

Oracle® Communications

Cloud Native Core, Service Communication Proxy REST Specification Guide



Release 26.1.201
G59079-01
July 2026

ORACLE®

G59079-01

Copyright © 2021, 2026, Oracle and/or its affiliates.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software, software documentation, data (as defined in the Federal Acquisition Regulation), or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs (including any operating system, integrated software, any programs embedded, installed, or activated on delivered hardware, and modifications of such programs) and Oracle computer documentation or other Oracle data delivered to or accessed by U.S. Government end users are "commercial computer software," "commercial computer software documentation," or "limited rights data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, reproduction, duplication, release, display, disclosure, modification, preparation of derivative works, and/or adaptation of i) Oracle programs (including any operating system, integrated software, any programs embedded, installed, or activated on delivered hardware, and modifications of such programs), ii) Oracle computer documentation and/or iii) other Oracle data, is subject to the rights and limitations specified in the license contained in the applicable contract. The terms governing the U.S. Government's use of Oracle cloud services are defined by the applicable contract for such services. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle®, Java, MySQL, and NetSuite are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Inside are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Epyc, and the AMD logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

Contents

Preface

Documentation Accessibility	i
Diversity and Inclusion	i
Conventions	i

1 Introduction

1.1 References	1

2 SCP Configuration Using REST APIs

2.1 Configuring SCP Features	3
2.2 Configuring Routing Options Config	54
2.3 Configuring Routing Config Set	68
2.4 Configuring NF Service Feature Config	104
2.5 Configuring NF Service Feature Config Set	112
2.6 Configuring NFTypes-NFServices	123
2.7 Configuring Canary Release Config Set	152
2.8 Configuring Topology Source Info	158
2.9 Configuring System Options	165
2.10 Configuring Overload Configuration Information	180
2.11 Configuring Overload Configuration Information Threshold	186
2.12 Configuring NRF	190
2.13 OAuth2.0 Configurations	194
2.13.1 Configuring OAuth2.0 Access Token Granularity	194
2.13.2 Configuring OAuth2.0 Local PLMN Required	205
2.14 Configuring Error Profiles	212
2.15 Outlier Detection Configuration	221
2.16 Configuring Ingress Rate Limiting	230
2.17 Configuring Egress Rate Limiting and Global Egress Rate Limiting	238
2.18 Configuring Dynamic Logging	248
2.18.1 Third Party Packages	260
2.19 Fetching Release 16 Routing Rules	261
2.20 Fetching Upgrade and Rollback Events	274

2.21	Updating HELM Configurable Parameters with REST APIs	276
2.22	Configuring Alternate NF Group	281
2.23	Configuring Server Header	291
2.24	Configuring SBI Message Priority	296
2.25	Pod Overload Control Configurations	308
2.25.1	Configuring Pod Overload Control Policy	308
2.25.2	Configuring Pod Overload Action Policy	314
2.25.3	Configuring Pod Overload Discard Policy	320
2.26	Configuring SEPP InterPlmn Info	325
2.27	Configuring App Routing Options	333
2.28	Configuring Mediation Trigger Point	344
2.29	Configuring Mediation Rule	362
2.30	Configuring Mediation Log Level	376
2.31	Configuring Mediation Support for User Defined Variables	381
2.32	Configuring Route Groups	390
2.33	Configuring Consumer NF Info	398
2.34	Configuring SCP Services	406
2.35	Configuring Load Control Information	434
2.36	Message Feed Configurations	439
2.36.1	Configuring Traffic Feed Data Director	439
2.36.2	Configuring Traffic Feed Trigger Point Config	444
2.37	Congestion Control Configurations	449
2.38	Circuit Breaking Configurations	458
2.39	NRF SRV Configuration	464
2.40	NRF FQDN InstanceId Mapping	471
2.41	Discovery Cache Response Configuration	473
2.42	Configuring TLS Version and Ciphers	484
2.43	Configuring NF Profile Level Attribute	490
2.44	Configuring NF Profile Level Attribute Configuration Data	498
2.45	Configuring SCP Feature Status	506
2.46	Configuring NF Topology On-demand Audit	508
2.47	Configuring NF Profile	511
2.48	Configuring NF Discovery Mode	529
2.49	Configuring Static NF Discovery	548
2.50	Configuring NF Selection Mode	587
2.51	Configuring IE Registry	604
2.52	Configuring IE Binding Info	621
2.53	Configuring Next Hop Roaming Proxy Routing Config	650
2.54	Configuring Roaming Proxy Selection Info	667
2.55	Configuring Roaming Proxy Support Config	680
2.56	Configuring Proxy Selection Routing Mode	703
2.57	Configuring Next Hop Proxy NF Service Config	713

2.58	Configuring Next Hop Proxy Routing Config	720
2.59	Configuring Roaming Proxy Info	734
2.60	Configuring Next Hop Roaming Proxy NF Service Config	745
2.61	Configuring NF Group ID Retrieval	752
2.62	Configuring Exception Config Set	773
2.63	Configuring NF Topology Audit	784

Preface

- [Documentation Accessibility](#)
- [Diversity and Inclusion](#)

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Diversity and Inclusion

Oracle is fully committed to diversity and inclusion. Oracle respects and values having a diverse workforce that increases thought leadership and innovation. As part of our initiative to build a more inclusive culture that positively impacts our employees, customers, and partners, we are working to remove insensitive terms from our products and documentation. We are also mindful of the necessity to maintain compatibility with our customers' existing technologies and the need to ensure continuity of service as Oracle's offerings and industry standards evolve. Because of these technical constraints, our effort to remove insensitive terms is ongoing and will take time and external cooperation.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which user supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that user enter.

My Oracle Support

My Oracle Support (<https://support.oracle.com>) is your initial point of contact for all product support and training needs.

Use My Oracle Support to access support resources, create and manage Service Requests (SRs), and get assistance with product issues.

For help with My Oracle Support registration, Service Request creation, or other support access questions, use the available support options in My Oracle Support, including MOSFS and MOS Chat.

My Oracle Support is available 24 hours a day, 7 days a week, 365 days a year.

Acronyms

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

Table 1 Acronyms

Acronym	Definition
3GPP	3rd Generation Partnership Project
API	Application Programming Interface
CCA	Client Credentials Assertion, 3gpp-Sbi-Client-Credentials header is defined by 3GPP. The header contains a client credentials assertion.
CNC Console	Oracle Communications Cloud Native Configuration Console
DNS	Domain Name System
FQDN	Fully Qualified Domain Name
HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure
IE	Information Element
K8s	Kubernetes
LC-H	Load Control based on LCI Header
LCI	Load Control Information
MCC	Mobile Country Code
MNC	Mobile Network Code
NF	Network Function
NRF	Oracle Communications Cloud Native Core, Network Repository Function
OCI	Overload Control Information
OLC-H	Overload Control based on OCI Header
PLMN	Public Land Mobile Network
REST	Representational State Transfer
SBI	Service Based Interface
SCP	Oracle Communications Cloud Native Core, Service Communication Proxy
SCPC	Service Communication Proxy Control
SEPP	Oracle Communications Cloud Native Core, Security Edge Protection Proxy
SPN	Service Proto Name
SRV	Service Records
URI	Uniform Resource Identifier
XFCC	x-forwarded-client-cert is a proxy header that indicates TLS certificate information.

What's New in This Guide

This section introduces the documentation updates for release 26.1.2xx.

Release 26.1.201 - G59079-01, July 2026

- Updated the following sections with new parameters for the Runtime Update for SCP Profile Parameters feature:
 - Updated the [Configuring System Options](#) section with new parameters, such as `scpServiceStatus.serviceStatus`, `scpServiceStatus.trafficRejectionErrorProfile`, and so on, to define the service state of SCP.
 - Updated the [Configuring NF Profile](#) section with information about the self SCP profile parameters.
 - Added `suspendedRspProfile` in the [Configuring SCP Features](#) section. This parameter is used to configure error profiles for the health query responses.
- Updated the following sections with new parameters for the Next Hop SCP Outlier Detection feature:
 - Updated the [Configuring System Options](#) section with `odHSupportEnabled`, which controls whether SCP-C component participates in the Outlier Detection header exchange with SCP-P.
 - Updated the [Configuring Next Hop Proxy Routing Config](#) section with `reRouteConditionList` to configure error conditions on which SCP attempts alternate routing.
- Updated the following sections with new parameters for the Support for Subscriber ID to Group ID Resolution feature:
 - Added `subid_to_nfgrp_id_resolution` in the [Configuring SCP Features](#) section. This parameter manages subscriber ID to NF group ID resolution.
 - Updated the [Configuring IE Binding Info](#) section with `nfgrp_idretrieval-cfg` to configure dynamic headers for queryMatch.
 - Updated the [Configuring IE Registry](#) section with `ims-domainname` to configure IP Multimedia Subsystem (IMS) domain name.
 - Added the [Configuring NF Group ID Retrieval](#) section to describe how SCP performs subscriber ID to group ID resolution.
 - Added the [Configuring Exception Config Set](#) section to describe how SCP handles different error scenarios instead of returning an error response.
- Added the [Configuring NF Topology Audit](#) section with information to configure audit interval for each NRF set. This section is added as part of the SCP Capacity enhancements.
- Added the following parameters in the [Configuring System Options](#) section as part of the SCP graceful start and stop procedure:
 - `scpServiceStatus.serviceStatus`
 - `scpServiceStatus.trafficRejectionErrorProfile`
 - `scpServiceStatus.fwdVendorSpecificIEInErrorRsp`
 - `scpServiceStatus.trafficRejectionDelay`

-
- Updated the [Configuring Dynamic Logging](#) section with the following information:
 - appLogLevel supports a new RX_TX_MSG_HEADER_INFO log level.
 - The TRACE log level supports SCP-Worker, SCP-nrfProxy, and SCP-nrfProxy-oauth.
 - Added the KeyLogFilter attribute, which is an optional filter applicable for the SCP-Cache microservice.
 - Updated the description and range of trafficPolicy.connectionPool.tcp.connectTimeout in the [Configuring System Options](#) section.
 - Updated the description of aggregatedRate with a note about configuring the aggregated rate with a minimum value of 20 in the [Configuring Egress Rate Limiting and Global Egress Rate Limiting](#) section.
 - Updated the description of retryAfter with information about the default value 0 for default error profile records in the [Configuring Error Profiles](#) section.

1

Introduction

This document provides information about how to configure the services and manageable objects in Oracle Communications Cloud Native Core, Service Communication Proxy (SCP) using Representational State Transfer Application Programming Interfaces (REST APIs).

The core network in 5G follows a service-based architecture, where network functions provide services that can be utilized using REST APIs by other functions. This allows the adoption of web-scale technologies and software that are used by different organizations in the telecommunications network.

SCP provides routing, load balancing, rate limiting, static configuration, dynamic discovery, and so on, functionalities to other 5G Network Functions (NFs). For more information about SCP functionalities and features, see *Oracle Communications Cloud Native Core, Service Communication Proxy User Guide*.

① Note

- The performance and capacity of the SCP system may vary based on the call model, feature or interface configuration, network conditions, and underlying CNE and hardware environment.
- The following terms are not used interchangeably in this document. They define SCP's routing behavior for different scenarios:
 - **Alternate Routing:** This term is used for the scenarios when SCP sends a request to an upstream producer and does not receive a successful response from the target upstream producer NF due to a request timeout, an error response, and so on. In such cases, SCP selects another equivalent available producer NF and performs routing to that producer NF. This routing to another equivalent available producer NF after the initial or prior routing failure is referred to as alternate routing.
 - **Reselection:** This term is used when SCP selects an alternate producer NF different from the initially selected producer NF, without attempting to send the request to the initially selected producer NF.

1.1 References

- *Oracle Communications Cloud Native Core, Service Communication Proxy User Guide*
- *Oracle Communications Cloud Native Core, Service Communication Proxy Installation, Upgrade, and Fault Recovery Guide*

2

SCP Configuration Using REST APIs

This chapter provides information about how to configure Oracle Communications Cloud Native Core, Service Communication Proxy (SCP) using REST APIs.

SCP can be configured using Helm and REST configurations. Some configurations are performed during SCP installation using Helm and a few configurations are modified using REST APIs. REST configurations can also be performed using the Oracle Communications Cloud Native Configuration Console (CNC Console).

For more information about SCP configuration types, see the following guides:

- For Helm configuration: *Oracle Communications Cloud Native Core, Service Communication Proxy Installation, Upgrade, and Fault Recovery Guide*.
- For REST configurations using the CNC Console: *Oracle Communications Cloud Native Core, Service Communication Proxy User Guide*.

SCP uses GET, PUT, DELETE, and so on HTTP methods to retrieve, update, and remove REST API configuration data.

① Note

- The PUT method for multiple rules as a single payload through a single API is not allowed unless specified explicitly.
- If the query parameter is incorrect, SCP does not return an error response but considers an API call without any query parameter, and therefore the GET ALL output is returned in the response.
- All SCP REST API resources support the HEAD method. A HEAD request returns the same status code and response headers as the corresponding GET request but does not include a response body. Use this method to verify resource availability or retrieve response metadata.

```
bash-5.1$ curl -v -I 'http://localhost:8081/ocscp/scpc-configuration/v1/ie-registry/discovery-query-param/3gpp-defined/tngf-info'
* Trying ::1:8081...
* connect to ::1 port 8081 failed: Connection refused
* Trying 127.0.0.1:8081...
* Connected to localhost (127.0.0.1) port 8081 (#0)
> HEAD /ocscp/scpc-configuration/v1/ie-registry/discovery-query-param/3gpp-defined/tngf-info HTTP/1.1
> Host: localhost:8081
> User-Agent: curl/7.76.1
> Accept: */*
>
* Mark bundle as not supporting multiuse
< HTTP/1.1 200 OK
HTTP/1.1 200 OK
< date: Tue, 23 Jun 2026 07:09:14 GMT
date: Tue, 23 Jun 2026 07:09:14 GMT
< connection: close
connection: close<
```

SCP Service Interfaces

SCP provides the following service interfaces:

- **Signaling Interface:** The signaling interface is exposed by SCP data plane called SCP-Worker. This interface is used to receive all 5G signaling traffic.
- **Config Interface:** The config interface is exposed by SCP control plane called SCPC-Config. This interface is used to receive all SCP configuration traffic.

SCP Signaling Service

SCP provides the following Signaling services:

- **FQDN**
 - Consumer NFs may use SCP Signaling service's FQDN to send 5G signaling traffic to SCP for routing. The Kubernetes service FQDN is of the following format:
 - * fqdn = scp-worker.<namespace>.<domain>. Where, namespace is Kubernetes namespace as provided during the Helm installation, and domain is as provided in the Helm chart (values.yaml) while installation.

- * If NFs are deployed outside of Kubernetes cluster, then ensure that this FQDN is resolvable by consumer NFs.
 - * Operator can specify the public or Kubernetes-cluster FQDN of SCP in the Helm chart (values.yaml, scpInfo.fqdn" = <releaseName>-scp-worker.<Namespace>.<domain>) during installation.
- **IP Address**
 - Consumer NFs may use SCP Signaling service's IP address to send the 5G signaling traffic to SCP for routing.
 - IP is <global.publicSignalingIP> as provided in the Helm chart (values.yaml) during SCP installation.

Note

Only IPv4 is supported.

- **Port**
 - Consumer NFs require port information along with FQDN or IP address to send 5G signaling traffic to SCP for routing.
 - Port is <global.publicSignalingPort> as provided in the Helm chart (values.yaml) during SCP installation.

SCP Config Service

SCP provides the following Config service:

- **FQDN**
 - Operator may use SCP Config service's FQDN to configure SCP for routing.
 - The Kubernetes service FQDN is of the following format:
 - * fqdn = scpc-config-svc.<namespace>.<domain>. Where, <namespace> is Kubernetes namespace as provided during the Helm installation, and <domain> is as provided in the Helm chart (values.yaml) during SCP installation.
 - * Operators must ensure that this FQDN is resolvable if operating from outside of the Kubernetes cluster.
- **IP Address**
 - Consumer NFs may use SCP Config service's IP Address to configure SCP for routing.
 - IP is <scpc-soothsayer.configService.publicConfigIP> as provided in the Helm chart (values.yaml) during SCP installation.
- **Port**
 - Operators require port information along with FQDN or IP address to configure SCP for routing.
 - Port is 8081 that is a fixed port and cannot be configured.

2.1 Configuring SCP Features

This section provides REST API configurations to enable SCP features.

Resources

The following table describes the resource name to retrieve, add, or update SCP features.

Table 2-1 Resource Name

Resource Name	Resource URI	HTTP Method	Description
scp-features	/ocscp/scpc-configuration/v1/scp-features	GET	Retrieves all the SCP features configured list at SCP or specific records based on the query parameters.
scp-features	/ocscp/scpc-configuration/v1/scp-features/{featureName}	GET	Retrieves records based on featureName as a path variable.
scp-features	/ocscp/scpc-configuration/v1/scp-features/{featureName}	PUT	Updates the feature-specific information based on the provided feature name in the Resource URI.

Data Model

Request Body

The following table describes the field names of the SCPFeaturesWrapper data type.

Table 2-2 SCPFeaturesWrapper

Parameter Name	Data Type	Mandatory (M) or Optional(O)	Description
featureName	String	M	Indicates the unique feature name as per the requirement. Supported values are: • <code>modeld_routing</code>: To enable or disable Release 16 Model D based routing. • <code>mediation</code>: To enable or disable Mediation. • <code>interplmn_routing</code>: To enable or disable the support for 5G SBI roaming. • <code>global_egress_ratelimit</code>: To enable or disable the Global Egress Rate Limiting and its specific configurations. • <code>enhanced_nf_status_processing</code>: To enable or disable the SUSPENDED NF Status processing. • <code>scp_user_agent_info</code>: To enable or disable addition of the "User-Agent" header in the SCP originated messages towards NRF. • <code>lci</code>: To enable or disable Load Control based on the Load Control Information (LCI) Header feature. • <code>Traffic Feed</code>: To enable or disable copying of both request and response messages routed through SCP towards Data Director • <code>egress_host_preference</code>: To enable or disable egress host preference. • <code>location_hdr_update_for_host_mismatch</code>: To enable or disable inter-SCP routing of subsequent 5G SBI request messages for unknown FQDNs as part of the Location Header for Host Mismatch feature. • <code>cca_header_validation</code>: To enable or disable Client Credentials Assertion (CCA) header validation. Note: SCP supports the 3gpp-Sbi-Client-Credentials header with x5c - X.509 URL, not x5u - X.509 URL. • <code>health_check</code>: Enables the Health Check API feature. By default, this feature is enabled. Note: This feature cannot be disabled because if it is disabled, SCP will not be able to send the response to the consumer,

Table 2-2 (Cont.) SCPFeaturesWrapper

Parameter Name	Data Type	Mandatory (M) or Optional(O)	Description
			potentially causing the consumer to perceive SCP as unavailable. Therefore, disabling this feature is not allowed. • <code>oauth2_support</code>: This parameter enables or disables the OAuth2.0 (Open Authorization) access tokens feature. • <code>nrf_bootstrap_info</code>: To enable or disable NRF configuration using the DNS SRV resolution feature and its configuration. • <code>oci</code>: To enable or disable the Overload Control Information (OCI) feature. • <code>ignore_unknown_nfservice</code>: To enable or disable NFProfile Processing enhancements supported by SCP. • <code>enhanced_error_rsp</code>: To combine all the error responses from both internal and external sources, such as error responses generated by SCP and error responses received from producer NFs while performing alternate routing. • <code>additional_logging</code>: To enable or disable the additional logging feature. • <code>log_subscriber_info</code>: To enable or disable the <code>log_subscriber_info</code> feature and configure its settings. • <code>timestamp_headers_support</code>: To enable or disable the <code>timestamp_headers_support</code> feature and configure its settings. • <code>enhanced_notifications_handling</code>: To enable or disable the Enhanced Notifications Handling feature. • <code>nf_discovery_enhancement</code>: To enable or disable the NF Discovery enhancements. Note: Before enabling the <code>nf_discovery_enhancement</code> parameter, verify that the <code>SCPnFTopologyForceRefreshAuditFailure</code> alert is absent in the system. If the alert is absent, the feature can be enabled. If the alert is present, corrective action is required to clear the alert before

Table 2-2 (Cont.) SCPFeaturesWrapper

Parameter Name	Data Type	Mandatory (M) or Optional(O)	Description
			proceeding. For more information about the SCPNfTopologyForceRefreshAuditFailure alert, see <i>Oracle Communications Cloud Native Core, Service Communication Proxy User Guide</i>. • nf_selection_enhancement: To enable or disable the NF Selection enhancements. Note: Before enabling the nf_selection_enhancement parameter, verify that the SCPNfTopologyForceRefreshAuditFailure alert is absent in the system. If the alert is absent, the feature can be enabled. If the alert is present, corrective action is required to clear the alert before proceeding. For more information about the SCPNfTopologyForceRefreshAuditFailure alert, see <i>Oracle Communications Cloud Native Core, Service Communication Proxy User Guide</i>. • ingress_rate_limit: To enable or disable ingress rate limiting. • egress_rate_limit: To enable or disable egress rate limiting. • subid_to_nfgrp_id_resolution: To enable or disable subscriber ID to NF group ID resolution.
enabled	Boolean	M	Enables or disables a feature. The values can be true or false. By default, this value is false.
featureSpecificConfig	customObject	O	Indicates feature specific configuration objects.

Table 2-3 Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
global_egress_ratelimit	<pre>featureSpecificConfig : { "remoteScpOneEnabled": "false", "remoteScpTwoEnabled": "false" }</pre>	This parameter enables or disables the Global Egress Rate Limiting feature. remoteScpOneEnabled: This parameter indicates whether SCP cache connectivity should be started for the remote SCP participant. Type: Boolean remoteScpTwoEnabled: This parameter indicates whether SCP cache connectivity should be started for the remote SCP participant.

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
modeld_routing	<pre>featureSpecificConfig: { "caching": "true", "enforceReqSpecificSvcDiscovery": "true" , "cacheCfgForNrfNotification": { "cacheUpdateMode": ["LOCAL_REFRESH", "NRF_REFRESH"] , "useCachedRecordOnError": 307, 308, 429, 5xx, empty2xx } }</pre>	This parameter enables or disables the Model D Indirect 5G SBI Communication feature. caching: This parameter indicates whether local cache is enabled for Model D rules. enforceReqSpecificSvcDiscovery: This parameter enforces NF Service specific Discovery Request when possible. cacheCfgForNrfNotification: Configuration for model-based D cache updates using NRF information. It includes two fields: cacheUpdateMode and useCachedRecordOnError. cacheUpdateMode: This parameter indicates the cache update mode for SCP when an NF profile notification is received. The mode determines how cache records are updated, either locally or through a fresh discovery request to NRF, depending on the modified NF-profile attribute. The following values are supported: NONE: Cache updates do not occur on notification. Updates happen only based on discovery responses. Setting the value to "NONE" disables this feature. LOCAL_REFRESH: The cache is updated locally if the NF-profile attribute being modified belongs to the local cache update category. If cacheUpdateMode is set to LOCAL_REFRESH only and the modified attribute requires an NRF discovery update, the notification is ignored. NRF_REFRESH: The cache is refreshed through a new discovery request to NRF if the NF-profile attribute being modified requires an NRF discovery update. If cacheUpdateMode is set to NRF_REFRESH only and the modified attribute requires a local update, the notification is ignored. [NRF_REFRESH, LOCAL_REFRESH]: Both local and NRF-based cache updates occur, depending on the modified NF-profile attribute. Upon receiving a Profile Notification, if both modes are configured, NRF_REFRESH will be applied first if applicable; otherwise, LOCAL_REFRESH will be applied. Default value: [NRF_REFRESH, LOCAL_REFRESH] useCachedRecordOnError: This parameter indicates that SCP uses the existing invalid cached response for the defined error codes if it receives an error response from NRF, if the request times out, or if it receives a 2xx response with no profiles.

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
		The allowed values include: • Allowed values: NONE, 5xx, empty2xx, and all valid reroutable codes defined for Routing Options. These include: 301, 302, 303, 304, 307, 308, 400, 401, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 421, 422, 425, 426, 428, 429, 431, 451, 500, 501, 502, 503, 504, 505, 506, 507, 508, 510, and 511. • Default value: ["307", "308", "429", "5xx", "empty2xx"] • NONE: This value indicates that no error codes are configured. No other error codes can be used when "NONE" is set. • 5xx: Indicates all supported error codes starting with 5. • empty2xx: This custom string is defined to handle cases where the NRF discovery response returns a 200 OK status with an empty list of profiles. If this value is configured, SCP will use the old invalid cached response.

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
mediation	<pre>"featureSpecificConfig": { "userDefinedVariable": { "enabled": false, "maxUserDefinedVariableSize": 1024, "maxUserDefinedVariableCount": 100 } }</pre>	userDefinedVariable: Configuration wrapper for the userDefinedVariable feature; it contains three fields. • enabled: This boolean parameter indicates whether the userDefinedVariable feature is enabled for Mediation. The default value is false. • maxUserDefinedVariableSize: This integer parameter specifies the overall max size of all userDefinedVariables included in the request or response body for mediation. – Default Value: 1024 – Range: 512 - 4096 • maxUserDefinedVariableCount: This parameter is an Integer which signifies the total number of userDefinedVariables that can be configured for usage at User Defined Variables API. – Default Value: 100 – Range: 1-250 Notes: • If the enabled field is set to false, rules using userDefinedVariables can only be saved in a draft state and cannot be moved to the compile or applied state. • If the enabled field is changed to true and any mediation rules are in the applied state, the enabled field cannot be set back to false until all applied rules are returned to draft state. • If userDefinedVariables are added through the User Defined Variables API, the maxUserDefinedVariableCount cannot be set to a value lower than the number of userDefinedVariables currently stored in the database.
interplmn_routing	<pre>"featureSpecificConfig": { "customRoamingProxySupport": false }</pre>	customRoamingProxySupport: This parameter specifies if custom roaming proxy nfType is supported for inter-PLMN routing. By default, this parameter is set to false. If set to false, the default roaming proxy (SEPP) is considered only for inter-PLMN routing. If set to true, custom roaming proxies along with SEPP are considered only for inter-PLMN routing. The usage of roaming proxy type depends on the roaming proxy mode rule.

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
enhanced_nf_status_processing	<pre>featureSpecificConfig : { "enhancedSuspendedStateRouting": ["AMF", PCF]" , "suspendedStateRouting": ["UDM"] }</pre>	This parameter enables or disables the NF Status Processing feature. enhancedSuspendedStateRouting: This parameter is used to indicate the list of NFTypes for which SCP would consider "SUSPENDED" NFs available for routing, alternate routing, or reselection only when alternate is not available in the "REGISTERED" state. This parameter is used to list NFTypes eligible for Mode 3. An * means that all NFTypes are eligible for Mode 3. suspendedStateRouting: This parameter is used to indicate the list of NFTypes for which SCP would consider "SUSPENDED" NFs available for routing. This parameter is used to list the NFTypes eligible for Mode 2. An * means that all NFTypes are eligible for Mode 2. Type: array(NFType) Note: To specify all NFTypes for Mode-3, the list has to be specified with the wildcard *. Example: <pre>featureSpecificConfig : { "enhancedSuspendedStateRouting": ["*"]", "suspendedStateRouting": [] }</pre> Note: • Mode 1: If the enhanced_nf_status_processing is set to false, only NFs in the REGISTERED state are considered for routing. • Mode 2: If the enhanced_nf_status_processing is set to true and suspendedStateRouting is present, all configured NFs are considered for routing, irrespective of their NF state (REGISTERED or SUSPENDED). • Mode 3: If the enhanced_nf_status_processing is set to true and enhancedSuspendedStateRouting is present, SCP considers SUSPENDED NFs available for routing, alternate routing, or reselection only when the alternate NF is not available in the REGISTERED state. • If enhancedSuspendedStateRouting is set to a subset of NF types such as AMF and PCF, SCP applies routing Mode 3 for AMF and PCF, and the remaining NF types will be routed to Mode 1. • If suspendedStateRouting is set to a subset of NF types such as AMF and PCF, SCP applies routing Mode 2 for AMF and PCF, and the remaining NF types will be routed to Mode 1. • If suspendedStateRouting and enhancedSuspendedStateRouting are

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
		configured for mutually exclusive NF types such as UDM and PCF, then SCP will route UDM to Mode 2 and PCF to Mode 3, respectively, and the remaining NF types will be routed to Mode 1.
scp_user_agent_info	"featureSpecificConfig": { "userAgentHeaderFormat": "NFType-NFInstanceID FQDN", "uniqueID": "string/text input" }	This parameter enables or disables addition of "User-Agent" header in the SCP originated messages towards NRF. userAgentHeaderFormat: This parameter indicates the format of the "User-Agent" header that is added in the SCP originated message requests towards NRF. SCP supports the following formats of the "User-Agent" header: • NFType-NFInstanceID FQDN • NFType-NFInstanceID-FQDN • NFType-FQDN NFInstanceID • NFType-FQDN-NFInstanceID • NFType-NFInstanceID • NFType-FQDN • NFType • NFType-UNIQUEID uniqueID: This parameter is applicable only for NFType-UNIQUEID. If you configure userAgentHeaderFormat as NFType-UNIQUEID, you must configure uniqueID.

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
lci	<pre>"featureSpecificConfig": { "scpLciConveyanceEnable": false, "relayPeerLci": true, "scpLciConveyanceInterval": 5000, "scpLciConveyanceMinLoadChange": 5, "scpLciConveyanceMinLoadThreshold": 30, "scpLciConveyanceMinLoadThreshold": 30, "scpLciConveyanceMinLoadThreshold": 30, "peerLciProcessingMinLoadChange": 5, "unknownPeerLciExpiry": 300 }</pre>	scpLciConveyanceEnable: This parameter enables SCP to add its LCI in request and response. - Default value: false relayPeerLci: This parameter allows SCP to forward the received LCI header from producer NF. - Default value: true scpLciConveyanceInterval: This parameter indicates periodic intervals for reporting SCP LCI to a peer NF. For each interval, SCP's LCI is reported to the peer NF irrespective of any change to SCP LCI. Sending SCP LCI periodically ensures that the peer NF has not missed earlier reported SCP LCI. The SCP LCI load value is measured by SCP as the current load value of SCP if the load is more than configured scpLciConveyanceMinLoadThreshold or 0 if the load is less than scpLciConveyanceMinLoadThreshold. - Default value: 5000 milliseconds - Range: 1000 to 3600000 milliseconds Note: - This LCI conveyance is not limited by scpLciConveyanceMinLoadThreshold or scpLciConveyanceMinLoadChange parameter. - However, if the SCP load value is lesser than scpLciConveyanceMinLoadThreshold, then it reports 0 as a load considering SCP is not loaded. - The LCI header will be sent along with the message being forwarded to the peer NF. scpLciConveyanceMinLoadChange: This parameter indicates the minimum delta change in load to convey LCI. It is applicable when SCP Load value goes beyond the scpLciConveyanceMinLoadThreshold value. - Default value: 5% - Range: 5% to 25% Example: - If the load changes from 30 to 35 or 35 to 30, LCI is conveyed. - if the load changes from 30 to 32, no LCI is conveyed. scpLciConveyanceMinLoadThreshold: This parameter indicates that SCP considers this parameter as a starting point for updating its original load value to peers. - Default value: 30% - Range: 0% to 60% Note: If the SCP load value is less than the scpLciConveyanceMinLoadThreshold, then

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
		SCP reports zero as a LCI load, considering SCP is not loaded. A zero load value is conveyed as part of the <code>scpLciConveyanceInterval</code>. <code>scpLciConveyanceToUnknownPeer</code>: This parameter is boolean that denotes whether SCP should convey its LCI to unknown peers or not. When it is enabled, SCP includes its Load LCI in every message which is going to that unknown peer. • Default value: false Note: If the SCP load value is less than the <code>scpLciConveyanceMinLoadThreshold</code>, then SCP reports zero as a LCI load, considering SCP is not loaded. <code>peerLciProcessingMinLoadChange</code>: This parameter indicates minimum load change threshold in peer NF's load as indicated in LCI or from NRF notification that should trigger LCI processing at SCP for that peer NF. • Default value: 5% • Range: 0% to 25% <code>unknownPeerLciExpiry</code>: This parameter indicates the existence of unknown peer LCI in SCP. The unknown peer represents inter PLMN NFs. When SCP receives LCI load value from inter PLMN NFs, it caches this LCI load value for the period of <code>unknownPeerLciExpiry</code>. • Default value: 300 seconds • Range: 30 to 900 seconds
traffic_feed	NA	The <code>featureSpecificConfig</code> field is not applicable for <code>traffic_feed</code>. You must keep its value empty, for example, <code>featureSpecificConfig: {}</code>

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
egress_host_preference	<pre>"featureSpecificConfig": { "hostPreference": { "request": { "apiRootHdrPresent": "passThrough", "apiRootHdrNotPresent": "ip", "scpGeneratedNrfMsg": "ip" }, "response": { "headers": "followRequest" } }, "fqdnResolution": { "fqdn": "nfProfile", "interPlmnFqdn": "dns" } }</pre>	hostPreference.request.apiRootHdrPresent: This parameter indicates the Host (":authority" header) preference for egress request if "3gpp-Sbi-Target-apiRoot" header is present in the ingress request. • Default value: passThrough • Range: ip, fqdn, or passThrough If set as: — ip: IP is used in host of egress message requests. — fqdn: FQDN is used in host of egress message requests. — passThrough: Uses the same type of host in egress message requests as it is received in ingress message requests. Note: The :authority header in the egress request must be FQDN irrespective of the host configurations of hostPreference.request.apiRootHdrPresent and hostPreference.request.apiRootHdrNotPresent if the identified request is an interplmn request. hostPreference.request.apiRootHdrNotPresent: This parameter indicates the host preference (":authority" header) for egress request if "3gpp-Sbi-Target-apiRoot" header is not present in the ingress request. • Default value: ip • Range: ip or fqdn If set as: • ip: IP is used in host of egress message requests. • fqdn: FQDN is used in host of egress message requests. hostPreference.request.scpGeneratedNrfMsg: This parameter indicates the host preference (":authority" header) for SCP generated NRF messages. • Default value: ip • Range: ip or fqdn If set as: • ip: IP is used in host of egress message requests. • fqdn: FQDN is used in host of egress message requests. hostPreference.response.headers: This parameter indicates the host preference for headers in egress message responses. Host present in "location" header or "3gpp-Sbi-Target-apiRoot" header will be updated as per configuration.

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
		- Default value: followRequest - Range: followRequest, ip, or fqdn If set as: - ip: IP is used in host of location header or 3gpp-Sbi-Target-apiRoot header for egress message responses. - fqdn: FQDN is used in host of location header or 3gpp-Sbi-Target-apiRoot header for egress message responses. - followRequest: Uses the same host as used for corresponding egress message request. Note: If the location header contains absolute URI, SCP does not update the authority in absolute URI. fqdnResolution.fqdn: This parameter indicates the resolution preference of egress message requests host FQDN if present. - Default value: nfProfile - Range: dns or nfProfile If set as: - dns: DNS resolution is used to resolve fqdn selected for egress message request. - nfProfile: IP Endpoint is used to resolve fqdn selected for egress message request. fqdnResolution.interPlmnFqdn: This parameter indicates the resolution preference of egress message requests inter-plmn FQDN if present. - Default value: dns - Range: dns or nfProfile If set as: - dns: DNS resolution is used to resolve fqdn selected for egress message request. - nfProfile: IP Endpoint is used to resolve fqdn selected for egress message request.
location_hdr_update_for_host_mismatch	NA	It is applicable when the "Location" header in the "201 Created" response has authority (FQDN or IP) different from the producer's authority (FQDN or IP) where the message is sent. The featureSpecificConfig field is not applicable for location_hdr_update_for_host_mismatch Keep this field blank. For example, featureSpecificConfig: {}

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
cca_header_validation	<pre>{ "featureSpecificConfig": { "validations": [{ "type": "subject", "errorProfileName": "ccaVerificationError", "producerNfTypes": ["UDM", "AMF"] }, { "type": "headerPresence", "errorProfileName": "ccaHeaderNotPresentError", "producerNfTypes": ["UDM", "AMF"] }], "tls crt san": { "preferred_validation_order": ["URI-ID-URN", "DNS-ID"], "max_entries_to_process": 30 } } }</pre>	validations: This parameter indicates the list of all the validations that SCP performs on 3gpp-Sbi-Client-Credentials header. - Default value: {"type": "subject", "errorProfileName": "ccaVerificationError", "producerNfTypes": []} - Range: subject, headerPresence type: This parameter indicates the type of validation: - headerPresence: SCP checks the presence of the 3gpp-Sbi-Client-Credentials header in the ingress request. - Validation will pass if the header is present. - Validation will fail if the header is not present. - subject: SCP checks the NF instance ID from the "sub" parameter in the 3gpp-Sbi-Client-Credentials header with the NF instance ID from the list of SANs in the client's TLS certificate. SANs directly have the NF Instance Id or the client's other identity, like the FQDN or IP address, which will be used to get the NF Instance Id. If the 3gpp-Sbi-Client-Credentials header is not present, then this validation will not be performed. - Validation will pass if the NF instance ID from the "sub" parameter matches the NF instance ID from the SAN. - Validation will fail if the NF instance ID from the "sub" parameter doesn't match the NF instance ID from the SAN. - Default value: subject - Range: subject, headerPresence errorProfileName: This parameter is used to generate an error response if the corresponding validation fails. Error profiles can be configured using the REST API: /ocscp/scpc-configuration/{version}/errorProfileConfig. - Default value: ccaVerificationError - Range: NA producerNfTypes: This parameter mentions the name of the producer NF Type. - Default value: null - Range: NA tls crt san.preferred_validation_order: This parameter indicates the order format-wise from which SCP picks SAN from the client's TLS certificate for verification of the "subject" type of validation.

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
		• Default value: URI-ID-URN, DNS-ID, IP-ADDRESS, URI-ID-APIROOT • Range: URI-ID-URN, DNS-ID, IP-ADDRESS, URI-ID-APIROOT tls.crt_san.max_entries_to_process: This parameter indicates the maximum number of SANs from the client's TLS certificate that SCP picks for validation. • Default value: 30 • Range: 1-100

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
health_check	<pre> "featureSpecificConfig": { "scpHealthAPI": { "successRspType": "200WithEmptyPayload", "overload": { "avgScpLoadThresholdValue" : 75, "overloadRspProfile": "healthCheckErrorProfile" }, "scpSuspendedState": { "suspendedRspProfile": "defaultScpTrafficRejectionErrorProfile" }, }, "nextHopSCP": { "requestTimeout": 1000, "pollingInterval": 1000, "consecutiveErrorResp": 3, "consecutiveSuccessResp": 3, "isScpHealthCheckSvcEnabled": false } } </pre>	This parameter enables the SCP Health Check API feature, which is the default configuration. avgScpLoadThresholdValue: This parameter provides the overall average SCP load threshold value. - Default value: 75% - Range: 75% - 90% successRspType: This parameter indicates successful responses for a healthy SCP. - Default value: 200StatusCodeAndEmptyPayload - Range: 200WithPayload, 200WithEmptyPayload, and 204WithNoContent overloadRspProfile: This parameter indicates the error profile configuration for the health query response when SCP is in overload condition. Default value: healthCheckErrorProfile. It configures error profiles for the health query responses in exception conditions. For more information about this parameter, see Configuring Error Profiles. suspendedRspProfile: This parameter indicates the error profile to use for the health query response when SCP is in suspended or outOfService states. - Default value: defaultScpTrafficRejectionErrorProfile - Range: NA isScpHealthCheckSvcEnabled: This parameter enables or disables the SCP health check API feature in inter-scp scenarios. - Default value: false - Range: true or false pollingInterval: This parameter indicates the duration to control the periodicity of health check requests in inter-scp scenarios. - Default value: 1000ms - Range: 300ms -60000ms requestTimeout: This parameter indicates the timer to monitor the waiting time for health check response in inter-scp scenarios. - Default value: 1000ms - Range: 300ms -60000ms noOfConsecutiveErrorResp: This parameter indicates the total number of consecutive failure responses that leads to failover in inter-scp scenarios. - Default value: 3 - Range: 1 - 20 noOfConsecutiveSuccessResp: This parameter indicates the total number of

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
		consecutive successful responses that leads to fallback in inter-scp scenarios. • Default value: 3 • Range: 1 - 20

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
oauth2_support	<pre>"featureSpecificConfig": { "scpAccessTokenCapability": ": ["INDIRECT_COM_WITH_DELEG_DISC", "INDIRECT_COM_WITHOUT_DELEG_DISC"], "accessTokenConveyance": true, "oauth2AccessTokenValidation": false, "accessTokenValidationTypes": ["TYPE1"], "accessTokenRefreshGuardTime": 60000, "accessTokenValidityGuardTime": 30000, "accessTokenCleanUpPostExpiry": 900000, "accessTokenHistorySize": 10, "accessTokenCacheSize": 50000, "requesterInfo": ["DISCOVERY-HEADERS", "CCA-HEADER", "USER-AGENT-HEADER"], "cacheEnabled": false }</pre>	This parameter enables or disables the OAuth2.0 (Open Authorization) access tokens feature. scpAccessTokenCapability: This parameter indicates Access token support for the listed indirect communication modes at SCP. (ENUM) Possible values: [INDIRECT_COM_WITH_DELEG_DISC, INDIRECT_COM_WITHOUT_DELEG_DISC] - INDIRECT_COM_WITH_DELEG_DISC: SCP initiates access token request toward NRF in delegated discovery service request. - INDIRECT_COM_WITHOUT_DELEG_DISC: SCP is expected to forward the service request with or without access token as per configuration at SCP. SCP is not expected to initiate access token request toward NRF. accessTokenConveyance: This parameter conveys acquired access token in the "3gpp-Sbi-Access-Token" header in service response to consumer NFs. - Default value: true - Range: true or false oauth2AccessTokenValidation: This parameter enables or disables validation of OAuth2 access token from consumer NFs. - Default value: Disabled - Range: Disabled or Enabled accessTokenValidationTypes: This parameter configures the list of required validation types in the network. - Default value: empty as default, only TYPE1 is in scope. - Enumeration: validationType. TYPE1: Represents validation for token expiry time. accessTokenRefreshGuardTime: This parameter initiates proactive refresh of cached access token when the configured time expires. The proactive refresh occurs if the relevant SBI messages are in exchange. - Default value: 60000ms - Range: 100ms - 300000ms accessTokenValidityGuardTime: This parameter indicates the time before the access token expiry when SCP considers not to use the existing access token and obtains new access token in the service request forwarded to producer NFs. - Default value: 30000ms - Range: 100ms - 300000ms

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
		accessTokenCleanUpPostExpiry : This parameter indicates the duration to purge the token from cache. - Default value: 900000ms - Range: 0ms - 3600000ms accessTokenHistorySize: This parameter indicates the number of access tokens signature history to identify whether the access token initiated by SCP or not. - Default value: 10 records - Range: 0 - 20 records accessTokenCacheSize: This parameter indicates the number of access tokens that can be cached in SCP. - Default value: 50000 records - Range: 5000 - 100000 records requesterInfo: This parameter indicates access token requester (consumer NF) Info to generate the access token request. - Prioritized list of default values: 1. DISCOVERY-HEADERS 2. CCA-HEADER 3. USER-AGENT-HEADER cacheEnabled: This parameter enables or disables caching of access tokens. - Default value: true - Range: true or false
nrf_bootstrap_info	<pre>"featureSpecificConfig": "source": "DNS_SRV ", "deRegisterScpDuringMigration": "false"</pre>	source: This field is used to select whether the NRF Configuration Using DNS SRV Resolution feature should be enabled or disabled. SCP will enable the feature if the source is DNS_SRV. - Default value: DNS_SRV deRegisterScpDuringMigration: In the migration from static to DNS SRV task, if static and DNS SRV NRF configurations are the same, then this parameter will be used to deregister SCP with the old or static NRFset. - Default value: false - Range: true or false

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
oci	<pre> { "featureName": "oci", "enabled": false, "featureSpecificConfig": { "olchSupportInd": true, "scpOciConveyanceInterval" : 2000, "scpOciRecoveryValidityPer iod": 3600, "nextHopRoamingProxyOci": [{ "nfType": "*", "enabled": true, "ruleName": "NextHopSeppOciRuleName" }], "nextHopProxyOci": [{ "nfType": "Scp", "enabled": true, "ruleName": "NextHopScpOciRuleName" }], "scpOciConveyance": { "enable": true, "unknownPeer": { "request": true, "response": true } } } } </pre>	If this parameter is set to true, SCP sends the olchSupportInd parameter in SCP NF profile when registering with NRF (NFRegister) or updating NRF (NFUpdate) to indicate that SCP supports the Overload Control Information feature based on the 3gpp-Sbi-Oci header. - Data Type: Boolean - Default value: true - Range: true or false scpOciConveyanceInterval: This parameter is the interval for reporting SCP OCI to peer NFs. For every interval until the validity period, the last sent OCI is reported to peer NF, irrespective of any change to SCP OCI. Sending SCP OCI periodically ensures that the peer NF has not missed an earlier reported SCP OCI. The same OCI header as sent on the last OCI threshold change or validity period expiry is sent. - Data Type: Integer - Default value: 2000 milliseconds - Range: 2000 to 3600000 milliseconds Note: OCI is sent to peer NFs only if there is a message for that NF. scpOciRecoveryValidityPeriod: This parameter indicates the value of the validity period to be sent in the OCI header to peers when SCP recovers from a congestion state. SCP sends OCI to peers with the reduction metric set to 0. - Data Type: Integer - Default value: 3600 seconds - Range: 5 to 3600 seconds nextHopRoamingProxyOci.nfType: Indicates the roaming proxy NF type. All NF types configured in the nfTypes-nfServices REST API with the NF role set to "CUSTOM_5G_ROAMING_PROXY", "SEPP", and "*". - Data Type: String - Default value: * - Range: "SEPP", "*", and NF Type with NF Role as "CUSTOM_5G_ROAMING_PROXY" nextHopRoamingProxyOci.enabled: If this parameter is set to true, the OCI enforcement is enabled for roaming proxy NF type. - Data Type: Boolean - Default value: true - Range: true or false nextHopRoamingProxyOci.ruleName: If this parameter is set to true, OCI feature enforcement is performed based on the OCI

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
		configuration referenced by the rule name specified as the value of this parameter. - Data Type: String - Default value: NextHopSeppOciRuleName - Range: NA Note: The OCI config rule configured for relayPeerOci is always set to false, and for ociEnforcement is always set to true. nextHopProxyOci.nfType: Indicates SCP NF type. - Data Type: String - Default value: SCP - Range: SCP nextHopProxyOci.enabled: If set to true, OCI enforcement is enabled for SCP. - Data Type: Boolean - Default value: true - Range: true or false nextHopProxyOci.ruleName: If set to true, OCI feature enforcement is performed based on the OCI configuration referenced by the rule name specified as this parameter's value. - Data Type: String - Default value: NextHopScpOciRuleName - Range: NA Note: The OCI config rule configured for relayPeerOci is always set to false, and for ociEnforcement is always set to true. nextHopScpOciRuleName: If nextHopScpOciEnabled is set to true, OCI feature enforcement is done based on ociConfigRule configured with the name provided as value for this parameter. - Default value: NextHopScpOciRuleName - Range: NextHopScpOciRuleName Note: When ociConfigRule is configured for nextHopScpOciRuleName, set relayPeerOci to false and ociEnforcement to true. nextHopSeppOciRuleName: If nextHopSeppOciEnabled is set to true, OCI feature enforcement is done based on ociConfigRule configured with the name provided as value for this parameter. - Default value: NextHopSeppOciRuleName - Range: NextHopSeppOciRuleName Note: When ociConfigRule is configured for nextHopSeppOciRuleName, set relayPeerOci to false and ociEnforcement to true. scpOciConveyance:enable: If this parameter is set to true, SCP starts conveying the 3gpp-

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
		Sbi-Oci header based on self-overload information. - Data Type: Boolean - Default value: true - Range: true or false scpOciConveyance:unknownPeer:request: If this parameter is set to true, SCP starts conveying self-OCI tagged to requests toward unknown peers. For unknown peers, identification of peer NFs is done based on message request's FQDN. - Data Type: Boolean - Default value:false - Range: true or false scpOciConveyance:unknownPeer:response: If this parameter is set to true, SCP starts conveying self-OCI tagged to responses toward unknown peers. - Data Type: Boolean - Default value:false - Range: true or false
ignore_unknown_nfservice	NA	The featureSpecificConfig field is not applicable for ignore_unknown_nfservice. You must keep its value empty, for example, featureSpecificConfig: {}
enhanced_error_rsp	<pre>"featureSpecificConfig": { "problemDetailsEnhancement": { "errorDetailMaxSize": 2100 } }</pre>	This parameter adds routing attempt information to ProblemDetails when SCP generates error responses. It enables SCP to combine all the error responses from both internal and external sources, such as error responses generated by SCP and error responses received from producer NFs while performing alternate routing. errorDetailMaxSize: This parameter manages the maximum length limit of the compiled error string in the detail parameter of problemDetails. SCP truncates the error string from end if the compiled string is greater than the maximum limit. - Default value: 2100 Bytes - Range: 1000 to 3100 Bytes

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
additional_logging	<pre>"featureSpecificConfig": { "scpGeneratedErrorRspLogging": { "enabled": false, "scpServiceNames": ["scp-worker"] } }</pre>	This parameter appends additional log attributes, such as errorStatus, errorTitle, errorDetails, errorCause, and sender, to error response logs generated by SCP for WARN level logs. scpServiceNames: This parameter contains the list of services for which SCP generates error response logs. - Default value: scp-worker - Possible Values: ALL, scp-worker Note: - This value cannot be null. - Do not set this parameter to any other microservice when it is set to ALL.
log_subscriber_info	<pre>"featureSpecificConfig": { "scpServiceNames": ["ALL"] }</pre>	This parameter appends User Equipment (UE) identity or subscriber ID to error logs. scpServiceNames: This parameter contains the list of services for which subscriber ID is added to their error logs. - Default value: ALL - Possible Values: ALL, scp-worker, scp-nrfproxy, and scp-nrfproxy-oauth Note: - This value cannot be null. - Do not set this parameter to any other microservice when it is set to ALL.

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
timestamp_headers_support	<pre> "featureSpecificConfig": { "dynamicResponseTimeout": true, "updateTimestampHeaders": true, "responseTransitTime": { "downstreamNF": 50, "downstreamSCP": 100, "downstreamSEPP": 300, "downstreamRoamingProxy": 300 } } </pre>	To enable or disable the timestamp_headers_support feature. - dynamicResponseTimeout: This parameter, when set to true, enables SCP to perform dynamic response time calculations based on the received timestamp headers. It updates or adds the 3gpp-Sbi-Sender-Timestamp and 3gpp-Sbi-Max-Rsp-Time headers in the egress SBI request. Additionally, when this parameter is enabled, the value of updateTimestampHeaders will not have any impact. – Date Type: Boolean – Default Value: true – Range: true or false - updateTimestampHeaders: This parameter, when set to true and dynamicResponseTimeout is false, allows SCP to add or update the 3gpp-Sbi-Sender-Timestamp and 3gpp-Sbi-Max-Rsp-Time headers in the egress SBI request. The 3gpp-Sbi-Sender-Timestamp is set to reflect the current timestamp, while the 3gpp-Sbi-Max-Rsp-Time will be set to the configured responseTimeout value for the specific service. – Date Type: Boolean – Default Value: true – Range: true or false Moreover, when dynamicResponseTimeout is true, the value of updateTimestampHeaders will not have any impact and should be set to true. In this case, SCP will always add or update the 3gpp-Sbi-Sender-Timestamp and 3gpp-Sbi-Max-Rsp-Time headers in the egress SBI request. - responseTransitTime: This parameter specifies the minimum estimated transit time required (in milliseconds) for the response to reach back to the original sender, whether it's the Consumer NF, SCP, or SEPP."responseTransitTime": <pre> { "downstreamNF": 50, "downstreamSCP": 100, "downstreamSEPP": 300} </pre> - responseTransitTime.downstreamNF: This parameter specifies the minimum estimated transit time required (in milliseconds) for the response to return to the original requester NF. – Date Type: Integer – Default Value: 50 – Range: 0 - 10000

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
		• <code>responseTransitTime.downstreamSCP</code>: This parameter specifies the minimum estimated transit time required (in milliseconds) for the response to return to the original requester SCP. – Date Type: Integer – Default Value: 100 – Range: 0 - 10000 • <code>responseTransitTime.downstreamSEPP</code>: This parameter specifies the minimum estimated transit time required (in milliseconds) for the response to return to the original requester SEPP. – Date Type: Integer – Default Value: 300 – Range: 0 - 10000 • <code>responseTransitTime.downstreamRoamingProxy</code>: This parameter specifies the minimum estimated transit time (in milliseconds) required for the response to reach the custom roaming proxy. SCP reserves this time when calculating the total transaction lifetime for the request. – Date Type: Integer – Default Value: 300 – Range: 0 - 10000
enhanced_notifications_handling	<pre>"featureSpecificConfig": { "alternateRoutingWithoutServName": false }</pre>	To enable or disable the Enhanced Notifications Handling feature. <code>alternateRoutingWithoutServName</code>: Enables or disables SCP to alternate route notification requests even if the service name is unavailable in the 3gpp-Sbi-Routing-Binding header. This parameter can have the following values: • <code>true</code>: Enables SCP to perform alternate routing of notification requests. • <code>false</code>: Refrains SCP from performing alternate routing of notification requests. • Date Type: Boolean • Default Value: <code>false</code>
ingress_rate_limit	NA	This is not applicable for <code>ingress_rate_limit</code> . You must keep it empty, that is, <code>featureSpecificConfig: {}</code> .
egress_rate_limit	NA	This is not applicable for <code>egress_rate_limit</code> . You must keep it empty, that is, <code>featureSpecificConfig: {}</code> .

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
nf_discovery_enhancement	<pre>"featureSpecificConfig": { "nfStatusForLocalDiscRespC reation": ["REGISTERED"] }</pre>	nfStatusForLocalDiscRespCreation: Indicates which NFs to consider during static discovery. • Data Type: array (string) • Default Value: ["REGISTERED"] • Range: ["REGISTERED","SUSPENDED","UNDISCOVERABLE"]
nf_selection_enhancement	NA	This is not applicable for nf_selection_enhancement. You must keep it empty, that is, featureSpecificConfig: {}.

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
subid_to_nfgrp_id_resolution	<pre> "featureSpecificConfig": { "supportedDeploymentModes" : ["INDIRECT_COM_WITH_DELEG_D ISCOVERY"], "supportedNfTypes": ["UDM", "AUSF"], "forwardResolvedSubIdToNextHopScp": false, "forwardRcvdSubIdToNrf": true, "forwardRcvdSubIdToNextHopScp": true } </pre>	To enable or disable subscriber ID to NF GroupId. - supportedDeploymentMode: Specifies the supported deployment modes for SLF lookup configuration in indirect communication scenarios. Only predefined values are allowed, and duplicate entries are not permitted. – Date Type: Array(String) – Priority: M – Default Value: INDIRECT_COM_WITH_DELEG_DISCOVERY – Range: INDIRECT_COM_WITH_DELEG_DISCOVERY - supportedNfTypes: Defines the list of applicable target NF types for which this feature is enabled. Values must be valid NF types from the NfType-NfService REST API, must not include *, must be unique, and the list must not be empty. Note: Ensure that the included nfType parameter contains the groupId information. – Date Type: Array(NfType) – Priority: M – Default Value: "UDM", "AUSF" – Range: All NfType from the NfTypes-NfServices REST API configuration except '*' - forwardResolvedSubIdToNextHopScp: Determines whether the subscriber ID is removed when forwarding a request to the next hop SCP after group ID resolution in inter-SCP scenarios. Only boolean values are accepted. – Date Type: boolean – Priority: O – Default Value: false – Range: true or false - forwardRcvdSubIdToNrf: Controls whether the received subscriber ID is included as a query parameter during NRF discovery when both subscriber ID and group ID are received. Only boolean values are accepted. – Date Type: boolean – Priority: O – Default Value: true – Range: true or false - forwardRcvdSubIdToNextHopScp: Specifies whether the subscriber ID header should be removed before forwarding the

Table 2-3 (Cont.) Mapping of FeatureSpecificConfig per Feature

Feature(featureName)	featureSpecificConfig	Description
		request to the next hop SCP when both the subscriber ID and group ID are received. Only boolean values are accepted. – Date Type: boolean – Priority: O – Default Value: true – Range: true or false

Response Body

The following table describes response body data models that varies based on the REST operation status.

Table 2-4 Response Body Data Type

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
array(SCPFeaturesWrapper)	M	1	200 OK	Indicates the list of SCP features (SCPFeaturesWrapper) matching criteria.
ProblemDetails	M	1	404 NOT FOUND	Returns when the data is not found for given query parameters.

JSON Format

```
[
  {
    "featureName": "string",
    "enabled": false,
    "featureSpecificConfig": {
      ...
    }
  }, {
    ...
  }
]
```

Resource Definition**GET REST API**

This resource fetches the SCP feature details (SCPFeaturesWrapper) based on the query parameters.

If no query parameter is provided, all the SCP feature detail are returned.

Resource URI: /ocscp/scpc-configuration/v1/scp-features

The following table describes the URI query parameters supported by the GET method on this resource.

Table 2-5 URI Query Parameters Supported by the GET Method

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
featureName	String	O	Specifies the identity of featureName for which SCP features are fetched.

Note

featureName is a valid combination of query parameter or path variable.

Table 2-6 Data Structures Supported by the GET Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
array(SCPFeaturesWrapper)	M	1	200 OK	Indicates the list of SCP features or specific record based on query parameters.
ProblemDetails	M	1	404 NOT FOUND	Returns when the data is not found for given query parameters.

Example

Successful response 1

```
$ curl -X GET "http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features"
-H "accept: application/json"
```

```
[
  {
    "featureName": "interplmn_routing",
    "enabled": false,
    "featureSpecificConfig": {
      "customRoamingProxySupport": false
    },
    "createdTimestamp": "2025-11-26 00:04:42.0",
    "updatedTimestamp": "2025-11-27 03:15:13.0"
  }
]
```

Successful response 2

```
$ curl -X GET "http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/interplmn_routing" -H "accept: application/json"
```

```
{
  "featureName": "interplmn_routing",
  "enabled": false,
  "featureSpecificConfig": {
    "customRoamingProxySupport": true
  },
  "createdTimestamp": "2025-11-26 00:04:42.0",
  "updatedTimestamp": "2025-11-27 03:15:13.0"
}
```

Successful response 3

```
$ curl -X GET "http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features?featureName=interplmn_routing" -H "accept: application/json"
```

```
{
  "featureName": "interplmn_routing",
  "enabled": false,
  "featureSpecificConfig": {
    "customRoamingProxySupport": false
  },
  "createdTimestamp": "2025-11-26 00:04:42.0",
  "updatedTimestamp": "2025-11-27 03:15:13.0"
}
```

Successful response 4

```
curl -X GET "http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/egress_host_preference" -H "accept: application/json"
```

Code: 200

```
{
  "featureName": "egress_host_preference",
  "enabled": false,
  "featureSpecificConfig": {
    "fqdnResolution": {
      "fqdn": "nfProfile",

```

```

        "interPlmnFqdn": "dns"
      },
      "hostPreference": {
        "request": {
          "apiRootHdrPresent": "passThrough",
          "scpGeneratedNrfMsg": "ip",
          "apiRootHdrNotPresent": "ip"
        },
        "response": {
          "headers": "followRequest"
        }
      }
    }
  }
}

```

Successful response 5

```
$ curl -X 'GET' 'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/location_hdr_update_for_host_mismatch' -H 'accept: application/json'
```

```

{
  "featureName": "location_hdr_update_for_host_mismatch",
  "enabled": false
}

```

Successful response 6

```
$ curl -X 'GET' 'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/cca_header_validation' -H 'accept: application/json'
```

```

{
  "featureName": "cca_header_validation",
  "enabled": false,
  "featureSpecificConfig": {
    "validations": [
      {
        "type": "subject",
        "errorProfileName": "ccaVerificationError",
        "producerNfType": []
      }
    ],
    "tls_cert_san": {
      "preferred_validation_order": [
        "URI-ID-URN",
        "DNS-ID",
        "IP-ADDRESS",
        "URI-ID-APIROOT"
      ],
      "max_entries_to_process": 30
    }
  }
}

```

```
    }
  }
}
```

Successful response 7

```
$ curl -X 'GET' 'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/enhanced_error_rsp' -H 'accept: application/json'
```

```
{
  "featureName": "enhanced_error_rsp",
  "enabled": true,
  "featureSpecificConfig": {
    "problemDetailsEnhancement": {
      "errorDetailMaxSize": 2100
    }
  }
}
```

Successful response 8

```
$ curl -X 'GET' 'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/additional_logging' -H 'accept: application/json'
```

```
{
  "featureName": "additional_logging",
  "enabled": false,
  "featureSpecificConfig": {
    "scpGeneratedErrorRspLogging": {
      "enabled": false,
      "scpServiceNames": [
        "scp-worker"
      ]
    }
  }
}
```

Successful response 9

```
$ curl -X 'GET' 'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/log_subscriber_info' -H 'accept: application/json'
```

```
{
  "featureName": "log_subscriber_info",
  "enabled": false,
  "featureSpecificConfig": {
```

```

        "scpServiceNames": [
            "ALL"
        ]
    }
}

```

Successful response 10

```
$ curl -X GET "http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/mediation" -H "accept: application/json"
```

```

{
  "featureName": "mediation",
  "enabled": false,
  "featureSpecificConfig": {
    "userDefinedVariable": {
      "enabled": false,
      "maxUserDefinedVariableSize": 1024,
      "maxUserDefinedVariableCount": 100
    }
  },
  "createdTimestamp": "2024-11-13 10:28:24.0",
  "updatedTimestamp": "2024-11-18 08:59:40.0"
}

```

Successful response 11

```
$ curl -X 'GET' 'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/timestamp_headers_support' -H 'accept: application/json'
```

```

{
  "featureName": "timestamp_headers_support",
  "enabled": false,
  "featureSpecificConfig": {
    "dynamicResponseTimeout": true,
    "updateTimestampHeaders": true,
    "responseTransitTime": {
      "downstreamNF": 50,
      "downstreamSCP": 100,
      "downstreamSEPP": 300,
      "downstreamRoamingProxy": 300
    }
  },
  "createdTimestamp": "2025-12-22 13:21:00.0",
  "updatedTimestamp": "2025-12-22 13:21:00.0"
}

```


Successful response 12

```
$ curl -X 'GET' 'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/enhanced_notifications_handling' -H 'accept: application/json'
```

```
{
  "featureName": "enhanced_notifications_handling",
  "enabled": true,
  "featureSpecificConfig": {
    "alternateRoutingWithoutServName": true
  }
}
```

Successful response 13

```
$ curl -X 'GET' \
'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/nf_discovery_enhancement' \
-H 'accept: application/json'
```

```
{
  "featureName": "nf_discovery_enhancement",
  "enabled": true,
  "featureSpecificConfig": {
    "nfStatusForLocalDiscRespCreation": [
      "REGISTERED"
    ]
  },
  "createdTimestamp": "2025-10-30 08:27:48.0",
  "updatedTimestamp": "2025-10-30 08:27:48.0"
}
```

Successful response 14

```
$ curl -X 'GET' \
'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/nf_selection_enhancement' \
-H 'accept: application/json'
```

```
{
  "featureName": "nf_selection_enhancement",
  "enabled": true,
  "createdTimestamp": "2025-10-30 08:27:48.0",
  "updatedTimestamp": "2025-10-30 08:27:48.0"
}
```

Successful response 14

```
curl -X 'GET' 'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/  
subid_to_nfgrp_id_resolution' -H 'accept: application/json'
```

Response Body:

```
{  
  "featureName": "subid_to_nfgrp_id_resolution",  
  "enabled": true,  
  "featureSpecificConfig": {  
    "supportedDeploymentModes": [  
      "INDIRECT_COM_WITH_DELEG_DISCOVERY"  
    ],  
    "supportedNfTypes": [  
      "UDM",  
      "AUSF"  
    ],  
    "forwardResolvedSubIdToNextHopScp": false,  
    "forwardRcvdSubIdToNrf": true,  
    "forwardRcvdSubIdToNextHopScp": true  
  }  
}
```

Failure case 1

```
$ curl -X GET "http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features?  
featureName=routing_options" -H "accept: application/json"
```

Response Body:

```
{  
  "title": "Not Found",  
  "status": "404",  
  "detail": "SCP Features configuration data not found against given query  
parameter(s), Please refer to the User Guide.",  
  "instance": "/ocscp/scpc-configuration/v1/scp-features?  
featureName=routing_options",  
  "cause": "DATA_NOT_FOUND"  
}
```

Failure case 2

```
curl -X GET "http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/  
egress_host_preferenceheader1" -H "accept: application/json"
```

Response Body:

```
{
  "title": "Not Found",
  "status": "404",
  "detail": "SCP Features configuration data not found against given query
parameter(s), Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/scp-features/
egress_host_preferenceheader1",
  "cause": "DATA_NOT_FOUND"
}
```

PUT REST API

This resource adds or updates the feature-specific information based on the provided feature name in the Resource URI.

Resource URI: /ocscp/scpc-configuration/v1/scp-features/{featureName}

Table 2-7 Data Structures Supported by the PUT Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
SCPFeaturesWrapper	M	1	200 OK	Indicates the SCP feature configuration data.
ProblemDetails	M	1	400 BAD REQUEST	Returns the ProblemDetails structure as defined in 3GPP TS 29.571 section 5.2.4.1.

Example

Successful response 1:

```
$ curl -X'PUT'\http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/
interplmn_routing'\-H'accept: application/json'\-H'Content-Type: application/
json'\-d'{  "featureName": "interplmn_routing",  "enabled": false,
"featureSpecificConfig": {    "customRoamingProxySupport": false  } }'
{
  "featureName": "interplmn_routing",
  "enabled": false,
  "featureSpecificConfig": {
    "customRoamingProxySupport": false
  },
  "createdTimestamp": "2025-11-26 00:04:42",
  "updatedTimestamp": "2025-11-27 10:26:39"
}
200 OK
```

Successful response 2:

```
curl -X PUT "http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/
egress_host_preference" -H "accept: */*" -H "Content-Type: application/json" -
d
{"featureName":"egress_host_preference","enabled":false,"featureSpecif
icConfig":{"fqdnResolution":
{"fqdn":"nfProfile","interPlmnFqdn":"dns"},"hostPreference":
{"request":
```

```
{\"apiRootHdrPresent\": \"passThrough\", \"scpGeneratedNrfMsg\": \"ip\", \"apiRootHdrNotPresent\": \"ip\"}, \"response\": {\"headers\": \"followRequest\"}}}]\"

{
  \"featureName\": \"egress_host_preference\",
  \"enabled\": false,
  \"featureSpecificConfig\": {
    \"fqdnResolution\": {
      \"fqdn\": \"nfProfile\",
      \"interPlmnFqdn\": \"dns\"
    },
    \"hostPreference\": {
      \"request\": {
        \"apiRootHdrPresent\": \"passThrough\",
        \"scpGeneratedNrfMsg\": \"ip\",
        \"apiRootHdrNotPresent\": \"ip\"
      },
      \"response\": {
        \"headers\": \"followRequest\"
      }
    }
  }
}
200 OK
```

Successful response 3:

```
curl -X 'PUT' 'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/cca_header_validation' -H 'accept: */*' -H 'Content-Type: application/json' -d '
{ \"featureName\": \"cca_header_validation\", \"enabled\": false,
  \"featureSpecificConfig\": {\"validations\": [{\"type\":
    \"subject\", \"errorProfileName\": \"ccaVerificationError\",
    \"producerNfType\": []}], \"tls crt san\": {\"preferred_validation_order\": [\"URI-ID-URN\", \"DNS-ID\", \"IP-ADDRESS\", \"URI-ID-APIROOT\"], \"max_entries_to_process\": 30}}}'

{
  \"featureName\": \"cca_header_validation\",
  \"enabled\": false,
  \"featureSpecificConfig\": {
    \"validations\": [
      {
        \"type\": \"subject\",
        \"errorProfileName\": \"ccaVerificationError\",
        \"producerNfType\": []
      }
    ],
    \"tls crt san\": {
      \"preferred_validation_order\": [
        \"URI-ID-URN\",
        \"DNS-ID\",
        \"IP-ADDRESS\",
        \"URI-ID-APIROOT\"
      ],
      \"max_entries_to_process\": 30
    }
  }
}
```

```

    }
  }
}

```

Successful response 4:

```

curl -X 'PUT' \
  'http://<SCP configuration FQDN>:<port>/ocscp/scpc-configuration/v1/scp-features/enhanced_nf_status_processing' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{
    "featureName": "enhanced_nf_status_processing",
    "enabled": true,
    "featureSpecificConfig": {"enhancedSuspendedStateRouting": ["AMF", "PCF", "NEF"]} }
  '
```

Successful response 5:

```

curl -X PUT "http://<configuration-fqdn>:<configuration-port>/ocscp/scpc-configuration/v1/scp-features/enhanced_error_rsp" -H "accept: */*" -H "Content-Type: application/json" -d "
{
  "featureName": "enhanced_error_rsp",
  "enabled": true,
  "featureSpecificConfig": {
    "problemDetailsEnhancement": {
      "errorDetailMaxSize": 2100
    }
  }
}
"
200 OK

```

Successful response 6:

```

curl -X PUT "http://<configuration-fqdn>:<configuration-port>/ocscp/scpc-configuration/v1/scp-features/additional_logging" -H "accept: */*" -H "Content-Type: application/json" -d "
{
  "featureName": "additional_logging",
  "enabled": true,
  "featureSpecificConfig": {
    "scpGeneratedErrorRspLogging": {
      "enabled": true,
      "scpServiceNames": [
        "scp-worker"
      ]
    }
  }
}
"
200 OK

```

Successful response 7:

```
curl -X PUT "http://<configuration-fqdn>:<configuration-port>/ocscp/scpc-configuration/v1/scp-features/log_subscriber_info" -H "accept: */*" -H "Content-Type: application/json" -d "{
  \"featureName\": \"log_subscriber_info\",
  \"enabled\": true,
  \"featureSpecificConfig\": {
    \"scpServiceNames\": [
      \"scp-nrfproxy-oauth\"
    ]
  }
}"
200 OK
```

Successful response 8:

```
bash-4.4$ curl -X 'PUT' \
  'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/mediation' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{
    \"featureName\": \"mediation\",
    \"enabled\": true,
    \"featureSpecificConfig\": {
      \"userDefinedVariable\": {
        \"enabled\": true,
        \"maxUserDefinedVariableSize\": 1024,
        \"maxUserDefinedVariableCount\": 100
      }
    }
  }'
{"featureName":"mediation","enabled":true,"featureSpecificConfig":{
{"userDefinedVariable":{
{"enabled":true,"maxUserDefinedVariableSize":1024,"maxUserDefinedVariableCount":100}},
"createdTimestamp":"2024-11-13
10:28:24","updatedTimestamp":"2024-11-18 09:08:53"}bash-4.4$
```

Successful response 9:

```
curl -X 'PUT' \
  'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/timestamp_headers_support' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{
    \"featureName\": \"timestamp_headers_support\",
    \"enabled\": false,
    \"featureSpecificConfig\": {
      \"dynamicResponseTimeout\": true,
      \"updateTimestampHeaders\": true,
      \"responseTransitTime\": {
        \"downstreamNF\": 50,
        \"downstreamSCP\": 100,

```

```

        "downstreamSEPP": 300,
        "downstreamRoamingProxy": 300
    }
}
}'

```

200 OK

Successful response 10:

```

curl -X 'PUT' \
'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/
enhanced_notifications_handling' \
-H 'accept: */*' \
-H 'Content-Type: application/json' \
-d '{
  "featureName": "enhanced_notifications_handling",
  "enabled": true,
  "featureSpecificConfig": {
    "alternateRoutingWithoutServName": true,
  }
}'

```

200 OK

Successful response 11:

```

Request->
curl -X 'PUT' \
'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/
ingress_connection_management' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "featureName": "ingress_connection_management",
  "enabled": true,
  "featureSpecificConfig": {
    "ingressConnMgmtAction": {
      "streamAdjustment": true,
      "connectionTermination": true,
      "messageDiscard": true
    }
  }
}'

```

```

Response->
Response Code: 200
Response Body:
{
  "featureName": "ingress_connection_management",
  "enabled": true,
  "featureSpecificConfig": {
    "ingressConnMgmtAction": {
      "streamAdjustment": true,
      "connectionTermination": true,

```

```

        "messageDiscard": true
    }
}
}

```

Successful response 12:

```

Request->
curl -X 'PUT' \
'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/
object_pool_overload_control' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "featureName": "object_pool_overload_control",
  "enabled": true,
  "featureSpecificConfig": {
    "objectPoolAction": {
      "streamAdjustment": true,
      "connectionTermination": true,
      "messageDiscard": true
    }
  }
}'

```

```

Response->
Response Code: 200
Response Body:
{
  "featureName": "object_pool_overload_control",
  "enabled": true,
  "featureSpecificConfig": {
    "objectPoolAction": {
      "streamAdjustment": true,
      "connectionTermination": true,
      "messageDiscard": true
    }
  }
}

```

Successful response 13:

```

curl -X 'PUT' \
'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/
subid_to_nfgrp_id_resolution' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "featureName": "subid_to_nfgrp_id_resolution",
  "enabled": false,
  "featureSpecificConfig": {
    "supportedDeploymentModes": [
      "INDIRECT_COM_WITH_DELEG_DISCOVERY"
    ],
    "supportedNfTypes": [

```



```

        "UDM",
        "AUSF",
        "PCF"
    ],
    "forwardResolvedSubIdToNextHopScp": false,
    "forwardRcvdSubIdToNrf": true,
    "forwardRcvdSubIdToNextHopScp": true
}
}'

```

Failure case 1:

① Note

In case SCP is not configured with local or foreign PLMNs and invalid NF type is configured for this feature, you receive a Bad Request 400 with error message.

```

$ curl -X PUT "http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features"
-H "accept: application/json" -H "Content-Type: application/json" -d
{"\featureName\":"interplmn_routing\",
\enabled\":"false\", \"featureSpecificConfig\":"{}\"}

```

Response Body:

```

{
  "title": "Bad Request",
  "status": "400",
  "detail": "Missing mandatory configuration. At least one local PLMN (SCP
Profile) and one remote PLMN (SeppConfig) should be configured for enabling
this feature.",
  "instance": "/ocscp/scpc-configuration/v1/scp-features",
  "cause": "MANDATORY_IE_INCORRECT"
}

```

Failure case 2:

```

curl -X 'PUT' \ 'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-
features/cca_header_validation' \ -H 'accept: */*' \ -H 'Content-Type:
application/json' \ -d '
{ "featureName": "cca_header_validation", "enabled": false,
"featureSpecificConfig": { "validations": [{"type": "abc",
"errorProfileName": "ccaVerificationError", "producerNfType":
[]}], "tls crt san": {"preferred_validation_order": ["URI-ID-URN", "DNS-ID", "IP-
ADDRESS", "URI-ID-APIROOT"], "max_entries_to_process": 30}}}'

```

```

Response Body: {
  "title": "Bad Request",
  "status": "400",
  "detail": "Validation type field value should be headerPresence/subject.
Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/scp-features/
cca_header_validation",
  "cause": "MANDATORY_IE_INCORRECT"
}

```

```
}
```

Failure case 3:

Request->

```
curl -X PUT "http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/
enhanced_error_rsp" -H "accept: */*" -H "Content-Type: application/json" -d "
```

```
{
  "featureName": "enhanced_error_rsp",
  "enabled": true,
  "featureSpecificConfig": {
    "problemDetailsEnhancement": {
      "errorDetailMaxSize": 3200
    }
  }
}
```

Response->

Response Code: 400

Response Body:

```
{
  "title": "Bad Request",
  "status": 400,
  "detail": "errorDetailMaxSize range should be between 1000 to 3100",
  "instance": "/ocscp/scpc-configuration/v1/scp-features/enhanced_error_rsp",
  "cause": "MANDATORY_IE_INCORRECT"
}
```

Failure case 4:

Request->

```
curl -X PUT "http://<configuration-fqdn>:<configuration-port>/ocscp/scpc-
configuration/v1/scp-features/additional_logging" -H "accept: */*" -H
"Content-Type: application/json" -d "
```

```
{
  "featureName": "additional_logging",
  "enabled": true,
  "featureSpecificConfig": {
    "scpGeneratedErrorRspLogging": {
      "enabled": true,
      "scpServiceNames": [
        "scp-worker", "xyz"
      ]
    }
  }
}
```

Response->

Response Code: 400

Response Body:

```
{
  "title": "Bad Request",
```

```

    "status": 400,
    "detail": "Invalid Service name found in scpServiceNames field. Supported
Values is either ALL or scp-worker only. Please refer to the User Guide.",
    "instance": "/ocscp/scpc-configuration/v1/scp-features/additional_logging",
    "cause": "MANDATORY_IE_INCORRECT"
}

```

Failure case 5:

Request->

```

curl -X PUT "http://<configuration-fqdn>:<configuration-port>/ocscp/scpc-
configuration/v1/scp-features/additional_logging" -H "accept: */*" -H
"Content-Type: application/json" -d "
{
  "featureName": "additional_logging",
  "enabled": true,
  "featureSpecificConfig": {
    "scpGeneratedErrorRspLogging": {
      "enabled": true,
      "scpServiceNames": [
        "scp-worker", "scp-worker"
      ]
    }
  }
}

```

Response->

Response Code: 400

Response Body:

```

{
  "title": "Bad Request",
  "status": 400,
  "detail": "scpServiceNames field should not contain duplicate values.
Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/scp-features/additional_logging",
  "cause": "MANDATORY_IE_INCORRECT"
}

```

Failure case 6:

Request->

```

curl -X PUT "http://<configuration-fqdn>:<configuration-port>/ocscp/scpc-
configuration/v1/scp-features/additional_logging" -H "accept: */*" -H
"Content-Type: application/json" -d "
{
  "featureName": "additional_logging",
  "enabled": true,
  "featureSpecificConfig": {
    "scpGeneratedErrorRspLogging": {
      "enabled": true,
      "scpServiceNames": [
        "ALL", "scp-worker"
      ]
    }
  }
}

```

```

}

Response->
Response Code: 400
Response Body:
{
  "title": "Bad Request",
  "status": 400,
  "detail": "scpServiceNames field should not contain any other microservice
name when ALL is present. Supported Values is either ALL or scp-worker only.
Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/scp-features/additional_logging",
  "cause": "MANDATORY_IE_INCORRECT"
}

```

Failure case 7:

```

Request->
curl -X PUT "http://<configuration-fqdn>:<configuration-port>/ocscp/scpc-
configuration/v1/scp-features/log_subscriber_info" -H "accept: */*" -H
"Content-Type: application/json" -d "
{
  "featureName": "log_subscriber_info",
  "enabled": true,
  "featureSpecificConfig": {
    "scpServiceNames": [
      "scp-worker", "scp-nrfproxy", "xyz-oauth"
    ]
  }
}
"

Response->
Response Code: 400
Response Body:
{
  "title": "Bad Request",
  "status": 400,
  "detail": "Invalid Service name found in scpServiceNames field. Supported
Values is either ALL or scp-worker, scp-nrfproxy, scp-nrfproxy-oauth only.
Please refer to the User Guide",
  "instance": "/ocscp/scpc-configuration/v1/scp-features/additional_logging",
  "cause": "MANDATORY_IE_INCORRECT"
}

```

Failure case 8:

```

Request->
curl -X PUT "http://<configuration-fqdn>:<configuration-port>/ocscp/scpc-
configuration/v1/scp-features/log_subscriber_info" -H "accept: */*" -H
"Content-Type: application/json" -d "
{
  "featureName": "log_subscriber_info",
  "enabled": true,
  "featureSpecificConfig": {
    "scpServiceNames": [

```

```

        "scp-worker", "scp-nrfproxy", "scp-nrfproxy-oauth", "scp-worker", "scp-
nrfproxy-oauth"
    ]
}
}

```

Response->

Response Code: 400

Response Body:

```

{
  "title": "Bad Request",
  "status": 400,
  "detail": "scpServiceNames field should not contain duplicate values.
Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/scp-features/additional_logging",
  "cause": "MANDATORY_IE_INCORRECT"
}

```

Failure case 9:

Request->

```

curl -X 'PUT' \
'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/
timestamp_headers_support' \
-H 'accept: */*' \
-H 'Content-Type: application/json' \
-d '{
  "featureName": "timestamp_headers_support",
  "enabled": false,
  "featureSpecificConfig": {
    "dynamicResponseTimeout": true,
    "updateTimestampHeaders": true,
    "responseTransitTime": {
      "downstreamNF": 50000,
      "downstreamSCP": 100,
      "downstreamSEPP": 300,
      "downstreamRoamingProxy": 300
    }
  }
}'

```

Response->

Response Code: 400

Response Body:

```

{
  "title": "Bad Request",
  "status": 400,
  "detail": "featureSpecificConfig field downstreamNF value should be between
0 to 10000.",
  "instance": "/ocscp/scpc-configuration/v1/scp-features/
timestamp_headers_support",
  "cause": "MANDATORY_IE_INCORRECT"
}

```

Failure case 10:

```
Request->
curl -X 'PUT' \
  'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/
timestamp_headers_support' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{
    "featureName": "timestamp_headers_support",
    "enabled": false,
    "featureSpecificConfig": {
      "dynamicResponseTimeout": true,
      "updateTimestampHeaders": false,
      "responseTransitTime": {
        "downstreamNF": 50,
        "downstreamSCP": 100,
        "downstreamSEPP": 300,
        "downstreamRoamingProxy": 300
      }
    }
  }'
```

Response->
Response Code: 400
Response Body:

```
{
  "title": "Bad Request",
  "status": 400,
  "detail": "When dynamicResponseTimeout is true, updateTimestampHeaders must
also be true.",
  "instance": "/ocscp/scpc-configuration/v1/scp-features/
timestamp_headers_support",
  "cause": "MANDATORY_IE_INCORRECT"
}
```

Failure case 11:

```
Request->
curl -X 'PUT' \
  'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/
enhanced_notifications_handling' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{
    "featureName": "enhanced_notifications_handling",
    "enabled": true,
    "featureSpecificConfig": {
      "alternateRoutingWithoutServName": fals,
    }
  }'
```

Response->
Response Code: 400
Response Body:

```
{
  "title": "Bad Request",
  "status": 400,
  "detail": "Unrecognized token 'fals': was expecting (JSON String, Number,
Array, Object or token 'null', 'true' or 'false')\n at [Source: REDACTED
(`StreamReadFeature.INCLUDE_SOURCE_IN_LOCATION` disabled); line: 5, column:
45]",
  "instance": "/ocscp/scpc-configuration/v1/scp-features/
enhanced_notifications_handling",
  "cause": "Unrecognized token 'fals': was expecting (JSON String, Number,
Array, Object or token 'null', 'true' or 'false')\n at [Source: REDACTED
(`StreamReadFeature.INCLUDE_SOURCE_IN_LOCATION` disabled); line: 5, column:
45]"
}
```

Failure case 12:

```
Request->
curl -X 'PUT' \
'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/
ingress_connection_management' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "featureName": "ingress_connection_management",
  "enabled": true,
  "featureSpecificConfig": {
    "ingressConnMgmtAction": {
      "connectionTermination": true,
      "messageDiscard": true
    }
  }
}'
```

```
Response->
Response Code: 400
Response Body:
{
  "title": "Bad Request",
  "status": 400,
  "detail": "action.streamAdjustment is missing, Please refer to the User
Guide.",
  "instance": "/ocscp/scpc-configuration/v1/scp-features/
ingress_connection_management",
  "cause": "MANDATORY_IE_MISSING"
}
```

Failure case 13:

```
Request->
curl -X 'PUT' \
'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/
ingress_connection_management' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
```

```
-d '{
  "featureName": "ingress_connection_management",
  "enabled": true,
  "featureSpecificConfig": {
    "ingressConnMgmtAction": {
      "streamAdjustment": "ABC",
      "connectionTermination": true,
      "messageDiscard": true
    }
  }
}'
```

Response->

Response Code: 400

Response Body:

```
{
  "title": "Invalid boolean value received. Please refer to the User Guide.",
  "status": 400,
  "detail": "ABC value for boolean field \"streamAdjustment\" is not valid
(only true and false supported). Please refer to the User Guide.",
  "cause": "INVALID_VALUE"
}
```

Failure case 14:

Request->

```
curl -X 'PUT' \
'http://<host>:<port>/ocscp/scpc-configuration/v1/scp-features/
ingress_connection_management' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "featureName": "ingress_connection_management",
  "enabled": true,
  "featureSpecificConfig": {
    "ingressConnMgmtAction": {
      "streamAdjustment": 123,
      "connectionTermination": true,
      "messageDiscard": true
    }
  }
}'
```

Response->

Response Code: 400

Response Body:

```
{
  "title": "Invalid boolean value received. Please refer to the User Guide.",
  "status": 400,
  "detail": "123 value for boolean field \"streamAdjustment\" is not valid
(only true and false supported). Please refer to the User Guide.",
  "cause": "INVALID_VALUE"
}
```


2.2 Configuring Routing Options Config

This section describes the routing-options-config REST API parameters to configure a routing option based on the following parameters:

- messageType
- notificationType
- nfType
- nfServiceName
- method
- apiSpecificResourceUri
- senderNFType
- notificationSender
 - apiNameAxHeading
 - serviceOperation

This REST API provides a match criteria for selecting a routing option configuration. When SCP-Worker receives a message request, it extracts the above mentioned attributes from the message request and matches them to select a routing option.

Note

You must configure message routing related parameters, such as maxRoutingAttempts, responseTimeout, and so on, as described in [Configuring Routing Config Set](#).

Resources

The following table describes the resource name to retrieve, add, or update routing-options-config configuration data:

Table 2-8 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
routing-options-config	/ocscp/scpc-configuration/{version}/routing-options-config	GET	- Retrieves routing options configuration for a given query parameters. - Retrieves all routing options configurations if no query parameter is specified. Query parameters: configName, nfType, serviceName, messageType, notificationType, senderNFType, method, and apiSpecificResourceUri.
routing-options-config	/ocscp/scpc-configuration/{version}/routing-options-config/{configName}	GET	Retrieves routing options configuration for a given configName.

Table 2-8 (Cont.) Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
routing-options-config	/ocscp/scpc-configuration/{version}/routing-options-config/{configName}	PUT	- Creates new routing options configuration. - Updates routing options configuration if record exists based on provided configName. - routingConfigSetName is a foreign key, and its data should be available before creating records with configName value. - messageType should be available to map to serviceType. - nfServiceName value should be available and exception is '*' value. - nfType value should be available and exception is '*' value. - Default records (defaultSvcNotificationConfig, defaultSvcRequestConfig) cannot be modified.
routing-options-config	/ocscp/scpc-configuration/{version}/routing-options-config/{configName}	DELETE	Removes routing options configuration for a given configName.

Sample Request Body:

```
{
  "configName": "mbkmYqfZzx05E3vEYeUCg_gmCesZ7g85HC9",
  "routingOptionsConfigData": {
    "messageType": [
      "notification-message"
    ],
    "notificationType": [
      "N1_MESSAGES"
    ],
    "nfType": "udm",
    "nfServiceName": "nudm-uecm",
    "method": [
      "*"
    ],
    "apiSpecificResourceUri": "udm-nudm-uecm",
    "senderNFType": "*",
    "routingConfigSetName": "r1",
    "notificationSender": {
      "apiNameAxHeading": "Nudm_UECM",
      "serviceOperation": "Update"
    }
  }
}
```

Resource Definition**GET**

This resource fetches all the routing-options-config configurations.

Resource URI: /ocscp/scpc-configuration/{version}/routing-options-config

The following table describes the data structures supported by the GET response body on this resource:

Table 2-9 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
routingOptionsConfigDataWrapper	M	1..N	200 OK	Indicates routing-options-config configurations.

This resource fetches the routing-options-config configuration based on the configName parameter.

Resource URI: /ocscp/scpc-configuration/{version}/routing-options-config/{configName}

The following table describes the path parameter supported by the GET response body on this resource:

Table 2-10 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Fetches configuration information for configName.

The following table describes data structures supported by the GET response body on these resources:

Table 2-11 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
routingOptionsConfigDataWrapper	M	1	200 OK	Indicates routing-options-config configurations.
ProblemDetails	M	1	404 Not Found	Indicates problem details.

This resource fetches all the routing-options-config configuration based on queryParams: nfType, serviceName, notificationType, senderNFType, method, apiSpecificResourceUri, configName, and messageType.

Resource URI: /ocscp/scpc-configuration/{version}/routing-options-config?nfType={value}&serviceName={value1}&notificationType={value2}&senderNFType={value3}&method={value4}&apiSpecificResourceUri={value5}&configName={value6}&messageType={value7}

The following table describes the query parameters that can be matched to retrieve matching entries:

Table 2-12 Query Parameters

Name	Data Type	Mandatory (M) or Optional (O)	Description
nfType	String	O	Indicates the nfType to search. The NF type of the producer NF or server for which routing options are configured.
serviceName	String	O	Indicates the serviceName to search. The NF service name of producer NF or server for which routing options are configured.
notificationType	String	O	Fetches configurations based on notificationType.
senderNFType	String	O	Fetches configurations based on NF type of the sender.
method	String	O	Fetches configurations on method.
apiSpecificResourceUri	String	O	Fetches configurations on apiSpecificResourceUri.
configName	String	O	Fetches configurations on configName.
messageType	String	O	Fetches configurations on messageType.

The following table describes data structures supported by the GET response body on these resources:

Table 2-13 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
routingOptionsConfigDataWrapper	M	1..N	200 OK	Indicates routing-options-config configurations.
ProblemDetails	M	1	404 Not Found	Indicates problem details.

Sample of a Successful GET Response

```
curl -X 'GET' \
'http://<localhost>:8081/ocscp/scpc-configuration/v1/routing-options-config/
```

```
test' \
-H 'accept: application/json'

{
  "configName": "test",
  "routingOptionsConfigData": {
    "messageType": [
      "notification-message"
    ],
    "notificationType": [
      "*"
    ],
    "nfType": "PCF",
    "nfServiceName": "*",
    "method": [
      "*"
    ],
    "apiSpecificResourceUri": ".*",
    "senderNFType": "*",
    "routingConfigSetName": "notification_req_default_config_set",
    "notificationSender": {
      "apiNameAxHeading": "nudm_uecm",
      "serviceOperation": "update"
    }
  },
  "createdTimestamp": "2025-06-20 06:41:15",
  "updatedTimestamp": "2025-06-20 06:41:15"
}
```

Sample of an Error GET Response

```
curl -X 'GET' \
'http://<localhost>:8081/ocscp/scpc-configuration/v1/routing-options-config/
test1' \
-H 'accept: application/json'
```

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "Ocscp Routing Options Config data not found against given
configName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/routing-options-config/test1",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

PUT

This resource configures routing-options-config configuration for a given data.

Resource URI: /ocscp/scpc-configuration/{version}/routing-options-config/{configName}

The following table describes the path parameter supported by this resource:

Table 2-14 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Key for configurations on routingOptionsConfig.

The following table describes the data structures supported by the PUT request body on this resource:

Table 2-15 Request Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
routingOptionsConfigDataWrapper	M	1	Indicates nftypes-nfservices configurations to be added or modified.

The following table describes data structures supported by the PUT response body on these resources:

Table 2-16 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
routingOptionsConfigDataWrapper	M	1	200 OK	Successfully updated routing-options-config data.
routingOptionsConfigDataWrapper	M	1	201 Created	Successfully created routing-options-config data.
ProblemDetails	M	1	400 Bad Request	Indicates problem details.
ProblemDetails	M	1	403 Forbidden	Forbidden updating default values.

Sample of a Successful PUT Response

```
curl -X 'PUT' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/routing-options-config/test' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "test",
    "routingOptionsConfigData": {
      "messageType": [
```

```

        "notification-message"
      ],
      "notificationType": [
        "*"
      ],
      "nfType": "PCF",
      "nfServiceName": "*",
      "method": [
        "*"
      ],
      "apiSpecificResourceUri": ".*",
      "senderNFType": "*",
      "routingConfigSetName": "notification_req_default_config_set",
      "notificationSender": {
        "apiNameAxHeading": "Nudm_UECM",
        "serviceOperation": "Update"
      }
    }
  }
}'

{
  "configName": "test",
  "routingOptionsConfigData": {
    "messageType": [
      "notification-message"
    ],
    "notificationType": [
      "*"
    ],
    "nfType": "PCF",
    "nfServiceName": "*",
    "method": [
      "*"
    ],
    "apiSpecificResourceUri": ".*",
    "senderNFType": "*",
    "routingConfigSetName": "notification_req_default_config_set",
    "notificationSender": {
      "apiNameAxHeading": "nudm_uecm",
      "serviceOperation": "update"
    }
  },
  "createdTimestamp": "2025-06-20 06:41:14",
  "updatedTimestamp": "2025-06-20 06:41:14"
}

```

Sample of an Error PUT Response

```

curl -X 'PUT' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/routing-
options-config/config111' -H 'accept: application/json' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{

```

```

    "configName": "config111",
    "routingOptionsConfigData": {
      "nfType": "CUSTOM_UDM",
      "nfserviceName": "nudm-uecm",
      "messageType": ["notification-message", "svc-request-message"],
      "routingConfigSetName": "udm_nudm-uecm_routing_config_set",
      "notificationType": ["N1_MESSAGES"],
      "senderNFType": "*",
      "method": ["*"],
      "apiSpecificResourceUri": "imsi-111110000/registrations/amf-3gpp-
access"
    },
    "createdTimestamp": "2024-04-24 14:50:56.0",
    "updatedTimestamp": "2024-04-24 14:50:56.0"
  }'

{
  "title": "Bad Request",
  "status": 400,
  "detail": "NFType NfService ServiceType/MessageType combination is not
configured. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/routing-options-config/
config111",
  "cause": "MANDATORY_IE_INCORRECT"
}

```

400 Error: Bad Request

Sample 2 of an Error PUT Response

```

curl -X 'PUT' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/routing-
options-config/defaultSvcRequestConfig' -H 'accept: application/json' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "configName": "defaultSvcRequestConfig",
  "routingOptionsConfigData": {
    "nfType": "CUSTOM_UDM",
    "nfserviceName": "nudm-uecm",
    "messageType": ["notification-message", "svc-request-message"],
    "routingConfigSetName": "udm_nudm-uecm_routing_config_set",
    "notificationType": ["N1_MESSAGES"],
    "senderNFType": "*",
    "method": ["*"],
    "apiSpecificResourceUri": "imsi-111110000/registrations/amf-3gpp-
access"
  }
}'

{
  "title": "Forbidden",
  "status": 403,
  "detail": "The default configuration cannot be updated. Please refer to

```



```

the user guide.",
  "instance": "/ocscp/scpc-configuration/v1/routing-options-config/
defaultSvcRequestConfig",
  "cause": "MODIFICATION_NOT_ALLOWED"
}

```

403 Error: Forbidden

DELETE

This resource removes the routing-options-config configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/routing-options-config/{configName}

The following table describes the path parameter supported by this resource:

Table 2-17 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Removes configurations based on configName.

The following table describes the data structures supported by the DELETE response body on this resource:

Table 2-18 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
ProblemDetails	M	1	403 Forbidden	Removes default data results
ProblemDetails	M	1	404 Not Found	Indicates the problem details.
NA	-	1	204 No Content	Successful removal of record.

Sample of a Successful DELETE Response

```

curl -X 'DELETE' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/routing-
options-config/config111' -H 'accept: application/json' \ -H 'accept:
application/json'

```

204 No Content

Sample of an Error DELETE Response

```
curl -X 'DELETE' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/routing-
options-config/config111' -H 'accept: application/json' \
-H 'accept: application/json'
```

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "Ocscp Routing Options Config data not found against given
configName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/routing-options-config/
config111",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

Sample 2 of an Error DELETE Response

```
curl -X 'DELETE' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/routing-
options-config/defaultSvcRequestConfig' -H 'accept: application/json' \
-H 'accept: application/json'
```

```
{
  "title": "Forbidden",
  "status": 403,
  "detail": "The default configuration cannot be deleted. Please refer to
the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/routing-options-config/
defaultSvcRequestConfig",
  "cause": "DATA_CANT_DELETED"
}
```

403 Error: Forbidden

Data Model

The following table describes data model for request or response:

Table 2-19 routingOptionsConfigDataWrapper

Field Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Unique configName key to identify the records. Number of characters is 256. Allowed character combinations should be alpha-numeric, hyphen, and underscore.
routingOptionsConfigData	JSON	M	User defined values for json data, structure is predefined with keys as defined in routingOptionsConfigData.
createdTimestamp	String	Read Only	Timestamp of the created record. This is not required in the request, but it is present in the response.

Table 2-19 (Cont.) routingOptionsConfigDataWrapper

Field Name	Data Type	Mandatory (M) or Optional (O)	Description
updatedTimestamp	String	Read Only	Timestamp of the updated record. This is not required in the request, but it is present in the response.

The following table describes parameters of routingOptionsConfigData:

Table 2-20 routingOptionsConfigData Parameters

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Range	Description
nfType	String	M	NA	Allowed character combinations should be alpha-numeric, hyphen, underscore, and *.	Indicates the NF type for which routing options are configured. This is either 3GPP defined NFType as per TS 29.510 or custom NFType. Entry for NFType SCP and SEPP is not allowed. "*" keyword is allowed to indicate any NFType match. Length: 100
nfServiceName	String	M	NA	Allowed character combinations should be alpha-numeric, hyphen, underscore, and *.	Indicates the NF service name for which routing options are configured. This is either 3GPP defined serviceName as per TS29.510 or any custom service name. If a particular NFType does not have NF service, "*" keyword is used for serviceName. Length: 100
messageType	Array(Enum)	M	NA	["notification-message", "svc-request-message"]	Provides a list of message type, such as notifications and SBI-messages, for which the routing configurations will apply. messageType is a foreign key mapped to serviceType and the mapping of service_type should be available.
routingConfigSetName	String	M	NA	Allowed character combinations should be alpha-numeric, hyphen, and underscore.	Indicates the name of the Routing Config set record, a rule with this name must be available.

Table 2-20 (Cont.) routingOptionsConfigData Parameters

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Range	Description
notificationType	Array(Enum)	O	*	N1_MESSAGE_S, N2_INFORMATION, LOCATION_NOTIFICATION, DATA_REMOVAL_NOTIFICATION, DATA_CHANGE_NOTIFICATION, *, LOCATION_UPDATE_NOTIFICATION, NSSA_REALTIME_NOTIFICATION, NSSA_REVOKE_NOTIFICATION, MATCH_INFORMATION, DATA_RESTORE_NOTIFICATION, TSCTS_NOTIFICATION, LCS_KEY_DELIVERY_NOTIFICATION, UUAA_MM_AUTH_NOTIFICATION	Indicates the notification type. If messageType has notification messages, notificationType may be configured. If messageType is only svc-request-message, notificationType must be blank. If messageType is only notification-message, notificationType is optional, and it can be configured. If not configured, '*' value will be configured. If messageType is both, notificationType is optional, and it can be configured. If not configured by user, '*' value will be configured.
senderNFType	String	O	*	*	Configures consumer NFType. It decides routing options based on the sender or consumer NFType that sends the message to SCP for routing. NFType is obtained from the following headers in order of precedence: • XFCC or User-Agent headers • 3gpp-sbi-callback If senderNFType is not provided or null or empty is provided, '*' is configured, which means any value of the parameter is accepted when matched with the header attributes. Length: 100

Table 2-20 (Cont.) routingOptionsConfigData Parameters

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Range	Description
method	Array(Enum)	O	Array having the * value	*,GET,PUT,POST,PATCH,OPTIONS,TRACE,HEAD,CONNECT,DELETE	Indicates the method type. If no value is provided, '*' is configured for method. This indicates that SCP-Worker will match any method type from following list: • GET • PUT • POST • PATCH • OPTIONS • TRACE • HEAD • CONNECT • DELETE Note: Both method and apiSpecificResourceUri should be configured for service operation specific configurations.

Table 2-20 (Cont.) routingOptionsConfigData Parameters

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Range	Description
apiSpecificResourceUri	String	O	.*	-	REGEX expression which is used to validate apiSpecificResourceUri in the RX request. REGEX should be valid as per Java regex validator. Sample: Ingress request URI: /USEast/nudm-uecm/v1/imsi-1000000001/registrations/amf-3gpp-access Not matched regex: imsi-1000000001/registrations/amf-3gpp-access "/" is considered as part of apiSpecificResourceUri for matching. Hence, the provided regex does not match. Matched regex: /imsi-1000000001/registrations/amf-3gpp-access Ingress request URI: /USEast/nausf-auth/v1/ue-authentications Matched regex: *auth.* Note: Both method and apiSpecificResourceUri should be configured for service operation specific configurations.
notificationSender	json	O	NA	NA	Specifies the notification sender details and is used to identify the API that sends the notification. If this parameter is not configured, it will be considered as a match-all, meaning any value for the parameter will be accepted during matching with the header attributes.

Table 2-20 (Cont.) routingOptionsConfigData Parameters

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Range	Description
notificationSender.apiNameAxHeading	String	M	NA	Allowed values are the configured values of apiNameAxHeading in the NFTypes-NFServices REST API.	Indicates the service type of the consumer NF. The value of this parameter is the first part of the callback type values in the 3gpp-Sbi-Callback header in a notification message. For example, when nudm-uecm sends DeregistrationNotification, then callback type value in 3gpp-Sbi-Callback header will have Nudm_UECM_DeregistrationNotification. Where Nudm_UECM is the apiNameAxHeading and DeregistrationNotification is callback service operation.
notificationSender.serviceOperation	String	O	NA	Allowed character combinations should be alpha-numeric, hyphen, and underscore.	Indicates the service operation type. The value of this parameter is compared with the second part of the callback type values in the 3gpp-Sbi-Callback header when the NF service sends a notification message. For example, when nudm-uecm sends DeregistrationNotification, then callback type value in the 3gpp-Sbi-Callback header will have Nudm_UECM_DeregistrationNotification, where DeregistrationNotification is callback service operation. If this parameter is not configured, only values that match the range regular expression are permitted.

Note

- The "*" value for a parameter indicates that any value of the parameter is accepted when matching is done.
- Duplicate entries are rejected with error response 400, Bad Request.

2.3 Configuring Routing Config Set

This section describes the routing-config-set REST API to define routing options parameters, such as maxRoutingAttempts, responseTimeout, and so on. These parameters are mapped

with service operation related parameters in [Configuring Routing Options Config](#). These routing options parameters are applied to a certain message routing when matched with service operation parameters.

Resources

The following table describes the resource name to retrieve, add, update, and remove routing config set configurations based on the query parameters:

Table 2-21 Resources

Resource Name	Resource URI	HTTP Method	Query Parameter	Description
routing-config-set	/ocscp/scpc-configuration/ <version>/routing-config-set/ <routingConfigSetName>	GET	None	Retrieves routing config set records based on routingConfigSetName.
routing-config-set	/ocscp/scpc-configuration/ <version>/routing-config-set/	GET	None	Retrieves all routing config set records.
routing-config-set	/ocscp/scpc-configuration/ <version>/routing-config-set/ <routingConfigSetName>	PUT	None	- Create and update the new routing config set. - Default routing config set record (notification_req_default_config_set, svc_req_default_config_set) can be updated.
routing-config-set	/ocscp/scpc-configuration/ <version>/routing-config-set/ <routingConfigSetName>	DELETE	None	- Removes the routing config set record for the given routingConfigSetName. - The default routing config set records (notification_req_default_config_set, svc_req_default_config_set) cannot be removed. - Deletion can only be processed if ocscp routing options has no reference to the specified routingConfigSetName.

Resource Definition

GET

This resource fetches the routing config set configurations for the specified rules.

Resource URI: /ocscp/scpc-configuration/{version}/routing-config-set/{routingConfigSetName}

The following table describes the URI query parameters supported by the GET method on this resource.

Table 2-22 URI query parameters

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
routingConfigSetName	String	O	The name of the routing config set used to retrieve the respective configurations.

The following table describes the data structures supported by the GET response body on this resource:

Table 2-23 Data Structures

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
routingConfigSetWrapperV2	M	1	200 OK	The routing options with the rule name.
ProblemDetails	M	1	404 Not Found	Problem details

Example

Sample Successful Response

```
curl -v -H "Content-Type: application/json" --request GET http://
localhost:8081/ocscp/scpc-configuration/v1/routing-config-set/
notification_req_default_config_set
```

HTTP / 1.1 200 OK

```
[{
  "routingConfigSetName": "notification_req_default_config_set",
  "routingOptions": {
    "srv": {
      "maxRoutingAttempts": 3,
      "alternateRouting": true
    },
    "pod": {
      "alternateRouting": true,
      "maxRoutingAttempts": 1
    },
    "alternateNFGroupRoutingOptions": {
      "mode": "NF_SET"
    },
    "totalTransactionLifetime": "6s",
    "responseTimeout": "1s",
    "reRouteConditionList": [{
      "statusCode": "307"
    }, {
      "statusCode": "308"
    }, {
      "statusCode": "429"
    }, {
      "statusCode": "5xx"
    }
  ]
}]
```

```

        }, {
            "statusCode": "timeout"
        }, {
            "statusCode": "connectionError"
        }
    ],
    "exceptionErrorResponses": [{
        "name": "Destination_Exhausted",
        "action": "Send_Answer",
        "error_profile":
"default_exception_error_destination_exhausted"
    }, {
        "name": "No_Response",
        "action": "Send_Answer",
        "error_profile": "default_exception_error_no_response"
    }, {
        "name": "Connect_Failure",
        "action": "Send_Answer",
        "error_profile": "default_exception_error_connect_failure"
    }, {
        "name": "No_Host",
        "action": "Send_Answer",
        "error_profile": "default_exception_error_no_host"
    }, {
        "name": "Insufficient_Time",
        "action": "Send_Answer",
        "error_profile": "timeHdrInsufficientTimeErrorProfile"
    }
    ],
    "nextHopProxy": {
        "totalTransactionLifetime": "7s",
        "responseTimeout": "4s",
        "service": {
            "maxRoutingAttempts": 2
        },
        "serviceEndpoint": {
            "maxRoutingAttempts": 1
        },
        "reRouteConditionList": [{
            "statusCode": "connectionError"
        }
    ],
    "exceptions": [{
        "name": "Destination_Exhausted",
        "action": "Send_Answer",
        "error_profile":
"default_exception_error_destination_exhausted"
    }
    ]
    },
    "nextHopRoamingProxy": {
        "totalTransactionLifetime": "7s",
        "responseTimeout": "4s",
        "service": {
            "maxRoutingAttempts": 2
        },
    },

```

```

        "serviceEndpoint": {
            "maxRoutingAttempts": 1
        },
        "reRouteConditionList": [{
            "statusCode": "307"
        }, {
            "statusCode": "308"
        }, {
            "statusCode": "429"
        }, {
            "statusCode": "5xx"
        }, {
            "statusCode": "timeout"
        }, {
            "statusCode": "connectionError"
        }
    ],
    "exceptions": [{
        "name": "No_Host",
        "action": "Send_Answer",
        "error_profile": "default_exception_error_no_host"
    }, {
        "name": "Destination_Exhausted",
        "action": "Send_Answer",
        "error_profile":
"default_exception_error_destination_exhausted"
    }
    ],
    "assignPreferredLocality": false,
    "overridePreferredLocality": false,
    "forwardRevisedPreferredLocality": false
},
"createdTimestamp": "2024-10-15 08:07:32",
"updatedTimestamp": "2024-10-15 08:07:32"
}, {
    "routingConfigSetName": "svc_req_default_config_set",
    "routingOptions": {
        "srv": {
            "maxRoutingAttempts": 3,
            "alternateRouting": true
        },
        "pod": {
            "alternateRouting": true,
            "maxRoutingAttempts": 1
        },
        "alternateNFGroupRoutingOptions": {
            "mode": "NF_SET"
        },
        "totalTransactionLifetime": "6s",
        "responseTimeout": "1s",
        "reRouteConditionList": [{
            "statusCode": "307"
        }, {
            "statusCode": "308"
        }, {

```

```

        "statusCode": "429"
      }, {
        "statusCode": "5xx"
      }, {
        "statusCode": "timeout"
      }, {
        "statusCode": "connectionError"
      }
    ],
    "exceptionErrorResponses": [{
      "name": "No_Response",
      "action": "Send_Answer",
      "error_profile": "default_exception_error_no_response"
    }, {
      "name": "Connect_Failure",
      "action": "Send_Answer",
      "error_profile": "default_exception_error_connect_failure"
    }, {
      "name": "Destination_Exhausted",
      "action": "Send_Answer",
      "error_profile":
"default_exception_error_destination_exhausted"
    }, {
      "name": "No_Host",
      "action": "Send_Answer",
      "error_profile": "default_exception_error_no_host"
    }, {
      "name": "Insufficient_Time",
      "action": "Send_Answer",
      "error_profile": "timeHdrInsufficientTimeErrorProfile"
    }
  ],
  "nextHopProxy": {
    "totalTransactionLifetime": "7s",
    "responseTimeout": "4s",
    "service": {
      "maxRoutingAttempts": 2
    },
    "serviceEndpoint": {
      "maxRoutingAttempts": 1
    },
    "reRouteConditionList": [{
      "statusCode": "connectionError"
    }
  ],
  "exceptions": [{
    "name": "Destination_Exhausted",
    "action": "Send_Answer",
    "error_profile":
"default_exception_error_destination_exhausted"
  }
]
},
"nextHopRoamingProxy": {
  "totalTransactionLifetime": "7s",
  "responseTimeout": "4s",

```

```

        "service": {
            "maxRoutingAttempts": 2
        },
        "serviceEndpoint": {
            "maxRoutingAttempts": 1
        },
        "reRouteConditionList": [{
            "statusCode": "307"
        }, {
            "statusCode": "308"
        }, {
            "statusCode": "429"
        }, {
            "statusCode": "5xx"
        }, {
            "statusCode": "timeout"
        }, {
            "statusCode": "connectionError"
        }
    ],
    "exceptions": [{
        "name": "No_Host",
        "action": "Send_Answer",
        "error_profile": "default_exception_error_no_host"
    }, {
        "name": "Destination_Exhausted",
        "action": "Send_Answer",
        "error_profile":
"default_exception_error_destination_exhausted"
    }
    ],
    "assignPreferredLocality": false,
    "overridePreferredLocality": false,
    "forwardRevisedPreferredLocality": false
},
"createdTimestamp": "2024-10-15 08:07:32",
"updatedTimestamp": "2024-10-15 08:07:32"
}
]

```

Sample Failure Response

```
curl -v -H "Content-Type: application/json" --request GET http://
localhost:8081/ocscp/scpc-configuration/v1/routing-config-set/defaultConfig
```

404 Not Found

```
{
  "title": "Not Found",
  "status": "404",
  "detail": "RoutingConfigSet data not found against given RoutingConfigSetName . Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/routing-config-set/defaultConfig",
  "cause": "DATA_NOT_FOUND"
}
```

This resource fetches the routing config set configurations for all rules.

Resource URI: /ocscp/scpc-configuration/{version}/routing-config-set

The following table describes the data structures supported by the GET response body on this resource:

Table 2-24 Data Structures

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
routingConfigSetWrapperV2	M	1..N	200 OK	The routing options data with the rule name.

Sample Routing Config Set Configurations for GET:

```
curl - v - H "Content-Type: application/json"--request GET http: //
localhost:8081/ocscp/scpc-configuration/v1/routing-config-set
```

HTTP / 1.1 200 OK

```
[{
  "routingConfigSetName": "notification_req_default_config_set",
  "routingOptions": {
    "srv": {
      "maxRoutingAttempts": 3,
      "alternateRouting": true
    },
    "pod": {
      "alternateRouting": true,
      "maxRoutingAttempts": 1
    },
    "alternateNFGroupRoutingOptions": {
      "mode": "NF_SET"
    },
    "totalTransactionLifetime": "6s",
    "responseTimeout": "1s",
    "reRouteConditionList": [{
      "statusCode": "307"
    }, {
      "statusCode": "308"
    }, {
      "statusCode": "429"
    }, {
      "statusCode": "5xx"
    }, {
      "statusCode": "timeout"
    }, {
      "statusCode": "connectionError"
    }
  ],
  "exceptionErrorResponses": [{
    "name": "Destination_Exhausted",
    "action": "Send_Answer",
    "error_profile":
      "default_exception_error_destination_exhausted"
  }
]
```

```

    }, {
      "name": "No_Response",
      "action": "Send_Answer",
      "error_profile": "default_exception_error_no_response"
    }, {
      "name": "Connect_Failure",
      "action": "Send_Answer",
      "error_profile": "default_exception_error_connect_failure"
    }, {
      "name": "No_Host",
      "action": "Send_Answer",
      "error_profile": "default_exception_error_no_host"
    }, {
      "name": "Insufficient_Time",
      "action": "Send_Answer",
      "error_profile": "timeHdrInsufficientTimeErrorProfile"
    }
  ],
  "nextHopProxy": {
    "totalTransactionLifetime": "7s",
    "responseTimeout": "4s",
    "service": {
      "maxRoutingAttempts": 2
    },
    "serviceEndpoint": {
      "maxRoutingAttempts": 1
    },
    "reRouteConditionList": [{
      "statusCode": "connectionError"
    }
  ],
  "exceptions": [{
    "name": "Destination_Exhausted",
    "action": "Send_Answer",
    "error_profile":
"default_exception_error_destination_exhausted"
  }
],
  "nextHopRoamingProxy": {
    "totalTransactionLifetime": "7s",
    "responseTimeout": "4s",
    "service": {
      "maxRoutingAttempts": 2
    },
    "serviceEndpoint": {
      "maxRoutingAttempts": 1
    },
    "reRouteConditionList": [{
      "statusCode": "307"
    }, {
      "statusCode": "308"
    }, {
      "statusCode": "429"
    }, {
      "statusCode": "5xx"
    }
  ]
}

```

```

        }, {
            "statusCode": "timeout"
        }, {
            "statusCode": "connectionError"
        }
    ],
    "exceptions": [{
        "name": "No_Host",
        "action": "Send_Answer",
        "error_profile": "default_exception_error_no_host"
    }, {
        "name": "Destination_Exhausted",
        "action": "Send_Answer",
        "error_profile":
"default_exception_error_destination_exhausted"
    }
    ],
    "assignPreferredLocality": false,
    "overridePreferredLocality": false,
    "forwardRevisedPreferredLocality": false
},
"createdTimestamp": "2024-10-15 08:07:32",
"updatedTimestamp": "2024-10-15 08:07:32"
}, {
    "routingConfigSetName": "svc_req_default_config_set",
    "routingOptions": {
        "srv": {
            "maxRoutingAttempts": 3,
            "alternateRouting": true
        },
        "pod": {
            "alternateRouting": true,
            "maxRoutingAttempts": 1
        },
        "alternateNFGroupRoutingOptions": {
            "mode": "NF_SET"
        },
        "totalTransactionLifetime": "6s",
        "responseTimeout": "1s",
        "reRouteConditionList": [{
            "statusCode": "307"
        }, {
            "statusCode": "308"
        }, {
            "statusCode": "429"
        }, {
            "statusCode": "5xx"
        }, {
            "statusCode": "timeout"
        }, {
            "statusCode": "connectionError"
        }
    ],
    "exceptionErrorResponses": [{
        "name": "No_Response",

```



```

        "action": "Send_Answer",
        "error_profile": "default_exception_error_no_response"
    }, {
        "name": "Connect_Failure",
        "action": "Send_Answer",
        "error_profile": "default_exception_error_connect_failure"
    }, {
        "name": "Destination_Exhausted",
        "action": "Send_Answer",
        "error_profile":
"default_exception_error_destination_exhausted"
    }, {
        "name": "No_Host",
        "action": "Send_Answer",
        "error_profile": "default_exception_error_no_host"
    }, {
        "name": "Insufficient_Time",
        "action": "Send_Answer",
        "error_profile": "timeHdrInsufficientTimeErrorProfile"
    }
],
"nextHopProxy": {
    "totalTransactionLifetime": "7s",
    "responseTimeout": "4s",
    "service": {
        "maxRoutingAttempts": 2
    },
    "serviceEndpoint": {
        "maxRoutingAttempts": 1
    },
    "reRouteConditionList": [{
        "statusCode": "connectionError"
    }
],
"exceptions": [{
    "name": "Destination_Exhausted",
    "action": "Send_Answer",
    "error_profile":
"default_exception_error_destination_exhausted"
}
]
},
"nextHopRoamingProxy": {
    "totalTransactionLifetime": "7s",
    "responseTimeout": "4s",
    "service": {
        "maxRoutingAttempts": 2
    },
    "serviceEndpoint": {
        "maxRoutingAttempts": 1
    },
    "reRouteConditionList": [{
        "statusCode": "307"
    }, {
        "statusCode": "308"
    }, {

```

```

        "statusCode": "429"
      }, {
        "statusCode": "5xx"
      }, {
        "statusCode": "timeout"
      }, {
        "statusCode": "connectionError"
      }
    ],
    "exceptions": [{
      "name": "No_Host",
      "action": "Send_Answer",
      "error_profile": "default_exception_error_no_host"
    }, {
      "name": "Destination_Exhausted",
      "action": "Send_Answer",
      "error_profile":
"default_exception_error_destination_exhausted"
    }
  ],
  "assignPreferredLocality": false,
  "overridePreferredLocality": false,
  "forwardRevisedPreferredLocality": false
},
"createdTimestamp": "2024-10-15 08:07:32",
"updatedTimestamp": "2024-10-15 08:07:32"
}
]

```

PUT

This resource creates or updates routing config set records for the specified routingConfigSetName.

Resource URI: /ocscp/scpc-configuration/{version}/routing-config-set/{routingConfigSetName}

Table 2-25 URI Query Parameters

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
routingConfigSetName	String	M	The name of the routing config set rule using which the respective routing config set is created or updated.

Table 2-26 Data Structures Supported by the PUT Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
routingConfigSetWrapperV2	M	1	200 OK	This response is generated when an existing record is updated.

Table 2-26 (Cont.) Data Structures Supported by the PUT Response Body

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
routingConfigSetWrapperV2	M	1	201	This response is generated when a new record is created.
ProblemDetails	M	1	400 Bad Request	Returns problem details.

Sample Success Response of Routing Config Set Configurations for PUT:

```
curl -v -H "Content-Type: application/json" --request PUT http://localhost:8081/ocscp/scpc-configuration/v1/routing-config-set/config1 -d
```

```
{
  "routingConfigSetName": "config1",
  "routingOptions": {
    "pod": {
      "maxRoutingAttempts": 1,
      "alternateRouting": true,
      "alternateNFGroupRoutingOptions": {
        "mode": "NF_SET",
        "srv": {
          "maxRoutingAttempts": 3,
          "alternateRouting": true,
          "totalTransactionLifetime": "6s",
          "reRouteConditionList": [
            {
              "statusCode": "307",
              "statusCode": "308",
              "statusCode": "429",
              "statusCode": "5xx",
              "statusCode": "timeout",
              "statusCode": "connectionError"
            }
          ],
          "responseTimeout": "1s",
          "exceptionErrorResponses": [
            {
              "name": "Destination_Exhausted",
              "action": "Send_Answer",
              "error_profile": "default_exception_error_destination_exhausted"
            },
            {
              "name": "No_Response",
              "action": "Send_Answer",
              "error_profile": "default_exception_error_no_response"
            },
            {
              "name": "Connect_Failure",
              "action": "Send_Answer",
              "error_profile": "default_exception_error_connect_failure"
            },
            {
              "name": "No_Host",
              "action": "Send_Answer",
              "error_profile": "default_exception_error_no_host"
            },
            {
              "name": "Insufficient_Time",
              "action": "Send_Answer",
              "error_profile": "timeHdrInsufficientTimeErrorProfile"
            }
          ],
          "assignPreferredLocality": false,
          "overridePreferredLocality": false,
          "forwardRevisedPreferredLocality": false,
          "nextHopRoamingProxy": {
            "totalTransactionLifetime": "7s",
            "responseTimeout": "4s",
            "service": {
              "maxRoutingAttempts": 2,
              "serviceEndpoint": {
                "maxRoutingAttempts": 1,
                "reRouteConditionList": [
                  {
                    "statusCode": "307",
                    "statusCode": "308",
                    "statusCode": "429",
                    "statusCode": "5xx",
                    "statusCode": "timeout",
                    "statusCode": "connectionError"
                  }
                ],
                "exceptions": [
                  {
                    "name": "No_Host",
                    "action": "Send_Answer",
                    "error_profile": "default_exception_error_no_host"
                  },
                  {
                    "name": "Destination_Exhausted",
                    "action": "Send_Answer",
                    "error_profile": "default_exception_error_destination_exhausted"
                  }
                ]
              },
              "nextHopProxy": {
                "totalTransactionLifetime": "7s",
                "responseTimeout": "4s",
                "service": {
                  "maxRoutingAttempts": 2,
                  "serviceEndpoint": {
                    "maxRoutingAttempts": 1,
                    "exceptions": [
                      {
                        "name": "Destination_Exhausted",
                        "action": "Send_Answer",
                        "error_profile": "default_exception_error_destination_exhausted"
                      }
                    ],
                    "reRouteConditionList": [
                      {
                        "statusCode": "connectionError"
                      }
                    ]
                  }
                }
              }
            }
          }
        }
      }
    }
  }
}
```

HTTP/1.1 201 Created

```
{
  "routingConfigSetName": "config1",
  "routingOptions": {
    "srv": {
      "maxRoutingAttempts": 3,
      "alternateRouting": true,
      "pod": {
        "alternateRouting": true,
        "maxRoutingAttempts": 1,

```

```

"alternateNFGroupRoutingOptions": {"mode": "NF_SET"},
"totalTransactionLifetime": "6s", "responseTimeout": "1s",
"reRouteConditionList": [{"statusCode": "connectionError"}, {"statusCode":
"5xx"}, {"statusCode": "307"}, {"statusCode": "429"}, {"statusCode": "308"},
{"statusCode": "timeout"}], "exceptionErrorResponses": [{"name":
"Destination_Exhausted", "action": "Send_Answer", "error_profile":
"default_exception_error_destination_exhausted"}, {"name": "No_Response",
"action": "Send_Answer", "error_profile":
"default_exception_error_no_response"}, {"name": "Connect_Failure", "action":
"Send_Answer", "error_profile": "default_exception_error_connect_failure"},
{"name": "No_Host", "action": "Send_Answer", "error_profile":
"default_exception_error_no_host"}, {"name": "Insufficient_Time", "action":
"Send_Answer", "error_profile": "timeHdrInsufficientTimeErrorProfile"}],
"nextHopProxy": {"totalTransactionLifetime": "7s", "responseTimeout": "4s",
"service": {"maxRoutingAttempts": 2}, "serviceEndpoint":
{"maxRoutingAttempts": 1}, "reRouteConditionList": [{"statusCode":
"connectionError"}, {"statusCode": "5xx"}, {"statusCode": "307"}, {"statusCode":
"429"}, {"statusCode": "308"}, {"statusCode": "timeout"}], "exceptions": [{"name": "Destination_Exhausted",
"action": "Send_Answer", "error_profile":
"default_exception_error_destination_exhausted"}]}, "nextHopRoamingProxy":
{"totalTransactionLifetime": "7s", "responseTimeout": "4s", "service":
{"maxRoutingAttempts": 2}, "serviceEndpoint": {"maxRoutingAttempts": 1},
"reRouteConditionList": [{"statusCode": "connectionError"}, {"statusCode":
"5xx"}, {"statusCode": "307"}, {"statusCode": "429"}, {"statusCode": "308"},
{"statusCode": "timeout"}], "exceptions": [{"name": "Destination_Exhausted",
"action": "Send_Answer", "error_profile":
"default_exception_error_destination_exhausted"}, {"name": "No_Host",
"action": "Send_Answer", "error_profile":
"default_exception_error_no_host"}]}, "assignPreferredLocality": False,
"overridePreferredLocality": False, "forwardRevisedPreferredLocality":
False}, "createdTimestamp": "2025-08-24 19:53:30", "updatedTimestamp":
"2025-08-24 19:53:30"}

```

Sample Success Response 2 of Routing Config Set Configurations for PUT:

```

curl -X 'PUT' \
  'http://localhost:8081/ocscp/scpc-configuration/v1/routing-config-set/
config1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '

```

```

"routingConfigSetName": "config1",
"routingOptions": {
  "srv": {
    "maxRoutingAttempts": 3,
    "alternateRouting": true
  },
  "pod": {
    "alternateRouting": true,
    "maxRoutingAttempts": 1
  },
  "alternateNFGroupRoutingOptions": {
    "mode": "NF_SET"
  },

```

```

    "totalTransactionLifetime": "6s",
    "responseTimeout": "1s",
    "reRouteConditionList": [{
      "statusCode": "307"
    }, {
      "statusCode": "308"
    }, {
      "statusCode": "429"
    }, {
      "statusCode": "5xx"
    }, {
      "statusCode": "timeout"
    }, {
      "statusCode": "connectionError"
    }
  ],
  "exceptionErrorResponses": [{
    "name": "Destination_Exhausted",
    "action": "Send_Answer",
    "error_profile":
"default_exception_error_destination_exhausted"
  }, {
    "name": "No_Response",
    "action": "Send_Answer",
    "error_profile": "default_exception_error_no_response"
  }, {
    "name": "Connect_Failure",
    "action": "Send_Answer",
    "error_profile": "default_exception_error_connect_failure"
  }, {
    "name": "No_Host",
    "action": "Send_Answer",
    "error_profile": "default_exception_error_no_host"
  }, {
    "name": "Insufficient_Time",
    "action": "Send_Answer",
    "error_profile": "timeHdrInsufficientTimeErrorProfile"
  }
],
  "nextHopProxy": {
    "totalTransactionLifetime": "7s",
    "responseTimeout": "4s",
    "service": {
      "maxRoutingAttempts": 2
    },
    "serviceEndpoint": {
      "maxRoutingAttempts": 1
    },
    "reRouteConditionList": [{
      "statusCode": "connectionError"
    }
  ],
  "exceptions": [{
    "name": "Destination_Exhausted",
    "action": "Send_Answer",
    "error_profile":

```

```

"default_exception_error_destination_exhausted"
    }
  ]
},
"nextHopRoamingProxy": {
  "totalTransactionLifetime": "7s",
  "responseTimeout": "4s",
  "service": {
    "maxRoutingAttempts": 2
  },
  "serviceEndpoint": {
    "maxRoutingAttempts": 1
  },
  "reRouteConditionList": [{
    "statusCode": "307"
  }, {
    "statusCode": "308"
  }, {
    "statusCode": "429"
  }, {
    "statusCode": "5xx"
  }, {
    "statusCode": "timeout"
  }, {
    "statusCode": "connectionError"
  }
],
"exceptions": [{
  "name": "No_Host",
  "action": "Send_Answer",
  "error_profile": "default_exception_error_no_host"
}, {
  "name": "Destination_Exhausted",
  "action": "Send_Answer",
  "error_profile":
"default_exception_error_destination_exhausted"
    }
  ]
},
"assignPreferredLocality": false,
"overridePreferredLocality": false,
"forwardRevisedPreferredLocality": false
}
}'

```

HTTP/1.1 201 Created

```

{
  "routingConfigSetName": "config1",
  "routingOptions": {
    "srv": {
      "maxRoutingAttempts": 3,
      "alternateRouting": true
    },
    "pod": {
      "alternateRouting": true,

```

```

        "maxRoutingAttempts": 1
    },
    "alternateNFGroupRoutingOptions": {
        "mode": "NF_SET"
    },
    "totalTransactionLifetime": "6s",
    "responseTimeout": "1s",
    "reRouteConditionList": [{
        "statusCode": "307"
    }, {
        "statusCode": "308"
    }, {
        "statusCode": "429"
    }, {
        "statusCode": "5xx"
    }, {
        "statusCode": "timeout"
    }, {
        "statusCode": "connectionError"
    }
    ],
    "exceptionErrorResponses": [{
        "name": "Destination_Exhausted",
        "action": "Send_Answer",
        "error_profile":
"default_exception_error_destination_exhausted"
    }, {
        "name": "No_Response",
        "action": "Send_Answer",
        "error_profile": "default_exception_error_no_response"
    }, {
        "name": "Connect_Failure",
        "action": "Send_Answer",
        "error_profile": "default_exception_error_connect_failure"
    }, {
        "name": "No_Host",
        "action": "Send_Answer",
        "error_profile": "default_exception_error_no_host"
    }, {
        "name": "Insufficient_Time",
        "action": "Send_Answer",
        "error_profile": "timeHdrInsufficientTimeErrorProfile"
    }
    ],
    "nextHopProxy": {
        "totalTransactionLifetime": "7s",
        "responseTimeout": "4s",
        "service": {
            "maxRoutingAttempts": 2
        },
        "serviceEndpoint": {
            "maxRoutingAttempts": 1
        },
        "reRouteConditionList": [{
            "statusCode": "connectionError"
        }
    ]
}

```

```

    ],
    "exceptions": [{
        "name": "Destination_Exhausted",
        "action": "Send_Answer",
        "error_profile":
"default_exception_error_destination_exhausted"
    }
    ],
    },
    "nextHopRoamingProxy": {
        "totalTransactionLifetime": "7s",
        "responseTimeout": "4s",
        "service": {
            "maxRoutingAttempts": 2
        },
        "serviceEndpoint": {
            "maxRoutingAttempts": 1
        },
        "reRouteConditionList": [{
            "statusCode": "307"
        }, {
            "statusCode": "308"
        }, {
            "statusCode": "429"
        }, {
            "statusCode": "5xx"
        }, {
            "statusCode": "timeout"
        }, {
            "statusCode": "connectionError"
        }
    ],
    "exceptions": [{
        "name": "No_Host",
        "action": "Send_Answer",
        "error_profile": "default_exception_error_no_host"
    }, {
        "name": "Destination_Exhausted",
        "action": "Send_Answer",
        "error_profile":
"default_exception_error_destination_exhausted"
    }
    ],
    },
    "assignPreferredLocality": false,
    "overridePreferredLocality": false,
    "forwardRevisedPreferredLocality": false
    },
    "createdTimestamp": "2024-10-15 08:07:32",
    "updatedTimestamp": "2024-10-15 08:07:32"
}

```


Sample Fail Response of Routing Config Set Configurations for PUT:

```
curl -v -H "Content-Type: application/json" --request PUT http://
localhost:8081/ocscp/scpc-configuration/v1/routing-config-set/config1123 -d
```

```
{
  "routingConfigSetName": "config1",
  "routingOptions": {
    "pod": {
      "maxRoutingAttempts": 1,
      "alternateRouting": true,
      "alternateNFGroupRoutingOptions": {
        "mode": "NF_SET",
        "srv": {
          "maxRoutingAttempts": 3,
          "alternateRouting": true,
          "totalTransactionLifetime": "6s",
          "reRouteConditionList": [
            { "statusCode": "307" },
            { "statusCode": "308" },
            { "statusCode": "429" },
            { "statusCode": "5xx" },
            { "statusCode": "timeout" },
            { "statusCode": "connectionError" }
          ],
          "responseTimeout": "1s",
          "exceptionErrorResponses": [
            {
              "name": "Destination_Exhausted",
              "action": "Send_Answer",
              "error_profile": "default_exception_error_destination_exhausted"
            },
            {
              "name": "No_Response",
              "action": "Send_Answer",
              "error_profile": "default_exception_error_no_response"
            },
            {
              "name": "Connect_Failure",
              "action": "Send_Answer",
              "error_profile": "default_exception_error_connect_failure"
            },
            {
              "name": "No_Host",
              "action": "Send_Answer",
              "error_profile": "default_exception_error_no_host"
            },
            {
              "name": "Insufficient_Time",
              "action": "Send_Answer",
              "error_profile": "timeHdrInsufficientTimeErrorProfile"
            }
          ],
          "assignPreferredLocality": false,
          "overridePreferredLocality": false,
          "forwardRevisedPreferredLocality": false,
          "nextHopRoamingProxy": {
            "totalTransactionLifetime": "7s",
            "responseTimeout": "4s",
            "service": {
              "maxRoutingAttempts": 2,
              "serviceEndpoint": {
                "maxRoutingAttempts": 1,
                "reRouteConditionList": [
                  { "statusCode": "307" },
                  { "statusCode": "308" },
                  { "statusCode": "429" },
                  { "statusCode": "5xx" },
                  { "statusCode": "timeout" },
                  { "statusCode": "connectionError" }
                ],
                "exceptions": [
                  {
                    "name": "No_Host",
                    "action": "Send_Answer",
                    "error_profile": "default_exception_error_no_host"
                  },
                  {
                    "name": "Destination_Exhausted",
                    "action": "Send_Answer",
                    "error_profile": "default_exception_error_destination_exhausted"
                  }
                ],
                "nextHopProxy": {
                  "totalTransactionLifetime": "7s",
                  "responseTimeout": "4s",
                  "service": {
                    "maxRoutingAttempts": 2,
                    "serviceEndpoint": {
                      "maxRoutingAttempts": 1,
                      "exceptions": [
                        {
                          "name": "Destination_Exhausted",
                          "action": "Send_Answer",
                          "error_profile": "default_exception_error_destination_exhausted"
                        }
                      ],
                      "reRouteConditionList": [
                        { "statusCode": "connectionError" }
                      ]
                    }
                  }
                }
              }
            }
          ]
        }
      }
    }
  }
}
```

DELETE

This resource removes the routing config set configuration for the specified rules.

Resource URI: /ocscp/scpc-configuration/{version}/routing-config-set/{routingConfigSetName}

Table 2-27 URI Query Parameters Supported by the DELETE Method on this Resource

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
routingOptionsConfigName	String	O	The name of the routing options configuration which should be removed.

Table 2-28 Data Structures Supported by the Delete Response Body on this Resource

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response codes	Description
NA	M	1	204 No Content	Successful deletion of routing config set records.
ProblemDetails	M	1	403 Forbidden	Indicates problem details.
ProblemDetails	M	1	404 Not Found	Indicates problem details.

Sample Successful Response of Routing Config Set Configurations for DELETE:

```
curl -v -H "Content-Type: application/json" --request DELETE http://localhost:8081/ocscp/scpc-configuration/v1/routing-config-set/defaultConfig
```

204 No Content

Sample Fail Response of Routing Config Set Configurations for DELETE:

```
curl -v -H "Content-Type: application/json" -X DELETE http://localhost:8081/ocscp/scpc-configuration/v1/routing-config-set/notification_req_default_config_set
```

403 Forbidden

```
{"title":"Forbidden","status":403,"detail":"The default configuration cannot be deleted. Please refer to the User Guide.","instance":"/ocscp/scpc-configuration/v1/routing-config-set/notification_req_default_config_set","cause":"DATA_CANT_DELETED"}
```

Sample Fail Response 2 of Routing Config Set Configurations for DELETE:

```
curl -v -H "Content-Type: application/json" --request DELETE http://localhost:8081/ocscp/scpc-configuration/v1/routing-config-set/config1
```

404 Not Found

```
{"title":"Not Found","status":404,"detail":"RoutingConfigSet data not found against given RoutingConfigSetName . Please refer to the User Guide.","instance":"/ocscp/scpc-configuration/v1/routing-config-set/config1","cause":"DATA_NOT_FOUND"}
```

Data Model

Request or Response Body (PUT)

The following table describes the field names of the routingConfigSetWrapperV2 data type.

Table 2-29 routingConfigSetWrapperV2

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Values	Allowed Values	Description
routingConfigSetName	String	M	-	-	Unique name that identifies the routing config set. This rule name is used in RoutingOptionsConfig as a reference.
routingOptionsroutingConfigSetWrapperV2	JSON	M	-	-	This field defines the routing option configurations.
createdTimestamp	String	Read Only	-	-	Timestamp of the created record. This is not required in the request, but it is present in the response.
updatedTimestamp	String	Read Only	-	-	Timestamp of the updated record. This is not required in the request, but it is present in the response.

The following table describes the RoutingOptionsV2 parameters:

Table 2-30 Parameters of RoutingOptionsV2

Parameter Name	Mandatory (M) or Optional(O)	Default Values	Value Range	Description and Data Type	Applicable to NF Service Level	Applicable to Pod Level within NF
responseTimeout	M	1 second	100-10000 ms	Indicates the allotted time to respond to a message request. When the response timeout expires, SCP performs alternate rerouting to the available alternate NF or pod. If no alternate NFs or pods are available, SCP sends an error message. Notes: - The supported values can be in 's' or 'ms'. Where, 's' is seconds and 'ms' is milliseconds. - This parameter must be an integer, not a decimal. If the value is provided as a decimal, convert it to an integer unit. For example, 0.1 s becomes 100 ms. Data Type: string	Yes	Yes

Table 2-30 (Cont.) Parameters of RoutingOptionsV2

Parameter Name	Mandatory (M) or Optional (O)	Default Values	Value Range	Description and Data Type	Applicable to NF Service Level	Applicable to Pod Level within NF
totalTransactionLifetime	M	6 seconds	100 - 240000 ms	Indicates the total time allowed to forward a request, including the initial and all subsequent routing attempts. Note: - The totalTransactionLifetime value should be greater than the value obtained by multiplying responseTimeout by the total maximum number of attempts (pod level + service level). - This parameter must be an integer, not a decimal. If the value is provided as a decimal, convert it to an integer unit. For example, 0.1 s becomes 100 ms. The totalTransactionLifetime value should be greater than the value obtained by multiplying responseTimeout by the total maximum number of attempts (pod level + service level). Data Type: string	Yes	Yes
pod	M	-	-	See Table 2-33. Data Type: PodLevelRoutingOptionsV2	-	-
service	M	-	-	See Table 2-34. Data Type: ServiceLevelRoutingOptionsV2	-	-

Table 2-30 (Cont.) Parameters of RoutingOptionsV2

Parameter Name	Mandatory (M) or Optional (O)	Default Values	Value Range	Description and Data Type	Applicable to NF Service Level	Applicable to Pod Level within NF
reRouteConditionList	O	-	301, 302, 303, 304, 307, 308, 400, 401, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 421, 422, 425, 426, 428, 429, 431, 451, 500, 501, 502, 503, 504, 505, 506, 507, 508, 510, 511, 5xx, "timeout", "connectionError", .	- This parameter lists the HTTP status codes that SCP uses to attempt alternative routing. If the upstream server responds with any of these configured response codes, SCP will try rerouting based on the configured alternate routing mechanism. - If SCP encounters errors such as "ConnectionError" or "Timeout" while routing to the upstream server, and these errors are configured, SCP will attempt to reroute using the configured alternate routing mechanism. Example: <pre>"reRouteConditionList": [{ "statusCode": "5xx" }, { "statusCode": "429" }, { "statusCode": "307" }, { "statusCode": "308" }, { "statusCode": "timeout" }, { "statusCode": "connectionError" }]</pre> Data Type: array(ProblemData)	No	Yes

Table 2-30 (Cont.) Parameters of RoutingOptionsV2

Parameter Name	Mandatory (M) or Optional (O)	Default Values	Value Range	Description and Data Type	Applicable to NF Service Level	Applicable to Pod Level within NF
exceptionErrorResponse	O	-	This range is fixed, and you are not allowed to add any additional entries to the list. If you configure less than five entries, the missing entries will be automatically added, as shown in the default value column. If you attempt to enter more than five entries, the request will be rejected.	Destination Exhausted Action: The action taken when a request cannot be processed due to an internal resource being exhausted. Send an answer with the configured HTTP status code. For more information, see "HTTP Status Code and Applicability for Rerouting" in <i>Oracle Communications Cloud Native Core, Service Communication Proxy User Guide</i> . Data Type: Array(ExceptionErrorResponse)	Yes	No

Table 2-30 (Cont.) Parameters of RoutingOptionsV2

Parameter Name	Mandatory (M) or Optional (O)	Default Values	Value Range	Description and Data Type	Applicable to NF Service Level	Applicable to Pod Level within NF
exceptionErrorResponses	O	-	This range is fixed, and you are not allowed to add any additional entries to the list. If you configure less than five entries, the missing entries will be automatically added, as shown in the default value column. If you attempt to enter more than five entries, the request will be rejected.	No Producer Response Action: Action taken when the routing of a request is abandoned due to a response timeout. Send Answer with configured HTTP status code. For more information, see "HTTP Status Code and Applicability for Rerouting" in <i>Oracle Communications Cloud Native Core, Service Communication Proxy User Guide</i>. Data Type: Array(ExceptionErrorResponse)	Yes	No

Table 2-30 (Cont.) Parameters of RoutingOptionsV2

Parameter Name	Mandatory (M) or Optional (O)	Default Values	Value Range	Description and Data Type	Applicable to NF Service Level	Applicable to Pod Level within NF
exceptionErrorResponse	O	-	This range is fixed, and you are not allowed to add any additional entries to the list. If you configure less than five entries, the missing entries will be automatically added, as shown in the default value column. If you attempt to enter more than five entries, the request will be rejected.	Connection Failure Action: Action taken when the routing of a request is abandoned when the last egress connection selection fails Send Answer with configured HTTP status code. For more information, see "HTTP Status Code and Applicability for Rerouting" in <i>Oracle Communications Cloud Native Core, Service Communication Proxy User Guide</i>. Data Type: Array(ExceptionErrorResponse)	Yes	No

Table 2-30 (Cont.) Parameters of RoutingOptionsV2

Parameter Name	Mandatory (M) or Optional (O)	Default Values	Value Range	Description and Data Type	Applicable to NF Service Level	Applicable to Pod Level within NF
exceptionErrorResponse	O	-	This range is fixed, and you are not allowed to add any additional entries to the list. If you configure less than five entries, the missing entries will be automatically added, as shown in the default value column. If you attempt to enter more than five entries, the request will be rejected.	Host not found Action: Action taken when the routing of a request is abandoned due to FQDN of the host not being found Send Answer with configured HTTP status code. For more information, see "HTTP Status Code and Applicability for Rerouting" in <i>Oracle Communications Cloud Native Core, Service Communication Proxy User Guide</i> . Data Type: Array(ExceptionErrorResponse)	Yes	No

Table 2-30 (Cont.) Parameters of RoutingOptionsV2

Parameter Name	Mandatory (M) or Optional (O)	Default Values	Value Range	Description and Data Type	Applicable to NF Service Level	Applicable to Pod Level within NF
exceptionErrorResponses	O	-	This range is fixed, and you are not allowed to add any additional entries to the list. If you configure less than five entries, the missing entries will be automatically added, as shown in the default value column. If you attempt to enter more than five entries, the request will be rejected.	Insufficient Processing Time Action: The action taken when an SBI request received from a downstream consumer NF or SCP has already timed out, based on the received timestamp headers. Send Answer with configured HTTP status code. For more information, see "HTTP Status Code and Applicability for Rerouting" in <i>Oracle Communications Cloud Native Core, Service Communication Proxy User Guide</i> . Data Type: Array(ExceptionErrorResponse)	Yes	No
assignPreferredLocality	O	false	true, false	SCP assigns its own locality as a preferred locality for NF discovery if assignPreferredLocality is enabled and the 3gpp-Sbi-Discovery-preferredlocality header is absent in ingress service requests. Data Type: boolean	Yes	NA

Table 2-30 (Cont.) Parameters of RoutingOptionsV2

Parameter Name	Mandatory (M) or Optional (O)	Default Values	Value Range	Description and Data Type	Applicable to NF Service Level	Applicable to Pod Level within NF
overridePreferredLocality	O	false	true, false	SCP overrides the 3gpp-Sbi-Discoverypreferred-locality header received in the service request and uses its own locality as preferred-locality for NF discovery if overridePreferredLocality is enabled, and the 3gpp-Sbi-Discoverypreferred-locality header is present in ingress service requests. Data Type: boolean	Yes	NA
forwardRevisedPreferredLocality	O	false	true, false	Controls the forwarding of assigned or overridden values of 3gpp-Sbi-Discovery-preferred-locality headers to the next hop SCP. Data Type: boolean	Yes	NA

Table 2-30 (Cont.) Parameters of RoutingOptionsV2

Parameter Name	Mandatory (M) or Optional (O)	Default Values	Value Range	Description and Data Type	Applicable to NF Service Level	Applicable to Pod Level within NF
nextHopRoamingProxy	O	<pre> "nextHopRoamingProxy": [{ "nfType": "*", "routingConfigName": "defaultNextHopRoamingProxyConfig" }] </pre>	routingConfigName of the nextHopRoamingProxy record. A rule with this name must be preconfigured using Configuring Next Hop Roaming Proxy Routing Config .	See Table 2-36 Data Type: Array(nextHopRoamingProxy)	-	-

Table 2-30 (Cont.) Parameters of RoutingOptionsV2

Parameter Name	Mandatory (M) or Optional (O)	Default Values	Value Range	Description and Data Type	Applicable to NF Service Level	Applicable to Pod Level within NF
nextHopProxy	O	<pre> "nextHopProxy": [{ "nfType": "SCP", "routingConfigName": "defaultNextHopProxyConfig" }]</pre>	routingConfigName of the nextHopProxy record. A rule with this name must to be preconfigured using Configuring Next Hop Proxy Routing Config .	See Table 2-36 Data Type: Array(nextHopProxy)	-	-

Table 2-30 (Cont.) Parameters of RoutingOptionsV2

Parameter Name	Mandatory (M) or Optional (O)	Default Values	Value Range	Description and Data Type	Applicable to NF Service Level	Applicable to Pod Level within NF
alternateNFGroupRoutingOptions	M	NF_SET	NF_SET DNS_SRV NF_SET_FOLLOWED_BY_DNSSRV STATIC_CONFIG NF_SET_FOLLOWED_BY_STATIC_CONFIG	This parameter decides the alternate routing mode, depending on which scp-worker derives the alternate producer NF - Different modes are described as follows: NF_SET: SCP performs alternate routing based on the Model C Indirect 5G SBI Communication format. This is the default mode. DNS_SRV: SCP performs alternate routing based on the DNS SRV query. NF_SET_FOLLOWED_BY_DNSSRV: SCP performs alternate routing based on NF Set and then with DNS SRV. STATIC_CONFIG: SCP performs alternate routing based on the static configuration. NF_SET_FOLLOWED_BY_STATIC_CONFIG: SCP performs alternate routing based on NF Set, and then using static configuration. Data Type: Enum(DNSSRVType)	Yes	No

Table 2-31 ExceptionErrorResponse

Parameter Name	Description and Data Type	Mandatory (M)/ Optional (O)	Default Value	Value Range	Applicable to NF Service Level	Applicable to Pod Level within NF
name	Name of the exception. Data Type: String	M	NA	NA	Yes	Yes
action	Indicates the action to be taken when the exception name is received. Data Type: String	M	Send_Answer	NA	Yes	Yes

Table 2-31 (Cont.) ExceptionErrorResponse

Parameter Name	Description and Data Type	Mandatory (M)/ Optional (O)	Default Value	Value Range	Applicable to NF Service Level	Applicable to Pod Level within NF
error_profile	Indicates the name of the error profile referenced in ERROR_PROFILE_CONFIG. If provided, the response will be generated based on the parameters defined in the error profile. Data Type: String	M	NA	NA	Yes	Yes

Table 2-32 ProblemData

Parameter Name	Description and Data Type	Mandatory (M)/Optional (O)	Default Value	Value Range	Applicable to NF Service Level	Applicable to Pod Level within NF
statusCode	Indicates the HTTP response codes for which SCP will attempt alternate routing. If the upstream server responds with any of these configured response codes, SCP will attempt to reroute the request based on the configured alternate routing mechanism. SCP will also attempt to reroute the request in the event of a response timeout, connection failure, refused stream, or when a GOAWAY frame is received on any connection. These events are not configurable and are supported by SCP by default. Example: <pre>"reRouteConditionList": [{ "statusCode": "5xx" }, { "statusCode": "429" }, { "statusCode": "307" }, { "statusCode": "308" }]</pre> Data Type: String	O	-	301, 302, 303, 304, 307, 308, 400, 401, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 421, 422, 425, 426, 428, 429, 431, 451, 500, 501, 502, 503, 504, 505, 506, 507, 508, 510, 511, 5xx	Yes	Yes

Table 2-33 PodLevelRoutingOptionsV2

Parameter Name	Description and Data Type	Mandatory (M)/Optional (O)	Default Value	Value Range	Applicable to NF Service Level	Applicable to Pod Level within NF
maxRoutingAttempts	Indicates the number of re-route attempts (retries) at the NF/Pod level. This is the maximum number of times the SCP is allowed to forward a request message at the NF/Pod level. - If the Max Routing Attempts value is set to 1 for both the Service and Pod level, the Total Transaction Lifetime field value is not needed. - If the Max Routing Attempts value (including both Service and Pod levels) is greater than 1, the Total Transaction Lifetime value will be considered during the rerouting process. Data Type: Integer	M	NA	1-5	Yes	Yes
alternateRouting	This parameter determines whether SCP will attempt alternate routing. Data Type: Boolean	M	true	true or false	-	-

Table 2-34 ServiceLevelRoutingOptionsV2

Parameter Name	Description and Data Type	Mandatory (M)/ Optional (O)	Default Value	Value Range	Applicable to NF Service Level	Applicable to Pod Level within NF
maxRoutingAttempts	Indicates the number of re-route attempts (retries) at the NF/Pod level. This is the maximum number of times the SCP is allowed to forward a request message at the NF/Pod level. - If the Max Routing Attempts value is set to 1 for both the Service and Pod level, the Total Transaction Lifetime field value is not needed. - If the Max Routing Attempts value (including both Service and Pod levels) is greater than 1, the Total Transaction Lifetime value will be considered during the rerouting process. Data Type: Integer	M	NA	1-5	Yes	Yes
alternateRouting	This parameter determines whether SCP will attempt alternate routing based on the configured alternate NF selection mechanism. Data Type: Boolean	M	true	true or false	-	-

Table 2-35 nextHopRoamingProxy

Parameter Name	Description and Data Type	Mandatory (M)/ Optional (O)	Default Value	Value Range
nfType	Specifies the nfType to which the configuration applies. Data type: String	M	NA	Allowed nfType: SCP
routingConfigName	The configName holds the configuration for the Next Hop Proxy Routing configuration. Based on the settings defined under this configName, next hop proxy routing is applied to the next hop proxy. Data type: String	M	NA	NA

Table 2-36 nextHopProxy

Parameter Name	Description and Data Type	Mandatory (M)/Optional (O)	Default Value	Value Range
nfType	Specifies the nfType to which the configuration applies. Data type: String	M	NA	Allowed nfTypes : " * ", SEPP, Any configured nfType with nfRole as CUSTOM_5G_ROAMING_PROXY
routingConfigName	The configName holds the configuration for the Next Hop Proxy Routing configuration. Based on the settings defined under this configName, next hop proxy routing is applied to the next hop proxy. Data type: String	M	NA	NA

2.4 Configuring NF Service Feature Config

This section describes the nfservice-config REST API to configure NF Service Feature Config for NFType and serviceName combinations. Each entry points to an NF Service Feature Config Set name, which is configured using the nfservice-config-set REST API.

Resources

The following table describes the resource name to retrieve, add, or remove nfservice-config configuration data:

Table 2-37 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
nfservice-config	/ocscp/scpc-configuration/{version}/nfservice-config	GET	Retrieves nfServiceConfig for given query parameters if the record exists. Retrieves all nfServiceConfig records if query parameter is not provided. Query parameters: nfType, serviceName, and configName.
nfservice-config	/ocscp/scpc-configuration/{version}/nfservice-config/{configName}	GET	Retrieves nfServiceConfig for a given configName if the record exists.

Table 2-37 (Cont.) Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
nfservice-config	/ocscp/scpc-configuration/{version}/nfservice-config/{configName}	PUT	Creates mapping of NF type and NF service to nfServiceConfigSetName. Mapping to nfServiceConfigSetName is possible only if that record is available. Ensure that provided nfType and serviceName records are available. Update nfServiceConfig if record exists: • nfType and nfService can be updated, but its mapping should be available. • configName cannot be updated. • The serviceName '*' value is accepted to indicate any match. • The nfType '*' value is accepted to indicate any match. • The default record name cannot be updated.
nfservice-config	/ocscp/scpc-configuration/{version}/nfservice-config/{configName}	DELETE	Removes NF Services configurations for the given configName. The default record (defaultNfServiceConfig) cannot be removed.

Resource Definition**GET**

This resource fetches all the nfServiceConfig configurations.

Resource URI: /ocscp/scpc-configuration/{version}/nfservice-config

The following table describes the data structures supported by the GET response body on this resource:

Table 2-38 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
nfServiceConfig Wrapper	M	1..N	200 OK	Indicates successful retrieval of all nfServiceConfigWrapper objects.

This resource fetches the nfServiceConfig configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/nfservice-config/{configName}

The following table describes the path parameter supported by this resource:

Table 2-39 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Fetches configuration information for configName.

The following table describes data structures supported by the GET response body on these resources:

Table 2-40 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
nfServiceConfig Wrapper	M	1	200 OK	Indicates successful retrieval of all nfServiceConfigWrapper objects.
ProblemDetails	M	1	404 Not Found	Indicates problem details.

Sample of a Successful GET Response

```
curl -X 'GET' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/nf-service-config/config1' -H 'accept: application/json'
```

```
{
  "configName": "config1",
  "nfServiceConfig": {
    "nfType": "UDM",
    "nfServiceName": "nudm-uecm",
    "nfServiceConfigSetName": "udm_nudm_uecm_config1"
  },
  "createdTimestamp": "2024-04-24 14:50:56.0",
  "updatedTimestamp": "2024-04-24 14:50:56.0"
}
```

Sample of an Error GET Response

```
curl -X 'GET' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/nf-service-config/config2' -H 'accept: application/json'
```

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "NF Service Configuration data not found against given configName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nf-service-config/c2342v",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

PUT

This resource configures nfservice-config for given data.

Resource URI: /ocscp/scpc-configuration/{version}/nfservice-config/{configName}

The following table describes the path parameter supported by this resource:

Table 2-41 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Key for PUT operation.

The following table describes the data structures supported by the PUT request body on this resource:

Table 2-42 Request Body Parameter

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
nfServiceConfig Wrapper	M	1	200 OK	Indicates nfServiceConfigWrapper configurations to be added or modified.

The following table describes data structures supported by the PUT response body on these resources:

Table 2-43 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
nfServiceConfig Wrapper	M	1	200 OK	Indicates successful update of nfServiceConfig configurations.
nfServiceConfig Wrapper	M	1	201 Created	Indicates successful creation of nfServiceConfig configurations.
ProblemDetails	M	1	400 Bad Request	Indicates problem details.
ProblemDetails	M	1	403 Forbidden	Updates the default data results.

Sample of a Successful PUT Response

```
curl -X 'PUT' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfservice-config/config1' \
  -H 'accept: application/json' \
```

```
-H 'Content-Type: application/json' \
-d '{
  "configName": "config1",
  "nfServiceConfig": {
    "nfType": "UDM",
    "nfServiceName": "nudm-uecm",
    "nfServiceConfigSetName": "udm_nudm_uecm_config1"
  }
}'

{
  "configName": "config1",
  "nfServiceConfig": {
    "nfType": "UDM",
    "nfServiceName": "nudm-uecm",
    "nfServiceConfigSetName": "udm_nudm_uecm_config1"
  },
  "createdTimestamp": "2024-04-24 14:50:56.0",
  "updatedTimestamp": "2024-04-24 14:50:56.0"
}
```

Sample of an Error PUT Response

```
curl -X 'PUT' \
'http://<localhost>:8081/ocscp/scpc-configuration/v1/nf-service-config/
config2' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "configName": "config2",
  "nfServiceConfig": {
    "nfType": "UDM",
    "nfServiceName": "nudm-uecm",
    "nfServiceConfigSetName": "udm_nudm_uecm_config2"
  }
}'

{
  "title": "Bad Request",
  "status": 400,
  "detail": "NfServiceConfig should have unique combination of nfType and
nfServiceName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nf-service-config/c4",
  "cause": "MANDATORY_IE_INCORRECT"
}
```

400 Error: Bad Request

Sample 2 of an Error PUT Response

```
curl -X 'PUT' \
'http://<localhost>:8081/ocscp/scpc-configuration/v1/nf-service-config/
```

```
defaultNfServiceConfig' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d ' {
  "configName": "defaultNfServiceConfig",
  "nfServiceConfig": {
    "nfType": "UDM",
    "nfServiceName": "*",
    "nfServiceConfigSetName": "defaultNfServiceConfigSet"
  }
},
{
  "title": "Forbidden",
  "status": 403,
  "detail": "The default configuration cannot be updated. Please refer to
the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfservice-config/
defaultNfServiceConfig",
  "cause": "MODIFICATION_NOT_ALLOWED"
}
```

403 Error: Forbidden

DELETE

This resource removes all the nfservice-config configurations based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/nfservice-config/
{configName}

The following table describes the path parameter supported by this resource:

Table 2-44 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Removes configurations based on combination of configName.

The following table describes the data structures supported by the DELETE response body on this resource:

Table 2-45 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
n/a	M	1	204 No Content	Removes the configuration of combination of nfType and nfServiceName.
ProblemDetails	M	1	404 Not Found	Indicates the problem details.

Table 2-45 (Cont.) Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
ProblemDetails	M	1	403 Forbidden	Removes the default data results.

Sample of a Successful DELETE Response

```
curl -X 'DELETE' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfservice-config/
config1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

204 No Content

Sample of an Error DELETE Response

```
curl -X 'DELETE' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfservice-config/
config5' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "NF Service Configuration data not found against given
configName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfservice-config/config5",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

Data Model

The following table describes data model for request or response:

Table 2-46 nfServiceConfigWrapper

Field Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Unique configName key to identify record. Number of characters is 256. Allowed character combinations should be alpha-numeric, hyphen, and underscore.

Table 2-46 (Cont.) nfServiceConfigWrapper

Field Name	Data Type	Mandatory (M) or Optional (O)	Description
nfServiceConfig	JSON	M	Provides configuration values of nfType, nfServiceName, and nfServiceConfigSetName.
createdTimestamp	String	Read Only	Timestamp of the created record. This is not required in the request, but it is present in the response.
updatedTimestamp	String	Read Only	Timestamp of the updated record. This is not required in the request, but it is present in the response.

The following table describes parameters of nfServiceConfig:

Table 2-47 nfServiceConfig Parameters

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Range	Description
nfType	String	M	NA	Allowed character combinations should be alpha- numeric, hyphen, underscore, and *.	The NF type for which routing options are configured. This is either 3GPP defined NFType as per TS 29.510 or custom NFType. The '*' value is accepted to indicate any match. Length: 100
serviceName	String	M	NA	Allowed character combinations should be alpha- numeric, hyphen, underscore, and *.	The NF service name for which routing options are configured. This is either 3GPP defined serviceName as per TS29.510 or any custom service name. If a particular NFType does not have NF Service, the '*' keyword should be provided for serviceName. The '*' value is accepted to indicate any match. Length: 100
nfServiceConfigSetName	String	M	NA	Allowed character combinations should be alpha- numeric, hyphen, underscore, and blank.	Indicates configName records that are available.

Sample configuration of nfServiceConfig parameters:

```
{
  configName: "config1",
  nfServiceConfig{
    "nfType": "UDM",
    "nfServiceName": "nudm-uecm",
```

```

    "nfServiceConfigSetName": "udm_nudm_uecm_config1"
  }
}

```

2.5 Configuring NF Service Feature Config Set

This section describes the nfservice-config-set REST API parameters to configure service level features in configName. This configuration is mapped with an NFType and serviceName combination using the nfservice-config REST API as described in [Configuring NF Service Feature Config](#).

Resources

The following table describes the resource name to retrieve, add, update, and remove nfservice config set configurations based on the query parameters:

Table 2-48 Resources

Resource Name	Resource URI	HTTP Method	Description
nfservice-config-set	/ocscp/scpc-configuration/{version}/nfservice-config-set	GET	Retrieves all stored NF services configuration records.
nfservice-config-set	/ocscp/scpc-configuration/{version}/nfservice-config-set/{configName}	GET	Get NF services configuration for given configName.
nfservice-config-set	/ocscp/scpc-configuration/{version}/nfservice-config-set/{configName}	PUT	Create new NF service config set. Update nfServiceConfigSetData if the record exists. configName cannot be updated. The default record (defaultNfServiceConfigSet) can be updated. New record cannot be created if rule mentioned in cbRuleName, odRuleName, ociRuleName, canaryReleaseConfigName, nfServiceLoadBasedCongestionControlCfg are not present in the respective tables.
nfservice-config-set	/ocscp/scpc-configuration/{version}/nfservice-config-set/{configName}	DELETE	Removes NF service configuration data for the given configName. Removal of information can proceed when no references of configName is present in the OCSCP_NF_SERVICE_CONFIG table.

Resource Definition

GET

This resource fetches all the nfservice-config-set configuration.

Resource URI: /ocscp/scpc-configuration/{version}/nfservice-config-set

The following table describes the data structures supported by the GET response body on this resource:

Table 2-49 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
nfServiceConfigSetWrapper	M	1..N	200 OK	Indicates nfServiceConfigSet configuration.

This resource fetches the nfservice-config-set configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/nfservice-config-set/{configName}

The following table describes the path parameter supported by this resource:

Table 2-50 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Fetches configuration information for configName.

The following table describes data structures supported by the GET response body on these resources:

Table 2-51 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
nfServiceConfigWrapper	M	1	200 OK	Indicates nfServiceConfigSet configurations.
ProblemDetails	M	1	404 Not Found	Indicates problem details.

Sample of a Successful GET Response

```
curl -X 'GET' \ 'http://<localhost>:32265/ocscp/scpc-configuration/v1/nfservice-config-set/udm_nudm_uecm_config1' \
-H 'accept: application/json'
```

```
{
  "configName": "udm_nudm_uecm_config1",
  "nfServiceConfigSetData": {
    "defaultPriority": 1,
    "defaultCapacity": 65535,
    "altRoutingDnsSrvModeSupported": false,
    "loadBasedCongestionControlEnabled": true,
    "nfServiceLoadBasedCongestionControlCfg": "defaultRule",
```

```

    "cbEnabled": false,
    "cbRuleName": "defaultRule",
    "odEnabled": false,
    "odRuleName": "defaultRule",
    "ociEnabled": false,
    "ociRuleName": "defaultOciConfigRule",
    "canaryReleaseEnabled": false,
    "canaryReleaseConfigName": "default",
    "nextHopProxy": [
      {
        "nfType": "SCP",
        "nfServiceConfigName": "defaultNextHopProxyConfig"
      }
    ],
    "nextHopRoamingProxy": [
      {
        "nfType": "*",
        "nfServiceConfigName": "defaultNextHopRoamingProxyConfig"
      }
    ],
    "createdTimestamp": "2024-05-02 02:26:30.0",
    "updatedTimestamp": "2024-05-02 02:26:30.0"
  }
}

```

Sample of a Fail GET Response

```

curl -X 'GET' \ 'http://<localhost>:32265/ocscp/scpc-configuration/v1/
nfservice-config-set/udm_nudm_uecm_config108' \
-H 'accept: application/json'

```

```

{
  "title": "Not Found",
  "status": 404,
  "detail": "NF Service Config Set Data not found against given configName.
Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfservice-config-set/
udm_nudm_uecm_config108",
  "cause": "DATA_NOT_FOUND"
}

```

404 Error: Not Found

PUT

This resource configures nfservice-config-set configuration for given data.

Resource URI: /ocscp/scpc-configuration/{version}/nfservice-config-set/
{configName}

The following table describes the path parameter supported by this resource:

Table 2-52 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Unique identifier of the records.

The following table describes the data structures supported by the PUT request body on this resource:

Table 2-53 Request Body Parameter

Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
nfServiceConfigWrapper	M	1	Indicates nfServiceConfigWrapper configurations to be added or modified.

The following table describes data structures supported by the PUT response body on these resources:

Table 2-54 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
nfServiceConfigWrapper	M	1	200 OK	Indicates successful update or replacement of nfServiceConfigSet configurations for configName.
nfServiceConfigSetWrapper	M	1	201 Created	Indicates creation of nfServiceConfigSet configurations for configName.
ProblemDetails	M	1	400 Bad Request	Indicates problem details.

Sample of a Successful PUT Response

```
curl -X 'PUT' \ 'http://<localhost>:32265/ocscp/scpc-configuration/v1/
nfservice-config-set/udm_nudm_uecm_config1' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "configName": "udm_nudm_uecm_config1",
  "nfServiceConfigSetData": {
    "defaultPriority": "1",
    "defaultCapacity": "65535",
    "altRoutingDnsSrvModeSupported": false,
    "loadBasedCongestionControlEnabled": true,
    "nfServiceLoadBasedCongestionControlCfg": "r1",
    "cbEnabled": false,
    "cbRuleName": "defaultRule",
    "odEnabled": false,
```

```

        "odRuleName": "defaultRule",
        "ociEnabled": false,
        "ociRuleName": "defaultOciConfigRule",
        "canaryReleaseEnabled": false,
        "canaryReleaseConfigName": "default",
        "nextHopProxy": [
            {
                "nfType": "SCP",
                "nfServiceConfigName": "defaultNextHopProxyConfig"
            }
        ],
        "nextHopRoamingProxy": [
            {
                "nfType": "*",
                "nfServiceConfigName": "defaultNextHopRoamingProxyConfig"
            }
        ]
    }
}

{
    "configName": "udm_nudm_uecm_config1",
    "nfServiceConfigSetData": {
        "defaultPriority": "1",
        "defaultCapacity": "65535",
        "altRoutingDnsSrvModeSupported": false,
        "loadBasedCongestionControlEnabled": true,
        "nfServiceLoadBasedCongestionControlCfg": "r1",
        "cbEnabled": false,
        "cbRuleName": "defaultRule",
        "odEnabled": false,
        "odRuleName": "defaultRule",
        "ociEnabled": false,
        "ociRuleName": "defaultOciConfigRule",
        "canaryReleaseEnabled": false,
        "canaryReleaseConfigName": "default",
        "nextHopProxy": [
            {
                "nfType": "SCP",
                "nfServiceConfigName": "defaultNextHopProxyConfig"
            }
        ],
        "nextHopRoamingProxy": [
            {
                "nfType": "*",
                "nfServiceConfigName": "defaultNextHopRoamingProxyConfig"
            }
        ]
    },
    "createdTimestamp": "2024-04-24 14:50:56.0",
    "updatedTimestamp": "2024-04-24 14:50:56.0"
}

```

Sample 1 of an Error PUT Response

```
curl -X 'DELETE' \
  'http://<localhost>:32265/ocscp/scpc-configuration/v1/nfservice-config-set/
udm_nudm_uecm_config108' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "NF Service Config Set Data not found against given configName.
Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfservice-config-set/
udm_nudm_uecm_config108",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

Sample 2 of an Error PUT Response

```
curl -X 'DELETE' \
  'http://<localhost>:32265/ocscp/scpc-configuration/v1/nfservice-config-
set/c1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

```
{
  "title": "Forbidden",
  "status": 403,
  "detail": "The given configName is referred by 'NF Service Config' hence
cannot be deleted. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfservice-config-set/c1",
  "cause": "DATA_CANT_DELETED"
}
```

403 Error: Forbidden

Sample 3 of an Error PUT Response

```
curl -X 'DELETE' \
  'http://<localhost>:32265/ocscp/scpc-configuration/v1/nfservice-config-set/
defaultNfServiceConfigSet' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

```
{
  "title": "Forbidden",
  "status": 403,
  "detail": "Default configuration is forbidden to delete. Please refer to
```



```

the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfservice-config-set/
defaultNfServiceConfigSet",
  "cause": "DATA_CANT_DELETED"
}

```

403 Error: Forbidden

DELETE

This resource removes all the nfservice-config-set configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/nfservice-config-set/{configName}

The following table describes the path parameter supported by this resource:

Table 2-55 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Removes configurations based on combination of configName.

The following table describes the data structures supported by the DELETE response body on this resource:

Table 2-56 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
n/a	M	1	204 No Content	Removes the configuration of combination of nfType and nfServiceName.
ProblemDetails	M	1	404 Not Found	Indicates the problem details.
ProblemDetails	M	1	403 Forbidden	Indicates the error when trying to remove a record with a reference in the foreign table (OCSCP_NF_SERVICE_CONFIG) or the default record removal.

Sample of a Successful DELETE Response

```

curl -X 'DELETE' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfservice-config-set/
udm_nudm_uecm_config108' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'

```

204 No Content

Sample of an Error DELETE Response

```
curl -X 'DELETE' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfservice-config-set/
udm_nudm_uecm_config108' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "NF Service Config Set Data not found against given configName.
Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfservice-config-set/
udm_nudm_uecm_config108",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

Sample 2 of an Error DELETE Response

```
curl -X 'DELETE' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfservice-config-
set/c1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

```
{
  "title": "Forbidden",
  "status": 403,
  "detail": "The given configName is referred by 'NF Service Config' hence
cannot be deleted. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfservice-config-set/c1",
  "cause": "DATA_CANT_DELETED"
}
```

403 Error: Forbidden

Data Model

The following table describes data model for request or response:

Table 2-57 nfServiceConfigSetWrapper

Field Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Unique configName to identify the records of nfServiceConfigSet. Allowed character combinations should be alpha-numeric, hyphen, and underscore.

Table 2-57 (Cont.) nfServiceConfigSetWrapper

Field Name	Data Type	Mandatory (M) or Optional (O)	Description
nfServiceConfigSetData	JSON	M	Indicates JSON structure to hold different NFService specific configurations.
createdTimestamp	String	Read Only	Timestamp of the created record. This is not required in the request, but it is present in the response.
updatedTimestamp	String	Read Only	Timestamp of the updated record. This is not required in the request, but it is present in the response.

The following table describes parameters of nfServiceConfigSetData:

Table 2-58 nfServiceConfigSetData

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Range	Description
defaultPriority	integer	M	NA	0-65535	Priority (relative to other NF Services of the same type) in the range of 0-65535, to be used for NF Service selection. The lower values indicate a higher priority. If priority is present in either NF profile or nfServiceList parameters, those will have precedence over this value. This default priority value shall be used for NF service instance selection only if priority is not published by producer NFs while registering with NRF in NF profile (including both NF profile and nfServiceList parameters).
defaultCapacity	integer	M	NA	0-65535	Capacity information in the range of 0-65535, expressed as a weight relative to other NF service instances of the same type. If capacity is also present in either NF profile or nfServiceList parameters, those will have precedence over this value. This default capacity value shall be used for NF service instance selection only if capacity is not published by producer NFs while registering with NRF in NF profile (including both NF profile and nfServiceList parameters).
altRoutingDnsSrvModeSupported	boolean	M	false	true or false	Indicates whether alternate routing is supported using DNS SRV.
loadBasedCongestionControlEnabled	boolean	M	true	true or false	Enables or disables congestion control for the associated service.

Table 2-58 (Cont.) nfServiceConfigSetData

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Range	Description
nfServiceLoadBasedCongestionControlCfg	String	O	NA	-	Name of the rule holding the configuration of congestion control. Based on the configuration under this rule, congestion control will be applied.
cbEnabled	boolean	M	false	true or false	Enables or disables circuit breaking for the associated service.
cbRuleName	String	O	NA	-	Name of the rule holding the configuration of circuit breaking. Based on the configuration under this rule, circuit breaking is activated.
odEnabled	boolean	M	false	true or false	Enables or disables the Outlier Detection feature.
odRuleName	String	O	NA	-	Name of the rule holding the configuration of Outlier Detection. Based on the configuration under this rule, the Outlier Detection is activated.
ociEnabled	boolean	M	false	true or false	Enables or disables OCI for the associated service. Note: Ensure that the Overload Control Information (OCI) feature is enabled through the scp-features REST API as follows: <pre> "featureName": "oci", "enabled": true, </pre>
ociRuleName	String	O	NA	-	Name of the rule holding the configuration of OCI. Based on the configuration under this rule, OCI is activated.
canaryReleaseEnabled	boolean	M	false	true or false	Enables or disables canary traffic for the associated service.
canaryReleaseConfigName	String	O	NA	-	Name of the rule holding the configuration of canary traffic. Based on the configuration under this rule, canary traffic routing is activated.

Table 2-58 (Cont.) nfServiceConfigSetData

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Range	Description
nextHopProxy	array(nextHopProxy)	O	NA	-	Defines the nfServiceConfigName, which holds a reference to the service-specific configuration to be applied when routing to the next hop proxy as defined in Configuring Next Hop Proxy NF Service Config. Default value: <pre> "nextHopProxy": [{ "nfType": "SCP", "nfServiceConfigName": "defaultNextHopProxyConfig" }]</pre>
nextHopRoamingProxy	array(nextHopRoamingProxy)	O	NA	-	Defines the nfServiceConfigName, which holds a reference to the service-specific configuration to be applied when routing to the next hop roaming proxy as defined in Configuring Next Hop Proxy NF Service Config. Default value: <pre> "nextHopRoamingProxy": [{ "nfType": "*", "nfServiceConfigName": "defaultNextHopRoamingProxyConfig" }]</pre>

Table 2-59 NextHopProxy

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Range	Description
nfType	String	M	NA	Allowed nfType: SCP	Indicates nfType for which the configuration is applicable. Length: NA

Table 2-59 (Cont.) NextHopProxy

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Range	Description
nfServiceConfigName	String	M	defaultRuleForNextHopScp	Allowed character combinations should be alpha-numeric, hyphen, and underscore.	Holds a reference, using the configName, to the service-specific configuration to be applied when routing to the next hop proxy as defined in Configuring Next Hop Proxy NF Service Config . Length: 256

Table 2-60 NextHopRoamingProxy

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Range	Description
nfType	String	M	NA	Allowed nfTypes: "*", SEPP, Any configured nfType with nfRole as CUSTOM_5G_ROAMING_PROXY	Specifies the nfType to which the configuration applies. Length: NA
nfServiceConfigName	String	M	defaultRuleForNextHopSepp	Allowed character combinations should be alpha-numeric, hyphen, and underscore.	Holds a reference, using the configName, to the service-specific configuration to be applied when routing to the next hop roaming proxy as defined in Configuring Next Hop Proxy NF Service Config . Length: 256

2.6 Configuring NFTypes-NFServices

This section describes the NFTypes-NFServices REST API parameters configuration to add new 3GPP defined NFs, custom NF types, and custom NF services in SCP.

Note

- You must configure NFType and NFService parameters before configuring routing related parameters and feature level parameters.
- apiName, NFType, and NFService values are not case-sensitive irrespective of the scenarios they are configured.
- SCP stores NFType value in uppercase, NFService and apiName values in lowercase, irrespective of the scenarios they are configured.
- apiName received in RX request is always case-insensitive.
- You must configure NFType, ServiceName, and ApiName as a valid combination of alphanumeric characters, hyphen, and underscore.
- The keyword "default" is not allowed for ServiceName.
- You must check APINAMEAxHeading validation for details on validation supported on the apiNameAxHeading field.
- NFRole describes the role of the configured NFType. The nfRole can be STANDARD_5G_NF, STANDARD_5G_NE or CUSTOM_5G_ROAMING_PROXY.

Resources

The following table describes the resource name to retrieve, add, or update nftypes-nfservices configuration data:

Table 2-61 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
nftypes-nfservices	/ocscp/scpc-configuration/{version}/nftypes-nfservices	GET	• Retrieves NF types and NF services configurations for given query parameters. • Retrieves all NF types and NF services configurations if no query parameter is used. Query parameters are: nfType, serviceName, configName, apiName, nfRole, apiNameAxHeading, apiName, nfRole, and apiNameAxHeading.
nftypes-nfservices	/ocscp/scpc-configuration/{version}/nftypes-nfservices/{configName}	GET	Retrieves NF type and NF service configuration for a given configName.
nftypes-nfservices	/ocscp/scpc-configuration/{version}/nftypes-nfservices/{configName}	PUT	• Creates new NF type and NF service configurations. Ensure that NF type and NF serviceName combination is unique. • Updates to NF type or NF service fields of an existing configuration are not allowed.

Table 2-61 (Cont.) Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
nftypes-nfservices	/ocscp/scpc-configuration/{version}/nftypes-nfservices/{configName}	DELETE	- Removes NF type and NF service configurations for a given configName. - Removal of parameters can only be proceeded if no other table has a reference to NF_TYPE and SERVICE_NAME combination. - Configuration containing nfType as SCP cannot be removed.

Resource Definition**GET**

This resource fetches the nftypes-nfservices configuration based on the query parameters.

Resource URI: /ocscp/scpc-configuration/{version}/nftypes-nfservices

The following table describes the data structures supported by the GET response body on this resource:

Table 2-62 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
NfServiceWrapper	M	1..N	200 OK	Indicates nftypes-nfservices configurations.

This resource fetches the nftypes-nfservices configuration based on the configName parameter.

Resource URI: /ocscp/scpc-configuration/{version}/nftypes-nfservices/{configName}

The following table describes the path parameter supported by this resource:

Table 2-63 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Fetches configuration information for configName.

The following table describes data structures supported by the GET response body on these resources:

Table 2-64 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
NfServiceWrapper	M	1	200 OK	Indicates nftypes-nfservices configurations.
ProblemDetails	M	1	404 Not Found	Indicates problem details.

This resource fetches all the nftypes-nfservices configurations based on configName, nfType, serviceName, apiname, and apinameaxheading query parameters.

Resource URI: /ocscp/scpc-configuration/{version}/nftypes-nfservices?
configName={value}&nfType={value2}&serviceName={value3}

The following table describes the query parameters:

Table 2-65 Query Parameters

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	O	- Provide any number of query parameters (maximum five). - The request fetches configuration that matches five query parameters.
nfType	String	O	
serviceName	String	O	
apiName	String	O	
nfRole	String	O	
apiNameAxHeading	String	O	

The following table describes data structures supported by the GET response body on these resources:

Table 2-66 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
NfServiceWrapper	M	1	200 OK	Indicates nftypes-nfservices configurations.
ProblemDetails	M	1	404 Not Found	Indicates problem details.

Sample of a Successful GET Response

```
curl -X 'GET' \
'http://<localhost>:32516/ocscp/scpc-configuration/v1/nftypes-nfservices?'
```

```
nfType=&serviceName=&configName=&apiName=&nfRole=&apiNameAxHeading=' \
-H 'accept: application/json'
```

```
[
  {
    "configName": "5g_eir_n5g-eir-eic",
    "nfServiceData": {
      "nfType": "5G_EIR",
      "serviceName": "n5g-eir-eic",
      "apiName": "n5g-eir-eic",
      "serviceType": [
        "notification-message-service",
        "request-message-service"
      ],
      "apiNameAxHeading": "n5g-eir_equipmentsidentitycheck",
      "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:31",
    "updatedTimestamp": "2026-03-13 11:12:31"
  },
  {
    "configName": "af",
    "nfServiceData": {
      "nfType": "AF",
      "serviceName": "noservice",
      "apiName": "",
      "serviceType": [
        "notification-message-service"
      ],
      "apiNameAxHeading": "",
      "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:32",
    "updatedTimestamp": "2026-03-13 11:12:32"
  },
  {
    "configName": "amf_namf-comm",
    "nfServiceData": {
      "nfType": "AMF",
      "serviceName": "namf-comm",
      "apiName": "namf-comm",
      "serviceType": [
        "notification-message-service",
        "request-message-service"
      ],
      "apiNameAxHeading": "namf_communication",
      "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:34",
    "updatedTimestamp": "2026-03-13 11:12:34"
  },
  {
    "configName": "amf_namf-evts",
```

```

    "nfServiceData": {
      "nfType": "AMF",
      "serviceName": "namf-evts",
      "apiName": "namf-evts",
      "serviceType": [
        "notification-message-service",
        "request-message-service"
      ],
      "apiNameAxHeading": "namf_eventexposure",
      "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:34",
    "updatedTimestamp": "2026-03-13 11:12:34"
  },
  {
    "configName": "amf_namf-loc",
    "nfServiceData": {
      "nfType": "AMF",
      "serviceName": "namf-loc",
      "apiName": "namf-loc",
      "serviceType": [
        "notification-message-service",
        "request-message-service"
      ],
      "apiNameAxHeading": "namf_location",
      "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:34",
    "updatedTimestamp": "2026-03-13 11:12:34"
  },
  {
    "configName": "amf_namf-mt",
    "nfServiceData": {
      "nfType": "AMF",
      "serviceName": "namf-mt",
      "apiName": "namf-mt",
      "serviceType": [
        "notification-message-service",
        "request-message-service"
      ],
      "apiNameAxHeading": "namf_mt",
      "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:34",
    "updatedTimestamp": "2026-03-13 11:12:34"
  },
  {
    "configName": "ausf_nausf-auth",
    "nfServiceData": {
      "nfType": "AUSF",
      "serviceName": "nausf-auth",
      "apiName": "nausf-auth",
      "serviceType": [
        "notification-message-service",
        "request-message-service"
      ],

```

```

        "apiNameAxHeading": "nausf_ueauthentication",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:33",
    "updatedTimestamp": "2026-03-13 11:12:33"
},
{
    "configName": "ausf_nausf-sorprotection",
    "nfServiceData": {
        "nfType": "AUSF",
        "serviceName": "nausf-sorprotection",
        "apiName": "nausf-sorprotection",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "nausf_sorprotection",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:33",
    "updatedTimestamp": "2026-03-13 11:12:33"
},
{
    "configName": "ausf_nausf-upuprotection",
    "nfServiceData": {
        "nfType": "AUSF",
        "serviceName": "nausf-upuprotection",
        "apiName": "nausf-upuprotection",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "nausf_upuprotection",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:33",
    "updatedTimestamp": "2026-03-13 11:12:33"
},
{
    "configName": "bsf_nbsf-management",
    "nfServiceData": {
        "nfType": "BSF",
        "serviceName": "nbsf-management",
        "apiName": "nbsf-management",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "nbsf_management",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:33",
    "updatedTimestamp": "2026-03-13 11:12:33"
},
{
    "configName": "chf_nchf-convergedcharging",

```

```

    "nfServiceData": {
      "nfType": "CHF",
      "serviceName": "nchf-convergedcharging",
      "apiName": "nchf-convergedcharging",
      "serviceType": [
        "notification-message-service",
        "request-message-service"
      ],
      "apiNameAxHeading": "nchf_convergedcharging",
      "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:31",
    "updatedTimestamp": "2026-03-13 11:12:31"
  },
  {
    "configName": "chf_nchf-spendinglimitcontrol",
    "nfServiceData": {
      "nfType": "CHF",
      "serviceName": "nchf-spendinglimitcontrol",
      "apiName": "nchf-spendinglimitcontrol",
      "serviceType": [
        "notification-message-service",
        "request-message-service"
      ],
      "apiNameAxHeading": "nchf_spendinglimitcontrol",
      "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:31",
    "updatedTimestamp": "2026-03-13 11:12:31"
  },
  {
    "configName": "gmlc_ngmlc-loc",
    "nfServiceData": {
      "nfType": "GMLC",
      "serviceName": "ngmlc-loc",
      "apiName": "ngmlc-loc",
      "serviceType": [
        "notification-message-service",
        "request-message-service"
      ],
      "apiNameAxHeading": "ngmlc_location",
      "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:34",
    "updatedTimestamp": "2026-03-13 11:12:34"
  },
  {
    "configName": "lmf_nlmf-loc",
    "nfServiceData": {
      "nfType": "LMF",
      "serviceName": "nlmf-loc",
      "apiName": "nlmf-loc",
      "serviceType": [
        "notification-message-service",
        "request-message-service"
      ],

```

```

        "apiNameAxHeading": "nlmf_location",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:31",
    "updatedTimestamp": "2026-03-13 11:12:31"
},
{
    "configName": "n3iwf",
    "nfServiceData": {
        "nfType": "N3IWF",
        "serviceName": "noservice",
        "apiName": "",
        "serviceType": [
            "notification-message-service"
        ],
        "apiNameAxHeading": "",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:32",
    "updatedTimestamp": "2026-03-13 11:12:32"
},
{
    "configName": "nef_3gpp-as-session-with-qos",
    "nfServiceData": {
        "nfType": "NEF",
        "serviceName": "3gpp-as-session-with-qos",
        "apiName": "3gpp-as-session-with-qos",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "assessionwithqos",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:32",
    "updatedTimestamp": "2026-03-13 11:12:32"
},
{
    "configName": "nef_3gpp-traffic-influence",
    "nfServiceData": {
        "nfType": "NEF",
        "serviceName": "3gpp-traffic-influence",
        "apiName": "3gpp-traffic-influence",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "trafficinfluence",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:32",
    "updatedTimestamp": "2026-03-13 11:12:32"
},
{
    "configName": "nef_nnef-eventexposure",
    "nfServiceData": {

```

```

        "nfType": "NEF",
        "serviceName": "nnef-eventexposure",
        "apiName": "nnef-eventexposure",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "nnef_eventexposure",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:32",
    "updatedTimestamp": "2026-03-13 11:12:32"
},
{
    "configName": "nef_nnef-pfdmanagement",
    "nfServiceData": {
        "nfType": "NEF",
        "serviceName": "nnef-pfdmanagement",
        "apiName": "nnef-pfdmanagement",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "nnef_pfdmanagement",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:32",
    "updatedTimestamp": "2026-03-13 11:12:32"
},
{
    "configName": "nrf_nnrf-disc",
    "nfServiceData": {
        "nfType": "NRF",
        "serviceName": "nnrf-disc",
        "apiName": "nnrf-disc",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "nnrf_nfdiscovery",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:31",
    "updatedTimestamp": "2026-03-13 11:12:31"
},
{
    "configName": "nrf_nnrf-nfm",
    "nfServiceData": {
        "nfType": "NRF",
        "serviceName": "nnrf-nfm",
        "apiName": "nnrf-nfm",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "nnrf_nfmanagement",

```

```

        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:31",
    "updatedTimestamp": "2026-03-13 11:12:31"
},
{
    "configName": "nrf_nnrf-oauth2",
    "nfServiceData": {
        "nfType": "NRF",
        "serviceName": "nnrf-oauth2",
        "apiName": "nnrf-oauth2",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": null,
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:31",
    "updatedTimestamp": "2026-03-13 11:22:58"
},
{
    "configName": "nssf_nssf-nssaiavailability",
    "nfServiceData": {
        "nfType": "NSSF",
        "serviceName": "nssf-nssaiavailability",
        "apiName": "nssf-nssaiavailability",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "nssf_nssaiavailability",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:34",
    "updatedTimestamp": "2026-03-13 11:12:34"
},
{
    "configName": "nssf_nssf-nsseselection",
    "nfServiceData": {
        "nfType": "NSSF",
        "serviceName": "nssf-nsseselection",
        "apiName": "nssf-nsseselection",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "nssf_nsseselection",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:34",
    "updatedTimestamp": "2026-03-13 11:12:34"
},
{
    "configName": "nwdaf_nnwdaf-analyticsinfo",
    "nfServiceData": {

```



```

        "nfType": "NWDAF",
        "serviceName": "nnwdaf-analyticsinfo",
        "apiName": "nnwdaf-analyticsinfo",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "nnwdaf_analyticsinfo",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:33",
    "updatedTimestamp": "2026-03-13 11:12:33"
},
{
    "configName": "nwdaflnnwdaf-eventssubscription",
    "nfServiceData": {
        "nfType": "NWDAF",
        "serviceName": "nnwdaf-eventssubscription",
        "apiName": "nnwdaf-eventssubscription",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "nnwdaf_eventssubscription",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:33",
    "updatedTimestamp": "2026-03-13 11:12:33"
},
{
    "configName": "pcf_npcf-am-policy-control",
    "nfServiceData": {
        "nfType": "PCF",
        "serviceName": "npcf-am-policy-control",
        "apiName": "npcf-am-policy-control",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "npcf_ampolicycontrol",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:33",
    "updatedTimestamp": "2026-03-13 11:12:33"
},
{
    "configName": "pcf_npcf-bdtpolicycontrol",
    "nfServiceData": {
        "nfType": "PCF",
        "serviceName": "npcf-bdtpolicycontrol",
        "apiName": "npcf-bdtpolicycontrol",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "npcf_bdtpolicycontrol",

```

```

        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:32",
    "updatedTimestamp": "2026-03-13 11:12:32"
  },
  {
    "configName": "pcf_npcf-eventexposure",
    "nfServiceData": {
      "nfType": "PCF",
      "serviceName": "npcf-eventexposure",
      "apiName": "npcf-eventexposure",
      "serviceType": [
        "notification-message-service",
        "request-message-service"
      ],
      "apiNameAxHeading": "npcf_eventexposure",
      "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:33",
    "updatedTimestamp": "2026-03-13 11:12:33"
  },
  {
    "configName": "pcf_npcf-policyauthorization",
    "nfServiceData": {
      "nfType": "PCF",
      "serviceName": "npcf-policyauthorization",
      "apiName": "npcf-policyauthorization",
      "serviceType": [
        "notification-message-service",
        "request-message-service"
      ],
      "apiNameAxHeading": "npcf_policyauthorization",
      "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:32",
    "updatedTimestamp": "2026-03-13 11:12:32"
  },
  {
    "configName": "pcf_npcf-smpolicycontrol",
    "nfServiceData": {
      "nfType": "PCF",
      "serviceName": "npcf-smpolicycontrol",
      "apiName": "npcf-smpolicycontrol",
      "serviceType": [
        "notification-message-service",
        "request-message-service"
      ],
      "apiNameAxHeading": "npcf_smpolicycontrol",
      "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:33",
    "updatedTimestamp": "2026-03-13 11:12:33"
  },
  {
    "configName": "pcf_npcf-ue-policy-control",
    "nfServiceData": {

```

```

        "nfType": "PCF",
        "serviceName": "npcf-ue-policy-control",
        "apiName": "npcf-ue-policy-control",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "npcf_uepolicycontrol",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:33",
    "updatedTimestamp": "2026-03-13 11:12:33"
},
{
    "configName": "scp",
    "nfServiceData": {
        "nfType": "SCP",
        "serviceName": "noservice",
        "apiName": "",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "",
        "nfRole": "STANDARD_5G_NE"
    },
    "createdTimestamp": "2026-03-13 11:12:31",
    "updatedTimestamp": "2026-03-13 11:12:31"
},
{
    "configName": "sepp",
    "nfServiceData": {
        "nfType": "SEPP",
        "serviceName": "noservice",
        "apiName": "",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "",
        "nfRole": "STANDARD_5G_NE"
    },
    "createdTimestamp": "2026-03-13 11:12:33",
    "updatedTimestamp": "2026-03-13 11:12:33"
},
{
    "configName": "smf_nsmf-event-exposure",
    "nfServiceData": {
        "nfType": "SMF",
        "serviceName": "nsmf-event-exposure",
        "apiName": "nsmf-event-exposure",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "nsmf_eventexposure",

```

```

        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:32",
    "updatedTimestamp": "2026-03-13 11:12:32"
},
{
    "configName": "smf_nsmf-pdusession",
    "nfServiceData": {
        "nfType": "SMF",
        "serviceName": "nsmf-pdusession",
        "apiName": "nsmf-pdusession",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "nsmf_pdusession",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:32",
    "updatedTimestamp": "2026-03-13 11:12:32"
},
{
    "configName": "smf_nsmf-sms",
    "nfServiceData": {
        "nfType": "SMSF",
        "serviceName": "nsmf-sms",
        "apiName": "nsmf-sms",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "nsmf_smservice",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:32",
    "updatedTimestamp": "2026-03-13 11:12:32"
},
{
    "configName": "udm_nudm-ee",
    "nfServiceData": {
        "nfType": "UDM",
        "serviceName": "nudm-ee",
        "apiName": "nudm-ee",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "nudm_ee",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:34",
    "updatedTimestamp": "2026-03-13 11:12:34"
},
{
    "configName": "udm_nudm-pp",
    "nfServiceData": {

```

```

        "nfType": "UDM",
        "serviceName": "nudm-pp",
        "apiName": "nudm-pp",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "nudm_pp",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:34",
    "updatedTimestamp": "2026-03-13 11:12:34"
},
{
    "configName": "udm_nudm-sdm",
    "nfServiceData": {
        "nfType": "UDM",
        "serviceName": "nudm-sdm",
        "apiName": "nudm-sdm",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "nudm_sdm",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:34",
    "updatedTimestamp": "2026-03-13 11:12:34"
},
{
    "configName": "udm_nudm-ueau",
    "nfServiceData": {
        "nfType": "UDM",
        "serviceName": "nudm-ueau",
        "apiName": "nudm-ueau",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "nudm_ueau",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:34",
    "updatedTimestamp": "2026-03-13 11:12:34"
},
{
    "configName": "udm_nudm-uecm",
    "nfServiceData": {
        "nfType": "UDM",
        "serviceName": "nudm-uecm",
        "apiName": "nudm-uecm",
        "serviceType": [
            "notification-message-service",
            "request-message-service"
        ],
        "apiNameAxHeading": "nudm_uecm",

```

```

        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:34",
    "updatedTimestamp": "2026-03-13 11:12:34"
  },
  {
    "configName": "udr_nudr-dr",
    "nfServiceData": {
      "nfType": "UDR",
      "serviceName": "nudr-dr",
      "apiName": "nudr-dr",
      "serviceType": [
        "notification-message-service",
        "request-message-service"
      ],
      "apiNameAxHeading": "nudr_datarepository",
      "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:31",
    "updatedTimestamp": "2026-03-13 11:12:31"
  },
  {
    "configName": "udr_nudr-group-id-map",
    "nfServiceData": {
      "nfType": "UDR",
      "serviceName": "nudr-group-id-map",
      "apiName": "nudr-group-id-map",
      "serviceType": [
        "notification-message-service",
        "request-message-service"
      ],
      "apiNameAxHeading": "nudr_groupidmap",
      "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:31",
    "updatedTimestamp": "2026-03-13 11:12:31"
  },
  {
    "configName": "udsf_nudsf-dr",
    "nfServiceData": {
      "nfType": "UDSF",
      "serviceName": "nudsf-dr",
      "apiName": "nudsf-dr",
      "serviceType": [
        "notification-message-service",
        "request-message-service"
      ],
      "apiNameAxHeading": "nudsf_datarepository",
      "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:32",
    "updatedTimestamp": "2026-03-13 11:12:32"
  },
  {
    "configName": "upf",
    "nfServiceData": {

```

```

        "nfType": "UPF",
        "serviceName": "noservice",
        "apiName": "",
        "serviceType": [
            "notification-message-service"
        ],
        "apiNameAxHeading": "",
        "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:32",
    "updatedTimestamp": "2026-03-13 11:12:32"
}
]

```

Sample of a Successful GET API with path Parameter

```
curl -X 'GET' 'http://<localhost>:32586/ocscp/scpc-configuration/v1/nftypes-nfservices/config1' -H 'accept: application/json'
```

```

{
  "configName": "config1",
  "nfServiceData": {
    "nfType": "UDM",
    "serviceName": "nudm-uecm",
    "apiName": "apiName1",
    "apiNameAxHeading": "apiNameAxHeading1",
    "serviceType": ["notification-message-service", "request-message-service"],
    "nfRole": STANDARD_5G_NF
  },
  "createdTimestamp": "2024-04-24 14:50:56.0",
  "updatedTimestamp": "2024-04-24 14:50:56.0"
}

```

Sample of a Successful GET API with Query Parameters

```
curl -X 'GET' \
'http://<localhost>:32516/ocscp/scpc-configuration/v1/nftypes-nfservices?nfType=AUSF&serviceName=nausf-auth&configName=ausf_nausf-auth&apiName=&nfRole=&apiNameAxHeading=' \
-H 'accept: application/json'
```

```

[
  {
    "configName": "ausf_nausf-auth",
    "nfServiceData": {
      "nfType": "AUSF",
      "serviceName": "nausf-auth",
      "apiName": "nausf-auth",
      "serviceType": [
        "notification-message-service",
        "request-message-service"
      ]
    }
  }
]

```

```

    ],
    "apiNameAxHeading": "nausf_ueauthentication",
    "nfRole": "STANDARD_5G_NF"
  },
  "createdTimestamp": "2026-03-13 11:12:33",
  "updatedTimestamp": "2026-03-13 11:12:33"
}
]

```

Sample of an Error GET API

```
curl -X 'GET' 'http://<localhost>:32586/ocscp/scpc-configuration/v1/nftypes-nfservices/config108' -H 'accept: application/json'
```

```

{
  "title": "Not Found",
  "status": "404",
  "detail": "NFTypes-NFServices data not found against given configName.
Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nftypes-nfservices/config108",
  "cause": "DATA_NOT_FOUND"
}

```

404 Error: Not Found

Sample of an Error GET API

```
curl -X 'GET' 'http://<localhost>:32586/ocscp/scpc-configuration/v1/nftypes-nfservices?configName=config108' -H 'accept: application/json'
```

```

{
  "title": "Not Found",
  "status": "404",
  "detail": "NFTypes-NFServices data not found against given query
parameter(s). Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nftypes-nfservices/config108",
  "cause": "DATA_NOT_FOUND"
}

```

404 Error: Not Found

PUT

This resource configures nftypes-nfservices for given data.

Resource URI: /ocscp/scpc-configuration/{version}/nftypes-nfservices/{configName}

The following table describes the data structures supported by the PUT response body on this resource:

Table 2-67 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
NfServiceWrapper	M	1	200 OK	Indicates nftypes-nfservices configurations to be added or modified.

This resource fetches the nftypes-nfservices configuration based on the configName parameter.

Resource URI: /ocscp/scpc-configuration/{version}/nftypes-nfservices/{configName}

The following table describes the path parameter supported by this resource:

Table 2-68 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Signifies a unique configuration name to identify the configuration. The name must be unique, as it serves as the key for the record.

The following table describes data structures supported by the PUT response body on these resources:

Table 2-69 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
NfServiceWrapper	M	1	201 Created	Indicates new nftypes-nfservices configuration creation.
NfServiceWrapper	M	1	200 OK	Updates the existing record.
ProblemDetails	M	1	400 Bad Request	Indicates problem details.
ProblemDetails	M	1	403 Forbidden	Updates the fields that cannot be modified.

Sample of a Successful PUT Response

```
curl -X 'PUT' \
  'http://<localhost>:32516/ocscp/scpc-configuration/v1/nftypes-nfservices/udm_nudm-uecm' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "udm_nudm-uecm",
```

```

    "nfServiceData": {
      "nfType": "UDM",
      "serviceName": "nudm-uecm",
      "apiName": "apiName1",
      "serviceType": [
        "notification-message-service",
        "request-message-service"
      ],
      "apiNameAxHeading": "apiNameAxHeading1",
      "nfRole": "STANDARD_5G_NF"
    },
    "createdTimestamp": "2026-03-13 11:12:34",
    "updatedTimestamp": "2026-03-13 11:12:34"
  }'

{
  "configName": "udm_nudm-uecm",
  "nfServiceData": {
    "nfType": "UDM",
    "serviceName": "nudm-uecm",
    "apiName": "apiname1",
    "serviceType": [
      "notification-message-service",
      "request-message-service"
    ],
    "apiNameAxHeading": "apinameaxheading1",
    "nfRole": "STANDARD_5G_NF"
  },
  "createdTimestamp": "2026-03-13 11:12:34",
  "updatedTimestamp": "2026-03-18 06:32:10"
}

```

Sample of an Error PUT Response

```

curl -X 'PUT' \
  'http://<localhost>:32265/ocscp/scpc-configuration/v1/nftypes-nfservices/
config2' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "config2",
    "nfServiceData": {
      "nfType": "UDM",
      "serviceName": "nudm-sdm",
      "apiName": "apiName1",
      "apiNameAxHeading": "apiNameAxHeading1",
      "serviceType": [
        "notification-message-service",
        "request-message-service"
      ],
      "nfRole": STANDARD_5G_NF
    }
  }'

```

```

    }
  }'

{
  "title": "Bad Request",
  "status": 400,
  "detail": "ApiName is not unique. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nftypes-nfservices/config2",
  "cause": "MANDATORY_IE_INCORRECT"
}

```

400 Error: Bad Request

Sample 2 of an Error PUT Response

```

curl -X 'PUT' \
'http://<localhost>:32265/ocscp/scpc-configuration/v1/nftypes-nfservices/
config1' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "configName": "config1",
  "nfServiceData": {
    "nfType": "nfT2",
    "serviceName": "nfsvc1",
    "apiName": "something",
    "apiNameAxHeading": "apiNameAxHeading1",
    "serviceType": [],
    "nfRole": STANDARD_5G_NF
  },
  "createdTimestamp": "string",
  "updatedTimestamp": "string"
}'

{
  "title": "Forbidden",
  "status": 403,
  "detail": "NF Type and NF Service Name should not be modified for
existing configuration. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nftypes-nfservices/config1",
  "cause": "MODIFICATION_NOT_ALLOWED"
}

```

403 Error: Forbidden

Sample 3 of an Error PUT Response

```

curl -X 'PUT' \
'http://<localhost>:32265/ocscp/scpc-configuration/v1/nftypes-nfservices/
config2' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{

```

```

    "configName": "config2",
    "nfServiceData": {
      "nfType": "UDM",
      "serviceName": "nudm-sdm",
      "apiName": "apiName1",
      "apiNameAxHeading": "apiNameAxHeading1",
      "serviceType": [
        "notification-message-service",
        "request-message-service"
      ],
      "nfRole": CUSTOM_5G_ROAMING_PROXY
    }
  }
}'

{
  "title": "Forbidden",
  "status": 403,
  "detail": "NFRole should not be modified for existing configuration.
Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nftypes-nfservices/config2",
  "cause": "MODIFICATION_NOT_ALLOWED"
}

```

403 Error: Forbidden

DELETE

This resource removes the nftypes-nfservices configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/nftypes-nfservices/
{configName}

The following table describes the path parameter supported by this resource:

Table 2-70 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Removes configurations based on configName.

The following table describes the data structures supported by the DELETE response body on this resource:

Table 2-71 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
None	-	1	204 No Content	In successful cases, only response code is returned.

Table 2-71 (Cont.) Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
ProblemDetails	M	1	404 Not Found	Indicates the problem details.

Sample of a Successful DELETE Response

```
curl -X 'DELETE' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nftypes-nfservices/
  config108' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

Response: 200 OK or 204 No
Content

Sample of an Error DELETE Response

```
curl -X 'DELETE' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nftypes-nfservices/
  config108' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "NFTypes-NFServices data not found against given configName.
  Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nftypes-nfservices/config108",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

Data Model

The following table describes data model for request or response:

Table 2-72 NfServiceWrapper

Field Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Signifies a unique configuration name to identify the configuration. The name must be unique, as it serves as the key for the record. Number of characters is 256. Allowed character combinations should be alpha-numeric, hyphen, and underscore.
nfServiceData	JSON	M	Provides configuration values of nfType, apiName, serviceName, and serviceType.
createdTimestamp	String	Read Only	Timestamp of the created record. This is not required in the request, but it is present in the response.
updatedTimestamp	String	Read Only	Timestamp of the updated record. This is not required in the request, but it is present in the response.

The following table describes parameters of nfServiceData:

Table 2-73 nfServiceData Parameters

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Range	Description
nfType	String	M	NA	Allowed character combinations should be alpha-numeric, hyphen, and underscore.	Indicates the NF type for which routing options are configured. This is either 3GPP defined NFType as per TS 29.510 or custom NFType. Length: 100

Table 2-73 (Cont.) nfServiceData Parameters

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Range	Description
serviceName	String	M	NA	Allowed character combinations should be alpha-numeric, hyphen, and underscore. "default" is not supported as a service name.	Indicates the NF service name for which routing options are configured. This is either 3GPP defined serviceName as per TS29.510 or any custom service name. For proxy network entities, such as SCP and SEPP, serviceName must be configured only with 'noservice' value. Apart from SCP and SEPP, if a particular NFType does not have NF Service, 'noservice' keyword should be provided for serviceName. Note: "noservice" is a keyword used by SCP to indicate that the corresponding has no NFService. - If you have added an NFType with serviceName as "noservice", and want to add a new serviceName for the same NFType, follow these steps: 1. Remove the NFType, "noservice" entry. 2. Add NFType, <new serviceName> entry again. Length: 100

Table 2-73 (Cont.) nfServiceData Parameters

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Range	Description
apiName	String	O	NA	Allowed character combinations should be alpha-numeric, hyphen, and underscore.	Ensure that the API name is unique across all records. In the absence of apiName, serviceName is configured as apiName. This must be configured if apiName and serviceName values are different. apiName must be defined if apiName to be used in API URI for this service API is different from serviceName published in NF Profile. When serviceName is set as 'noservice', apiName configuration is not allowed. Note: configName does not show any value for apiName when nfType is not configured. When any value is configured for nfType, apiName is not included in configName: <pre>{ "configName": "config199", "nfServiceData": { "nfType": "UDMTEST", "serviceName": "noservice", "serviceType": ["notification-message- service"], "nfRole": "STANDARD_5G_NF" } }</pre> Length: 256

Table 2-73 (Cont.) nfServiceData Parameters

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Range	Description
apiNameAxHeading	String	M	NA	Allowed character combinations should be alpha-numeric, hyphen, and underscore.	Configures the apiNameAxHeading attribute of notificationSender of routing options configuration. Its value is API name taken from the heading of the relevant annex A.x as defined in the corresponding 3GPP TS of that API. The value of this parameter is the first part of the callback type values in the 3gpp-Sbi-Callback header in a notification message. For example, when nudm-uecm sends DeregistrationNotification, then callback type value in 3gpp-Sbi-Callback header will have Nudm_UECM_DeregistrationNotification. Where Nudm_UECM is the apiNameAxHeading and DeregistrationNotification is callback service operation. Validations: • Empty and null values are allowed. • Default entries are populated for all supported 3GPP NFTypes. • If the value of this parameter is not provided, the API attempts to populate it from a static YAML file, provided that apiName is configured. • API allows the configuration of this parameter even when serviceName is set to noservice. • The API returns 400 responses if the following values are configured: – a duplicate value that is already configured in SCP for a different NFType-NFService. – a reserved value for a different 3GPP NF irrespective of whether the specified NF is supported by SCP or is currently registered using the NFType-NFService REST

Table 2-73 (Cont.) nfServiceData Parameters

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Range	Description
					API. The reserved value for NFs is taken from the static YAML file. – a value not aligned to the allowed regex of alphanumeric, hyphen, and underscore characters. – a value for SCP and SEPP NFs. Length: 256
serviceType	Array(String)	M	["notification-message-service", "request-message-service"] Or ["notification-message-service"]	["notification-message-service", "request-message-service"]	When this attribute is blank, serviceType is automatically configured for both notification-message-service and request-message-service. When NFType is SCP and SEPP, serviceType is configured for both notification-message-service and request-message-service. When serviceName is set to 'noservice', serviceType configuration is allowed to have only "notification-message-service" value for NF other than SCP and SEPP. When serviceName is set to 'noservice', and serviceType is blank, serviceType is automatically configured to notification-message-service only for NF other than SCP and SEPP.
nfRole	NFRole (Enum)	O	STANDARD_5G_NF or STANDARD_5G_NE	Valid values of NFRole are: STANDARD_5G_NF, STANDARD_5G_NE, CUSTOM_5G_ROAMING_PROXY	Describes the role of the configured NFType, such as a standard NF type, standard proxies, or custom-defined NF types or proxies. STANDARD_5G_NF: 3GPP defined NF. The default value if this attribute is absent in the configuration except SCP and SEPP. STANDARD_5G_NE: 3GPP defined Network Entity (NE). The default value for SCP and SEPP if this attribute is absent in the configuration. CUSTOM_5G_ROAMING_PROXY: Mandatory to be configured for any custom 5G roaming proxy. Note: Records of the same NF type cannot have different NF roles. Length: 0...1

2.7 Configuring Canary Release Config Set

The canary-release REST API inspects the version (API version) attribute of the NF Service profile published by the NFs during NF registration or update. It can identify the release as a canary version if the version matches the configured value. There are two versions of API, Production version (older version) and Canary version (newer version) of the service instance. SCP distributes traffic between the Production version and the Canary versions based on operator configuration.

The following sample REST API messages provide the details about the operations and parameters for Canary Release options. The default values of parameters related to CanaryRelease are mentioned in the following samples, however, you can modify these values. These parameters are applicable at the pod level.

Resources

The following table describes the resource name to retrieve, add, or update canary-release configuration data:

Table 2-74 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
canary-release	/ocscp/scpc-configuration/{version}/canary-release	GET	Retrieves all stored canary release configuration data.
canary-release	/ocscp/scpc-configuration/{version}/canary-release/{configName}	GET	Retrieves canary release configuration data for the given configName.
canary-release	/ocscp/scpc-configuration/{version}/canary-release/{configName}	PUT	Creates new canary release config data. Updates canary release data if the record exists. configName cannot be updated. The default record (defaultCanaryConfigName) can be updated.
canary-release	/ocscp/scpc-configuration/{version}/canary-release/{configName}	DELETE	Removes canary release configuration data for the given configName. Cannot remove the records if it is used in the OCSKP_NF_SERVICE_CONFIG_SET table. The default record (defaultCanaryConfigName) cannot be deleted.

Resource Definition

GET

This resource fetches all the canary release configurations.

Resource URI: /ocscp/scpc-configuration/{version}/canary-release

The following table describes the data structures supported by the GET response body on this resource:

Table 2-75 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
canaryReleaseData	M	1..N	200 OK	Fetches all canary release data record.

This resource fetches the canary release configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/canary-release/{configName}

The following table describes the path parameter supported by this resource:

Table 2-76 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Fetches configuration information for configName.

The following table describes data structures supported by the GET response body on these resources:

Table 2-77 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
canaryReleaseData	M	1	200 OK	Indicates canaryReleaseData configurations.
ProblemDetails	M	1	404 Not Found	Indicates problem details.

Sample of a Successful GET Response

```
curl -X 'GET' \ 'http://<localhost>:8081/ocscp/scpc-configuration/v1/canary-release/config1' \
-H 'accept: application/json'
```

```
{
  "configName": "config1",
  "canaryData": {
    "apiFullVersion": "2.0.0",
    "canaryTraffic": 5
  },
  "createdTimestamp": "2024-04-24 14:50:56.0",
  "updatedTimestamp": "2024-04-24 14:50:56.0"
}
```

Sample of an Error GET Response

```
curl -X 'GET' \ 'http://<localhost>:8081/ocscp/scpc-configuration/v1/canary-
release/config1' \
-H 'accept: application/json'
```

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "Canary release data not found against given configName. Please
refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/canary-release/config1",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

PUT

This resource configures canary release configuration for given data.

Resource URI: /ocscp/scpc-configuration/{version}/canary-release/
{configName}

The following table describes the path parameter supported by this resource:

Table 2-78 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Unique identifier for the record configName.

The following table describes the data structures supported by the PUT request body on this resource:

Table 2-79 Request Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
canaryReleaseData	M	1	The canaryRelease data to be added or updated.

The following table describes data structures supported by the PUT response body on these resources:

Table 2-80 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
canaryReleaseData	M	1	200 OK	Indicates successful update of canary release configurations.
canaryReleaseData	M	1	201 Created	Indicates successful creation of canary release configurations.
ProblemDetails	M	1	400 Bad Request	Indicates the problem details.

Sample of a Successful PUT Response

```
curl -X 'PUT' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/canary-release/
config1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "config1",
    "canaryData": {
      "apiFullVersion": "2.0.0",
      "canaryTraffic": 5
    }
  }'

{
  "configName": "config1",
  "canaryData": {
    "apiFullVersion": "2.0.0",
    "canaryTraffic": 5
  },
  "createdTimestamp": "2024-08-02 09:47:12",
  "updatedTimestamp": "2024-08-02 09:47:12"
}
```

Sample of an Error PUT Response

```
curl -X 'PUT' \ 'http://<localhost>:8081/ocscp/scpc-configuration/v1/canary-
release/config1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "config1",
    "canaryData": {
      "apiFullVersion": "adfasdfldksfa;sdfk;asdlfasdflljsadf",
      "canaryTraffic": 5
    }
  }'
```

```

    }
  }'

{
  "title": "Bad Request",
  "status": 400,
  "detail": "Field apiFullVersion format is incorrect. Please refer to the
user guide.",
  "instance": "/ocscp/scpc-configuration/v1/canary-release/config1",
  "cause": "INVALID_VALUE"
}

```

400 Error: Bad Request

DELETE

This resource removes all the canary release configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/canary-release/{configName}

The following table describes the path parameter supported by this resource:

Table 2-81 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Removes configurations based on configName.

The following table describes the data structures supported by the DELETE response body on this resource:

Table 2-82 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
NA	M	1	204 No Content	Successful deletion of nfServiceConfigData.
ProblemDetails	M	1	404 Not Found	Indicates the problem details.
ProblemDetails	M	1	403 Forbidden	Indicates the problem details.

Sample of a Successful DELETE Response

```

curl -X 'DELETE' \ 'http://<localhost>:8081/ocscp/scpc-configuration/v1/
canary-release/config1' \
-H 'accept: application/json'

```

204 No Content

Sample of an Error DELETE Response

```
curl -X 'DELETE' \ 'http://<localhost>:8081/ocscp/scpc-configuration/v1/
canary-release/config1' \
-H 'accept: application/json'
```

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "Canary release data not found against given configName. Please
refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/canary-release/config1",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

Sample 2 of an Error DELETE Response

```
curl -X 'DELETE' \
'http://<localhost>:8081/ocscp/scpc-configuration/v1/canary-release/
defaultCanaryConfigName' \
-H 'accept: application/json'
```

```
{
  "title": "Forbidden",
  "status": 403,
  "detail": "The default configuration cannot be deleted. Please refer to
the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/canary-release/
defaultCanaryConfigName",
  "cause": "DATA_CANT_DELETED"
}
```

403 Error: Forbidden

Data Model

The following table describes data model for request or response:

Table 2-83 canaryReleaseData

Field Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Unique configName key to identify canary release configuration. Allowed character combinations should be alpha-numeric, hyphen, and underscore.
canaryData	JSON	M	JSON containing apiFullVersion of canaryTraffic.
createdTimestamp	String	Read Only	Timestamp of the created record. This is not required in the request, but it is present in the response.

Table 2-83 (Cont.) canaryReleaseData

Field Name	Data Type	Mandatory (M) or Optional (O)	Description
updatedTimestamp	String	Read Only	Timestamp of the updated record. This is not required in the request, but it is present in the response.

The following table describes parameters of canaryData:

Table 2-84 canaryData

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Range	Description
apiFullVersion	String	M	NA	-	API version to redirect requests.
canaryTraffic	int	M	NA	0-100	Represents percentage of traffic to be routed.

2.8 Configuring Topology Source Info

The Topology Source Info REST API configures how SCP discovers and learns 5G topology to derive routing rules. It supports learning from NRF, LOCAL, or both (NRF_AND_LOCAL). If duplicate instanceIds are encountered, the SCP resolves conflicts based on the configured preferredTopologySource.

This REST API operates in either AUTO (AUTONOMOUS) or USER mode. This setting determines how SCP behaves when using locally sourced topology information.

Note

The nfType value configured by using the Topology Source API must match the case of the nfType value configured by using the nftypes-nfservices API. For example, if the configured NF type is UDM, use UDM in the Topology Source API. Do not use udm or Udm.

Resources

The following table describes the resource name to retrieve, add, or remove the topologysourceinfo configuration data:

Table 2-85 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Request Body, Query Parameters	Response Status Code, Body	Description
topologysourceinfo	/ocscp/scpc-configuration/v1 / topologysourceinfo	GET	-	200	Reads the topology source information for all the NF types.

Table 2-85 (Cont.) Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Request Body, Query Parameters	Response Status Code, Body	Description
topologysourceinfo	/ocscp/scpc-configuration/v1 / topologysourceinfo/{NFType}	PUT	Body: TopologySource	• 200 • 201 • 400	Creates or updates the topology source information for a specific NF type.
topologysourceinfo	/ocscp/scpc-configuration/v1 / topologysourceinfo/{NFType}	DELETE	Query Parameter: NFType	• 204 • 404	Removes the topology source information for a specific NF type.
topologysourceinfo	/ocscp/scpc-configuration/v1 / topologysourceinfo/{NFType}	GET	Query Parameter: NFType	• 200 • 404	Reads the topology source information for a specific NF type.

Data Model

The following table describes data model for request or response:

Table 2-86 TopologySourceInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
nftype	String	M	Identifies the NF type to which this configuration applies. Length: 256 Default value: NA Allowed values: Any valid NF type as configured in Configuring NFTypes-NFServices or "*".
topologysource	Enumeration (TopologySource)	M	The source from which the NF profile is learned. Default value: NA Allowed values: • NRF (Existing) • LOCAL (Existing) • NRF_AND_LOCAL

Table 2-86 (Cont.) TopologySourceInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
preferredTopologySource	Enumeration (TopologySourcePreference)	O	The preferred source is used when a profile with the same instance ID is learned from both NRF and LOCAL. The value of this parameter depends on the topologySource parameter. Default value: - LOCAL: LOCAL - NRF: NRF - NRF_AND_LOCAL: NRF Allowed values: NRF, LOCAL - If the topologySource is LOCAL, the preferredTopologySource must be LOCAL and it cannot be changed. - If the topologySource is NRF, preferredTopologySource must be NRF and it cannot be changed. - If the topologySource is NRF_AND_LOCAL, preferredTopologySource can be either NRF or LOCAL, and it can be changed.
localNfTopologyCfgMode	Enumeration(LocalNfTopologyConfigMode)	O	Indicates the mode to configure LOCAL NF topology. - USER mode: It is the default mode and no local copy of an NRF-learned profile is created. - AUTO mode: An SCP-owned copy of the NRF-learned profile is created and can be used for routing even if the NRF profile is deregistered, until the retentionPeriod expires. Default value: USER Allowed values: AUTO,USER localNfTopologyCfgMode can be set to AUTO only when the topologySource is NRF or NRF_AND_LOCAL.
localNfTopologyRetentionPeriod	String	O	Indicates the local NF topology retention period after an NF_DEREGISTERED request is received from NRF. Default value: "7D" Allowed values: Any combination of number with M, H, and D in range 5M to 14D. Multiple units are not supported. - The retention period must be at least 2 characters long. - The numeric portion of the retention period must be in a parse condition. - The unit must be one of the allowed values, M (minutes), H (hours), or D (days), and is case-insensitive. Note: localNfTopologyRetentionPeriod applies only to profiles owned by SCP.

Table 2-87 TopologySource

Topology Source Values	Description
NRF	The SCP 5G topology information source is NRF.

Table 2-87 (Cont.) TopologySource

Topology Source Values	Description
LOCAL	The SCP 5G topology information source is local, not NRF. This configuration may result from an NF service failure and may trigger restoration procedures. For more information, see clause 6.2 of 3GPP TS 23.527. - Transition from NRF to LOCAL: Stops learning from NRF and, from now on, uses the available, modified, or created topology information in SCP. - Transition from LOCAL to NRF: Starts learning from NRF and creates routing rules accordingly. In this scenario, statically configured NF rules may be deleted if their information is not available in NRF.
NRF_AND_LOCAL	The SCP 5G topology information source is both NRF and LOCAL. If there is a conflicting instanceId, SCP selects routing rules based on the configured preferredTopologySource.

Table 2-88 TopologySourcePreference

Topology Source Preference Values	Description
NRF	When topologySource is NRF_AND_LOCAL and the same instanceId is learned from both sources, the profile learned from NRF takes precedence over the profile learned locally.
LOCAL	When topologySource is NRF_AND_LOCAL and the same instanceId is learned from both sources, the profile learned locally through the SCP REST API takes precedence over the profile learned from the NRF.

Table 2-89 LocalNFTopologyConfigMode

Local NF Topology Mode	Description
AUTO	SCP creates a LOCAL NF topology based on topology learned from NRF.
USER	SCP does not create a LOCAL NF topology based on topology learned from the NRF. You can configure it.

Note

Any update to an SCP-owned profile through the NF Profile REST API reassigns ownership of that profile from SCP to USER.

Table 2-90 Request Body

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
topologySourceInfo	TopologySourceInfo	M	Indicates the topology source information.

The response body data model varies based on the REST API operation status.

Table 2-91 Response Body

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Code	Description
array(TopologySourceInfo)	M	1	200 OK	Indicates a list of TopologySourceInfo configurations.
ProblemDetails	M	1	400 BAD REQUEST	Returned when invalid input is provided.

Resource Definition**GET ALL REST API**

This resource fetches all the topology source configuration.

Resource URI: /ocscp/scpc-configuration/{version}/ topologysourceinfo

The following table describes the data model supported by the GET response body on this resource:

Table 2-92 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
List<TopologySourceInfo>	M	1	200 OK	Indicates the topology source info of nfType.

GET REST API

This resource fetches the topology source configuration for nfType.

Resource URI: /ocscp/scpc-configuration/{version}/ topologysourceinfo/{nfType}

The following table describes the data structure supported by the GET response body on this resource:

Table 2-93 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
TopologySourceInfo	M	1	200 OK	Indicates the topology source info of nfType.
ProblemDetails	M	1	404 Not Found	Returns when no matching entry is found.

Sample of a Successful GET API

```
curl -X 'GET' 'http://localhost:8081/ocscp/scpc-configuration/v1/topologysourceinfo/UPF' -H 'accept: application/json'
```

```
{
  "nftype": "UPF",
  "topologysource": "NRF_AND_LOCAL",
  "preferredTopologySource": "NRF",
  "localNfTopologyCfgMode": "USER",
  "localNfTopologyRetentionPeriod": "6M"
}
```

Sample of a Configuration Not Found

```
curl -X 'GET' \
  'http://localhost:8081/ocscp/scpc-configuration/v1/topologysourceinfo/SMF' \
  -H 'accept: application/json'
{"title":"Not Found","status":404,"detail":"The nfType is not configured in Topology Source Info API. Please refer to the User Guide.","instance":"/ocscp/scpc-configuration/v1/topologysourceinfo/SMF","cause":"DATA_NOT_FOUND"}
```

PUT

This resource adds or updates the topology source configuration using the request body.

Resource URI: /ocscp/scpc-configuration/{version}/topologysourceinfo/{nftype}

The following table describes the data structure supported by PUT response body on this resource:

Table 2-94 Request Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Code	Description
TopologySourceInfo(json)	M	1	200 OK	Adds a new topology source configuration.
TopologySourceInfo(json)	M	1	201 Created	Indicates updated existing topology source configuration.
String	M	1	400 BAD REQUEST	Returns problem description when invalid input is provided.

Sample of a Successful PUT API

```
curl -X 'PUT' \
  'http://localhost:8081/ocscp/scpc-configuration/v1/topologysourceinfo/UPF' \
  -H 'accept: application/json'
```

```
-H 'Content-Type: application/json' \
-d

'{
  "nfType": "UPF",
  "topologySource": "NRF_AND_LOCAL",
  "preferredTopologySource": "NRF",
  "localNfTopologyCfgMode": "USER",
  "localNfTopologyRetentionPeriod": "6m"
}'
{"nfType": "UPF", "topologySource": "NRF_AND_LOCAL", "preferredTopologySource": "NRF", "localNfTopologyCfgMode": "USER", "localNfTopologyRetentionPeriod": "6M"}
```

DELETE

This resource removes the topology source configuration.

Resource URI: /ocscp/scpc-configuration/{version}/ topologysourceinfo/{nfType}

The following table describes the data model supported by the DELETE response body on this resource:

Table 2-95 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
Default	M	1	204 OK	Indicates the topology source configuration removed for nfType.
ProblemDetails	M	1	404 Not Found	Indicates the problem details.

Sample of a Successful of DELETE API

```
curl -v 'DELETE' 'http://localhost:8081/ocscp/scpc-configuration/v1/topologysourceinfo/SMF' -H 'accept: application/json'
```

HTTP/1.1 204 No Content

Sample of an Error DELETE API

```
curl -v 'DELETE' 'http://localhost:8081/ocscp/scpc-configuration/v1/topologysourceinfo/SMF' -H 'accept: application/json'
```

HTTP/1.1 404 Not Found

```
{"title": "Not Found", "status": 404, "detail": "The nfType is not configured in Topology Source Info API. Please refer to the User Guide.", "instance": "/ocscp/scpc-configuration/v1/topologysourceinfo/SMF", "cause": "DATA_NOT_FOUND"}
```

2.9 Configuring System Options

The System Options REST API controls system behavior per service. You can configure system options by using GET and PUT operations.

Note

The default systemOptions are provided during the installation of SCP through Helm.

Sample REST API Messages

Request_Type: **GET and PUT**

URI: http://<SCP configuration FQDN>:8081/ocscp/scpc-configuration/v1/systemoptions

```
{
  "scpServiceStatus": {
    "serviceStatus": "inService",
    "trafficRejectionErrorProfile": "defaultScpTrafficRejectionErrorProfile",
    "fwdVendorSpecificIEInErrorRsp": false,
    "trafficRejectionDelay": "10s"
  },
  "nextHopProxyODConfig": [
    {
      "nfType": "SCP",
      "odEnabled": false,
      "odRuleName": "nextHopScpODRule",
      "odHSupportEnabled": true
    }
  ],
  "nextHopRoamingProxyODConfig": [
    {
      "nfType": "*",
      "odEnabled": false,
      "odRuleName": "defaultRule"
    }
  ],
  "nextHopProxyCBConfig": [
    {
      "nfType": "SCP",
      "cbEnabled": false,
      "cbRuleName": "defaultRule"
    }
  ],
  "nextHopRoamingProxyCBConfig": [
    {
      "nfType": "*",
      "cbEnabled": false,
      "cbRuleName": "defaultRule"
    }
  ],
  "forwardNfDiscoveryHeaders": true,
}
```



```

"viaHeaderCheckEnabled": true,
"interPlmnFqdnValidationEnabled": false,
"trafficPolicy": {
  "connectionPool": {
    "http": {
      "idleTimeout": "600s"
    },
    "https": {
      "idleTimeout": "600s"
    },
    "tcp": {
      "connectTimeout": "250ms",
      "tcpKeepalive": {
        "enable": true,
        "probes": 9,
        "time": "180s",
        "interval": "1s"
      }
    }
  }
},
"ttl": "900s",
"dnsQueryTimeout": "5000ms"
}

```

The following table describes System Options parameters:

Table 2-96 Configuring Parameters for System Options

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
overloadThresholdActionsInterval	String	M	1	Specifies the time interval between consecutive overload or congestion actions, such as HTTP/2 stream reduction and connection termination. This parameter applies to all overload features, including object overload, pod overload, and connection congestion. Default value: <pre> "overloadThresholdActionsInterval": { "http2streamAdjActionInterval": 1, "connTerminationActionInterval": 2 } </pre>

Table 2-96 (Cont.) Configuring Parameters for System Options

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
scpServiceStatus.serviceStatus	String	M	1	Indicates service state of SCP. Default value: inService Range: - inService: SCP is registered with NRF with nfStatus set to REGISTERED. Heartbeats, subscriptions, and audits are active. The service routes Service Based Interface (SBI) and internal requests. - suspended: SCP remains registered with NRF with nfStatus set to SUSPENDED and remains subscribed to NRF. Heartbeats are stopped, and audits continue. The service rejects Service Based Interface (SBI) traffic after trafficRejectionDelay, except NF Profile Notification traffic from NRF to SCP. The service continues to route internal requests. The health check returns a failure response. - deregistered: SCP deregisters from NRF and unsubscribes from NRF subscriptions. Heartbeats and audits are stopped. Existing Service Based Interface (SBI) and internal request routing continue to use the current routing rules. - outOfService: SCP deregisters from NRF and unsubscribes from NRF subscriptions. Heartbeats and audits are stopped. The service rejects Service Based Interface (SBI) traffic after trafficRejectionDelay. The service continues to route internal requests. The health check returns a failure response.

Table 2-96 (Cont.) Configuring Parameters for System Options

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
scpServiceStatus.trafficRejectionErrorProfile	String	M	1	Indicates the error profiles that SCP uses while rejecting SBI traffic in the traffic rejection state, for example, suspended and outOfService states. Default value: defaultScpTrafficRejectionErrorProfile Error Profile Details: <pre>{ "name": "defaultScpTrafficRejectionErrorProfile", "errorProfile": { "status": 500, "cause": "SYSTEM_FAILURE", "title": "SCP is Suspended or Out Of Service", "detail": "Admin has put SCP in Suspended or OutOfService status", "retryAfter": 0 } }</pre> Range: NA
scpServiceStatus.fwdVendorSpecificIEInErrorResponse	Boolean	M	1	When SCP is in an SBI traffic rejection state, it can insert a vendor-specific IE, that is, vendorSpecific-000323, in the error response body sent to the request sender. When this parameter is set to true, SCP includes the vendor-specific IE in the response sent to the consumer NF. Otherwise, it does not include the vendor-specific IE. In inter-SCP cases, the producer SCP (SCP-P) always includes the vendor-specific IE in traffic rejection responses sent to the consumer SCP (SCP-C) when SCP-P is in a traffic rejection state. When SCP-C forwards that error response to the consumer NF, this parameter determines whether to forward the vendor-specific IE. Default value: false Range: true or false

Table 2-96 (Cont.) Configuring Parameters for System Options

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
scpServiceStatus.trafficRejectionDelay	String	M	1	When the service state of SCP changes to a traffic rejection state, SCP waits for the duration specified in <code>trafficRejectionDelay</code> before it starts rejecting traffic. This buffer time allows other NFs to become aware of SCP's state change through SCP NF profile update event received from NRF. Default value: 10 seconds Range: 0 second to 60 seconds
nextHopProxyODConfig	array(SystemOptionsODHConfig)	O	1..N	Indicates the Outlier Detection configuration for next hop proxy based on <code>nfType</code>. The default configuration is provided for SCP <code>nfType</code>. Default value: <pre>"nextHopProxyODConfig": [{ "nfType": "SCP", "odEnabled": false, "odRuleName": "nextHopScpODRule", "odHSupportEnabled": true }]</pre> Range: NA Note: The default value of <code>odHSupportEnabled</code> is set to true for fresh SCP installation. However, this value is set to false when SCP is upgraded.
nextHopRoamingProxyODConfig	array(SystemOptionsODConfig)	O	1..N	Indicates the Outlier Detection configuration for next hop roaming proxy based on <code>nfType</code>. The default configuration is provided for "*" <code>nfType</code>. Default value: <pre>"nextHopRoamingProxyODConfig": [{ "nfType": "*", "odEnabled": false, "odRuleName": "defaultRule" }]</pre> Range: NA

Table 2-96 (Cont.) Configuring Parameters for System Options

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
nextHopProxyCBConfig	array(SystemOptionsCBCofig)	O	1..N	Indicates Circuit Breaking configuration for next hop proxy based on nfType. The default configuration is provided for SCP nfType. Default value: <pre>"nextHopProxyCBConfig": [{ "nfType": "SCP", "cbEnabled": false, "cbRuleName": "defaultRule" }]</pre> Range: NA
nextHopRoamingProxyCBConfig	array(SystemOptionsCBCofig)	O	1..N	Indicates Circuit Breaking configuration for next hop roaming proxy based on nfType. The default configuration is provided for "*" nfType. Default value: <pre>"nextHopRoamingProxyCBConfig": [{ "nfType": "*", "cbEnabled": false, "cbRuleName": "defaultRule" }]</pre> Range: NA
forwardNfDiscoveryHeaders	Boolean	O	1	Enables or disables the forwarding of discovery headers to next hop SCP. Default value: true Range: true or false
trafficPolicy.connectionPool.http.idleTimeout	String	O	1	The idle timeout for upstream connection pool connections. The idle timeout is defined as the period in which there are no active requests. If not set, there is no idle timeout. When the idle timeout is reached the connection will be closed. Note that request based timeouts mean that HTTPS/2 PINGs will not keep the connection alive. Default value: 600s Range: NA

Table 2-96 (Cont.) Configuring Parameters for System Options

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
trafficPolicy.connectionPool.http.idleTimeout	String	O	1	The idle timeout for upstream connection pool connections is defined as the period in which there are no active requests. If not set, there is no idle timeout. When the idle timeout is reached, the connection will be closed. Note that request-based timeouts mean that HTTP/2 PINGs will not keep the connection alive. Default value: 600s Range: NA
trafficPolicy.connectionPool.tcp.connectTimeout	String	M	1	Specifies the TCP connection timeout for upstream connection pool connections. The valid units are milliseconds and seconds. A value of 0 indicates an infinite connection timeout or disables the connection timeout. Default value: 250ms Range: 0 to 15000ms
trafficPolicy.connectionPool.tcp.tcpKeepalive	TcpKeepalive	M	1	Contains the TcpKeepalive information. If set, enables TCP Keepalives to upstream peer. All the parameters of tcpkeepAlive are required if this information is configured. Default value: NA Range: NA
trafficPolicy.connectionPool.tcp.tcpKeepalive.enable	Boolean	O	1	Enables or disables tcp keepalive for upstream connections. Default value: true Range: true or false
trafficPolicy.connectionPool.tcp.tcpKeepalive.probes	Integer	O	1	Maximum number of keepalive probes to send without response before deciding the connection is dead. For example: 9 The default value is 9, minimum value is 1, and maximum value is 16. Range: NA
trafficPolicy.connectionPool.tcp.tcpKeepalive.time	String	O	1	The time duration a connection needs to be idle before keep-alive probes are sent. The valid time unit is second. For example: 180s The default value is 180 seconds, minimum value is 1 second, and maximum value is 7200 seconds. Range: NA
trafficPolicy.connectionPool.tcp.tcpKeepalive.interval	String	O	1	The time duration between keep-alive probes. The valid time unit is seconds. For example: 1s The default value is 1 second, minimum value is 1 second, and maximum value is 120 seconds. Range: NA

Table 2-96 (Cont.) Configuring Parameters for System Options

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
tTl	String	M	1	Indicates the duration in which the DNS record is valid. This is used by the DNS SRV feature to refresh the DNS SRV record. The range is between 30 seconds to 86400 seconds. Default value: 900s
dnsQueryTimeout	String	M	1	The maximum amount of time in milliseconds to wait for a response during a DNS SRV query. The range is between 30 to 86400 seconds. Default value: 500ms
viaHeaderCheckEnabled	boolean	O	1	The relevance of this parameter arises when the 3gpp-Sbi-Target-apiRoot value contains a PLMN ID that is local to SCP. - If this parameter is enabled, the "via header" will be checked for the presence of SEPP. If SEPP is found, SCP will consider the request as coming from a SEPP, and intra-PLMN routing to the alternate producer NF will be based on the interPlmnFQDN. - If this parameter is disabled, the decision to use either the interPlmnFQDN or the FQDN of the alternate producer NF for intra-PLMN routing will depend on the interPlmnFqdnValidationEnabled parameter. Note: The first routing attempt will always be based on the 3gpp-Sbi-Target-apiRoot, but the parameter's relevance is in selecting the alternate producer for intra-PLMN routing. Default value: true Range: true or false

Table 2-96 (Cont.) Configuring Parameters for System Options

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
interPlmnFqdnValidationEnabled	boolean	O	1	The relevance of this parameter arises when <code>viaHeaderCheckEnabled</code> is set to false or the <code>viaHeader</code> is not present in the incoming request, and the <code>3gpp-Sbi-Target-apiRoot</code> value contains a PLMN ID that is local to SCP. - If this parameter is enabled, SCP selects an alternate destination for intra-PLMN routing based on the <code>interplmnFQDN</code> if the first destination matches the <code>interplmnFQDN</code> of a known NF profile. If there is no match, then SCP selects the alternate destination based on the FQDN. This can occur in the following scenarios: - The first destination matches the FQDN instead of the <code>interplmnFQDN</code> of a known NF profile. - The first destination has no match with either the FQDN or the <code>interplmnFQDN</code> among the list of known profiles (catch-all routing for the first attempt). - If this parameter is disabled, SCP always selects the alternate destination for intra-PLMN routing based on the FQDN. Note: The first routing attempt will always be based on the <code>3gpp-Sbi-Target-apiRoot</code> header, but the relevance of this parameter is in selecting the alternate producer for intra-PLMN routing. Default value: false Range: true or false

Table 2-97 SystemOptionsODConfig

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
nfType	String	M	1	Indicates roaming proxy NFType for which the Outlier Detection Configuration is defined. Default value: false Range: - For <code>nextHopProxyODConfig</code>: SCP - For <code>nextHopRoamingProxyODConfig</code>: "*", SEPP, Any nfType configured with <code>nfRole</code> as <code>CUSTOM_5G_ROAMING_PROXY</code>

Table 2-97 (Cont.) SystemOptionsODConfig

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
odEnabled	Boolean	O	1	Enable or disables Outlier Detection for next hop roaming proxy. Default value: false Range: true or false
odRuleName	String	O	1	Indicates the name of the rule holding the configuration of Outlier Detection for next hop roaming proxy. Based on the configuration under this rule, Outlier Detection for next hop roaming proxy works. Default value: For nextHopProxyODConfig: "nextHopScpODRule" For nextHopRoamingProxyODConfig: "defaultRule" Range: NA

Table 2-98 SystemOptionsODHConfig

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
nfType	String	M	1	Indicates next hop proxy Outlier Detection configuration NFType for which the Outlier Detection configuration is defined. Default value: NA Range: - For nextHopProxyODConfig: SCP - For nextHopRoamingProxyODConfig: "*", SEPP, Any nfType configured with nfRole as CUSTOM_5G_ROAMING_PROXY
odEnabled	Boolean	O	1	Enables or disables Outlier Detection for next hop proxy. Default value: false Range: true or false
odRuleName	String	O	1	Indicates the name of the rule holding the configuration of Outlier Detection for next hop proxy. Based on the configuration under this rule, Outlier Detection for next hop proxy works. Default value: - For nextHopProxyODConfig: "nextHopScpODRule" - For nextHopRoamingProxyODConfig: "defaultRule" Range: true or false

Table 2-98 (Cont.) SystemOptionsODHConfig

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
odHSupportEnabled	Boolean	O	1	Controls whether SCP-C component participates in the Outlier Detection header exchange with SCP-P. When this parameter is enabled, SCP-C reads the Outlier Detection header included in the response from SCP-P and processes it according to Outlier Detection header support. When this parameter is disabled, the Outlier Detection header is ignored and the system falls back to the existing Outlier Detection flow. Default value: true Range: true or false Note: The default value of odHSupportEnabled is set to true for fresh SCP installation. However, this value is set to false when SCP is upgraded.

Table 2-99 SystemOptionsCBConfig

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
nfType	String	M	1	Indicates proxy or roaming proxy NFType for which Circuit Breaking configuration is defined. Default value: NA Range: - For nextHopProxyODConfig: SCP - For nextHopRoamingProxyODConfig: "*", SEPP, Any nfType configured with nfRole as CUSTOM_5G_ROAMING_PROXY
cbEnabled	Boolean	O	1	Enable or disables Circuit Breaking for next hop proxy or next hop roaming proxy. Default value: false Range: true or false
cbRuleName	String	O	1	Indicates the name of the rule holding the configuration of Circuit Breaking for next hop proxy or next hop roaming proxy. Based on the configuration under this rule, Circuit Breaking for next hop proxy or next hop roaming proxy works. Default value: NA Range: - For nextHopProxyCBConfig: "defaultRule" - For nextHopRoamingProxyCBConfig: "defaultRule"

Sample of a Successful GET API

```

curl -X 'GET' \
  'http://10.75.212.215:31359/ocscp/scpc-configuration/v1/systemoptions' \
  -H 'accept: application/json'

{
  "scpServiceStatus": {
    "serviceStatus": "inService",
    "trafficRejectionErrorProfile": "defaultScpTrafficRejectionErrorProfile",
    "fwdVendorSpecificIEInErrorRsp": false,
    "trafficRejectionDelay": "10s"
  },
  "nextHopProxyODConfig": [
    {
      "nfType": "SCP",
      "odEnabled": false,
      "odRuleName": "nextHopScpODRule",
      "odHSupportEnabled": true
    }
  ],
  "nextHopRoamingProxyODConfig": [
    {
      "nfType": "*",
      "odEnabled": false,
      "odRuleName": "defaultRule"
    }
  ],
  "nextHopProxyCBConfig": [
    {
      "nfType": "SCP",
      "cbEnabled": false,
      "cbRuleName": "defaultRule"
    }
  ],
  "nextHopRoamingProxyCBConfig": [
    {
      "nfType": "*",
      "cbEnabled": false,
      "cbRuleName": "defaultRule"
    }
  ],
  "forwardNfDiscoveryHeaders": true,
  "viaHeaderCheckEnabled": true,
  "interPlmnFqdnValidationEnabled": false,
  "trafficPolicy": {
    "connectionPool": {
      "http": {
        "idleTimeout": "600s"
      },
      "https": {
        "idleTimeout": "600s"
      }
    }
  },

```

```

        "tcp": {
            "connectTimeout": "250ms",
            "tcpKeepalive": {
                "enable": true,
                "probes": 9,
                "time": "180s",
                "interval": "1s"
            }
        }
    },
    "ttl": "900s",
    "dnsQueryTimeout": "5000ms",
    "overloadThresholdActionsInterval": {
        "http2streamAdjActionInterval": 1,
        "connTerminationActionInterval": 2
    }
}

```

Sample of a Successful PUT API

```

curl -X 'PUT' \
'http://10.75.224.197:31612/ocscp/scpc-configuration/v1/systemoptions' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '

{
  "scpServiceStatus": {
    "serviceStatus": "inService",
    "trafficRejectionErrorProfile": "defaultScpTrafficRejectionErrorProfile",
    "fwdVendorSpecificIEInErrorRsp": false,
    "trafficRejectionDelay": "15s"
  },
  "nextHopProxyODConfig": [
    {
      "nfType": "SCP",
      "odEnabled": false,
      "odRuleName": "nextHopScpODRule",
      "odHSupportEnabled": true
    }
  ],
  "nextHopRoamingProxyODConfig": [
    {
      "nfType": "*",
      "odEnabled": false,
      "odRuleName": "defaultRule"
    }
  ],
  "nextHopProxyCBConfig": [
    {
      "nfType": "SCP",
      "cbEnabled": false,
      "cbRuleName": "defaultRule"
    }
  ]
}

```

```

    }
  ],
  "nextHopRoamingProxyCBConfig": [
    {
      "nfType": "*",
      "cbEnabled": false,
      "cbRuleName": "defaultRule"
    }
  ],
  "forwardNfDiscoveryHeaders": true,
  "viaHeaderCheckEnabled": true,
  "interPlmnFqdnValidationEnabled": false,
  "trafficPolicy": {
    "connectionPool": {
      "http": {
        "idleTimeout": "600s"
      },
      "https": {
        "idleTimeout": "600s"
      },
      "tcp": {
        "connectTimeout": "250ms",
        "tcpKeepalive": {
          "enable": true,
          "probes": 9,
          "time": "180s",
          "interval": "1s"
        }
      }
    }
  },
  "ttl": "900s",
  "dnsQueryTimeout": "5000ms",
  "overloadThresholdActionsInterval": {
    "http2streamAdjActionInterval": 1,
    "connTerminationActionInterval": 2
  }
}'

```

Response Body:

```

{
  "scpServiceStatus": {
    "serviceStatus": "inService",
    "trafficRejectionErrorProfile": "defaultScpTrafficRejectionErrorProfile",
    "fwdVendorSpecificIEInErrorRsp": false,
    "trafficRejectionDelay": "15s"
  },
  "nextHopProxyODConfig": [
    {
      "nfType": "SCP",
      "odEnabled": false,
      "odRuleName": "nextHopScpODRule",
      "odHSupportEnabled": true
    }
  ]
}

```

```

    }
  ],
  "nextHopRoamingProxyODConfig": [
    {
      "nfType": "*",
      "odEnabled": false,
      "odRuleName": "defaultRule"
    }
  ],
  "nextHopProxyCBConfig": [
    {
      "nfType": "SCP",
      "cbEnabled": false,
      "cbRuleName": "defaultRule"
    }
  ],
  "nextHopRoamingProxyCBConfig": [
    {
      "nfType": "*",
      "cbEnabled": false,
      "cbRuleName": "defaultRule"
    }
  ],
  "forwardNfDiscoveryHeaders": true,
  "viaHeaderCheckEnabled": true,
  "interPlmnFqdnValidationEnabled": false,
  "trafficPolicy": {
    "connectionPool": {
      "http": {
        "idleTimeout": "600s"
      },
      "https": {
        "idleTimeout": "600s"
      },
      "tcp": {
        "connectTimeout": "250ms",
        "tcpKeepalive": {
          "enable": true,
          "probes": 9,
          "time": "180s",
          "interval": "1s"
        }
      }
    }
  },
  "ttl": "900s",
  "dnsQueryTimeout": "5000ms",
  "overloadThresholdActionsInterval": {
    "http2streamAdjActionInterval": 1,
    "connTerminationActionInterval": 2
  }
}

```

2.10 Configuring Overload Configuration Information

This section provides information about overload control configuration parameters required for sending OCI to peers.

Resources

The following table describes the resource name to retrieve, add, or update overload control configuration data:

Table 2-100 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
oci-config	/ocscp/scpc-configuration/v1/oci-config	GET	Retrieves OCI config at SCP.
oci-config	/ocscp/scpc-configuration/v1/oci-config	PUT	Updates OCI config parameters.
oci-config	/ocscp/scpc-configuration/v1/oci-config	DELETE	Removes OCI config rule.

Resource Definition

GET

This resource fetches the OCI Config details (OCIConfigWrapper) based on the query parameters.

If no query parameter is provided, all the SCP feature details are returned.

Resource URI: /ocscp/scpc-configuration/v1/oci-config

Response Body

Response body data model varies based on the REST operation status.

Table 2-101 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
OCIConfigWrapper	M	1	200 OK	Indicates the list of OCI Config (OCIConfigWrapper) matching criteria.
ProblemDetails	M	1	404 NOT FOUND	Returns when data is not found for given query parameters.

This resource fetches the OCI Config details (OCIConfigWrapper) based on the ociConfigRule query parameter.

If no query parameter is provided, all the SCP feature details are returned.

Resource URI: /ocscp/scpc-configuration/{version}/oci-config?ociConfigRule=defaultOciConfigRule

Response Body

Response body data model varies based on the REST operation status.

Table 2-102 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
OCIConfigWrapper	M	1	200 OK	Indicates the list of OCI Config (OCIConfigWrapper) matching criteria.
ProblemDetails	M	1	404 NOT FOUND	Returns when data is not found for given query parameters.

Example of a successful response:

```
curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/oci-config" -
H "accept: application/json"
```

```
Code: 200
{
  [
    {
      "ociConfigRule": "defaultOciConfigRule",
      "data": {
        "relayPeerOci": false,
        "ociEnforcement": true,
        "ociEnforcementAction": "REROUTE",
        "ociSendErrorProfile": "defaultErrorProfile",
        "interPlmnOciEnforcement": false,
        "ociTrafficRecoveryPolicy": {
          "recoveryPolicy": "INCREMENTAL",
          "stepInPercentage": 10,
          "stepDurationInMs": 100
        },
        "ociEnforcementPolicy": {
          "enforcementPolicy": "PERCENTAGE_WITH_PRIORITY",
          "maxSbiMessagePriorityForOciEnforcement": 15
        }
      }
    }
  ]
}
```

Example of a failure response:

```
curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v2/oci-config" -
H "accept: application/json"
```

```
{
  "title": "Not Found",
```



```

    "status": "404",
    "detail": "Oci_Config data not found against given query parameter(s).
Please refer to the User Guide.",
    "instance": "/ocscp/scpc-configuration/v1/oci-config?ociConfigRule=abc",
    "cause": "DATA_NOT_FOUND"
}

```

PUT

This resource updates the OCI config using the request body.

Resource URI: ocscp/scpc-configuration/v1/oci-config

Table 2-103 Data Structures Supported by the PUT Response Body

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response codes	Description
OCIConfigWrapper	M	1	200 OK	Indicates the list of OCI Config (OCIConfigWrapper) matching criteria.
ProblemDetails	M	1	400 BAD REQUEST	Returns error with problem details structure as defined in 3GPP TS 29.571 Section 5.2.4.1.

Example of a successful response:

```
curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/oci-config" -H "accept: application/json"
```

```

Code: 200
{
  [
    {
      "ociConfigRule": "defaultOciConfigRule",
      "data":
      {
        "relayPeerOci": false,
        "ociEnforcement": true,
        "ociEnforcementAction": "REROUTE",
        "ociSendErrorProfile": "defaultErrorProfile",
        "interPlmnOciEnforcement": false,
        "ociTrafficRecoveryPolicy":
        {
          "recoveryPolicy": "INCREMENTAL",
          "stepInPercentage": 10,
          "stepDurationInMs": 100
        },
        "ociEnforcementPolicy":
        {
          "enforcementPolicy": "PERCENTAGE_WITH_PRIORITY",
          "maxSbiMessagePriorityForOciEnforcement": 15
        }
      }
    }
  ]
}

```

```
    ]
  }
```

DELETE

This resource deletes the OCI config using the request body.

Resource URI: ocscp/scpc-configuration/v1/oci-config

Table 2-104 Data Structures Supported by the DELETE Response Body

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
OCIConfigWrapper	M	1	200 OK	Indicates the list of OCI Config (OCIConfigWrapper) matching criteria.
ProblemDetails	M	1	403 Forbidden	Returns when data is not found for given query parameters.

Example of a successful response:

Request:

```
curl -X 'DELETE' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/oci-config?ociConfigRule=defaultOciConfigRule' -H 'accept: application/json'
```

Response:

```
{
  "title": "Forbidden",
  "status": "403",
  "detail": "Given oci config rule is used in routing options hence cannot be deleted",
  "instance": "/ocscp/scpc-configuration/v1/oci-config?ociConfigRule=defaultOciConfigRule",
  "cause": "OPERATION_NOT_ALLOWED"
}
```

Data Model**Table 2-105 OCIConfigWrapper**

Field Name	Data Type	Default Value	Description
relayPeerOci	Boolean	false	If this parameter is set to true, SCP forwards the OCI header received from downstream peer in the ingress messages to upstream peers with the egress messages. • Default value: false • Range: true, false

Table 2-105 (Cont.) OCConfigWrapper

Field Name	Data Type	Default Value	Description
ociEnforcement	Boolean	true	Enables or disables overload corrective action on the OCI information received from peer. Overload corrective actions can send error responses or reroute based on ociEnforcementAction. - Default value: true - Range: true, false
ociEnforcementAction	Enum	REROUTE	Decides OCI enforcement action, such as send error or reroute. SENDERERROR: SCP immediately sends error responses without trying for alternate peers. REROUTE: SCP attempts to reselect equivalent available peers. If it is not able to route to reselected peer, SCP sends error responses back. - Default value: REROUTE - Range: SENDERERROR and REROUTE
OciSendErrorProfile	String	defaultErrorProfile	In reference to the error response profile, SCP sends error responses because of overload correction action based on OCI. Default value: defaultErrorProfile
interPlmnOciEnforcement	Boolean	false	Enables or disables OCI enforcement toward remote PLMN peers. - Default value: false - Range: true, false

Table 2-106 ociTrafficRecoveryPolicy

Field Name	Data Type	Default Value	Description
recoveryPolicy	Enum	INCREMENTAL	Decides the traffic recovery policy after OCI enforcement action. INCREMENTAL: Increments traffic in steps to 100% based on "stepInPercentage" and "stepDurationInMs" parameters. IMMEDIATE: Increments traffic to 100% immediately. - Default value: INCREMENTAL - Range: INCREMENTAL, IMMEDIATE
stepInPercentage	Integer	10	Defines the size of a step in percentage of reduced traffic when the INCREMENTAL policy is configured. - Default value: 10 - Range: 5 - 15
stepDurationInMs	Integer	100	Defines the duration of a step when the INCREMENTAL policy is configured. Traffic is incremented after this duration for every step during traffic recovery after OCI enforcement action. - Default value: 100 - Range: 50 - 10000

Table 2-107 ociEnforcementPolicy

Field Name	Data Type	Default Value	Description
enforcementPolicy	Enum	PERCENTAGE_WITHPRIORITY	Decides the traffic recovery policy toward a peer after OCI enforcement action. PERCENTAGE_WITH_PRIORITY: Enforces OCI action on percentage of messages as received in reduction metric if priority of message is greater than "maxSbiMessagePriorityForOciEnforcement". PERCENTAGE_ONLY: Enforces OCI action on percentage of messages as received in the reduction metric. - Default value: PERCENTAGE_WITH_PRIORITY - Range: PERCENTAGE_WITH_PRIORITY, PERCENTAGE_ONLY
maxSbiMessagePriorityForOciEnforcement	Integer	15	Defines maximum priority value below which OCI enforcement action will not be applied. - Default value: 15 - Range: 0 - 31

JSON Format**Current JSON Format:**

```
[
  {
    "ociConfigRule": "defaultOciConfigRule",
    "data": {
      "relayPeerOci": false,
      "ociEnforcement": true,
      "ociEnforcementAction": "REROUTE",
      "ociSendErrorProfile": "defaultErrorProfile",
      "interPlmnOciEnforcement": false,
      "ociTrafficRecoveryPolicy": {
        "recoveryPolicy": "INCREMENTAL",
        "stepInPercentage": 10,
        "stepDurationInMs": 100
      },
      "ociEnforcementPolicy": {
        "enforcementPolicy": "PERCENTAGE_WITH_PRIORITY",
        "maxSbiMessagePriorityForOciEnforcement": 15
      }
    }
  }
]
```

Error Profile:

```
{
  "name": "ociErrorProfile",
  "errorProfile": {
    
```

```

        "status":500,
        "cause":"NF_SERVICE_FAILOVER",
        "customCause":null,
        "title":"INTERNAL SERVER ERROR",
        "detail":"SCP is unable to route because peer NF overload as per
reported OCI",
        "retryAfter":0,
        "redirectURL":null
    }
}

```

2.11 Configuring Overload Configuration Information Threshold

This section provides information about overload control configurations required for the `OciThresholdConfig` threshold levels to generate self-Overload Control Information (OCI) by SCP.

Resources

The following table describes the resource name to retrieve, add, or update overload control configuration data:

Table 2-108 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
oci-threshold-config	/ocscp/scpc-configuration/v1/oci-threshold-config	GET	Retrieves all SCP OCI threshold config data configured at SCP.
oci-threshold-config	/ocscp/scpc-configuration/v1/oci-threshold-config	GET	Retrieves an SCP OCI threshold config data configured based on the threshold level at SCP when the threshold level is provided as query parameters. However, this query parameter is optional. If it is absent, then it retrieves all SCP OCI threshold config data configured at SCP.
oci-threshold-config	/ocscp/scpc-configuration/v1/oci-threshold-config	PUT	Adds or updates SCP OCI threshold config data at SCP.

Resource Definition

GET REST API

This resource fetches the SCP OCI threshold config data based on the query parameters.

If no query parameter is provided, all the SCP OCI threshold config data is returned.

Resource URI: `/ocscp/scpc-configuration/v1/oci-threshold-config`

Table 2-109 URI Query Parameters Supported by the GET Method

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
thresholdLevel	String	M	Indicates the names of supported threshold levels such as WARN, MINOR, MAJOR, and CRITICAL.

PUT REST API

This resource adds or updates the SCP OCI threshold config configuration using the request body.

Resource URI: /ocscp/scpc-configuration/v1/oci-threshold-config

Table 2-110 Data Structures Supported by the PUT Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
OciThresholdConfigWrapper	M	1	200 OK	Indicates the names of supported threshold levels such as WARN, MINOR, MAJOR, and CRITICAL.
ProblemDetails	M	1	400 BAD REQUEST	Returns error with problem details structure as defined in 3GPP TS 29.571 Section 5.2.4.1.

Table 2-111 URI Query Parameters Supported by the DELETE Method

Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
thresholdLevel	String	M	1	Indicates all the custom threshold levels apart from WARN, MINOR, MAJOR, and CRITICAL.

Note

- The threshold level is a valid combination of query parameters.
- Only custom threshold levels can be removed. The default levels such as WARN, MINOR, MAJOR, or CRITICAL, cannot be removed.

Table 2-112 Data Structures Supported by the DELETE Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
None	-	1	200 OK	In successful cases, only response code is returned.

Table 2-112 (Cont.) Data Structures Supported by the DELETE Response Body

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
ProblemDetails	M	1	404 NOT FOUND	When no matching entry is found.

Data Model

The following table describes the field names of the OciThresholdConfigWrapper data type:

Table 2-113 OciThresholdConfigWrapper

Field Name	Data Type	Mandatory (M) or Optional (O)	Description
thresholdLevel	String	M	Indicates the supported threshold levels such as WARN, MINOR, MAJOR, and CRITICAL.
OciThresholdConfig	Object	M	Indicates the OciThresholdConfig data.

Table 2-114 OciThresholdConfig

Field Name	Data Type	Mandatory (M) or Optional (O)	Range	Description
generateOciHeader	Boolean	M	true, false	Controls the generation of self-OCI, which is created by SCP, for different threshold levels. If this parameter is set to true. The OCI header for self-overload is added to HTTP messages on load update for this OCI level. The default value is true.
onsetThreshold	Integer	M	2-100	Indicates the onset overload threshold value based on the CPU usage.
abatementThreshold	Integer	M	1-99	Indicates the abatement overload threshold value based on the CPU usage.
overloadReductionMetric	Integer	M	0-100%	Indicates the value of the Overload-Reduction-Metric attribute in the 3gpp-Sbi-Oci header that is configured at each overload level, for example, the percentage (%) of traffic that the consumer NF must reduce toward SCP.
periodOfValidity	Integer	M	5 - 3600 seconds	Indicates the value of the Period-of-Validity attribute in the 3gpp-Sbi-Oci header that is configured at each overload level.
abatementTimeInMilliseconds	Integer	M	50 ms to 5000 ms	Indicates the abatement time for overload level change.

The following table provides the default values of the OciThresholdConfig parameter:

Table 2-115 OciThresholdConfig

thresholdLevel	onsetThreshold	abatementThreshol	overload Reductio nMetric	periodOfValidit y	abatementTime	generateOciHeader
WARN	80	77	10	5 seconds	200 ms	true
MINOR	85	82	20	5 seconds	200 ms	true
MAJOR	90	87	30	5 seconds	200 ms	true
CRITICAL	95	92	40	5 seconds	200 ms	true

JSON format for SCP OCI threshold config

```
[
  {
    "thresholdLevel": "CRITICAL",
    "data":
    {
      "onSetThreshold": 86,
      "abatementThreshold": 82,
      "abatementTimeInMilliseconds": 200,
      "generateOciHeader": true,
      "overloadReductionMetric": 40,
      "periodOfValidity": 5
    }
  },
  {
    "thresholdLevel": "MAJOR",
    "data":
    {
      "onSetThreshold": 80,
      "abatementThreshold": 78,
      "abatementTimeInMilliseconds": 200,
      "generateOciHeader": true,
      "overloadReductionMetric": 30,
      "periodOfValidity": 5
    }
  },
  {
    "thresholdLevel": "MINOR",
    "data":
    {
      "onSetThreshold": 75,
      "abatementThreshold": 70,
      "abatementTimeInMilliseconds": 200,
      "generateOciHeader": true,
      "overloadReductionMetric": 20,
      "periodOfValidity": 5
    }
  },
  {
    "thresholdLevel": "WARN",
    "data":
    {
```



```

        "onSetThreshold": 68,
        "abatementThreshold": 65,
        "abatementTimeInMilliseconds": 200,
        "generateOciHeader": true,
        "overloadReductionMetric": 10,
        "periodOfValidity": 5
    }
}
]

```

2.12 Configuring NRF

This section provides information about configuration of NRF preferred by SCP for access token requests.

Resources

The following table describes the resource name to retrieve and update the NRF data based on the query parameters.

Table 2-116 Resource Name

Resource Name	Resource URI	HTTP Method	Description
nrf-configuration	/ocscp/scpc-configuration/v1/nrf-configuration	GET	Retrieves NRF configurations.
nrf-configuration	/ocscp/scpc-configuration/v1/nrf-configuration	PUT	Updates NRF configurations.

Data Model

Request Body

The following table describes the field names of the NrfConfigurationWrapper data model.

Table 2-117 NrfConfigurationWrapper

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Supported Values	Description
Service	String	M	"nnrf-oauth2"	"nnrf-oauth2", "nnrf-disc"	Indicates the service name of the preferred NRF configuration.
NrfConfigData	JSON	M	See Table 2-118		Configures preferred NRF. This parameter can be configured as nrfInstanceId or nrfSetId or both.

Table 2-118 NrfConfigData

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
nrfInstanceId	String	C	6faf1bbc-6e4a-2828-a507-a14ef8e1bc5a	Indicates the NF Instance ID of the preferred NRF. Note: When only nrfInstanceId is provided, then SCP forwards the route to the matching NRF with nrfInstanceId.
nrfSetId	Array	C	setnrf11.nrfset.5g.c.mnc012.mcc345	The NF Set ID of the preferred NRF. Array(nrfSetId) uses the value from the first index even if multiple values are added. Note: When only nrfSetId is provided, then SCP supports load balancing to the matching NRFs selected by nrfSetId.

Note

If both nrfInstanceId and nrfSetId are provided, SCP forwards the route to the matching NRF with nrfInstanceId; if it fails, then SCP does an alternate route to the NRFs selected by nrfSetId.

Resource Definition**GET REST API**

This resource fetches the NrfConfiguration data based on the query parameters.

Resource URI: /ocscp/scpc-configuration/v1/nrf-configuration

Table 2-119 URI Query Parameters Supported by the GET Method

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
Service	String	O	Indicates the configuration name. If the parameter is empty, all configurations are returned.

Table 2-120 array(NrfConfigurationWrapper)

Field Name	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
array(NrfConfigurationWrapper)	M	1	200 OK	The list of NrfConfigurations available.

Preferred NRF oauth2 GET SCP JSON example:

```
$ curl -X 'GET' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/nrf-configuration?service=nnrf-oauth2' -H 'accept: application/json'
```

```
{
  "service": "nnrf-oauth2",
  "nrfConfigData": {
    "nrfInstanceId": "6faf1bbc-6e4a-2828-a507-a14ef8e1bc5a",
    "nrfSetId": [
      "setnrfl1.nrfset.5gc.mnc012.mcc345"
    ]
  }
}
```

Preferred NRF disc GET SCP JSON example:

```
$ curl -X 'GET' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/nrf-configuration?service=nnrf-disc' -H 'accept: application/json'
```

```
{
  "service": "nnrf-disc",
  "nrfConfigData": {
    "nrfInstanceId": "6faf1bbc-6e4a-2828-a507-a14ef8e1bc5a",
    "nrfSetId": [
      "setnrfl1.nrfset.5gc.mnc012.mcc345"
    ]
  }
}
```

PUT REST API

This resource update the NrfConfiguration data using the request body.

Resource URI: /ocscp/scpc-configuration/v1/nrf-configuration

Table 2-121 Data Structures Supported by the PUT Response Body

Name	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
NrfConfiguration	M	1	200 OK	Indicates NrfConfiguration to be set.
ProblemDetails	M	1	400 BAD REQUEST	Returns when both the nfinstancid and nrfsetid are not present.

JSON Example of NRF Configuration for PUT

Successful response for NRF oauth2:

```
$ curl -X 'PUT' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/nrf-configuration?service=nnrf-oauth2' -H 'accept: */*' -H 'Content-Type: application/json' -d '{"service": "nnrf-oauth2", "nrfConfigData": {"nrfInstanceId": "6faf1bbc-6e4a-2828-a507-a14ef8e1bc5a", "nrfSetId": ["setnrfl1.nrfset.5gc.mnc012.mcc345"]}}'
```

```
{
  "service": "nnrf-oauth2",
  "nrfConfigData": {
    "nrfInstanceId": "6faf1bbc-6e4a-2828-a507-a14ef8e1bc5a",
    "nrfSetId": [
      "setnrfl1.nrfset.5gc.mnc012.mcc345"
    ]
  }
}
```

Successful response for NRF disk:

```
$ curl -X 'PUT' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/nrf-configuration?service=nnrf-disc' -H 'accept: */*' -H 'Content-Type: application/json' -d
```

```
{
  "service": "nnrf-disc",
  "nrfConfigData": {
    "nrfInstanceId": "6faf1bbc-6e4a-2828-a507-a14ef8e1bc5a",
    "nrfSetId": [
      "setnrfl1.nrfset.5gc.mnc012.mcc345"
    ]
  }
}'
```

Failure response:

```
$ curl -X 'PUT' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/nrf-configuration?service=nnrf-oauth2' -H 'accept: */*' -H 'Content-Type: application/json' -d '{"service": "nnrf-oauth2", "nrfConfigData": { }}'
```

```
{
  "title": "Forbidden",
  "status": "403",
  "detail": "Minimum one value ninstanceid or ninstancesetid must present",
  "instance": "/ocscp/scpc-configuration/v1/nrf-configuration?service=nnrf-oauth2",
  "cause": "INVALID_REQUEST_BODY"
}
```

2.13 OAuth2.0 Configurations

This section provides information about NRF configurations and configuring access token granularity and requests for NF types or NF service instances.

2.13.1 Configuring OAuth2.0 Access Token Granularity

This section provides information about configurations required for access token granularity and access token requests for NFType, specific NF, or NF instance ID.

Resources

The following table describes the resource name to retrieve, add, and delete the access token granularity configurations data based on the query parameters.

Table 2-122 Resource Name

Resource Name	Resource URI	HTTP Method	Description
oauth2-authorization/ access-token- granularity	/ocscp/scpc- configuration/v1/ oauth2-authorization/ access-token- granularity	GET	Retrieves access token granularity configurations.
oauth2-authorization/ access-token- granularity	/ocscp/scpc- configuration/v1/ oauth2-authorization/ access-token- granularity	PUT	Adds an access token granularity configuration.
oauth2-authorization/ access-token- granularity	/ocscp/scpc- configuration/v1/ oauth2-authorization/ access-token- granularity	DELETE	Removes an access token granularity configuration.

Data Model

Request Body

The following table describes the field names of the accessTokenGranularityWrapper data model.

Table 2-123 accessTokenGranularityWrapper

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
ruleName	String	M	defaultNonRoaming	Indicates the unique string that works as an ID.
data	AccessTokenGranularityData	M	For more information, see Table 2-124	Indicates the specific data for each OAuth2 configuration type.

Note

There are two default entries: one for non-roaming and another for roaming.

Table 2-124 AccessTokenGranularityData

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Range	Description
requesterPlmnIds	PLMN List	C	null	empty or plmn ids	Indicates the list of Local PLMNs IDs. Note: These can be present for NON_ROAMING traffic, but not mandatory to have it in this scenario.
targetPlmnIds	PLMN List	C	null	empty or plmn ids	Indicates the list of target PLMN IDs. Note: These can be present for NON_ROAMING traffic as well, but not mandatory to have it in this scenario.
trafficScenario	enum	M	NON-ROAMING	NON-ROAMING	Represents Local PLMN messages.
consumerNfTypes	Array	O	null	empty or Valid NF Type	Indicates the list of consumer NF types.
targetNfTypes	Array	M	*	* or Valid NF Types	Indicates the list of Target NF types.
targetServiceNames	Array	O	null	empty or valid service names	Indicates the list of Target service names.

Table 2-124 (Cont.) AccessTokenGranularityData

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Range	Description
supportedAccess TokenGranularity	enum	M	NF-TYPE	NF-TYPE or NF- INSTANCE	This configuration is used when SCP initiates access token process. Based on this value, SCP determines whether to use NF-Type of NF-Instance based query. There possible values are: - NF-TYPE: NF: Represents target NF type based access token. - NF-INSTANCE: Represents target NF instance ID based access token. For example, <pre>{ "ruleName": "defaultNonRoaming" , "data": { "trafficScenario" : "NON-ROAMING", "targetNfTypes": ["*"], "supportedAccessTok enGranularity": "NF-INSTANCE", "accessTokenReqInfo ": { "localPlmn": { "intraScp": { "mandatory": ["grant_type", "nfInstanceId", "scope", "targetNfInstanceId "] }, "interScp": { "mandatory": ["grant_type", "nfInstanceId", "scope", "targetNfInstanceId "] } } } } }</pre>

Table 2-124 (Cont.) AccessTokenGranularityData

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Range	Description
accessTokenReqInfo	accessTokenReqInfo Data	O	Structure of accessTokenReqInfo Data: <pre> "accessTokenReqInfo": { "localPlmn" : { "intraScp": { "mandatory" : ["grant_type", "nfInstanceId", "scope", "nfType", "targetNfType"], "preferred" : ["string1", "string2"] }, "interScp": { "mandatory" : ["grant_type", "nfInstanceId", "scope", "nfType", "targetNfType", "targetNfSetId"], "preferred" : ["string1", "string2"] } }, </pre>	composite type	Access token request info configuration is used when SCP initiates access token process. SCP composes query parameters based on these mandatory and preferred parameters. Also, it provides separate section for intra-SCP and inter-SCP. The operator is expected to configure AccessTokenReqInfo as per the allowed access token in the deployed network. - The Mandatory list defines the attributes that are required in an access token request so that NRF can issue the access token. - The preferred list defines the attributes that are expected to be used in access token requests based on their presence in 5G SBI requests from consumer NF; for example, if attributes are present, they are used in access token requests; otherwise, they are not. - The following lists the possible values for mandatory and preferred parameters: GRANT_TYPE("grant_type"), NF_INSTANCE_ID("nfInstanceId"), NF_TYPE("nfType"), TARGET_NF_TYPE("targetNfType"), SCOPE("scope"), TARGET_INSTANCE_ID("targetNfInstanceId"), REQUESTER_PLMN_LIST("requesterPlmnList"), REQUESTER_SNSSAI_LIST("requesterSnssaiList"), REQUESTER_FQDN("requesterFqdn"), REQUESTER_SNP_LIST("requesterSnpnList"),

Table 2-124 (Cont.) AccessTokenGranularityData

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Range	Description
			<pre> "remotePlmn": { "intraScp": { "mandatory" : ["grant_type", "nfInstanceId", "scope", "nfType", "targetNfType"], "preferred" : ["string1", "string2"] }, } </pre> Default: <pre> "accessTokenReqInfo": { "localPlmn" : { "intraScp": { "mandatory" : ["grant_type", "nfInstanceId", "scope", "nfType", "targetNfType"] }, "interScp": </pre>		TARGET_PLMN("targetPlmn"), TARGET_SNP("targetSNPN"), TARGET_SNSSAI_LIST("targetSnssaiList"), TARGET_NSI_LIST("targetNsiList"), TARGET_SET_ID("targetNfSetId"), TARGET_NF_SERVICE_SET_ID("targetNfServiceSetId"), HMRP_ACCESS_TOKEN_URI("hmrpAccessTokenUri"), SOURCE_NF_INSTANCE_ID("sourceNfInstanceId") Note: Among all possible values, at least one must be included as mandatory parameter.

Table 2-124 (Cont.) AccessTokenGranularityData

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Range	Description
			<pre>{ "mandatory" : ["grant_type", "nfInstanceId", "scope", "nfType", "targetNfSetId", "targetNfSetId"], }</pre>		

Response Body

The response body data model varies based on Rest operation status.

Table 2-125 Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
array(accessTokenGranularityWrapper)	M	1	200 OK	Indicates the list of oauth2 configurations (accessTokenGranularityWrapper) Matching criteria.
ProblemDetails	M	1	400 BAD REQUEST	Returns when invalid combination or more than 3 query parameters are provided.

JSON Example of "accessTokenGranularityWrapper"

```
[
  {
    "ruleName": "defaultNonRoaming",
    "data": {
      "trafficScenario": "NON-ROAMING",
      "targetNfTypes": [
        "*"
      ],
      "supportedAccessTokenGranularity": "NF-TYPE",
      "accessTokenReqInfo": {
        "localPlmn": {
```

```

        "intraScp": {
            "mandatory": ["grant_type", "nfInstanceId",
"scope", "nfType", "targetNfType"]
        },
        "interScp": {
            "mandatory": ["grant_type", "nfInstanceId",
"scope", "nfType", "targetNfSetId", "targetNfSetId"]
        }
    }
}
},
{
    "ruleName": "Config1",
    "data": {
        "requesterPlmnIds": [{"mcc": "325", "mnc": "13"}, { "mcc": "326", "mnc":
"14"}],
        "targetPlmnIds": [{"mcc": "324", "mnc": "12"}, { "mcc": "327", "mnc": "15"}],
        "trafficScenario": "NON-ROAMING",
        "consumerNfTypes": ["PCF", "UDM"],
        "targetNfTypes": ["PCF", "UDM"],
        "targetServiceNames": ["nudm-uecm", "nudm-sdm"],
        "supportedAccessTokenGranularity": "NF-TYPE",
        "accessTokenReqInfo": {
            "localPlmn": {
                "intraScp": {
                    "mandatory": ["grant_type", "nfInstanceId",
"scope", "nfType", "targetNfType"],
                    "preferred": ["requesterFqdn", "targetPlmn"]
                },
                "interScp": {
                    "mandatory": ["grant_type", "nfInstanceId", "scope", "nfType",
"targetNfType", "targetNfSetId"],
                    "preferred": ["requesterFqdn", "targetPlmn"]
                }
            }
        }
    }
},
{.....}
]

```

Resource Definition

GET REST API

This resource fetches the OAuth2 configuration (accessTokenGranularityWrapper) based on the query parameters.

If no query parameter is provided, all message priorities are returned.

Resource URI: /ocscp/scpc-configuration/v1/oauth2-authorization/access-token-granularity

Table 2-126 URI Query Parameters Supported by the GET Method

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	O	Indicates the configuration name. If the parameter is empty, all configurations are returned.

Table 2-127 Data Structures Supported by the GET Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
array(accessTokenGranularityWrapper)	M	1	200 OK	Indicates the list of OAuth2 configurations (accessTokenGranularityWrapper) matching criteria.
ProblemDetails	M	1	400 BAD REQUEST	Returns when an invalid combination or more than three query parameters are provided.

Example

Successful response 1

```
$ curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/oauth2-authorization/access-token-granularity" -H "accept: application/json"
```

Response Body:

```
[
  {
    "ruleName": "defaultNonRoaming",
    "data": {
      "trafficScenario": "NON-ROAMING",
      "targetNfTypes": [
        "*"
      ],
      "supportedAccessTokenGranularity": "NF-TYPE",
      "accessTokenReqInfo": {
        "localPlmn": {
          "intraScp": {
            "mandatory": ["grant_type", "nfInstanceId",
"scope", "nfType", "targetNfType"]
          },
          "interScp": {
            "mandatory": ["grant_type", "nfInstanceId", "scope", "nfType",
"targetNfType", "targetNfSetId"]
          }
        }
      }
    }
  },
  {
    ...
  }
]
```

```

    "ruleName": "Config1",
    "data": {
      "requesterPlmnIds": [{"mcc": "325", "mnc": "13"}, { "mcc": "326", "mnc":
"14"}],
      "targetPlmnIds": [{"mcc": "324", "mnc": "12"}, { "mcc": "327", "mnc": "15"}],
      "trafficScenario": "NON-ROAMING",
      "consumerNfTypes": ["PCF", "UDM"],
      "targetNfTypes": ["PCF", "UDM"],
      "targetServiceNames": ["nudm-uecm", "nudm-sdm"]
      "supportedAccessTokenGranularity": "NF-TYPE",
      "accessTokenReqInfo": {
        "localPlmn": {
          "intraScp": {
            "mandatory": ["grant_type", "nfInstanceId",
"scope", "nfType", "targetNfType"],
            "preferred": ["string1", "string2"]
          },
          "interScp": {
            "mandatory": ["grant_type", "nfInstanceId", "scope", "nfType",
"targetNfType", "targetNfSetId"],
            "preferred": ["string1", "string2"]
          }
        }
      }
    },
    {.....}
  ]

```

Successful response 2

```

$ curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/oauth2-
authorization/access-token-granularity?ruleName=defaultNonRoaming" -H
"accept: application/json"

```

```

[
  {
    "ruleName": "defaultNonRoaming",
    "data": {
      "trafficScenario": "NON-ROAMING",
      "targetNfTypes": [
        ""
      ],
      "supportedAccessTokenGranularity": "NF-TYPE",
      "accessTokenReqInfo": {
        "localPlmn": {
          "intraScp": {
            "mandatory": ["grant_type", "nfInstanceId",
"scope", "nfType", "targetNfType"]
          },
          "interScp": {
            "mandatory": ["grant_type", "nfInstanceId", "scope", "nfType",
"targetNfType", "targetNfSetId"]
          }
        }
      }
    }
  }
]

```

```

    }
  }
}
]

```

Failure response

```
$ curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/oauth2-authorization/access-token-granularityruleName=ojhasflakhsdvg" -H "accept: application/json"
```

```

{
  "title": "Not Found",
  "status": "404",
  "detail": "access Token Granularity configuration data not found against
given query parameter(s), Please refer to the User Guide",
  "instance": "/ocscp/scpc-configuration/v1/ruleName=ojhasflakhsdvg",
  "cause": "DATA_NOT_FOUND"
}

```

PUT REST API

This resource adds one Oauth 2 configuration (accessTokenGranularityWrapper) using the request body.

If no query parameter is provided, all message priorities are returned.

Resource URI: /ocscp/scpc-configuration/v1/oauth2-authorization/access-token-granularity

Table 2-128 Data Structures Supported by the PUT Response Body

Name	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
array(accessTokenGranularityWrapper)	M	1	200 OK	Indicates the list of oauth2 configurations (accessTokenGranularityWrapper) matching criteria.
ProblemDetails	M	1	400 BAD REQUEST	Returns the ProblemDetails when an invalid combination or more than three query parameters are provided.

Example

```

Successful response$ curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/oauth2-authorization/access-token-granularity" -H "accept: application/json" -H "Content-Type: application/json" -d
{"ruleName":"Config2","data":{"trafficScenario ":"NON-ROAMING"},"targetNfTypes":["PCF"]},"supportedAccessTokenGranularity":"NFType"}

```

```

{
  "ruleName": "Config2",

```

```

    "data": {
      "trafficScenario ": "NON-ROAMING",
      "targetNfTypes": ["PCF"],
      "supportedAccessTokenGranularity": "NfType"
    }
  }
}

```

200 OK

Failure response\$ curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/oauth2-authorization/access-token-granularity" -H "accept: application/json" -H "Content-Type: application/json" -d '{"ruleName\":\"Config2\",\"data\":{\"targetNfTypes\":[\"PCF\"]},\"supportedAccessTokenGranularity\":\"NfType\"}'

```

{
  "title": "Bad Request",
  "status": "400",
  "detail": "trafficScenario Object is missing, Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/oauth2-authorization/access-token-granularity",
  "cause": "MANDATORY_IE_MISSING"
}

```

DELETE REST API

This resource removes one Oauth 2 configuration (accessTokenGranularityWrapper) based on query parameters.

Resource URI: /ocscp/scpc-configuration/v1/oauth2-authorization/access-token-granularity

Table 2-129 URI Query Parameters Supported by the DELETE Method

Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
ruleName	String	O	1	Defines the name of the rule. The name of the rule must be unique.

Table 2-130 Data Structures Supported by the DELETE Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
None	-	-	204 OK	In a success case, only the response code is returned.
ProblemDetails	M	1	404 NOT FOUND	Returns when no matching entry is found.

Example

Successful response

```
$ curl -X DELETE "http://<localhost>:8081/ocscp/scpc-configuration/v1/oauth2-authorization/access-token-granularity?ruleName=Config2"-H "accept: application/json"*/"
```

204OK

Failure response

```
$ curl -X DELETE "http://<localhost>:8081/ocscp/scpc-configuration/v1/oauth2-authorization/access-token-granularity?ruleName=Config222" -H "accept: */"
```

```
{
  "title": "Not Found",
  "status": "404",
  "detail": "oauth2-authorization/access-token-granularity configuration data not found for the given 'ruleName': Config222",
  "instance": "/ocscp/scpc-configuration/v1/oauth2-authorization/Config222",
  "cause": "DATA_NOT_FOUND"
}
```

2.13.2 Configuring OAuth2.0 Local PLMN Required

This section provides information about configurations required for local PLMN OAuth2.0.

Resources

The following table describes the resource name to retrieve, add, and remove the OAuth2 required configurations data based on the query parameters.

Table 2-131 Resource Name

Resource Name	Resource URI	HTTP Method	Description
oauth2-authorization/ local-plmn-oauth2- required-config	/ocscp/scpc-configuration/v1/ oauth2-authorization/ local-plmn-oauth2- required-config	GET	Retrieves the OAuth2 required configurations.
oauth2-authorization/ local-plmn-oauth2- required-config	/ocscp/scpc-configuration/v1/ oauth2-authorization/ local-plmn-oauth2- required-config	PUT	Adds and updates the OAuth2 required configuration.
oauth2-authorization/ local-plmn-oauth2- required-config	/ocscp/scpc-configuration/v1/ oauth2-authorization/ local-plmn-oauth2- required-config	DELETE	Removes one OAuth2 required configuration.

Data Model

Request Body

The following table describes the field names of the OAuth2RequiredWrapper data model.

Table 2-132 OAuth2RequiredWrapper

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
ruleName	String	M	default	Indicates a unique string that works as an ID.
data	LocalNfOAuth2RequiredData	M	See Table 2-133	Indicates the specific data for each OAuth2 configuration type.

Table 2-133 LocalNfOAuth2RequiredData

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Range	Description
nfType	String	M	*	* or Valid NF type	Indicates the producer NF types for this configuration.
localPlmnIds	PLMN List	O	-	empty or Valid service Names	Indicates the list of Local PLMNs IDs of Producers. Following this pattern: [{"mcc": "234", "mnc": "987"}, {"mcc": "123", "mnc": "987"}, {...}....]
serviceNames	Array	O	-	empty or valid service names	Indicates the list valid services names of NF types.
nfInstanceIdList	Array	O	-	empty or instance ids	Indicates the list of producer NF instances IDs.
nfServiceInstanceIdsList	Array	O	-	empty or service instance ids	Indicates the list of producer NF service IDs.
oauth2Required	Boolean	M	false	true or false	OAuth2Required indicates that OAuth2.0 based authorization is required: - If true, it means an access token is required at the selected target NF service instance and for service requests. - If false, then it means an access token is not required at the selected target NF service instance for service requests.

Table 2-133 (Cont.) LocalNfOAuth2RequiredData

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Range	Description
defaultScope	Oauth2DefaultScopeData	O	{scopeSource: NFTYPE}	"SERVICE-SPECIFIC"/"NF-TYPE"/"CUSTOM-SCOPE"	Provides different scopes selection options which can be used in the access token process. SERVICE-SPECIFIC: The scope is selected from incoming service request. NF-TYPE: The scope is selected based on the configured NF type (all the services under this NF type will be the scope list). CUSTOM-SCOPE: Allows to explicitly configure the required NF services for scope.

Table 2-134 Oauth2DefaultScopeData Model

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
scopeSource	enum	M	NFTYPE	Indicates enum with three different values:ScopeSource Enum { "SERVICE-SPECIFIC", "NF-TYPE", "CUSTOM-SCOPE"; }
scopelist	Array	C	-	List of of valid services, this is mandatory when scopeSource is CUSTOM-SCOPE and SERVICE-SPECIFIC and NF-TYPE are null.

Response Body

The response body data model varies based on REST operation status.

Table 2-135 Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
array(Oauth2RequiredWrapper)	M	1	200 OK	List of OAuth2 configurations (Oauth2RequiredWrapper) matching criteria.

Table 2-135 (Cont.) Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
ProblemDetails	M	1	400 BAD REQUEST	Returns when an invalid combination or more than three query parameters are provided.

Example,

```
[
  {
    "ruleName": "default",
    "data": {
      "nfType": "*"
      "oauth2Required": false,
      "defaultScope": {
        "scopeSource": "NF-TYPE"
      }
    }
  },{
    "ruleName": "config1",
    "data": {
      "nfType": "AMF",
      "localPlmnIds": [{ "mcc": "325", "mnc": "13"}, { "mcc": "326", "mnc": "14"}],
      "serviceNames": ["nudm-ee"],
      "nfInstanceIdList": ["1aaf1bbc-6e4a-4454-a507-11111111111",
"1aaf1bbc-6e4a-4454-a507-22222222222"],
      "nfServiceInstanceIdList": ["1aaf1bbc-6e4a-4454-0000-11111111111",
"1aaf1bbc-6e4a-4454-0000-22222222222"],
      "oauth2Required": true,
      "defaultScope": {
        "scopeSource": "CUSTOM-SCOPE",
        "scopelist":["nudm-uecm", "nudm-sdm"]
      }
    }
  },{
    .....
    .....
  }
]
```

Resource Definition

GET REST API

This resource fetches the OAuth2 configuration (OAuth2RequiredWrapper) based on the query parameters.

Resource URI: /ocscp/scpc-configuration/v1/oauth2-authorization/local-plmn-oauth2-required-config

Table 2-136 URI Query Parameters Supported by the GET Method

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	O	Indicates the configuration name. If the parameter is empty, all configurations are returned.

Table 2-137 Data Structures Supported by the GET Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
array(Oauth2RequiredWrapper)	M	1	200 OK	Indicates the list of oauth2 configurations (Oauth2RequiredWrapper) matching criteria.
ProblemDetails	M	1	400 BAD REQUEST	Returns when an invalid combination or more than three query parameters are provided.

Example

Successful response 1\$ curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/oauth2-authorization/local-plmn-oauth2-required-config" -H "accept: application/json"

```
[
  {
    "ruleName": "default",
    "data": {
      "nfType": "*"
      "oauth2Required": false,
      "defaultScope": {
        "scopeSource": "NF-TYPE"
      }
    }
  },
  {
    "ruleName": "config1",
    "data": {
      "nfType": "AMF",
      "localPlmnIds": [{"mcc": "325", "mnc": "13"}, {"mcc": "326", "mnc": "14"}],
      "serviceNames": ["nudm-ee"],
      "nfInstanceIdsList": ["1aaf1bbc-6e4a-4454-a507-111111111111",
"1aaf1bbc-6e4a-4454-a507-222222222222"],
      "nfServiceInstanceIdsList": ["1aaf1bbc-6e4a-4454-0000-111111111111",
"1aaf1bbc-6e4a-4454-0000-222222222222"],
      "oauth2Required": true,
      "defaultScope": {
        "scopeSource": "CUSTOM-SCOPE",
        "scopelist": ["nudm-uecm", "nudm-sdm"]
      }
    }
  }
],
.....
```

```

        .....
    }
]

```

Failure response\$ curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/oauth2-authorization/local-plmn-oauth2-required-config?ruleName=ojhasflakhsdvg" -H "accept: application/json"

```

{
  "title": "Not Found",
  "status": "404",
  "detail": "oauth2 configuration data not found against given query
parameter(s), Please refer to the User Guide",
  "instance": "/ocscp/scpc-configuration/v1/ruleName=ojhasflakhsdvg",
  "cause": "DATA_NOT_FOUND"
}

```

PUT REST API

This resource adds one OAuth 2 configuration (OAuth2RequiredWrapper) using the Request Body.

Resource URI: /ocscp/scpc-configuration/v1/oauth2-authorization/local-plmn-oauth2-required-config

Table 2-138 Data Structures Supported by the PUT Response Body

Name	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
array(Oauth2RequiredWrapper)	M	1	200 OK	Indicates the list of oauth2 configurations (OAuth2RequiredWrapper) matching criteria
ProblemDetails	M	1	400 BAD REQUEST	Returns when an invalid combination or more than three query parameters are provided.

Example

Successful response\$ curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/oauth2-authorization/local-plmn-oauth2-required-config" -H "accept: application/json" -H "Content-Type: application/json" -d '{"ruleName":"Config2","data":{"nfType":"PCF"},"oauth2Required":true}'

```

{
  "ruleName": "Config2",
  "data": {
    "nfType": "PCF",
    "oauth2Required": true,
  }
}

```

200 OK

DELETE REST API

This resource removes one OAuth 2 configuration (OAuth2RequiredWrapper) based on query parameters.

Resource URI: /ocscp/scpc-configuration/v1/oauth2-authorization/local-plmn-oauth2-required-config

Table 2-139 URI Query Parameters Supported by the DELETE Method

Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
ruleName	String	O	1	Indicates the rule name.

Table 2-140 Data Structures Supported by the DELETE Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
None	-	-	204 OK	Returns the successful response. Only response code is returned.
ProblemDetails	M	1	404 NOT FOUND	Returns when no matching entry is found.

Example

Successful response

```
$ curl -X DELETE "http://<localhost>:8081/ocscp/scpc-configuration/v1/oauth2-authorization/local-plmn-oauth2-required-config?ruleName=Config2" -H "accept: application/json" */"
```

204 OK

Failure response\$ curl -X DELETE "http://<localhost>:8081/ocscp/scpc-configuration/v1/oauth2-authorization/local-plmn-oauth2-required-config?ruleName=Config222" -H "accept: */"

```
{
  "title": "Not Found",
  "status": "404",
  "detail": "OAuth2 configuration data not found for the given 'ruleName': Config222",
  "instance": "/ocscp/scpc-configuration/v1/oauth2-authorization/Config222",
  "cause": "DATA_NOT_FOUND"
}
```

2.14 Configuring Error Profiles

This section provides information about configuring different Error Profiles, which can be used to build problem details sent in response body to the consumer.

Resources

The following table describes the resource name to retrieve, add, update, and remove error profile configuration based on the query parameters.

Table 2-141 Resource Name

Resource Name	Resource URI	HTTP Method	Description
error-response-profile	/ocscp/scpc-configuration/{version}/error-response-profile	GETALL	Retrieves all error profile configurations.
error-response-profile	/ocscp/scpc-configuration/{version}/error-response-profile/{name}	GET	Retrieves error profile configuration for given name.
error-response-profile	/ocscp/scpc-configuration/{version}/error-response-profile/{name}	PUT	Add or update error profile configuration for given name.
error-response-profile	/ocscp/scpc-configuration/{version}/error-response-profile/{name}	DELETE	Deletes error profile configuration for a given name; if the name is in use, it can't be deleted.

Data Model

Request Body

The following table describes the field names of the ErrorProfileData data type.

Table 2-142 ErrorProfileData

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
name (256)	String	M	Name of the configuration record
errorProfile	JSON	M	Error Profile JSON object

Table 2-143 ErrorProfile

Parameter	Data Type	Mandatory (M) or Optional(O)	Default Value	Allowed Value	Description
status	Integer	M	500	300-511	HTTP Status Code

Table 2-143 (Cont.) ErrorProfile

Parameter	Data Type	Mandatory (M) or Optional(O)	Default Value	Allowed Value	Description
cause	String	M	UNSPECIFIED_NF_FAILURE	For list of error causes, see Table 2-149	This parameter indicates the list of error causes that are specific to the occurrence of the problem.
customCause	String (256)	C	null	NA	User defined custom cause. This field will be used only if cause field value is set to "CUSTOM".
title	String (256)	O	Internal Server Error	NA	If this field is null, a standard HTTP status code description is added.
detail	enum	O	null	NA	If present, the same data is used; otherwise, the application can add it optionally.
retryAfter	Integer	C	0	Non-negative integer (>=0)	This parameter indicates the number of seconds after client should retry. The default value is 0 for default error profile records. If you omit this attribute or leave it empty in the request, the value is not populated automatically.
redirectURL	String (256)	C	null	Valid absolute URL with http or https scheme and host	This parameter indicates the AbsoluteURL of the resource to which the message is redirected.

Request Body JSON Format

```

{
  "name": "defaultErrorProfile",
  "errorProfile": {
    "status": 500,
    "cause": "UNSPECIFIED_NF_FAILURE",
    "customCause": null,
    "title": "INTERNAL_SERVER_ERROR",
    "detail": null,
    "retryAfter": 0,
    "redirectURL": null
  }
}

```

Resource Definition**GET REST API:**

This resource fetches all the error profile based on the query parameters.

Resource URI: /ocscp/scpc-configuration/{version}/error-response-profile

The following table describes the data structure supported by the GET method on this resource.

Table 2-144 Data structures supported by the GET Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response codes	Description
errorProfile	M	1..N	200 OK	Indicates error profile configurations.

This resource fetches all the error profile based on name.

Resource URI: /ocscp/scpc-configuration/{version}/error-response-profile/{name}

The following table describes the path parameter supported by the GET method on this resource.

Table 2-145 Path Parameter

Name	Data Type	Mandatory (M) or Optional(O)	Description
name	String	M	Fetches configurations on name.

Example

Successful response - 1

```
$ curl -X 'GET' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/error-response-profile' -H 'accept: application/json'
```

```
[
  {
    "name": "ccaHeaderNotPresentError",
    "errorProfile": {
      "status": 400,
      "cause": "MANDATORY_IE_MISSING",
      "title": "BAD_REQUEST",
      "detail": "Bad Request, Mandatory 3gpp-Sbi-Client-Credential header missing",
      "retryAfter": 0
    }
  },
  {
    "name": "ccaVerificationError",
    "errorProfile": {
      "status": 403,
      "cause": "CCA_VERIFICATION_FAILURE",
```

```

        "title": "FORBIDDEN",
        "detail": "Forbidden, CCA verification failed",
        "retryAfter": 0
    },
    {
        "name": "defaultErrorProfile",
        "errorProfile": {
            "status": 500,
            "cause": "UNSPECIFIED_NF_FAILURE",
            "title": "INTERNAL_SERVER_ERROR",
            "detail": "Internal Server Error",
            "retryAfter": 0
        }
    },
    {
        "name": "healthCheckErrorProfile",
        "errorProfile": {
            "status": 503,
            "cause": "NF_CONGESTION",
            "title": "NF service is overloaded/congested",
            "detail": "NF service is overloaded/congested"
        }
    }
]

```

Successful response - 2

```
$ curl -X 'GET'\http://<localhost>:8081/ocscp/scpc-configuration/v1/error-
response-profile/defaultErrorProfile\ -H 'accept:
application/json'
```

```

[
  [
    {
      "ruleName": "udm_test",
      "data": {
        "nfServiceName": "nudm_uecm",
        "httpMethods": [
          "GET",
          "POST"
        ],
        "messageType": "REQUEST",
        "enableAssignPriority": true,
        "assignPriority": 10,
        "enableOverridePriority": false,
        "overridePriority": -1
      }
    }
  ]
]

```

Failure Case

```
$ curl -X 'GET'\http://<localhost>:8081/ocscp/scpc-configuration/v1/error-response-profile/defaultError'\-H 'accept: application/json'
```

```
{
  "title": "Not Found",
  "status": "404",
  "detail": "Error Profile data not found against given name. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/error-response-profile/defaultError",
  "cause": "DATA_NOT_FOUND"
}
```

PUT REST API:

This resource adds or updates the error profile configuration using the request body.

Resource URI: /ocscp/scpc-configuration/{version}/error-response-profile/{name}

Table 2-146 Data Structures Supported by the PUT Response Body

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response codes	Description
errorProfile	M	1	200 OK	Indicates Error Profile to be added.
ProblemDetails	M	1	400/404	Returns ProblemDetails.

Example

Successful response

```
$ curl -X 'PUT'\http://<localhost>:8081/ocscp/scpc-configuration/v1/error-response-profile/defaultErrorProfile'\ -H 'accept: application/json'\ -H 'Content-Type: application/json'\ -d '{"name": "defaultErrorProfile", "errorProfile": {"status": 500, "cause": "UNSPECIFIED_NF_FAILURE", "title": "INTERNAL_SERVER_ERROR", "detail": "Internal Server Error", "retryAfter": 0}}'
```

```
{
  "name": "defaultErrorProfile",
  "errorProfile": {
    "status": 500,
```

```

        "cause": "UNSPECIFIED_NF_FAILURE",
        "title": "INTERNAL_SERVER_ERROR",
        "detail": "Internal Server Error",
        "retryAfter": 0
    }
}

```

Failure Case

```

$ curl -X 'PUT'\http://<localhost>:8081/ocscp/scpc-configuration/v1/error-
response-profile/defaultErrorProfile'\-H 'accept:
application/json'\-H 'Content-Type:
application/json'\ -d '{"name":
"defaultErrorProfile","errorProfile": {"status": 500,"cause":
"abc","title":
"INTERNAL_SERVER_ERROR","detail": "Internal Server Error",
"retryAfter":
0}}'

```

```

{
  "title": "Bad Request",
  "status": "400",
  "detail": "The value given should be either 'custom' or present in
ApplicationError Enum List. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/error-response-profile/
defaultErrorProfile",
  "cause": "MANDATORY_IE_MISSING"
}

```

DELETE REST API:

This resource deletes the error profile configuration data based on name.

Resource URI: /ocscp/scpc-configuration/{version}/error-response-profile/{name}

Table 2-147 Path Parameter

Name	Data Type	Mandatory (M) or Optional(O)	Description
name	String	M	Delete configurations for name.

Table 2-148 Data structures supported by the Delete Response Body on this resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response codes	Description
ProblemDetails	M	1	400/404	Problem Details.

Example

Successful response

```
$ curl -X 'DELETE' \ 'http://<localhost>:8081/ocscp/scpc-configuration/v1/
error-response-profile/defaultErrorProfile' \ -H 'accept: application/
json' Server response
Code Details
204
Response headers
date: Fri, 12 May 2023 07:13:56 GMT
```

Failure case

```
$ curl -X 'DELETE' \ 'http://<localhost>:8081/ocscp/scpc-configuration/v1/
error-response-profile/defaultErrorProfile' \ -H 'accept: application/json'
```

```
{
  "title": "Not Found",
  "status": "404",
  "detail": "Error Profile data not found against given name. Please refer to
the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/error-response-profile/
defaultErrorProfile",
  "cause": "DATA_NOT_FOUND"
}
```

Protocol or application Error**Table 2-149 Common Protocol and Application Errors**

Protocol or application Error	HTTP status code	Description
INVALID_API	400 Bad Request	The HTTP request contains an unsupported API name or API version in the URI.
INVALID_MSG_FORMAT	400 Bad Request	The HTTP request has an invalid format.
INVALID_QUERY_PARAM	400 Bad Request	The HTTP request contains an unsupported query parameter in the URI. See NOTE 1.
MANDATORY_QUERY_PARAM_INCORRECT	400 Bad Request	A mandatory query parameter, or a conditional query parameter that is mandatory, for an HTTP method was received in the URI with a semantically incorrect value. See NOTE 1.
OPTIONAL_QUERY_PARAM_INCORRECT	400 Bad Request	An optional query parameter for an HTTP method was received in the URI with a semantically incorrect value that prevents successful processing of the service request. See NOTE 1.

Table 2-149 (Cont.) Common Protocol and Application Errors

Protocol or application Error	HTTP status code	Description
MANDATORY_QUERY_PARAM_MISSING	400 Bad Request	A query parameter that is defined as mandatory, or as conditional but mandatory, for an HTTP method is not included in the URI of the request. See NOTE 1.
MANDATORY_IE_INCORRECT	400 Bad Request	A mandatory IE within the JSON body, within a variable part of an <code>apiSpecificResourceUriPart</code> or within an HTTP header, or a conditional IE but mandatory for an HTTP method was received with a semantically incorrect value. See NOTE 1.
OPTIONAL_IE_INCORRECT	400 Bad Request	An optional IE within the JSON body or within an HTTP header for an HTTP method was received with a semantically incorrect value that prevents successful processing of the service request. See NOTE 1.
MANDATORY_IE_MISSING	400 Bad Request	A mandatory IE within the JSON body or within the variable part of an <code>apiSpecificResourceUriPart</code> or within an HTTP header, or a conditional IE but mandatory, for an HTTP method is not included in the request. See NOTE 1.
UNSPECIFIED_MSG_FAILURE	400 Bad Request	The request is rejected due to an unspecified client error. See NOTE 2.
RESOURCE_CONTEXT_NOT_FOUND	400 Bad Request	The notification request is rejected because the callback URI still exists in the receiver of the notification, but the specific resource context identified within the notification payload is not found in the NF service consumer.
CCA_VERIFICATION_FAILURE	403 Forbidden	The request is rejected due to a failure to verify the CCA at the receiving entity, for example, an NRF or NF service producer.
TOKEN_CCA_MISMATCH	403 Forbidden	The request is rejected due to a mismatch between the subject claim in the access token and the subject claim in the CCA.
MODIFICATION_NOT_ALLOWED	403 Forbidden	The request is rejected because the contained modification instructions attempt to modify IE, which is not allowed to be modified.
SUBSCRIPTION_NOT_FOUND	404 Not Found	The request for modification or deletion of the subscription is rejected because the subscription is not found in the NF.

Table 2-149 (Cont.) Common Protocol and Application Errors

Protocol or application Error	HTTP status code	Description
RESOURCE_URI_STRUCTURE_NOT_FOUND	404 Not Found	The request is rejected because a fixed part after the first variable part of an <code>apiSpecificResourceUriPart</code> (as defined in clause 4.4.1 of 3GPP TS 29.501 [5]) is not found in the NF. This fixed part of the URI may represent a sub-resource collection, for example, contexts, subscriptions, policies, or a custom operation. See NOTE 5.
INCORRECT_LENGTH	411 Length Required	The request is rejected due to the incorrect value of the content-length header field.
NF_CONGESTION_RISK	429 Too Many Requests	The request is rejected due to excessive traffic which, if continued over time, may lead to (or may increase) an overload situation.
INSUFFICIENT_RESOURCES	500 Internal Server Error	The request is rejected due to insufficient resources.
UNSPECIFIED_NF_FAILURE	500 Internal Server Error	The request is rejected due to unspecified reason at the NF. See NOTE 3.
SYSTEM_FAILURE	500 Internal Server Error	The request is rejected due to generic error condition in the NF.
NF_FAILOVER	500 Internal Server Error	The request is rejected due to the unavailability of the NF, and the requester may trigger an immediate re-selection of an alternative NF based on this information. See NOTE 6
NF_SERVICE_FAILOVER	500 Internal Server Error	The request is rejected due to the unavailability of the NF service, and the requester may trigger an immediate re-selection of an alternative NF service based on this information. See NOTE 6.
NF_CONGESTION	503 Service Unavailable	The NF experiences congestion and performs overload control, which does not allow the request to be processed. See NOTE 4.
TARGET_NF_NOT_REACHABLE	504 Gateway Timeout	The request is not served as the target NF is not reachable.
TIMED_OUT_REQUEST	504 Gateway Timeout	The request is rejected due to a request that has timed out at the HTTP client.

Note

1. `invalidParams` attribute is included in the "ProblemDetails" data structure, indicating unsupported, missing, or incorrect IEs, query parameters, or 3gpp-Sbi-Discovery-* headers.
2. This application error indicates an error in the HTTP request, and there is no other application error value that can be used instead.
3. This application error indicates an error condition in the NF, and there is no other application error value that can be used instead.
4. If the reason for rejection is a temporary overload, the NF may include in the response a `Retry-After` header field to indicate how long the service is expected to be unavailable.
5. If the request is rejected because of an error in an URI before the first variable part of an "apiSpecificResourceUriPart", the "404 Not Found" HTTP status code may be sent without the "ProblemDetails" data structure indicating a protocol or application error.
6. The NF service consumer (as receiver of the cause code) should stop sending subsequent requests addressing the resource contexts in the producer's NF instance (for `NF_FAILOVER`) or NF service instance (for `NF_SERVICE_FAILOVER`) to avoid massive rejections. The NF service consumer may reselect an alternative NF service producer as specified in clause 6.5 of 3GPP TS 23.527 [38], for example, using the binding indication of resource context. It is implementation specific for the NF service consumer to determine when and whether the NF producer becomes available again, for example, when there is no other alternative available or at expiry of a local configured timer.

2.15 Outlier Detection Configuration

This section describes the REST API configurations required for Outlier Detection. Outlier Detection is configured for each service in the routing option and for inter-SCP and SEPP in System Options. Outlier Detection configurations created using this REST API are used in Routing Options for NF Services and in System Options for inter-SCP and SEPP. This feature can be disabled at the global or system level and enabled at the NF service level in the routing option to work for those services.

Resources

The following table describes the resource URIs and the corresponding HTTP methods for the outlier-detection resource type.

Table 2-150 Resources

Resource Name	Resource URI	HTTP Method	Description
outlier-detection	/ocscp/scpc-configuration/{version}/outlier-detection	GET	Retrieves all outlier-detection configurations.
outlier-detection	/ocscp/scpc-configuration/{version}/outlier-detection/{ruleName}	GET	Retrieves outlier-detection configuration for a given ruleName.

Table 2-150 (Cont.) Resources

Resource Name	Resource URI	HTTP Method	Description
outlier-detection	/ocscp/scpc-configuration/{version}/outlier-detection/{ruleName}	PUT	Create or update the outlier-detection configuration for a given ruleName.
outlier-detection	/ocscp/scpc-configuration/{version}/outlier-detection/{ruleName}	PATCH	Updates outlier-detection configuration by ruleName.
outlier-detection	/ocscp/scpc-configuration/{version}/outlier-detection/{ruleName}	DELETE	Removes outlier-detection configuration for a given ruleName. If the rule is in use, then it cannot remove the ruleName.

Data Model**Request Body**

The following table describes outlierDetectionConfig data types.

Table 2-151 outlierDetectionConfig

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Range	Description
ruleName	String	M	NA	NA	Provides the unique rule present in the outlier detection table that must not be repeated.
consecutiveErrors	Integer	O	100	5 - 500	Number of consecutive errors after which an endpoint is considered unhealthy.
interval	String	O	86400 seconds	30 seconds - 86400 seconds	Interval after which stale records are removed from the outlier data cache. Stale records are identified as the records that are not referenced by any message in this interval. Note: The interval value must be significantly greater than baseEjectionTime.
baseEjectionTime	String	O	5 seconds	1 second - 500 seconds	Duration for which an endpoint is ejected

Table 2-151 (Cont.) outlierDetectionConfig

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Range	Description
ErrorList	Array(String)	O	["Connection Error", "Time outs", 500, 501, 502, 503, 504, 505, 506, 507, 508, 510, 511]	["Connection Error", "Time outs", 301, 302, 303, 304, 307, 308, 400, 401, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 421, 422, 425, 426, 428, 429, 431, 451, 500, 501, 502, 503, 504, 505, 506, 507, 508, 510, 511]	List with errors to be considered for outlier detection.

Response Body

JSON Format

```
{
  "ruleName": "defaultRule",
  "outlierDetectionConfigData": {
    "consecutiveErrors": 100,
    "interval": "86400s",
    "baseEjectionTime": "5s",
    "ErrorList": [
      "500"
    ]
  }
}
```

Response Body

JSON Format

```
{
  "ruleName": "defaultRule",
  "outlierDetectionConfigData": {
```

```

    "consecutiveErrors": 100,
    "interval": "86400s",
    "baseEjectionTime": "5s",
    "ErrorList": [
      "500"
    ]
  }
}

```

Resource Definition

This section describes GET, PUT, PATCH, and DELETE resource types supported by this feature.

GET

This section describes the resources to fetch all the outlier-detection configurations.

Resource URI: /ocscp/scpc-configuration/{version}/outlier-detection

Table 2-152 Data Structures Supported by the GET Response Body

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
outlierDetectionConfig	M	1..N	200 OK	Indicates outlier-detection configurations.

Resource to fetch all the outlier-detection configurations based on ruleName.

Resource URI: /ocscp/scpc-configuration/{version}/outlier-detection/{ruleName}

Table 2-153 Path Parameters

Name	Data Type	Mandatory (M) or Optional (O)	Description
ruleName	String	M	Fetches configurations on ruleName.

Table 2-154 Data Structures Supported by the GET Response Body

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response codes	Description
outlierDetectionConfig	M	1	200 OK	Indicates outlier-detection configurations.
ProblemDetails	M	1	404	Provides problem details.

Successful Sample of GET API:

Request:

```

curl -X 'GET' \
  'http://10.75.212.196:31304/ocscp/scpc-configuration/v1/outlier-detection' \

```

```

-H 'accept: application/json'
Response body:
[
  {
    "ruleName": "defaultRule",
    "outlierDetectionConfigData": {
      "consecutiveErrors": 100,
      "interval": "86400s",
      "baseEjectionTime": "5s",
      "ErrorList": [
        "Connection Error",
        "Time outs",
        "500",
        "501",
        "502",
        "503",
        "504",
        "505",
        "506",
        "507",
        "508",
        "510",
        "511"
      ]
    },
    "createdTimestamp": "2026-05-20 17:25:50",
    "updatedTimestamp": "2026-05-20 17:25:50"
  },
  {
    "ruleName": "nextHopScpODRule",
    "outlierDetectionConfigData": {
      "consecutiveErrors": 100,
      "interval": "86400s",
      "baseEjectionTime": "5s",
      "ErrorList": [
        "Connection Error",
        "Time outs",
        "500",
        "501",
        "502",
        "503",
        "504",
        "505",
        "506",
        "507",
        "508",
        "510",
        "511"
      ]
    },
    "createdTimestamp": "2026-05-20 17:25:50",
    "updatedTimestamp": "2026-05-20 17:25:50"
  }
]

```

Request:

```

curl -X 'GET' \
  'http://10.75.212.196:31304/ocscp/scpc-configuration/v1/outlier-detection/
defaultRule' \
  -H 'accept: application/json'
Response body:
{
  "ruleName": "defaultRule",
  "outlierDetectionConfigData": {
    "consecutiveErrors": 100,
    "interval": "86400s",
    "baseEjectionTime": "5s",
    "ErrorList": [
      "Connection Error",
      "Time outs",
      "500",
      "501",
      "502",
      "503",
      "504",
      "505",
      "506",
      "507",
      "508",
      "510",
      "511"
    ]
  },
  "createdTimestamp": "2026-05-20 17:25:50",
  "updatedTimestamp": "2026-05-20 17:25:50"
}

```

Error Sample of GET API:

Request:

```

curl -X 'GET' \
  'http://10.75.212.196:31304/ocscp/scpc-configuration/v1/outlier-detection/
rule1' \
  -H 'accept: application/json'

```

Response body:

```

{
  "title": "Not Found",
  "status": 404,
  "detail": "Outlier Detection Configuration data not found against given
query parameter(s), Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/outlier-detection/rule1",
  "cause": "DATA_NOT_FOUND"
}

```

PUT

This section describes outlier-detection configurations for a given data.

Resource URI: /ocscp/scpc-configuration/{version}/outlier-detection/
{ruleName}

Table 2-155 Data Structures Supported by the PUT Request Body

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
outlierDetectionConfig	M	1	200 OK	Indicates outlier-detection configurations.
ProblemDetails	M	1	400 or 404 BAD REQUEST	Provides problem details.

Successful Sample of PUT API

Request:

```
curl -X 'PUT' \
'http://10.75.212.196:31304/ocscp/scpc-configuration/v1/outlier-detection/Rule' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "ruleName": "Rule",
  "outlierDetectionConfigData": {
    "consecutiveErrors": 100,
    "interval": "86400s",
    "baseEjectionTime": "5s",
    "ErrorList": [
      "Connection Error",
      "Time outs",
      "500",
      "501"
    ]
  },
  "createdTimestamp": "2026-05-20 17:25:50",
  "updatedTimestamp": "2026-05-20 17:25:50"
}'
```

Response:

```
{
  "ruleName": "Rule",
  "outlierDetectionConfigData": {
    "consecutiveErrors": 100,
    "interval": "86400s",
    "baseEjectionTime": "5s",
    "ErrorList": [
      "Connection Error",
      "Time outs",
      "500",
      "501"
    ]
  },
  "createdTimestamp": "2026-05-20 17:53:31",
  "updatedTimestamp": "2026-05-20 17:53:31"
}
```

Error Sample of PUT API

Request:

```
curl -X 'PUT' \
  'http://10.75.212.196:31304/ocscp/scpc-configuration/v1/outlier-detection/Rule' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "ruleName": "Rule",
    "outlierDetectionConfigData": {
      "consecutiveErrors": 1000,
      "interval": "86400s",
      "baseEjectionTime": "5s",
      "ErrorList": [
        "Connection Error",
        "Time outs",
        "500",
        "501"
      ]
    },
    "createdTimestamp": "2026-05-20 17:25:50",
    "updatedTimestamp": "2026-05-20 17:25:50"
  }'
```

Response:

```
{
  "title": "Bad Request",
  "status": 400,
  "detail": "The value given is out of Range",
  "instance": "/ocscp/scpc-configuration/v1/outlier-detection/Rule",
  "cause": "MANDATORY_IE_INCORRECT"
}
```

PATCH REST API

This section describes resource to update the outlier-detection configurations using the request body.

Resource URI: /ocscp/scpc-configuration/{version}/outlier-detection/{ruleName}

Table 2-156 Data Structures Supported by the PATCH Request Body

Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	M	Rule name for which Outlier Detection configuration is modified.
outlierDetectionConfig	JSON	O	patchDocument to be sent. For example, [{ "op": "replace", "path": "/outlierDetectionConfigData/interval", "value": "50s" }][{ "op": "replace", "path": "/outlierDetectionConfigData/ErrorList", "value": ["500","501"] }]

Successful Sample of PATCH API

Request:

```
curl -X 'PATCH' \
  'http://10.75.212.196:31304/ocscp/scpc-configuration/v1/outlier-detection/
rule' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/merge-patch+json' \
  -d ' [{ "op": "replace", "path": "/outlierDetectionConfigData/ErrorList",
"value": ["500","501"] } ]'
```

Response:

```
{
  "ruleName": "Rule",
  "outlierDetectionConfigData": {
    "consecutiveErrors": 100,
    "interval": "86400s",
    "baseEjectionTime": "5s",
    "ErrorList": [
      "500",
      "501"
    ]
  },
  "createdTimestamp": "2026-05-20 17:59:29",
  "updatedTimestamp": "2026-05-20 18:00:26"
}
```

Error Sample of PATCH API

Request:

```
curl -X 'PATCH' \
  'http://10.75.212.196:31304/ocscp/scpc-configuration/v1/outlier-detection/
rule' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/merge-patch+json' \
  -d ' [{ "op": "replace", "path": "/outlierDetectionConfigData/
consecutiveErrors", "value": 1000 } ]'
```

Response:

```
{
  "title": "Bad Request",
  "status": 400,
  "detail": "The value given is out of Range",
  "instance": "/ocscp/scpc-configuration/v1/outlier-detection/rule",
  "cause": "MANDATORY_IE_INCORRECT"
}
```

DELETE REST API

This section describes resources to fetch all the outlier-detection configurations based on ruleName.

Resource URI: /ocscp/scpc-configuration/{version}/outlier-detection/{ruleName}

Table 2-157 Path Parameter

Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	M	Fetch configurations on ruleName.

Table 2-158 Data Structures Supported by the DELETE Request Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response codes	Description
ProblemDetails	M	1	400 or 404 BAD REQUEST	Provides problem details.

Successful Sample of DELETE API

Request:

```
curl -X 'DELETE' \
'http://10.75.212.196:31304/ocscp/scpc-configuration/v1/outlier-detection/rule' \
-H 'accept: application/json'
```

Response: 204 OK

Error Sample of DELETE API

Request:

```
curl -X 'DELETE' \
'http://10.75.212.196:31304/ocscp/scpc-configuration/v1/outlier-detection/rule' \
-H 'accept: application/json'
```

Response:

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "Outlier Detection Configuration data not found against given query parameter(s), Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/outlier-detection/rule",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

2.16 Configuring Ingress Rate Limiting

This section provides the following information about Ingress Rate Limiting configuration:

- List of resources required for retrieving, configuring, and deleting the Ingress Rate Limiting data.

- Ingress Rate Limiter data name and data type.
- Functionalities of GET, PUT, and DELETE APIs.

Resources

The following table describes the resources for retrieving, configuring, and deleting the Ingress Rate Limiting data.

Table 2-159 Ingress Rate Limiting Resource Names

Resource Name	Resource URI	HTTP Method	Query Parameters	Description
ingressRateLimiter	/ocscp/scpc-configuration/v1/ratelimit/ingress	GET	NFType or FQDN or NfInstanceId	Retrieves Ingress Rate Limiting data configured to the corresponding supplied query parameters.
ingressRateLimiter	/ocscp/scpc-configuration/v1/ratelimit/ingress	PUT	NA	Configures Ingress Rate Limiting data using the supplied request body in the JSON format.
ingressRateLimiter	/ocscp/scpc-configuration/v1/ratelimit/ingress	DELETE	FQDN or NfInstanceId	Deletes Ingress Rate Limiting data corresponding to supplied query parameters.

Data Model

Request Body

The following table describes Ingress Rate Limiter data name and data type.

Table 2-160 IngressRateLimiterData

Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
nfType	NFType	C	1	Indicates the supported NFType as described in the 3GPP TS 29.510 section 6.1.6.3.3: UDM, AMF, SMF, AUSF, NEF, NRF, PCF, SMSF, NSSF, UDR, LMF, GMLC, F5GEIR, SEPP, UPF, N3IWF, AF, UDSF, BSF, CHF, NWDAF, CUSTOM_ORACLE_SCP, SCP.
fqdn	String	C	1	Indicates the FQDN of consumer NF.
NfInstanceId	String	C	1	NfInstanceId of consumer NF
enabled	Boolean	O	1	Indicates whether the rate limiting is enabled for nfType/fqdn. Default value is false.
data	Data	M	1	Indicates the rate limit configuration data.

Data

The following table describes the types of data.

Table 2-161 Data Name and Type

Name	DataType	Mandatory (M) or Optional(O)	Cardinality	Description
config	Config	M	1	Indicates the rate limit data.
errorResponse	ErrorResponse	M	1	Indicates the error handling related data.

Config**Table 2-162 Config Data Type**

Name	DataType	Mandatory (M) or Optional(O)	Cardinality	Range	Description
durationInSec	integer	M	1	1-1	Indicates the time unit in seconds to calculate the rate. The default value is 1 second.
rate	integer	M	1	1- 50000	Indicates the messages or time unit to be accepted.
burstPercentage	integer	O	1	0 - 100	Indicates the Burst percentage used to calculate the number of burst messages allowed per 100ms. The default value is 0. Note: Burst Control is not supported. Therefore, any value set for this parameter does not take effect.

Table 2-163 ErrorResponse

Name	DataType	Mandatory (M) or Optional(O)	Cardinality	Range	Description
errorResponse	String	O	1	0-200 characters	Indicates the Custom Error String used in cause field of the ProblemDetails structure as defined in the 3GPP TS 29.571 section 5.2.4.1. Default value shall be a constant string "INGRESS-RATE-LIMITER:TOO MANY REQUESTS" auto configured by SCP.
errorCode	Int	M	1	3xx,4xx,5xx	Indicates the Http Status code.

JSON Format

```
{
  "data": {
```

```

    "config": {
      "durationInSec": 1,
      "rate": 0,
      "burstPercentage" : 0
    },
    "errorResponse": {
      "errorCode": 0,
      "errorResponse": "string"
    }
  },
  "enabled": true,
  "fqdn": "string",
  "nfinstanceid": "string",
  "nfType": "string"
}

```

Response Body

The response body data model varies based on the Rest operation status. For more information, refer to the subsequent sections.

Table 2-164 Response Body Data Type

Data Type	Description
IngressRateLimiterData	Same as the request body as described in Table 2-160 .
ProblemDetails	Returns when an invalid combination or more than two query parameters are provided.
None	Indicates an empty body.

Resource Definition

GET REST API

This resource fetches the Ingress Rate Limiting Configuration based on the query parameters. If no query parameter is provided, all the Ingress Rate Limiting Configuration data is returned.

Resource URI: /ocscp/scpc-configuration/v1/ratelimit/ingress

The following table describes URI query parameters supported by the GET method on this resource.

Table 2-165 URI Query Parameters

Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
Fqdn	String	O	1	Indicates the FQDN of consumer NF.
NfinstanceId	String	O	1	NfinstanceId of consumer NF
NFType	NFType	O	1	Indicates the NFType supported as described in the 3GPP TS 29.510 section 6.1.6.3.11: UDM, AMF, SMF, AUSF, NEF, PCF, SMSF, NSSF, UDR, LMF, GMLC, F5GEIRSEPP, UPF, N3IWF, AF, UDSF, BSF, CHF, NWDAF, CUSTOM_ORACLE_SCP, SCP.

Note

Only one Query parameters is supported at a time.

The following table describes data structures supported by the GET Response Body on this resource.

Table 2-166 Data Structures

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
array(IngressRateLimiterData)	M	1	200 OK	Indicates the list of Ingress Rate Limiting Configuration data.
IngressRateLimiterData	M	1	200 OK	Indicates the Ingress Rate Limiting Configuration data.
ProblemDetails	M	1	400 BAD REQUEST	Indicates that the requested combination of Query Parameters is not allowed.
ProblemDetails	M	1	404 NOT FOUND	Indicates that there is no matching entry found.

Example:

Successful response

```
curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/ratelimit/ingress?nfType=PCF" -H "accept: */*"
{
  "nfType": "PCF",
  "data": {
    "config": {
      "rate": 1000,
      "durationInSec": 1,
      "burstPercentage": 0
    },
    "errorResponse": {
      "errorResponse": "TOO MANY REQUESTS",
      "errorCode": 429
    }
  },
  "enabled": true
}
```

Failure response, If the Ingress rate limiting data is not configured.

```
curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/ratelimit/ingress?fqdn=amf" -H "accept: */*"
{
  "title": "Not Found",
  "status": "404",
  "detail": "Ingress Rate Limiting Configuration data not found against given query parameter.",
  "instance": "/ocscp/scpc-configuration/v1/ratelimit/ingress?fqdn=amf",
}
```

```
"cause": "DATA_NOT_FOUND"
}
```

PUT API

This resource adds Ingress Rate Limiting Configuration using the Request Body.

Resource URI: /ocscp/scpc-configuration/v1/ratelimit/ingress

Note

One of the following fields must be present in the request body:

- Fqdn
- NFType

The following table describes Data structures supported by the PUT Response Body on this resource.

Table 2-167 Data Structures Supported by the PUT Response Body

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
IngressRateLimiterData	M	1	200 OK	Indicates the Ingress Rate Limiting Configuration data.
ProblemDetails	M	1	400 BAD REQUEST	Indicates that both NFType and Fqdn is provided in the request. Returns when an invalid combination or more than two query parameters are provided.

Example:

Successful response

```
curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/ratelimit/ingress" -H "accept: */*" -H "Content-Type: application/json" -d "{\"data\": {\"config\": {\"durationInSec\": 1, \"rate\": 80}, \"errorResponse\": {\"errorCode\": 429, \"errorResponse\": \"INGRESS-RATE-LIMITER: TOO MANY REQUESTS\"}}, \"enabled\": true, \"nfType\": \"UDM\"}"
```

```
{
  "nfType": "UDM",
  "data": {
    "config": {
      "rate": 80,
      "durationInSec": 1,
      "burstPercentage": 0
    },
    "errorResponse": {
      "errorResponse": "INGRESS-RATE-LIMITER: TOO MANY REQUESTS",
      "errorCode": 429
    }
  }
}
```

```

    },
    "enabled": true
}

200 OK

```

Failure response: If both FQDN and NFType are given in the request body.

```

curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/ratelimit/
ingress" -H "accept: */*" -H "Content-Type: application/json" -d "{\"data\":
{\"config\":{\"durationInSec\":1,\"rate\":200},\"errorResponse\":
{\"errorCode\":429,\"errorResponse\":\"TOO MANY
REQUESTS\"}},\"enabled\":true,\"fqdn\":\"udm.oracle.com\", \"nfType\":\"UDM\"}"

```

```

{
  "title": "Bad Request",
  "status": "400",
  "detail": "Both NFType and Fqdn is provided in the request body, Only one
of the 2 fields can be provided.",
  "instance": "/ocscp/scpc-configuration/ratelimit/ingress",
  "cause": "INVALID_KEY_COMBINATION"
}

```

Failure response: if rate divided by durationInSec is less than 10, then the configuration is considered as invalid.

```

curl -X 'PUT' \
'http://<localhost>:8081/ocscp/scpc-configuration/v1/ratelimit/ingress' \
-H 'accept: */*' \
-H 'Content-Type: application/json' \
-d '{
  "data": {
    "config": {
      "burstPercentage": 0,
      "durationInSec": 1,
      "rate": 1
    },
    "errorResponse": {
      "errorResponse": "INGRESS-RATE-LIMITER:TOO MANY REQUESTS",
      "errorCode": 429
    }
  },
  "enabled": true,
  "fqdn": "amf1svc.oracle.com"
},
{
  "title": "Bad Request",
  "status": "400",
  "detail": "rate divided by durationInSec should be more than or equal to
10, Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/ratelimit/ingress",
  "cause": "MANDATORY_IE_INCORRECT"
}

```

DELETE API:

This resource deletes the Ingress Rate Limiting Configuration data based on the query parameters.

Resource URI: /ocscp/scpc-configuration/v1/ratelimit/ingress

The following table describes URI query parameters supported by the DELETE method on this resource.

Table 2-168 URI Query Parameters Supported by the DELETE Method

Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
Fqdn	String	O	1	Indicates the FQDN of consumer NF.
NfInstanceId	String	O	1	NfInstanceId of Consumer NF

Note

Rate limit configuration corresponding to NFType is used as the default configuration and only update operation is supported on it.

The following table describes Data structures supported by the DELETE Response Body on this resource.

Table 2-169 Data Structures Supported by the DELETE Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
None			200 OK	Indicates that the response is successful.
ProblemDetails	M	1	404 NOT FOUND	Indicates that there is no matching entry found. Returns when an invalid combination or more than two query parameters are provided.

Example

Successful response

```
curl -X DELETE
"http://<localhost>:8081/ocscp/scpc-configuration/v1/ingressratelimiter?
fqdn=udm.oracle.com" -H
"accept: */*" 200 OK
```

Failure Response: When no matching entry is found.

```
curl -X DELETE
"http://<localhost>:8081/ocscp/scpc-configuration/v1/ingressratelimiter?
fqdn=amf" -H "accept:
*/*" { "title": "Not Found", "status": "404", "detail": "Ingress Rate
Limiting
Configuration data not found against given fqdn.", "instance":
```



```
"/ocscp/scpc-configuration/v1/ratelimit/ingress?fqdn=amf", "cause":
"DATA_NOT_FOUND"
}
```

2.17 Configuring Egress Rate Limiting and Global Egress Rate Limiting

This section provides the information about Egress Rate Limiting and Global Egress Rate Limiting configurations:

- List of resources required for retrieving, configuring, and deleting the rate limiting data.
- Rate limiter data name and data type.
- Functionalities of GET, PUT, and DELETE REST APIs.

Resources

The following table describes the resources for retrieving, configuring, and deleting the egress rate limiting data.

Table 2-170 Egress Rate Limiting Resource Names

Resource Name	Resource URI	HTTP Method	Query Parameters	Description
egressRateLimiter	/ocscp/scpc-configuration/v1/ratelimit/egress	GET	Combination of NFType/FQDN/serviceName	Retrieves egress rate limiting data configured to the corresponding supplied query parameters.
egressRateLimiter	/ocscp/scpc-configuration/v1/rateimit/egress	PUT	NA	Configures egress rate limiting data using the supplied request body in the JSON format.
egressRateLimiter	/ocscp/scpc-configuration/v1/ratelimit/egress	DELETE	Combination of NFType/FQDN/serviceName	Removes egress rate limiting data corresponding to supplied query parameters.

Data Model

Request Body

The following table describes egress rate limiter data name and data type.

Table 2-171 EgressRateLimiterData

Name	DataType	Mandatory (M) or Optional(O)	Cardinality	Description
nfType	NFType	C	1	Indicates the supported NFType as described in the 3GPP TS 29.510 section 6.1.6.3.3: NRF, UDM, AMF, SMF, AUSF, NEF, PCF, SMSF, NSSF, UDR, LMF, GMLC, F5GEIR, SEPP, UPF, N3IWF, AF, UDSF, BSF, CHF, NWDAF, CUSTOM_ORACLE_SCP, SCP.
serviceName	ServiceName	C	1	Indicates the ServiceName as per the supported NFType.

Table 2-171 (Cont.) EgressRateLimiterData

Name	DataType	Mandatory (M) or Optional(O)	Cardinality	Description
fqdn	String	C	1	Indicates the FQDN of producer NF.
enabled	Boolean	O	1	Indicates whether the rate limiting is enabled for this entry: Default value is false.
data	Data	M	1	Indicates the rate limit configuration data.

Data

The following table describes the types of data.

Table 2-172 Data Name and Type

Name	DataType	Mandatory (M) or Optional(O)	Cardinality	Description
config	Config	M	1	Indicates the rate limit data.
errorResponse	ErrorResponse	C	1	Indicates the error handling related data.

Config**Table 2-173 Config Data Type**

Name	DataType	Mandatory (M) or Optional(O)	Cardinality	Range	Description
durationInSec	integer	M	1	1-1	Indicates the time unit in seconds to calculate the rate. The default value is 1 second.
rate	integer	M	1	1- 75000	Indicates the messages / time unit to be accepted when aggregatedRate is set to 0 or the Global Egress Rate Limit feature is disabled.

Table 2-173 (Cont.) Config Data Type

Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Range	Description
aggregateRate	integer	O	1	0- 75000	Indicates the messages / time unit to be accepted when the Global Egress Rate Limit feature is enabled. If it is set to 0, this field is ignored and this configuration is not considered for Global Egress Rate Limit. It is considered for local rate limit. Note: It is recommended to configure the aggregated rate with a minimum value of 20, as lower values may cause inaccurate rate limiting behavior. You must configure the aggregated rate in multiples of 20. For example, configure aggregated rate values of 20, 40, or 60. Configure a minimum aggregated rate value of 20, and use multiples of 20. Avoid configuring values such as 5, 10, 25, 35, or 50.
burstPercentage	integer	O	1	0 - 100	Indicates the Burst percentage used to calculate the number of burst messages allowed per 100ms. Note: Burst Control is not supported. Therefore, any value set for this parameter does not take effect.
action	String	O	1	"sendResponse" / "AlternateRoute" Default value is "sendResponse"	Defines the action if the rate limit quota is exhausted. "sendResponse": sends configured error response back immediately "AlternateRoute": attempts to reselect the equivalent NF and send the messages to that reselected NF

Table 2-174 ErrorResponse

Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Range	Description
errorResponse	String	O	1	0-200	Indicates the Custom Error String used in cause field of the ProblemDetails structure as defined in the 3GPP TS 29.571 section 5.2.4.1. Default value shall be a constant string "EGRESS-RATE-LIMITER:TOO MANY REQUESTS" auto configured by SCP.
errorCode	Int	M	1	3xx,4xx,5xx	Indicates the Http Status code.

JSON Format

```
{
  "data": {
    "config": {
      "action": "string",
      "aggregatedRate": 0,
      "burstPercentage": 0,
      "durationInSec": 1,
      "rate": 0
    },
    "errorResponse": {
      "errorCode": 0,
      "errorResponse": "string"
    }
  },
  "enabled": true,
  "fqdn": "string",
  "nfType": "string",
  "serviceName": "string"
}
```

Response Body

The response body data model varies based on the REST operation status.

Table 2-175 Response Body Data Type

Data Type	Description
EgressRateLimiterData	Same as the request body as described in Table 2-171 .
ProblemDetails	Indicates the ProblemDetails structure as defined in the 3GPP TS 29.571 section 5.2.4.1.
None	Indicates an empty body.

Resource Definition**GET REST API**

This resource fetches the egress rate limiting configuration based on the query parameters. If no query parameter is provided, all the egress rate limiting configuration data is returned.

Resource URI: /ocscp/scpc-configuration/v1/ratelimit/egress

The following table describes URI query parameters supported by the GET method on this resource.

Table 2-176 URI Query Parameters

Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
NFType	NFType	O	1	Indicates the supported NFType as described in the 3GPP TS 29.510 section 6.1.6.3.3: UDM, AMF, SMF, AUSF, NEF, PCF, SMSF, NSSF, UDR, LMF, GMLC, F5GEIRSEPP, UPF, N3IWF, AF, UDSF, BSF, CHF, NWDAF, CUSTOM_ORACLE_SCP, SCP.
serviceName	ServiceName	O	1	Indicates the ServiceName as per the supported NFType.
Fqdn	String	O	1	Indicates the FQDN of producer NF.

Note

The valid combination of query parameters are as follows:

- Fqdn + serviceName
- Fqdn + NFType
- Fqdn
- serviceName
- NFType

The following table describes data structures supported by the GET Response Body on this resource.

Table 2-177 Data Structures Supported by the GET Response Body on this resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
array (EgressRateLimiterData)	M	1	200 OK	Indicates the list of egress rate limiting configuration data.
EgressRateLimiterData	M	1	200 OK	Indicates the egress rate limiting configuration data.
ProblemDetails	M	1	400 BAD REQUEST	Indicates that the requested combination of query parameters is not allowed.
ProblemDetails	M	1	404 NOT FOUND	Indicates that there is no matching entry found.

Example:

Successful response - 1, Combination of Fqdn, serviceName

```
$ curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/ratelimit/egress?serviceName=nudm-uecm&fqdn=udm1svc.scpsvc.svc.cluster.local" -H "accept: */*"
```

```
{
  "fqdn": "udm1svc.scpsvc.svc.cluster.local",
  "serviceName": "nudm-uecm",
  "data": {
    "config": {
      "rate": 1000,
      "durationInSec": 1,
      "action": "AlternateRoute",
      "burstPercentage": 0,
      "aggregatedRate": 5000
    },
    "errorResponse": {
      "errorResponse": "TOO MANY REQUEST",
      "errorCode": 429
    }
  },
  "enabled": true
}
```

Successful response - 2, Only serviceName

```
$ curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/ratelimit/egress?serviceName=nudm-uecm" -H "accept: */*"
```

```
{
  "serviceName": "nudm-uecm",
  "data": {
    "config": {
      "rate": 1000,
      "durationInSec": 1,
      "action": "AlternateRoute",
      "burstPercentage": 0,
      "aggregatedRate": 5000
    },
    "errorResponse": {
      "errorResponse": "TOO MANY REQUEST",
      "errorCode": 429
    }
  },
  "enabled": true
}
```

Failure case, Incorrect combination of parameters such as NFType and serviceName

```
$ curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/ratelimit/egress?nfType=UDM&serviceName=nudm-uecm" -H "accept: */*"
Response Body :
```

```
{
  "title": "Bad Request",
  "status": "400",
  "detail": "Requested combination of Query Parameters is not allowed, please
refer to the User Guide",
  "instance": "/ocscp/scpc-configuration/v1/ratelimit/egress?
nfType=UDM&serviceName=nudm-uecm",
  "cause": "INVALID_QUERY_PARAM"
}
```

PUT REST API

This resource adds and updates egress rate limiting configuration using the Request Body.

Resource URI: /ocscp/scpc-configuration/v1/ratelimit/egress

The following table describes data structures supported by the PUT Response Body on this resource.

Table 2-178 Data Structures Supported by the PUT Response Body

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
EgressRateLimiterData	M	1	200 OK	Indicates the egress rate limiting configuration data.
ProblemDetails	M	1	400 BAD REQUEST	Indicates that both NFType and Fqdn is provided in the request. The ProblemDetails structure is defined in the 3GPP TS 29.571 Section 5.2.4.1.

Note

The valid combination of fields in the request body is as follows:

- Fqdn, serviceName
- Fqdn, NFType
- Fqdn
- serviceName
- NFType

Example:

Successful response - 1, Combination of Fqdn and ServiceName.

Configuring with a global rate of 5000 with aggregatedRate field.

```
$ curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/ratelimit/
egress" -H "accept: */*" -H "Content-Type: application/json" -d "{\"data\":
{\"config\":
{\"action\": \"AlternateRoute\", \"durationInSec\": 1, \"rate\": 100}, \"errorRespon
se\": {\"errorCode\": 429, \"errorResponse\": \"EGRESS_RATE_LIMITER: T00 MANY
```

```

REQUEST\"}},\"enable\":true,\"fqdn\":\"udm1.vzw.com\",\"serviceName\":\"nudm-uecm\"}"

{
  "fqdn": "udm1.vzw.com",
  "serviceName": "nudm-uecm",
  "enabled": true,
  "data": {
    "config": {
      "rate": 100,
      "durationInSec": 1,
      "burstPercentage" : 0,
      "action": "AlternateRoute"
    },
    "globalConfig": {
      "rate": 120,
      "durationInSec": 1,
      "burstPercentage" : 0,
      "action": "AlternateRoute"
    },
    "errorResponse": {
      "errorResponse": "EGRESS_RATE_LIMITER:TOO MANY REQUEST",
      "errorCode": 429
    }
  }
}

200 OK

```

Successful response - 2, Combination of Fqdn and ServiceName.

```

curl -X 'PUT' \
'http://<SCP configuration FQDN>:30446/ocscp/scpc-configuration/v1/ratelimit/egress' \
-H 'accept: */*' \
-H 'Content-Type: application/json' \
-d '{
  "fqdn": "nef1.vzw.com",
  "serviceName": "nnef-eventexposure",
  "enabled": true,
  "data": {
    "config": {
      "rate": 100,
      "durationInSec": 1,
      "burstPercentage" : 0,
      "action": "AlternateRoute"
    },
    "globalConfig": {
      "rate": 120,
      "durationInSec": 1,
      "burstPercentage" : 0,
      "action": "AlternateRoute"
    },
    "errorResponse": {
      "errorResponse": "EGRESS_RATE_LIMITER:TOO MANY REQUEST",

```



```

        "errorCode": 429
    }
}
}'

```

Failure case 1: Incorrect combination of fields such as NFType and serviceName in request body

```

$ curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/ratelimit/egress" -H "accept: */*" -H "Content-Type: application/json" -d '{"data":{"config":{"action":"AlternateRoute","durationInSec":1,"rate":300},"errorResponse":{"errorCode":0,"errorResponse":"","enable":true,"nfType":"UDM","serviceName":"nudm-uecm"}}}'

```

Response Body:

```

{
  "title": "Bad Request",
  "status": "400",
  "detail": "Incorrect combination of Keys in request Body, please refer to the User Guide",
  "instance": "/ocscp/scpc-configuration/v1/ratelimit/egress",
  "cause": "INVALID_KEY_COMBINATION"
}

```

Failure response: if rate divided by durationInSec is less than 10, then the configuration is considered as invalid.

```

curl -X 'PUT' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/ratelimit/egress' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{
    "data": {
      "config": {
        "action": "sendResponse",
        "burstPercentage": 0,
        "durationInSec": 1,
        "rate": 1,
        "aggregatedRate": 0
      },
      "errorResponse": {
        "errorResponse": "EGRESS-RATE-LIMITER:T00 MANY REQUESTS",
        "errorCode": 429
      }
    },
    "enabled": true,
    "fqdn": "udm1svc.scpsvc.svc.cluster.local"
  }'
{
  "title": "Bad Request",
  "status": "400",
  "detail": "rate divided by durationInSec should be more than or equal to 10, Please refer to the User Guide.",
}

```

```

    "instance": "/ocscp/scpc-configuration/v1/ratelimit/egress",
    "cause": "MANDATORY_IE_INCORRECT"
  }

```

DELETE REST API

This resource deletes the egress rate limiting configuration data based on the query parameters.

Resource URI: /ocscp/scpc-configuration/v1/ratelimit/egress

The following table describes URI query parameters supported by the DELETE method on this resource.

Table 2-179 URI Query Parameters Supported by the DELETE Method

Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
NFType	NFType	O	1	Indicates supported NFType as described in the 3GPP TS 29.510 section 6.1.6.3.3: UDM, AMF, SMF, AUSF, NEF, PCF, SMSF, NSSF, UDR, LMF, GMLC, F5GEIR, SEPP, UPF, N3IWF, AF, UDSF, BSF, CHF, NWDAF, CUSTOM_ORACLE_SCP, SCP.
serviceName	ServiceName	O	1	Indicates the ServiceName as per supported NFType.
Fqdn	String	O	1	Indicates the FQDN of producer NF.

① Note

The valid combination of query parameters are provided as follows:

- Fqdn, serviceName
- Fqdn, NFType
- Fqdn
- serviceName

The following table describes data structures supported by the DELETE Response Body on this resource.

Table 2-180 Data Structures Supported by the DELETE Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
None			200 OK	Indicates that the response is successful.
ProblemDetails	M	1	400 BAD REQUEST	Indicates that the requested combination of query parameters is not allowed.
ProblemDetails	M	1	404 NOT FOUND	Indicates that there is no matching entry found.

Example

Successful response - 1, Combination of Fqdn and serviceName

```
$ curl -X DELETE "http://<localhost>:8081/ocscp/scpc-configuration/v1/ratelimit/egress?fqdn=udm1.vzw.com&serviceName=nudm-uecm"-H "accept: */*" 200OK
```

Successful response - 2, Only Fqdn Delete

```
$ curl -X DELETE "http://<localhost>:8081/ocscp/scpc-configuration/v1/egressratelimiter?fqdn=udm1.vzw.com"-H "accept: */*" 200OK
```

Failure case 1, Incorrect query parameter like NFType

```
$ curl -X DELETE "http://<localhost>:8081/ocscp/scpc-configuration/v1/ratelimit/egress?nfType=UDM"-H "accept: */*"
Response Body:{ "title": "Bad Request", "status": "400",
"detail": "Requested Delete combination of Query Parameters is not allowed, please refer to the User Guide", "instance": "/ocscp/scpcconfiguration/v1/ratelimit/egress?nfType=UDM", "cause": "INVALID_QUERY_PARAM"}
```

Failure case 2, When no matching entry is found

```
$ curl -X DELETE "http://<localhost>:8081/ocscp/scpcconfiguration/v1/ratelimit/egress?serviceName=nudm-sdm"-H "accept: */*"
Response Body:{ "title": "Not Found", "status": "404",
"detail": "Egress Rate Limiting configuration data not found against given query parameter(s), Please refer to the User Guide",
"instance": "/ocscp/scpc-configuration/v1/ratelimit/egress?serviceName=nudm-sdm", "cause": "DATA_NOT_FOUND"}
```

2.18 Configuring Dynamic Logging

Service Communication Proxy (SCP) provisions an option to change log levels of SCP microservices dynamically through SCP configuration service.

Retrieving all Service Level Logs

Table 2-181 Retrieving all Service Level Logs

Resource URI	HTTP Method	Content Type	Response Codes
Configuration attributes for all service level logs			
<i>http://<ip>:<port>/ocscp/scpc-configuration/v1/all/logging</i>	GET	application/json	200: Successfully returns Log Levels of all SCP microservices 404: No SCP Log levels found in system

Table 2-181 (Cont.) Retrieving all Service Level Logs

Resource URI	HTTP Method	Content Type	Response Codes
Configuration attributes at service level logs			
<code>http://<ip>:<port>/ocscp/scpc-configuration/v1/<microservice-name>/logging</code>	GET	application/json	200: Successfully returns Log Levels of all SCP microservices 404: No SCP Log levels record found for microservice
<code>http://<ip>:<port>/ocscp/scpc-configuration/v1/<microservice-name>/logging</code>	PUT	application/json	200: Successfully returns Log Levels of all SCP microservices 400: Request Body is empty for service 404: No SCP Log levels record found for microservice

Note

The following microservices are supported: scpc-worker, scpc-notification, scpc-configuration, scpc-audit, scpc-subscription, and scpc-loadmanager.

Response Body of GET ALL Method for all Service Level Logs:

```
[
  {
    "scpc-audit": {
      "appLogLevel": "WARN",
      "packageLogLevel": [
        {
          "packageName": "library",
          "logLevelForPackage": "OFF"
        }
      ],
      "logRateControl": {
        "rate": 100,
        "logLevel": "OFF"
      }
    },
    "scpc-notification": {
      "appLogLevel": "WARN",
      "packageLogLevel": [
        {
          "packageName": "library",
          "logLevelForPackage": "OFF"
        }
      ],
      "logRateControl": {
        "rate": 100,
        "logLevel": "OFF"
      }
    },
    "scpc-subscription": {
      "appLogLevel": "WARN",
```

```

    "packageLogLevel": [
      {
        "packageName": "library",
        "logLevelForPackage": "OFF"
      }
    ],
    "logRateControl": {
      "rate": 100,
      "logLevel": "OFF"
    }
  },
  "scpc-configuration": {
    "appLogLevel": "INFO",
    "packageLogLevel": [
      {
        "packageName": "library",
        "logLevelForPackage": "OFF"
      }
    ],
    "logRateControl": {
      "rate": 100,
      "logLevel": "OFF"
    }
  },
  "scp-worker": {
    "appLogLevel": "WARN",
    "packageLogLevel": [
      {
        "packageName": "library",
        "logLevelForPackage": "OFF"
      }
    ],
    "logRateControl": {
      "rate": 100,
      "logLevel": "ERROR"
    }
  },
  "scp-cache": {
    "appLogLevel": "WARN",
    "packageLogLevel": [
      {
        "packageName": "library",
        "logLevelForPackage": "OFF"
      }
    ],
    "logRateControl": {
      "rate": 100,
      "logLevel": "OFF"
    }
  },
  "scp-load-manager": {
    "appLogLevel": "WARN",
    "packageLogLevel": [
      {
        "packageName": "library",

```

```

        "logLevelForPackage": "OFF"
      }
    ],
    "logRateControl": {
      "rate": 100,
      "logLevel": "OFF"
    }
  },
  "scp-nrfproxy": {
    "appLogLevel": "WARN",
    "packageLogLevel": [
      {
        "packageName": "library",
        "logLevelForPackage": "OFF"
      }
    ],
    "logRateControl": {
      "rate": 100,
      "logLevel": "WARN"
    }
  },
  "scp-nrfproxy-oauth": {
    "appLogLevel": "WARN",
    "packageLogLevel": [
      {
        "packageName": "library",
        "logLevelForPackage": "OFF"
      }
    ],
    "logRateControl": {
      "rate": 100,
      "logLevel": "WARN"
    }
  }
}
]

```

Response Body of GET Method at Service Level Logs:

```

{
  "appLogLevel": "INFO",
  "packageLogLevel": [
    {
      "logLevelForPackage": "library",
      "packageName": "OFF"
    }
  ],
  "logRateControl": {
    "rate": 100,
    "logLevel": "OFF"
  }
}

```

Response Body of PUT Method at Service Level Logs:

```

{
  "appLogLevel": "INFO",
  "packageLogLevel": [
    {
      "logLevelForPackage": "library",
      "packageName": "OFF"
    }
  ],
  "logRateControl": {
    "rate": 100,
    "logLevel": "OFF"
  }
}

```

Table 2-182 LoggingLevels

Attribute Name	Data Type	Range	Default Values	Description
appLogLevel	string	ERROR, WARN, INFO, DEBUG, TRACE, RX_TX_MSG_INFO, RX_TX_MSG_HEADER_INFO, KEY_INFO	WARN	Specifies the log level of the application. Note: - The TRACE log level is supported by SCPC-Notification, SCPC-Audit, SCP-Load-Manager, SCP-Cache, SCP-Worker, SCP-nrfProxy, and SCP-nrfProxy-oauth. - The RX_TX_MSG_INFO and RX_TX_MSG_HEADER_INFO log levels are supported only by SCP-Worker. - The KEY_INFO log level is supported only for SCP-Cache.
packageLogLevel	array (PackageLogLevel)	-	See Table 2-183 .	Specifies a list of individual packages and their respective log levels
logRateControl	See Table 2-184	See Table 2-184	See Table 2-184	Specifies the log levels of the application to support rate control.

Table 2-183 PackageLogLevel

Attribute Name	Data Type	Range	Default Values	Description
packageName	string	root	root	Specifies the name of the package.

Table 2-183 (Cont.) PackageLogLevel

Attribute Name	Data Type	Range	Default Values	Description
logLevelForPackage	string	INFO,DEBUG,WARN,ERROR,FATAL,OFF,TRACE	WARN	Specifies the log level for the given package.

Table 2-184 LogRateControl

Attribute Name	Data Type	Range	Default Values	Description
rate	Integer	1-1000	100	Specifies the average number of logs per second that should be allowed. Note: The default log rate change to 100 is applied only during installation, not when upgrading.
logLevel	string	ERROR,WARN,INFO,DEBUG,OFF	OFF	Specifies the log level to control log rate.

Table 2-185 KeyLogFilter

Attribute Name	Data Type	Range	Default Values	Description
key	List[String]	-	-	The key for which KEY_INFO level logs is collected. This filter is optional and applicable only for the SCP-Cache microservice. The key field is egress_ followed by the egress key configured in /ratelimit/egress API. Example: egress_udm2svc.scp-user-ns.svc.freeway3.lab.in.oracle.com

Sample JSON body for PUT request API:

```
{
  "appLogLevel": "INFO",
  "packageLogLevel": [
    {
      "logLevelForPackage": "library",
      "packageName": "OFF"
    }
  ],
  "logRateControl": {
```



```

        "rate": 100,
        "logLevel": "OFF"
    }
}

```

Sample JSON body for GET API response:

```

{
  "appLogLevel": "INFO",
  "packageLogLevel": [
    {
      "logLevelForPackage": "library",
      "packageName": "OFF"
    }
  ],
  "logRateControl": {
    "rate": 100,
    "logLevel": "OFF"
  }
}

```

Sample JSON body for GET ALL API response:

```

[
  {
    "scpc-audit": {
      "appLogLevel": "WARN",
      "packageLogLevel": [
        {
          "packageName": "library",
          "logLevelForPackage": "OFF"
        }
      ],
      "logRateControl": {
        "rate": 100,
        "logLevel": "OFF"
      }
    },
    "scpc-notification": {
      "appLogLevel": "WARN",
      "packageLogLevel": [
        {
          "packageName": "library",
          "logLevelForPackage": "OFF"
        }
      ],
      "logRateControl": {
        "rate": 100,
        "logLevel": "OFF"
      }
    },
    "scpc-subscription": {
      "appLogLevel": "WARN",
      "packageLogLevel": [
        {

```

```

        "packageName": "library",
        "logLevelForPackage": "OFF"
    }
  ],
  "logRateControl": {
    "rate": 100,
    "logLevel": "OFF"
  }
},
"scpc-configuration": {
  "appLogLevel": "INFO",
  "packageLogLevel": [
    {
      "packageName": "library",
      "logLevelForPackage": "OFF"
    }
  ],
  "logRateControl": {
    "rate": 100,
    "logLevel": "OFF"
  }
},
"scp-worker": {
  "appLogLevel": "WARN",
  "packageLogLevel": [
    {
      "packageName": "library",
      "logLevelForPackage": "OFF"
    }
  ],
  "logRateControl": {
    "rate": 100,
    "logLevel": "ERROR"
  }
},
"scp-cache": {
  "appLogLevel": "WARN",
  "packageLogLevel": [
    {
      "packageName": "library",
      "logLevelForPackage": "OFF"
    }
  ],
  "logRateControl": {
    "rate": 100,
    "logLevel": "OFF"
  }
},
"scp-load-manager": {
  "appLogLevel": "WARN",
  "packageLogLevel": [
    {
      "packageName": "library",
      "logLevelForPackage": "OFF"
    }
  ]
}

```

```

    ],
    "logRateControl": {
      "rate": 100,
      "logLevel": "OFF"
    }
  },
  "scp-nrfproxy": {
    "appLogLevel": "WARN",
    "packageLogLevel": [
      {
        "packageName": "library",
        "logLevelForPackage": "OFF"
      }
    ]
  },
  "logRateControl": {
    "rate": 100,
    "logLevel": "WARN"
  }
},
"scp-nrfproxy-oauth": {
  "appLogLevel": "WARN",
  "packageLogLevel": [
    {
      "packageName": "library",
      "logLevelForPackage": "OFF"
    }
  ]
},
"logRateControl": {
  "rate": 100,
  "logLevel": "WARN"
}
}
}
]

```

Sample JSON body for PUT request API with KEY_INFO level and keyLogFilter:

```

{
  "appLogLevel": "KEY_INFO",
  "packageLogLevel": [
    {
      "packageName": "library",
      "logLevelForPackage": "OFF"
    }
  ],
  "logRateControl": {
    "rate": 100,
    "logLevel": "OFF"
  },
  "keyLogFilter": [
    {
      "key": "egress_udm2svc.scp-user-ns.svc.freeway3.lab.in.oracle.com"
    }
  ]
}

```

The following table describes log rate impact based on the log levels:

Table 2-186 Log Rate Impact Based on Log Levels

AppLogLevel	Rate Control LogLevel	Log Levels Controlled by Defined Rate per Second	Log Levels Not Impacted	Results
ERROR	OFF	NONE	FATAL/ERROR	All ERROR messages are delivered.
WARN	OFF	NONE	FATAL/ERROR/WARN	All ERROR/WARN messages are delivered.
INFO	OFF	NONE	FATAL/ERROR/WARN/INFO	All ERROR/WARN/INFO messages are delivered.
DEBUG	OFF	NONE	FATAL/ERROR/WARN/INFO/DEBUG	All ERROR/WARN/INFO/DEBUG messages are delivered.
ERROR	ERROR	ERROR	FATAL	All ERROR logs are controlled based on the configured rate per second, and any FATAL messages are delivered with no limitation.
WARN	ERROR	ERROR/WARN	FATAL	ERROR/WARN messages are controlled by the filter, and any FATAL messages are delivered with no limitation.
INFO	ERROR	ERROR/WARN/INFO	FATAL	Logs are controlled together (INFO+WARN+ERROR) at the configured rate per second, and any FATAL messages are delivered with no limitation.
DEBUG	ERROR	ERROR/WARN/INFO/DEBUG	FATAL	ERROR/WARN/INFO/DEBUG messages are controlled by the filter, and any FATAL messages are delivered with no limitation.
ERROR	WARN	NONE	FATAL/ERROR	All ERROR messages are delivered.
WARN	WARN	WARN	FATAL/ERROR	WARN messages are controlled by the filter, and any ERROR/FATAL messages are delivered with no limitation.
INFO	WARN	WARN/INFO	FATAL/ERROR	WARN/INFO messages are controlled by the filter, and any ERROR/FATAL messages are delivered with no limitation.
DEBUG	WARN	WARN/INFO/DEBUG	FATAL/ERROR	WARN/INFO/DEBUG messages are controlled by the filter, and any ERROR/FATAL messages are delivered with no limitation.
ERROR	INFO	NONE	FATAL/ERROR	All ERROR messages are delivered.
WARN	INFO	NONE	FATAL/ERROR/WARN	All ERROR/WARN messages are delivered.

Table 2-186 (Cont.) Log Rate Impact Based on Log Levels

AppLogLevel	Rate Control LogLevel	Log Levels Controlled by Defined Rate per Second	Log Levels Not Impacted	Results
INFO	INFO	INFO	FATAL/ERROR/WARN	INFO logs are controlled as per the configured rate per second. INFO logs (WARN/ERROR/FATAL) would continue to be delivered.
DEBUG	INFO	INFO/DEBUG	FATAL/ERROR/WARN	INFO/DEBUG logs are controlled as per the configured rate per second. WARN/ERROR/FATAL logs would continue to be delivered.
ERROR	DEBUG	NONE	FATAL/ERROR	All ERROR messages are delivered.
WARN	DEBUG	NONE	FATAL/ERROR/WARN	All ERROR/WARN messages are delivered.
INFO	DEBUG	NONE	FATAL/ERROR/WARN/INFO	All ERROR/WARN/INFO messages are delivered.
DEBUG	DEBUG	DEBUG	FATAL/ERROR/WARN/INFO	DEBUG logs are controlled as per the configured rate per second. INFO/WARN/ERROR/FATAL logs would continue to be delivered.
ERROR/WARN/INFO/DEBUG	TRACE	TRACE	FATAL/ERROR/WARN/INFO	If any or all TRACE logs are controlled as per the configured rate per second, DEBUG/INFO/WARN/ERROR/FATAL logs would continue to be delivered.

Sample JSON Format with Default Value

```

curl -X 'PUT' \
  'http://localhost:8081/ocscp/scpc-configuration/v1/scp-worker/logging' \

-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "appLogLevel": "WARN",
  "packageLogLevel": [
    {
      "packageName": "library",
      "logLevelForPackage": "OFF"
    }
  ],
  "logRateControl": {
    "rate": 100,
    "logLevel": "OFF"
  }
}'

```

Sample JSON Format with logLevel Enabled

```
curl -X 'PUT' \
'http://localhost:8081/ocscp/scpc-configuration/v1/scp-worker/logging' \

-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "appLogLevel": "WARN",
  "packageLogLevel": [
    {
      "packageName": "<some-library-name>",
      "logLevelForPackage": "ERROR"
    }
  ],
  "logRateControl": {
    "rate": 100,
    "logLevel": "ERROR"
  }
}'
```

Log levels during deployment

The default log levels of SCP Services can be set during deployment time as below:

```
# ***** LOG LEVELS OF ALL SERVICES ***** #
serviceLogLevels:
  scpcAudit: &auditLogLevelRef INFO
  scpcConfiguration: &configLogLevelRef INFO
  scpcSubscription: &subsLogLevelRef INFO
  scpcNotification: &notifLogLevelRef INFO
  scpcAlternateResolution: &alternateResolutionLogLevelRef INFO
  scpcLoadManager: &loadManagerLogLevelRef WARN
  scpNrfProxyOAuth: &nrfProxyOAuthLogLevelRef WARN
  scpNrfProxy: &nrfproxyLogLevelRef WARN
  scpCache: &cacheLogLevelRef WARN
  scpWorker: &workerLogLevelRef WARN
  scpMediation: &mediationLogLevelRef WARN
  scpMediationTest: &mediationTestLogLevelRef WARN
# ***** END ***** #
```

Note

The variables start with **&** are reference variables that must not be modified.

Changing log levels from internal config pod

The log levels can be changed from inside config pod.

Step: curl -X GET "http://localhost:8081/ocscp/scpc-configuration/v1/all/logging" -H "accept: application/json" or to get log level of particular service. curl -X GET "http://localhost:8081/ocscp/scpc-configuration/v1/<microservice-name>/logging" -H "accept: application/json" Step3: To change log level of a service. Updating all services(PUT ALL) at once not supported. curl -X

```
PUT "http://localhost:8081/ocscp/scpc-configuration/v1/<microservice-name>/logging" -H
"accept: application/json" -H "Content-Type: application/json" -d
"{\"appLogLevel\": \"warn\", \"packageLogLevel\":
[{\\"packageName\": \"library\", \"logLevelForPackage\": \"OFF\"}]}"
```

1. Execute the following command into config pod:

```
kubectl exec -it <config_pod_name> -n <namespace> bash
```

2. Check log levels of all services as follows:

```
curl -X GET "http://localhost:8081/ocscp/scpc-configuration/v1/all/
logging" -H "accept: application/json"
```

3. Get log level of particular service as follows:

```
curl -X GET "http://localhost:8081/ocscp/scpc-configuration/v1/
<microservice-name>/logging" -H "accept: application/json"
```

4. To change log level of a service. Updating log level for all the services at once (PUT ALL) is not supported:

```
curl -X PUT "http://localhost:8081/ocscp/scpc-configuration/v1/
<microservice-name>/logging" -H "accept: application/json" -H "Content-
Type: application/json" -d "{\"appLogLevel\": \"warn\", \"packageLogLevel\":
[{\\"packageName\": \"library\", \"logLevelForPackage\": \"OFF\"}]}"
```

For performing logging configurations using the CNC Console, see *Oracle Communications Cloud Native Core, Service Communication Proxy User Guide*.

2.18.1 Third Party Packages

Users should never enable DEBUG logs under high traffic conditions. DEBUG logs should only be enabled when the traffic rate is very low.

The following table lists the package names and the corresponding logs that each enables:

Table 2-187 Log Packages and Their Corresponding Log Levels

Package Name	Log Enabled	Recommended	Notes
org	Enables logs for all packages that start with org.	No	Since it generates a lot of logs and may impact the performance of the service.
io	Enables logs for all packages that start with io.	No	Since it generates a lot of logs and may impact the performance of the service.
org.springframework	Enables logs related to the Spring Framework only.	Yes	NA
org.springframework.<subpackage>	Enables logging for specific subpackages of the Spring Framework.	Yes	NA
reactor.netty	Enables logging for Reactor Netty.	Yes	NA

Table 2-187 (Cont.) Log Packages and Their Corresponding Log Levels

Package Name	Log Enabled	Recommended	Notes
reactor.netty.<subpackage>	Enables logging for specific subpackages of Reactor Netty.	Yes	NA
org.eclipse.jetty	Enables logging for Jetty-related components only.		NA
org.eclipse.jetty.<subpackage>	Enables logging for specific Jetty subpackages, such as: - org.eclipse.jetty.client - org.eclipse.jetty.http - org.eclipse.jetty.http2 - org.eclipse.jetty.io	Yes	NA
com.oracle.cgbu.jetty	Enables logging for Oracle Custom Jetty Client.	Yes	NA
com.oracle.cgbu.jetty.<subpackage>	Enables logging for specific subpackages of the Oracle Custom Jetty Client.	Yes	NA
com.zaxxer	Enables logging for HikariCP.	Yes	This component is used to manage DB connections

2.19 Fetching Release 16 Routing Rules

This section provides details about fetching routing information that is supported in Release 16 deployment. The following information is fetched for routing:

- List of resources required for retrieving routing information
- URI Query parameters supported by the GET method
- Data structures supported by the GET response body

For information about Release 16, see 3GPP TS 23.501 version 16.6.0 Release 16.

Resources

The following table describes the resource name to retrieve a collection of routing information.

Table 2-188 Resource Name

Resource Name	Resource URI	HTTP Method	Description
routing-rules-r16	/ocscp/scpc-configuration/v1/routing-rules-r16	GET	Retrieves a collection or list of routing information (NfInstanceServices) configured in SCP. Use this API when Model C support is enabled in SCP. For information about enabling this feature, see <i>Oracle Communications Cloud Native Core, Service Communication Proxy Installation, Upgrade, and Fault Recovery Guide</i> .

Resource Definition

This resource fetches the routing information (NfInstanceServices) based on the query parameters.

If no query parameter is provided, all the routing information is returned.

Resource URI: /ocscp/scpc-configuration/v1/routing-rules-r16

Table 2-189 URI Query Parameters Supported by the GET Method

Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
nfSetId	String	O	1	Indicates the nfSetId of the NF.
nfFqdn	FQDN	O	1	Indicates the FQDN of NF service.
nfType	NFType	O	1	Indicates the NF type of the NF for which routing information is fetched.
nfInstanceId	NfInstanceId	O	1	Identifies the NF instance for which routing information is fetched.
nfServiceType	NFService	O	1	Indicates NFService, for example, nudm-uecm, for which routing information is fetched.
nfIp	Ipv4Addr	O	1	Indicates the IPv4 address for which routing information is fetched.
nfServiceInstanceId	String	C	1	Indicates the NF Service Instance ID for which routing information is fetched. Use it with nfInstanceId.

Note

- Supports only 0 to 3 query parameters.
- The valid combinations of 1 query parameter are as follows:
 - nfSetId
 - nflp
 - nfFqdn
 - nfType
 - nfInstanceId
 - nfServiceType
- The valid combinations of 2 query parameters are as follows:
 - nfSetId + nfFqdn
 - nfSetId + nflp
 - nfSetId + nfInstanceId
 - nfSetId + nfType
 - nfSetId + nfServiceType
 - nfFqdn + nfServiceType
 - Nflp+ nfServiceType
 - nfInstanceId + nfServiceInstanceId
- The valid combinations of 3 query parameters are as follows:
 - nfSetId + nfFqdn + nfServiceType
 - nfSetId + nflp + nfServiceType
 - nfSetId + nfInstanceId + nfServiceInstanceId
- If there are more than 3 query parameters, these combinations are considered as invalid.

The following tables describe query parameters for Local and InterSCP.

Table 2-190 One Query Parameter for Local and InterSCP

Parameter	Local	InterSCP (Foreign)	Description
nfInstanceId	Allowed	Allowed	Identifies the NF instance for which routing information is fetched.
nfSetId	Allowed	NA	Indicates the nfSetId of the NF.
nfType	Allowed	NA	Indicates the NF type of the NF for which routing information is fetched.
nfServiceType	Allowed	NA	Indicates NFService, for example, nudmuecm, for which routing information is fetched.
locality	NA	Allowed	Identifies the InterSCP unknown instance for which routing information is fetched.
nfFqdn	Allowed	Allowed	Indicates the FQDN of NF service.

Table 2-190 (Cont.) One Query Parameter for Local and InterSCP

Parameter	Local	InterSCP (Foreign)	Description
nfIp	Allowed	Allowed	Indicates the IPv4 address for which routing information is fetched.

Two Query Parameter for Local and InterSCP**Table 2-191 Two Query Parameter for Local and InterSCP**

Parameter	Local	InterSCP (Foreign)	Description
nfSetId + nfFqdn	Allowed	NA	nfSetId of the NF and FQDN of NF service.
nfSetId + nfIp	Allowed	NA	nfSetId of the NF and IPv4 address for which routing information is fetched.
nfSetId + nfInstanceId	Allowed	NA	nfSetId of the NF and identity of the NF instance for which routing information is fetched.
nfSetId + nfType	Allowed	NA	nfSetId of the NF and the NF type for which routing information is fetched.
nfSetId + nfServiceType	Allowed	NA	nfSetId of the NF and NFService, for example, nudm-uecm, for which routing information is fetched.
nfFqdn + nfServiceType	Allowed	NA	FQDN of the NF service and the NF service type, for example, nudm-uecm, for which routing information is fetched.
nfIp+ nfServiceType	Allowed	NA	IPv4 address of the NF and the NF service type, for example, nudm-uecm, for which routing information is fetched.
nfInstanceId + nfServiceInstanceId	Allowed	NA	Identity of the NF instance and the NF Service Instance ID for which routing information is fetched. Note: To be used with nfInstanceId.
nfFqdn + locality	NA	Allowed	FQDN of NF service and identity of the InterSCP of unknown records for which routing information is fetched.
nfIp+ locality	NA	Allowed	IPv4 address of the NF and identity of the InterSCP of unknown records for which routing information is fetched.
nfInstanceId + locality	NA	Allowed	Identity of the NF instance and identity of the InterSCP of unknown records for which routing information is fetched.

Three Query Parameter for Local and InterSCP**Table 2-192 Three Query Parameter for Local and InterSCP**

Parameter	Local	InterSCP (Foreign)	Description
nfSetId + nfFqdn + nfServiceType	Allowed	NA	Fetches SCP routing rules information for Release 16 using nfSetId, nfFqdn, and nfServiceType.
nfSetId + nfIp + nfServiceType	Allowed	NA	Fetches SCP routing rules information for Release 16 using nfSetId, nfIp, and nfServiceType.

Table 2-192 (Cont.) Three Query Parameter for Local and InterSCP

Parameter	Local	InterSCP (Foreign)	Description
nfSetId + nfInstanceId + nfServiceInstanceId	Allowed	NA	Fetches SCP routing rules information for Release 16 using nfSetId, nfInstanceId, and nfServiceInstanceId.

Data Structures Supported by the GET Response Body on this Resource

The following tables describes the supported data type by the GET response body.

Table 2-193 Data Structures Supported by the GET Response Body

Data Type	P	Cardinality	Response Code	Description
array(NfInstanceServices)	M	1	200 OK	Indicates the list of routing rules (NfInstance Services) matching criteria.
ProblemDetails	M	1	400 BAD REQUEST	Returns when an invalid combination or more than three query parameters are provided.

NfInstanceServices

```
{
  local: [
    {
      "kind": "NFInstanceServiceMapping",
      "spec": {
        "hosts": [
          "string"
        ],
        "nfType": "string",
        "nfSetsList": {
          nfSetIdList: ["string"]
        },
        "nfInstanceId": "3faf2bbc-6e4a-2828-a507-a14ef8e1bc7b",
        "nfServiceToRouteMapping": {
          "nfServiceToRoutesListMap": {
            "default": {
              "hosts": [
                "string"
              ],
              "destinations": [
                {
                  "destWeight": {
                    "weight": 0,

```

```

        "destination":{
            "host":"string",
            "port":{
                "number":0
            },
            "http2MaxRequests":0
        },
        "isRemoteScp":false,
        "ocscpc_load":0,
        "ocscpw_priority":0,
        "ocscpw_nf_instance_id":"string",
        "ocscpw_service_instance_id":"string"
    },
    "serviceSetIds":null
}
]
},
"nnrf-disc":{
    "hosts":[
        "string"
    ],
    "destinations":[
        {
            "destWeight":{
                "weight":0,
                "destination":{
                    "host":"string",
                    "port":{
                        "number":0
                    },
                    "http2MaxRequests":0
                },
                "isRemoteScp":false,
                "ocscpc_load":0,
                "ocscpw_priority":0,
                "ocscpw_nf_instance_id":"string",
                "ocscpw_service_instance_id":"string"
            },
            "serviceSetIds":null
        }
    ]
}
}
},
"metadata":{
    "name":"string",
    "namespace":"string"
},
"apiVersion":"string"
],
foreign:
[
    {
        "kind": "InterSCPRoutingInfo",

```

```

    "spec": {
      "hosts": ["udm1svc.default.svc.cluster.local:8080",
        "udm1svc.default.svc.cluster.local:8080-nudm-uecm",
        "192.168.2.143:8080-nudm-uecm", "192.168.2.143:8080"],
      "locality": "Loc1",
      "nfSetIdList": [],
      "nfInstanceIdList": ["9faf1bbc-6e4a-4454-a507-a14ef8e1bc5b"],
      "primaryDestinationList": [{
        "weight": 100,
        "destination": {
          "host": "ocscp-localscp-worker.scpsvc.svc.cluster.local",
          "port": {
            "number": 8000
          },
        },
        "http2MaxRequests": 100000
      }],
      "isRemoteScp": true,
      "ocscpc_load": 0,
      "ocscpw_priority": 0,
      "ocscpw_nf_instance_id": "3faf1bbc-6e4a-4454-a507-a14ef8e1bc5e",
      "ocscpw_service_instance_id": "f86b54b7-aef9-4c78-
b346-3bfb7f380811"
    },
    "secondaryDestinationList": {}
  },
  "metadata": {
    "name": "interScpRoutingInfo",
    "namespace": "scpsvc"
  },
  "apiVersion": "v1"
}
]
}

```

Example:**Successful Response1**

```

$ curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/routing-
rules-r16?nfType=NRF" -H "accept: */*"
{
  "local": [
    {
      "spec": {
        "nfInstanceId": "6faf1bbc-6e4a-2828-a507-a14ef8e1bc5a",
        "nfServiceToRouteMapping": {
          "nfServiceToRoutesListMap": {
            "default": {
              "hosts": [
                null
              ],
            },
            "destinations": [
              {
                "destinationInfo": {
                  "destination": {

```

```

        "port": {
          "number": 80
        }
      },
      "weight": 0,
      "ocscpw_priority": 0,
      "ocscpw_nf_instance_id": "6faf1bbc-6e4a-2828-a507-
a14ef8e1bc5a",
      "ocscpw_service_instance_id": "6faf1bbc-6e4a-2828-a507-
a14ef8e1bc5a",
      "ocscpc_load": 0
    }
  ]
},
"nnrf-nfm": {
  "hosts": [
    "nrf1svc.scpsvc.svc.cluster.local:8080-nnrf-nfm"
  ],
  "destinations": [
    {
      "destinationInfo": {
        "destination": {
          "host": "nrf1svc.scpsvc.svc.cluster.local",
          "port": {
            "number": 8080
          },
          "location": "MESH_EXTERNAL",
          "ports": [
            {
              "number": 8080,
              "protocol": "HTTP2",
              "name": "http2"
            }
          ]
        },
        "resolution": "DNS"
      },
      "weight": 5000,
      "ocscpw_priority": 0,
      "ocscpw_nf_instance_id": "6faf1bbc-6e4a-2828-a507-
a14ef8e1bc5a",
      "ocscpw_service_instance_id": "fe137ab7-740a-46ee-
aa5c-951806d77b01",
      "ocscpc_load": 0
    }
  ]
},
"nnrf-disc": {
  "hosts": [
    "nrf1svc.scpsvc.svc.cluster.local:8080-nnrf-disc"
  ],
  "destinations": [
    {
      "destinationInfo": {
        "destination": {

```

```

        "host": "nrf1svc.scpsvc.svc.cluster.local",
        "port": {
            "number": 8080
        },
        "location": "MESH_EXTERNAL",
        "ports": [
            {
                "number": 8080,
                "protocol": "HTTP2",
                "name": "http2"
            }
        ],
        "resolution": "DNS"
    },
    "weight": 5000,
    "ocscpw_priority": 0,
    "ocscpw_nf_instance_id": "6faf1bbc-6e4a-2828-a507-
a14ef8e1bc5a",
    "ocscpw_service_instance_id": "fe137ab7-740a-46ee-
aa5c-951806d77b02",
    "ocscpc_load": 0
    }
    }
    ]
    }
    },
    "hosts": [
        null
    ],
    "nfSetsList": {
        "nfSetIdList": [
            "Reg1"
        ]
    },
    "nfType": "NRF"
}
},
{
    "spec": {
        "nfInstanceId": "6faf1bbc-6e4a-2828-a507-a14ef8e1bc5b",
        "nfServiceToRouteMapping": {
            "nfServiceToRoutesListMap": {
                "default": {
                    "hosts": [
                        null
                    ],
                    "destinations": [
                        {
                            "destinationInfo": {
                                "destination": {
                                    "port": {
                                        "number": 80
                                    }
                                }
                            },
                            "weight": 0,

```



```

        "ocscpw_priority": 1,
        "ocscpw_nf_instance_id": "6faf1bbc-6e4a-2828-a507-
a14ef8e1bc5b",
        "ocscpw_service_instance_id": "6faf1bbc-6e4a-2828-a507-
a14ef8e1bc5b",
        "ocscpc_load": 0
    }
}
],
},
"nnrf-nfm": {
    "hosts": [
        "nrf2svc.scpsvc.svc.cluster.local:8080-nnrf-nfm"
    ],
    "destinations": [
        {
            "destinationInfo": {
                "destination": {
                    "host": "nrf2svc.scpsvc.svc.cluster.local",
                    "port": {
                        "number": 8080
                    },
                    "location": "MESH_EXTERNAL",
                    "ports": [
                        {
                            "number": 8080,
                            "protocol": "HTTP2",
                            "name": "http2"
                        }
                    ]
                },
                "resolution": "DNS"
            },
            "weight": 5000,
            "ocscpw_priority": 1,
            "ocscpw_nf_instance_id": "6faf1bbc-6e4a-2828-a507-
a14ef8e1bc5b",
            "ocscpw_service_instance_id": "fe137ab7-740a-46ee-
aa5c-951806d77b01",
            "ocscpc_load": 0
        }
    ]
},
"nnrf-disc": {
    "hosts": [
        "nrf2svc.scpsvc.svc.cluster.local:8080-nnrf-disc"
    ],
    "destinations": [
        {
            "destinationInfo": {
                "destination": {
                    "host": "nrf2svc.scpsvc.svc.cluster.local",
                    "port": {
                        "number": 8080
                    },
                    "location": "MESH_EXTERNAL",

```

```

        "ports": [
            {
                "number": 8080,
                "protocol": "HTTP2",
                "name": "http2"
            }
        ],
        "resolution": "DNS"
    },
    "weight": 5000,
    "ocscpw_priority": 1,
    "ocscpw_nf_instance_id": "6faf1bbc-6e4a-2828-a507-
a14ef8e1bc5b",
    "ocscpw_service_instance_id": "fe137ab7-740a-46ee-
aa5c-951806d77b02",
    "ocscpc_load": 0
    }
    }
    ]
    }
    },
    "hosts": [
        null
    ],
    "nfSetsList": {
        "nfSetIdList": [
            "Reg1"
        ]
    },
    "nfType": "NRF"
}
},
"foreign": []
}

```

Successful Response2:

```

$ curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/routing-
rules-r16?nfType=AUSF&nfSetId=NONE" -H "accept: */*"
{
  "local": [
    {
      "spec": {
        "nfInstanceId": "8faf1bbc-6e4a-2828-a507-a14ef8e1bc5b",
        "nfServiceToRouteMapping": {
          "nfServiceToRoutesListMap": {
            "default": {
              "hosts": [
                "10.75.226.108:ip",
                "ausfsvc_fqdn"
              ]
            },
            "nausf-auth": {

```

```

    "hosts": [
      "nrf2svc.scpsvc.svc.cluster.local:8080-nausf-auth"
    ],
    "destinations": [
      {
        "destinationInfo": {
          "destination": {
            "host": "nrf2svc.scpsvc.svc.cluster.local",
            "port": {
              "number": 8080
            },
            "location": "MESH_EXTERNAL",
            "ports": [
              {
                "number": 8080,
                "protocol": "HTTP2",
                "name": "http2"
              }
            ],
            "resolution": "DNS"
          },
          "weight": 5000,
          "ocscpw_priority": 1,
          "ocscpw_nf_instance_id": "8faf1bbc-6e4a-2828-a507-
a14ef8e1bc5b",
          "ocscpw_service_instance_id": "fe137ab7-740a-46ee-
aa5c-951806d77b01",
          "ocscpc_load": 0
        }
      }
    ],
    "nausf-sorprotection": {
      "hosts": [
        "nrf2svc.scpsvc.svc.cluster.local:8080-nausf-sorprotection"
      ],
      "destinations": [
        {
          "destinationInfo": {
            "destination": {
              "host": "nrf2svc.scpsvc.svc.cluster.local",
              "port": {
                "number": 8080
              },
              "location": "MESH_EXTERNAL",
              "ports": [
                {
                  "number": 8080,
                  "protocol": "HTTP2",
                  "name": "http2"
                }
              ],
              "resolution": "DNS"
            },
            "weight": 5000,
            "ocscpw_priority": 1,

```

```

        "ocscpw_nf_instance_id": "8faf1bbc-6e4a-2828-a507-
a14ef8e1bc5b",
        "ocscpw_service_instance_id": "fe137ab7-740a-46ee-
aa5c-951806d77b02",
        "ocscpc_load": 0
    }
}
]
}
},
"nfSetsList": {},
"nfType": "AUSF"
}
}
],
"foreign": []
}

```

Failure cases

If the number of query parameters is greater than 3.

```

$ curl -X GET "http://localhost:8081/ocscp/scpc-configuration/v1/routing-
rules-r16?nfType=NRF&nfServiceType=nnrf-
disc&nfIp=10.75.226.108&nfInstanceId=6faf1bbc-6e4a-4454-a507-a14ef8e1bc5a" -H
"accept: */*"
Error response for above curl Request:
Response Code: 400
Response Status: BAD_REQUEST
Response Body : { "title": "Bad Request", "status": "400", "detail": "Maximum
3 Query Parameters are allowed, please refer to the User Guide",
"instance": "/ocscp/scpc-configuration/v1/routing-rules-r16?
nfType=NRF&nfServiceType=nnrf-
disc&nfIp=10.75.226.108&nfInstanceId=6faf1bbc-6e4a-4454-a507-a14ef8e1bc5a",
"cause": "INVALID_MSG_FORMAT" }
Response Headers :
  connection: keep-alive  content-type: application/problem+json  date: Wed30
Dec 2020 07:16:52 GMT  transfer-encoding: chunked

```

If any invalid combination of query parameters is requested.

```

$ curl -X GET "http://localhost:8081/ocscp/scpc-configuration/v1/routing-
rules-r16?nfType=NRF&nfServiceType=nnrf-nfm" -H "accept: */*"
Error response for above curl Request:
Response Code: 400
Response Status: BAD_REQUEST
Response Body: { "title": "Bad Request", "status": "400", "detail":
"Requested combination of Query Parameters is not allowed, please refer to
the User Guide",
"instance": "/ocscp/scpc-configuration/v1/routing-rules-r16?
nfType=NRF&nfServiceType=nnrf-nfm", "cause": "INVALID_MSG_FORMAT" }

```

Response Headers :

connection: keep-alive content-type: application/problem+json date: Wed30
Dec 2020 07:16:52 GMT transfer-encoding: chunked

2.20 Fetching Upgrade and Rollback Events

This section provides information about fetching upgrade and rollback event information.

Resources

The following table describes the resource name to retrieve the list of upgrade and rollback events.

Table 2-194 Upgrade and Rollback Resource Name

Resource Name	Resource URI	HTTP Method	Description
upgraderollbackevents	/ocscp/scpc-configuration/v1/upgraderollbackevents	GET	Retrieves a collection or list of upgrade and rollback events.

Resource Definition

This resource fetches upgrade or rollback events based on the query parameters.

If no query parameter is provided, all the events are returned.

Resource URI: /ocscp/scpc-configuration/v1/upgraderollbackevents

Table 2-195 URI Query Parameters Supported by the GET Method

Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Description	Allowed Values
serviceName	String	O	1	Name of the service	- scpc-audit - scpc-configuration - scpc-notification - scpc-subscription - scp-worker Example: scpc-audit
event	String	O	1	Event to be filtered	- Pre_Upgrade_Started - Pre_Upgrade_Completed - Pre_Upgrade_Failed - Post_Upgrade_Started - Post_Upgrade_Completed - Post_Upgrade_Failed - Pre_Rollback_Started - Pre_Rollback_Completed - Pre_Rollback_Failed - Post_Rollback_Started - Post_Rollback_Completed - Post_Rollback_Failed Example: Pre_Upgrade_Started

Table 2-195 (Cont.) URI Query Parameters Supported by the GET Method

Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description	Allowed Values
sourceRelease	String	O	1	Source release version for performing upgrade and rollback. The convention to identify a release is as follows: 25.1.200 is identified as 25120000	Any string followed the convention. Example: 25120000 Sample output: <pre>{ "serviceName": "scpc-configuration", "event": "Pre_Upgrade_Started", "sourceRelease": "25120000", "targetRelease": "25210000", "creationTimestamp": "2025-10-26T00:36:40.000+00:00" }</pre>
targetRelease	String	O	1	Target release version for performing upgrade and rollback. The convention to identify a release is as follows: 25.2.100 is identified as 25210000	Any string followed the convention. Example: 25210000 Sample output: <pre>{ "serviceName": "scpc-configuration", "event": "Pre_Upgrade_Started", "sourceRelease": "25120000", "targetRelease": "25210000", "creationTimestamp": "2025-10-26T00:36:40.000+00:00" }</pre>

Table 2-196 Data Structures Supported by the GET Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
array(UpgradeRollbackEvent)	M	1	200 OK	List of events matching criteria.

Example Response

```
$ curl -X GET "curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/upgraderollbackevents" -H "accept: */*" -H "accept: */*"
[
  {
    "serviceName": "scpc-configuration",
    "event": "Pre_Upgrade_Started",
    "sourceRelease": "25120000",
    "targetRelease": "25210000",
    "creationTimestamp": "2025-10-26T00:36:40.000+00:00"
  }
]
```

2.21 Updating HELM Configurable Parameters with REST APIs

This section provides REST API parameters required to update the Helm configurable options after SCP deployment.

Configuring Operations for PUT ALL Method

Request_Type: PUT ALL

URI: /ocscp/scpc-configuration/v1/tracing

Message:

```
[{
  "msgTracingEnabled": true,
  "msgJsonBodyEnabled": false,
  "serviceName": "scp-worker"
}]
```

Table 2-197 REST API: PUT ALL Method

Parameter	Description	Data Type	Value Range	Mandatory
msgTracingEnabled	Enable/Disable jaeger trace	Boolean	True/False	Yes
msgJsonBodyEnabled	Enable/Disable body decoding in jaeger traces	Boolean	True/False	Yes
serviceName	Name of the service to which tracing is applied	String (scp-worker)	scp-worker	Yes

Success Response

Request URI: http://<hostname>:<port>/ocscp/scpc-configuration/v1/tracing

Request Body:

```
[{
  "msgTracingEnabled": true,
  "msgJsonBodyEnabled": false,
```

```
"serviceName": "scp-worker"
}]
```

Response:

```
[{
  "msgTracingEnabled": true,
  "msgJsonBodyEnabled": false,
  "serviceName": "scp-worker"
}]
```

Error Response

- Scenario 1: When the serviceName is anything else other than scp-worker
Request URI: *http://<hostname>:<port>/ocscp/scpc-configuration/v1/tracing*

Request Body:

```
[{
  "msgTracingEnabled": true,
  "msgJsonBodyEnabled": false,
  "serviceName": "scp-workerbjasd"
}]
```

Response Header:

Status Code: 400 Bad

Request connection: keep-alive

content-type: application+problem/json

date: Mon, 15 Feb 2021 05:57:49 GMT

transfer-encoding: chunked

Response Body: { "title": "Invalid Service Name", "status": "400",
"cause": "Invalid Service Name" }

- Scenario 2: When the mandatory parameters are missing.
Request URI: *http://<hostname>:<port>/ocscp/scpc-configuration/v1/tracing*

Request Body:

```
[{
  "bacd": true,
  "msgJsonBodyEnabled": false,
  "serviceName": "scp-workerbjasd"
}]
```

Response Body: { "status": "400", "error": "Bad Request" }

- Scenario 3: When the mandatory parameters' keys are incorrect.
Request URI: *http://<hostname>:<port>/ocscp/scpc-configuration/v1/tracing*

Request Body:

```
[{
  "bacd": true,
```



```
"msgJsonBodyEnabled": false,
"serviceName": "scp-worker"
}]
```

Response Body:

```
{ "status": "400", "error": "Bad Request" }
```

Configuring Operations for PUT Single Method**Request_Type:** PUT**URI:** /ocscp/scpc-configuration/v1/tracing/{serviceName}**Table 2-198 Path Variable**

Parameter	Description	Data Type	Value Range
serviceName	Name of the service to which tracing is applied.	String	scp-worker

Message:

```
{
  "msgTracingEnabled": true,
  "msgJsonBodyEnabled": false,
  "serviceName": "scp-worker"
}
```

Table 2-199 REST API: PUT Single Method

Parameter	Description	Data Type	Value Range	Mandatory
msgTracingEnabled	Enable/Disable jaeger trace	Boolean	True/False	Yes
msgJsonBodyEnabled	Enable/Disable json body trace	Boolean	True/False	Yes
serviceName	Name of the service to which tracing parameters are applied.	String	scp-worker	Yes

Success Response**Request URI:** http://<hostname>:<port>/ocscp/scpc-configuration/v1/tracing/scp-worker**Request Body:**

```
{
  "msgTracingEnabled": true,
  "msgJsonBodyEnabled": false,
  "serviceName": "scp-worker"
}
```

Response:

```
{
  "msgTracingEnabled": true,
  "msgJsonBodyEnabled": false,
  "serviceName": "scp-worker"
}
```

Error Response

- Scenario 1: When the serviceName is anything else other than scp-worker and the service name does not match with the servicename in URI.

Request URI: *http://<hostname>:<port>/ocscp/scpc-configuration/v1/tracing/scp-worker*

Request Body:

```
{
  "msgTracingEnabled": true,
  "msgJsonBodyEnabled": false,
  "serviceName": "scp-workerbjasd"
}
```

Response Header:

Status Code: 400 Bad Request

Request connection: keep-alive

content-type: application+problem/json

date: Mon, 15 Feb 2021 05:57:49 GMT

transfer-encoding: chunked

Response body:

```
{ "title": "Invalid Service Name", "status": "400",
  "cause": "Invalid Service Name" }
```

- Scenario 2: When the mandatory parameters are missing.

Request URI: *http://<hostname>:<port>/ocscp/scpc-configuration/v1/tracing/scp-worker*

Request Body:

```
{
  "msgJsonBodyEnabled": false,
  "serviceName": "scp-worker"
}
or
{
  "msgTracingEnabled": true,
  "serviceName": "scp-worker"
}
or
{
  "msgTracingEnabled": true,
```

```
"msgJsonBodyEnabled": false,
}
```

Response Body:

```
{ "status": "400", "cause": "<attribute-name> cannot be empty"
}
```

- Scenario 3: When the mandatory parameters' keys are incorrect.

Request URI: *http://<hostname>:<port>/ocscp/scpc-configuration/v1/tracing/scp-worker*

Request Body:

```
{
  "bacd": true,
  "msgJsonBodyEnabled": false,
  "serviceName": "scp-worker"
}
```

Response body:

```
{ "status": "400", "error": "Bad Request" }
```

Configuring Operations for GET Method

Request_Type: GET

URI: */ocscp/scpc-configuration/v1/tracing/{serviceName}* and */ocscp/scpc-configuration/v1/tracing*

Message:

```
[{
  "msgTracingEnabled": true,
  "msgJsonBodyEnabled": false,
  "serviceName": "scp-worker"
}]
```

Table 2-200 REST API: GET Method

Parameter	Description	Data Type	Value Range
serviceName	Service Name to which tracing will be applied	String	scp-worker

Success Response

Request URI: */ocscp/scpc-configuration/v1/tracing/scp-worker*

Response body:

```
[{
  "msgTracingEnabled": true,
  "msgJsonBodyEnabled": false,
  "serviceName": "scp-worker"
}]
```

Error Response

Scenario 1: When the serviceName is anything else other than scp-worker

Request URI: /ocscp/scpc-configuration/v1/tracing/scp-worker-xyz

Response body:

```
{ "title": "Invalid Service Name", "status": "400", "cause": "Invalid Service Name" }
```

Supported HTTP Status Code

- 200 - In case of success
- 400 - In case of Bad Request or invalid serviceName
- 404 - In case when serviceName is not found

Curl Commands

- GET:

```
curl -X GET -i 'http://<hostname>:<port>/ocscp/scpc-configuration/v1/tracing/'
```

- PUT ALL:

```
curl -X PUT -H 'Content-Type: application/json' -i 'http://<hostname>:<port>/ocscp/scpc-configuration/v1/tracing/' --data ' [{"msgTracingEnabled":true,"msgJsonBodyEnabled":false,"serviceName":"scp-worker"} ]'
```

- PUT Single:

```
curl -X PUT -H 'Content-Type: application/json' -i 'http://<hostname>:<port>/ocscp/scpc-configuration/v1/tracing/scp-worker' --data '{"msgTracingEnabled":true,"msgJsonBodyEnabled":false,"serviceName":"scp-worker"}'
```

For information about HELM parameters, see the *Oracle Communications Cloud Native Core, Service Communication Proxy Installation, Upgrade, and Fault Recovery Guide*.

2.22 Configuring Alternate NF Group

This section provides the following Alternate NF Group REST API configurations:

- Resource URIs for the alternatenfgroup resource type.
- Types of data model.
- URI query parameters supported by GET, PUT, and DELETE methods.

Resources

The following table describes the resource URIs and the corresponding HTTP methods for the alternatenfgroup resource type.

Table 2-201 alternatenfgroup Resource Type

Resource Name	Resource URI	HTTP Method	Mandatory (M) or Optional (O)	Query Parameters	Description
alternatenfgroup	/ocscp/scpc-configuration/v1/alternatenfgroup/configuration	GET	O	- servicePortName - apiPrefix	Retrieves the alternate NF group configuration data that are configured for corresponding query parameters. Displays both statically configured and alternate NF group data determined from NF profiles.
alternatenfgroup	/ocscp/scpc-configuration/v1/alternatenfgroup/configuration	PUT	O	NA	Configures the alternate NF group configuration data using the request body in the JSON format.
alternatenfgroup	/ocscp/scpc-configuration/v1/alternatenfgroup/configuration	DELETE	M	servicePortName	Removes the alternate NF group configuration data for corresponding query parameters.
alternatenfgroup	/ocscp/scpc-configuration/v1/alternatenfgroup/refreshdnssrvdata	PUT	O	NA	Refreshes the alternate NF group data when required.

Data Model

The following tables describe different data models required for configuring Alternate NF Group.

Table 2-202 AlternateNFGroupData

Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Range or Supported Value	Description
dnsSRVConfiguration	AlternateNFGroupConfiguration	M	1	NA	The data type of the DNS SRV configuration.
array(dnsSrvRecords)	DNSSRVRecord	M	1	NA	This is the alternate NF group configuration data.

Table 2-203 AlternateNFGroupConfiguration

Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Range or Supported Value	Description
serviceProtoName	String	M	1	Extract and validate as per SCP FQDN regex	The service proto name of the producer NF. The DNS SRV format: _service._proto.name. ttl IN SRV priority weight port target. serviceProtoName represents _service._proto.name
apiPrefix	String	O	1	NA	This is used while constructing destination URI. If empty or null, then the string is provided.

Table 2-204 DNSSRVRecord

Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Range or Supported Value	Description
target	String	M	1	Validate as per SCP FQDN regex	Indicates the target NF type.
port	String	M	1	0-65535	Indicates the port number of the ipEndPoint attribute.
ttl	Long	O	1	30-86400 seconds	Determines the availability of data in the network and when the data can be removed. If the TTL value received is not within this range, then the default TTL value, which is 900s, is used as configured in the System Config table.
type	String	O	1	SRV	Identifies the record type.
dclass	String	O	1	IN	Defines DNS class values.
priority	Long	M	1	0-65535	Prioritizes the NF selection.
weight	Long	M	1	0-65535	Specifies a relative order or position for entries with the same priority. For more information, see RFC 2782.

Table 2-205 AlternateNFGroupRefreshData

Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Range or Supported Value	Description
refreshAll	String	O	1	true or false	Indicates whether all the alternate NF group data should be refreshed or not. If only the refreshAll parameter is present with the value as true without the spnlist parameter, then all the Service Proto Names (SPNS) are considered for the refresh.
spnlist	Array	O	1	NA	Provides the list of Service Proto Names (SPNS) to be refreshed. If the spnlist parameter is present and contains an SPN with the refreshAll parameter set to true, then that SPN in the spnlist parameter will be considered for refresh.

Table 2-206 ProblemDetails

Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
type	String	O	1	Identifies the problem type.
title	String	M	1	Summarizes the problem type.
status	String	M	1	Indicates the HTTP status code for the occurrence of the problem type.
detail	String	M	1	Provides a description specific to the occurrence of the problem type.
instance	String	M	1	Identifies the specific occurrence of this problem type.
cause	String	M	1	Defines the application error cause specific to the occurrence of this problem type.

Request Body

The following table describes the AlternateNFGroupConfiguration data type.

Table 2-207 AlternateNFGroupConfiguration Data Type

Data Type	Description
AlternateNFGroupConfiguration	Indicates the data type of the DNS SRV configuration. For more information, see Table 2-203 .

Response Body

The response body data model varies based on the REST operation status. For more information, see the information provided in the subsequent tables.

Table 2-208 Response Body Data Type

Data Type	Description
DNSSRVData	This is the alternate NF group configuration data.
None	Empty body

Resource Definition

This section describes GET, PUT, and DELETE resource types supported by Alternate NF Group.

GET API

This resource fetches the alternate NF group configuration based on the query parameters.

Resource URI: /ocscp/scpc-configuration/v1/alternatenfgroup/configuration

Request Body

There is no request body in GET Request API.

Table 2-209 URI Query Parameters Supported by the GET Method

Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
serviceProtoName	String	O	1	The service proto name of the producer NF.
apiPrefix	String	O	0..1	Optional path segments used to construct the {apiRoot} variable of the different API URIs as described in 3GPP 29.501.

Note

If none of the aforementioned query parameters are provided, all the user provisioned serviceProtoName data are returned.

Table 2-210 Data Structures Supported by the GET Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
array(DNSSRVData)	M	1	200 OK	This is the alternate NF group configurations data.
ProblemDetails	M	1	400 BAD REQUEST	This data structure is sent if the query parameters validation fails.
ProblemDetails	M	1	404 NOT FOUND	This data structure is sent when no matching entry is found. For information about the ProblemDetails structure, see 3GPP TS 29.571.

Note

The GET request only retrieves the records provisioned by users.

The following examples are of successful and failed responses.

Success response:

```
curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/alternatenfgroup/configuration?serviceProtoName=_http._tcp.nf2stub.scpsvc.svc" -H "accept: */*"
```

Response Body:

```
[{
  "dnsSRVConfiguration": {
    "serviceProtoName": "_http._tcp.nf2stub.scpsvc.svc",
    "apiPrefix": "USEast"
  },
  "dnsSrvRecords": [{
    "target": "nf2stub.scpsvc.svc",
    "port": 8080,
    "ttl": 86400,
    "type": "SRV",
    "dclass": "IN",
    "priority": 1,
    "weight": 60
  },
  {
    "target": "nf21stub.scpsvc.svc",
    "port": 8080,
    "ttl": 86400,
    "type": "SRV",
    "dclass": "IN",
    "priority": 20,
    "weight": 20
  }
}]
```

```

        "target": "nf22stub.scpsvc.svc",
        "port": 8080,
        "ttl": 86400,
        "type": "SRV",
        "dclass": "IN",
        "priority": 10,
        "weight": 20
    }
}
]]

```

Failure response: If the alternate NF group data is not configured.

```

curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/
alternatenfgroup/configuration?
serviceProtoName=_http._tcp.nf23432stub.scpsvc.svc" -H "accept: */*"

```

```

{
  "title": "Not Found",
  "status": "404",
  "detail": "Alternate NF Group Configuration not found against given query
parameters",
  "instance": "/ocscp/scpc-configuration/v1/alternatenfgroup/configuration?
serviceProtoName=_http._tcp.nf23432stub.scpsvc.svc",
  "cause": "DATA_NOT_FOUND"
}

```

PUT API

This resource adds the alternate NF group configuration using the request body.

Resource URI: /ocscp/scpc-configuration/v1/alternatenfgroup/configuration

Table 2-211 Data Structures Supported by the PUT Request Body

Data Type	Description
AlternateNFGroupConfiguration	Indicates the data type of the DNS SRV configuration. For more information, see Table 2-203 .

Table 2-212 Data Structures Supported by the PUT Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
AlternateNFGroupConfiguration	M	1	200 OK	This response is used when an existing record is updated.
AlternateNFGroupConfiguration	M	1	201 CREATED	This response is used when a new entry is created.

Table 2-212 (Cont.) Data Structures Supported by the PUT Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
ProblemDetails	M	1	400 BAD REQUEST	This response is used when the request body validation fails. For example, when serviceProtoName is missing in the request body. For information about the ProblemDetails structure, see 3GPP TS 29.571.

Note

The PUT request for Alternate NF Group is allowed only when the entry for that spn is already present in DNS SERVER otherwise, it gives a 404 Not Found error for such spn.

The following examples are of successful and failed responses.

Success response:

```
curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/alternatenfgroup/configuration" -H "accept: */*" -H "Content-Type: application/json" -d "{
  \"apiPrefix\": \"USEast\",
  \"serviceProtoName\": \"_http._tcp.nf2stub.scpsvc.svc\"
}"
```

Response:

```
{
  \"serviceProtoName\": \"_http._tcp.nf2stub.scpsvc.svc\",
  \"apiPrefix\": \"USEast\"
}
200 OK
```

Failure response: Invalid request body

```
curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/alternatenfgroup/configuration" -H "accept: */*" -H "Content-Type: application/json" -d "{
  \"apiPrefix\": \"USEast\",
  \"serviceProtoName\": \"_http.npcf.rcklca63.we.pcf.5gc.oper.com\"
}"
```

Response:

```
{
  \"title\": \"Bad Request\",
  \"status\": \"400\",
  \"detail\": \"Invalid request body received, please refer to the User Guide\",
  \"instance\": \"/ocscp/scpc-configuration/v1/alternatenfgroup/configuration\",
```

```

    "cause": "INVALID_REQUEST_BODY"
  }

```

DELETE API

This resource removes the alternate NF group configuration based on the query parameters.

Resource URI: /ocscp/scpc-configuration/v1/alternatenfgroup/configuration

Table 2-213 Data Structures Supported by the DELETE Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
None			200 OK	This response is used when the query is successful.
Problem Details	M	1	404 NOT FOUND	This response is used when no matching entry is found. For information about the ProblemDetails structure, see 3GPP TS 29.571.
Problem Details	M	1	400 BAD REQUEST	This response is used when serviceProtoName is missing in the request. For information about the ProblemDetails structure, see 3GPP TS 29.571.

Note

The DELETE request body removes only the records provisioned by users.

The following examples are of successful and failed responses.

Success response:

```

curl -X DELETE "http://<localhost>:8081/ocscp/scpc-configuration/v1/
alternatenfgroup/configuration?
serviceProtoName=_http._tcp.nf2stub.scpsvc.svc" -H "accept: */*"

```

200 OK

Failure response: When no matching entry is found.

```

curl -X DELETE "http://<localhost>:8081/ocscp/scpc-configuration/v1/
alternatenfgroup/configuration?
serviceProtoName=_http._tcp.nf21232stub.scpsvc.svc" -H "accept: */*"

```

```

{
  "title": "Not Found",
  "status": "404",
  "detail": "Alternate NF Group Configuration not found against given query
parameters",

```

```

    "instance": "/ocscp/scpc-configuration/v1/alternatenfgroup/configuration?
serviceProtoName=_http._tcp.nf21232stub.scpsvc.svc",
    "cause": "DATA_NOT_FOUND"
}

```

REFRESH DNS Data API

This resource refreshes the alternate NF group configuration based on the request body parameters.

Resource URI: /ocscp/scpc-configuration/{version}/alternatenfgroup/refreshdnssrvdata

Table 2-214 Data Structures Supported by the PUT Request Body

Data Type	Description
AlternateNFGroupRefreshData	Indicates whether all the alternate NF group data should be refreshed or not. For more information, see Table 2-205 .

The following examples are of successful and failed responses.

Success response:

```

curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/
alternatenfgroup/refreshdnssrvdata" -H "accept: */*" -H "Content-Type:
application/json" -d "{
  "refreshAll": "true",
  "spnlist": [
  ]
}"

```

Response:

```

{
  "refreshAll": "true",
  "spnlist": []
}
200 OK

```

Failure response: Invalid request body

```

curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/
alternatenfgroup/refreshdnssrvdata" -H "accept: */*" -H "Content-Type:
application/json" -d '{"spnlist":[]}'

{
  "title": "Bad Request",
  "status": "400",
  "detail": "Invalid request body received, please refer to the User Guide",
  "instance": "/ocscp/scpc-configuration/v1/alternatenfgroup/
refreshdnssrvdata",
  "cause": "INVALID_REQUEST_BODY"
}

```

2.23 Configuring Server Header

This section describes the Server Header REST API configuration.

Resources

The following table describes the resource name to retrieve and update server header configurations in SCP.

Table 2-215 Resource Name

Resource Name	Resource URI	HTTP Method	Description
serverheader	/ocscp/scpc-configuration/{version}/serverheader	GET	Retrieves server header configurations in SCP.
serverheader	/ocscp/scpc-configuration/{version}/serverheader	PUT	Updates server header configurations in SCP.

Data Model

The following table describes different types of server header parameters.

Table 2-216 Types of Server Header Parameters

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
enableEnhanceServerHeaderBehavior	Boolean	M	false	Enables or disables the enhanced server header behavior. Possible values are: true, false, 1, or 0. The enhanced server header format: List of <NF-Type>-<NF-Instance Id> in reverse order of tried producers. Producer generated error: <NF-Type2>-<NF-Instance Id2> <NF-Type1>-<NF-Instance Id1> SCP generated error: SCP-<scp fqdn> <NF-Type2>-<NF-Instance Id2> <NF-Type1>-<NF-Instance Id1>

Table 2-216 (Cont.) Types of Server Header Parameters

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
sideCarProxyServerHeader	List<String>	M	Empty List	Indicates the list of strings (example: envoy, istio-envoy, and so on)/string patterns(example: e.*y, and so on) to identify from server header value if error response is generated by side car proxy. If response received by SCP carries any of the configured strings or patterns in sideCarProxyServerHeader and response code matches with any of the configured sideCarProxyStatusCode, it will be treated as sidecar/service mesh generated error. It is applicable to both enableEnhanceServerHeaderBehavior and enableEnhanceServerHeaderBehaviorV2. Note: This parameter allows the string regex patterns and empty list.
addServerHeaderInProducer Response	Boolean	M	false	Enables or disables the addition of a server header in producer NF-generated error responses by SCP during the default behavior (which means both enableEnhanceServerHeaderBehavior and enableEnhanceServerHeaderBehaviorV2 are false). If set to TRUE - SCP will add a server header with the producer's information if a server header is not present in the error response received from the upstream peer. If set to FALSE - SCP will not add a server header with the producer's information if the server header is not present in the error response received from the upstream peer. The received response is passed as it is to the consumer. Possible values are: true, false, 1, or 0.

Table 2-216 (Cont.) Types of Server Header Parameters

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
sideCarProxyStatusCode	List<Integer>	M	503	Indicates the list of server header status codes (503 and so on)/class of status code (5xx,4xx) to identify if error response is generated by side car proxy. If response received by SCP carries any of the configured strings or patterns in sideCarProxyServerHeader and response code matches with any of the configured sideCarProxyStatusCode, it will be treated as sidecar/service mesh generated error. Supported range or patterns are: 5xx and 4xx Value range: 400-599 Empty list is allowed. Applicable to both enableEnhanceServerHeaderBehavior and enableEnhanceServerHeaderBehaviorV2.

Table 2-216 (Cont.) Types of Server Header Parameters

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
enableEnhanceServerHeaderBehaviorV2	Boolean	M	false	Enables or disables the new custom behavior. The behavior enabled is mutually exclusive with enableEnhanceServerHeaderBehavior. Server header format: List of <NF-Type>-<NF-Instance Id> in reverse order of tried producer NFs. Producer NF generated error format: <NF-Type2>-<NF-Instance Id2> <NF-Type1>-<NF-Instance Id1> - If SCP receives at least one server header from any one of the attempted producer NFs, SCP adds the same server header to the final error response. - If SCP receives server headers from multiple attempted producer NFs, SCP adds the received server headers in the reverse order to the final error response. SCP generated error format: SCP-<scp fqdn> SCP adds "SCP-<scp fqdn>" to the server header in the following scenarios: - In all the self-generated errors, such as connection failures, timeout, unknown errors, and so on. - If the error is received from the service mesh sidecar

Resource Definition**GET REST API**

URL: curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/serverheader" -H "accept: application/json"

Request URI: /ocscp/scpc-configuration/{version}/serverheader

Example of a curl request:

```
curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/serverheader" -H "accept: application/json"
```

Response Data Structure:

Response of "curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/serverheader" -H "accept: application/json"

```
{
  "enableEnhanceServerHeaderBehavior": false,
  "sideCarProxyServerHeader": [],
  "addServerHeaderInProducerResponse": false,
  "enableEnhanceServerHeaderBehaviorV2": false,
  "sideCarProxyServerHeaderStatusCode": ["503"]
}
```

PUT REST API

Request URI: /ocscp/scpc-configuration/{version}/serverheader

Example of a curl command:

```
curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/
serverheader" -H "accept: application/json" -H "Content-Type: application/
json" -d "
```

```
{"enableEnhanceServerHeaderBehavior":false,"sideCarProxyServerHeader":
["envoy"],"addServerHeaderInProducerResponse":false,"enableEnhanceServerH
eaderBehaviorV2":false,"sideCarProxyServerHeaderStatusCode":
["503","4xx"]}
```

Understanding sideCarProxyServerHeader and sideCarProxyStatusCode Configurations

This scenario explains sideCarProxyServerHeader and sideCarProxyStatusCode configurations based on the following conditions:

- Alternate routing is enabled.
- Producer NF, for example, chf1, responds with "503" and server header as "envoy". chf2 responds with 503 without server header.

Sample SCP server header configuration:

```
{
  "enableEnhanceServerHeaderBehavior": false,
  "sideCarProxyServerHeader": ["e*y", "istio*y"],
  "addServerHeaderInProducerResponse": false,
  "enableEnhanceServerHeaderBehaviorV2": true,
  "sideCarProxyStatusCode": [
    "5xx", "4xx"
  ]
}
```

Server header behavior: SCP responds to consumer NF with "503" and "envoy" as server header.

In the above scenario, the received error response is not considered as service mesh error because the configured `sideCarProxyServerHeader` regex is not matching with the received server header. This mismatch occurs when the configured "e*y" mismatches with the received server header "envoy".

Where,

- e*: This means zero or more occurrences of the letter e.
- y: This means exactly one occurrence of the letter y.

The pattern e*y does not match "envoy" because there are characters, n, v, and o, between e and y, which are not accounted for by the pattern e*y.

If you want to match "envoy", then you can use the following regex:

- "e.*y"
- "envoy"

In the above mentioned regex configurations, SCP treats the received error response as service mesh error and adds SCP's FQDN in the server header and sends it to the consumer NF.

2.24 Configuring SBI Message Priority

This section provides Service Based Interface (SBI) Message Priority REST API configurations to support SCP behavior for SBI Messages priority headers received in message requests and responses.

Resources

The following table describes the resource name to retrieve, add, update, and remove SBI message priority information based on the query parameters.

Table 2-217 Resource Name

Resource Name	Resource URI	HTTP Method	Description
sbi-message-priority	/ocscp/scpc-configuration/v1/sbi-message-priority	GET	Retrieves the SBI Message Priority configured in SCP.
sbi-message-priority	/ocscp/scpc-configuration/v1/sbi-message-priority	PUT	Adds and updates the SBI Message Priority configured in SCP.
sbi-message-priority	/ocscp/scpc-configuration/v1/sbi-message-priority	PATCH	Updates or modifies the SBI Message Priority configured in SCP.
sbi-message-priority	/ocscp/scpc-configuration/v1/sbi-message-priority	DELETE	Removes the configured SBI Message Priority from SCP.

Data Model

Request Body

The following table describes the field names of the `SbiMsgPriorityWrapper` data type.

Table 2-218 SbiMsgPriorityWrapper

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
ruleName	String	M	default	Indicates the unique name for ruleName.
nfServiceName	String	M	*	Indicates all 3GPP defined NF Services as per 3GPP TS29.510.
httpMethods	String	M	*	Indicates the list of String HTTP methods, such as GET, POST, PUT, PATCH, DELETE, and OPTIONS.
messageType	String	M	*	Indicates the incoming request type. Possible values are: REQUEST or RESPONSE.
enableAssignPriority	boolean	O	false	Indicates whether the SMP header is available or not in the ingress message.
assignPriority	String	O	16	Indicates the "3gpp-Sbi-Message-Priority" header value. The value range is between 0 and 31.
enableOverridePriority	boolean	O	false	Indicates whether the SMP header is available or not in the ingress message.
overridePriority	String	O	16	Indicates the "3gpp-Sbi-Message-Priority" header value.

* indicates that the default value is applicable for all the possible message priority rules.

Response Body

The following table describes response body data models that varies based on the REST operation status.

Table 2-219 Response Body Data Type

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
array(SbiMsgPriorityWrapper)	M	1	200 OK	Indicates the list of Message Priorities (SbiMsgPriorityWrapper) that matches the criteria.
ProblemDetails	M	1	400 BAD REQUEST	Returns when an invalid combination or more than three query parameters are provided.

JSON Format

```
[
  {
    "ruleName": "default",
    "data": {
      "nfServiceName": "",
      "httpMethods": [
        ""
      ]
    }
  },
]
```

```

        "messageType": [
            "*"
        ],
        "enableAssignPriority": false,
        "assignPriority": 16,
        "enableOverridePriority": false,
        "overridePriority": 16,
        "nfType": "*"
    }
}, {
    ....
    ...
}
]

```

Resource Definition

GET REST API

This resource fetches the message priority (SBIMessagePriorityBean) based on the query parameters.

If no query parameter is provided, all the message priorities are returned.

Resource URI: /ocscp/scpc-configuration/v1/sbi-message-priority

The following table describes the URI query parameters supported by the GET method on this resource.

Table 2-220 URI Query Parameters Supported by the GET Method

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	O	Indicates the name of ruleName.
nfServiceName	String	O	Indicates all 3GPP defined NF Services as per 3GPP TS29.510 (callback and custom).
httpMethod	String	O	Indicates HTTP methods, such as GET, POST, PUT, PATCH, DELETE, and OPTIONS.
messageType	String	O	Indicates the message request or response. Possible values are: REQUEST or RESPONSE.

Note

The valid combination of query parameters is as follows:

- ruleName
- nfServiceName
- httpMethod
- messageType
- nfServiceName + httpMethod + messageType
- nfServiceName + httpMethod
- nfServiceName + messageType
- httpMethod + messageType

Table 2-221 Data Structures Supported by the GET Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
array(SbiMsgPriorityWrapper)	M	1	200 OK	Indicates the list of Message Priority (SbiMsgPriorityWrapper) that matches the criteria.
ProblemDetails	M	1	400 BAD REQUEST	Returns when an invalid combination or more than 3 query parameters are provided.

Example

Successful response - 1

```
$ curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/sbi-
message-priority" -H "accept: application/json"
[
  {
    "ruleName": "default",
    "data": {
      "nfServiceName": "*",
      "httpMethods": [
        "*"
      ],
      "messageType": [
        "*"
      ],
      "enableAssignPriority": false,
      "assignPriority": 16,
      "enableOverridePriority": false,
      "overridePriority": 16,
      "nfType": "*"
    }
  },
]
```

```
{
  "ruleName": "udm_test",
  "data": {
    "nfServiceName": "nudm_uecm",
    "httpMethods": [
      "GET",
      "POST"
    ],
    "messageType": [
      "service-request",
      "service-response"
    ],
    "enableAssignPriority": true,
    "assignPriority": 10,
    "enableOverridePriority": false,
    "overridePriority": -1,
    "nfType": "UDM"
  }
}
```

Successful response - 2

```
$ curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/sbi-
message-priority?nfServiceName=nudm_uecm" -H "accept: application/json"
[
  [
    {
      "ruleName": "udm_test",
      "data": {
        "nfServiceName": "nudm_uecm",
        "httpMethods": [
          "GET",
          "POST"
        ],
        "messageType": [
          "service-request",
          "service-response"
        ],
        "enableAssignPriority": true,
        "assignPriority": 10,
        "enableOverridePriority": false,
        "overridePriority": -1,
        "nfType": "UDM"
      }
    }
  ]
]
```

Successful response - 3

```
$ curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/sbi-
message-priority?nfServiceName=nudm_uecm&messageType=REQUEST" -H "accept:
application/json"
[
```

```

{
  "ruleName": "udm_test",
  "data": {
    "nfServiceName": "nudm_uecm",
    "httpMethods": [
      "GET",
      "POST"
    ],
    "messageType": [
      "service-request",
      "service-response"
    ],
    "enableAssignPriority": true,
    "assignPriority": 10,
    "enableOverridePriority": false,
    "overridePriority": -1,
    "nfType": "UDM"
  }
}
]

```

Successful response - 4

```

$ curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/sbi-
message-priority?ruleName=default" -H "accept: application/json"
{
  "ruleName": "default",
  "data": {
    "nfServiceName": "*",
    "httpMethods": [
      "*"
    ],
    "messageType": [
      "*"
    ],
    "enableAssignPriority": false,
    "assignPriority": 16,
    "enableOverridePriority": false,
    "overridePriority": 16,
    "nfType": "*"
  }
}

```

PUT REST API

This resource adds or updates the SBI message priority configuration using the request body.

Resource URI: /ocscp/scpc-configuration/v1/sbi-message-priority

Table 2-222 Data Structures Supported by the PUT Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
SbiMsgPriorityWrapper	M	1	200 OK	Indicates the SBI message priority configuration data.
ProblemDetails	M	1	400 BAD REQUEST	Returns the ProblemDetails structure as defined in 3GPP TS 29.571.

Example

Successful response - 1

```
$ curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/sbi-
message-priority" -H "accept: application/json" -H "Content-Type: application/
json" -d '{"ruleName\":\"nudm_test\",\"data\":
{\"nfServiceName\":\"nudm_uecm\",\"httpMethods\":
[\"PUT\",\"PATCH\"],\"messageType\":[\"service-request\",\"service-
response\"],\"enableAssignPriority\":true,\"assignPriority\":10,\"enableOverri
dePriority\":true,\"overridePriority\":10}}'
```

```
{
  "ruleName": "nudm_test",
  "data": {
    "nfServiceName": "nudm_uecm",
    "httpMethods": [
      "PUT",
      "PATCH"
    ],
    "messageType": [
      "service-request",
      "service-response"
    ],
    "enableAssignPriority": true,
    "assignPriority": 10,
    "enableOverridePriority": true,
    "overridePriority": 10,
    "nfType": "UDM"
  }
}
```

200 OK

Successful response - 2

```
curl -X 'PUT' \
'http://<SCP configuration FQDN>:<port>/ocscp/scpc-configuration/v1/sbi-
message-priority' \
-H 'accept: */*' \
-H 'Content-Type: application/json' \
-d '{
  "ruleName": "nef_qos_test",
```

```

    "data": {
      "nfServiceName": "3gpp-as-session-with-qos",
      "httpMethods": [
        "GET",
        "POST"
      ],
      [
        "service-request",
        "service-response"
      ],
      "enableAssignPriority": true,
      "assignPriority": 10,
      "enableOverridePriority": false,
      "overridePriority": 1,
      "nfType": "NEF"
    }
  }
}'

```

Failure case 1: Due to missing data object in the request body.

```

$ curl -X 'PUT' \
  'http://localhost:1106/ocscp/scpc-configuration/v1/sbi-message-priority' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{
    "ruleName": "rule1"
  }'

```

Response Body:

```

{
  "title": "Bad Request",
  "status": 400,
  "detail": "data Object is missing, Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/sbi-message-priority",
  "cause": "MANDATORY_IE_MISSING"
}

```

Failure case 2: Due to missing fields in request body.

```

$ curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/sbi-
message-priority" -H "accept: application/json" -H "Content-Type: application/
json" -d '{"data":
{"assignPriority":10,"dNns":"","enableAssignPriority":true,"enableOve
rridePriority":true,"httpMethods":
["PUT","PATCH"],"messageType":"REQUEST","overridePriority":10,"sNSS
AIs":"","ruleName":"nudm_test"}'

```

Response Body:

```

{
  "title": "Bad Request",
  "status": "400",
  "detail": "nfServiceName is missing, Please refer to the User Guide.",

```

```

    "instance": "/ocscp/scpc-configuration/v1/sbi-message-priority",
    "cause": "MANDATORY_IE_MISSING"
  }

```

Failure case 2: Missing fields in request body

```

$ curl -X 'PUT' \
  'http://localhost:1106/ocscp/scpc-configuration/v1/sbi-message-priority' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d ' {
    "ruleName": "rule1",
    "data": {

      "httpMethods": [
        ""
      ],
      "messageType": [
        "notification-response",
        "notification-request"
      ],
      "enableAssignPriority": false,
      "assignPriority": 16,
      "enableOverridePriority": false,
      "overridePriority": 16,
      "nfType": ""
    }
  }'

```

Response Body:

```

{
  "title": "Bad Request",
  "status": 400,
  "detail": "nfServiceName is missing, Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/sbi-message-priority",
  "cause": "MANDATORY_IE_MISSING"
}

```

Failure case 2: Overlapping of Keys

```

$ curl -X 'PUT' \
  'http://localhost:1106/ocscp/scpc-configuration/v1/sbi-message-priority' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d ' {
    "ruleName": "rule4",
    "data": {
      "nfServiceName": "",
      "httpMethods": [
        ""
      ],
      "messageType": [
        "notification-response",
        "notification-request"
      ]
    }
  }'

```

```

    ],
    "enableAssignPriority": false,
    "assignPriority": 16,
    "enableOverridePriority": false,
    "overridePriority": 16,
    "nfType": "*"
  }
}'

```

Response Body:

```

{
  "title": "Bad Request",
  "status": 400,
  "detail": "Overlapping of Keys in request Body, please refer to the User
Guide",
  "instance": "/ocscp/scpc-configuration/v1/sbi-message-priority",
  "cause": "MANDATORY_IE_INCORRECT"
}

```

PATCH REST API

This resource adds or updates the message priority configuration using the request body.

Resource URI: /ocscp/scpc-configuration/v1/sbi-message-priority

Table 2-223 URI Query Parameters Supported by the PATCH method

Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
ruleName	String	M	1	Indicates the name of ruleName.
patchDocument	String	M	1	Indicates the patchDocument to be added to the request body. Example: [{"op": "replace", "path": "/data/nfServiceName", "value": "nudm_sdm"}, {"op": "replace", "path": "/data/messageType", "value": "REQUEST"}, {"op": "replace", "path": "/data/httpMethods", "value": ["GET"]}]

Successful response

```

$ curl -X 'PATCH' \
  'http://localhost:1106/ocscp/scpc-configuration/v1/sbi-message-priority?
ruleName=rule1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/merge-patch+json' \

```

```

-d '[[{"op": "replace", "path": "/data/nfServiceName", "value": "nudm-uecm" }]]'

$ curl -X 'PATCH' \
  'http://localhost:1106/ocscp/scpc-configuration/v1/sbi-message-priority?ruleName=rule1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/merge-patch+json' \
  -d '[[{"op": "replace", "path": "/data/nfType", "value": "UDM" }]]'

$ curl -X 'PATCH' \
  'http://localhost:1106/ocscp/scpc-configuration/v1/sbi-message-priority?ruleName=rule1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/merge-patch+json' \
  -d '[[{"op": "replace", "path": "/data/httpMethods", "value": ["GET"]}]]'

$ curl -X 'PATCH' \
  'http://localhost:1106/ocscp/scpc-configuration/v1/sbi-message-priority?ruleName=rule1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/merge-patch+json' \
  -d '[[{"op": "replace", "path": "/data/messageType", "value": ["service-request"]}]]'

```

Table 2-224 PATCH Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
SbiMsgPriorityWrapper	M	1	200 OK	Indicates the SBI message priority configuration data.
ProblemDetails	M	1	400 BAD REQUEST	Returns the ProblemDetails structure as defined in 3GPP TS 29.571.

Response body**Response Body:**

```

{
  "ruleName": "udm_test1",
  "data": {
    "nfServiceName": "nudm_sdm",
    "httpMethods": [
      "GET"
    ],
    "messageType": [
      "service-request",
      "service-response"
    ],
    "enableAssignPriority": true,
    "assignPriority": 25,
    "enableOverridePriority": false,
    "overridePriority": 16,
    "nfType": "UDM"
  }
}

```

```
}
}
```

DELETE REST API

This resource removes the message priority configuration data based on query parameters.

Resource URI: /ocscp/scpc-configuration/v1/sbi-message-priority

Table 2-225 URI Query Parameters Supported by the DELETE method

Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
ruleName	String	O	1	Indicates the name of ruleName.

Note

ruleName is a valid combination of query parameters.

Table 2-226 Data Structures Supported by the DELETE Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
None			204 OK	Returns only the response code in successful scenarios.
ProblemDetails	M	1	404 NOT FOUND	Returns when no matching entry is found.

Example

Successful response - 1

```
$ curl -X DELETE "http://<localhost>:8081/ocscp/scpc-configuration/v1/sbi-  
message-priority?ruleName=udm_test" -H "accept: application/json" */"
```

204 OK

Failure case 1: When no matching entry is found.

```
$ curl -X DELETE "http://<localhost>:8081/ocscp/scpc-configuration/v1/sbi-  
message-priority?ruleName=udm_test" -H "accept: */"
```

Response Body:

```
{
  "title": "Not Found",
  "status": "404",
  "detail": "Sbi Message Priority configuration data not found for the given  
'ruleName': udm_test",
  "instance": "/ocscp/scpc-configuration/v1/sbi-message-priority/udm_test",
```

```
"cause": "DATA_NOT_FOUND"
}
```

2.25 Pod Overload Control Configurations

This section provides information about overload policy configurations to control and discard request messages sent to scp-worker.

2.25.1 Configuring Pod Overload Control Policy

This section provides information about configurations required for CPU and pending transactions onset threshold, abatement threshold, and abatement time for SCP-Worker.

Resources

The following table describes the resource name to retrieve, add, update, and remove the SCP-Worker Pod Overload Control Policy data based on the query parameters.

Table 2-227 Resource Name

Resource Name	Resource URI	HTTP Method	Description
pod-overload-control-policy	/ocscp/scpc-configuration/v1/scp-worker/pod-overload-control-policy	GET	Retrieves all the scp-worker Pod Overload Control Policy data configured in SCP.
pod-overload-control-policy	/ocscp/scpc-configuration/v1/scp-worker/pod-overload-control-policy	GET	Retrieves the scp-worker Pod Overload Control Policy data configured based on the threshold level in SCP when the threshold level is provided as query parameters, which is optional. If it is absent, then it retrieves all Overload Control Policy data configured in SCP.
pod-overload-control-policy	/ocscp/scpc-configuration/v1/scp-worker/pod-overload-control-policy	PUT	Adds or updates the scp-worker Pod Overload Control Policy data to SCP. Note: - You can add new customized threshold levels. - While configuring threshold levels, ensure that onset and abatement thresholds do not overlap with other threshold levels. - While configuring the WARN level, you should configure the lowest possible onset and abatement thresholds. - Ensure that the abatement threshold is lesser than the onset threshold.
pod-overload-control-policy	/ocscp/scpc-configuration/v1/pod-overload-control-policy	DELETE	Removes the configured scp-worker Pod Overload Control Policy data at the threshold level. Note: SCP does not allow the removal of default threshold levels: MINOR, MAJOR, WARN, and CRITICAL.

Data Model

Request Body

The following table describes the field names of the OverloadCtrlPolicyWrapper data type.

Table 2-228 OverloadCtrlPolicyWrapper

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
thresholdLevel	String	M	Indicates the name of a threshold level, for example, MINOR, MAJOR, WARN, and CRITICAL.
data	WorkerPodOICtrlPolicy Data	M	Contains the cpuOverloadConfig data.

Table 2-229 WorkerPodOICtrlPolicyData

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
cpuOverloadConfig	Object	M	Contains CPU overload control details.
pendingTransactionOverload Config	Object	C	Configures the parameters such as onSetThreshold, abatementThreshold, and abatementTimeInMilliseconds for all the threshold levels. Note: The pendingTransactionOverloadConfig parameter is optional, but if a user wants to keep this configuration, then all three parameters of this configuration should be provided.

Table 2-230 CpuOverloadConfig

Field Name	Data Type	Mandatory (M) or Optional(O)	Range	Description
onSetThreshold	Integer	M	2-100	Indicates the Pod CPU overload onset threshold value for a congestion level. Note: This value is the percentage of CPU utilization.
abatementThreshold	Integer	M	1-99	Indicates the congestion level abatement threshold value. Note: This value is the percentage of CPU utilization.
abatementTimeInMilliseconds	Integer	M	50 ms to 5000 ms	Indicates the congestion level abatement threshold time.

Table 2-231 pendingTransactionOverloadConfig

Field Name	Data Type	Mandatory (M) or Optional(O)	Range	Description
onSetThreshold	Integer	M	2-100	Indicates the percentage of pod's pending transaction for given maximum allowed pending transaction. Note: Maximum allowed pending transaction is the maximum number of requests pending at SCP at any point in time for a particular SCP-Worker CPU profile deployed. For maximum allowed pending transaction per SCP-Worker CPU profile, see Table 2-232 .
abatementThreshold	Integer	M	1-99	Indicates the congestion level abatement threshold value. Note: This value is the percentage of the maximum allowed pending transactions supported by SCP.
abatementTimeInMilliseconds	Integer	M	50ms to 5000ms	Indicates the congestion level abatement threshold time.

Table 2-232 Maximum Allowed Pending Transaction per SCP-Worker CPU Profile

SCP-Worker CPU Profile	Maximum Allowed Pending Transaction
4	6000
8	12000
12	15000

Table 2-233 CpuOverloadConfig Threshold Level

Threshold Level	onSetThreshold	abatementThreshold	Abatement Time in millisecond
WARN	75	70	200
MINOR	82	76	200
MAJOR	87	83	200
CRITICAL	92	88	200

Note

These alarms are raised when the CPU utilization reaches the mentioned threshold level.

Table 2-234 pendingTransactionOverloadConfig Threshold Level

Threshold Level	onSetThreshold	abatementThreshold	Abatement Time in millisecond
WARN	75	70	200
MINOR	82	76	200
MAJOR	87	83	200
CRITICAL	92	88	200

Note

These alarms are raised when the pending transaction reaches the mentioned threshold level.

Resource Definition**GET REST API**

This resource fetches the scp-worker Pod Overload Control Policy data based on the query parameters.

If no query parameter is provided, all the Overload Control Policy data is returned.

Resource URI: /ocscp/scpc-configuration/v1/scp-worker/pod-overload-control-policy

Table 2-235 URI Query Parameters Supported by the GET Method

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
thresholdLevel	String	M	Indicates the name of a threshold level, for example, MINOR, MAJOR, WARN, and CRITICAL. This is the threshold level for which the query is being triggered. This returns the overload Control policy configuration for the queried threshold level.

Table 2-236 Data Structures Supported by the GET ALL Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
List<OverloadCtrlPolicyWrapper>	M	1	200 OK	Indicates the list of OverloadCtrlPolicyWrapper data.

Table 2-237 Data Structures Supported by the GET Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
OverloadCtrlPolicyWrapper	-	1	200 OK	Indicates the OverloadCtrlPolicyWrapper configuration data. On successful response, returns the overload Control configuration data.
ProblemDetails	M	1	404 NOT FOUND	Returns error with problem details in case of any issue and if the query is unable to fetch the results. This data type can have 403 response code that indicates operation is not allowed.

Example

Successful response

```
{
  "thresholdLevel": "CRITICAL",
  "data": {
    "cpuOverloadConfig": {
      "onSetThreshold": 95,
      "abatementThreshold": 92,
      "abatementTimeInMilliseconds": 90
    },
    "pendingTransactionOverloadConfig": {
      "onSetThreshold": 95,
      "abatementThreshold": 92,
      "abatementTimeInMilliseconds": 50
    }
  }
}
```

PUT REST API

This resource adds or updates the scp-worker Pod Overload Control Policy configuration data using the request body.

Resource URI: /ocscp/scpc-configuration/v1/scp-worker/pod-overload-control-policy

Table 2-238 Data Structures Supported by the PUT Response Body

Name	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
OverloadCtrlPolicyWrapper	M	1	200 OK	Indicates the OverloadCtrlPolicyWrapper configuration data. On successful response, returns the overload Control configuration data.

Table 2-238 (Cont.) Data Structures Supported by the PUT Response Body

Name	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
ProblemDetails	M	1	400 BAD REQUEST	Returns the ProblemDetails structure as defined in 3GPP TS 29.571. This data type can have 403 response code that indicates operation is not allowed. Returns BAD request in case request is incorrect. In response, sends problemDetails as defined in 29.571.

Example

Successful response

```
curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/scp-worker/
pod-overload-control-policy" -H "accept: */*" -H "Content-Type: application/
json" -d "{\"data\":{\"cpuOverloadConfig\":
{\"abatementThreshold\":96,\"abatementTimeInMilliseconds\":600,\"onSetThreshol
d\":97}},\"thresholdLevel\":\"Level1\"}"
```

Response Code: 201 CREATED

Response Body:

```
{
  "thresholdLevel": "Level1",
  "data": {
    "cpuOverloadConfig": {
      "onSetThreshold": 97,
      "abatementThreshold": 96,
      "abatementTimeInMilliseconds": 90
    },
    "pendingTransactionOverloadConfig": {
      "onSetThreshold": 97,
      "abatementThreshold": 96,
      "abatementTimeInMilliseconds": 50
    }
  }
}
```

DELETE REST API

This resource removes the scp-worker Pod Overload Control Policy configuration data based on the query parameters.

Resource URI: /ocscp/scpc-configuration/v1/scp-worker/pod-overload-control-policy

Table 2-239 URI Query Parameters Supported by the DELETE Method

Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
thresholdLevel	String	M	1	Indicates the name of a custom threshold level. This is the threshold level for which the query is being triggered. This returns the overload Control policy configuration for the queried threshold level.

Note

- thresholdLevel is a valid combination of query parameters.
- Only custom threshold levels can be removed. The default levels, MINOR, MAJOR, WARN, and CRITICAL cannot be removed.

Table 2-240 Data Structures Supported by the DELETE Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
None			204 OK	Returns the successful response in case deletion of record is successful.
ProblemDetails	M	1	404 NOT FOUND	Returns when no matching entry is found. This data type can have 403 response code that indicates operation is not allowed.

Example

Successful response

```
curl -X DELETE "http://<localhost>:8081/ocscp/scpc-configuration/V1/scp-worker/pod-overload-control-policy?thresholdLevel=LEVEL1" -H "accept: application/json"
```

Response code : 204 No Content

2.25.2 Configuring Pod Overload Action Policy

This section describes SCP-Worker Pod Overload Action Policy configurations based on the threshold level.

Resources

The following table describes the resource name to retrieve, add, update, and remove the SCP-Worker Pod Overload Action Policy data based on the query parameters.

Table 2-241 Resource Name

Resource Name	Resource URI	HTTP Method	Description
pod-overload-action-policy	/ocscp/scpc-configuration/v1/scp-worker/pod-overload-action-policy	GET	Retrieves all the scp-worker Pod Overload Action Policy data configured in SCP.
pod-overload-action-policy	/ocscp/scpc-configuration/v1/scp-worker/pod-overload-action-policy	GET	Retrieves the scp-worker Pod Overload Action Policy data configured based on the threshold level in SCP.
pod-overload-action-policy	/ocscp/scpc-configuration/v1/scp-worker/pod-overload-action-policy	PUT	Adds scp-worker Pod Overload Action Policy data to SCP. By default, this policy supports MINOR, MAJOR, and CRITICAL levels. Note: - You can add new customized threshold levels. - Do not configure the Warn threshold level.
pod-overload-action-policy	/ocscp/scpc-configuration/v1/scp-worker/pod-overload-action-policy	DELETE	Removes the configured scp-worker Pod Overload Action Policy data by the threshold level. Note: You cannot remove MINOR, MAJOR, and CRITICAL threshold levels.

Data Model

Request Body

The following table describes the field names of the OverloadActionWrapper data type.

Table 2-242 OverloadActionWrapper

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
thresholdLevel	String	M	Indicates the name of a threshold level, for example, MINOR, MAJOR, and CRITICAL.
data	WorkerPodOlActionPolicyData	M	Contains the cpuOverloadConfig data.

Table 2-243 WorkerPodOIActionPolicyData

Field Name	Data Type	Mandatory (M) or Optional(O)	Range	Description
overloadAction	Enum	M	NO_ACTION and DISCARD	Indicates the overloadAction objects, for example: NO_ACTION and DISCARD. NO_ACTION indicates that no action is taken for the configured thresholdLevel. DISCARD indicates that the messages can be discarded based on the "3gpp-Sbi-Message-Priority" header or percentage. The default value is DISCARD.
errorResponsePercentage	Integer	M	100	Indicates the percentage of messages with error responses when overloadAction is DISCARD.
ErrorProfileConfiguration	Object	M	NA	Indicates error profiles to be used for responding with error responses if overloadAction is configured.
DiscardPolicyType	Enum	M	DISCARD_PERCENTAGE and SBI_MESSAGE_PRIORITY	Indicates the DiscardPolicyType objects. For example: DISCARD_PERCENTAGE and SBI_MESSAGE_PRIORITY. DISCARD_PERCENTAGE enables the discard message by percentage. SBI_MESSAGE_PRIORITY enables the discard message by priority.

Table 2-244 ErrorProfileConfiguration

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
errorCode	Integer	M	429	Indicates an HTTP status error code.
errorCause	String	M	NF_CONGESTION_RISK	Indicates the cause of the pod overload.
errorTitle	String	M	SCP is in pod overload congestion	Indicates the name of the error.
errorDescription	String	M	SCP <podName> pod is in <congestion level> pod overload congestion	Describes the cause of the error.

Table 2-244 (Cont.) ErrorProfileConfiguration

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
retryAfter	String	O	NA	Indicates the interval to start the next retry attempt.
redirectUrl	String	O	NA	Indicates the alternate URL to redirect request messages.

Resource Definition**GET REST API**

This resource fetches the scp-worker Pod Overload Action Policy data based on the query parameters.

If no query parameter is provided, all the Overload Action Policy data is returned.

Resource URI: /ocscp/scpc-configuration/v1/scp-worker/pod-overload-action-policy

Table 2-245 URI Query Parameters Supported by the GET Method

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
thresholdLevel	String	M	Indicates the name of a threshold level, for example, MINOR, MAJOR, and CRITICAL. This is the threshold level for which the query is being triggered. This returns the overload action policy configuration for the queried threshold level.

Note

thresholdLevel is a valid combination of query parameters.

Table 2-246 Data Structures Supported by the GET ALL Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
List<OverloadActionPolicy Wrapper>		1	200 OK	Indicates the list of OverloadActionPolicyWrapper data.

Table 2-247 Data Structures Supported by the GET Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
OverloadActionPolicyWrapper		1	200 OK	Indicates the OverloadActionPolicyWrapper configuration data. On successful response, returns the overload Action configuration data.

Example

Successful response

```
curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/scp-worker/
pod-overload-action-policy?thresholdLevel=CRITICAL" -H "accept: application/
json"
```

Response code : 200 OK

Response data:

```
{
  "thresholdLevel": "CRITICAL",
  "data": {
    "overloadAction": "DISCARD",
    "errorResponsePercentage": 100,
    "errorProfileConfiguration": {
      "errorCode": 429,
      "errorCause": "",
      "errorTitle": "",
      "errorDescription": "",
    },
    "discardPolicyType": "DISCARD_PERCENTAGE"
  }
}
```

PUT REST API

This resource adds or updates the scp-worker Pod Overload Action Policy configuration data using the request body.

Resource URI: /ocscp/scpc-configuration/v1/scp-worker/pod-overload-action-policy

Table 2-248 Data Structures Supported by the PUT Response Body

Field Name	Mandatory (M) or Optional(O)	Response Codes	Description
OverloadActionWrapper	M	200 OK	Indicates the OverloadAction configuration data. On successful response, returns the overload Action configuration data.

Table 2-248 (Cont.) Data Structures Supported by the PUT Response Body

Field Name	Mandatory (M) or Optional(O)	Response Codes	Description
ProblemDetails	M	400 BAD REQUEST	Returns the ProblemDetails structure as defined in 3GPP TS 29.571. This data type can have 403 response code that indicates operation is not allowed. Returns BAD request in case request is incorrect. In response, sends probLemDetails as defined in 3GPP TS 29.571.

Example

Successful response

```
curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/scp-worker/
pod-overload-action-policy" -H "accept: */*" -H "Content-Type: application/
json" -d "{\"data\":
{\"discardPolicyType\": \"DISCARD_PERCENTAGE\", \"errorProfileConfiguration\":
{\"errorCause\": \"\", \"errorCode\": 429, \"errorDescription\": \"string\", \"error
Title\": \"string\", \"redirectUrl\": \"string\", \"retryAfter\": \"string\"}, \"err
orResponsePercentage\": 67, \"overloadAction\": \"NO_ACTION\"}, \"thresholdLevel\":
\"Level1\"}\""
```

Response Code: 201 CREATED

Response Data:

```
{
  "thresholdLevel": "Level1",
  "data": {
    "overloadAction": "NO_ACTION",
    "errorResponsePercentage": 100,
    "errorProfileConfiguration": {
      "errorCode": 429,
      "errorCause": "",
      "errorTitle": "string",
      "errorDescription": "string",
      "retryAfter": "string",
      "redirectUrl": "string"
    },
    "discardPolicyType": "DISCARD_PERCENTAGE"
  }
}
```

DELETE REST API

This resource removes the scp-worker Pod Overload Action Policy configuration data based on the query parameters.

Resource URI: /ocscp/scpc-configuration/v1/scp-worker/pod-overload-action-policy

Table 2-249 URI Query Parameters Supported by the DELETE Method

Field Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
thresholdLevel	String	M	1	Indicates the name of a threshold level, for example, MINOR, MAJOR, and CRITICAL. This is the threshold level for which the query is being triggered. This returns the overload Action policy configuration for the queried threshold level.

Note

thresholdLevel is a valid combination of query parameters.

Table 2-250 Data Structures Supported by the DELETE Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
None			204 NO CONTENT	Returns the successful response in case deletion of record is successful.
ProblemDetails	M	1	404 NOT FOUND	Returns when no matching entry is found. This data type can have 403 response code that indicates operation is not allowed.

Example

Successful response

```
curl -X DELETE "http://<localhost>:8081/ocscp/scpc-configuration/v1/scp-worker/pod-overload-action-policy?thresholdLevel=LEVEL1" -H "accept: application/json"
```

Response Code: 204 No Content

2.25.3 Configuring Pod Overload Discard Policy

This section describes SCP-Worker Pod Overload Discard Policy configurations based on the threshold level.

Resources

The following table describes the resource name to retrieve, add, update, and remove the SCP-Worker Pod Overload Discard Policy data based on the query parameters.

Table 2-251 Resource Name

Resource Name	Resource URI	HTTP Method	Description
pod-overload-discard-policy	/ocscp/scpc-configuration/v1/scp-worker/pod-overload-discard-policy	GET	Retrieves all the scp-worker Pod Overload Discard Policy data configured in SCP.
pod-overload-discard-policy	/ocscp/scpc-configuration/v1/scp-worker/pod-overload-discard-policy	GET	Retrieves the scp-worker Pod Discard Policy data configured based on the threshold level in SCP.
pod-overload-discard-policy	/ocscp/scpc-configuration/v1/scp-worker/pod-overload-discard-policy	PUT	Adds the scp-worker Pod Discard Policy data to SCP. By default, this policy supports MINOR, MAJOR, and CRITICAL levels. Note: - You can add new customized threshold levels. - Do not configure the Warn threshold level.
pod-overload-discard-policy	/ocscp/scpc-configuration/v1/scp-worker/pod-overload-discard-policy	DELETE	Removes the configured scp-worker Pod Discard Policy data by the threshold level. Note: You cannot remove MINOR, MAJOR, and CRITICAL threshold levels.

Data Model

Request Body

The following table describes the field names of the DiscardPolicyWrapper data type.

Table 2-252 DiscardPolicyWrapper

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
thresholdLevel	String	M	Indicates the name of a threshold level, for example, MINOR, MAJOR, WARN, and CRITICAL.
data	WorkerPodOldDiscardPolicyData	M	Contains the cpuOverloadConfig data.

Table 2-253 DiscardPolicyConfig Threshold Level

Threshold Level	discardPercentage	sbiMsgPriorityDiscardForm
MINOR	20	16
MAJOR	50	8
CRITICAL	70	4

Table 2-254 WorkerPodOldDiscardPolicyData

Field Name	Data Type	Mandatory (M) or Optional(O)	Range	Description
discardPercentage	Integer	M	1-100	Indicates the percentage of messages to be discarded if the CPU overload threshold level exceeds the configured limit.
sbiMsgPriorityDiscardFrom	Integer	M	0-31	Discards the requests having SBI message priority greater than or equal to the configured limit.

Resource Definition**GET REST API**

This resource fetches the scp-worker Pod Overload Discard Policy data based on the query parameters.

If no query parameter is provided, all the Discard Policy data is returned.

Resource URI: /ocscp/scpc-configuration/v1/scp-worker/pod-overload-discard-policy

Table 2-255 URI Query Parameters Supported by the GET Method

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
thresholdLevel	String	M	Indicates the name of a threshold level, for example, MINOR, MAJOR, WARN, and CRITICAL. This is the threshold level for which the query is being triggered. This returns the overload Discard policy configuration for the queried threshold level.

Table 2-256 Data Structures Supported by the GET ALL Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
List<DiscardPolicyWrapper>	M	1	200 OK	Indicates the list of DiscardPolicyWrapper data.

Table 2-257 Data Structures Supported by the GET Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
DiscardPolicyWrapper	M	1	200 OK	Indicates the DiscardPolicyWrapper configuration data. On successful response, returns the overload Discard configuration data.

Table 2-257 (Cont.) Data Structures Supported by the GET Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
ProblemDetails	M	1	404 NOT FOUND	Returns error with problem details in case of any issue and if the query is unable to fetch the results. This data type can have 403 response code that indicates operation is not allowed.

Example

Successful response

```
curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/scp-worker/pod-overload-discard-policy?thresholdLevel=CRITICAL" -H "accept: application/json"
```

Response Code: 200 OK

Response Body:

```
{
  "thresholdLevel": "CRITICAL",
  "data": {
    "discardPercentage": 30,
    "sbiMsgPriorityDiscardFrom": 4
  }
}
```

PUT REST API

This resource adds or updates the scp-worker Pod Overload Discard Policy configuration data using the request body.

Resource URI: /ocscp/scpc-configuration/v1/scp-worker/pod-overload-discard-policy

Table 2-258 Data Structures Supported by the PUT Response Body

Field Name	Mandatory (M) or Optional(O)	Response Codes	Description
DiscardPolicyWrapper	M	200 OK	Indicates the DiscardPolicy configuration data. On successful response, returns the overload Discard configuration data.
ProblemDetails	M	400 BAD REQUEST	Returns the ProblemDetails structure as defined in 3GPP TS 29.571. This data type can have 403 response code that indicates operation is not allowed. Returns BAD request in case request is incorrect. In response, sends probLemDetails as defined in 29.571.

Example

Successful response

```
curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/scp-worker/
pod-overload-discard-policy" -H "accept: */*" -H "Content-Type: application/
json" -d "{\"data\":
{\"discardPercentage\":40,\"sbiMsgPriorityDiscardFrom\":19},\"thresholdLevel\"
: \"LEVEL1\"}"
```

Response Code: 201 OK

Response Body:

```
{
  "thresholdLevel": "LEVEL1",
  "data": {
    "discardPercentage": 40,
    "sbiMsgPriorityDiscardFrom": 19
  }
}
```

DELETE REST API

This resource removes the scp-worker Pod Overload Discard Policy configuration data based on the query parameters.

Resource URI: /ocscp/scpc-configuration/v1/scp-worker/pod-overload-discard-policy

Table 2-259 URI Query Parameters Supported by the DELETE Method

Field Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
thresholdLevel	String	M	1	Indicates the name of a threshold level, for example, MINOR, MAJOR, WARN, and CRITICAL. This is the threshold level for which the query is being triggered. This returns the overload Discard policy configuration for the queried threshold level.

Note

thresholdLevel is a valid combination of query parameters.

Table 2-260 Data Structures Supported by the DELETE Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
None			200 OK	Returns the successful response in case deletion of record is successful.
ProblemDetails	M	1	404 NOT FOUND	Returns when no matching entry is found. This data type can have 403 response code that indicates operation is not allowed.

Example

Successful response

```
curl -X DELETE "http://<localhost>:8081/ocscp/scpc-configuration/v1/scp-worker/pod-overload-discard-policy?thresholdLevel=LEVEL1" -H "accept: application/json"
```

Response Code: 204 No Content

2.26 Configuring SEPP InterPlmn Info

This section provides SEPP InterPlmn Info REST API configurations to enable SCP integration with Security Edge Protection Proxy (SEPP) to route 5G Service Based Interface (SBI) roaming subscriber traffic outside the network to the required Public Land Mobile Network (PLMN).

Resources

The following table describes the resource name to retrieve, add, update, and remove SEPP Info based on the query parameters.

Table 2-261 Resource Name

Resource Name	Resource URI	HTTP Method	Description
sepp-config	/ocscp/scpc-configuration/v1/sepp-config	GET	Retrieves all the SEPP Info configured list at SCP or specific records based on the query parameters.
sepp-config	/ocscp/scpc-configuration/v1/sepp-config/{nflInstanceId}	GET	Retrieves SEPP Info records based on nflInstanceId as a path variable.
sepp-config	/ocscp/scpc-configuration/v1/sepp-config/{nflInstanceId}	PUT	Adds or updates SEPP Info details configured in SCP.

Table 2-261 (Cont.) Resource Name

Resource Name	Resource URI	HTTP Method	Description
sepp-config	/ocscp/scpc-configuration/v1/sepp-config/{nfInstanceId}	PATCH	Updates or modifies SEPP Info details configured in SCP.
sepp-config	/ocscp/scpc-configuration/v1/sepp-config/{nfInstanceId}	DELETE	Removes the configured SEPP Info details based on nfInstanceId.

Data Model**Request Body**

The following table describes the field names of the InterPlmnRoutingInfo data type.

Table 2-262 InterPlmnRoutingInfo

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
nfInstanceId	String	M	Specifies the identity of the NF instance for which routing information is fetched.
seppInfo remotePlmnList	String	M	This is the remote PLMN list served by SEPP, utilized in roaming scenarios to select SEPP based on the PLMN in the FQDN.
mcc	String	M	Indicates the mobile country code. It is a three digit number ranging from 0 to 9.
mnc	String	M	Indicates the mobile network code. It can be of two or three digits ranging from 0 to 9.
http	String	M	Enables the HTTP connection. The value can be 0 to 65535.
https	String	M	Enables the HTTPS connection. The value can be 0 to 65535.

Response Body

The following table describes response body data models that varies based on the REST operation status.

Table 2-263 Response Body Data Type

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
array(InterPlmnRoutingInfo)	M	1	200 OK	Indicates the list of SEPP Info (InterPlmnRoutingInfo) matching criteria.
ProblemDetails	M	1	404 NOT FOUND	Returns when the data is not found for given query parameters.

JSON Format

```
[
  {
    "nfInstanceId" : "1faf1bbc-6e4a-4454-a507-a14ef8e1bc6a",
    "seppInfo": {
      "remotePlmnList": [{
        "mcc": "327",
        "mnc": "15"
      }, {
        "mcc": "328",
        "mnc": "16"
      }, {
        "mcc": "329",
        "mnc": "17"
      }],
      "seppPorts": {
        "http": "8000",
        "https": "8090"
      }
    }
  }, {
    ....
    ...
  }
]
```

Resource Definition**GET REST API**

This resource fetches the SEPP Info details (InterPlmnRoutingInfo) based on the query parameters.

If no query parameter is provided, all the SEPP info details are returned.

Resource URI: /ocscp/scpc-configuration/v1/sepp-config

The following table describes the URI query parameters supported by the GET method on this resource.

Table 2-264 URI Query Parameters Supported by the GET Method

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
nfInstanceId	String	O	Specifies the identity of the NF instance for which routing information is fetched.

Note

nfInstanceId is a valid combination of query parameter or path variable.

Table 2-265 Data Structures Supported by the GET Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
array(InterPlmnRoutingInfo)	M	1	200 OK	Indicates the list of SEPP Info (InterPlmnRoutingInfo) or specific record based on the query parameters.
ProblemDetails	M	1	404 NOT FOUND	Returns when the data is not found for given query parameters.

Example

Successful response - 1

```
$ curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/sepp-config" -H "accept: application/json"
[
  {
    "nfInstanceId": "1faf1bbc-6e4a-4454-a507-a14ef8e1bc6a",
    "seppInfo": {
      "remotePlmnList": [{
        "mcc": "327",
        "mnc": "15"
      }, {
        "mcc": "328",
        "mnc": "16"
      }],
      "seppPorts": {
        "http": "8000",
        "https": "8090"
      }
    }
  }
]
```

Successful response - 2

```
$ curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/sepp-
config?nfInstanceId=1faf1bbc-6e4a-4454-a507-a14ef8e1bc6a" -H "accept:
application/json"
```

```
{
  "nfInstanceId": "1faf1bbc-6e4a-4454-a507-a14ef8e1bc6a",
  "seppInfo": {
    "remotePlmnList": [{
      "mcc": "327",
      "mnc": "15"
    }, {
      "mcc": "328",
      "mnc": "16"
    }],
    "seppPorts": {
      "http": "8000",
      "https": "8090"
    }
  }
}
```

Successful response - 3

```
$ curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/sepp-
config/1faf1bbc-6e4a-4454-a507-a14ef8e1bc6a" -H "accept: application/json"
```

```
{
  "nfInstanceId": "1faf1bbc-6e4a-4454-a507-a14ef8e1bc6a",
  "seppInfo": {
    "remotePlmnList": [{
      "mcc": "327",
      "mnc": "15"
    }, {
      "mcc": "328",
      "mnc": "16"
    }],
    "seppPorts": {
      "http": "8000",
      "https": "8090"
    }
  }
}
```

Failure case 1

```
$ curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/sepp-
config?nfInstanceId=4faf1bbc-5e4a-4454-a507-a14ef8e1bc6a" -H "accept:
application/json"
```

Response Body:

```
{
  "title": "Not Found",
```

```

    "status": "404",
    "detail": "Sepp Info configuration data not found against given query
parameter(s), Please refer to the User Guide",
    "instance": "/ocscp/scpc-configuration/v1/sepp-config?
nfInstanceId=4faf1bbc-5e4a-4454-a507-a14ef8e1bc6a",
    "cause": "DATA_NOT_FOUND"
}

```

PUT REST API

This resource adds or updates the SEPP Info configuration using the request body.

Resource URI: /ocscp/scpc-configuration/v1/sepp-config/{nfInstanceId}

Table 2-266 Data Structures Supported by the PUT Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
InterPlmnRoutingInfo	M	1	200 OK	Indicates the InterPlmn RoutingInfo configuration data.
ProblemDetails	M	1	400 BAD REQUEST	Returns the ProblemDetails structure as defined in 3GPP TS 29.571 section 5.2.4.1.

Example

Successful response

```

$ curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/sepp-
config/2faf1bbc-6e4a-4454-a507-a14ef8e1bc6a" -H "accept: */*" -H "Content-
Type: application/json" -d "{ \"nfInstanceId\": \"9faf1bbc-6e4a-4454-a507-
aef01a101a06\", \"seppInfo\": { \"remotePlmnList\": [{ \"mcc\": \"267\",
\"mnc\": \"321\" }], \"seppPorts\": { \"http\": \"8000\", \"https\":
\"4430\" } } }"

```

```

{
  "nfInstanceId": "2faf1bbc-6e4a-4454-a507-a14ef8e1bc6a",
  "seppInfo": {
    "remotePlmnList": [{
      "mcc": "267",
      "mnc": "321"
    }],
    "seppPorts": {
      "http": "8000",
      "https": "4430"
    }
  }
}

```

200 OK

PATCH REST API

This resource adds or updates the SEPP Info configuration using the request body.

Resource URI: /ocscp/scpc-configuration/v1/sepp-config/ {nfInstanceId}

Table 2-267 URI Query Parameters Supported by the PATCH method

Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
nfInstanceId	String	M	1	Specifies the identity of the NF instance for which routing information is fetched.
patchDocument	String	M	1	Indicates the patchDocument to be sent. Example: [{"op": "replace", "path": "/seppInfo/seppPorts/http", "value": "8000"}, {"op": "replace", "path": "/seppInfo/seppPorts/https", "value": "9000"}]

Successful response: Request Body

```
$ curl -X PATCH "http://<localhost>:8081/ocscp/scpcconfiguration/v1/sepp-config/2faf1bbc-6e4a-4454-a507-a14ef8e1bc6a" -H "accept: application/json" -H "Content-Type: application/merge-patch+json" -d "[{"op": "replace", "path": "/seppInfo/seppPorts/https", "value": "9010"}, {"op": "replace", "path": "/seppInfo/seppPorts/http", "value": "9100"}]"
```

Table 2-268 PATCH Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
InterPlmnRoutingInfo	M	1	200 OK	Indicates the InterPlmn RoutingInfo configuration data.
ProblemDetails	M	1	400 BAD REQUEST	Returns the ProblemDetails structure as defined in 3GPP TS 29.571 section 5.2.4.1.

Response body

```
{
  "nfInstanceId": "2faf1bbc-6e4a-4454-a507-a14ef8e1bc6a",
  "seppInfo": {
    "remotePlmnList": [{
      "mcc": "327",
      "mnc": "15"
    }, {
      "mcc": "328",
      "mnc": "16"
    }],
    "seppPorts": {
```

```

        "http": "9010",
        "https": "9000"
    }
}

```

DELETE REST API

This resource removes the SEPP Info configuration data based on query parameters.

Resource URI: /ocscp/scpc-configuration/v1/sepp-config/{nfInstanceId}

Table 2-269 URI Query Parameters Supported by the DELETE method

Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
nfInstanceId	String	O	1	Specifies the identity of the NF instance for which routing information is fetched.

Note

nfInstanceId is a valid combination of query parameter or path variable.

Table 2-270 Data Structures Supported by the DELETE Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
None			204 OK	In successful scenarios, only response code is returned.
ProblemDetails	M	1	404 NOT FOUND	When no matching entry is found.

Example

Successful response - 1

```
$ curl -X DELETE "http://<localhost>:8081/ocscp/scpc-configuration/v1/sepp-config/2faf1bbc-6e4a-4454-a507-a14ef8e1bc6a" -H "accept: application/json" */*
```

204 OK

Failure case 1: When no matching entry is found.

```
$ curl -X DELETE "http://<localhost>:8081/ocscp/scpc-configuration/v1/sepp-config/4faf1bbc-5e4a-4454-a507-a14ef8e1bc6a" -H "accept: application/json"
```

Response Body:

```
{
```

```

    "title": "Not Found",
    "status": "404",
    "detail": "Sepp Info configuration data not found against given query
parameter(s), Please refer to the User Guide",
    "instance": "/ocscp/scpc-configuration/v1/sepp-config4faf1bbc-5e4a-4454-
a507-a14ef8e1bc6a",
    "cause": "DATA_NOT_FOUND"
  }

```

2.27 Configuring App Routing Options

The following section provides configuration details about routing options applicable for Mediation.

Resources

The following table describes the resource name to retrieve, add, update, and remove App routing options.

Table 2-271 Resource Name

Resource Name	Resource URI	HTTP Method	Description
approutingoptions	/ocscp/scpc-configuration/{version}/approutingoptions	GET ALL	Retrieves all configured App routing options.
approutingoptions	/ocscp/scpc-configuration/{version}/approutingoptions/{appname}	GET	Retrieves the configured App routing options specified using the field appname. Note: Routing options can be specified only for Mediation, therefore only "mediation" appname is supported.
approutingoptions	/ocscp/scpc-configuration/{version}/approutingoptions/{appname}	PUT	Updates the configured App routing options specified using the field appname. Note: You cannot create new routing options but you can only update them. Routing options for appname Mediation can only be updated.
approutingoptions	/ocscp/scpc-configuration/{version}/approutingoptions/{appname}	DELETE	Removes the configured App routing options specified using the appname field. Note: DELETE method is not supported.

Data Model

The following table describes the supported data type.

Table 2-272 approutingoptions

Field Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Description	Allowed Values	Default Value
appName	String	M	1	Indicates the name of the application for which the routing option has to be configured.	mediation	mediation

Table 2-272 (Cont.) approutingoptions

Field Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description	Allowed Values	Default Value
routingOptions	JSON	M	1	Indicates the JSON structure to store the routing options.	NA	<pre>{ "appName": "mediation", "routingOptions" : { "v1": { "retry": true, "maxRetries": 2, "responseTimeout": "1s", "onErrorResponse": [{ "statusCode" : ["DEFAULT"], "action" : "continue_processing" }, { "statusCode": ["MSGDCODEFAILURE"], "action" : "continue_processing" }, { "statusCode": ["MAXHD RSIZEEXCEEDED"] / "action" : "continue_processing" }</pre>

Table 2-272 (Cont.) approutingoptions

Field Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description	Allowed Values	Default Value
						single }

Table 2-273 approutingOptions

Field Name	Data Type	Mandatory (M) or Optional(O)	Description	Default Value
retry	boolean	O	Indicates whether to attempt retry or not when the routing fails.	true
maxRetryAttempts	INT	O	Indicates the maximum number of retry attempts. Minimum value is 1, Maximum value is 10.	1
responseTimeout	String	O	Indicates the allotted time to respond to a message request. Value Range: 100 - 50000 milliseconds or 1 - 50 seconds.	1s
exceptionErrorResponses	List<ExceptionErrorResponses>	O	Indicates the list of ExceptionErrorResponses. Specifies the methods to handle exceptions in case of routing failures. Note: exceptionErrorResponses specify how exceptions should be handled. In the exceptionErrorResponses of routingOptions, three exception configurations will be created by default during deployment. These configurations will include the status codes DEFAULT, MSGDECODEFAILURE, and MAXHDRSIZEEXCEEDED, with the action set to continue_processing. This means that if an exception occurs during mediation invocation, the process will continue. To change this behavior, the user must create their own exception configuration by specifying actions for specific status codes.	"exceptionErrorResponses": [{ "statusCode": ["DEFAULT"], "action": "continue_processing" }, { "statusCode": ["MSGDECODEFAILURE"], "action": "continue_processing" }, { "statusCode": ["MAXHDRSIZEEXCEEDED"], "action": "continue_processing" },]

Table 2-274 exceptionErrorResponses

Field Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description	Default Value
statusCode	List<String>	M	1..N	Indicates the list of status codes that matches with the status code received from the application. The required action specified by action field is taken.	HTTP Status Codes, HTTP Status with other defined custom status (RESPONSE_TIMEOUT and CONNECTION_FAILURE) Default values are: DEFAULT, MSGDECODEFAILURE, and MAXHRSIZEEXCEEDED
action	String	M	1	Indicates the action to be taken when the above mentioned status code is received.	send_error_response: Error to be sent if the received status code from application is present in the statusCode list. continue_processing: Continue with processing of message if the received status code from application is present in the statusCode list.
errorProfileConfiguration	JSON	C (mandatory when action=send_error_response)	1	The error profile to be sent when the action to perform is send_error_response when the statusCode matches.	NA

Table 2-275 errorProfileConfiguration

Field Name	Data Type	Mandatory (M) or Optional(O)	Description	Default Value
errorCode	Int	O	Indicates configurable error codes to be sent by SCP to consumer NFs.	Valid HTTP status codes include 5xx and 4xx error codes, as well as custom error codes such as DEFAULT, RESPONSE_TIMEOUT, and CONNECTION_FAILURE. For example, 500, 502, 400, 404 and so on.
errorCause	String	O	Indicates the error cause that is specific to the occurrence of the problem.	NA
errorTitle	String	O	Indicates the title of the error.	NA
errorDescription	String	O	Indicates an explanation specific to the occurrence of the problem.	NA

Table 2-275 (Cont.) errorProfileConfiguration

Field Name	Data Type	Mandatory (M) or Optional(O)	Description	Default Value
retryAfter	String	C	Indicates the retry interval.	Mandatory if ERROR code is 3xx series and action is send_error_response. The time unit supported is seconds. Example: 2s, 3s, and so on.
redirectUrl	String	C	Indicates the AbsoluteURL of the resource to which the message is redirected to.	Mandatory if ERROR code is 3xx series and action is send_error_response.

Default Routing Options

In the exceptionErrorResponses of routingOptions, three exception configurations are created by default during deployment. The status codes for these configurations are DEFAULT, MSGDECODEFAILURE, and MAXHDRSIZEEXCEEDED, with the action set to continue processing. The routing options will be created with the following default configurations:

```
{
  "appName": "mediation",
  "routingOptions": {
    "retry": true,
    "maxRetryAttempts": "2",
    "responseTimeout": "1s",
    "exceptionErrorResponses": [
      {
        "statusCode": [
          "DEFAULT"
        ],
        "action": "continue_procesing"
      },
      {
        "statusCode": [
          "MSGDECODEFAILURE"
        ],
        "action": "continue_procesing"
      },
      {
        "statusCode": [
          "MAXHDRSIZEEXCEEDED"
        ],
        "action": "continue_procesing"
      }
    ]
  }
}
```

Request or Response Body

The following table describes response body based on the REST operation status.

RoutingOptions

```

{
  "appname": "mediation"
  "routingOptions":
  {
    "retry": true,
    "maxRetryAttempts": 4,
    "responseTimeout": 5s,
    "exceptionErrorResponses": [{
      "statusCode": ["501", "504", "connection_failure",
"response_timeout", "SERVICE_UNAVAILABLE" ]
      "action": "send_error",
      "errorProfileConfiguration": {
        "errorCode": 503,
        "errorCause": "MEDIATION_NOT_REACHABLE",
        "errorTitle": "Mediation service unreachable",
        "errorDescription": "Mediation service is not reachable",
        "retryAfter": "5",
        "redirectUrl": ""
      }
    }]
  }
}

```

Resource Definition

GET REST API

This resource retrieves routing options for all the applications.

Resource URI: /ocscp/scpc-configuration/{version}/approutingoptions

The following table describes the data structure supported by the GET method on this resource.

Table 2-276 Data Structure Supported by the GET Method

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
approutingoptions	M	1..N	200 OK	Routing options configuration for the application.

This resource retrieves routing options for the application specified by appname.

Resource URI: /ocscp/scpc-configuration/{version}/approutingoptions/{appname}

The following table describes the path parameters supported by the GET method on this resource.

Table 2-277 Path Parameters Supported by the GET Method

Name	Data Type	Mandatory (M) or Optional(O)	Description
appname	String	M	Fetches configurations on app name. The supported value is "mediation".

Table 2-278 Data Structures Supported by the GET Response Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
approutingoptions	M	1	200 OK	Indicates the routing options configuration for the Application.
ProblemDetails	M	1	404 NOT FOUND	Indicates that there is no matching entry found.

Example

Success response for GET ALL

```
curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/approutingoptions" -H "accept: application/json"
```

```
HTTP/1.1 200 OK
Connection: keep-alive
Transfer-Encoding: chunked
Content-Type: application/json
Date: Tue, 24 May 2022 12:08:49 GMT
```

```
[
  {
    "appName": "mediation",
    "routingOptions": {
      "retry": false,
      "maxRetryAttempts": 6,
      "responseTimeout": "10s",
      "exceptionErrorResponses": [
        {
          "statusCode": [
            "DEFAULT"
          ],
          "action": "continue_processing"
        }
      ],
      "statusCode": [
        "MSGDECODEFAILURE"
      ],
      "action": "continue_processing"
    }
  ],
  {
    "statusCode": [
      "MSGDECODEFAILURE"
    ],
    "action": "continue_processing"
  }
]
```

```

        "MAXHDRSIZEEXCEEDED"
      ],
      "action": "continue_processing"
    },
    {
      "statusCode": [
        "501"
      ],
      "action": "send_error_response",
      "errorProfileConfiguration": {
        "errorCode": 501,
        "errorCause": "NOT FOUND",
        "errorTitle": "NOT FOUND ",
        "errorDescription": "NOT FOUND",
        "retryAfter": "",
        "redirectUrl": ""
      }
    }
  ]
}
]

```

Success response for GET

```
curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/
approutingoptions/mediation" -H "accept: application/json"
```

```
HTTP/1.1 200 OK
Connection: keep-alive
Transfer-Encoding: chunked
Content-Type: application/json
Date: Tue, 24 May 2022 12:08:49 GMT
```

```

{
  "appName": "mediation",
  "routingOptions": {
    "retry": false,
    "maxRetryAttempts": 6,
    "responseTimeout": "10s",
    "exceptionErrorResponses": [
      {
        "statusCode": [
          "DEFAULT"
        ],
        "action": "continue_processing"
      },
      {
        "statusCode": [
          "MSGDECODEFAILURE"
        ],
        "action": "continue_processing"
      }
    ]
  }
}

```

```

    {
      "statusCode": [
        "MAXHDRSIZEEXCEEDED"
      ],
      "action": "continue_processing"
    },
    {
      "statusCode": [
        "501"
      ],
      "action": "send_error_response",
      "errorProfileConfiguration": {
        "errorCode": 501,
        "errorCause": "NOT FOUND",
        "errorTitle": "NOT FOUND ",
        "errorDescription": "NOT FOUND",
        "retryAfter": "",
        "redirectUrl": ""
      }
    }
  ]
}

```

Failure response

```
curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/approutingoptions/med" -H "accept: application/json"
```

```

HTTP/1.1 404 Not Found
Connection: keep-alive
Transfer-Encoding: chunked
Content-Type: application/json
Date: Tue, 24 May 2022 12:08:49 GMT

```

```

{
  "title": "Not Found",
  "status": "404",
  "detail": "App Routing Options response data not found against given query parameter(s)",
  "instance": "/ocscp/scpc-configuration/v1/approutingoptions/med",
  "cause": "DATA_NOT_FOUND"
}

```

PUT REST API

This resource configures routing options for the application.

Resource URI: /ocscp/scpc-configuration/{version}/approutingoptions/{appname}

Table 2-279 Data Structures Supported by the PUT Request Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
approutingoptions	M	1	Indicates the routing options configuration for the Application.

Table 2-280 Data Structures Supported by the PUT Response Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
approutingoptions	M	1	200 OK	Indicates the routing options configuration for the Application.
ProblemDetails	M	1	404 NOT FOUND	Indicates that there is no matching entry found.
ProblemDetails	M	1	400 BAD REQUEST	Returns the ProblemDetails structure as defined in 3GPP TS 29.571.

Example

Success response

```
curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/approutingoptions/mediation" -H "accept: application/json" -H "Content-Type: application/json" -d '{"appName":"mediation","routingOptions":{"retry":false,"maxRetryAttempts":6,"responseTimeout":"10s","exceptionErrorResponses":[{"statusCode":["DEFAULT"],"action":"continue_processing"}, {"statusCode":["501"],"action":"send_error_response","errorProfileConfiguration":{"errorCode":501,"errorCause":"NOT FOUND","errorTitle":"NOT FOUND","errorDescription":"NOT FOUND"},"retryAfter":"","redirectUrl":""}]}}'
```

```
HTTP/1.1 201 Ok
Connection: keep-alive
Transfer-Encoding: chunked
Content-Type: application/json
Date: Tue, 24 May 2022 12:08:49 GMT
```

```
{
  "appName": "mediation",
  "routingOptions": {
    "retry": false,
    "maxRetryAttempts": 6,
    "responseTimeout": "10s",
    "exceptionErrorResponses": [
      {
        "statusCode": [
          "DEFAULT"
        ]
      }
    ]
  }
}
```

```

    ],
    "action": "continue_processing"
  },
  {
    "statusCode": [
      "501"
    ],
    "action": "send_error_response",
    "errorProfileConfiguration": {
      "errorCode": 501,
      "errorCause": "NOT FOUND",
      "errorTitle": "NOT FOUND ",
      "errorDescription": "NOT FOUND",
      "retryAfter": "",
      "redirectUrl": ""
    }
  }
]
}
}

```

Failure response

```

curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/
approutingoptions/med" -H "accept: application/json" -H "Content-Type:
application/json" -d '{"appName":"mediation","routingOptions":
{"retry":false,"maxRetryAttempts":6,"responseTimeout":"10","exception
ErrorResponses":[{"statusCode":
["DEFAULT"],"action":"continue_processing"},{"statusCode":
["501"],"action":"send_error_response","errorProfileConfiguration":
{"errorCode":501,"errorCause":"NOT FOUND","errorTitle":"NOT FOUND
","errorDescription":"NOT
FOUND","retryAfter":"","redirectUrl":""}]}}}'

```

```

HTTP/1.1 400 Bad Request
Connection: keep-alive
Transfer-Encoding: chunked
Content-Type: application/json
Date: Tue, 24 May 2022 12:08:49 GMT

```

```

{
  "title": "Bad Request",
  "status": "400",
  "detail": "App Name must always be mediation",
  "instance": "/ocscp/scpc-configuration/v1/approutingoptions/med",
  "cause": "INVALID_QUERY_PARAM"
}

```

DELETE REST API

This resource removes all the application routing options based on ruleName.

Note

DELETE method is not supported.

Resource URI: /ocscp/scpc-configuration/{version}/approutingoptions/{appname}

Table 2-281 Path Parameters Supported by the DELETE Response Body on this Resource

Name	Data Type	Mandatory (M) or Optional(O)	Description
appname	String	M	Removes configurations on app name.

Table 2-282 Data Structures Supported by the DELETE Response Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
ProblemDetails	M	1	404 NOT FOUND	Indicates that there is no matching entry found.
ProblemDetails	M	1	400 BAD REQUEST	Returns the ProblemDetails structure as defined in 3GPP TS 29.571.

2.28 Configuring Mediation Trigger Point

This section describes the trigger points configurations to define the filter criteria for a message to decide whether to invoke mediation or not.

Resources

The following table describes the resource name to retrieve, add, update, and remove Mediation trigger points.

Table 2-283 Resource Name

Resource Name	Resource URI	HTTP Method	Description
mediation-trigger-point-config	/ocscp/scpc-configuration/{version}/mediation-trigger-point-config	GET	Retrieves all Mediation trigger point configurations.
mediation-trigger-point-config	/ocscp/scpc-configuration/{version}/mediation-trigger-point-config/{ruleName}	GET	Retrieves Mediation trigger point configuration for the specified ruleName.
mediation-trigger-point-config	/ocscp/scpc-configuration/{version}/mediation-trigger-point-config/{ruleName}	PUT	Configures Mediation trigger point configuration for the specified data.
mediation-trigger-point-config	/ocscp/scpc-configuration/{version}/mediation-trigger-point-config/{ruleName}	PATCH	Updates the Mediation trigger point configuration by ruleName.
mediation-trigger-point-config	/ocscp/scpc-configuration/{version}/mediation-trigger-point-config/{ruleName}	DELETE	Removes the Mediation trigger point configuration for the specified ruleName.

Data Model

The following table describes the supported data type.

Table 2-284 MediationTriggerPointConfig

Field Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
ruleName	String	M	1	Unique rule name for each mediation configuration. It is a unique primary key.
triggerPoints	Array(TriggerPoint)	M	1..N	List of trigger points to be enabled if matches. One or more of the following trigger points:"requestIngress", "requestEgress", "responseIngress", "responseEgress"
nfType	NFType	C	1	NFType for which mediation configuration is required. NFType is as per 3GPP TS 29.510 Section 6.1.6.3.3 Enumeration: NFType.
serviceName	String	C	1	The service of NFType for which mediation configuration is required. NFType is as per 3GPP TS29.510 Section 6.1.6.3.11 Enumeration: ServiceName.
match	Array(Match)	O	1..N	List of match blocks to be satisfied for the rule to be activated. Minimum number of blocks is 1. Maximum number of blocks is 20.
groupId	String	O	1	groupId for which mediation configuration is required. Mediation configuration for a specific group is applicable to the mediation requests or responses received only from the same group. HTTP Mediation service consumer NFs which requires the same mediation rules can be grouped together using this groupId.
httpMethods	Array(String)	M	1..N	HTTP methods (GET,POST,PUT,PATCH,DELETE,OPTIONS)
messageType	Array(MessageType)	M	1..N	The allowed message types are [svc-request-message], [notification-message], or both [notification-message, svc-request-message].
action	Action	M	1	Action Wrapper to set the type of action to be taken on the message.

Note

For each trigger point configuration, the combination of **NfType**, **serviceName**, **httpMethods**, **messageType** and **triggerPoints** methods must be unique. No new records can be added with the same combination.

For example, if a configuration exists with the following values:

- **ruleName:** medRule1
- **nfType:** UDM
- **serviceName:** nudm-uecm
- **httpMethod:** {PUT, POST}
- **messageType:** [notification-message, svc-request-message]
- **triggerPoints:** [requestIngress]

Then, adding a similar configuration using the same **nfType**, **serviceName**, and **httpMethods** but with a different rule name, as shown below, will not be allowed:

- **ruleName:** medRule2
- **nfType:** UDM
- **serviceName:** nudm-uecm
- **httpMethod:** {PUT, POST}
- **messageType:** [notification-message, svc-request-message]
- **triggerPoints:** [requestIngress]

Table 2-285 TriggerPoint

Order of Invocation	Enumeration value	Description
First	"requestIngress"	Mediation invocation after receiving the ingress 5G SBI request message.
Second	"requestEgress"	Mediation invocation before forwarding the 5G SBI request message.
Third	"responseIngress"	Mediation invocation after receiving the ingress 5G SBI response message.
Fourth	"responseEgress"	Mediation invocation before forwarding the 5G SBI response message.

Table 2-286 MessageType

Enumeration value	Description
"notification-message"	The message type is a notification message.
"svc-request-message"	The message type is a service request message.

Table 2-287 Match

Field Name	Data Type	Description	Required
headers	HeaderBodyMatch[]	List of header names and values to match using MatchType comparison. All conditions within a single header block are combined with AND semantics. - Minimum number of elements/conditions: 1 - Maximum number of elements/conditions: 5	anyOf
body	HeaderBodyMatch[]	List of "body IE" JSON Pointers and their corresponding values to match using MatchType comparison. All conditions within a single body block are combined with AND semantics. - Minimum number of elements/conditions: 1 - Maximum number of elements/conditions: 5	anyOf
userDefinedVariables	HeaderBodyMatch[]	List of userDefinedVariables names (to be selected from the dropdown in CNCC) and their corresponding values to match using MatchType comparison. All conditions within a single body block are combined with AND semantics. - Minimum number of elements/conditions: 1 - Maximum number of elements/conditions: 5	anyOf

Match Parameter Semantics

- Match Blocks using OR Semantics:
The match wrapper consists of multiple match blocks, which are evaluated using **OR semantics**. This means that for the overall match wrapper to evaluate to true, it is sufficient for any one match block to satisfy the conditions.

For example, if the match wrapper contains three match blocks, the entire wrapper will be considered a match as long as at least one of the blocks matches the conditions.
- Internal Components of a Match Block (AND Semantics)
Each match block contains three components:
 - Body:** A list of match conditions for body fields.
 - Headers:** A list of match conditions for headers.
 - userDefinedVariables (UDVs):** A list of match conditions for user-defined variables.
These components are evaluated using AND semantics:
 - All conditions within each component (for example, all body conditions, all header conditions, and all UDV conditions) must be satisfied.
 - Furthermore, all three components (body, headers, and userDefinedVariables) must match in order for the block to be considered a match.

Table 2-288 HeaderBodyMatch

Field Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
name	String	M	1	Name of the header or the bodyIE or the userDefinedVariable JSON Pointer. Note: List of predefined headers available in this section. JSON Pointer must point to basic data types. Arrayed and Object values are not supported.
match_type	MatchType	M	1	One of the supported match operators.
value	String	C	0..1	Value of header or bodyIE or userDefinedVariable to be matched. The value is only required if match_type is not range.
range	Range	C	0..1	Range start (inclusive). It is used only when match_type is range.

Note

Either the value or the range attribute must be present.

The supported pseudo headers are :scheme, :authority, :path, and :status.

For :path, when specifying a match, ignore the leading or the first forward slash (/) for the match to succeed.

Example:

```
"headers":
  [
    {
      "name": ":path",
      "value": "USEast/nudm-uecm/v1/imsi-1100000001/registrations/
amf-3gpp-access",
      "match-type": "exact"
    }
  ]
```

For :status, the value must be specified as an integer.

Example:

```
"headers":
  [
    {
      "name": ":status",
      "value": "200",
      "match-type": "exact"
    }
  ]
```

```
    }
  ]
}
```

For :scheme and :authority, provide the exact value as received in the request.

Table 2-289 MatchType

Field Name	Data Type	Description	Required
exact	String	Matching is performed using the exact comparison.	oneOf
prefix	String	Matching is performed using the prefix comparison.	oneOf
range	String	Matching is performed using the range comparison.	oneOf
regex	String	Matching is performed using the ECMAScript Regular Expression comparison.	oneOf

Table 2-290 Range

Field Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
start	String	O	0..1	The first value, that is, range start inclusive, identifying the start of the range. This string consists of only digits. Pattern: "[0-9]+\$"
end	String	O	0..1	The last value, that is, range end inclusive, identifying the end of the range. This string consists of only digits. Pattern: "[0-9]+\$"

Table 2-291 Action

Field Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
actionType	ActionType(String)	M	1	This parameter is to select the action for the configured trigger point rules matching the trigger point rules configuration. Allowed Values:forwardToMediationService, setTriggerPointsInvocation forwardToMediationService: If the mediationTriggerPointConfig conditions are matched for a request, the request will be sent to the mediation service for the particular trigger point specified in the triggerPoints field where the match is successful. setTriggerPointsInvocation: If the mediationTriggerPointConfig conditions are matched for a request, the matching conditions will not be attempted again for the trigger points present in the triggerPointList field. Instead, the request will be sent directly to mediation for those trigger points.
triggerPointList	array(TriegerPoint)	C	1....N (where 1 <=N<=4)	List of trigger points to be invoked for matching the configured trigger point rule. This is only applicable for actionType = setTriggerPointsInvocation. Additionally, the first value in the triggerPointList should not precede the parent triggerPoints. Example (not allowed)triggerPoints: ["requestEgress"], "action": { "actionType": "setTriggerPointsInvocation", "triggerPointList": ["requestIngress"] } In this example, "requestIngress" is listed after "requestEgress", which violates the rule that the first trigger point in the triggerPointList should not occur before the first trigger point in the parent triggerPoints.

Examples

Request body

```
{
  "groupId": "string",
  "ruleName": "string",
  "match": [
    {
      "body": [
```

```

        {
            "range": {
                "start": 0,
                "end": 0
            },
            "match-type": "exact",
            "name": "string",
            "value": "string"
        }
    ],
    "headers": [
        {
            "range": {
                "start": 0,
                "end": 0
            },
            "match-type": "exact",
            "name": "string",
            "value": "string"
        }
    ],
    "userDefinedVariables": [
        {
            "range": {
                "start": 0,
                "end": 0
            },
            "match-type": "exact",
            "name": "string",
            "value": "string"
        }
    ]
}
],
"serviceName": "5g-sbi-notification",
"httpMethods": ["PUT", "POST"]
"nfType": "5G_EIR",
"triggerPoints": [
    "requestEgress"
],
"messageType": [
    "notification-message"
],
"action": {
    "actionType": "forwardToMediationService"
}
}

```

Response body:

The response body for GET is the list of the following JSON structure.

The response body of PUT and PATCH is the following JSON structure.

```

{
    "groupId": "string",

```

```

"ruleName": "string",
"match": [
  {
    "body": [
      {
        "range": {
          "start": 0,
          "end": 0
        },
        "match-type": "exact",
        "name": "string",
        "value": "string"
      }
    ],
    "headers": [
      {
        "range": {
          "start": 0,
          "end": 0
        },
        "match-type": "exact",
        "name": "string",
        "value": "string"
      }
    ],
    "userDefinedVariables": [
      {
        "range": {
          "start": 0,
          "end": 0
        },
        "match-type": "exact",
        "name": "string",
        "value": "string"
      }
    ]
  }
],
"serviceName": "5g-sbi-notification",
"httpMethods": [ "PUT", "POST" ]
"nfType": "5G_EIR",
"triggerPoints": [
  "requestEgress"
],
"messageType": [
  "notification-message"
],
"action": {
  "actionType": "forwardToMediationService"
}
}

```

Resource Definition

GET REST API

This resource retrieves all the Mediation trigger point configurations.

Resource URI: /ocscp/scpc-configuration/{version}/mediation-trigger-point-config

Table 2-292 Data Structures Supported by the GET Response Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
MediationTriggerPointConfig	M	1..N	200 OK	Indicates Mediation trigger point configurations.

This resource retrieves all the Mediation trigger point configurations based on ruleName.

Resource URI: /ocscp/scpc-configuration/{version}/mediation-trigger-point-config/{ruleName}

Table 2-293 Path Parameters Supported by the GET Response Body on this Resource

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	M	Fetches configurations on ruleName

Table 2-294 Data Structures Supported by the GET Response Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
MediationTriggerPointConfig	M	1	200 OK	Indicates Mediation trigger point configurations.
ProblemDetails	M	1	404 NOT FOUND	Indicates that there is no matching entry found.

Example

Success response for GET and GET ALL

```
curl -X 'GET' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/mediation-trigger-point-config' -H 'accept: application/json' -v
Note: Unnecessary use of -X or --request, GET is already inferred.
* Trying <localhost>:8081...
* Connected to <localhost>:8081 (<localhost>:8081) port 32484 (#0)
> GET /ocscp/scpc-configuration/v1/mediation-trigger-point-config HTTP/1.1
> Host: <localhost>:8081
> User-Agent: curl/8.1.2
> accept: application/json
>
< HTTP/1.1 200 OK
< Connection: keep-alive
< Transfer-Encoding: chunked
< Content-Type: application/json
< Date: Mon, 23 Sep 2024 14:16:25 GMT
<
[
  {
    "ruleName": "Mediation_rule1",
    "nfType": "UDR",
```

```

"serviceName": "nudr-group-id-map",
"httpMethods": [
  "GET",
  "PUT"
],
"match": [
  {
    "headers": [
      {
        "name": "api-version",
        "value": "v2",
        "match-type": "exact"
      }
    ],
    "body": [
      {
        "name": "/supiorSuciList/supiorsuci",
        "value": "suci-",
        "match-type": "prefix"
      }
    ]
  }
],
"triggerPoints": [
  "requestEgress"
],
"groupId": "group1",
"messageType": [
  "notification-message"
]
},
{
  "ruleName": "R1",
  "serviceName": "nudm-sdm",
  "httpMethods": [
    "GET",
    "PUT"
  ],
  "match": [
    {
      "headers": [
        {
          "name": "api-version",
          "value": "v2",
          "match-type": "exact"
        }
      ],
      "body": [
        {
          "name": "/supiorSuciList/supiorsuci",
          "value": "suci-",
          "match-type": "prefix"
        }
      ]
    }
  ]
}
],

```

```

    "triggerPoints": [
      "requestEgress"
    ],
    "groupId": "group1",
    "messageType": [
      "notification-message"
    ],
    "action": {
      "actionType": "forwardToMediationService"
    }
  }
]

```

Success response 2

```

curl -X 'GET' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/mediation-trigger-
point-config/Mediation_rule1' \
  -H 'accept: application/json' -v
Note: Unnecessary use of -X or --request, GET is already inferred.
* Trying <localhost>:8081...
* Connected to <localhost>:8081 (<localhost>:8081) port 32484 (#0)
> GET /ocscp/scpc-configuration/v1/mediation-trigger-point-config/
Mediation_rule1 HTTP/1.1
> Host: <localhost>:8081
> User-Agent: curl/8.1.2
> accept: application/json
>
< HTTP/1.1 200 OK
< Connection: keep-alive
< Transfer-Encoding: chunked
< Content-Type: application/json
< Date: Mon, 23 Sep 2024 14:20:08 GMT
<
{
  "ruleName": "Mediation_rule1",
  "nfType": "UDR",
  "serviceName": "nudr-group-id-map",
  "httpMethods": [
    "GET",
    "PUT"
  ],
  "match": [
    {
      "headers": [
        {
          "name": "api-version",
          "value": "v2",
          "match-type": "exact"
        }
      ],
      "body": [

```

```

        {
            "name": "/superiorSuciList/supiorsuci",
            "value": "suci-",
            "match-type": "prefix"
        }
    ]
}
],
"triggerPoints": [
    "requestEgress"
],
"groupId": "group1",
"messageType": [
    "notification-message"
],
"action": {
    "actionType": "forwardToMediationService"
}
}

```

Failure response

```

curl -X 'GET' \
'http://<localhost>:8081/ocscp/scpc-configuration/v1/mediation-trigger-
point-config/med' \
-H 'accept: application/json' -v
Note: Unnecessary use of -X or --request, GET is already inferred.
* Trying <localhost>:8081...
* Connected to <localhost>:8081 (<localhost>:8081) port 32484 (#0)
> GET /ocscp/scpc-configuration/v1/mediation-trigger-point-config/med HTTP/1.1
> Host: <localhost>:8081
> User-Agent: curl/8.1.2
> accept: application/json
>
< HTTP/1.1 404 Not Found
< Connection: keep-alive
< Transfer-Encoding: chunked
< Content-Type: application/problem+json
< Date: Mon, 23 Sep 2024 14:23:52 GMT
<
{
  "title": "Not Found",
  "status": 404,
  "detail": "Mediation_Configuration for given ruleName not found . Please
refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/mediation-trigger-point-config/
med",
  "cause": "DATA_NOT_FOUND"
}

```

PUT REST API

This resource configures Mediation trigger points for the specified data.

Resource URI: /ocscp/scpc-configuration/{version}/mediation-trigger-point-config/{ruleName}

Table 2-295 Data Structures Supported by the PUT Request Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
MediationTriggerPointConfig	M	1	Indicates Mediation trigger point configurations to be added.

Table 2-296 Data Structures Supported by the PUT Response Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
MediationTriggerPointConfig	M	1	200 OK	Indicates Mediation trigger point configurations.
ProblemDetails	M	1	404 NOT FOUND	Indicates that there is no matching entry found.
ProblemDetails	M	1	400 BAD REQUEST	Returns the ProblemDetails structure as defined in 3GPP TS 29.571.

Example

Success response

```
curl -X 'PUT' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/mediation-trigger-
  point-config/Mediation_rule1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "ruleName": "Mediation_rule1",
    "nfType": "UDR",
    "serviceName": "nudr-group-id-map",
    "httpMethods": [
      "GET",
      "PUT"
    ],
    "match": [
      {
        "headers": [
          {
            "name": "api-version",
            "value": "v2",
            "match-type": "exact"
          }
        ],
        "body": [
          {
            "name": "/supiorSuciList/supiorsuci",
            "value": "suci-",
            "match-type": "prefix"
          }
        ]
      }
    ]
  }
```



```

    }
  ],
  "userDefinedVariables": [
    {
      "name": "udv-1",
      "value": "376",
      "match-type": "exact"
    }
  ]
}
],
"triggerPoints": [
  "requestEgress"
],
"groupId": "group1",
"messageType": [
  "notification-message"
],
"action": {
  "actionType": "forwardToMediationService"
}
}'

```

Failure response

```

curl -X 'PUT' \
'http://<localhost>:8081/ocscp/scpc-configuration/v1/mediation-trigger-
point-config/Mediation_rule' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "ruleName": "Mediation_rule1",
  "nfType": "UDR",
  "serviceName": "nudr-group-id-map",
  "httpMethods": [
    "GET",
    "PUT"
  ],
  "match": [
    {
      "headers": [
        {
          "name": "api-version",
          "value": "v2",
          "match-type": "exact"
        }
      ],
      "body": [
        {
          "name": "/supiorSuciList/supiorsuci",
          "value": "suci-",
          "match-type": "prefix"
        }
      ]
    }
  ],
  "userDefinedVariables": [

```

```

        {
          "name": "udv-1",
          "value": "376",
          "match-type": "exact"
        }
      ]
    },
    "triggerPoints": [
      "requestEgress"
    ],
    "groupId": "group1",
    "messageType": [
      "notification-message"
    ],
    "action": {
      "actionType": "setTriggerPointsInvocation",
      "triggerPointList": [
        "responseIngress"
      ]
    }
  }
}' -v

```

PATCH REST API

This resource updates the Mediation trigger point configuration for the specified data.

Resource URI: /ocscp/scpc-configuration/{version}/mediation-trigger-point-config/{ruleName}

Table 2-297 Data Structures Supported by the PATCH Request Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
string	M	1	The patch body in the string format that must be updated.

Table 2-298 Data Structures Supported by the PATCH Response Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
MediationTriggerPointConfig	M	1	200 OK	Indicates Mediation trigger point configurations.
ProblemDetails	M	1	400 BAD REQUEST	Returns the ProblemDetails structure as defined in 3GPP TS 29.571.
ProblemDetails	M	1	404 NOT FOUND	Indicates that there is no matching entry found.

Example

Success response:

```
curl -X PATCH "http://<localhost>:8081/ocscp/scpc-configuration/v1/mediation-trigger-point-config/Mediation_rule1" -H "Content-Type: application/merge-
```

```
patch+json" -d ' [{ "op": "replace", "path": "/match/0/headers/0/name",
"value":"amfId" } ] ]

HTTP/1.1 200 OK
Connection: keep-alive
Transfer-Encoding: chunked
Content-Type: application/json
Date: Tue, 24 May 2022 12:26:55 GMT

* Connection #0 to host <localhost> left intact
{"ruleName":"Mediation_rule1","nfType":"UDR","serviceName":"nudr-group-id-
map","httpMethods":["PUT"],"match":[{"headers":
[{"name":"amfId","value":"v2","match-type":"exact"}],"body":
[{"name":"amfId","value":"100","match-type":"prefix"}]}],"triggerPoints":
["requestEgress","requestIngress","responseEgress"],"groupId":"group1"}

```

Failure response -1

```
curl -X PATCH "http://<localhost>:8081/ocscp/scpc-configuration/v1/mediation-
trigger-point-config/Mediation_rule1" -H "Content-Type: application/merge-
patch+json" -d ' [{ "op": "replace", "path": "/match/0/headers/0/name",
"value":"amfId" } ] ]

HTTP/1.1 404 Not Found
Connection: keep-alive
Transfer-Encoding: chunked
Content-Type: application/problem+json
Date: Tue, 24 May 2022 12:23:18 GMT

* Connection #0 to host <localhost> left intact
{"title":"Not Found","status":"404","detail":"Mediation_Configuration for
given RuleName not found . Please refer to the User Guide.'ruleName':
Mediation_rule1","instance":"/ocscp/scpc-configuration/v1/mediation-trigger-
point-config/Mediation_rule1","cause":"DATA_NOT_FOUND"}

```

Failure response -2

```
curl -X PATCH "http://<localhost>:8081/ocscp/scpc-configuration/v1/mediation-
trigger-point-config/Mediation_rule1" -H "Content-Type: application/merge-
patch+json" -d ' [{ "op": "replace", "path": "match/0/headers/match-type",
"value":"prefix" } ] ]

HTTP/1.1 400 Bad Request
Connection: keep-alive
Transfer-Encoding: chunked
Content-Type: application/problem+json
Date: Tue, 24 May 2022 12:26:21 GMT

* Connection #0 to host <localhost> left intact
{"title":"Bad Request","status":"400","detail":"Invalid Patch
Document","instance":"/ocscp/scpc-configuration/v1/mediation-trigger-point-
config/Mediation_rule1","cause":"INVALID_REQUEST_BODY"}

```

DELETE REST API

This resource retrieves all the Mediation trigger point configuration based on ruleName.

Resource URI: /ocscp/scpc-configuration/{version}/mediation-trigger-point-config/{ruleName}

Table 2-299 Path Parameters Supported by the DELETE Response Body on this Resource

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	M	Removes configurations on ruleName

Table 2-300 Data Structures Supported by the DELETE Response Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
ProblemDetails	M	1	400 BAD REQUEST	Returns the ProblemDetails structure as defined in 3GPP TS 29.571.
ProblemDetails	M	1	404 NOT FOUND	Indicates that there is no matching entry found.

Example

Success response

```
curl -X DELETE "http://<localhost>:8081/ocscp/scpc-configuration/v1/mediation-trigger-point-config/med1" -H "accept: application/json"
```

```
HTTP/1.1 204 No Content
Date: Tue, 24 May 2022 12:22:00 GMT
```

Failure response

```
curl -X DELETE "http://<localhost>:8081/ocscp/scpc-configuration/v1/mediation-trigger-point-config/med1" -H "accept: application/json"
```

```
HTTP/1.1 404 Not Found
Connection: keep-alive
Transfer-Encoding: chunked
Content-Type: application/problem+json
Date: Tue, 24 May 2022 12:05:38 GMT
```

```
{
  "title": "Not Found",
  "status": "404",
  "detail": "Mediation_Configuration for given RuleName not found . Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/mediation-trigger-point-config/med1",
  "cause": "DATA_NOT_FOUND"
}
```

2.29 Configuring Mediation Rule

This section describes the configuration of mediation rules for creating, modifying, and deleting Mediation rules using the Rest API.

Resources

The following table describes the resource name to retrieve, add, update, and remove Mediation rules.

Table 2-301 Resource Name

Resource Name	Resource URI	HTTP Method	Description
HTTP Mediation	<code>\${mediationConfig.baseUrl}/mediation/v1/rules</code> <code>\${mediationConfig.baseUrl}/mediation/v1/rules/</code>	GET	Retrieves all Mediation rules.
HTTP Mediation	<code>\${mediationConfig.baseUrl}/mediation/v1/rules/{ruleName}</code>	GET	Retrieves Mediation rule for the specified ruleName.
HTTP Mediation	<code>\${mediationConfig.baseUrl}/mediation/v1/rules/{ruleName}</code>	PUT	Updates the Mediation rule.
HTTP Mediation	<code>\${mediationConfig.baseUrl}/mediation/v1/rules/{ruleName}</code>	POST	Creates the Mediation rule.
HTTP Mediation	<code>\${mediationConfig.baseUrl}/mediation/v1/rules/{ruleName}</code>	DELETE	Removes the Mediation rule.

Note

As mediation can be used by other NFs, a base URL is needed. This is defined in properties as `${mediationConfig.baseUrl}`. In the case of SCP, the value is: `/ocscp/scpc-configuration`, creating the URL like this: `/ocscp/scpc-configuration/mediation/v1/rules`

Data Model

The following table describes the supported data type.

Table 2-302 MediationRulesConfig

Field Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
ruleName	String	M	1	Unique rule name for each mediation rule. It is a unique primary key.
format	String	M	1	Indicates the Format in which the rules are defined, such as DRL.

Table 2-302 (Cont.) MediationRulesConfig

Field Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
status	String	M	1	Indicates the status of the rule. It can have the following values: - DRAFT - APPLIED The following fields are allowed to be modified in DRAFT status: Mediation Mode, Code, and State. The valid values for state are SAVE, CLONE, COMPILE, and APPLY. The following fields are allowed to be modified in APPLIED status: Mediation Mode and State. The valid values for state are SAVE, CLONE, and DRAFT.
mode	String	M	1	Indicated whether the rule applies to mediation active or mediation test. - Mediation Active allows actual messages to be manipulated according to configured mediation rules. - Mediation Test executes the mediation rule on message copy instead of the actual message and verifies the behavior of the mediation rule.
state	String	M	1	Indicates the action to be applied to the rule. The default value is SAVE. Note: The DRAFT state is an invalid transition that could lead to an error. The valid values for state are DRAFT, SAVE, CLONE, COMPILE, and APPLY. The state of a Mediation rule is applicable to change as per the status field.
code	String	M	1	Indicates the configurable drool expression that matches the request/response headers and body sent by SCP.
New Rule Name	String	M	1	Indicates the new name of the rule. This field appears when a CLONE state is selected.

Note

For each mediation rule configuration, the rule name must be unique. No new rules can be added with the same name.

Request Body JSON Format

```
{
  "name": "string",
  "format": "DRL",
  "status": ["DRAFT", "APPLIED"],
  "mode": ["MEDIATION_ACTIVE", "MEDIATION_TEST"],
```

```

    "state": ["SAVE", "APPLY", "DRAFT", "COMPILE", "CLONE"],
    "code": "string"
}

```

Example

```

{
  "name": "ruleTest1",
  "format": "DRL",
  "status": "DRAFT",
  "mode": "MEDIATION_TEST",
  "state": "SAVE",
  "code": "package com.oracle.cgbu.ocmediation.nfmediation;\n \nimport
com.oracle.cgbu.ocmediation.factdetails.Request;\nimport
com.oracle.cgbu.ocmediation.factdetails.Response;\nimport
java.util.Map;\nimport java.util.HashMap; \ndialect \"mvel\"\n\nrule
\"ruleTest1\"\nwhen\n  req : Request(headers.has(\"Header1\") == true)\nthen
\n  req.headers.add(\"NewHeader1\", \"132465\")\nend"
}

```

Response Body JSON Format

```

{
  "name": "string",
  "format": "DRL",
  "mode": ["MEDIATION_ACTIVE", "MEDIATION_TEST"],
  "status": ["DRAFT", "APPLIED"],
  "code": "string"
}

```

Example

```

{
  "name": "ruleTest1",
  "format": "DRL",
  "mode": "MEDIATION_ACTIVE",
  "status": "DRAFT",
  "code": "package com.oracle.cgbu.ocmediation.nfmediation;\n \nimport
com.oracle.cgbu.ocmediation.factdetails.Request;\nimport
com.oracle.cgbu.ocmediation.factdetails.Response;\nimport
java.util.Map;\nimport java.util.HashMap; \ndialect \"mvel\"\n\nrule
\"ruleTest1\"\nwhen\n  req : Request(headers.has(\"Header1\") == true)\nthen
\n  req.headers.add(\"NewHeader1\", \"132465\")\nend"
}

```

Resource Definition

GET REST API

This resource retrieves all the Mediation rules.

Resource URI: /ocscp/scpc-configuration/mediation/v1/rules

Table 2-303 Data Structures Supported by the GET Response Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
MediationRules	M	1..N	200 OK	Indicates Mediation rules.

This resource retrieves all the Mediation rules based on ruleName.

Resource URI: /ocscp/scpc-configuration/mediation/v1/rules/{ruleName}

Table 2-304 Path Parameters Supported by the GET Response Body on this Resource

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	M	Fetches rule by ruleName

Table 2-305 Data Structures Supported by the GET Response Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
MediationRule	M	1	200 OK	Indicates Mediation rules.
ProblemDetails	M	1	404 NOT FOUND	Indicates that there is no matching entry found.

Example

Success response for GET ALL

```
curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/mediation/v1/rules"
-H "accept: application/json"
```

```
[
  {
    "name": "ruleTest0",
    "format": "DRL",
    "mode": "MEDIATION_ACTIVE",
    "status": "DRAFT",
    "code": "package com.oracle.cgbu.ocmediation.nfmediation; import
com.oracle.cgbu.ocmediation.factdetails.Request; dialect \"mvel\" rule
\"ruleTest0\" when req : Request(headers.has(\"NewTest0\") == true) then
req.headers.add(\"Test0\", \"0\") end"
  },
  {
    "name": "ruleTest1",
    "format": "DRL",
    "mode": "MEDIATION_ACTIVE",
    "status": "DRAFT",
    "code": "package com.oracle.cgbu.ocmediation.nfmediation; import
com.oracle.cgbu.ocmediation.factdetails.Request; dialect \"mvel\" rule
\"ruleTest1\" when req : Request(headers.has(\"NewTest1\") == true) then
req.headers.add(\"Test1\", \"1\") end"
```



```
}
]
```

Success response for GET

```
curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/mediation/v1/
rules/ruleTest0" -H
    "accept: application/json"

{
    "name": "ruleTest0",
    "format": "DRL",
    "mode": "MEDIATION_ACTIVE",
    "status": "DRAFT",
    "code": "package com.oracle.cgbu.ocmediation.nfmediation; import
com.oracle.cgbu.ocmediation.factdetails.Request; dialect \"mvel\" rule
\"ruleTest0\" when req : Request(headers.has(\"NewTest0\") == true) then
req.headers.add(\"Test0\", \"0\") end"
}
```

Failure response

```
curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/mediation/v1/
rules/ruleTest$" -H
    "accept: application/json"

{
    "title": "NOT_FOUND",
    "status": 404,
    "detail": "Rule: ruleTest$ was not found",
    "cause":
"com.oracle.cgbu.ocmediationconfig.service.RulesConfigService.lambda$findByName$0(RulesConfigService.java:45)\njava.base/
java.util.Optional.orElseThrow(Optional.java:403)\ncom.oracle.cgbu.ocmediation
config.service.RulesConfigService.findByName(RulesConfigService.java:45)\ncom.
oracle.cgbu.ocmediationconfig.controller.RulesConfigController.getRuleByName(R
ulesConfigController.java:45)\njava.base/
jdk.internal.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
\njava.base/
jdk.internal.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.
java:77)\njava.base/
jdk.internal.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAcces
sorImpl.java:43)\njava.base/
java.lang.reflect.Method.invoke(Method.java:568)\norg.springframework.web.meth
od.support.InvocableHandlerMethod.doInvoke(InvocableHandlerMethod.java:205)\nno
rg.springframework.web.method.support.InvocableHandlerMethod.invokeForRequest(
InvocableHandlerMethod.java:150)\norg.springframework.web.servlet.mvc.method.a
nnotation.ServletInvocableHandlerMethod.invokeAndHandle(ServletInvocableHandle
rMethod.java:117)\norg.springframework.web.servlet.mvc.method.annotation.Reque
stMappingHandlerAdapter.invokeHandlerMethod(RequestMappingHandlerAdapter.java:
895)\norg.springframework.web.servlet.mvc.method.annotation.RequestMappingHand
lerAdapter.handleInternal(RequestMappingHandlerAdapter.java:808)\norg.springfr
amework.web.servlet.mvc.method.AbstractHandlerMethodAdapter.handle(AbstractHan
```

```

dlerMethodAdapter.java:87)\norg.springframework.web.servlet.DispatcherServlet.
doDispatch(DispatcherServlet.java:1072)\norg.springframework.web.servlet.Dispa
tcherServlet.doService(DispatcherServlet.java:965)\norg.springframework.web.se
rvlet.FrameworkServlet.processRequest(FrameworkServlet.java:1006)\norg.springf
ramework.web.servlet.FrameworkServlet.doGet(FrameworkServlet.java:898)\njavax.
servlet.http.HttpServlet.service(HttpServlet.java:497)\norg.springframework.we
b.servlet.FrameworkServlet.service(FrameworkServlet.java:883)\njavax.servlet.h
ttp.HttpServlet.service(HttpServlet.java:584)\nio.undertow.servlet.handlers.Se
rvletHandler.handleRequest(ServletHandler.java:74)\nio.undertow.servlet.handle
rs.FilterHandler$FilterChainImpl.doFilter(FilterHandler.java:129)\norg.springf
ramework.web.filter.RequestContextFilter.doFilterInternal(RequestContextFilter
.java:100)\norg.springframework.web.filter.OncePerRequestFilter.doFilter(OnceP
erRequestFilter.java:117)\nio.undertow.servlet.core.ManagedFilter.doFilter(Man
agedFilter.java:61)\nio.undertow.servlet.handlers.FilterHandler$FilterChainImp
l.doFilter(FilterHandler.java:131)\norg.springframework.web.filter.FormContent
Filter.doFilterInternal(FormContentFilter.java:93)\norg.springframework.web.fi
lter.OncePerRequestFilter.doFilter(OncePerRequestFilter.java:117)\nio.undertow
.servlet.core.ManagedFilter.doFilter(ManagedFilter.java:61)\nio.undertow.servl
et.handlers.FilterHandler$FilterChainImpl.doFilter(FilterHandler.java:131)\nor
g.springframework.boot.actuate.metrics.web.servlet.WebMvcMetricsFilter.doFilde
rInternal(WebMvcMetricsFilter.java:96)\norg.springframework.web.filter.OncePer
RequestFilter.doFilter(OncePerRequestFilter.java:117)\nio.undertow.servlet.cor
e.ManagedFilter.doFilter(ManagedFilter.java:61)\nio.undertow.servlet.handlers.
FilterHandler$FilterChainImpl.doFilter(FilterHandler.java:131)\norg.springfram
ework.web.filter.CharacterEncodingFilter.doFilterInternal(CharacterEncodingFil
ter.java:201)\norg.springframework.web.filter.OncePerRequestFilter.doFilter(On
cePerRequestFilter.java:117)\nio.undertow.servlet.core.ManagedFilter.doFilter(
ManagedFilter.java:61)\nio.undertow.servlet.handlers.FilterHandler$FilterChain
Impl.doFilter(FilterHandler.java:131)\nio.undertow.servlet.handlers.FilterHand
ler.handleRequest(FilterHandler.java:84)\nio.undertow.servlet.handlers.securit
y.ServletSecurityRoleHandler.handleRequest(ServletSecurityRoleHandler.java:62)
\nio.undertow.servlet.handlers.ServletChain$1.handleRequest(ServletChain.java:
68)\nio.undertow.servlet.handlers.ServletDispatchingHandler.handleRequest(Serv
letDispatchingHandler.java:36)\nio.undertow.servlet.handlers.RedirectDirHandle
r.handleRequest(RedirectDirHandler.java:68)\nio.undertow.servlet.handlers.secu
rity.SSLInformationAssociationHandler.handleRequest(SSLInformationAssociationH
andler.java:117)\nio.undertow.servlet.handlers.security.ServletAuthenticationC
allHandler.handleRequest(ServletAuthenticationCallHandler.java:57)\nio.underto
w.server.handlers.PredicateHandler.handleRequest(PredicateHandler.java:43)\nio
.undertow.security.handlers.AbstractConfidentialityHandler.handleRequest(Abstr
actConfidentialityHandler.java:46)\nio.undertow.servlet.handlers.security.Serv
letConfidentialityConstraintHandler.handleRequest(ServletConfidentialityConstr
aintHandler.java:64)\nio.undertow.security.handlers.AuthenticationMechanismsHa
ndler.handleRequest(AuthenticationMechanismsHandler.java:60)\nio.undertow.serv
let.handlers.security.CachedAuthenticatedSessionHandler.handleRequest(CachedA
uthenticatedSessionHandler.java:77)\nio.undertow.security.handlers.AbstractSecu
rityContextAssociationHandler.handleRequest(AbstractSecurityContextAssociation
Handler.java:43)\nio.undertow.server.handlers.PredicateHandler.handleRequest(P
redicateHandler.java:43)\nio.undertow.servlet.handlers.SendErrorPageHandler.ha
ndleRequest(SendErrorPageHandler.java:52)\nio.undertow.server.handlers.Predica
teHandler.handleRequest(PredicateHandler.java:43)\nio.undertow.servlet.handler
s.ServletInitialHandler.handleFirstRequest(ServletInitialHandler.java:275)\nio
.undertow.servlet.handlers.ServletInitialHandler.access$100(ServletInitialHand
ler.java:79)\nio.undertow.servlet.handlers.ServletInitialHandler$2.call(Servle
tInitialHandler.java:134)\nio.undertow.servlet.handlers.ServletInitialHandler$
2.call(ServletInitialHandler.java:131)\nio.undertow.servlet.core.ServletReques

```

```
tContextThreadSetupAction$1.call(ServletRequestContextThreadSetupAction.java:4
8)\nio.undertow.servlet.core.ContextClassLoaderSetupAction$1.call(ContextClass
LoaderSetupAction.java:43)\nio.undertow.servlet.handlers.ServletInitialHandler
.dispatchRequest(ServletInitialHandler.java:255)\nio.undertow.servlet.handlers
.ServletInitialHandler.access$000(ServletInitialHandler.java:79)\nio.undertow.
servlet.handlers.ServletInitialHandler$1.handleRequest(ServletInitialHandler.j
ava:100)\nio.undertow.server.Connectors.executeRootHandler(Connectors.java:387
)
\nio.undertow.server.HttpServerExchange$1.run(HttpServerExchange.java:852)\nor
g.jboss.threads.ContextClassLoaderSavingRunnable.run(ContextClassLoaderSavingR
unnable.java:35)\norg.jboss.threads.EnhancedQueueExecutor.safeRun(EnhancedQueu
eExecutor.java:2019)\norg.jboss.threads.EnhancedQueueExecutor$ThreadBody.doRun
Task(EnhancedQueueExecutor.java:1558)\norg.jboss.threads.EnhancedQueueExecutor
$ThreadBody.run(EnhancedQueueExecutor.java:1449)\norg.xnio.XnioWorker$WorkerTh
readFactory$1$1.run(XnioWorker.java:1282)\njava.base/
java.lang.Thread.run(Thread.java:842)"
}
```

PUT REST API

This resource modifies the Mediation rules for the specified data.

Resource URI: /ocscp/scpc-configuration/mediation/v1/rules/{ruleName}

Table 2-306 Path Parameters Supported by the PUT Response Body on this Resource

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	M	Modify rule by ruleName

Table 2-307 Data Structures Supported by the PUT Response Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
MediationRule	M	1	200 OK	Modify Mediation rules.
ProblemDetails	M	1	400 BAD REQUEST	Indicates that there is no matching entry found.

Example

Success response for PUT

```
curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/mediation/v1/
rules/ruleTest0" -H
    "accept: application/json"
```

```
{
  "name": "ruleTest0",
  "format": "DRL",
  "mode": "MEDIATION_ACTIVE",
  "status": "DRAFT",
  "code": "package com.oracle.cgbu.ocmediation.nfmediation;\n \nimport
com.oracle.cgbu.ocmediation.factdetails.Request;\nimport"
```

```
com.oracle.cgbu.ocmediation.factdetails.Response;\nimport
java.util.Map;\nimport java.util.HashMap; \ndialect \"mvel\" \"\n\nrule
\"rule_test456\" \"\nwhen\n  req : Request(headers.has(\"OtherStuff\") == true)
\nthen\n  req.headers.add(\"TEST\", \"132465\")\nend"
}
```

Failure response

```
curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/mediation/v1/
rules/ruleTest0" -H
```

```
  "accept: application/json" -d '{"name": "ruleTest0", "format":
"DRL", "status": "DRAFT", "mode": "MEDIATION_TEST", "state":
"SAVE"}'
```

```
{
  "title": "BAD_REQUEST",
  "status": 400,
  "detail": "Fields: [code], are required and missing for rules with state:
SAVE",
  "cause":
    "com.oracle.cgbu.ocmediationconfig.validator.RuleConfigValidator.validateRequi
redFields(RuleConfigValidator.java:40)\ncom.oracle.cgbu.ocmediationconfig.serv
ice.RulesConfigService.saveRuleByName(RulesConfigService.java:59)\ncom.oracle.
cgbu.ocmediationconfig.controller.RulesConfigController.saveRuleByName(RulesCo
nfigController.java:67)\njava.base/
jdk.internal.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
\njava.base/
jdk.internal.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.
java:77)\njava.base/
jdk.internal.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAcces
sorImpl.java:43)\njava.base/
java.lang.reflect.Method.invoke(Method.java:568)\norg.springframework.web.meth
od.support.InvocableHandlerMethod.doInvoke(InvocableHandlerMethod.java:205)\no
rg.springframework.web.method.support.InvocableHandlerMethod.invokeForRequest(
InvocableHandlerMethod.java:150)\norg.springframework.web.servlet.mvc.method.a
nnotation.ServletInvocableHandlerMethod.invokeAndHandle(ServletInvocableHandle
rMethod.java:117)\norg.springframework.web.servlet.mvc.method.annotation.Reque
stMappingHandlerAdapter.invokeHandlerMethod(RequestMappingHandlerAdapter.java:
895)\norg.springframework.web.servlet.mvc.method.annotation.RequestMappingHand
lerAdapter.handleInternal(RequestMappingHandlerAdapter.java:808)\norg.springfr
amework.web.servlet.mvc.method.AbstractHandlerMethodAdapter.handle(AbstractHan
dlerMethodAdapter.java:87)\norg.springframework.web.servlet.DispatcherServlet.
doDispatch(DispatcherServlet.java:1072)\norg.springframework.web.servlet.Dispa
tcherServlet.doService(DispatcherServlet.java:965)\norg.springframework.web.se
rvlet.FrameworkServlet.processRequest(FrameworkServlet.java:1006)\norg.springf
ramework.web.servlet.FrameworkServlet.doPut(FrameworkServlet.java:920)\njavax.
servlet.http.HttpServlet.service(HttpServlet.java:520)\norg.springframework.we
b.servlet.FrameworkServlet.service(FrameworkServlet.java:883)\njavax.servlet.h
ttp.HttpServlet.service(HttpServlet.java:584)\nio.undertow.servlet.handlers.Se
rvletHandler.handleRequest(ServletHandler.java:74)\nio.undertow.servlet.handle
rs.FilterHandler$FilterChainImpl.doFilter(FilterHandler.java:129)\norg.springf
ramework.web.filter.RequestContextFilter.doFilterInternal(RequestContextFilter
.java:100)\norg.springframework.web.filter.OncePerRequestFilter.doFilter(OnceP
erRequestFilter.java:117)\nio.undertow.servlet.core.ManagedFilter.doFilter(Man
```

```

agedFilter.java:61)\nio.undertow.servlet.handlers.FilterHandler$FilterChainImpl
l.doFilter(FilterHandler.java:131)\norg.springframework.web.filter.FormContent
Filter.doFilterInternal(FormContentFilter.java:93)\norg.springframework.web.fi
lter.OncePerRequestFilter.doFilter(OncePerRequestFilter.java:117)\nio.undertow
.servlet.core.ManagedFilter.doFilter(ManagedFilter.java:61)\nio.undertow.servl
et.handlers.FilterHandler$FilterChainImpl.doFilter(FilterHandler.java:131)\nor
g.springframework.boot.actuate.metrics.web.servlet.WebMvcMetricsFilter.doFilde
rInternal(WebMvcMetricsFilter.java:96)\norg.springframework.web.filter.OncePer
RequestFilter.doFilter(OncePerRequestFilter.java:117)\nio.undertow.servlet.cor
e.ManagedFilter.doFilter(ManagedFilter.java:61)\nio.undertow.servlet.handlers
.FilterHandler$FilterChainImpl.doFilter(FilterHandler.java:131)\norg.springfram
ework.web.filter.CharacterEncodingFilter.doFilterInternal(CharacterEncodingFil
ter.java:201)\norg.springframework.web.filter.OncePerRequestFilter.doFilter(On
cePerRequestFilter.java:117)\nio.undertow.servlet.core.ManagedFilter.doFilter(
ManagedFilter.java:61)\nio.undertow.servlet.handlers.FilterHandler$FilterChain
Impl.doFilter(FilterHandler.java:131)\nio.undertow.servlet.handlers.FilterHand
ler.handleRequest(FilterHandler.java:84)\nio.undertow.servlet.handlers.securit
y.ServletSecurityRoleHandler.handleRequest(ServletSecurityRoleHandler.java:62)
\nio.undertow.servlet.handlers.ServletChain$1.handleRequest(ServletChain.java:
68)\nio.undertow.servlet.handlers.ServletDispatchingHandler.handleRequest(Serv
letDispatchingHandler.java:36)\nio.undertow.servlet.handlers.RedirectDirHandle
r.handleRequest(RedirectDirHandler.java:68)\nio.undertow.servlet.handlers.secu
rity.SSLInformationAssociationHandler.handleRequest(SSLInformationAssociationH
andler.java:117)\nio.undertow.servlet.handlers.security.ServletAuthenticationC
allHandler.handleRequest(ServletAuthenticationCallHandler.java:57)\nio.underto
w.server.handlers.PredicateHandler.handleRequest(PredicateHandler.java:43)\nio
.undertow.security.handlers.AbstractConfidentialityHandler.handleRequest(Abstr
actConfidentialityHandler.java:46)\nio.undertow.servlet.handlers.security.Serv
letConfidentialityConstraintHandler.handleRequest(ServletConfidentialityConstr
aintHandler.java:64)\nio.undertow.security.handlers.AuthenticationMechanismsHa
ndler.handleRequest(AuthenticationMechanismsHandler.java:60)\nio.undertow.serv
let.handlers.security.CachedAuthenticatedSessionHandler.handleRequest(CachedAu
thenticatedSessionHandler.java:77)\nio.undertow.security.handlers.AbstractSecu
rityContextAssociationHandler.handleRequest(AbstractSecurityContextAssociation
Handler.java:43)\nio.undertow.server.handlers.PredicateHandler.handleRequest(P
redicateHandler.java:43)\nio.undertow.servlet.handlers.SendErrorPageHandler.ha
ndleRequest(SendErrorPageHandler.java:52)\nio.undertow.server.handlers.Predica
teHandler.handleRequest(PredicateHandler.java:43)\nio.undertow.servlet.handler
s.ServletInitialHandler.handleFirstRequest(ServletInitialHandler.java:275)\nio
.undertow.servlet.handlers.ServletInitialHandler.access$100(ServletInitialHand
ler.java:79)\nio.undertow.servlet.handlers.ServletInitialHandler$2.call(Servle
tInitialHandler.java:134)\nio.undertow.servlet.handlers.ServletInitialHandler$
2.call(ServletInitialHandler.java:131)\nio.undertow.servlet.core.ServletReques
tContextThreadSetupAction$1.call(ServletRequestContextThreadSetupAction.java:4
8)\nio.undertow.servlet.core.ContextClassLoaderSetupAction$1.call(ContextClass
LoaderSetupAction.java:43)\nio.undertow.servlet.handlers.ServletInitialHandler
.dispatchRequest(ServletInitialHandler.java:255)\nio.undertow.servlet.handlers
.ServletInitialHandler.access$000(ServletInitialHandler.java:79)\nio.undertow
.servlet.handlers.ServletInitialHandler$1.handleRequest(ServletInitialHandler.j
ava:100)\nio.undertow.server.Connectors.executeRootHandler(Connectors.java:387
)\n\nio.undertow.server.HttpServerExchange$1.run(HttpServerExchange.java:852)\nor
g.jboss.threads.ContextClassLoaderSavingRunnable.run(ContextClassLoaderSavingR
unnable.java:35)\norg.jboss.threads.EnhancedQueueExecutor.safeRun(EnhancedQueu
eExecutor.java:2019)\norg.jboss.threads.EnhancedQueueExecutor$ThreadBody.doRun
Task(EnhancedQueueExecutor.java:1558)\norg.jboss.threads.EnhancedQueueExecutor

```

```
$ThreadBody.run(EnhancedQueueExecutor.java:1449)\norg.xnio.XnioWorker$WorkerTh
readFactory$1$1.run(XnioWorker.java:1282)\njava.base/
java.lang.Thread.run(Thread.java:842)"
}
```

POST REST API

This resource creates Mediation rules based on ruleName.

Resource URI: /ocscp/scpc-configuration/mediation/v1/rules/{ruleName}

Table 2-308 Path Parameters Supported by the POST Response Body on this Resource

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	M	Modify Mediation rules by ruleName

Table 2-309 Data Structures Supported by the POST Response Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
MediationRule	M	1	201 CREATED	Creates Mediation rule.
ProblemDetails	M	1	404	Indicates that there is no matching entry found.

Example

Success response for POST

```
curl -X POST "http://<localhost>:8081/ocscp/scpc-configuration/mediation/v1/
rules/ruleTest0" -H
  "accept: application/json" -d '{"name": "ruleTest0","format":
"DRL","status":
  "DRAFT","mode": "MEDIATION_TEST","state":  "SAVE","code": "package
com.oracle.cgbu.ocmediation.nfmediation;\n  \nimport
com.oracle.cgbu.ocmediation.factdetails.Request;\nimport
com.oracle.cgbu.ocmediation.factdetails.Response;\nimport
java.util.Map;\nimport
java.util.HashMap; \ndialect \"mvel\"\n\nrule  \"rule_test456\"\nwhen\n
req :
Request(headers.has(\"OtherStuff\") == true)\nthen \n
req.headers.add(\"TEST\", \"132465\")\nend"}'
```

```
{
  "name": "ruleTest0",
  "format": "DRL",
  "mode": "MEDIATION_ACTIVE",
  "status": "DRAFT",
  "code": "package com.oracle.cgbu.ocmediation.nfmediation;\n  \nimport
com.oracle.cgbu.ocmediation.factdetails.Request;\nimport
com.oracle.cgbu.ocmediation.factdetails.Response;\nimport
java.util.Map;\nimport java.util.HashMap; \ndialect \"mvel\"\n\nrule
\"rule_test456\"\nwhen\n    req : Request(headers.has(\"OtherStuff\") == true)
```

```
\nthen \n    req.headers.add(\"TEST\", \"132465\")\nend"
}
```

Failure response for POST

```
curl -X POST "http://<localhost>:8081/ocscp/scpc-configuration/mediation/v1/
rules/ruleTest0" -H
```

```
"accept: application/json" -d '{"name": "ruleTest0", "format":
"DRL", "status": "DRAFT", "mode": "MEDIATION_TEST", "state":
"SAVE"}'
```

```
{
  "title": "BAD_REQUEST",
  "status": 400,
  "detail": "Rule: ruleTest0 already exists in database.",
  "cause":
    "com.oracle.cgbu.ocmediationconfig.service.RulesConfigService.validateCreation
    Rule(RulesConfigService.java:89)\ncom.oracle.cgbu.ocmediationconfig.controller
    .RulesConfigController.createRuleByName(RulesConfigController.java:74)\njdk.in
    ternal.reflect.GeneratedMethodAccessor840.invoke(Unknown Source)\njava.base/
    jdk.internal.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAcces
    sorImpl.java:43)\njava.base/
    java.lang.reflect.Method.invoke(Method.java:568)\norg.springframework.web.meth
    od.support.InvocableHandlerMethod.doInvoke(InvocableHandlerMethod.java:205)\no
    rg.springframework.web.method.support.InvocableHandlerMethod.invokeForRequest(
    InvocableHandlerMethod.java:150)\norg.springframework.web.servlet.mvc.method.a
    nnotation.ServletInvocableHandlerMethod.invokeAndHandle(ServletInvocableHandle
    rMethod.java:118)\norg.springframework.web.servlet.mvc.method.annotation.Reque
    stMappingHandlerAdapter.invokeHandlerMethod(RequestMappingHandlerAdapter.java:
    884)\norg.springframework.web.servlet.mvc.method.annotation.RequestMappingHand
    lerAdapter.handleInternal(RequestMappingHandlerAdapter.java:797)\norg.springfr
    amework.web.servlet.mvc.method.AbstractHandlerMethodAdapter.handle(AbstractHan
    dlerMethodAdapter.java:87)\norg.springframework.web.servlet.DispatcherServlet.
    doDispatch(DispatcherServlet.java:1081)\norg.springframework.web.servlet.Dispa
    tcherServlet.doService(DispatcherServlet.java:974)\norg.springframework.web.se
    rvlet.FrameworkServlet.processRequest(FrameworkServlet.java:1014)\norg.springf
    ramework.web.servlet.FrameworkServlet.doPost(FrameworkServlet.java:914)\njakar
    ta.servlet.http.HttpServlet.service(HttpServlet.java:547)\norg.springframework
    .web.servlet.FrameworkServlet.service(FrameworkServlet.java:885)\njakarta.serv
    let.http.HttpServlet.service(HttpServlet.java:614)\nio.undertow.servlet.handle
    rs.ServletHandler.handleRequest(ServletHandler.java:74)\nio.undertow.servlet.h
    andlers.FilterHandler$FilterChainImpl.doFilter(FilterHandler.java:129)\norg.sp
    ringframework.web.filter.RequestContextFilter.doFilterInternal(RequestContextF
    ilter.java:100)\norg.springframework.web.filter.OncePerRequestFilter.doFilter(
    OncePerRequestFilter.java:116)\nio.undertow.servlet.core.ManagedFilter.doFilt
    er(ManagedFilter.java:67)\nio.undertow.servlet.handlers.FilterHandler$FilterCh
    ainImpl.doFilter(FilterHandler.java:131)\norg.springframework.web.filter.FormCo
    ntentFilter.doFilterInternal(FormContentFilter.java:93)\norg.springframework.w
    eb.filter.OncePerRequestFilter.doFilter(OncePerRequestFilter.java:116)\nio.und
    ertow.servlet.core.ManagedFilter.doFilter(ManagedFilter.java:67)\nio.undertow
    .servlet.handlers.FilterHandler$FilterChainImpl.doFilter(FilterHandler.java:131
    )
    \norg.springframework.web.filter.ServerHttpObservationFilter.doFilterInternal(
    ServerHttpObservationFilter.java:109)\norg.springframework.web.filter.OncePerR
```

```

requestFilter.doFilter(OncePerRequestFilter.java:116)\nio.undertow.servlet.core
.ManagedFilter.doFilter(ManagedFilter.java:67)\nio.undertow.servlet.handlers.F
ilterHandler$FilterChainImpl.doFilter(FilterHandler.java:131)\norg.springframe
work.web.filter.CharacterEncodingFilter.doFilterInternal(CharacterEncodingFilt
er.java:201)\norg.springframework.web.filter.OncePerRequestFilter.doFilter(On
cePerRequestFilter.java:116)\nio.undertow.servlet.core.ManagedFilter.doFilter(M
anagedFilter.java:67)\nio.undertow.servlet.handlers.FilterHandler$FilterChainI
mpl.doFilter(FilterHandler.java:131)\nio.undertow.servlet.handlers.FilterHandl
er.handleRequest(FilterHandler.java:84)\nio.undertow.servlet.handlers.security
.ServletSecurityRoleHandler.handleRequest(ServletSecurityRoleHandler.java:62)\
nio.undertow.servlet.handlers.ServletChain$1.handleRequest(ServletChain.java:6
8)\nio.undertow.servlet.handlers.ServletDispatchingHandler.handleRequest(Servl
etDispatchingHandler.java:36)\nio.undertow.servlet.handlers.RedirectDirHandler
.handleRequest(RedirectDirHandler.java:68)\nio.undertow.servlet.handlers.secur
ity.SSLInformationAssociationHandler.handleRequest(SSLInformationAssociationHa
ndler.java:117)\nio.undertow.servlet.handlers.security.ServletAuthenticationCa
llHandler.handleRequest(ServletAuthenticationCallHandler.java:57)\nio.undertow
.server.handlers.PredicateHandler.handleRequest(PredicateHandler.java:43)\nio.
undertow.security.handlers.AbstractConfidentialityHandler.handleRequest(Abstra
ctConfidentialityHandler.java:46)\nio.undertow.servlet.handlers.security.Servl
etConfidentialityConstraintHandler.handleRequest(ServletConfidentialityConstra
intHandler.java:64)\nio.undertow.security.handlers.AuthenticationMechanismsHan
dler.handleRequest(AuthenticationMechanismsHandler.java:60)\nio.undertow.servl
et.handlers.security.CachedAuthenticatedSessionHandler.handleRequest(CachedAut
henticatedSessionHandler.java:77)\nio.undertow.security.handlers.AbstractSecur
ityContextAssociationHandler.handleRequest(AbstractSecurityContextAssociationH
andler.java:43)\nio.undertow.server.handlers.PredicateHandler.handleRequest(Pr
edicateHandler.java:43)\nio.undertow.servlet.handlers.SendErrorPageHandler.han
dleRequest(SendErrorPageHandler.java:52)\nio.undertow.server.handlers.Predicat
eHandler.handleRequest(PredicateHandler.java:43)\nio.undertow.servlet.handlers
.ServletInitialHandler.handleFirstRequest(ServletInitialHandler.java:276)\nio.
undertow.servlet.handlers.ServletInitialHandler$2.call(ServletInitialHandler.j
ava:135)\nio.undertow.servlet.handlers.ServletInitialHandler$2.call(ServletIni
tialHandler.java:132)\nio.undertow.servlet.core.ServletRequestContextThreadSet
upAction$1.call(ServletRequestContextThreadSetupAction.java:48)\nio.undertow.s
ervlet.core.ContextClassLoaderSetupAction$1.call(ContextClassLoaderSetupAction
.java:43)\nio.undertow.servlet.handlers.ServletInitialHandler.dispatchRequest(
ServletInitialHandler.java:256)\nio.undertow.servlet.handlers.ServletInitialHa
ndler$1.handleRequest(ServletInitialHandler.java:101)\nio.undertow.server.Conn
ectors.executeRootHandler(Connectors.java:393)\nio.undertow.server.HttpServerE
xchange$1.run(HttpServerExchange.java:859)\norg.jboss.threads.ContextHandler$1
.runWith(ContextHandler.java:18)\norg.jboss.threads.EnhancedQueueExecutor$Task
.run(EnhancedQueueExecutor.java:2513)\norg.jboss.threads.EnhancedQueueExecuto
r$ThreadBody.run(EnhancedQueueExecutor.java:1538)\norg.xnio.XnioWorker$WorkerTh
readFactory$1$1.run(XnioWorker.java:1282)\njava.base/
java.lang.Thread.run(Thread.java:842)"
}

```

DELETE REST API

This resource deletes all the Mediation rules based on ruleName.

Resource URI: /ocscp/scpc-configuration/mediation/v1/rules/{ruleName}

Table 2-310 Path Parameters Supported by the DELETE Response Body on this Resource

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	M	Deletes Mediation rules by ruleName

Table 2-311 Data Structures Supported by the DELETE Response Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
MediationRule	M	1	204	Deleted Mediation rule.
ProblemDetails	M	1	404	Indicates that there is no matching entry found.

Example

Success response for DELETE

```
curl -X DELETE "http://<localhost>:8081/ocscp/scpc-configuration/mediation/v1/
rules/ruleTest999" -H
    "accept: application/json"
```

Failure response

```
curl -X DELETE "http://<localhost>:8081/ocscp/scpc-configuration/mediation/v1/
rules/ruleTest$" -H
    "accept: application/json"
```

```
{
  "title": "NOT_FOUND",
  "status": 404,
  "detail": "Rule: ruleTest$ was not found",
  "cause":
    "com.oracle.cgbu.ocmediationconfig.service.RulesConfigService.lambda$deleteByN
ame$1(RulesConfigService.java:52)\njava.base/
java.util.Optional.orElseThrow(Optional.java:403)\ncom.oracle.cgbu.ocmediation
config.service.RulesConfigService.deleteByName(RulesConfigService.java:52)\nco
m.oracle.cgbu.ocmediationconfig.controller.RulesConfigController.deleteRuleByN
ame(RulesConfigController.java:52)\njava.base/
jdk.internal.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
\njava.base/
jdk.internal.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.
java:77)\njava.base/
jdk.internal.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAcces
sorImpl.java:43)\njava.base/
java.lang.reflect.Method.invoke(Method.java:568)\norg.springframework.web.meth
od.support.InvocableHandlerMethod.doInvoke(InvocableHandlerMethod.java:205)\nno
rg.springframework.web.method.support.InvocableHandlerMethod.invokeForRequest(
InvocableHandlerMethod.java:150)\norg.springframework.web.servlet.mvc.method.a
nnotation.ServletInvocableHandlerMethod.invokeAndHandle(ServletInvocableHandle
rMethod.java:117)\norg.springframework.web.servlet.mvc.method.annotation.Reque
stMappingHandlerAdapter.invokeHandlerMethod(RequestMappingHandlerAdapter.java:
```

```

895)\norg.springframework.web.servlet.mvc.method.annotation.RequestMappingHand
lerAdapter.handleInternal(RequestMappingHandlerAdapter.java:808)\norg.springfr
amework.web.servlet.mvc.method.AbstractHandlerMethodAdapter.handle(AbstractHan
dlerMethodAdapter.java:87)\norg.springframework.web.servlet.DispatcherServlet.
doDispatch(DispatcherServlet.java:1072)\norg.springframework.web.servlet.Dispa
tcherServlet.doService(DispatcherServlet.java:965)\norg.springframework.web.se
rvlet.FrameworkServlet.processRequest(FrameworkServlet.java:1006)\norg.springf
ramework.web.servlet.FrameworkServlet.doDelete(FrameworkServlet.java:931)\njav
ax.servlet.http.HttpServlet.service(HttpServlet.java:523)\norg.springframework
.web.servlet.FrameworkServlet.service(FrameworkServlet.java:883)\njavax.servle
t.http.HttpServlet.service(HttpServlet.java:584)\nio.undertow.servlet.handlers
.ServletHandler.handleRequest(ServletHandler.java:74)\nio.undertow.servlet.han
dlers.FilterHandler$FilterChainImpl.doFilter(FilterHandler.java:129)\norg.sprin
gframework.web.filter.RequestContextFilter.doFilterInternal(RequestContextFil
ter.java:100)\norg.springframework.web.filter.OncePerRequestFilter.doFilter(On
cePerRequestFilter.java:117)\nio.undertow.servlet.core.ManagedFilter.doFilter(
ManagedFilter.java:61)\nio.undertow.servlet.handlers.FilterHandler$FilterChain
Impl.doFilter(FilterHandler.java:131)\norg.springframework.web.filter.FormCont
entFilter.doFilterInternal(FormContentFilter.java:93)\norg.springframework.web
.filter.OncePerRequestFilter.doFilter(OncePerRequestFilter.java:117)\nio.under
tow.servlet.core.ManagedFilter.doFilter(ManagedFilter.java:61)\nio.undertow.se
rvlet.handlers.FilterHandler$FilterChainImpl.doFilter(FilterHandler.java:131)\
norg.springframework.boot.actuate.metrics.web.servlet.WebMvcMetricsFilter.doFi
lterInternal(WebMvcMetricsFilter.java:96)\norg.springframework.web.filter.Once
PerRequestFilter.doFilter(OncePerRequestFilter.java:117)\nio.undertow.servlet.
core.ManagedFilter.doFilter(ManagedFilter.java:61)\nio.undertow.servlet.handle
rs.FilterHandler$FilterChainImpl.doFilter(FilterHandler.java:131)\norg.springf
ramework.web.filter.CharacterEncodingFilter.doFilterInternal(CharacterEncoding
Filter.java:201)\norg.springframework.web.filter.OncePerRequestFilter.doFilde
r(OncePerRequestFilter.java:117)\nio.undertow.servlet.core.ManagedFilter.doFil
ter(ManagedFilter.java:61)\nio.undertow.servlet.handlers.FilterHandler$FilterC
hainImpl.doFilter(FilterHandler.java:131)\nio.undertow.servlet.handlers.Filter
Handler.handleRequest(FilterHandler.java:84)\nio.undertow.servlet.handlers.sec
urity.ServletSecurityRoleHandler.handleRequest(ServletSecurityRoleHandler.java
:62)\nio.undertow.servlet.handlers.ServletChain$1.handleRequest(ServletChain.j
ava:68)\nio.undertow.servlet.handlers.ServletDispatchingHandler.handleRequest(
ServletDispatchingHandler.java:36)\nio.undertow.servlet.handlers.RedirectDirHa
ndler.handleRequest(RedirectDirHandler.java:68)\nio.undertow.servlet.handlers.
security.SSLInformationAssociationHandler.handleRequest(SSLInformationAssociat
ionHandler.java:117)\nio.undertow.servlet.handlers.security.ServletAuthenticat
ionCallHandler.handleRequest(ServletAuthenticationCallHandler.java:57)\nio.und
ertow.server.handlers.PredicateHandler.handleRequest(PredicateHandler.java:43)
\nio.undertow.security.handlers.AbstractConfidentialityHandler.handleRequest(A
bstractConfidentialityHandler.java:46)\nio.undertow.servlet.handlers.security.
ServletConfidentialityConstraintHandler.handleRequest(ServletConfidentialityCo
nstraintHandler.java:64)\nio.undertow.security.handlers.AuthenticationMechanis
msHandler.handleRequest(AuthenticationMechanismsHandler.java:60)\nio.undertow.
servlet.handlers.security.CachedAuthenticatedSessionHandler.handleRequest(Cach
edAuthenticatedSessionHandler.java:77)\nio.undertow.security.handlers.Abstract
SecurityContextAssociationHandler.handleRequest(AbstractSecurityContextAssocia
tionHandler.java:43)\nio.undertow.server.handlers.PredicateHandler.handleReque
st(PredicateHandler.java:43)\nio.undertow.servlet.handlers.SendErrorPageHandle
r.handleRequest(SendErrorPageHandler.java:52)\nio.undertow.server.handlers.Pre
dicateHandler.handleRequest(PredicateHandler.java:43)\nio.undertow.servlet.han
dlers.ServletInitialHandler.handleFirstRequest(ServletInitialHandler.java:275)
\nio.undertow.servlet.handlers.ServletInitialHandler.access$100(ServletInitial

```

```

Handler.java:79)\nio.undertow.servlet.handlers.ServletInitialHandler$2.call(ServletInitialHandler.java:134)\nio.undertow.servlet.handlers.ServletInitialHandler$2.call(ServletInitialHandler.java:131)\nio.undertow.servlet.core.ServletRequestContextThreadSetupAction$1.call(ServletRequestContextThreadSetupAction.java:48)\nio.undertow.servlet.core.ContextClassLoaderSetupAction$1.call(ContextClassLoaderSetupAction.java:43)\nio.undertow.servlet.handlers.ServletInitialHandler.dispatchRequest(ServletInitialHandler.java:255)\nio.undertow.servlet.handlers.ServletInitialHandler.access$000(ServletInitialHandler.java:79)\nio.undertow.servlet.handlers.ServletInitialHandler$1.handleRequest(ServletInitialHandler.java:100)\nio.undertow.server.Connectors.executeRootHandler(Connectors.java:387)\nio.undertow.server.HttpServerExchange$1.run(HttpServerExchange.java:852)
)\norg.jboss.threads.ContextClassLoaderSavingRunnable.run(ContextClassLoaderSavingRunnable.java:35)\norg.jboss.threads.EnhancedQueueExecutor.safeRun(EnhancedQueueExecutor.java:2019)\norg.jboss.threads.EnhancedQueueExecutor$ThreadBody.doRunTask(EnhancedQueueExecutor.java:1558)\norg.jboss.threads.EnhancedQueueExecutor$ThreadBody.run(EnhancedQueueExecutor.java:1449)\norg.xnio.XnioWorker$WorkerThreadFactory$1$1.run(XnioWorker.java:1282)\njava.base/java.lang.Thread.run(Thread.java:842)"
}

```

2.30 Configuring Mediation Log Level

This section describes how to configure mediation and mediation-test services at the log level using the REST API.

Resources

The following table describes the resource name to retrieve, add, and update the log level of mediation and mediation-test services.

Table 2-312 Resource Name

Resource Name	Resource URI	HTTP Method	Description
loglevel	/mediation/v1/mediation-config/	GET ALL	Retrieves the log level of the mediation and mediation-test services and its library log levels.
loglevel	/mediation/v1/mediation-config/{serviceName}	GET	Retrieves the log level of a specific service and its library log level.
loglevel	/mediation/v1/mediation-config/{serviceName}	PUT	Updates log levels of mediation, mediation-test service, and its library log levels.

Data Model

The following table describes the supported data type.

Table 2-313 LoggingLevels

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
appLogLevel	String	M	WARN	Indicates the type of log level. The following are the supported log levels: • WARN: Designates potentially harmful situations. • INFO: Designates informational messages that highlight the progress of the application at coarse-grained level. • ERROR: Designates error events that might still allow the application to continue running. • DEBUG: Designates fine-grained informational events that are most useful to debug an application.
serviceType	String	M	NA	Indicates the name of the type of service. For examples, mediation and mediation-test
packageLogLevel	List(PackageLogLevel)	M	NA	Indicates the package level log information.
logRateControl	LogRateCntrol	O	NA	Indicates the log rate control information.

Table 2-314 PackageLogLevel

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
packageName	String	M	Library	Indicates the name of the package. It should be a valid library name. • The valid package names are org, io, springfox, com.zaxxer, reactor, validator, and library.
logLevelForPackage	String	M	INFO	Indicates the type of package log level. The following are the supported log levels: • WARN: Designates potentially harmful situations. • INFO: Designates informational messages that highlight the progress of the application at a coarse-grained level. • ERROR: Designates error events that might still allow the application to continue running. • DEBUG: Designates fine-grained informational events that are most useful to debug an application • OFF: Designates to turn off logging.

Table 2-315 LogRateControl

Field Name	Data Type	Range	Default Value	Description
rate	Integer	1-10000	1	Indicates the average number of logs allowed per second.
logLevel	String	NA	OFF	Indicates the type of log level where rate control is applied. The following are the supported log levels: • WARN: Designates potentially harmful situations. • INFO: Designates informational messages that highlight the progress of the application at a coarse-grained level. • ERROR: Designates error events that might still allow the application to continue running. • DEBUG: Designates fine-grained informational events that are most useful to debug an application • OFF: Designates to turn off logging.

Response codes

The following table provides response codes and their descriptions.

Table 2-316 Response codes

Response Code	Category	Description
200	Success	Successfully retrieves the log level of mediation.
400	Failure	Bad requests occur when invalid log-level data is provided during the PUT operation.
404	Failure	No log-level record was found for mediation.

Examples

Sample JSON body for PUT request API

Example to update mediation log level:

```
curl -X 'PUT' \
  'http://<localhost>:8081/ocscp/scpc-configuration/mediation/v1/mediation-
  config/mediation' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "serviceType": "mediation",
    "appLogLevel": "info",
    "packageLogLevel": [
      {
        "packageName": "library",
```

```

        "logLevelForPackage": "OFF"
    }
},
"logRateControl": {
    "rate": 1,
    "logLevel": "OFF"
}
}'
Response:
{
    "headers": {},
    "body": {
        "appLogLevel": "INFO",
        "packageLogLevel": [
            {
                "packageName": "library",
                "logLevelForPackage": "OFF"
            }
        ],
        "logRateControl": {
            "rate": 1,
            "logLevel": "OFF"
        },
        "serviceType": "mediation"
    },
    "statusCode": "OK",
    "statusCodeValue": 200
}

```

Sample JSON body for GET API response

Example to get log level for specific service:

```

curl -X 'GET' \
  'http://<localhost>:8081/ocscp/scpc-configuration/mediation/v1/mediation-
  config/mediation' \
  -H 'accept: application/json'
Response :
{
    "appLogLevel": "INFO",
    "packageLogLevel": [
        {
            "packageName": "library",
            "logLevelForPackage": "OFF"
        }
    ],
    "logRateControl": {
        "rate": 1,
        "logLevel": "OFF"
    },
    "serviceType": "mediation"
}

```

Example to get log level for specific service:

```
curl -X 'GET' \
  'http://<localhost>:8081/ocscp/scpc-configuration/mediation/v1/mediation-
  config/mediation-test' \
  -H 'accept: application/json'
Response:
{
  "appLogLevel": "WARN",
  "packageLogLevel": [
    {
      "packageName": "library",
      "logLevelForPackage": "OFF"
    }
  ],
  "logRateControl": {
    "rate": 1,
    "logLevel": "OFF"
  },
  "serviceType": "mediation-test"
}
```

Example to get all mediation config log levels:

```
curl -X 'GET' \
  'http://<localhost>:8081/ocscp/scpc-configuration/mediation/v1/mediation-
  config/' \
  -H 'accept: application/json'
Response:
[
  {
    "appLogLevel": "WARN",
    "packageLogLevel": [
      {
        "packageName": "library",
        "logLevelForPackage": "OFF"
      }
    ],
    "logRateControl": {
      "rate": 1,
      "logLevel": "OFF"
    },
    "serviceType": "mediation-test"
  },
  {
    "appLogLevel": "INFO",
    "packageLogLevel": [
      {
        "packageName": "library",
        "logLevelForPackage": "OFF"
      }
    ],
    "logRateControl": {
      "rate": 1,
      "logLevel": "OFF"
    }
  }
]
```

```

    },
    "serviceType": "mediation"
  }
]

```

2.31 Configuring Mediation Support for User Defined Variables

This section describes the configuration of user-defined variables for creating, modifying, and deleting them using the REST API.

Resources

The following table describes the resource name to retrieve, add, update, and remove user defined variables.

Table 2-317 Resource Name

Resource Name	Resource URI	HTTP Method	Description
HTTP Mediation	<code>\${mediationConfig.baseUrl}/mediation/v1/user-defined-variables</code> <code>\${mediationConfig.baseUrl}/mediation/v1/user-defined-variables/</code>	GET	Retrieves a record of all configured user-defined variables.
HTTP Mediation	<code>\${mediationConfig.baseUrl}/mediation/v1/user-defined-variables/{variableName}</code>	GET	Retrieves a specific record based on a user-defined variable provided as a path parameter. For example: where <code>variableName</code> is <code>user-category/prepaid-user</code> , and so on.
HTTP Mediation	<code>\${mediationConfig.baseUrl}/mediation/v1/user-defined-variables/{variableName}</code>	PUT	Updates the user-defined variables.
HTTP Mediation	<code>\${mediationConfig.baseUrl}/mediation/v1/user-defined-variables/{variableName}</code>	POST	Creates the user-defined variables and generates the primary key before performing the PUT operation.
HTTP Mediation	<code>\${mediationConfig.baseUrl}/mediation/v1/user-defined-variables/{variableName}</code>	DELETE	Deletes the user-defined variables.

Data Model

The following table describes the supported data type:

Table 2-318 UserDefinedVariables Attribute Details

Field Name	Data Type	Mandatory (M)/Optional (O)	Description
name	String	M	A unique variable name as per the user's requirement.
data	VariableData	M	Data object for the user-defined variable.

Table 2-319 VariableData Attribute Details

Field Name	Data Type	Mandatory (M)/Optional (O)	Description
type	ENUM	M	The data type of the variable (for example, STRING, LONG, JSON, BOOLEAN).
size	Integer	M	The minimum and maximum size (in Bytes) of the variable value that can be accepted. The allowed size range is between 1 and 1024 bytes only.
description	String	O	The description of the user-defined variable.

Request Body JSON Format

```

{
  "name": "custom_var1",
  "data": {
    "type": "string",
    "size": 128,
    "description": "string"
  }
}

```

Response Body

The response body data model varies based on the status of the REST operation.

Table 2-320 Response Body Data Model

Data Type	Mandatory (M)/Optional (O)	Cardinality	Description and Response Code
UserDefinedVariables	M	1	User-defined variable (userDefinedVariable) matching criteria. Response Code: 200 OK
ProblemDetails	M	1	Returns when no data is found for the given query parameters. 404 NOT FOUND
ProblemDetails	M	1	Returns a "Bad Request" response when parameter validation fails. 400 BAD REQUEST

Resource Definition**GET REST API**

This resource fetches user-defined variables (userDefinedVariable) based on the query parameters. This resource returns all user-defined variables if no query parameters are provided.

Resource URI: /ocscp/scpc-configuration/mediation/v1/user-defined-variables/{variableName}

Table 2-321 Path Parameters Supported by the GET Response Body on this Resource

Field Name	Data Type	Mandatory (M)/Optional (O)	Description
Name	String	O	The identity of the user-defined variable name for which the configured user-defined variables are being fetched.

Table 2-322 Data Structures Supported by the GET Response Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
UserDefinedVariables	M	1	200 OK	Indicates userDefinedVariable for fetching a specific record based on path parameters.
ProblemDetails	M	1	404 NOT FOUND	Returns a response when no data is found for the given path parameters.

Example

Success response for GET

```
curl -X GET "http://<configuration-fqdn>:<configuration-port>/ocscp/scpc-configuration/mediation/v1/user-defined-variables/user-category" -H "accept: application/json"
```

Response->

```
Response Code: 200
Response Body:
{
  "name": "user-category",
  "data":
  {
    "type": "string",
    "size": 128,
    "description": "string"
  }
}
```

Failure response 1

```
curl -X GET "http://<configuration-fqdn>:<configuration-port>/ocscp/scpc-configuration/mediation/v1/user-defined-variables/prepaid-user" -H "accept: application/json"
```

Response->

Response Code: 404

Response Body:

```
{
  "title": "NOT_FOUND",
  "status": 404,
  "detail": "User-Defined-Variable: prepaid-user was not found. Please refer the User Guide",
  "cause": "USER_DEFINED_VARIABLE_NOT_FOUND"
}
```

Failure response 2

```
curl -X GET "http://<configuration-fqdn>:<configuration-port>/ocscp/scpc-configuration/mediation/v1/user-defined-variables/" -H "accept: application/json"
```

Response Code: 400

Response Body:

```
{
  "title": "BAD_REQUEST",
  "status": 400,
  "detail": "User-Defined-Variable body contains null or empty value. Please provide valid name. Please refer the User Guide",
  "cause": "INVALID_NAME"
}
```

POST REST API

This resource creates the user-defined variables configuration using the request body.

Resource URI: /ocscp/scpc-configuration/mediation/v1/user-defined-variables/{variableName}

Table 2-323 Data Structures Supported by the POST Response Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
UserDefinedVariables	M	1	200 OK	Creates the user-defined variables configuration data.
ProblemDetails	M	1	400 BAD REQUEST	Returns the structure of ProblemDetails.

Example

Success response for POST

```
curl -X POST "http://<configuration-fqdn>:<configuration-port>/ocscp/scpc-configuration/
```

```
mediation/v1/user-defined-variables/user-category" -H "accept: application/json"
```

Request →

Request body:

```
{
  "name": "user-category",
  "data":
  {
    "type": "string",
    "size": 128,
    "description": "string"
  }
}
```

Response->

Response Code: 200

Response Body:

```
{
  "name": "user-category",
  "data":
  {
    "type": "string",
    "size": 128,
    "description": "string"
  }
}
```

Failure response 1 for POST

```
curl -X POST "http://<configuration-fqdn>:<configuration-port>/ocscp/scpc-configuration/
```

```
mediation/v1/user-defined-variables/prepaid-user" -H "accept: application/
json"
```

Request body:

```
{
  "name": "user-category",
  "data": {
    "type": "string",
    "size": 1209,
    "description": "string"
  }
}
```

Response->

Response Code: 400

Response Body:

```
{
  "title": "BAD_REQUEST",
  "status": 400,
  "detail": "Request body User-Defined-VariableName: user-category does not
match with param User-Defined-VariableName: user-imsi. Please refer the User
Guide",
  "cause": "INVALID_KEY_COMBINATION"
}
```

Failure response 2

```
curl -X POST "http://<configuration-fqdn>:<configuration-port>/ocscp/scpc-
configuration/
```

```
mediation/v1/user-defined-variables/user-category" -H "accept: application/
json"
```

Request →

Request body:

```
{
  "name": ,
  "data": {
    "type": "string",
    "size": 1209,
    "description": "string"
  }
}
```

Response->

Response Code: 400

Response Body:

```
{
  "title": "BAD_REQUEST",
  "status": 400,
  "detail": "User-Defined-Variable body contains null or empty value for Name
field. Please provide valid name. Please refer the User Guide",
  "cause": "INVALID_NAME"
}
```

PUT REST API

This resource updates the user-defined variables configuration using the request body.

Resource URI: /ocscp/scpc-configuration/mediation/v1/user-defined-variables/{variableName}

Table 2-324 Data Structures Supported by the PUT Response Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
UserDefinedVariables	M	1	200 OK	Modifies the user-defined variable configuration data.
ProblemDetails	M	1	400 BAD REQUEST	Returns the structure of ProblemDetails.
ProblemDetails	M	1	404 Not Found	Returns the structure of ProblemDetails.

Example

Success response for PUT

```
curl -X PUT "http://<configuration-fqdn>:<configuration-port>/ocscp/scpc-configuration/
```

```
mediation/v1/user-defined-variables/user-category" -H "accept: application/
json"
```

Request body:

```
{
  "name": "user-category",
  "data":
  {
    "type": "string",
    "size": 128,
    "description": "string"
  }
}
```

```
Response->
  Response Code: 200
  Response Body:
  {
    "name": "user-category",
    "data":
    {
      "type": "string",
      "size": 128,
      "description": "string"
    }
  }
```

Failure Response

```
curl -X PUT "http://<configuration-fqdn>:<configuration-port>/ocscp/scpc-configuration/
```

```
mediation/v1/user-defined-variables/user-category" -H "accept: application/json"
```

Request body:

```
{
  "name": "user-category",
  "data":
  {
    "description": "string"
  }
}
```

```
Response->
  Response Code: 400

  Response Body:
  {
    "title": "BAD_REQUEST",
    "status": 400,
    "detail": "Fields: [size, type], are required and missing for User-Defined-Variable: user-category. Please refer the User Guide",
    "cause": "MANDATORY_IE_MISSING"
  }
```

DELETE REST API

This resource deletes the user-defined variables configuration using the request body.

Resource URI: /ocscp/scpc-configuration/mediation/v1/user-defined-variables/{variableName}

Table 2-325 Data Structures Supported by the DELETE Response Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
userDefinedVariablesWrapper	M	1	200 OK	Indicates the user-defined variable configuration data.
MediationConfigControllerAdvice	M	1	400 BAD REQUEST	Returns the mediationConfigControllerAdvice structure.
MediationConfigControllerAdvice	M	1	404 Not Found	Returns the mediationConfigControllerAdvice structure.

Example

Success response for DELETE

```
curl -X DELETE "http://<configuration-fqdn>:<configuration-port>/ocscp/scpc-configuration/
```

```
mediation/v1/user-defined-variables/user-category" -H "accept: application/json"
```

Response Code: 200 Response Body: OK

Failure response

```
curl -X DELETE "http://<configuration-fqdn>:<configuration-port>/ocscp/scpc-configuration/
```

```
mediation/v1/userDefinedVariables/user-category" -H "accept: application/json"
```

Response Code: 404

Response Body:

```
{
  "title": "NOT_FOUND",
  "status": 404,
  "detail": "User-Defined-Variable: user-category was not found. Please refer the User Guide",
  "cause": "USER_DEFINED_VARIABLE_NOT_FOUND"
}
```

Failure Response 2

```
curl -X DELETE "http://<configuration-fqdn>:<configuration-port>/ocscp/scpc-configuration/
```



```
mediation/v1/userDefinedVariables/user-category" -H "accept: application/json"
```

Response Code: 400

Response Body:

```
{
  "title": "BAD_REQUEST",
  "status": 400,
  "detail": "User-Defined-Variable: userDefined-var is being used at
Mediation Trigger Point Configuration in 13 RuleName(s). List of 10 out of 13
RuleName(s) are as follows: [rule-trigger18, rule-trigger, rule-trigger181,
rule-trigger98, rule3, rule-trigger8, rule-trigger7, rule-trigger4, rule-
trigger3, rule-trigger6]. Please refer the User Guide",
  "cause": "USER_DEFINED_VARIABLE_ALREADY_IN_USE"
}
```

2.32 Configuring Route Groups

This section describes REST API configurations required for Route Groups. The static alternate route feature prioritizes the settings in the static routing configuration over any NF profile for the alternate destination.

Resources

The following table describes the resource URIs and the corresponding HTTP methods for the route-groups resource type.

Table 2-326 Resource Name

Resource Name	Resource URI	HTTP Method	Description
route-groups	/ocscp/scpc-configuration/v1/route-groups	GET	- Reads a collection of route groups. - Reads the route group configuration of a given route group name. - Retrieves configured route groups based on the supplied query parameters as filtering criteria.
route-groups	/ocscp/scpc-configuration/v1/route-groups	PUT	Configures a new route group or replaces the configuration of an existing route group by providing a route group configuration in the request body.
route-groups	/ocscp/scpc-configuration/v1/route-groups	DELETE	Removes the configuration of an existing route group.

Resource: route-groups

Resource URI: /ocscp/scpc-configuration/v1/route-groups

Resource Definition

This section describes GET, PUT, and DELETE resource types supported by Route Group.

GET REST API

The following table describes the URI query parameters supported by the GET method on this resource.

Note

- The names of the query parameters in the following tables are case sensitive.
- The combination of query parameters are not supported. If no query parameter is specified, it retrieves all the records. Otherwise, only one query parameter at a time is supported.

Table 2-327 URI Query Parameters Supported by the GET Method

Field Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
routeGroupId	string	O	0..1	Indicates the unique route group ID.
routeGroupType	RouteGroupType	O	0..1	Indicates all route groups configured using specified addressing parameters such as fqdn, nfnInstanceId, ipv4address, or ipv6address.
primaryRoute	PrimaryRoute	O	0..1	Indicates specific route group configuration for the specified fqdn, nfnInstanceId, ipv4address, or ipv6address. For IP, only the primaryRoute query parameter with only one element (ipv4Address and port) in the list is supported. Note: As this query parameter considers the JSON format as an input string, you must use the "data-urlencode" annotation in the curl command.

Note

To get all route groups, do not provide any query parameters.

The following table describes the data structure supported by the GET response body on this resource:

Table 2-328 Data Structure Supported by the GET Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
array(routeGroupRecord)	M	1	200 OK	The response body contains a list of route group configuration equivalent to the criteria for received requests.

Table 2-328 (Cont.) Data Structure Supported by the GET Response Body

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Code	Description
ProblemDetails	M	1	404 NOT FOUND	This data structure is sent when no matching entry is found. For information about the ProblemDetails structure, see 3GPP TS 29.571.

Note

All the supported HTTP error status is applicable with a ProblemDetails data type as described in *Oracle Communications Cloud Native Core, Service Communication Proxy User Guide*. For more information, see Clause 5.2.7 of 3GPP TS 29.500.

The following example is of a successful response.

```
curl -v -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/route-groups" -H "accept: */*" -H "Content-Type: application/json" -d '{"routeGroupId":"udm1","routeGroupType":"IPV4","primaryRoute":{"ipEndpoints":[{"ipv4Address":"200.200.200.210","port":80}], "alternateRouteList":[{"apiPrefix":"USEast","capacity":10,"ipv4Addresses":["200.200.200.220"],"port":80,"priority":10,"scheme":"http"}, {"apiPrefix":"USEast","capacity":10,"ipv4Addresses":["200.200.200.230","200.200.200.235"],"port":80,"priority":10,"scheme":"http"}]}'
```

Response:

201 OK

```
{ "routeGroupId": "udm1", "routeGroupType": "IPV4", "primaryRoute": { "ipEndpoints": [ { "ipv4Address": "200.200.200.210", "port": 80 } ], "alternateRouteList": [ { "ipv4Addresses": [ "200.200.200.220" ], "port": 80, "priority": 10, "capacity": 10, "apiPrefix": "USEast", "scheme": "http" }, { "ipv4Addresses": [ "200.200.200.230", "200.200.200.235" ], "port": 80, "priority": 10, "capacity": 10, "apiPrefix": "USEast", "scheme": "http" } ] }
```

PUT REST API

There are no URI query parameters supported by the PUT method on this resource.

The following table describes the data structure supported by the PUT request body on this resource:

Table 2-329 Data Structure Supported by the PUT Request Body

Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
routeGroupRecord	M	1	Indicates the route group configuration data.

The following table describes the data structures supported by the PUT response body on this resource:

Table 2-330 Data Structures Supported by the PUT Response Body

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Code	Description
routeGroupRecord	M	1	200 OK	Indicates the updated or replaced existing route group configuration data equivalent to the criteria for received requests.
routeGroupRecord	M	1	201 Created	Indicates the successful creation of new route group configuration data as per received requests.
ProblemDetails	M	1	400 BAD REQUEST	This response is used when the request body validation fails. For example, when serviceProtoName is missing in the request body. For information about the ProblemDetails structure, see 3GPP TS 29.571.

Note

All supported HTTP error status is applicable with a ProblemDetails data type. For more information, see Clause 5.2.7 of 3GPP TS 29.500.

The following example is of a successful response.

```
curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/route-groups" -H "accept: application/json"
```

Response:

```
200 OK
[{"routeGroupId":"udm1","routeGroupType":"IPADDRESS","primaryRoute":
{"ipEndpoints":
[{"ipv4Address":"200.200.200.210","port":80}]], "alternateRouteList":
[{"ipv4Addresses":
["200.200.200.220"],"port":80,"priority":10,"capacity":10,"apiPrefix":"USEast",
"scheme":"http"}, {"ipv4Addresses":
```

```
[{"200.200.200.230", "200.200.200.235"}, {"port": 80, "priority": 10, "capacity": 10, "apiPrefix": "USEast", "scheme": "http"}]]]
```

DELETE REST API

The following table describes the URI query parameters supported by the DELETE method on this resource:

Table 2-331 URI Query Parameters Supported by the DELETE Method

Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
routeGroupId	string	M	1	Indicates the unique route group ID.

Note

All the supported HTTP error status is applicable with a ProblemDetails data type. For more information, see Clause 5.2.7 of 3GPP TS 29.500.

The following example is of a successful response.

```
curl -v -X DELETE "http://<localhost>:8081/ocscf/scpc-configuration/v1/route-groups?routeGroupId=udm1" -H "accept: application/json"
```

204 No Content

Data Model

The following tables describe different data models required for configuring Route Group.

Table 2-332 routeGroupRecord

Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
routeGroupId	string	M	1	Indicates the unique route group name or ID.
routeGroupType	RouteGroupType	M	1	Addresses parameters such as fqdn, nfiInstanceId, ipv4address, or ipv6address, used in route group configuration.

Table 2-332 (Cont.) routeGroupRecord

Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
primaryRoute	PrimaryRoute	C	1	Indicates the target endpoint information for the first routing attempt of 5G SBI message. - At least one of the first attempt route information parameters is included in the route configuration. - If the primaryRoute parameter is present, then the alternateRouteList parameter is also present. - If the primaryRouteList parameter is present, then the alternateRouteList parameter is absent. - The valid combinations are primaryRoute and alternateRouteList, primaryRouteList, All other combinations are invalid.
alternateRouteList	array(RouteRecord)	C	0..N	Indicates the route (target endpoint info) information to be used in alternate NF selection and load-balancing at SCP in alternate routing of 5G SBI message.

Table 2-333 PrimaryRoute

Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
fqdn	Fqdn	C	0..1	Indicates the FQDN of primary route, that is, for the first routing attempt of a 5G SBI message request.
port	integer	C	0..1	Indicates the port number. The minimum value is 0 and the maximum value is 65535.Port is defined if FQDN is present.
nfInstanceId	NfInstanceId	C	0..1	Indicates the NF instance ID of primary route, that is, for the first routing attempt of a 5G SBI message request.
ipEndPoints	array(IpEndPoint)	C	0..1	Indicates the list of all IPv4 addresses of primary route, that is, for the first routing attempt of a 5G SBI message request.

Note

- At least one of the primary route addressing parameters such as fqdn, nfInstanceId, or ipEndPoints must be included in the route configuration.
- The primary route has the authority, FQDN or IP and port information, which is matched with ":authority" pseudo header of the first routing attempt to select a producer NF. Note that the scheme and apiPrefix are not considered.
- The port is defined if FQDN is present.

Table 2-334 IpEndPoint

Attribute Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
ipv4Address	Ipv4Addr	C	0..1	Indicates the IPv4 address.
ipv6Address	Ipv6Addr	C	0..1	Indicates the IPv6 address.
port	integer	M	1	Indicates the port number. The minimum value is 0 and the maximum value is 65535.

Note

In this data structure, only one occurrence of either ipv4Address or ipv6Address shall be included.

Table 2-335 RouteRecord

Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
fqdn	Fqdn	C	0..1	Indicates the FQDN of primary route, that is, for the first routing attempt of a 5G SBI message request.
nfInstanceId	NfInstanceId	C	0..1	Indicates the NF instance ID of primary route, that is, for the first routing attempt of a 5G SBI message request.
ipv4Addresses	array(Ipv4 Addr)	C	0..N	Indicates the list of all IPv4 addresses of primary route, that is, for the first routing attempt of a 5G SBI message request.
ipv6Addresses	array(Ipv6 Addr)	C	0..N	Indicates the list of all IPv6 addresses of primary route, that is, for the first routing attempt of a 5G SBI message request.
port	integer	O	0..1	Indicates the port number. The minimum value is 0 and the maximum value is 65535.
priority	integer	O	0..1	Indicates the priority (relative to other NFs of the same route list) within the range of 0 to 65535 for NF selection and alternate routing. The lower values indicate a higher priority.

Table 2-335 (Cont.) RouteRecord

Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
capacity	integer	O	0..1	Indicates the static capacity information within the range of 0 to 65535. It is expressed as a weight relative to other NF instances of the same route list.
apiPrefix	string	O	0..1	Indicates the optional path segments to construct the {apiRoot} variable of the different API URIs as described in Clause 4.4.1 of 3GPP TS 29.501.
scheme	UriScheme	M	1	Indicates the URI scheme, for example, "http" or "https".

Note

- At least one of the primary route addressing parameters such as fqdn, nfinstancelid, ipv4address, or ipv6address, must be included in the route configuration.
- If the port number is absent, SCP uses the default HTTP port number, that is, TCP port 80 for "http" URIs or TCP port 443 for "https" URIs as specified in Internet Engineering Task Force (IETF) Request for Comments (RFC) 7540.

Table 2-336 Enumeration: RouteGroupType

Enumeration Value	Description
"FQDN"	Route group with FQDN in route group configuration.
"NFINSTANCEID"	Route group with NF instance ID in route group configuration.
"IPADDRESS"	Route group can have either IPv4 or IPv6 or both addresses in route group configuration. In case both IPv4 and IPv6 addresses are present, the load balancing mechanism is used to route the traffic between IPv4 and IPv6.

Table 2-337 Simple Data Types

Type Name	Type Definition	Description
Fqdn	string	Indicates the FQDN of the NF service.
Ipv4Addr	string	Indicates the string identifying an IPv4 address formatted in the "dotted decimal" notation as defined in IETF RFC 1166. Pattern: '^([0-9] [1-9][0-9] 1[0-9][0-9] 2[0-4][0-9] 25[0-5])\.){3}([0-9] [1-9][0-9] 1[0-9][0-9] 2[0-4][0-9] 25[0-5])\$'
Nfinstancelid	string	Indicates the string uniquely identifying an NF instance. The format of the NF Instance ID is a Universally Unique Identifier (UUID) version 4 as described in IETF RFC 4122.

Table 2-338 ProblemDetails

Attribute Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
type	Uri	O	0..1	Identifies the problem type. A URI reference according to IETF RFC 3986.
title	string	O	0..1	Indicates a short human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem.
status	integer	O	0..1	Indicates the HTTP status code for the occurrence of the problem.
detail	string	O	0..1	Indicates a human-readable explanation specific to the occurrence of the problem.
instance	Uri	O	0..1	Indicates a URI reference that identifies the specific occurrence of the problem.
cause	string	C	0..1	Indicates a machine-readable application error cause specific to the occurrence of the problem. It should be present and provide application-related error information if available.
invalidParams	array(InvalidParam)	O	1..N	Indicates the description of invalid parameters for a request rejected due to invalid parameters.

For more information about the ProblemDetails structure, see Section 5.2.4.1 of 3GPP TS 29.571.

2.33 Configuring Consumer NF Info

This section describes Consumer NF Info parameters that are used to determine the identity of consumer NFs that send message requests to SCP.

Resources

The following table describes the resource URIs and the corresponding HTTP methods for the ConsumerInfo resource type.

Table 2-339 Resources

Resource Name	Resource URI	HTTP Method	Description
ConsumerInfo	/ocscp/scpc-configuration/{version}/consumerNfInfo/headerInfo	GET	Retrieves consumerInfo data
ConsumerInfo	/ocscp/scpc-configuration/{version}/consumerNfInfo/headerInfo	PUT	Configures ConsumerInfo data

Data Model

Request Body

The following table describes ConsumerInfo name and data type.

Table 2-340 ConsumerInfo

Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
primaryHeaderName	String	M	1	The header name to identify the consumer NF according to the ingress rate limiting configurations. This is a mandatory parameter. This parameter is given priority over the secondaryHeaderName parameter. The default value is "X-Forwarded-Client-Cert". It can use the following values: "User-Agent" "X-Forwarded-Client-Cert"
secondaryHeaderName	String	O	1	The header name to identify the consumer NF according to the ingress rate limiting configurations. The default value is "". It can use the following values: "User-Agent" "X-Forwarded-Client-Cert"
userAgentHeaderFormat	String	C	1	The header format to identify the consumer NF according to the ingress rate limiting configurations. It supports the following formats: - Format1: NFTYPE-NFINSTANCEID FQDN or NFTYPE-NFINSTANCEID-FQDN - Format2: NFTYPE-FQDN NFINSTANCEID or NFTYPE-FQDN-NFINSTANCEID - Format3: NFTYPE-NFINSTANCEID - Format4: NFTYPE-FQDN - Format5: NFTYPE Where, - NFTYPE indicates the type of consumer NF. - NFINSTANCEID indicates the instance ID of the consumer NF. - FQDN indicates the FQDN of the consumer NF. In the aforementioned example, "-" is a separator and NFInstanceId, FQDN, and Hostname are supported IDs. Note: userAgentHeaderFormat should have values separated by commas irrespective of userAgentHeaderSeparator for PUT requests, and the expected format will be retrieved from GET requests as per userAgentHeaderSeparator. The input and output values for the PUT request are defined in the Table 2-341. Note: This is required only if the User-Agent header is configured.

Table 2-340 (Cont.) ConsumerInfo

Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
userAgentHeaderSeparator	String	C	1	This is the separator that the User-Agent header uses to separate NFINSTANCEID and FQDN. The default value is SPACE. The supported values are SPACE and HYPHEN. Note: NULL is not allowed. Note: This is required only if the User-Agent header is configured.
xfccHeaderCertificateIndex	String	C	1	The certificate extract index contains certificate information in the XFCC header. This parameter is used to decode "X-Forwarded-Client-Cert" for the FQDN. The default value is 0. Note: This is required only if the X-Forwarded-Client-Cert header is configured.
xfccHeaderExtractField	String	C	1	This is the name of the field that has to be retrieved from the XFCC header. The default value is DNS. Specifies the attribute name to extract from the X-Forwarded-Client-Cert (XFCC) header. This attribute accepts any non-empty string and is matched against a key in the XFCC header. For example, configuring DNS matches DNS=<consumer-nf-fqdn>. SCP extracts the matching value and uses it as the consumer NF FQDN or URL for consumer identity resolution. Note: This is required only if the X-Forwarded-Client-Cert header is configured.
xfccHeaderExtractIndex	String	C	1	Index where the Field configured in 'extractField' is present in the XFCC header for extraction. The default value is 0. Note: This is required only if the X-Forwarded-Client-Cert header is configured.

Table 2-340 (Cont.) ConsumerInfo

Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
fallbackNfTypesHdrSeq	Array(String)	M	-	List of headers to use as a fallback consumer information source if the primary or secondary headers do not provide consumer information. The list order determines the order in which each header will be attempted as a source. The supported header is 3gpp-sbi-discovery-requester-nf-type. Valid configurations: <pre>"fallbackNfTypesHdrSeq": ["3gpp-sbi-discovery-requester-nf-type"]</pre> <pre>"fallbackNfTypesHdrSeq": []</pre> Invalid configuration: <pre>"fallbackNfTypesHdrSeq": ["3gpp-sbi-discovery-requester-nf-type", "3gpp-Sbi-Client-Credentials"]</pre> <pre>"fallbackNfTypesHdrSeq": ["3gpp-sbi-discovery-requester-nf-type", "3gpp-sbi-discovery-requester-nf-type"]</pre> <pre>"fallbackNfTypesHdrSeq": [null]</pre> <pre>"fallbackNfTypesHdrSeq": [""]</pre> The default configuration is "fallbackNfTypesHdrSeq": ["3gpp-sbi-discovery-requester-nf-type"]. An empty list indicates that no fallback will be performed.

Table 2-340 (Cont.) ConsumerInfo

Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
fallbackNfInstIdsHdrSeq	Array(String)	M	-	List of headers to use as a fallback consumer information source if the primary or secondary headers do not provide consumer information. The list order determines the order in which each header will be attempted as a source. The supported headers are 3gpp-Sbi-Client-Credentials and 3gpp-sbi-discovery-requester-nf-instance-id. Note: To make this configuration valid, 3gpp-Sbi-Client-Credentials must appear either at the beginning or at the end of the list. Valid configurations: <pre>"fallbackNfInstIdsHdrSeq": ["3gpp-Sbi-Client-Credentials", "3gpp-sbi-discovery-requester-nf-instance-id"]</pre> <pre>"fallbackNfInstIdsHdrSeq": ["3gpp-sbi-discovery-requester-nf-instance-id", "3gpp-Sbi-Client-Credentials"]</pre> Invalid configuration: <pre>"fallbackNfInstIdsHdrSeq": ["3gpp-sbi-discovery-requester-nf-type", "3gpp-Sbi-Client-Credentials", "3gpp-sbi-discovery-requester-nf-instance-id"]</pre> <pre>"fallbackNfInstIdsHdrSeq": ["3gpp-sbi-discovery-requester-nf-type"]</pre> <pre>"fallbackNfInstIdsHdrSeq": ["3gpp-Sbi-Client-Credentials", "3gpp-Sbi-Client-Credentials"]</pre> <pre>"fallbackNfInstIdsHdrSeq": ["3gpp-sbi-discovery-requester-nf-instance-id", "3gpp-sbi-discovery-requester-nf-instance-id"]</pre> <pre>"fallbackNfInstIdsHdrSeq": [null]</pre>

Table 2-340 (Cont.) ConsumerInfo

Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
				"fallbackNfInstIdsHdrSeq": [""] The default configuration is "fallbackHeadersSequence": ["3gpp-sbi-discovery-requester-nf-instance-id","3gpp-Sbi-Client-Credentials"] An empty list indicates that no fallback will be performed.

The following table describes input and output values for the PUT request:

Table 2-341 PUT Request Input and Output Values

Input (PUT)	Output (GET) The values in this column use the "-" separator.
NFTYPE,NFINSTANCEID,FQDN	NFTYPE-NFINSTANCEID-FQDN
NFTYPE,FQDN,NFINSTANCEID	NFTYPE-FQDN-NFINSTANCEID
NFTYPE,NFINSTANCEID	NFTYPE-NFINSTANCEID
NFTYPE,FQDN	NFTYPE-FQDN
NFTYPE	NFTYPE

JSON Format:

```
[
  {
    "primaryHeaderName": "string",
    "secondaryHeaderName": "string",
    "userAgentHeaderFormat": "string",
    "userAgentHeaderSeparator": "string",
    "xfccHeaderCertExtractIndex": "string",
    "xfccHeaderExtractField": "string",
    "xfccHeaderExtractIndex": "string",
    "fallbackNfTypesHdrSeq": ["string", "string",...],
    "fallbackNfInstIdsHdrSeq": ["string", "string",...]
  }
]
```

Response Body

Response body data model:

Data Type	Description
ConsumerInfo	Determines the header type such as XFCC or User-Agent, in the ingress message request.
ProblemDetails	Returns when an invalid combination or more than two query parameters are provided.

Resource Definition:

This section describes GET and PUT resource types supported by ConsumerInfo.

GET API

This section describes the resource to fetch the existing ConsumerInfo configuration.

Resource URI: /ocscp/scpc-configuration/v1/consumerNFInfo/headerInfo

Table 2-342 Data structures supported by the GET Response Body on this resource

Field Name	Mandatory (M) or Optional (O)	Cardinality	Response Code	Description
consumerInfo	M	1	200 OK	Determines the header type such as XFCC or User-Agent, in the ingress message request.
ProblemDetails	M	1	400 BAD REQUEST	Returns when an invalid combination or more than two query parameters are provided.

```
curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/
consumerNfInfo/headerInfo" -H "accept: application/json"
```

```
{
  "primaryHeaderName": "User-Agent",
  "secondaryHeaderName": "X-Forwarded-Client-Cert",
  "userAgentHeaderFormat": "NFType-NFInstanceID FQDN",
  "userAgentHeaderSeparator": "SPACE",
  "xfccHeaderCertExtractIndex": "0",
  "xfccHeaderExtractField": "DNS",
  "xfccHeaderExtractIndex": "0",
  "fallbackNfTypesHdrSeq": [
    "3gpp-sbi-discovery-requester-nf-type"
  ],
  "fallbackNfInstIdsHdrSeq": [
    "3gpp-sbi-discovery-requester-nf-instance-id",
    "3gpp-Sbi-Client-Credentials"
  ]
}
```

PUT API

This resource configures the use of Ingress Rate Limiting Configuration header using the Request Body.

Resource URI: /ocscp/scpc-configuration/v1/consumerNFInfo/headerInfo

Table 2-343 Data Structures Supported by the PUT Response Body on this Resource

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Code	Description
consumerInfo	M	1	200 OK	Determines the header type such as XFCC or User-Agent, in the ingress message request.
ProblemDetails	M	1	400 BAD REQUEST	Returns when an invalid combination or more than two query parameters are provided.

Success Response

```
curl -X PUT "http://10.75.237.50:31337/ocscp/scpc-configuration/v1/consumerNfInfo/headerInfo" -H "accept: */*" -H "Content-Type: application/json" -d "{
  \"primaryHeaderName\": \"X-Forwarded-Client-Cert\",
  \"secondaryHeaderName\": \"User-Agent\",
  \"userAgentHeaderFormat\": \"NFType,NFInstanceId,FQDN\",
  \"userAgentHeaderSeparator\": \"SPACE\",
  \"xfccHeaderCertExtractIndex\": \"0\",
  \"xfccHeaderExtractField\": \"DNS\",
  \"xfccHeaderExtractIndex\": \"0\",
  \"fallbackNfTypesHdrSeq\": [
    \"3gpp-sbi-discovery-requester-nf-type\"
  ],
  \"fallbackNfInstIdsHdrSeq\": [
    \"3gpp-sbi-discovery-requester-nf-instance-id\",
    \"3gpp-Sbi-Client-Credentials\"
  ]
}"
```

Request Body:

```
{
  \"primaryHeaderName\": \"X-Forwarded-Client-Cert\",
  \"secondaryHeaderName\": \"User-Agent\",
  \"userAgentHeaderFormat\": \"NFType,NFInstanceId,FQDN\",
  \"userAgentHeaderSeparator\": \"SPACE\",
  \"xfccHeaderCertExtractIndex\": \"0\",
  \"xfccHeaderExtractField\": \"DNS\",
  \"xfccHeaderExtractIndex\": \"0\",
  \"fallbackNfTypesHdrSeq\": [
    \"3gpp-sbi-discovery-requester-nf-type\"
  ],
  \"fallbackNfInstIdsHdrSeq\": [
    \"3gpp-sbi-discovery-requester-nf-instance-id\",
    \"3gpp-Sbi-Client-Credentials\"
  ]
}
```



```

    ]
  }

  Response body

  [
    {
      "primaryHeaderName": "X-Forwarded-Client-Cert",
      "secondaryHeaderName": "User-Agent",
      "userAgentHeaderFormat": "NFType-NFInstanceID FQDN",
      "userAgentHeaderSeparator": "SPACE",
      "xfccHeaderCertExtractIndex": "0",
      "xfccHeaderExtractField": "DNS",
      "xfccHeaderExtractIndex": "0",
      "fallbackNfTypesHdrSeq": [
        "3gpp-sbi-discovery-requester-nf-type"
      ],
      "fallbackNfInstIdsHdrSeq": [
        "3gpp-sbi-discovery-requester-nf-instance-id",
        "3gpp-Sbi-Client-Credentials"
      ]
    }
  ]

```

2.34 Configuring SCP Services

This section provides configuration information about thread watchdog and queue alerts threshold required for SCP microservices.

Resources

The following table describes the resource name to retrieve and update configuration at the SCP microservices level.

Table 2-344 Resource Name

Resource Name	Resource URI	HTTP Method	Description
scp-service-config	/ocscp/scpc-configuration/{version}/scp-service-config	GET ALL	Retrieves all the SCP microservices configurations.
scp-service-config	/ocscp/scpc-configuration/{version}/scp-service-config/{serviceName}	GET	Retrieves SCP microservices configurations based on servicename.
scp-service-config	/ocscp/scpc-configuration/{version}/scp-service-config/{serviceName}	PUT	Updates all the SCP microservices configurations based on servicename.

Data Model

This REST API is used to update microservice level configurations for SCP, therefore the data model is generic.

Generic Data Model

Table 2-345 ScpServiceConfigs

Field Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description	Allowed Values
serviceName	String	M	1	Indicates the SCP microservice name.	Valid microservice names of SCP, for example, • scpc-notification • scp-worker • scp-nrfproxy • scpc-subscription • scpc-alternate-resolution • scpc-audit • scpc-configuration • scp-cache • scp-load-manager • scp-nrfproxy-oauth
scpServiceConfigs	Map<String, IScpServiceConfigValue>	M	1	Contains microservice level configurations provided with the type of configurations and value in the JSON structure.	-

Specific Data Model

TaskInfoScpConfig

The following data model is defined to specify thread related configurations.

Table 2-346 ScpServiceConfigValue

Field Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description	Allowed Values	Default Values
type	Type	M	1	Indicates the type of configuration to identify whether the value is single or range.	VALUE	VALUE
value	List<TaskInfoScpConfig>	M	1	Indicates the list of values that specify the thread information configurations.	List of TaskInfoScpConfig. For more information, see Table 2-347 .	For default values, see Table 2-347 .

Table 2-347 TaskInfoScpConfig

Field Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Description	Allowed Value	Default Value
queueName	String	NA	1	Indicates the name of the queue for which these configurations are applicable.	The set of allowed values for each supported micro-service, for example, serviceName, is as follows: serviceName: - scpc-notification - notificationQueue - waitingQueue - runQueue serviceName: - scp-worker - scpDownstreamExecutorQueue - scpNrfProxyDownstreamExecutorQueue - scpUpstreamExecutorQueue - scpClientExecutorQueue - scpUpdateSLCertsQueue - scpMediationDownstreamExecutorQueue - scpReconfigureEgressRLExecutorQueue - scpTrafficFedExecutorQueue serviceName: - scp-nrfproxy - scpDownstreamExecutorQueue - scpUpstreamExecutorQueue	The set of default values for each supported micro-service, for example, serviceName, is as follows: serviceName: - scpc-notification - notificationQueue - waitingQueue - runQueue serviceName: - scp-worker - scpDownstreamExecutorQueue - scpNrfProxyDownstreamExecutorQueue - scpUpstreamExecutorQueue - scpClientExecutorQueue - scpUpdateSLCertsQueue - scpMediationDownstreamExecutorQueue - scpReconfigureEgressRLExecutorQueue - scpTrafficFedExecutorQueue serviceName: - scp-nrfproxy - scpDownstreamExecutorQueue - scpUpstreamExecutorQueue

Table 2-347 (Cont.) TaskInfoScpConfig

Field Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description	Allowed Value	Default Value
					serviceName: scp-cache - accessTokenCohEvExecutorQueue - accessTokenAppEvExecutorQueue - scpCacheExecutorQueue serviceName: scp-load-manager - sutLciCohEvExecutorQueue - sutLciAppEvExecutorQueue - peerLciCohEvExecutorQueue - peerLciAppEvExecutorQueue - loadCohEvExecutorQueue - loadAppEvExecutorQueue	serviceName: scp-cache - accessTokenCohEvExecutorQueue - accessTokenAppEvExecutorQueue - scpCacheExecutorQueue serviceName: scp-load-manager - sutLciCohEvExecutorQueue - sutLciAppEvExecutorQueue - peerLciCohEvExecutorQueue - peerLciAppEvExecutorQueue - loadCohEvExecutorQueue - loadAppEvExecutorQueue
criticalQLogThreshold	String	O	1	Indicates the percentage (%) value for queue usage threshold upon reaching which a "critical" alert is raised.	0-100%	85%
majorQLogThreshold	String	O	1	Indicates the percentage (%) value for queue usage threshold upon reaching which a "major" alert is raised.	0-100%	75%
minorQLogThreshold	String	O	1	Indicates the percentage (%) value for queue usage threshold upon reaching which a "minor" alert is raised.	0-100%	65%

Queue names and Usages

The following lists the queue names and their usages:

Worker queue names

- `scpDownstreamExecutorQueue`: Downstream (message received from consumer) message handling thread pool queue
- `scpNrfProxyDownstreamExecutorQueue`: Downstream message handling thread pool queue for `nrfProxy`
- `scpUpstreamExecutorQueue`: Upstream (response received) message handling thread pool queue
- `scpClientExecutorQueue`: Currently not in use
- `scpUpdateSSLCertsQueue`: Thread pool queue for all the ssl certificate related threads
- `scpMediationDownstreamExecutorQueue`: Downstream message handling thread pool queue for mediation
- `scpReconfigureEgressRLExecutorQueue`: RateLimiter thread pool queue
- `scpTrafficFeedExecutorQueue`: Traffic feed thread pool queue

NRF Proxy Queue Names

- `scpDownstreamExecutorQueue`: Downstream(message received from Worker) message handling thread pool queue
- `scpUpstreamExecutorQueue`: Upstream (response received) message handling thread pool queue

Notification Queue Names

- `notificationQueue`: If a notification arrives at SCP, it is placed in the notification queue, which has a capacity of 5000
- `waitingQueue`: The notification is removed from the notification queue and added to the waiting queue, which has a capacity of 5000 for each `nf` type
- `runQueue`: Finally, the notification is moved from `waitingQueue` to `runQueue`. The notification is processed from `runQueue`; capacity is 40.

Cache Queue Names

- `accessTokenCohEvExecutorQueue`: A queue the cache service uses to service access token coherence requests.
- `accessTokenAppEvExecutorQueue`: A queue the cache service uses to serve access token application requests.
- `scpCacheExecutorQueue`: SCP cache executor queue for the thread pool used to serve global rate-limiting coherence requests.

Load Manager Names

- `sutLciCohEvExecutorQueue`: A queue the Load Manager service uses to service LCI coherence event requests.
- `sutLciAppEvExecutorQueue`: A queue the Load Manager service uses to service LCI application event requests.
- `peerLciCohEvExecutorQueue`: A queue that the Load Manager service uses to service requests for peer LCI coherence events.
- `peerLciAppEvExecutorQueue`: A queue that the Load Manager service uses to service requests for peer LCI application event services.

- `loadCohEvExecutorQueue`: A queue that the Load Manager service uses to service load coherence event requests.
- `loadAppEvExecutorQueue`: A queue that the Load Manager service uses to service load application event requests.

Note

All queue capacities are 10,000 for worker and NRF queues. These queue capacities are not configurable and only allow threshold value updates.

The following data model is defined to specify thread related configurations.

Table 2-348 ThreadWatchDogScpServiceConfig

Field Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Description	Allowed Values	Default Values
type	Type	M	1	Indicates the type of configuration to identify whether the value is single or range.	VALUE	VALUE
value	List<ThreadWatchDogConfig>	M	1	Indicates the list of values that specify the thread information configurations.	List of ThreadWatchDogConfig. For more information, see Table 2-348 .	For information about default values, see Table 2-348 .

Table 2-349 ThreadWatchDogConfig

Field Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Description	Allowed Values	Default Value
enableThreadWatchDog	Boolean	M	1	Specifies whether to enable or disable liveness failures. If this parameter is set to true, liveness fails whenever the watchdog reports a stuck or deadlocked thread.	true or false	true
watchDogMonitoringInterval	int	O	1	Indicates the time interval used by watchdog to monitor if any threads are stuck. The time interval is in milliseconds.	500-10000	3000

Table 2-349 (Cont.) ThreadWatchDogConfig

Field Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description	Allowed Values	Default Value
watchDogInterval	int	O	1	Indicates the maximum time allowed for threads to be nonresponsive. Watchdog uses this time to determine if a thread is stuck. The time interval is in milliseconds. For example, if watchDogInterval is 10s and a thread does not respond for 10s, then watchdog marks that thread as stuck or nonresponsive.	5000-900000	9000 Note: Default value for scpc-notification micro-service for r15 deployment is 15m, for example, 900000
watchDogFailureCount	int	O	1	Indicates the maximum number of times threadWatchDog attempts to check if a thread is stuck before marking the thread as hung or stuck. For instance, if this value is 3, then the watchdog will check if a thread is stuck for 3 times continuously before marking it as stuck/hung.	1-25	5

The following data model is defined to specify inter pod resiliency configurations.

Table 2-350 ConnectivityWatchDogServiceConfig

Field Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description	Allowed Values	Default Values
type	Type	M	1	Indicates the type of configuration to identify whether the value is single or range.	VALUE	VALUE
value	List<ConnectivityWatchDogConfig>	M	1	Indicates the list of values that specify the pod resiliency configurations.	List of ConnectivityWatchDogConfig. For more information, see Table 2-350 .	For information about default values, see Table 2-350 .

Table 2-351 ConnectivityWatchDogConfig

Field Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Description	Allowed Values	Default Value
enableConnectivityWatchDog	Boolean	M	1	Specifies whether to enable or disable interpod resiliency check.	true or false	true
connectivityMonitoringInterval	int	O	1	Indicates the time interval for resiliency in milliseconds.	500-10000	1000
connectivityRetryThreshold	int	O	1	Indicates the maximum number of attempts to be made if any pod is not reachable.	0-5	2
connectivityResponseTimeout	int	O	1	Indicates the maximum response timeout in milliseconds for the client to error out.	500-10000	2000
connectivityRetryInterval	int	O	1	Indicated the time interval between retries in milliseconds	500-10000	500

The following data model is defined to specify routing options configurations.

Table 2-352 RoutingOptionsScpServiceConfig

Field Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Description	Allowed Values	Default Values
type	Type	M	1	Indicates the type of configuration to identify whether the value is single or range.	VALUE	VALUE
value	List<RoutingOptionsConfig>	M	1	Indicates the list of values that specify the pod resiliency configurations.	List of RoutingOptionsConfig. For more information, see Table 2-353 .	For information about default values, see Table 2-353 .

Table 2-353 RoutingOptionsConfig

Field Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Description	Allowed Values	Default Value
responseTimeout	int	M	1	Indicates the maximum response timeout in seconds.	0-10	1
maxRetryAttempts	int	M	1	Indicates the maximum number of attempts to establish the connection.	0-5	0

Micro-service data model

The list of service specific data model is as follows:

SCPC-NOTIFICATION

The SCP service configuration API uses the following data models for scpc-notification service:

- ScpServiceConfigValue
- ThreadWatchDogScpServiceConfig
- ConnectivityWatchDogServiceConfig

Request Body

```
{
  "serviceName": "scpc-notification",
  "scpServiceConfigs": {
    "taskInfo": {
      "type": "VALUE",
      "value": [
        {
          "queueName": "notificationQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "waitingQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "runQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        }
      ]
    },
    "connectivityWatchDogInfo": {
      "value": {
        "connectivityMonitoringInterval": 1000,
        "enableConnectivityWatchDog": true,
        "connectivityRetryThreshold": 3,
        "connectivityResponseTimeout": 5000,
        "connectivityRetryInterval": 1000
      }
    },
    "notificationThreadWatchDogInfo": {
      "value": {
        "enableThreadWatchDog": true,
        "watchDogMonitoringInterval": 1000,
        "watchDogInterval": 9000,
        "watchDogFailureCount": 1
      }
    }
  }
}
```

```

    }
  }
}

```

Response Body

```

{
  "serviceName": "scpc-notification",
  "scpServiceConfigs": {
    "taskInfo": {
      "type": "VALUE",
      "value": [
        {
          "queueName": "notificationQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "waitingQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "runQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        }
      ]
    },
    "connectivityWatchDogInfo": {
      "value": {
        "connectivityMonitoringInterval": 1000,
        "enableConnectivityWatchDog": true,
        "connectivityRetryThreshold": 3,
        "connectivityResponseTimeout": 5000,
        "connectivityRetryInterval": 1000
      }
    },
    "notificationThreadWatchDogInfo": {
      "value": {
        "enableThreadWatchDog": true,
        "watchDogMonitoringInterval": 1000,
        "watchDogInterval": 9000,
        "watchDogFailureCount": 1
      }
    }
  }
}

```

SCPC-WORKER

The SCP service configuration API uses the following data models for the scp-worker service:

- ScpServiceConfigValue
- ThreadWatchDogScpServiceConfig
- ConnectivityWatchDogServiceConfig
- RoutingOptionsScpServiceConfig

Request Body

```
{
  "serviceName": "scp-worker",
  "scpServiceConfigs": {
    "taskInfo": {
      "type": "VALUE",
      "value": [
        {
          "queueName": "scpDownstreamExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "scpNrfProxyDownstreamExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "scpUpstreamExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "scpClientExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "scpUpdateSSLCertsQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "scpMediationDownstreamExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "scpReconfigureEgressRLExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        }
      ]
    }
  }
}
```

```

    ]
  },
  "routingOptions": {
    "value": {
      "scpc-notification": {
        "responseTimeout": "1s",
        "maxRetryAttempts": 0
      }
    }
  },
  "threadWatchDogInfo": {
    "value": {
      "enableThreadWatchDog": true,
      "watchDogMonitoringInterval": 1000,
      "watchDogInterval": 9000,
      "watchDogFailureCount": 1
    }
  },
  "connectivityWatchDogInfo": {
    "value": {
      "connectivitytMonitoringInterval": 1000,
      "enableConnectivityWatchDog": true,
      "connectivityRetryThreshold": 3,
      "connectivityResponseTimeout": 5000,
      "connectivityRetryInterval": 1000
    }
  },
  "podOverloadControl": {
    "cpuOverloadConfig": {
      "enabled": true
    },
    "pendingTransactionOverloadConfig": {
      "enabled": true
    }
  }
}

```

Response Body

```

{
  "serviceName": "scp-worker",
  "scpServiceConfigs": {
    "taskInfo": {
      "type": "VALUE",
      "value": [
        {
          "queueName": "scpDownstreamExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "scpNrpfProxyDownstreamExecutorQueue",
          "criticalQLogThreshold": "85%",

```

```

        "majorQLogThreshold": "75%",
        "minorQLogThreshold": "65%"
    },
    {
        "queueName": "scpUpstreamExecutorQueue",
        "criticalQLogThreshold": "85%",
        "majorQLogThreshold": "75%",
        "minorQLogThreshold": "65%"
    },
    {
        "queueName": "scpClientExecutorQueue",
        "criticalQLogThreshold": "85%",
        "majorQLogThreshold": "75%",
        "minorQLogThreshold": "65%"
    },
    {
        "queueName": "scpUpdateSSLCertsQueue",
        "criticalQLogThreshold": "85%",
        "majorQLogThreshold": "75%",
        "minorQLogThreshold": "65%"
    },
    {
        "queueName": "scpMediationDownstreamExecutorQueue",
        "criticalQLogThreshold": "85%",
        "majorQLogThreshold": "75%",
        "minorQLogThreshold": "65%"
    },
    {
        "queueName": "scpReconfigureEgressRLExecutorQueue",
        "criticalQLogThreshold": "85%",
        "majorQLogThreshold": "75%",
        "minorQLogThreshold": "65%"
    }
]
},
"routingOptions": {
    "value": {
        "scpc-notification": {
            "responseTimeout": "1s",
            "maxRetryAttempts": 0
        }
    }
},
"threadWatchDogInfo": {
    "value": {
        "enableThreadWatchDog": true,
        "watchDogMonitoringInterval": 1000,
        "watchDogInterval": 9000,
        "watchDogFailureCount": 1
    }
},
"connectivityWatchDogInfo": {
    "value": {
        "connectivityMonitoringInterval": 1000,
        "enableConnectivityWatchDog": true,
        "connectivityRetryThreshold": 3,

```

```

        "connectivityResponseTimeout": 5000,
        "connectivityRetryInterval": 1000
    }
},
"podOverloadControl": {
    "cpuOverloadConfig": {
        "enabled": true
    },
    "pendingTransactionOverloadConfig": {
        "enabled": true
    }
}
}
}
}

```

SCPC-NRFPROXY

The SCP service configuration API uses the following data models for scp-nrfproxy service:

- ScpServiceConfigValue
- ThreadWatchDogScpServiceConfig
- ConnectivityWatchDogServiceConfig

Request Body

```

{
  "serviceName": "scp-nrfproxy",
  "scpServiceConfigs": {
    "taskInfo": {
      "type": "VALUE",
      "value": [
        {
          "queueName": "scpDownstreamExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "scpUpstreamExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        }
      ]
    },
    "nrfThreadWatchDogInfo": {
      "value": {
        "enableThreadWatchDog": true,
        "watchDogMonitoringInterval": 1000,
        "watchDogInterval": 9000,
        "watchDogFailureCount": 1
      }
    },
    "connectivityWatchDogInfo": {
      "value": {
        "connectivitytMonitoringInterval": 1000,

```

```

        "enableConnectivityWatchDog": true,
        "connectivityRetryThreshold": 3,
        "connectivityResponseTimeout": 5000,
        "connectivityRetryInterval": 1000
    }
}
}
}

```

Response Body

```

{
  "serviceName": "scp-nrfproxy",
  "scpServiceConfigs": {
    "taskInfo": {
      "type": "VALUE",
      "value": [
        {
          "queueName": "scpDownstreamExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "scpUpstreamExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        }
      ]
    },
    "nrfThreadWatchDogInfo": {
      "value": {
        "enableThreadWatchDog": true,
        "watchDogMonitoringInterval": 1000,
        "watchDogInterval": 9000,
        "watchDogFailureCount": 1
      }
    },
    "connectivityWatchDogInfo": {
      "value": {
        "connectivityMonitoringInterval": 1000,
        "enableConnectivityWatchDog": true,
        "connectivityRetryThreshold": 3,
        "connectivityResponseTimeout": 5000,
        "connectivityRetryInterval": 1000
      }
    }
  }
}

```

SCPC-CONFIGURATION

The SCP service configuration API uses the following data models for scp-nrfproxy service:

- ThreadWatchDogScpServiceConfig

- ConnectivityWatchDogServiceConfig

Request Body

```
{
  "serviceName": "scpc-configuration",
  "scpServiceConfigs": {
    "connectivityWatchDogInfo": {
      "value": {
        "connectivityMonitoringInterval": 1000,
        "enableConnectivityWatchDog": true,
        "connectivityRetryThreshold": 3,
        "connectivityResponseTimeout": 5000,
        "connectivityRetryInterval": 1000
      }
    },
    "configurationThreadWatchDogInfo": {
      "value": {
        "enableThreadWatchDog": true,
        "watchDogMonitoringInterval": 1000,
        "watchDogInterval": 9000,
        "watchDogFailureCount": 1
      }
    }
  }
}
```

Response Body

```
{
  "serviceName": "scpc-configuration",
  "scpServiceConfigs": {
    "connectivityWatchDogInfo": {
      "value": {
        "connectivityMonitoringInterval": 1000,
        "enableConnectivityWatchDog": true,
        "connectivityRetryThreshold": 3,
        "connectivityResponseTimeout": 5000,
        "connectivityRetryInterval": 1000
      }
    },
    "configurationThreadWatchDogInfo": {
      "value": {
        "enableThreadWatchDog": true,
        "watchDogMonitoringInterval": 1000,
        "watchDogInterval": 9000,
        "watchDogFailureCount": 1
      }
    }
  }
}
```

SCPC-SUBSCRIPTION

The SCP service configuration API uses the following data models for scpc-subscription service:

- ThreadWatchDogScpServiceConfig
- ConnectivityWatchDogServiceConfig

Request Body

```
{
  "serviceName": "scpc-subscription",
  "scpServiceConfigs": {
    "connectivityWatchDogInfo": {
      "value": {
        "connectivityMonitoringInterval": 1000,
        "enableConnectivityWatchDog": true,
        "connectivityRetryThreshold": 3,
        "connectivityResponseTimeout": 5000,
        "connectivityRetryInterval": 1000
      }
    },
    "subscriptionThreadWatchDogInfo": {
      "value": {
        "enableThreadWatchDog": true,
        "watchDogMonitoringInterval": 1000,
        "watchDogInterval": 9000,
        "watchDogFailureCount": 1
      }
    }
  }
}
```

Response Body

```
{
  "serviceName": "scpc-subscription",
  "scpServiceConfigs": {
    "connectivityWatchDogInfo": {
      "value": {
        "connectivityMonitoringInterval": 1000,
        "enableConnectivityWatchDog": true,
        "connectivityRetryThreshold": 3,
        "connectivityResponseTimeout": 5000,
        "connectivityRetryInterval": 1000
      }
    },
    "subscriptionThreadWatchDogInfo": {
      "value": {
        "enableThreadWatchDog": true,
        "watchDogMonitoringInterval": 1000,
        "watchDogInterval": 9000,
        "watchDogFailureCount": 1
      }
    }
  }
}
```

SCPC-AUDIT

The SCP service configuration API uses the following data models for scpc-subscription service:

- ThreadWatchDogScpServiceConfig
- ConnectivityWatchDogServiceConfig

Request Body

```
{
  "serviceName": "scpc-audit",
  "scpServiceConfigs": {
    "auditThreadWatchDogInfo": {
      "value": {
        "enableThreadWatchDog": true,
        "watchDogMonitoringInterval": 1000,
        "watchDogInterval": 9000,
        "watchDogFailureCount": 1
      }
    },
    "connectivityWatchDogInfo": {
      "value": {
        "connectivitytMonitoringInterval": 1000,
        "enableConnectivityWatchDog": true,
        "connectivityRetryThreshold": 3,
        "connectivityResponseTimeout": 5000,
        "connectivityRetryInterval": 1000
      }
    }
  }
}
```

Response Body

```
{
  "serviceName": "scpc-audit",
  "scpServiceConfigs": {
    "auditThreadWatchDogInfo": {
      "value": {
        "enableThreadWatchDog": true,
        "watchDogMonitoringInterval": 1000,
        "watchDogInterval": 9000,
        "watchDogFailureCount": 1
      }
    },
    "connectivityWatchDogInfo": {
      "value": {
        "connectivitytMonitoringInterval": 1000,
        "enableConnectivityWatchDog": true,
        "connectivityRetryThreshold": 3,
        "connectivityResponseTimeout": 5000,
        "connectivityRetryInterval": 1000
      }
    }
  }
}
```

SCPC-ALTERNATE-RESOLUTION

The SCP service configuration API uses the following data models for scp-nrfproxy service:

- ThreadWatchDogScpServiceConfig
- ConnectivityWatchDogServiceConfig

Request Body

```
{
  "serviceName": "scpc-alternate-resolution",
  "scpServiceConfigs": {
    "connectivityWatchDogInfo": {
      "value": {
        "connectivitytMonitoringInterval": 1000,
        "enableConnectivityWatchDog": true,
        "connectivityRetryThreshold": 3,
        "connectivityResponseTimeout": 5000,
        "connectivityRetryInterval": 1000
      }
    },
    "alternateResolutionThreadWatchDogInfo": {
      "value": {
        "enableThreadWatchDog": true,
        "watchDogMonitoringInterval": 1000,
        "watchDogInterval": 9000,
        "watchDogFailureCount": 1
      }
    }
  }
}
```

Response Body

```
{
  "serviceName": "scpc-alternate-resolution",
  "scpServiceConfigs": {
    "connectivityWatchDogInfo": {
      "value": {
        "connectivitytMonitoringInterval": 1000,
        "enableConnectivityWatchDog": true,
        "connectivityRetryThreshold": 3,
        "connectivityResponseTimeout": 5000,
        "connectivityRetryInterval": 1000
      }
    },
    "alternateResolutionThreadWatchDogInfo": {
      "value": {
        "enableThreadWatchDog": true,
        "watchDogMonitoringInterval": 1000,
        "watchDogInterval": 9000,
        "watchDogFailureCount": 1
      }
    }
  }
}
```

SCP-CACHE

The SCP service configuration API uses the following data models for scp-cache service:

- ScpServiceConfigValue

Request Body

```
{
  "serviceName": "scp-cache",
  "scpServiceConfigs": {
    "taskInfo": {
      "type": "VALUE",
      "value": [
        {
          "queueName": "accessTokenCohEvExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "accessTokenAppEvExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "scpCacheExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        }
      ]
    }
  }
}
```

Response Body

```
{
  "serviceName": "scp-cache",
  "scpServiceConfigs": {
    "taskInfo": {
      "type": "VALUE",
      "value": [
        {
          "queueName": "accessTokenCohEvExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "accessTokenAppEvExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        }
      ],
    }
  }
}
```

```

        {
            "queueName": "scpCacheExecutorQueue",
            "criticalQLogThreshold": "85%",
            "majorQLogThreshold": "75%",
            "minorQLogThreshold": "65%"
        }
    ]
}
}
}

```

SCP-LOAD-MANAGER

The SCP service configuration API uses the following data models for scp-load-manager service:

- ScpServiceConfigValue

Request Body

```

{
  "serviceName": "scp-load-manager",
  "scpServiceConfigs": {
    "taskInfo": {
      "type": "VALUE",
      "value": [
        {
          "queueName": "sutLciCohEvExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "sutLciAppEvExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "peerLciCohEvExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "peerLciAppEvExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "loadCohEvExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        }
      ]
    }
  }
}

```

```

        "queueName": "loadAppEvExecutorQueue",
        "criticalQLogThreshold": "85%",
        "majorQLogThreshold": "75%",
        "minorQLogThreshold": "65%"
    }
  ]
}
}
}

```

Response Body

```

{
  "serviceName": "scp-load-manager",
  "scpServiceConfigs": {
    "taskInfo": {
      "type": "VALUE",
      "value": [
        {
          "queueName": "sutLciCohEvExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "sutLciAppEvExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "peerLciCohEvExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "peerLciAppEvExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "loadCohEvExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "loadAppEvExecutorQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        }
      ]
    }
  }
}

```

```

    }
  }
}

```

Resource Definition

GET REST API

This resource retrieves routing options for all the applications.

Resource URI: /ocscp/scpc-configuration/{version}/scp-service-config

Table 2-354 Data Structures Supported by the GET Response Body on this Resource

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Code	Description
scpServiceConfigs	M	1..N	200 OK	Retrieves configurations for SCP microservices.

This resource retrieves routing options for the application specified by serviceName.

Resource URI: /ocscp/scpc-configuration/{version}/scp-service-config/{serviceName}

Table 2-355 Path Parameters

Name	Data Type	Mandatory (M) or Optional (O)	Description
serviceName	String	M	Retrieves configurations on microserviceName. The supported values are worker, notification, and nrproxy.

Table 2-356 Data Structures Supported by the GET Response Body on this Resource

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Code	Description
scpServiceConfigs	M	1	200 OK	Indicates service configurations for SCP microservices.
ProblemDetails	M	1	404	Returns when an invalid combination or more than two query parameters are provided.

Curl GET/GET ALL command

GET ALL

Success Response

```
curl -X GET http://<localhost>:8081/ocscp/scpc-configuration/v1/scp-service-
config -H 'accept: application/json' -v
```

```
* About to connect() to <localhost>:8081 port 31343 (#0)
* Trying <localhost>:8081...
* Connected to <localhost>:8081 (<localhost>:8081) port 31343 (#0)
> GET /ocscp/scpc-configuration/v1/scp-service-config HTTP/1.1
> User-Agent: curl/7.29.0
> Host: <localhost>:8081
> accept: application/json
>
< HTTP/1.1 200 OK
< Connection: keep-alive
< Transfer-Encoding: chunked
< Content-Type: application/json
< Date: Thu, 17 Nov 2022 06:12:26 GMT
<

[{"serviceName":"scp-nrfproxy","scpServiceConfigs":{"taskInfo":
{"type":"VALUE","value":
[{"queueName":"scpDownstreamExecutorQueue","criticalQLogThreshold":"85%","majorQLogThreshold":"75%","minorQLogThreshold":"65%"},
{"queueName":"scpUpstreamExecutorQueue","criticalQLogThreshold":"85%","majorQLogThreshold":"75%","minorQLogThreshold":"65%"}]},
{"nrfThreadWatchDogInfo":
{"value":
{"enableThreadWatchDog":true,"watchDogMonitoringInterval":1000,"watchDogInterval":9000,"watchDogFailureCount":1},
{"connectivityWatchDogInfo":{"value":
{"connectivityMonitoringInterval":1000,"enableConnectivityWatchDog":true,"connectivityRetryThreshold":3,"connectivityResponseTimeout":5000,"connectivityRetryInterval":1000}}}},
{"serviceName":"scp-worker","scpServiceConfigs":
{"taskInfo":{"type":"VALUE","value":
[{"queueName":"scpDownstreamExecutorQueue","criticalQLogThreshold":"85%","majorQLogThreshold":"75%","minorQLogThreshold":"65%"},
{"queueName":"scpNrfProxyDownstreamExecutorQueue","criticalQLogThreshold":"85%","majorQLogThreshold":"75%","minorQLogThreshold":"65%"},
{"queueName":"scpUpstreamExecutorQueue","criticalQLogThreshold":"85%","majorQLogThreshold":"75%","minorQLogThreshold":"65%"},
{"queueName":"scpClientExecutorQueue","criticalQLogThreshold":"85%","majorQLogThreshold":"75%","minorQLogThreshold":"65%"},
{"queueName":"scpUpdateSSLCertsQueue","criticalQLogThreshold":"85%","majorQLogThreshold":"75%","minorQLogThreshold":"65%"},
{"queueName":"scpMediationDownstreamExecutorQueue","criticalQLogThreshold":"85%","majorQLogThreshold":"75%","minorQLogThreshold":"65%"},
{"queueName":"scpReconfigureEgressRLExecutorQueue","criticalQLogThreshold":"85%","majorQLogThreshold":"75%","minorQLogThreshold":"65%"}]},
{"routingOptions":
{"value":{"scpc-notification":
{"responseTimeout":"1s","maxRetryAttempts":0}},
{"threadWatchDogInfo":{"value":
{"enableThreadWatchDog":true,"watchDogMonitoringInterval":1000,"watchDogInterval":9000,"watchDogFailureCount":1},
{"connectivityWatchDogInfo":{"value":
{"connectivityMonitoringInterval":1000,"enableConnectivityWatchDog":true,"connectivityRetryThreshold":3,"connectivityResponseTimeout":5000,"connectivityRetryInterval":1000}}}},
{"serviceName":"scp-alternate-
```



```

resolution", "scpServiceConfigs": {"connectivityWatchDogInfo": {"value":
{"connectivitytMonitoringInterval": 1000, "enableConnectivityWatchDog": true, "con
nectivityRetryThreshold": 3, "connectivityResponseTimeout": 5000, "connectivityRet
ryInterval": 1000}}, "alternateResolutionThreadWatchDogInfo": {"value":
{"enableThreadWatchDog": true, "watchDogMonitoringInterval": 1000, "watchDogInterv
al": 9000, "watchDogFailureCount": 1}}}}, {"serviceName": "scpc-
audit", "scpServiceConfigs": {"auditThreadWatchDogInfo": {"value":
{"enableThreadWatchDog": true, "watchDogMonitoringInterval": 1000, "watchDogInterv
al": 9000, "watchDogFailureCount": 1}}, "connectivityWatchDogInfo": {"value":
{"connectivitytMonitoringInterval": 1000, "enableConnectivityWatchDog": true, "con
nectivityRetryThreshold": 3, "connectivityResponseTimeout": 5000, "connectivityRet
ryInterval": 1000}}}}, {"serviceName": "scpc-configuration", "scpServiceConfigs":
{"connectivityWatchDogInfo": {"value":
{"connectivitytMonitoringInterval": 1000, "enableConnectivityWatchDog": true, "con
nectivityRetryThreshold": 3, "connectivityResponseTimeout": 5000, "connectivityRet
ryInterval": 1000}}, "configurationThreadWatchDogInfo": {"value":
{"enableThreadWatchDog": true, "watchDogMonitoringInterval": 1000, "watchDogInterv
al": 9000, "watchDogFailureCount": 1}}}}, {"serviceName": "scpc-
notification", "scpServiceConfigs": {"taskInfo": {"type": "VALUE", "value":
[{"queueName": "notificationQueue", "criticalQLogThreshold": "85%", "majorQLogThre
shold": "75%", "minorQLogThreshold": "65%"},
{"queueName": "waitingQueue", "criticalQLogThreshold": "85%", "majorQLogThreshold"
: "75%", "minorQLogThreshold": "65%"},
{"queueName": "runQueue", "criticalQLogThreshold": "85%", "majorQLogThreshold": "75
%", "minorQLogThreshold": "65%"}]}, "connectivityWatchDogInfo": {"value":
{"connectivitytMonitoringInterval": 1000, "enableConnectivityWatchDog": true, "con
nectivityRetryThreshold": 3, "connectivityResponseTimeout": 5000, "connectivityRet
ryInterval": 1000}}, "notificationThreadWatchDogInfo": {"value":
{"enableThreadWatchDog": true, "watchDogMonitoringInterval": 1000, "watchDogInterv
al": 9000, "watchDogFailureCount": 1}}}}, {"serviceName": "scpc-
subscription", "scpServiceConfigs": {"connectivityWatchDogInfo": {"value":
{"connectivitytMonitoringInterval": 1000, "enableConnectivityWatchDog": true, "con
nectivityRetryThreshold": 3, "connectivityResponseTimeout": 5000, "connectivityRet
ryInterval": 1000}}, "subscriptionThreadWatchDogInfo": {"value":
{"enableThreadWatchDog": true, "watchDogMonitoringInterval": 1000, "watchDogInterv
al": 9000, "watchDogFailureCount": 1}}}}]}

```

GET Command

Success Response

```

curl -X GET http://<localhost>:8081/ocscp/scpc-configuration/v1/scp-service-
config/scp-worker -H 'accept: application/json' -v

```

```

* About to connect() to <localhost> port <port number> (#0)
* Trying <localhost>:8081...
* Connected to <localhost>:8081 (<localhost>:8081) port 31343 (#0)
> GET /ocscp/scpc-configuration/v1/scp-service-config/scp-worker HTTP/1.1
> User-Agent: curl/7.29.0
> Host: <localhost>:8081
> accept: application/json
>
< HTTP/1.1 200 OK
< Connection: keep-alive
< Transfer-Encoding: chunked

```

```
< Content-Type: application/json
< Date: Thu, 17 Nov 2022 06:17:08 GMT
<
{"serviceName":"scp-worker","scpServiceConfigs":{"taskInfo":
{"type":"VALUE","value":
[{"queueName":"scpDownstreamExecutorQueue","criticalQLogThreshold":"85%","majorQLogThreshold":"75%","minorQLogThreshold":"65%"},
{"queueName":"scpNrFProxyDownstreamExecutorQueue","criticalQLogThreshold":"85%","majorQLogThreshold":"75%","minorQLogThreshold":"65%"},
{"queueName":"scpUpstreamExecutorQueue","criticalQLogThreshold":"85%","majorQLogThreshold":"75%","minorQLogThreshold":"65%"},
{"queueName":"scpClientExecutorQueue","criticalQLogThreshold":"85%","majorQLogThreshold":"75%","minorQLogThreshold":"65%"},
{"queueName":"scpUpdateSSLCertsQueue","criticalQLogThreshold":"85%","majorQLogThreshold":"75%","minorQLogThreshold":"65%"},
{"queueName":"scpMediationDownstreamExecutorQueue","criticalQLogThreshold":"85%","majorQLogThreshold":"75%","minorQLogThreshold":"65%"},
{"queueName":"scpReconfigureEgressRLExecutorQueue","criticalQLogThreshold":"85%","majorQLogThreshold":"75%","minorQLogThreshold":"65%"}]},
"routingOptions":
{"value":{"scpc* Connection #0 to host <localhost> left intact
-notification":
{"responseTimeout":"1s","maxRetryAttempts":0}},
"threadWatchDogInfo":{"value":
{"enableThreadWatchDog":true,"watchDogMonitoringInterval":1000,"watchDogInterval":9000,"watchDogFailureCount":1}},
"connectivityWatchDogInfo":{"value":
{"connectivityMonitoringInterval":1000,"enableConnectivityWatchDog":true,"connectivityRetryThreshold":3,"connectivityResponseTimeout":5000,"connectivityRetryInterval":1000}}}}
```

Failure Response

```
curl -X 'GET' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/scp-service-config/Worker1' -H 'accept: application/json' -v
```

```
* About to connect() to <localhost> port <port number> (#0)
* Trying <localhost>:8081...
* Connected to <localhost>:8081 (<localhost>:8081) port 31368 (#0)
> GET /ocscp/scpc-configuration/v1/scp-service-config/Worker1 HTTP/1.1
> User-Agent: curl/7.29.0
> Host: <localhost>:8081
> accept: application/json
>
< HTTP/1.1 404 Not Found
< Connection: keep-alive
< Transfer-Encoding: chunked
< Content-Type: application/problem+json
< Date: Thu, 18 Aug 2022 09:08:36 GMT
<
* Connection #0 to host <localhost> left intact
{"title":"Not Found","status":"404","detail":"Scp_Service_Configuration for given serviceName not found . Please refer to the User Guide.","instance":"/ocscp/scpc-configuration/v1/scp-service-config/Worker1","cause":"DATA_NOT_FOUND"}
```

PUT REST API

This resource configures routing options for the application.

Resource URI: /ocscp/scpc-configuration/{version}/scp-service-config/{appname}

Table 2-357 Data Structures Supported by the PUT Request Body on this Resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
scpServiceConfigs	1	M	scp-service-configs for the application.

Table 2-358 Data structures supported by the PUT Response Body on this resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Code	Description
scpServiceConfigs	M	1	200 OK	Indicates service configurations for SCP microservices.
ProblemDetails	M	1	400/404	Returns when an invalid combination or more than two query parameters are provided.

Curl PUT Command

Success Response

```
curl -X 'PUT' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/scp-
service-config/scpc-alternate-resolution' \
    "connectivityRetryInterval": 1000
```

```
> -H 'accept: application/json' \
> -H 'Content-Type: application/json' \
> -d '{
>   "serviceName": "scpc-alternate-resolution",
>   "scpServiceConfigs": {
>     "connectivityWatchDogInfo": {
>       "value": {
>         "connectivityMonitoringInterval": 1000,
>         "enableConnectivityWatchDog": true,
>         "connectivityRetryThreshold": 3,
>         "connectivityResponseTimeout": 5000,
>         "connectivityRetryInterval": 1000
>       }
>     },
>     "alternateResolutionThreadWatchDogInfo": {
>       "value": {
>         "enableThreadWatchDog": true,
>         "watchDogMonitoringInterval": 1000,
>         "watchDogInterval": 9000,
>         "watchDogFailureCount": 1
>       }
>     }
>   }
> }'
```

```
{
  "serviceName": "scpc-alternate-resolution",
  "scpServiceConfigs": {
    "connectivityWatchDogInfo": {
      "value": {
        "connectivityMonitoringInterval": 1000,
        "enableConnectivityWatchDog": true,
        "connectivityRetryThreshold": 3,
        "connectivityResponseTimeout": 5000,
        "connectivityRetryInterval": 1000
      }
    },
    "alternateResolutionThreadWatchDogInfo": {
      "value": {
        "enableThreadWatchDog": true,
        "watchDogMonitoringInterval": 1000,
        "watchDogInterval": 9000,
        "watchDogFailureCount": 1
      }
    }
  }
}
```

Failure Response 1

```
curl -X 'PUT' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/scp-  
service-config/Notification' -H 'accept: application/json' -H 'Content-  
Type: application/json' -d '{
```

```
{
  "serviceName": "NOTIFICATION",
  "scpServiceConfigs": {
    "TaskInfoScpConfig": {
      "type": "VALUE",
      "value": [
        {
          "queueName": "notificationQueue",
          "criticalQLogThreshold": "86%",
          "majorQLogThreshold": "76%",
          "minorQLogThreshold": "66%"
        },
        {
          "queueName": "waitingQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        },
        {
          "queueName": "runQueue",
          "criticalQLogThreshold": "85%",
          "majorQLogThreshold": "75%",
          "minorQLogThreshold": "65%"
        }
      ]
    }
  }
}
>
> '
{"timestamp": "2022-08-18T09:13:28.253+00:00", "status": 400, "error": "Bad  
Request", "path": "/ocscp/scpc-configuration/v1/scp-service-config/  
Notification"}
```

Failure Response 2

```
curl -X 'PUT' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/scp-
service-config/Subscription' \

> -H 'accept: application/json' \
> -H 'Content-Type: application/json' \
> -d '{
>   "serviceName": "subscription",
>   "scpServiceConfigs": {
>     "TaskInfoScpConfig": {
>       "type": "VALUE",
>       "value": [
>         {
>           "queueName": "notificationQueue",
>           "criticalQLogThreshold": "86%",
>           "majorQLogThreshold": "76%",
>           "minorQLogThreshold": "66%"
>         },
>         {
>           "queueName": "waitingQueue",
>         }
>       ]
>     }
>     "criticalQLogThreshold": "85%",
>     "majorQLogThreshold": "75%",
>     "minorQLogThreshold": "65%"
>   },
>   {
>     "queueName": "runQueue",
>     "criticalQLogThreshold": "85%",
>     "majorQLogThreshold": "75%",
>     "minorQLogThreshold": "65%"
>   }
> ]
> }
> }'
{"title":"Not Found","status":"404","detail":"Scp_Service_Configuration for
given serviceName not found . Please refer to the User Guide.,"instance":"/
ocscp/scpc-configuration/v1/scp-service-config/
Subscription","cause":"DATA_NOT_FOUND"}
```

2.35 Configuring Load Control Information

This section describes REST API configurations required for the Load Control based on the Load Control Information (LCI) Header feature:

Resource

The following table describes the resource URIs and the corresponding HTTP methods for the to retrieve, add, or update SCP features.

Table 2-359 Resources

Resource Name	Resource URI	HTTP Method	Description
scp-features	/ocscp/scpc-configuration/v1/scp-features/lci	GET	Retrieves records based on featureName as a path variable.
scp-features	/ocscp/scpc-configuration/v1/scp-features/lci	PUT	To enable/disable the scp feature and its parameters.

Data Model**Request Body**

The following table describes LCISpecificConfig data types.

Table 2-360 LCISpecificConfig

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Range	Description
scpLciConveyanceEnable	Boolean	M	false	NA	This parameter enables or disables the addition of SCP LCI.
relayPeerLci	Boolean	M	true	NA	This parameter enables or disables the relay of the peer's LCI.
scpLciConveyanceInterval	Integer	O	5000 milliseconds	1000 milliseconds - 3600000 milliseconds	This parameter governs the periodicity of LCI conveyance. After the duration specified in this parameter, SCP LCI is transmitted to peers.
scpLciConveyanceMinLoadChange	Integer	M	5	5 - 25	This parameter indicates the minimum eligible change in load while conveying LCI.
scpLciConveyanceMinLoadThreshold	Integer	M	30	0-60	This parameter allows SCP to define a minimum load change threshold that can trigger the generation of an LCI header and report it to peers if allowed.
scpLciConveyanceToUnknownPeer	Boolean	M	false	NA	This parameter indicates whether SCP can send its LCI to an unknown peer NF.
peerLciProcessingMinLoadChange	Integer	M	5	0-25	This parameter allows SCP to define a minimum load change in a peer NF's load as indicated in LCI, which can trigger a re-evaluation of routing rules.
unknownPeerLciExpiry	Integer	M	300 seconds	30 seconds - 900 seconds	This parameter specifies the minimum number of seconds required to remove an unknown peer's LCI from cache.

Response Body

The following table describes response body data models that vary based on the REST operation status.

Table 2-361 Response Body Data Type

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
array(SCPFeaturesWrapper)	M	1	200 OK	Indicates the list of SCP features (SCPFeaturesWrapper) matching criteria.
ProblemDetails	M	1	404 NOT FOUND	Returns when the data is not found for given query parameters.

JSON Format

Current JSON Format

```
{
  "featureName": "lci",
  "enabled": false,
  "featureSpecificConfig": {
    "scpLciConveyanceEnable": false,
    "relayPeerLci": true,
    "scpLciConveyanceInterval": 2000,
    "scpLciConveyanceMinLoadChange": 5,
    "scpLciConveyanceMinLoadThreshold": 30,
    "scpLciConveyanceToUnknownPeer": false,
    "peerLciProcessingMinLoadChange": 5,
    "unknownPeerLciExpiry": 300
  }
}
```

Resource Definition

GET REST API

This section describes the resource to fetch all the SCP feature details (SCPFeaturesWrapper) based on the query parameters.

If no query parameter is provided, all the SCP feature detail are returned.

Resource URI: `ocscp/scpc-configuration/v1/scp-features/lci`

The following table describes the URI query parameters supported by the GET method on this resource.

Table 2-362 Parameters Supported by the GET Method

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
featureName	String	O	Specifies the identity of featureName for which SCP features are fetched.

Note

featureName is a valid combination of query parameter or path variable.

Table 2-363 Data Structures Supported by the GET Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
array(SCPFeaturesWrapper)	M	1	200 OK	Indicates the list of of LCI header Info (SCPFeaturesWrapper) (or) Get specific record based on query parameters.
ProblemDetails	M	1	404 NOT FOUND	Returns when the data is not found for given query parameters.

Example

Successful response - 1

```
curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/scp-features/lci" -H "accept: application/json"
```

```
Code: 200 { {
  "featureName": "lci",
  "enabled": false,
  "featureSpecificConfig": {
    "scpLciConveyanceEnable": false,
    "relayPeerLci": true,
    "scpLciConveyanceInterval": 2000,
    "scpLciConveyanceMinLoadChange": 5,
    "scpLciConveyanceMinLoadThreshold": 30,
    "scpLciConveyanceToUnknownPeer": false,
    "peerLciProcessingMinLoadChange": 5,
    "unknownPeerLciExpiry": 300
  }
}
```

Failure case 1

```
curl -X GET "http://<localhost>:8081/ocscp/scpc-configuration/v1/scp-features/lciheader_1" -H "accept: application/json"
```

```
Response Body:
{
  "title": "Not Found",
  "status": "404",
  "detail": "SCP Features configuration data not found against given query parameter(s), Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/scp-features/lciheader_1",
  "cause": "DATA_NOT_FOUND"
}
```


PUT REST API

This resource adds or updates the SCP feature interplmn routing configuration using the request body.

Resource URI: `ocscp/scpc-configuration/v1/scp-features/lci`

Table 2-364 Data Structures Supported by the PUT Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
SCPFeaturesWrapper	M	1	200 OK	Indicates the SCP feature lciheader configuration data.
ProblemDetails	M	1	400 BAD REQUEST	Returns the ProblemDetails structure as defined in 3GPP TS 29.571 section 5.2.4.1.

Example

Successful response:

```
curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/scp-features/
lciheader" -H "accept: */*" -H "Content-Type: application/json" -d " {
  "featureName": "lci",
  "enabled": false,
  "featureSpecificConfig": {
    "scpLciConveyanceEnable": false,
    "relayPeerLci": true,
    "scpLciConveyanceInterval": 2000,
    "scpLciConveyanceMinLoadChange": 5,
    "scpLciConveyanceMinLoadThreshold": 30,
    "scpLciConveyancetoUnknownPeer": false,
    "peerLciProcessingMinLoadChange": 5,
    "unknownPeerLciExpiry": 300
  }
} 200 OK
```

Failure case 1:**Note**

In case SCP is not configured with local or foreign PLMNs and invalid NF type is configured for this feature, you receive a Bad Request 400 with error message.

```
curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/scp-features/
lci"-H "accept: */*" -H "Content-Type:
application/json"-d "
{
  "title": "Bad Request",
  "status": "400",
  "detail": "Unknown Feature: lxi not supported. Please refer to the User
Guide.",
  "instance": "/ocscp/scpc-configuration/v1/scp-features/lxi",
```

```
"cause": "MANDATORY_IE_INCORRECT"
}
400 Bad Request
```

Failure case 2:

```
curl -X PUT "http://<localhost>:8081/ocscp/scpc-configuration/v1/scp-features/
lci"-H "accept: */*" -H "Content-Type:
application/json"-d "
{
  "title": "Bad Request",
  "status": "400",
  "detail": "SCP conveyance interval range should be between 100ms to 3600ms",
  "instance": "/ocscp/scpc-configuration/v1/scp-features/lci",
  "cause": "MANDATORY_IE_INCORRECT"
}
400 Bad Request
```

2.36 Message Feed Configurations

This section provides information about message feed Data Director configurations at SCP.

2.36.1 Configuring Traffic Feed Data Director

This section describes the Traffic Feed Data Director configurations.

Table 2-365 Resources

Resource name	Resource URI	HTTP method or custom operation	Description
5gsbi-traffic-feed/data-director-config	/ocscp/scpc-configuration/{version}/5gsbi-traffic-feed/data-director-config	GET	Retrieves Traffic Feed Data Director Config configured at SCP.
5gsbi-traffic-feed/data-director-config	/ocscp/scpc-configuration/{version}/5gsbi-traffic-feed/data-director-config	PUT	Adds Traffic Feed Data Director Config configured at SCP.
5gsbi-traffic-feed/data-director-config	/ocscp/scpc-configuration/{version}/5gsbi-traffic-feed/data-director-config	PATCH	Updates Traffic Feed Data Director Config configured at SCP.

Data Model

Request Body

Table 2-366 trafficFeedDataDirectorConfig

Field Name	Data Type	Default Value	Description
kafkaPartitionSelectionLogic	String	RoundRobin	Indicates the logic to select Kafka partitions to route messages. RoundRobin: All the messages are distributed across all the available partitions in a round-robin order. KeyBased: Messages with the same correlation-id are routed to the same partition. This ensures the same transaction messages are routed to the same partition.
deliveryTimeoutMs	Integer	5000 milliseconds	Indicates an upper bound on the time to report success or failure to the SCP application from the Kafka Producer Library. When this period expires, the Kafka producer reports a failure to application. The value of this configuration should be greater than or equal to the sum of requestTimeoutMs and lingerMs.
trafficFeedBootstrapServer	Object with host and port info host String port Integer	NA	A list of host or port pairs to use for establishing the initial connection to the Kafka cluster.
topic	String	NA	Topic name that SCP uses to write on Kafka Broker.
securityProtocol	String	None	Protocol used to communicate with brokers. The values are: PLAINTEXT, SSL, SASL_PLAINTEXT, SASL_SSL.
saslMechanism	String	None Recommended: PLAIN	SASL mechanism used for client connections. The values are: PLAIN.
keySerializer	String	Json	Key serialization Two Serialization option supported: JSON and STRING.
valueSerializer	String	Json	Value serialization Two Serialization option Supported JSON,STRING
acks	String	0	The number of acknowledgments the producer NF requires the leader to have received before considering a request complete. Available options: • 0 - The producer NF never waits for an acknowledgment from the server at all. • 1 - The producer NF responds after the leader write without waiting for acknowledgment from all the followers. • all - The producer NF waits for the full set of in-sync replicas to acknowledge the record. Note: Parameter to change the behavior of underlying kafka library.

Table 2-366 (Cont.) trafficFeedDataDirectorConfig

Field Name	Data Type	Default Value	Description
retryCount	Integer	0	Number of times producer NFs send data to broker in case of error. Note: Parameter to change the behavior of underlying kafka library.
retryBackoffMs	Long	100	The amount of time to wait before attempting to retry a failed request to a given topic partition. Note: Parameter to change the behavior of underlying kafka library.
requestTimeoutMs	Integer	1000	The maximum amount of time the client waits for the response of a request. Note: Parameter to change the behavior of underlying kafka library. Oracle Support shall be consulted before modifying the default value. The value of this parameter must not be more than the threadWatchDog time of the scp-worker microservice.
trafficfeedBlockingSendTimeoutMs	Integer	500	The amount of time for which the producer will block sending messages to the broker when the producer is not able to connect to the broker. maxValue: 200000, minValue: 100 Note: Parameter to change the behavior of underlying kafka library. Increasing this value more than the threadWatchDog time of the worker microservice can result in a worker pod crash.
trafficfeedDegradationperiod	Integer	1000	The amount of time the producer waits before sending to the broker when a previous attempt to connect to the broker has failed. maxValue: 10000, minValue: 10 Note: Parameter to change the behavior of underlying kafka library.
trafficfeedConsecutiveFailures	Integer	10	The number of consecutive failures allowed by SCP before blocking the producer from sending messages. maxValue: 100, minValue: 1 Note: Parameter to change the behavior of underlying kafka library.
batchSize	Integer	16384	It specifies the batch size in bytes based on which records are collected together into fewer requests and sent. Note: Parameter to change the behavior of underlying kafka library.
lingerMs	Long	2	It specifies the amount of time for which the producer will wait to allow other records to be sent so that the sends can be batched together. Note: Parameter to change the behavior of underlying kafka library.

Table 2-366 (Cont.) trafficFeedDataDirectorConfig

Field Name	Data Type	Default Value	Description
trafficfeedMaxBlockMsConfig	Long	10	The configuration controls how long the KafkaProducer's send() method will block. Note: Parameter to change the behavior of underlying kafka library.
bufferMemory	Long	33554432	The total bytes of memory the producer can use to buffer records waiting to be sent to the server. Note: Parameter to change the behavior of underlying kafka library.

Response body data model varies based on Rest operation status. Details can be found in the subsequent sections.

Response Body

Table 2-367 Response Body

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response codes	Description
trafficFeedDataDirectorConfig	M	1	200 OK	List of Producer Configuration matching criteria.
ProblemDetails	M	1	400 BAD REQUEST	Returns when invalid input are provided.

JSON Format

```
{
  "kafkaPartitionSelectionLogic": "RoundRobin",
  "trafficFeedBootstrapServerList": [
    {
      "host": "10.75.212.228",
      "port": 31215
    }
  ],
  "securityProtocol": "none",
  "saslMechanism": "none",
  "keySerializer": "json",
  "valueSerializer": "json",
  "acks": "0",
  "retryCount": 0,
  "deliveryTimeoutMs": 120000,
  "retryBackoffMs": 100,
  "requestTimeoutMs": 1001000,
  "trafficfeedBlockingSendTimeoutMs": 500,
  "trafficfeedDegradationperiod": 1000,
  "trafficfeedConsecutiveFailures": 10,
  "batchSize": 16384,
```

```

    "lingerMs": 2,
    "trafficfeedMaxBlockMsConfig": 10,
    "bufferMemory": 33554432
  }

```

Resource Definition

GET REST API:

Resource to fetch the Traffic server Configuration Info Details based on the json version.

Resource URI: /ocscp/scpc-configuration/{version}/5gsbi-traffic-feed/data-director-config

Table 2-368 Data structures supported by the GET Response Body

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response codes	Description
trafficFeedDataDirectorConfig	M	1	200 OK	Producer Configuration Info Data

PUT REST API:

Resource to add or update the Traffic server of Producer Configuration using the Request Body.

Resource URI: /ocscp/scpc-configuration/{version}/5gsbi-traffic-feed/data-director-config

Table 2-369 Data Structures Supported by the PUT Response Body

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response codes	Description
trafficFeedDataDirectorConfig(json)	M	1	200 OK	A list of host or port pairs to use for establishing the initial connection to the Kafka cluster.
String	M	1	400 BAD REQUEST	Returns Problem description when invalid input is provided.

PATCH REST API:

Resource to add or update the Traffic server Configuration using the Request Body.

Resource URI: /ocscp/scpc-configuration/{version}/5gsbi-traffic-feed/data-director-config

Table 2-370 URI Query Parameters Supported by the PATCH Method

Name	Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
patchDocument	String	M	1	patchDocument need to be send Example: [{"op":"add","path": "/keySerializer", "value": "JSON"}], [{"op":"add","path": "/topic", "value": "scpTopic1"}], [{ "op":"replace", "path":"/trafficFeedBootStrapServer", "value": [{"host":"12.11.11.11", "port":8095 } }]
String	M	1	400 BAD REQUEST	Returns Problem description when invalid input is provided.

2.36.2 Configuring Traffic Feed Trigger Point Config

This section describes the Traffic Feed Trigger Point configurations.

Table 2-371 Resources

Resource name	Resource URI	HTTP method or custom operation	Description
5gsbi-traffic-feed/trigger-point	/ocscp/scpc-configuration/{version}/5gsbi-traffic-feed/trigger-point	GET	Retrieves all the Traffic Feed Trigger Point configuration at SCP.
5gsbi-traffic-feed/trigger-point	/ocscp/scpc-configuration/{version}/5gsbi-traffic-feed/trigger-point/{ruleName}	GET	Retrieves Traffic Feed Trigger Point configurations at SCP for given ruleName.
5gsbi-traffic-feed/trigger-point	/ocscp/scpc-configuration/{version}/5gsbi-traffic-feed/trigger-point/{ruleName}	PUT	Updates Traffic Feed Trigger Point configuration at SCP for given ruleName.
5gsbi-traffic-feed/trigger-point	/ocscp/scpc-configuration/{version}/5gsbi-traffic-feed/trigger-point/{ruleName}	PATCH	Updates Traffic Feed Trigger Point configuration at SCP for given ruleName.
5gsbi-traffic-feed/trigger-point	/ocscp/scpc-configuration/{version}/5gsbi-traffic-feed/trigger-point/{ruleName}	DELETE	Removes Traffic Feed Trigger Point configurations at SCP for given ruleName.

Data Model

Request Body

Table 2-372 trafficFeedTriggerPointConfig

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	M	The rule's name must be in string format.It must have a unique rule name.
serviceName	String	O	The name of the services for which rule is applied: nnrf-nfm, nnrf-disc, nudm-sdm, nudm-uecm, nudm-ueau, nudm-ee, nudm-pp, namf-comm, namf-evts, namf-mt, namf-loc, nsmf-pdusession, nsmf-event-exposure, nausf-auth, nausf-sorprotection, nausf-upuprotection, nnef-pfdmanagement, npc-f-am-policy-control, npc-f-smpolicycontrol, npc-f-policyauthorization, npc-f-bdtpolicycontrol, nsmsf-sms, nnssf-nssselection, nnssf-nssaiavailability, nudr-dr, nudr-group-id-map, nlmf-loc, n5g-eir-eic, nbsf-management, nchf-spendinglimitcontrol, nnwdaf-eventssubscription, nnwdaf-analyticsinonpcf-eventexposure, npc-f-ue-policy-control, nchf-convergedcharging, 5g-sbi-notification, nnef-eventexposure, nnef-afsessionwithqos
nfType	String	M	Either 3GPP defined NFType as per TS29.510 custom NFType or *.
allowedtrafficPercentage	Integer	M	0-100% of traffic can be sent to traffic feed.
triggerPoints	Array(TriggerPoint)	M	List of trigger points to be enabled if matches. One or more of following: • RxRequest • TxRequest • RxResponse • TxResponse
messageType	Set(MessageType)	M	The allowed message type is [svc-request-message], [notification-message], or both [notification-message, svc-request-message].

Response Body

Response body data model varies based on Rest operation status. Details can be found in the subsequent sections.

Table 2-373 Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response codes	Description
array (trafficFeed TriggerPoint config)	M	1	200 OK	List of traffic Feed configuration matching criteria.
ProblemDetails	M	1	400 BAD REQUEST	Returns when invalid input are provided.

JSON Format

```

{
  "ruleName": "string",
  "trafficFeedTriggerPointConfigData": {
    "allowedTrafficPercentage": 100,
    "triggerPoints": [
      "RxRequest"
    ],
    "nfType": "string",
    "serviceName": "string",
    "messageType": [
      "notification-message"
    ]
  }
}

```

Resource Definition

GET REST API

Resource to fetch the message-copy-traffic-config details based on the json version.

Resource URI: /ocscp/scpc-configuration/v1/5gsbi-traffic-feed/trigger-point

Table 2-374 Data Structures Supported by the GET Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response codes	Description
trafficFeedTriggerPointConfig	M	1	200 OK	configuration for Traffic Feed

PUT REST API

Resource to put the message-copy-traffic-config details based on the json version.

Resource URI: /ocscp/scpc-configuration/v1/5gsbi-traffic-feed/trigger-point/ruleName

Successful Response:

```
curl -X 'PUT' \
  'http://<SCP configuration FQDN>:32209/ocscp/scpc-configuration/v1/5gsbi-traffic-feed/trigger-point/nef_trafficfeed_rule' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{
    "ruleName": "nef_trafficfeed_rule",
    "trafficFeedTriggerPointConfigData": {
      "allowedTrafficPercentage": 100,
      "triggerPoints": [
        "RxRequest"
      ],
      "nfType": "nef",
      "serviceName": "nnef-eventexposure",
      "messageType": [
        "notification-message"
      ]
    }
  }'
```

Failure response:

```
curl -X 'PUT' \
  'http://localhost:1106/ocscp/scpc-configuration/v1/5gsbi-traffic-feed/trigger-point/rule5' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{
    "ruleName": "rule5",
    "trafficFeedTriggerPointConfigData": {
      "allowedTrafficPercentage": 100,
      "triggerPoints": [
        "RxRequest"
      ],
      "nfType": "UDM",
      "serviceName": "nudm-sdm",
      "messageType": [
        "notification-message",
        "svc-request-message"
      ]
    }
  }'
```

```
{
  "title": "Bad Request",
  "status": 400,
  "detail": "Rule for the given combination already exists.",
  "instance": "/ocscp/scpc-configuration/v1/5gsbi-traffic-feed/trigger-point/rule5",
  "cause": "MANDATORY_IE_MISSING"
}
```

Table 2-375 Data Structures Supported by the PUT Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response codes	Description
trafficFeedTriggerPointConfig	M	1	200 OK	configuration for Traffic Feed

PATCH REST API

Resource to add or update the message-copy-traffic-config using the Request Body.

Resource URI: /ocscp/scpc-configuration/v1/5gsbi-traffic-feed/trigger-point

Table 2-376 Data Structures Supported by the PATCH Response Body

Name	Data Type	Mandatory (M) or Optional(O)	Cardinality	Description
ruleName	String	M	1	Rule name for which Ingress and Egress Traffic configuration can be modified.
serviceName	String	O	1	Update serviceName for provided ruleName [{"op": "replace", "path": "/serviceName", "value": "nausf-auth" }]
trafficFeedTriggerPointConfig	Json	O	1	patchDocument need to be send example: [{"op": "replace", "path": "/trafficFeedTriggerPointConfigData/allowedTrafficPercentage", "value": "50" }] [{"op": "replace", "path": "/trafficFeedTriggerPointConfigData/triggerPoints", "value": ["RxRequest","TxRequest"]}]

2.37 Congestion Control Configurations

This REST API is used to configure the congestion control configuration rules. The user uses this API to configure congestion control configurations, and the name of this rule is provided in Routing Options at the service level.

Resources

The following table describes the resource name to retrieve, add, update, and remove the congestion control configuration based on the query parameters.

Table 2-377 Resource Name

Resource Name	Resource URI	HTTP Method	Description
congestion-control	ocscp/scpc-configuration/{version}/congestion-control/{ruleName}	GET	Retrieves congestion control configuration rules for a given rulename.
congestion-control	ocscp/scpc-configuration/{version}/congestion-control	GET	Retrieves all congestion control configuration rules.
congestion-control	ocscp/scpc-configuration/{version}/congestion-control/{ruleName}	PUT	Updates the congestion control configuration rule.
congestion-control	ocscp/scpc-configuration/{version}/congestion-control/{ruleName}	DELETE	Deletes the congestion control configuration rule.

Data Model

Request Body

The following table describes the field names of the CongestionControlConfig data type.

Table 2-378 CongestionControlConfig

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
ruleName	String	M	"ruleName": "defaultRule"	Name of the rule to identify the congestion control configuration.
congestionControlConfigData	NFServiceLoadBased CongestionControl	M	-	NFServiceLoadBased CongestionControl

Table 2-379 NFServiceLoadBasedCongestionControl

Field Name	Data Type	Mandatory (M) or Optional(O)	Allowed Value	Description
alternateRoutingOnsetThresholdPercent	Integer	M	0-100	This field indicates the threshold percentage for onset of reselection of equivalent NF.
alternateRoutingAbatementThresholdPercent	Integer	M	0-100	This field indicates the threshold percentage for reselection abatement.
throttleOnsetThresholdPercent	Integer	M	0-100	This field indicates threshold percentage for onset throttling.
throttleAbatementThresholdPercent	Integer	M	0-100	This field indicates the threshold percentage for throttle abatement.
sbiMsgPriorityDiscardFrom	Integer	M	0-31	This field indicates the priority of the message, after which the message is discarded. For example, if the value is 30, then messages with priority 0-29 are high priority, and other low-priority messages are throttled.
errorProfileConfiguration	ErrorProfile Configuration	M		-

Table 2-380 ErrorProfileConfiguration

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Allowed Value	Description
ErrorCode	Integer	M	-	Valid HTTP status codes like 5xx, 4xx error codes.	Indicates configurable error codes to be sent by SCP to consumer NFs.
errorCause	String	O	-	-	Indicates the error cause that is specific to the occurrence of the problem.
errorTitle	String	O	-	-	Indicates the title of the error.
errorDescription	String	O	-	-	Indicates an explanation specific to the occurrence of the problem.
retryAfter	String	O	-	-	Indicates the retry interval. Note: The retryAfter header is applicable only for 429, 503, and 307 errors.
redirectUrl	String	O	-	-	Indicates the absolute URL of the resource to which the message is redirected.

Request/Response Body JSON Format (GET)

Response Body, Example:

```
{
  "ruleName": defaultRule
  "congestionControlConfigData": {
    "alternateRoutingOnsetThresholdPercent": 80,
```

```

        "alternateRoutingAbatementThresholdPercent": 75,
        "throttleOnsetThresholdPercent": 90,
        "throttleAbatementThresholdPercent": 85,
        "sbiMsgPriorityDiscardFrom": 24,
        "errorProfileConfiguration": {
            "errorCode": 500,
            "errorCause": "NF_SERVICE_FAILOVER",
            "errorTitle": "NF service is overloaded/congested",
            "errorDescription": "NF service is overloaded/congested",
            "retryAfter": "5",
            "redirectUrl": ""
        }
    }
}

```

Request/Response Body JSON Format (PUT)

Request Body, Example:

```

{
  "ruleName": defaultRule
  "congestionControlConfigData": {
    "alternateRoutingOnsetThresholdPercent": 80,
    "alternateRoutingAbatementThresholdPercent": 75,
    "throttleOnsetThresholdPercent": 90,
    "throttleAbatementThresholdPercent": 85,
    "sbiMsgPriorityDiscardFrom": 24,
    "errorProfileConfiguration": {
      "errorCode": 503,
      "errorCause": "NF_CONGESTION",
      "errorTitle": "NF service is overloaded/congested",
      "errorDescription": "NF service is overloaded/congested",
      "retryAfter": "5",
      "redirectUrl": ""
    }
  }
}

```

Response body, Example:

```

{
  "ruleName": defaultRule
  "congestionControlConfigData": {
    "alternateRoutingOnsetThresholdPercent": 80,
    "alternateRoutingAbatementThresholdPercent": 75,
    "throttleOnsetThresholdPercent": 90,
    "throttleAbatementThresholdPercent": 85,
    "sbiMsgPriorityDiscardFrom": 24,
    "errorProfileConfiguration": {
      "errorCode": 503,
      "errorCause": "NF_CONGESTION",
      "errorTitle": "NF service is overloaded/congested",
      "errorDescription": "NF service is overloaded/congested",
      "retryAfter": "5",
      "redirectUrl": ""
    }
  }
}

```

```

    }
  }
}

```

Resource Definition

GET REST API:

This resource fetches all the congestion control configurations rules.

Resource URI: /ocscp/scpc-configuration/{version}/congestion-control/

The following table describes the data structure supported by the GET method on this resource.

Table 2-381 Data structures supported by the GET Response Body

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response codes	Description
List<CongestionControlConfig>	M	1	200 OK	The congestion control configuration with a rule name.

Example

```

{
  "ruleName": defaultRule
  "congestionControlConfigData": {
    "alternateRoutingOnsetThresholdPercent": 80,
    "alternateRoutingAbatementThresholdPercent": 75,
    "throttleOnsetThresholdPercent": 90,
    "throttleAbatementThresholdPercent": 85,
    "sbiMsgPriorityDiscardFrom": 24,
    "errorProfileConfiguration": {
      "errorCode": 503,
      "errorCause": "NF_CONGESTION",
      "errorTitle": "NF service is overloaded/congested",
      "errorDescription": "NF service is overloaded/congested",
      "retryAfter": "5",
      "redirectUrl": ""
    }
  }
}

```

GET REST API:

This resource fetches the congestion control configurations for the specified rules.

Resource URI: /ocscp/scpc-configuration/{version}/congestion-control/{ruleName}

The following table describes the URI query parameters supported by the GET method on this resource.

Table 2-382 URI query parameters

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	O	The name of the congestion control rule used to retrieve the respective configurations.

The following table describes the data structure supported by the GET method on this resource.

Table 2-383 Data structures supported by the GET Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response codes	Description
CongestionControl Config	M	1..N	200 OK	The congestion control configuration with a rule name.
Problem details	M	1	404 NOT Found	Problem details

Curl Example for GET

Successful response

```
curl -v -H "Content-Type: application/json" --request GET http://localhost:8081/ocscp/scpc-configuration/v1/congestion-control/defaultRule
```

```
HTTP/1.1 200 OK
```

```
{
  "ruleName": "defaultRule",
  "congestionControlConfigData": {
    "alternateRoutingOnsetThresholdPercent": 80,
    "alternateRoutingAbatementThresholdPercent": 75,
    "throttleOnsetThresholdPercent": 90,
    "throttleAbatementThresholdPercent": 85,
    "sbiMsgPriorityDiscardFrom": 24,
    "errorProfileConfiguration": {
      "errorCode": 500,
      "errorCause": "NF_SERVICE_FAILOVER",
      "errorTitle": "NF service is overloaded/congested",
      "errorDescription": "NF service is overloaded/congested",
      "retryAfter": "5",
      "redirectUrl": ""
    }
  }
}
```


Failure case

```
curl -v -H "Content-Type: application/json" --request GET http://
localhost:8081/ocscp/scpc-configuration/v1/congestion-control/rx
```

```
HTTP/1.1 404 Not Found
```

```
{
  "title": "Not Found",
  "status": "404",
  "detail": "Congestion control configuration data not found for provided
ruleName in path parameter(s)",
  "instance": "/ocscp/scpc-configuration/v1/congestion-control/rx",
  "cause": "DATA_NOT_FOUND"
}
```

PUT REST API:

This resource adds or updates the congestion control configurations for the specified rules.

Resource URI: /ocscp/scpc-configuration/{version}/congestion-control/{ruleName}

Table 2-384 URI query parameters

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	O	The name of the congestion control rule used to add the respective configurations.

Table 2-385 Data structures

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response codes	Description
CongestionControlConfig	M	1	200 OK	CongestionControlConfiguration with the rule name when an existing record is updated.
CongestionControlConfig	M	1	201	CongestionControlConfiguration with the rule name when an existing record is updated.
Problem details	M	1	404 NOT Found	Problem details

Curl Example for PUT

Success response:

```
curl -v -H "Content-Type: application/json" --request PUT -d '{
>   "ruleName": "r2",
>   "congestionControlConfigData": {
>     "alternateRoutingOnsetThresholdPercent": 80,
>     "alternateRoutingAbatementThresholdPercent": 75,
>     "throttleOnsetThresholdPercent": 90,
>     "throttleAbatementThresholdPercent": 85,
```

```

>   "sbiMsgPriorityDiscardFrom": 24,
>   "errorProfileConfiguration": {
>     "errorCode": 503,
>     "errorCause": "NF_CONGESTION",
>     "errorTitle": "NF service is overloaded/congested",
>     "errorDescription": "NF service is overloaded/congested",
>     "retryAfter": "5",
>     "redirectUrl": ""
>   }
> }
> }' http://localhost:8081/ocscp/scpc-configuration/v1/congestion-control/r2
*   Trying 127.0.0.1...
* TCP_NODELAY set
* Connected to localhost (127.0.0.1) port 8081 (#0)
> PUT /ocscp/scpc-configuration/v1/congestion-control/r2 HTTP/1.1
> Host: localhost:8081
> User-Agent: curl/7.61.1
> Accept: */*
> Content-Type: application/json
> Content-Length: 560
>
* upload completely sent off: 560 out of 560 bytes
< HTTP/1.1 201 Created
< Connection: keep-alive
< Transfer-Encoding: chunked
< Content-Type: application/json
< Date: Fri, 18 Aug 2023 10:50:12 GMT
<
* Connection #0 to host localhost left intact

{
  "ruleName": "r2",
  "congestionControlConfigData": {
    "alternateRoutingOnsetThresholdPercent": 80,
    "alternateRoutingAbatementThresholdPercent": 75,
    "throttleOnsetThresholdPercent": 90,
    "throttleAbatementThresholdPercent": 85,
    "sbiMsgPriorityDiscardFrom": 24,
    "errorProfileConfiguration": {
      "errorCode": 503,
      "errorCause": "NF_CONGESTION",
      "errorTitle": "NF service is overloaded/congested",
      "errorDescription": "NF service is overloaded/congested",
      "retryAfter": "5",
      "redirectUrl": ""
    }
  }
}

```

Failure case 1

```

curl -X 'PUT' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/congestion-control/r2' \
  -H 'accept: application/json' \

```

```

-H 'Content-Type: application/json' \
-d '{
  "ruleName": "r1",
  "congestionControlConfigData": {
    "alternateRoutingOnsetThresholdPercent": 30,
    "alternateRoutingAbatementThresholdPercent": 20,
    "throttleOnsetThresholdPercent": 50,
    "throttleAbatementThresholdPercent": 60,
    "sbiMsgPriorityDiscardFrom": 20,
    "errorProfileConfiguration": {
      "errorCause": "string",
      "errorTitle": "string",
      "errorDescription": "string",
      "retryAfter": "string",
      "redirectUrl": "string"
    }
  }
}'
HTTP/1.1 400 Bad Request
{
  "title": "Bad Request",
  "status": "400",
  "detail": "Rule name should be same in path parameter and request body.",
  "instance": "/ocscp/scpc-configuration/v1/congestion-control/r1",
  "cause": "INVALID_KEY"
}

```

Failure case 2

```

curl -X 'PUT' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/congestion-control/r1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "ruleName": "r1",
    "congestionControlConfigData": {
      "alternateRoutingOnsetThresholdPercent": 30,
      "alternateRoutingAbatementThresholdPercent": 20,
      "throttleOnsetThresholdPercent": 50,
      "throttleAbatementThresholdPercent": 60,
      "sbiMsgPriorityDiscardFrom": 20,
      "errorProfileConfiguration": {
        "errorCause": "string",
        "errorTitle": "string",
        "errorDescription": "string",
        "retryAfter": "string",
        "redirectUrl": "string"
      }
    }
  }'
HTTP/1.1 400 Bad Request
{
  "title": "Bad Request",
  "status": "400",

```

```

    "detail": "Invalid errorCode configured in section
errorProfileConfiguration. Please refer user guide.",
    "instance": "/ocscp/scpc-configuration/v1/congestion-control/r1",
    "cause": "MANDATORY_IE_INCORRECT"
  }

```

DELETE REST API:

This resource deletes the congestion control configurations for the specified rules.

Resource URI: /ocscp/scpc-configuration/{version}/congestion-control/{ruleName}

Table 2-386 URI query parameters

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	O	The name of the congestion control rule that needs to be deleted.

Table 2-387 Data structures supported by the Delete Response Body on this resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response codes	Description
Default	M	1	204 OK	-
ProblemDetails	M	1	400/404	Problem details.

Curl Example for Delete

Successful response

```
curl -v -H "Content-Type: application/json" --request DELETE http://
localhost:8081/ocscp/scpc-configuration/v1/congestion-control/r2
```

```

HTTP/1.1 204 No Content
< Date: Fri, 18 Aug 2023 10:55:57 GMT
<
* Connection #0 to host localhost left intact

```

Failure case

```
curl -v -H "Content-Type: application/json" --request DELETE http://
localhost:8081/ocscp/scpc-configuration/v1/congestion-control/rx
```

```

HTTP/1.1 404 Not Found

{
  "title": "Not Found",
  "status": "404",
  "detail": "Congestion control configuration data Not Found for the given
ruleName in path parameter(s)",

```

```

    "instance": "/ocscp/scpc-configuration/v1/congestion-control/rx",
    "cause": "DATA_NOT_FOUND"
  }

```

2.38 Circuit Breaking Configurations

This REST API is used to configure the circuit-breaking configuration rules. The user will use this API to configure CB configurations, and the name of this rule will be provided in Routing Options at the service level and System Options at the global level for inter-SCP and SEPP.

Resources

The following table describes the resource name to retrieve, add, update, and remove the circuit breaking configuration based on the query parameters.

- Resource URI Structure: `http://<authority>:<port>/ocscp/scpc-configuration/{version}/circuit-breaking/{ruleName}`
- Authority: loadbalancer or fqdn
- Port: nodeport(lp address) or internal port (For fqdn)
- loadbalancerip: 10.75.225.111
- Example : `http://10.75.225.111:32456/ocscp/scpc-configuration/{version}/circuit-breaking/{ruleName}` or `http://ocscp-scpc-configuration:8081/ocscp/scpc-configuration/{version}/circuit-breaking/{ruleName}`

Table 2-388 Resource Name

Resource Name	Resource URI	HTTP Method	Description
circuit-breaking	<code>ocscp/scpc-configuration/{version}/circuit-breaking/{ruleName}</code>	GET	Retrieves the circuit breaking configuration rule.
circuit-breaking	<code>ocscp/scpc-configuration/{version}/circuit-breaking</code>	GET	Retrieves all circuit breaking configuration rules.
circuit-breaking	<code>ocscp/scpc-configuration/{version}/circuit-breaking/{ruleName}</code>	PUT	creates a circuit breaking configuration rule if not present; otherwise, it updates the existing one.
circuit-breaking	<code>ocscp/scpc-configuration/{version}/circuit-breaking/{ruleName}</code>	DELETE	Deletes the circuit breaking configuration rule.

Data Model

Request Body

The following table describes the field names of the CircuitBreakingConfig data type.

Table 2-389 CircuitBreakingConfig

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
ruleName	String	M	-	The rule name to identify the circuit breaker configuration.
CircuitBreakingConfig	CircuitBreakingConfig	M	-	Provides http2MaxRequests to configure maximum number of requests SCP routes to an NF service instance.

Table 2-390 CircuitBreakingConfigData

Field Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
http2MaxRequests	Integer	M	1000	Maximum number of requests SCP routes to an NF service instance (peer destination) and waiting for their responses before stopping further routing requests to it.

Request/Response Body JSON Format (GET)

Response Body, Example:

```
{
  "ruleName": "newCBRule",
  "circuitBreakingConfigData": {
    "http2MaxRequests": 1200
  }
}
```

Request/Response Body JSON Format (PUT)

Request Body, Example:

```
{
  "ruleName": "newCBRule",
  "circuitBreakingConfigData": {
    "http2MaxRequests": 1200
  }
}
```

Response body, Example:

```
{
  "ruleName": "newCBRule",
  "circuitBreakingConfigData": {
    "http2MaxRequests": 1200
  }
}
```

```
}
}
```

Resource Definition

GET REST API:

This resource fetches the circuit breaking configurations for the specified rules.

Resource URI: /ocscp/scpc-configuration/{version}/circuit-breaking/{ruleName}

The following table describes the URI query parameters supported by the GET method on this resource.

Table 2-391 URI query parameters

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	O	The name of the circuit breaking rule used to retrieve the respective configurations.

The following table describes the data structure supported by the GET method on this resource.

Table 2-392 Data structures supported by the GET Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response codes	Description
CircuitBreakingConfig	M	1	200 OK	The circuit breaking configuration with a rule name.
ProblemDetails	M	1	404	Problem details

Example

Success response

```
curl -v -H "Content-Type: application/json" --request GET http://localhost:8081/ocscp/scpc-configuration/v1/circuit-breaking/defaultRule
```

HTTP/1.1 200 OK

```
{
  "ruleName": "defaultRule",
  "circuitBreakingConfigData": {
    "http2MaxRequests": 1000
  }
}
```

Failure case

```
curl -v -H "Content-Type: application/json" --request GET http://
localhost:8081/ocscp/scpc-configuration/v1/circuit-breaking/defaultRule1
```

```
HTTP/1.1 404 Not Found
```

```
{
  "title": "Not Found",
  "status": "404",
  "detail": "Congestion control configuration data not found for provided
ruleName in path parameter(s)",
  "instance": "/ocscp/scpc-configuration/v1/circuit-breaking/defaultRule1",
  "cause": "DATA_NOT_FOUND"
}
```

GET REST API:

This resource fetches all circuit breaking configuration rules.

Resource URI: /ocscp/scpc-configuration/{version}/circuit-breaking

The following table describes the data structure supported by the GET method on this resource.

Table 2-393 Data structures supported by the GET Response Body

Data Type	Mandato ry (M) or Optiona l(O)	Cardina lity	Response codes	Description
CircuitBreakingCon fig	M	1..N	200 OK	The circuit breaking configuration with a rule name.

Example of Congestion Control Configuration for GET

```
Command : curl -X 'GET' \
'http://<localhost>:8081/ocscp/scpc-configuration/v1/circuit-breaking' \
-H 'accept: application/json'
```

Response:

```
[
  {
    "ruleName": "defaultRule",
    "circuitBreakingConfigData": {
      "http2MaxRequests": 1000
    }
  }
]
```

PUT REST API:

This resource adds or updates the circuit breaking configurations for the specified rules.

Resource URI: /ocscp/scpc-configuration/{version}/circuit-breaking/{ruleName}

Table 2-394 URI query parameters

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	O	The name of the circuit breaking rule using which the respective configurations will be retrieved.

Table 2-395 Data structures

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response codes	Description
CircuitBreakingConfig	M	1	200 OK	This response is generated when an existing record is updated.
CircuitBreakingConfig	M	1	201	This response is generated when a new record is created.
CircuitBreakingConfig	M	1	404	Problem details

Example of Congestion control configuration for PUT

Success response:

```
curl -v -H "Content-Type: application/json" -X PUT http://localhost:8081/
ocscp/scpc-configuration/v1/circuit-breaking/defaultRule -d '{
  "ruleName": "defaultRule",
  "circuitBreakingConfigData": {
    "http2MaxRequests": 1000
  }
}'
```

HTTP/1.1 200 OK

```
{"ruleName":"defaultRule","circuitBreakingConfigData":
{"http2MaxRequests":1000}}
```

Failure case 1

```
curl -v -H "Content-Type: application/json" -X PUT http://localhost:8081/
ocscp/scpc-configuration/v1/circuit-breaking/defaultRule1 -d '{
  "ruleName": "defaultRule",
  "circuitBreakingConfigData": {
    "http2MaxRequests": 1000
  }
}'
```

HTTP/1.1 400 Bad Request

```
{"title":"Bad Request","status":"400","detail":"Please provide same ruleName"}
```

in Path Variable and Request Body. Please refer to the User Guide.", "instance": "/ocscp/scpc-configuration/v1/circuit-breaking/defaultRule1", "cause": "MANDATORY_IE_MISSING"}

DELETE REST API:

This resource deletes the circuit breaking configurations for the specified rules.

Resource URI: /ocscp/scpc-configuration/{version}/circuit-breaking/{ruleName}

Table 2-396 URI query parameters

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	O	The name of the circuit breaking rule that needs to be deleted.

Table 2-397 Data structures supported by the Delete Response Body on this resource

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response codes	Description
Default	M	1	204 OK	-
ProblemDetails	M	1	403/404	Problem details.

Example

Successful response

```
curl -v -H "Content-Type: application/json" -X DELETE http://localhost:8081/ocscp/scpc-configuration/v1/circuit-breaking/defaultRuleq
HTTP/1.1 204 No Content
```

Failure case 1

```
curl -v -H "Content-Type: application/json" -X DELETE http://localhost:8081/ocscp/scpc-configuration/v1/circuit-breaking/defaultRule
HTTP/1.1 403 Forbidden
{"title":"Forbidden","status":"403","detail":"Default rule cannot be deleted. Please refer to the User Guide.", "instance": "/ocscp/scpc-configuration/v1/circuit-breaking/defaultRule", "cause": "OPERATION_NOT_ALLOWED"}
```

Failure case 2

```
curl -v -H "Content-Type: application/json" -X DELETE http://localhost:8081/ocscp/scpc-configuration/v1/circuit-breaking/defaultRuleqq
HTTP/1.1 404 Not Found
{"title":"Not Found","status":"404","detail":"Circuit Breaking Configuration data not found against given query parameter(s). Please refer to the User
```

```
Guide.", "instance": "/ocscp/scpc-configuration/v1/circuit-breaking/
defaultRule111", "cause": "DATA_NOT_FOUND"}
```

2.39 NRF SRV Configuration

This section provides the following NRF SRV Configuration Rest API:

- Resource URIs for the nrfsrvconfig resource type.
- Types of data model.
- URI query parameters supported by GET, PUT, and DELETE methods.

Resources

The following table describes the resource URIs and the corresponding HTTP methods for the nrfsrvconfig resource type.

Table 2-398 nrfsrvconfig Resource Type

Resource Name	Resource URI	HTTP Method	Description
nrfsrvconfig	/ocscp/scpc-configuration/{version}/nrfsrvconfig/{nrfSrvFqdn}	PUT	Creates the new NRF SRV configuration for the given nrfSrvFqdn or updates the existing NRF SRV configuration.
nrfsrvconfig	/ocscp/scpc-configuration/{version}/nrfsrvconfig/{nrfSrvFqdn}	GET	Get the NRF SRV configuration for the given NRF SRV FQDN.
nrfsrvconfig	/ocscp/scpc-configuration/{version}/nrfsrvconfig	GET	Get all the NRF SRV configuration available in the database.
nrfsrvconfig	/ocscp/scpc-configuration/{version}/nrfsrvconfig/{nrfSrvFqdn}	DELETE	Removes the NRF SRV configuration for the given NRF SRV FQDN.

① Note

- Use the Configure Alternate NF Group section to refresh the NRF SRV FQDN.
- Set "spnlist" with NRF SRV in SPN format, and set refreshAll to false.

Resource Definition

This section describes GET, PUT, and DELETE resource types supported by NRF SRV configuration.

PUT API

This resource creates the new NRF SRV configuration or updates the existing NRF SRV configuration by taking NRFSRVConfigData as the request body.

Resource URI: /ocscp/scpc-configuration/{version}/nrfsrvconfig/{nrfSrvFqdn}

Request Body

Table 2-399 Data Structures Supported by the PUT Request Body

Data Type	Description
NRFsrvConfigData	Indicates the data type of the NRF SRV configuration. For more information, see Table 2-403 .

Table 2-400 Data Structures Supported by the PUT Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
NRFsrvConfigData	M	1	200 OK	This response is used when an existing record is updated.
NRFsrvConfigData	M	1	201 CREATED	This response is used when a new entry is created.
ProblemDetails	M	1	400 BAD REQUEST	This response is used when request body validation fails.

The following example is of NRF SRV Configuration REST API for PUT method.

Response:

```
curl -X 'PUT' \
'http://<localhost>:8081/ocscp/scpc-configuration/v1/nrfsrvconfig/
nrf2svc.scpsvc.svc.cluster.local' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "nrfSrvFqdn": "nrf2svc.scpsvc.svc.cluster.local",
  "nrfSrvConfig": {
    "nfSetIdList": [
      "setnrfk2.nrfset.5gc.mnc012.mcc345"
    ],
    "performSubscription": true,
    "performAudit": true,
    "registerScp": true,
    "apiPrefix": "USEast",
    "scheme": "http",
    "versions": [
      {
        "apiVersionInUri": "v1",
        "apiFullVersion": "1.0.0"
      }
    ],
    "serviceNames": [
      "nnrf-nfm",
      "nnrf-disc",
      "nnrf-oauth2"
    ],
    "isInterPlmnFqdn": true
  }
}
```

```
}
}'
```

Example of NRF SRV Configuration REST API for PUT Method Bad Request

Use case: A configuration where no entry contains 'v1' in apiVersionInUri.

```
curl -X 'PUT' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nrfsrvconfig/
nrf2svc.scpsvc.svc.cluster.local' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "nrfSrvConfig":{
      "apiPrefix":"USEast",
      "isInterPlmnFqdn":"false",
      "nfSetIdList":[
        "setnrf11.nrfset.5gc.mnc012.mcc346"
      ],
      "performAudit":"false",
      "performSubscription":"false",
      "plmnList":[
        {
          "mcc":"410",
          "mnc":"213"
        }
      ],
      "registerScp":"false",
      "scheme":"http",
      "serviceNames":[
        "nnrf-nfm",
        "nnrf-disc",
        "nnrf-oauth2"
      ],
      "versions":[
        {
          "apiFullVersion":"1.0.0",
          "apiVersionInUri":"v2"
        }
      ]
    },
    "nrfSrvFqdn":"nrf1svc.scpsvc.svc.cluster.local"
  }
}'
```

Response

```
{
  "title":"Bad Request",
  "status":400,
  "detail":"At least one entry in the version list must have its apiVersion
set as v1. Please refer to the User Guide.",
  "instance":"/ocscp/scpc-configuration/v1/nrfsrvconfig/
nrf1svc.scpsvc.svc.cluster.local",
  "cause":"MANDATORY_IE_INCORRECT"
}
```

GET API

This resource fetches the NRF SRV configuration based on the supplied nrfSrvFqdn or fetches all the records.

Resource URI: /ocscp/scpc-configuration/{version}/nrfsrvconfig/{nrfSrvFqdn}

Table 2-401 Data Structures Supported by the GET Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
NRFSRVConfigData	M	1..N	200 OK	This response is used when a record is fetched.
ProblemDetails	M	1	404 NOT FOUND	This response is used when no matching entry is found.
ProblemDetails	M	1	400 BAD REQUEST	This response is used when query parameter validation fails.

The following example is of NRF SRV Configuration REST API for GET method.

Response:

```
curl -X 'GET' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nrfsrvconfig/nrf2svc.scpsvc.svc.cluster.local' \
  -H 'accept: application/json'
```

DELETE API

This resource removes the NRF SRV configuration for the given nrfSrvFqdn.

Resource URI: /ocscp/scpc-configuration/{version}/nrfsrvconfig/{nrfSrvFqdn}

Table 2-402 Data Structures Supported by the DELETE Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
None	-	-	204 NO CONTENT	This response is used when the query is successful.
Problem Details	M	1	404 NOT FOUND	This response is used when no matching entry is found.
Problem Details	M	1	400 BAD REQUEST	This response is used when query parameter validation fails.

The following example is of NRF SRV Configuration REST API for DELETE method.

Response:

```
curl -X 'DELETE' \
      'http://<localhost>:8081/ocscp/scpc-configuration/v1/nrfsrvconfig/
nrfsrvconfig.nrf2svc.scpsvc.svc.cluster.local' \
      -H 'accept: application/json'
```

Data Model

The following tables describe different data models required for configuring NRF SRV data.

Table 2-403 NRFSRVConfigData

Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
nrfSrvFqdn	String	M	NA	The data type of NRF SRV FQDN for the corresponding NRF SRV configuration.
nrfSrvConfig	NRFSRVConfig	M	NA	This is the NRF SRV configuration data.

Table 2-404 NRFSRVConfig

Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
plmnList	List	O	NA	List of the NRF serving PLMN.
nfSetIdList	List	M	NA	This is the SetId list for this NRF SRV configuration. You can configure multiple nfSetIds, but the NRF profile and rule creation will only take into account the nfSetId from the 0th index. This setId must be unique for each NRF SRV configuration; that is, this setId must not be present in any other NRF SRV configuration.
performSubscription	boolean	O	true	This field allows to decide whether NRF from this NRF SRV should be used for a subscription or not. The possible values are true or false.
performAudit	boolean	O	true	This field allows to decide whether NRF from this NRF SRV should be used for an audit or not. The possible values are true or false.
registerScp	boolean	O	false	This field allows to decide whether to register SCP with the NRF from the NRF Set. The possible values are true or false.
scheme	UriScheme	M	NA	This field is used for the URI Scheme. The supported value is http/https.

Table 2-404 (Cont.) NRFSRVConfig

Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
versions	array(NFServiceVersion)	M	NA	This field lists the NFServiceVersion. Configuring multiple API versions is permissible, but at least one entry in the version list must have its apiVersionInUri set to "v1." This is because SCP currently utilizes "v1" for its self-generated requests towards NRF.
apiPrefix	String	O	NA	This field is used in the URI while communicating with NRF.
serviceNames	array(ServiceName)	M	"nnrf-nfm", "nnrf-disc", "nnrf-oauth2"	Indicates the service name of the NRF SRV configuration. The nnrf-nfm and nnrf-disc are mandatory for NRF SRV configurations. The supported value is nnrf-nfm/nnrf-disc/nnrf-oauth2.
isInterPlmnFqdn	boolean	O	false	This field allows you to choose whether or not to map the NRF from this NRF SRV resolution to the InterPlmn Fqdn.

Table 2-405 NFServiceVersion

Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
apiVersionInUri	String	M	NA	The apiVersionInUri is used in the URI while communicating with NRF. The supported value is v1/v2.
apiFullVersion	String	M	NA	The apiFullVersion should be in format x.y.z.

Allowed or Not Allowed API operations

Table 2-406 Different Types of Scenarios

Scenario	Allowed or Not Allowed	Notes
If performAudit is true, and the nnrf-nfm service is configured as a service for audit (global helm configuration), user can remove its entry from the NRF SRV configuration.	Not Allowed	nnrf-nfm service is mandatory
If inserting or updating nfSetId with a value that already exists in another nfSetId configuration.	Not Allowed	-

Table 2-406 (Cont.) Different Types of Scenarios

Scenario	Allowed or Not Allowed	Notes
If performAudit is true, and the nnrf-disc service is configured as a service for audit (global helm configuration), user can remove its entry from the NRF SRV configuration.	Not Allowed	nnrf-disc service is mandatory
If nnrfServiceForAudit is nnrf-disc and supported NRF services should have disc and user can change performAudit to true	Allowed	-
If nnrfServiceForAudit is nnrf-nfm and supported NRF services should have mgmt and user can change performAudit to true	Allowed	-
If model-D is enabled and nnrfSetID (or nrflInstanceID) is present in the NRF_CONFIG table for nnrf-disc, and user can remove the nnrf-disc service from the NRF SRV configuration.	Not Allowed	nnrf-disc service is mandatory
If OAuth2 is enabled and nnrfSetID (or nrflInstanceID) is present in the NRF_CONFIG table for nnrf-oauth2, and user can remove the nnrf-oauth2 service from the NRF SRV configuration.	Not Allowed	-
The registerScp can be set from false to true when nnrfset has mgmt service configured in the supported NRF service list.	Allowed	-
The performSubscription can be set from false to true when nnrfset has mgmt service configured in the supported NRF service list.	Allowed	-
Configuring the version with the "apiVersionInUri" value as v2 only.	Not Allowed	Configuring multiple API versions is permissible, but at least one entry in the version list must have its apiVersionInUri set to "v1". This is because SCP currently utilizes "v1" for its self-generated requests towards NRF.

Note

Service types nnrf-nfm and nnrf-disc are mandatory for [Table 2-404](#) table configurations. Deletion of nnrf-nfm and nnrf-disc service types from the NRF SRV profile is not supported.

2.40 NRF FQDN InstanceId Mapping

This section describes REST API configurations required for the mapping the NRF FQDN InstanceId.

Resources

The following table describes the resource URIs and the corresponding HTTP methods for the nrffqdninstanceidmapping resource type.

Table 2-407 nrffqdninstanceidmapping Resource Type

Resource Name	Resource URI	HTTP Method	Description
nrffqdninstanceidmapping	/ocscp/scpc-configuration/{version}/nrffqdninstanceidmapping	GET	Fetches the NRF FQDN and corresponding instanceid mapping details.

Resource Definition

This section describes GET resource types supported by NRF FQDN InstanceId Mapping.

GET API

This resource fetches the NRF FQDN and corresponding instanceid mapping details.

Resource URI: /ocscp/scpc-configuration/{version}/nrffqdninstanceidmapping

Table 2-408 Data Structures Supported by the GET Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
NRFFQDNInstanceIdMappingData	M	1..N	200 OK	This response is used when a record is fetched.

The following example is of NRF FQDN InstanceId Mapping REST API for GET method.

Response:

```
curl -X 'GET'
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/
nrffqdninstanceidmapping'
-H 'accept: application/json'

[
  {
    "nrfFqdn": "nrf2svc.scpsvc.svc.cluster.local",
    "data": {
      "v1": {
        "nfInstanceId": "e12013b2-590d-39ab-9aba-dac025f69a65",
        "nrfRegionOrSetId": "setnrf11.nrfset.5gc.mnc012.mcc345",
        "svcNameSvcNfInstanceId": {
          "nnrf-nfm": "fe137ab7-740a-46ee-aa5c-951806d77b01",
          "nnrf-disc": "fe137ab7-740a-46ee-aa5c-951806d77b02",
```

```

        "nnrf-oauth2": "fe137ab7-740a-46ee-aa5c-951806d77b03"
    }
}
},
{
    "nrfFqdn": "nrf3svc.scpsvc.svc.cluster.local",
    "data": {
        "v1": {
            "nfInstanceId": "4ca42748-72e2-3dd7-b4a0-4e664b021312",
            "nrfRegionOrSetId": "setnrfl1.nrfset.5gc.mnc012.mcc345",
            "svcNameSvcNfInstanceId": {
                "nnrf-nfm": "fe137ab7-740a-46ee-aa5c-951806d77b01",
                "nnrf-disc": "fe137ab7-740a-46ee-aa5c-951806d77b02",
                "nnrf-oauth2": "fe137ab7-740a-46ee-aa5c-951806d77b03"
            }
        }
    }
},
{
    "nrfFqdn": "nrf4svc.scpsvc.svc.cluster.local",
    "data": {
        "v1": {
            "nfInstanceId": "91b26862-b80f-3607-a8ef-43b429cf3b30",
            "nrfRegionOrSetId": "setnrfl1.nrfset.5gc.mnc012.mcc345",
            "svcNameSvcNfInstanceId": {
                "nnrf-nfm": "fe137ab7-740a-46ee-aa5c-951806d77b01",
                "nnrf-disc": "fe137ab7-740a-46ee-aa5c-951806d77b02",
                "nnrf-oauth2": "fe137ab7-740a-46ee-aa5c-951806d77b03"
            }
        }
    }
},
{
    "nrfFqdn": "ocnrf-ingressgateway.ocnrf.svc.cluster.local",
    "data": {
        "v1": {
            "nfInstanceId": "85e3cce9-d6f1-3af6-abbb-1419cfb38e1d",
            "nrfRegionOrSetId": "setnrfl1.nrfset.5gc.mnc012.mcc345",
            "svcNameSvcNfInstanceId": {
                "nnrf-nfm": "fe137ab7-740a-46ee-aa5c-951806d77b01",
                "nnrf-disc": "fe137ab7-740a-46ee-aa5c-951806d77b02",
                "nnrf-oauth2": "fe137ab7-740a-46ee-aa5c-951806d77b03"
            }
        }
    }
}
]

```

Data Model

The following tables describe different data models required for mapping NRF FQDN InstanceId data.

Table 2-409 NRFFQDNInstanceIdMappingData

Name	Data Type	Mandatory (M) or Optional(O)	Default Value	Description
nrfFqdn	String	M	NA	This is the NRF FQDN received from DNS server.
data	JSON	M	NA	This is the mapping detail of instanceid corresponding to the NRF FQDN.

2.41 Discovery Cache Response Configuration

This REST API is used to retrieve, create, update, and delete NF discovery response cache configurations.

Resources

The following table describes the resource name to retrieve, add, update, and remove NF discovery response cache configurations based on the query parameters.

Table 2-410 Resources

Resource Name	Resource URI	HTTP Method	Description
nfdiscovery-response-cache-cfg	/ocscp/scpc-configuration/{version}/nfdiscovery-response-cache-cfg	GET	Retrieves the NF discovery response cache configuration for the given discoveryCacheCfgName
nfdiscovery-response-cache-cfg	/ocscp/scpc-configuration/{version}/nfdiscovery-response-cache-cfg/{ruleName}	GET	Retrieves NF discovery response cache configuration for given discoveryCacheCfgName
nfdiscovery-response-cache-cfg	/ocscp/scpc-configuration/{version}/nfdiscovery-response-cache-cfg/{ruleName}	PUT	Creates or updates the NF discovery response cache configuration for the given discoveryCacheCfgName
nfdiscovery-response-cache-cfg	/ocscp/scpc-configuration/{version}/nfdiscovery-response-cache-cfg/{ruleName}	DELETE	Deletes the NF discovery response cache configuration for the given discoveryCacheCfgName

Data Model

The following table describes the field names of the DiscoveryCacheCfgWrapper data type:

Table 2-411 DiscoveryCacheCfgWrapper

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	M	Indicates the unique rule name for each delegated discovery configuration that is considered as a primary key.

Table 2-411 (Cont.) DiscoveryCacheCfgWrapper

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
data	DiscoveryCacheCfgData	M	Specific data for each discovery cache response configuration type. For more information, see DiscoveryCacheCfgData table.

Table 2-412 DiscoveryCacheCfgData

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
targetNfType	String	M	This is the NF type of producer for which delegated discovery is being made. The allowed values for this field are: * : This value denotes all the valid NF types. - or - a valid NF type that SCP supports.
serviceNames	array(ServiceName)	O	This is the list of service names supported by producer NF for which delegated discovery is being made. The allowed values for this field are: * : This value denotes all the service names for that target NF type. - or - a valid NF service that a NF type supports.
excludeDiscoveryQueryParams	array(ExcludeQueryInfo)	M	This is a list of ExcludeQueryInfo objects. ExcludeQueryInfo has one field called queryHeader. - The value of this query header is one of the query parameters that is forwarded along with the discovery request to NRF. - If multiple query parameters are configured, the response will be cached if any one of the query parameters is matched. - Maximum size of this list is 20. For more information, see ExcludeQueryInfo table.

Note

For more information about valid NF types and services supported by SCP, see the "Supported NF Types" chapter in the *Oracle Communications Cloud Native Core, Service Communication Proxy User Guide*.

Table 2-413 ExcludeQueryInfo

Field Name	Data Type	Mandatory (M) or Optional (O)	Description
queryHeader	String	M	It is the query parameters that are forwarded along with the discovery request to NRF, for which responses will not be cached. The allowed values for this field are: • None: This value denotes that caching is done for all the discovery responses. • *: This value denotes that caching will not be done for all the discovery responses. • SubscriberIds: An UE ID-related NF discovery query parameters. • Supported Query Parameters: The query parameters that is forwarded along with the discovery request to NRF. For more information, see "Supported Query Parameters" chapter in the <i>Oracle Communications Cloud Native Core, Service Communication Proxy User Guide</i>.

Default Rules for this API

Following are the default rules configured automatically after a fresh SCP deployment takes place:

- **defaultNFTypeDiscovery:** This rule is applicable to any Model D request where discovery is happening without service names (in these requests, the 3gpp-sbi-discovery-service-names header is not present) and no other custom rule match is found. For this rule, caching will not happen for the list of query headers mentioned in the ExcludeQueryInfo.
- **defaultNFServiceDiscovery:** This rule is applicable to a Model D request where the request 3gpp-sbi-discovery-service-names header is also present in the incoming request and no other custom rule match is found. For this rule, caching will not happen for the list of query headers mentioned in the ExcludeQueryInfo.

For both of the above rules, excludeDiscoveryQueryParams has the following values:

- In case of install: [{"excludeQueryInfo":{"queryHeader":"SubscriberIds"}}] indicates that the caching of responses will be done for all the query headers except the SubscriberIds (refer to [SubscriberIds](#))
- In case of upgrade: [{"excludeQueryInfo":{"queryHeader":"None"}}] indicates that the caching of responses will be done for all the query headers so as to be backward compatible with older releases.

Note

By default, users can configure up to 100 rules using this API.

Table 2-414 Default Rule Names Configuration

ruleName	targetNfType	serviceNames	excludeDiscoveryQueryParams
defaultNFTypeDiscovery	*	absent	[[{"excludeQueryInfo": {"queryHeader": "SubscriberIds"}}]]
defaultNFServiceDiscovery	*	*	[[{"excludeQueryInfo": {"queryHeader": "SubscriberIds"}}]]

The following default rules are configured automatically during the upgrade:

Table 2-415 Default Rule Name Configuration

ruleName	targetNfType	serviceNames	excludeDiscoveryQueryParams
defaultNFTypeDiscovery	*	absent	[[{"excludeQueryInfo": {"queryHeader": "None"}}]]
defaultNFServiceDiscovery	*	*	[[{"excludeQueryInfo": {"queryHeader": "None"}}]]

The string SubscriberIds is a custom string, which is a group of 8 query parameters. SubscriberIds are UE ID-related NF discovery query parameters.

The following table lists the eight subscriber IDs covered by the keyword "SubscriberIds":

Table 2-416 SubscriberIds

SubscriberIds	Description
supi	If included, this Information Element (IE) shall contain the SUPI of the requester UE to search for an appropriate NF. SUPI may be included if the target NF type is "PCF," "CHF," "AUSF," "UDM," or "UDR."
ue-ipv4-address	The IPv4 address of the UE for which a BSF or P-CSCF needs to be discovered.
ip-domain	The IPv4 address domain of the UE for which a BSF needs to be discovered.
ue-ipv6-prefix	The IPv6 prefix of the UE for which a BSF or P-CSCF needs to be discovered.
gpsi	If included, this IE shall contain the GPSI of the requester UE to search for an appropriate NF. GPSI may be included if the target NF type is "CHF," "PCF," "UDM," or "UDR."
external-group-identity	If included, this IE shall contain the external group identifier of the requester UE to search for an appropriate NF. This may be included if the target NF type is "UDM" or "UDR."
routing-indicator	Routing indicator information that allows to route network signaling with SUCI (see 3GPP 23.003 [12]) to an AUSF and UDM instance capable of serving the subscriber. May be included if the target NF type is "AUSF" or "UDM." Pattern: "^{0-9}{1,4}\$"
msisdn	If included, this IE shall contain the external group identifier of the requester UE to search for an appropriate NF. This may be included if the target NF type is "UDM" or "UDR."

Resource Definition**GET REST API:**

The resource fetches the discovery response cache configuration (discoveryCacheCfgWrapper) based on the query parameters. If no query parameter is given, all the data is returned.

Resource URI for GET All: ocscp/scpc-configuration/v1/nfdiscovery-response-cache-cfg

Resource URI for GET: ocscp/scpc-configuration/v1/nfdiscovery-response-cache-cfg/{ruleName}

The following table describes the URI query parameters supported by the GET method on this resource.

Table 2-417 URI query parameters

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	O	- If this query parameter is present, then it will fetch the record for that rule name. - If this query parameter is not present, then it will fetch all the records present in the database.

The following table describes the data structures supported by the GET Response Body on this resource.

Table 2-418 Data Structures Supported by the GET Response Body

Data Type	Mandatory (M) or Optional(O)	Cardinality	Response Codes	Description
array(discoveryCacheCfgWrapper)	M	1	200 OK	List of discovery response cache configurations (discoveryCacheCfgWrapper) matching criteria.
ProblemDetails	M	1	400 BAD REQUEST	Returns when an invalid combination or query parameter is provided.
ProblemDetails	M	1	404 Not Found	Returns when no record is found for the given query.
ProblemDetails	M	1	405 Method Not Allowed	Returns when an incorrect method or the server is configured to disallow the said method.

Examples

Successful response

```
[
  {
    "ruleName": "defaultNFServiceDiscovery",
    "data": {
      "targetNfType": "*",
      "serviceNames": [
        "*"
      ],
      "excludeDiscoveryQueryParams": [
        {
          "excludeQueryInfo": {
            "queryHeader": "SubscriberIds"
          }
        }
      ]
    },
    "createdTimestamp": "2024-01-24 14:50:56.0",
    "updatedTimestamp": "2024-01-24 14:50:56.0"
  },
  {
    "ruleName": "defaultNFTypeDiscovery",
    "data": {
      "targetNfType": "*",
      "excludeDiscoveryQueryParams": [
        {
          "excludeQueryInfo": {
            "queryHeader": "SubscriberIds"
          }
        }
      ]
    },
    "createdTimestamp": "2024-01-24 14:50:56.0",
    "updatedTimestamp": "2024-01-24 14:50:56.0"
  }
]
```

Failure Case 1: 400 Bad Request

Request(Input given as v5 wrong version):

```
curl -X 'GET' 'http://<localhost>:8081/ocscp/scpc-configuration/v5/nfdiscovery-response-cache-cfg/rule1' -H 'accept: application/json'
```

Response:

```
connection: keep-alive
content-length: 0
date: Fri,02 Feb 2024 09:43:00 GMT
```

400 Error: Bad Request

Failure Case 2: 404 Not Found**Request:**

```
curl -X 'GET' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfdiscovery-response-cache-cfg/pqr' -H 'accept: application/json'
```

Response:

```
{
  "title": "Not Found",
  "status": "404",
  "detail": "Discovery Cache Configuration data not found against given query parameter(s), Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfdiscovery-response-cache-cfg/pqr",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

Failure Case 3: 405 Method Not Allowed

HttpStatus : 405 - This can be seen through curl command when instead of GET we are requesting for any other method in this example POST.

Request:

```
curl -X 'POST' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfdiscovery-response-cache-cfg/rule1' -H 'accept: application/json'
```

Response:

```
{"timestamp":"2024-02-02T11:08:01.059+00:00","status":405,"error":"Method Not Allowed","path":"/ocscp/scpc-configuration/v5/nfdiscovery-response-cache-cfg/rule1"}
```

PUT REST API:

This resource adds one discovery response cache configuration (discoveryCacheCfgWrapper) using the Request Body.

Resource URI: ocscp/scpc-configuration/{version}/nfdiscovery-response-cache-cfg/{ruleName}

Table 2-419 URI query parameters

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	M	The unique string that works as an ID.
data	DiscoveryCacheCfgData	M	The specific data for the discovery response configuration type.

The following table describes the data structures supported by the PUT Response Body on this resource.

Table 2-420 Data Structures Supported by the PUT Response Body

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response codes	Description
array(discoveryCacheCfgWrapper)	M	1	201 OK	If a new record in the table is created.
array(discoveryCacheCfgWrapper)	M	1	200 OK	If an existing record in the table is updated.
ProblemDetails	M	1	400 BAD REQUEST	Returns problem details.
ProblemDetails	M	1	405 Method Not Allowed	Returns when an incorrect method or the server is configured to disallow the said method.

Examples

Successful response

```

HttpStatus : 400
Request:
curl -X 'PUT' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfdiscovery-response-cache-cfg/Rule1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "ruleName": "Rule1",
    "data": {
      "targetNfType": "UDRR",
      "excludeDiscoveryQueryParams": [
        {
          "excludeQueryInfo": {
            "queryHeader": "SubscriberIds"
          }
        }
      ]
    }
  }'
```

```

Response:
{
  "title": "Bad Request",
  "status": "400",
  "detail": "TargetNfType is invalid, Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfdiscovery-response-cache-cfg/RULE5",
  "cause": "INVALID_REQUEST_BODY"
}
```

```

Reuest:
curl -X 'PUT' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfdiscovery-response-cache-cfg/newRule' \
```

```
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d ' {
  "ruleName": "newRule",
  "data": {
    "targetNfType": "AMF",
    "excludeDiscoveryQueryParams": [
      {
        "excludeQueryInfo": {
          "queryHeader": "SubscriberIds"
        }
      }
    ]
  }
}'
```

```
Response:
HttpStatus : 201
{
  "ruleName": "newRule",
  "data": {
    "targetNfType": "AMF",
    "excludeDiscoveryQueryParams": [
      {
        "excludeQueryInfo": {
          "queryHeader": "SubscriberIds"
        }
      }
    ]
  }
}
```

```
Request:
curl -X 'PUT' \
'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfdiscovery-response-
cache-cfg/newRule' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d ' {
  "ruleName": "newRule",
  "data": {
    "targetNfType": "AMF",
    "excludeDiscoveryQueryParams": [
      {
        "excludeQueryInfo": {
          "queryHeader": "supi"
        }
      }
    ]
  }
}'
```

```
Response:
HttpStatus : 200
{
  "ruleName": "newRule",
```

```

    "data": {
      "targetNfType": "AMF",
      "excludeDiscoveryQueryParams": [
        {
          "excludeQueryInfo": {
            "queryHeader": "supi"
          }
        }
      ]
    }
  }
}

```

HttpStatus : 405 - This can be seen through curl command when instead of PUT we are requesting for any other method in this example POST.

Request:

```

curl -X 'POST' \
> 'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfdiscovery-response-cache-cfg/Rule1' \
> -H 'accept: application/json' \
> -H 'Content-Type: application/json' \
> -d '{
>   "ruleName": "Rule1",
>   "data": {
>     "targetNfType": "UDR",
>     "excludeDiscoveryQueryParams": [
>       {
>         "excludeQueryInfo": {
>           "queryHeader": "SubscriberIds"
>         }
>       }
>     ]
>   }
> }'

```

Response:

```

{"timestamp":"2024-02-02T10:10:19.204+00:00","status":405,"error":"Method Not Allowed","path":"/ocscp/scpc-configuration/v1/nfdiscovery-response-cache-cfg/Rule1"}

```

DELETE REST API:

This resource deletes one Discovery Response Cache configuration (discoveryCacheCfgWrapper) based on query parameters.

Resource URI: ocscp/scpc-configuration/{version}/nfdiscovery-response-cache-cfg/{ruleName}

Table 2-421 URI query parameters supported by the DELETE method on this resource

Field Name	Data Type	Mandatory (M) or Optional(O)	Description
ruleName	String	O	The name of the rule name configuration which needs to be deleted.

Table 2-422 Data structures supported by the Delete Response Body on this resource

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response codes	Description
None	M	1	200 OK	Returns the successful response. Only response code is returned.
ProblemDetails	M	1	404 NOT FOUND	Returns when no matching entry is found.
ProblemDetails	M	1	400 BAD REQUEST	Returns when an invalid combination or query parameter is provided.
ProblemDetails	M	1	405 Method Not Allowed	Returns when an incorrect method or the server is configured to disallow the said method.

Examples

Successful response:

```
Request : curl -X 'DELETE' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfdiscovery-response-cache-cfg/Rule1' -H 'accept: application/json'
```

Response: 204 OK

Failure response: 404 NOT FOUND

```
Request:
curl -X 'DELETE' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfdiscovery-response-cache-cfg/pqr' -H 'accept: application/json'
```

```
Response:
{
  "title": "Not Found",
  "status": "404",
  "detail": "Discovery Cache Configuration data not found against given query parameter(s), Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfdiscovery-response-cache-cfg/pqr",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

Failure response: 400 Bad Request

```
Request(Input given as wrong version v5):
curl -X 'DELETE' 'http://<localhost>:8081/ocscp/scpc-configuration/v5/nfdiscovery-response-cache-cfg/pqr' -H 'accept: application/json'
```

```
Response:
connection: keep-alive
content-length: 0
date: Fri,02 Feb 2024 09:43:00 GMT
```

400 Error: Bad Request

Failure response: 405 Method Not Allowed

HttpStatus : 405 - This can be seen through curl command when instead of DELETE we are requesting for any other method in this example POST.

Request:

```
curl -X 'POST' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfdiscovery-response-cache-cfg/Rule4' -H 'accept: application/json'
```

Response:

```
{"timestamp":"2024-02-02T11:13:13.951+00:00","status":405,"error":"Method Not Allowed","path":"/ocscp/scpc-configuration/v5/nfdiscovery-response-cache-cfg/Rule4"}
```

2.42 Configuring TLS Version and Ciphers

This section provides the following TLS Version and Ciphers configuration Rest API:

- Resource URIs for the tls-config resource type.
- Types of data model.
- URI query parameters supported by GET, PUT, and DELETE methods.

Resources

The following table describes the resource URIs and corresponding HTTP methods for the tls-config resource type.

Table 2-423 tls-config Resource Type

Resource name	Resource URI	HTTP Method	Description
tls-config	/ocscp/scpc-configuration/{version}/tls-config	GET	Retrieves the TLS ciphers and versions for all interfaces.
tls-config	/ocscp/scpc-configuration/{version}/tls-config/{interfaceName}	GET	Retrieves the TLS ciphers and version for a given interface.
tls-config	/ocscp/scpc-configuration/{version}/tls-config/{interfaceName}	PUT	• Create new TLS cipher configurations for the given interface if the records do not already exist. • Update existing TLS cipher configurations if a record for the interface is found.

Resource Definition

This section describes GET, PUT, and DELETE resource types supported by TLS Ciphers configuration.

GET ALL API

This resource fetches all the TLS Ciphers configuration.

Resource URI: /ocscp/scpc-configuration/{version}/tls-config

Table 2-424 Data Structures Supported by the GET Request Body

Data Type	Mandatory(M)/Optional(O)	Cardinality	Response Codes	Description
TLSConfigurationWrapper	M	1	200 OK	Indicates that all TLSConfigurationWrapper objects were successfully fetched.

The following example is of TLS Configuration REST API for GET method.

Request:

```
curl -X 'GET' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/tls-config' -H 'accept: application/json'
```

Response:

```
[
  {
    "interfaceName": "sbiIngressCiphers",
    "tlsCiphersConfigData": {
      "tlsVersion": "TLSv1.3",
      "terminateExistingConn": false,
      "tls13Ciphers": [
        "TLS_CHACHA20_POLY1305_SHA256",
        "TLS_AES_256_GCM_SHA384",
        "TLS_AES_128_GCM_SHA256"
      ]
    }
  }
]
```

GET ALL API

This resource fetches the TLS Ciphers and version configuration.

Resource URI: /ocscp/scpc-configuration/{version}/tls-config/{interfaceName}

Table 2-425 Data Structures Supported by the GET Request Body

Data Type	Mandatory(M)/Optional(O)	Cardinality	Response Codes	Description
TLSConfigurationWrapper	M	1	200 OK	Indicates the successful fetch of TLSConfigurationWrapper configurations.
ProblemDetails	M	1	400	Indicates that the request failed because the given interface name is not present.

The following example is of TLS Configuration REST API for GET method.

Successful sample of GET API

```
curl -X 'GET' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/tls-config/sbiEgress' -H 'accept: application/json'
{
  "interfaceName": "sbiEgress",
  "tlsConfigData": {
    "tlsVersion": "TLSv1.2",
    "terminateExistingConn": false,
    "tls12Ciphers": [
      "TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384",
      "TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384",
      "TLS_ECDHE_RSA_WITH_CHACHA20_POLY1305_SHA256",
      "TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256",
      "TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256",
      "TLS_ECDHE_ECDSA_WITH_CHACHA20_POLY1305_SHA256"
    ]
  }
}
```

Failure sample of GET API

```
curl -X 'GET' 'http://<localhost>:8081/ocscp/scpc-configuration/v1/tls-config/sbiEgress1' -H 'accept: application/json'
{
  "title": "Bad Request",
  "status": 400,
  "detail": "Invalid Tls Interface Name, Allowed interfaceName names are sbiIngress, sbiEgress, sbiTrafficFeed",
  "instance": "/ocscp/scpc-configuration/v1/tls-config/sbiEgress1",
  "cause": "INVALID_QUERY_PARAM"
}
```

PUT API

This resource creates new TLS cipher configurations for the specified interface.

Resource URI: /ocscp/scpc-configuration/{version}/tls-config/{interfaceName}

Table 2-426 Data Structures Supported by the PUT Request Body

Path Params	Data Type	Mandatory(M)/Optional(O)	Description
interfaceName	String	M	Retrieves configurations for the specified interfaceName.

Table 2-427 Data Structures Supported by the PUT Request Body

Data Type	Mandatory(M)/Optional(O)	Cardinality	Description
TLSConfigurationWrapper	M	1	Indicates that a TLSConfigurationWrapper is to be added or updated.

Table 2-428 Data Structures Supported by the PUT Request Body

Data Type	Mandatory(M)/ Optional(O)	Cardinalit y	Respons e Codes	Description
TLSConfigurationWrap per	M	1	200	Indicates that the nfServiceConfig configurations were successfully updated.
TLSConfigurationWrap per	M	1	201	Indicates that the nfServiceConfig configurations were successfully created.
Problem Details	M	1	400	Indicates that the request failed due to one of the following reasons: • An invalid TLS version is configured. • Invalid ciphers are configured. • An invalid interface name is configured.

The following example is of TLS Configuration REST API for PUT method.

Successful sample of GET API

```
curl -X 'PUT' \
'http://<localhost>:8081/ocscp/scpc-configuration/v1/tls-config/
sbiIngressCiphers' \
-H 'accept: */*' \
-H 'Content-Type: application/json' \
-d '{
  "interfaceName": "sbiIngressCiphers",
  "tlsCiphersConfigData": {
    "tlsVersion": "TLSv1.3",
    "terminateExistingConn": false,
    "tls13Ciphers": [
      "TLS_CHACHA20_POLY1305_SHA256", "TLS_AES_256_GCM_SHA384",
      "TLS_AES_128_GCM_SHA256"
    ]
  }
}'
{
  "interfaceName": "sbiIngressCiphers",
  "tlsCiphersConfigData": {
    "tlsVersion": "TLSv1.3",
    "terminateExistingConn": false,
    "tls13Ciphers": [
      "TLS_CHACHA20_POLY1305_SHA256",
      "TLS_AES_256_GCM_SHA384",
      "TLS_AES_128_GCM_SHA256"
    ]
  }
}
```

Failure sample of PUT API

Request

```
curl -X 'PUT' \
'http://<localhost>:8081/ocscp/scpc-configuration/v1/tls-config/sbiIngress'
\
```

```

-H 'accept: */*' \
-H 'Content-Type: application/json' \
-d '{
  "interfaceName": "sbiIngress",
  "tlsConfigData": {
    "tlsVersion": "TLSv1.3,TLSv1.4",
    "terminateExistingConn": true,
    "tls12Ciphers": [
      "TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384",
      "TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384",
      "TLS_ECDHE_RSA_WITH_CHACHA20_POLY1305_SHA256",
      "TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256",
      "TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256",
      "TLS_ECDHE_ECDSA_WITH_CHACHA20_POLY1305_SHA256"
    ],
    "tls13Ciphers": [
      "TLS_AES_128_GCM_SHA256",
      "TLS_AES_256_GCM_SHA384",
      "TLS_CHACHA20_POLY1305_SHA256"
    ]
  }
}
```

Response

```

{
  "title": "Bad Request",
  "status": 400,
  "detail": "Invalid TLS version configured, please refer user guide.",
  "instance": "/ocscp/scpc-configuration/v1/tls-config/sbiIngress",
  "cause": "INVALID_REQUEST_BODY"
}
```

Data Model

The following table lists the data model for request or response.

Table 2-429 TLSConfigurationWrapper Details

Parameter Name	Data Type	Mandatory (M) / Optional (O)	Default Values	Value Range	Description and Validation
interfaceName	String	M	NA	Only the configured interfaces with non-null values are allowed. These interfaces are: - sbiIngress - sbiEgress - sbiTrafficFeed	Indicates the interface that requires updating with the TLS version and ciphers. Validation - Non null values. - Only configured TLS versions are allowed

Table 2-429 (Cont.) TLSConfigurationWrapper Details

Parameter Name	Data Type	Mandatory (M) / Optional (O)	Default Values	Value Range	Description and Validation
tlsVersion	String	M	NA	The following are the allowed values: • TLS 1.3 • TLS 1.2 • TLS 1.3,TLS 1.2 Note: When providing both versions, ensure they are separated by "," with no space following the ",".	Specifies the TLS version that should be configured.
terminateExistingConn	Boolean	M	• sbIngress: false • sbIEgress: true • sbITrafficFeeder: true	true or false • Allowed Values: – sbIngress: false – sbIEgress: true – sbITrafficFeeder: true or false	Specifies whether to keep the existing connections or not. true: Indicates that the existing connection will be terminated, and new requests will be handled on the new connection. false: Indicates that the existing connection will remain unchanged, and only new connections will use the updated TLS configuration.
tls12Ciphers	List<String>	C	NA	• TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384 • TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 • TLS_ECDHE_RSA_WITH_CHACHA20_POLY1305_SHA256 • TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 • TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 • TLS_ECDHE_ECDSA_WITH_CHACHA20_POLY1305_SHA256	Specifies the TLS 1.2 ciphers to be configured. Validation • Non null values based on TLS version. • Only configured Ciphers are allowed.
tls13Ciphers	List<String>	C	NA	• TLS_AES_128_GCM_SHA256 • TLS_AES_256_GCM_SHA384 • TLS_CHACHA20_POLY1305_SHA256	Specifies the TLS 1.3 ciphers to be configured. Validation • Non null values based on TLS version. • Only configured Ciphers are allowed

The following sample request illustrates how to configure TLS settings for secure communication:

```
{
  "interfaceName": "sbiIngressCiphers",
  "tlsCiphersConfigData": {
    "tlsVersion": "TLSv1.3, TLSv1.2",
    "terminateExistingConn": false,
    "tls12Ciphers": [
      "TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384",
      "TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384",
      "TLS_ECDHE_RSA_WITH_CHACHA20_POLY1305_SHA256"
    ],
    "tls13Ciphers": [
      "TLS_AES_128_GCM_SHA256",
      "TLS_AES_256_GCM_SHA384",
      "TLS_CHACHA20_POLY1305_SHA256"
    ]
  }
}
```

2.43 Configuring NF Profile Level Attribute

This section describes the `nfProfile-level-attribute-config` REST API parameters required to configure NF profile level attributes that may be unavailable in a registered NF profile. You can configure NF profile level attributes based on NF types or combinations of NF types and NF instances. This API refers to a configured instance of NF profile level attribute configuration data REST API to obtain specific NF profile level attributes.

Resources

The following table describes the resource name to retrieve, add, or update `nfProfile-level-attribute-config` configuration data:

Table 2-430 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
<code>nfProfile-level-attribute-config</code>	<code>ocscp/scpc-configuration/{version}/nfProfile-level-attribute-config</code>	GET	Retrieves all existing NF profile level attribute configuration.
<code>nfProfile-level-attribute-config</code>	<code>ocscp/scpc-configuration/{version}/nfProfile-level-attribute-config/{configName}</code>	GET	Retrieves NF profile level attribute configuration for a config name.
<code>nfProfile-level-attribute-config</code>	<code>/ocscp/scpc-configuration/{version}/nfProfile-level-attribute-config/{configName}</code>	PUT	- Creates a new NF profile level attribute configuration. - Updates an existing NF profile level attribute configuration record.
<code>nfProfile-level-attribute-config</code>	<code>/ocscp/scpc-configuration/{version}/nfProfile-level-attribute-config/{configName}</code>	DELETE	Removes an existing NF profile level attribute configuration.

Resource Definition**GET ALL**

This resource fetches all the NF profile level attribute configuration.

Resource URI: /ocscp/scpc-configuration/{version}/nfProfile-level-attribute-config

The following table describes data structures supported by the GET response body on this resource:

Table 2-431 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
NfProfileLevelAttrConfigWrapper	M	1	200	Indicates that all the NfProfileLevelAttrConfigWrapper objects are fetched.

The following table describes data structures supported by the GET response body on these resources:

Table 2-432 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
NfProfileLevelAttrConfigWrapper	M	1	200	Indicates that all the NfProfileLevelAttrConfigWrapper configurations are fetched.

Sample GET API

Request:

```
curl -X 'GET' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfProfile-level-attribute-config' \
  -H 'accept: application/json'
```

Response:

```
[
  {
    "configName": "defaultNfProfileLevelAttrConfig",
    "nfProfileLevelAttrConfig": {
      "nfType": "*",
      "nfInstanceIdsList": [
        "*"
      ],
      "nfProfileLevelAttrConfigDataName":
```

```

"defaultNfProfileLevelAttrConfigData"
    },
    "createdTimestamp": "2025-01-09 05:24:11.0",
    "updatedTimestamp": "2025-01-09 05:24:11.0"
  }
]

```

GET

This resource fetches NF profile level attribute configuration.

Resource URI: `ocscp/scpc-configuration/{version}/nfProfile-level-attribute-config/{configName}`

The following table describes data structures supported by the GET response body on this resource:

Table 2-433 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
NfProfileLevelAttrConfigWrapper	M	1	200	Indicates that all the NfProfileLevelAttrConfigWrapper objects are fetched.

The following table describes data structures supported by the GET response body on these resources:

Table 2-434 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
NfProfileLevelAttrConfigWrapper	M	1	200	Indicates that all the NfProfileLevelAttrConfigWrapper configurations are fetched.
ProblemDetails	M	1	404	Retrieves records based on non-existing configName.

Sample of a Successful GET API

Request:

```

curl -X 'GET' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfProfile-level-attribute-config/defaultNfProfileLevelAttrConfig' \
  -H 'accept: application/json'

```

Response:

```
{
```

```

"configName": "defaultNfProfileLevelAttrConfig",
"nfProfileLevelAttrConfig": {
  "nfType": "*",
  "nfInstanceIdsList": [
    "*"
  ],
  "nfProfileLevelAttrConfigDataName": "defaultNfProfileLevelAttrConfigData"
},
"createdTimestamp": "2025-04-11 14:41:21",
"updatedTimestamp": "2025-04-14 14:48:12"
}

```

Sample of an Error GET API

Request:

```

curl -X 'GET' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfProfile-level-attribute-config/test123' \
  -H 'accept: application/json'

```

Response:

```

{
  "title": "Not Found",
  "status": 404,
  "detail": "Nf Profile Level Attribute Configuration not found against given query parameter(s), Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfProfile-level-attribute-config/test123",
  "cause": "DATA_NOT_FOUND"
}

```

PUT

This resource configures NF profile level attribute configuration.

Resource URI: /ocscp/scpc-configuration/{version}/nfProfile-level-attribute-config/{configName}

The following table describes data structures supported by the PUT request body on this resource:

Table 2-435 Path Parameters

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Fetches configurations of configName.

Table 2-436 NfProfileLevelAttrConfigWrapper

Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
NfProfileLevelAttrConfigWrapper	M	1	Adds or updates NfProfileLevelAttrConfigWrapper.

The following table describes data structures supported by the PUT response body on this resource:

Table 2-437 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
NfProfileLevelAttrConfigWrapper	M	1	200	Indicates successful update of NF profile level attribute configurations.
NfProfileLevelAttrConfigWrapper	M	1	201	Indicates successful creation of NF profile level attribute configurations.
ProblemDetails	M	1	400	Scenarios: - Attempts to insert or update records when configName does not match in the query parameter and request body. - Attempts to insert or update records with special characters in nfInstanceIdList. - Attempts to insert or update records with special characters in configName. - Attempts to insert a new record when DB tables reach their maximum limit. - Attempts to insert or update records when the nfInstanceId list reaches its maximum limit. - Attempts to insert or update records with exact existing (nfType and instanceIdList) configuration. - Attempts to insert or update records with an invalid nfType. - Attempts to insert or update records with a non-existing nfProfileLevelAttrConfigDataName value.

Sample of a Successful PUT API

```
Request:
curl -X 'PUT' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfProfile-level-attribute-config/test-config2' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
```

```

    "configName": "test-config2",
    "nfProfileLevelAttrConfig": {
      "nfType": "PCF",
      "nfInstanceIdsList": [
        "231-sfds-2e234"
      ],
      "nfProfileLevelAttrConfigDataName": "test"
    }
  }
}'

```

Response:

```

{
  "configName": "test-config2",
  "nfProfileLevelAttrConfig": {
    "nfType": "PCF",
    "nfInstanceIdsList": [
      "231-sfds-2e234"
    ],
    "nfProfileLevelAttrConfigDataName": "test"
  },
  "createdTimestamp": "Mon Jan 13 14:26:59 UTC 2025",
  "updatedTimestamp": "Mon Jan 13 14:26:59 UTC 2025"
}

```

Sample of an Error PUT API

Request:

```

curl -X 'PUT' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfProfile-level-attribute-config/test-config2' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "test-config21",
    "nfProfileLevelAttrConfig": {
      "nfType": "PCF",
      "nfInstanceIdsList": [
        "231-sfds-2e234"
      ],
      "nfProfileLevelAttrConfigDataName": "test"
    }
  }'

```

Response:

```

{
  "title": "Bad Request",
  "status": 400,
  "detail": "Config Name mismatch in Query params and Request body params, Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfProfile-level-attribute-config/"
}

```

```
test-config2",
  "cause": "MANDATORY_QUERY_PARAM_INCORRECT"
}
```

DELETE

This resource removes NF profile level attribute configuration for a given configName.

Resource URI: /ocscp/scpc-configuration/{version}/nfProfile-level-attribute-config/{configName}

The following table describes data structures supported by the PUT request body on this resource:

Table 2-438 Path Parameters

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Fetches configurations of configName.

The following table describes data structures supported by the DELETE response body on this resource:

Table 2-439 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
None	-	-	204	Indicates successful removal of NF profile level attribute configuration.
ProblemDetails	M	1	400	Scenarios: - Attempts to remove the default configuration. - Attempts to remove a non-existing configuration.

Sample of a Successful DELETE API

Request:

```
curl -X 'DELETE' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfProfile-level-attribute-config/testData' \
  -H 'accept: application/json'
```

Response:

```
{}
```

Successfully deleted Nf Profile Config Set Data

Sample for an Error DELETE API

Request:

```
curl -X 'DELETE' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfProfile-level-
attribute-config/testDataaa' \
  -H 'accept: application/json'
```

Response:

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "Nf Profile Level Attribute Configuration not found against given
query parameter(s), Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfProfile-config-set-data/
testDataaa",
  "cause": "DATA_NOT_FOUND"
}
```

Data Model

The following table describes data model for request or response:

Table 2-440 NfProfileConfigSetDataWrapper

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Description
configName	String	M	defaultNfProfileLevelAttrConfig	Indicates unique configuration name to configure the NF profile level attribute configuration. The allowed values must be alphanumeric with hyphen and underscore special characters.
nfType	String	M	*	Describes NfType to which this configuration is applicable. * indicates all valid NF types.
nfinstanceidList	Array<String>	O	*	Indicates configuration list of nfInstance IDs separated by comma. When nfInstanceid is provided, it is used with nfType to extract the missing profile level data to be used while processing NF profiles for creating rules. When nfInstanceid is not provided, it is automatically set to '*'. Then, this configuration is applicable for any NF instance of a given NfType. The allowed values must be alphanumeric with hyphen and underscore special characters. * indicates all valid NF instance IDs.

Table 2-440 (Cont.) NfProfileConfigSetDataWrapper

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Description
nfProfileLevelAttrConfigDataName	String	O	defaultNfProfileLevelAttrConfigData	Indicates an NF profile level attribute configuration data item that is already configured. When SCP processes NF profiles, relevant NF profile level attribute configuration data items are selected based on nfType or nfInstanceID combinations, and they are used for creating default rules. Then, those default rules will be used for routing and alternate routing of notification requests when the service name is unknown.

2.44 Configuring NF Profile Level Attribute Configuration Data

This section describes the `nfProfile-level-attribute-config-data` REST API parameters required to configure NF profile level attribute configurations data. This includes notification attributes that are used for alternate routing of notification requests and DNS SRV attributes for the DNS SRV feature. The data configured in this API is referred by NF profile level attribute configuration REST API.

Resources

The following table describes the resource name to retrieve, add, or update `nfProfile-level-attribute-config-data` configuration data:

Table 2-441 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
nfProfile-level-attribute-config-data	<code>ocscp/scpc-configuration/{version}/nfProfile-level-attribute-config-data</code>	GET	Retrieves all the existing NF profile level attribute configuration data items.
nfProfile-level-attribute-config-data	<code>ocscp/scpc-configuration/{version}/nfProfile-level-attribute-config-data/{configName}</code>	GET	Retrieves NF profile level attribute configuration data for a config name.
nfProfile-level-attribute-config-data	<code>/ocscp/scpc-configuration/{version}/nfProfile-level-attribute-config-data/{configName}</code>	PUT	- Creates a new NF profile level attribute configuration data item. - Updates an existing NF profile level attribute configuration data record.
nfProfile-level-attribute-config-data	<code>/ocscp/scpc-configuration/{version}/nfProfile-level-attribute-config-data{configName}</code>	DELETE	Removes an existing NF profile level attribute configuration data item.

Resource Definition

GET ALL

This resource fetches all the NF profile level attribute configuration data.

Resource URI: /ocscp/scpc-configuration/{version}/nfProfile-level-attribute-config-data

The following table describes data structures supported by the GET response body on this resource:

Table 2-442 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
NfProfileLevelAttrConfigDataWrapper	M	1	200	Indicates that all the NfProfileLevelAttrConfigDataWrapper objects are fetched.

The following table describes data structures supported by the GET response body on these resources:

Table 2-443 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
NfProfileLevelAttrConfigDataWrapper	M	1	200	Indicates that all the NfProfileLevelAttrConfigDataWrapper configurations are fetched.

Sample GET API

Request:

```
curl -X 'GET' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfProfile-level-attribute-config-data' \
  -H 'accept: application/json'
```

Response:

```
[
  {
    "configName": "defaultNfProfileLevelAttrConfigData",
    "dnsSrv": {
      "scheme": "https",
      "portPreference": "SRV_RECORD"
    },
    "notificationAttributes": {
      "scheme": "http",
      "port": 80,
      "capacity": 65535,
      "priority": 1
    },
    "createdTimestamp": "2025-03-21 06:15:36",
    "updatedTimestamp": "2025-03-21 06:15:36"
  }
]
```

```
}
]
```

GET

This resource fetches NF profile level attribute configuration data.

Resource URI: /ocscp/scpc-configuration/{version}/nfProfile-level-attribute-config-data/{configName}

The following table describes data structures supported by the GET response body on this resource:

Table 2-444 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
NfProfileLevelAttrConfigDataWrapper	M	1	200	Indicates that all the NfProfileLevelAttrConfigDataWrapper objects are fetched.

The following table describes data structures supported by the GET response body on these resources:

Table 2-445 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
NfProfileLevelAttrConfigDataWrapper	M	1	200	Indicates that all the NfProfileLevelAttrConfigDataWrapper configurations are fetched.
ProblemDetails	M	1	400	Retrieves records based on the 'configName', which does not exist.

Sample of a Successful GET API

Request:

```
curl -X 'GET' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfProfile-level-attribute-config-data/defaultNfProfileLevelAttrConfigData' \
  -H 'accept: application/json'
```

Response:

```
{
  "configName": "defaultNfProfileLevelAttrConfigData",
  "dnsSrv": {
    "scheme": "https",
    "portPreference": "SRV_RECORD"
  },
}
```

```

"notificationAttributes": {
  "scheme": "http",
  "port": 80,
  "capacity": 65535,
  "priority": 1
},
"createdTimestamp": "2025-03-21 06:15:36",
"updatedTimestamp": "2025-03-21 06:15:36"
}

```

Sample of an Error GET API

Request:

```

curl -X 'GET' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfProfile-level-
  attribute-config-data/test12' \
  -H 'accept: application/json'

```

Response:

```

{
  "title": "Not Found",
  "status": 404,
  "detail": "Nf Profile Level Attribute Config data not found against given
  query parameter(s), Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfProfile-level-attribute-config-
  data/test12",
  "cause": "DATA_NOT_FOUND"
}

```

PUT

This resource adds or updates NF profile level attribute configuration data.

Resource URI: /ocscp/scpc-configuration/{version}/nfProfile-level-attribute-config-data/{configName}

The following table describes data structures supported by the PUT request body on this resource:

Table 2-446 Path Parameters

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Indicates the name of the configurations to be added or updated.

Table 2-447 NfProfileLevelAttrConfigWrapper

Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
NfProfileLevelAttrConfigDataWrapper	M	1	Adds or updates NfProfileLevelAttrConfigDataWrapper.

The following table describes data structures supported by the PUT response body on this resource:

Table 2-448 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
NfProfileLevelAttrConfigDataWrapper	M	1	200	Indicates successful update of NF profile level attribute configuration data item.
NfProfileLevelAttrConfigDataWrapper	M	1	201	Indicates successful creation of NF profile level attribute configuration data item.
ProblemDetails	M	1	400	Scenarios: - Attempts to insert or update a record when configName in the query parameter does not match with the configName in the request body. - Attempts to insert or update records with an invalid notification attribute scheme. - Attempts to insert or update records with an invalid notification attribute port value. - Attempts to insert or update records with an invalid notification attribute capacity value. - Attempts to insert or update records with special characters in configName. - Attempts to insert a new record when the DB table reaches its maximum limit. - Attempts to insert or update records with an invalid DnsSrv scheme value.

Sample of a Successful PUT API

```
Request:
curl -X 'PUT' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfProfile-level-attribute-config-data/chk-config-data' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "chk-config-data",
    "dnsSrv": {
      "scheme": "https",
      "portPreference": "SRV_RECORD"
    }
  }'
```

```

    },
    "notificationAttributes": {
      "scheme": "http",
      "port": 10,
      "capacity": 9877,
      "priority": 10
    }
  }
}'

```

Response:

```

{
  "configName": "chk-config-data",
  "dnsSrv": {
    "scheme": "https",
    "portPreference": "SRV_RECORD"
  },
  "notificationAttributes": {
    "scheme": "http",
    "port": 10,
    "capacity": 9877,
    "priority": 10
  },
  "createdTimestamp": "2025-04-04 05:52:03",
  "updatedTimestamp": "2025-04-04 05:52:03"
}

```

Sample of an Error PUT API

Request:

```

curl -X 'PUT' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfProfile-level-
  attribute-config-data/chk-config-data1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "chk-config-data",
    "dnsSrv": {
      "scheme": "https",
      "portPreference": "SRV_RECORD"
    },
    "notificationAttributes": {
      "scheme": "http",
      "port": 10,
      "capacity": 9877,
      "priority": 10
    }
  }'

```

Response:

```

{
  "title": "Bad Request",

```

```

    "status": 400,
    "detail": "Config Name mismatch in Query params and Request body params,
Please refer to the User Guide.",
    "instance": "/ocscp/scpc-configuration/v1/nfProfile-level-attribute-config-
data/chk-config-data1",
    "cause": "MANDATORY_QUERY_PARAM_INCORRECT"
  }

```

DELETE

This resource removes NF profile level attribute configuration data for a given configName.

Resource URI: /ocscp/scpc-configuration/{version}/nfProfile-level-attribute-config-data/{configName}

The following table describes data structures supported by the PUT request body on this resource:

Table 2-449 Path Parameters

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Indicates the name of the configuration to be removed.

The following table describes data structures supported by the DELETE response body on this resource:

Table 2-450 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
None	-	-	204	Indicates successful removal of the NF profile level attribute configuration data item.
ProblemDetails	M	1	400	Scenarios: - Attempts to remove the default configuration. - Attempts remove a configuration by config name, which is absent.

Sample of a Successful DELETE API

Request:

```

curl -X 'DELETE' \
  'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfProfile-level-
attribute-config-data/chk-config-data' \
  -H 'accept: application/json'

```

Response:

```
{}
```

Successfully deleted NF Profile Level Attribute Configuration Data

Sample for an Error DELETE API

Request:

```
curl -X 'DELETE' \
'http://<localhost>:8081/ocscp/scpc-configuration/v1/nfProfile-level-attribute-config-data/chk-config-data12' \
-H 'accept: application/json'
```

Response:

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "Nf Profile Level Attribute Config data not found against given query parameter(s), Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfProfile-level-attribute-config-data/chk-config-data12",
  "cause": "DATA_NOT_FOUND"
}
```

Data Model

The following table describes data model for request or response:

Table 2-451 NfProfileLevelAttrConfigDataWrapper

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Description
configName	String	M	defaultNfProfileLevelAttrConfigData	Indicates unique configuration name to configure the NF profile level attribute configuration data. The default value cannot be deleted, but it can be modified. The allowed values must be alphanumeric with hyphen and underscore special characters.
dnsSrv.scheme	String	O	https	Defines the default scheme to form the query for DNS SRV profile level FQDN. Range: http or https
dnsSrv.portPreference	String	O	SRV_RECORD	Defines the path to retrieve the port values either from the DNS SRV record or from the configured notification attributes. Range: SRV_RECORD or STATIC_CONFIG - STATIC_CONFIG: Uses static configuration defined in notificationAttributes.port - SRV_RECORD: Uses port from the DNS SRV record.

Table 2-451 (Cont.) NfProfileLevelAttrConfigDataWrapper

Field Name	Data Type	Mandatory (M) or Optional (O)	Default Value	Description
notificationAttributes.scheme	String	M	http	Defines the scheme to be used while creating default routing rules for notification requests when the scheme is not provided in the NF profile at profile level. Range: http or https
notificationAttributes.port	Integer	O	80	Defines the port to be used while creating default routing rules for notification request when the port is not provided in the NF profile at profile level. Range: 1-65535
notificationAttributes.capacity	Integer	O	65535	Defines the capacity to be used while creating default routing rules for notification requests when the capacity is not provided in the NF profile at profile level. Range: 0-65535
notificationAttributes.priority	Integer	O	1	Defines the priority to be used while creating default routing rules for notification requests when the priority is not provided in the NF profile at profile level. Range: 0-65535

2.45 Configuring SCP Feature Status

This section describes SCP Feature Status REST API parameters to fetch the runtime status of NRF migration tasks.

Resources

The following table describes the resource name to retrieve scpfeaturestatus configuration data:

Table 2-452 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
scpfeaturestatus	/ocscp/scpc-configuration/{version}/scpfeaturestatus	GET	Retrieves the runtime status of a feature.

Resource Definition

GET

This resource fetches the runtime status of a feature based on the query parameters.

Resource URI: /ocscp/scpc-configuration/{version}/scpfeaturestatus

The following table describes the data structures supported by the GET response body on this resource:

Table 2-453 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
SCPFeatureStatusData	M	1	200 OK	200 OK is used when a record is fetched.

Example of SCP Feature Status REST API for GET Method:

```
curl -X 'GET'
'http://<localhost>:8081/ocscp/scpc-configuration/v1/scpfeaturestatus'
-H 'accept: application/json'

[
  {
    "feature": "nrf_bootstrap_info",
    "admin": "ENABLED",
    "status": "ENABLED"
  }
]
```

Data Model

The following table describes data model for request or response:

Table 2-454 SCPFeatureStatusData

Field Name	Data Type	Mandatory (M) or Optional (O)	Description
featureName	String	M	Displays the names of the features, such as nrf_bootstrap_info. Default value: Feature Name
adminState	String	M	Displays the admin state of the feature. Possible statuses are mentioned below: - ENABLED: This indicates that the user has enabled the feature. - DISABLED: This indicates that the user has disabled the feature. Default value: DISABLED

Table 2-454 (Cont.) SCPFeatureStatusData

Field Name	Data Type	Mandatory (M) or Optional (O)	Description
runtimeStatus	String	M	Displays the current runtime status of the feature. Possible statuses are mentioned below: - DISABLED: This indicates that the feature is disabled. For example, in the <code>nrf_bootstrap_info</code> feature, this state means SCP is running with a statically configured NRF. If the user has changed the 'Admin State' from ENABLED to DISABLED, this state means the feature is successfully disabled. - IN_PROGRESS: This indicates the enabling or disabling of the feature is currently in progress when the 'Admin State' is set to ENABLED or DISABLED. For example, in the <code>nrf_bootstrap_info</code> feature, when the 'Admin State' is ENABLED, the migration from static to DNS SRV based NRF topology is in progress. In the <code>nrf_bootstrap_info</code> feature, when the 'Admin State' is DISABLED, the migration from a DNS SRV based NRF topology to static NRF topology is in progress. - FAILED_RETRY: This indicates that the process of enabling or disabling the feature (as indicated by the 'Admin State') has encountered failure and is undergoing retries. For example, in the <code>nrf_bootstrap_info</code> feature, this state means either of the migration tasks has failed and going through retries. - ENABLED: This indicates the feature is successfully enabled. For example, in the <code>nrf_bootstrap_info</code> feature, this state means the migration from static to a DNS SRV based NRF topology is successful. Default value: DISABLED
creationTimestamp	Date	M	Displays the time of creation of the event, for example, creationTimestamp": "2021-05-26T01:17:15.000+00:00
updatedAtTimestamp	Date	M	Displays the time of updation of the event, for example, creationTimestamp": "2021-05-26T06:24:15.000+00:00

2.46 Configuring NF Topology On-demand Audit

In SCP 25.2.100 and earlier releases, the NF topology audit was performed automatically at set intervals. You can initiate an on-demand NF topology audit with NRF by using this REST API. It provides an option to manually refresh and reprocess all NF profiles.

Resources

The following table describes the resource name to initiate nf-topology-audit configuration data:

Table 2-455 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
nf-topology-audit	/ocscp/scpc-configuration/{version}/nf-topology-audit	PUT	Initiates an on-demand NF topology audit on specified NF types with optional NRF Set IDs and optional force refresh.

Resource Definition**PUT**

This resource performs an on-demand NF topology audit on specified NF types with optional NRF Set IDs and optional force refresh based on the query parameters.

Resource URI: /ocscp/scpc-configuration/{version}/nf-topology-audit

The following table describes the data structures supported by the PUT request body on this resource:

Table 2-456 Request Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
OnDemandAuditDetailsWrapper	M	1	Indicates nf-topology-audit configuration used to submit the NF topology audit request to SCP.

The following table describes the data structures supported by the PUT response body on this resource:

Table 2-457 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
OnDemandAuditDetailsWrapper	M	1	200 OK	Successfully submitted nf-topology-audit request.
ProblemDetails	M	1	400 Bad Request	Problem details

Sample of a successful PUT API

Request:

```
curl -X 'PUT' \
  'http://localhost:31411/ocscp/scpc-configuration/v1/nf-topology-audit' \
  -H 'accept: application/json' \
```



```
-H 'Content-Type: application/json' \
-d '{
  "nfTypeList": [
    "SMF", "UDM"
  ],
  "nrfSetIdList": [
    "setnrfl1.nrfset.5gc.mnc012.mcc345"
  ],
  "forceRefresh": true
}'
```

Response:

```
{
  "nfTypeList": [
    "SMF",
    "UDM"
  ],
  "nrfSetIdList": [
    "setnrfl1.nrfset.5gc.mnc012.mcc345"
  ],
  "forceRefresh": true,
  "message": "OnDemand Audit has been accepted for SMF,UDM"
}
```

Sample of an Error PUT API

Request:

```
curl -X 'PUT' \
'http://localhost:31411/ocscp/scpc-configuration/v1/nf-topology-audit' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "nfTypeList": [
    "SMF", "UDMd"
  ],
  "nrfSetIdList": [
    "setnrfl1.nrfset.5gc.mnc012.mcc345"
  ],
  "forceRefresh": true
}'
```

Response:

```
{
  "title": "Bad Request",
  "status": 400,
  "detail": "UDMD NFType(s) not configured in NFTypes-NFServices (Resource name is nftypes-nfservices). Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nf-topology-audit",
  "cause": "INVALID_REQUEST_BODY"
}
```

Data Model

The following table describes data model for request or response:

Table 2-458 OnDemandAuditDetailsWrapper

Field Name	Data Type	Mandatory (M) or Optional (O)	Description
nfTypeList	List<String>	M	This parameter configures valid NFTypes on which topology refresh is required. Default value: NA Range: Valid nfTypes/*
nrfSetIdList	List<String>	O	This parameter configures NRF Set IDs on which topology refresh is required. If not provided, all the configured NRF Set IDs are audited. Default value: Empty List Range: Provisioned NRF Set IDs in deployment
forceRefresh	Boolean	O	This parameter indicates whether to force NF profile mismatch in the SCP-Audit microservice. It has the following values: true: Enables force NF profile mismatch in the SCP-Audit microservice. SCP-Notification processes NF profiles even if it is already learnt by SCP. false: Performs usual audit process. NF profiles are processed by SCP-Notification only if there is a mismatch between the learnt NF profile and the NF profile fetched from NRF during audit. Default value: false Range: true/false

Note

You must provide at least one NFType/*. When * is provided, audit is initiated for all the NFs except NRF, where TSI is either NRF or NRF_AND_LOCAL.

2.47 Configuring NF Profile

The NF Profile REST API retrieves and updates NF profile configuration in SCP based on the topology source information of that NF.

The resource URI has been updated to include topology source information.

The combination of topology and nf-instance-id determines a unique NF profile. The CNC Console configuration screen and its structured data fields have been removed, and only JSON-based GET and PUT operations are supported.

REST API for NRF or LOCAL learned profiles:

- GET: `ocscp/scpc-configuration/v1/nf-instances` and `ocscp/scpc-configuration/v1/nf-instances/nfInstanceId`
- GET: `ocscp/scpc-configuration/v1/nf-instances/{nfinstnceid}`
- PUT: `ocscp/scpc-configuration/v1/nf-instances/{nfinstnceid}`
- DELETE: `ocscp/scpc-configuration/v1/nf-instances/{nfinstnceid}`

REST API for the NRF learned profile:

- GET: ocscp/scpc-configuration/v1/nf-instances/NRF
- DELETE: ocscp/scpc-configuration/v1/nf-instances/NRF

REST API for the Static (LOCAL) configured profiles:

- GET: ocscp/scpc-configuration/v1/nf-instances/LOCAL
- PUT: ocscp/scpc-configuration/v1/nf-instances/LOCAL
- DELETE: ocscp/scpc-configuration/v1/nf-instances/LOCAL

REST API for the NRF or LOCAL learned profiles:

- GET: ocscp/scpc-configuration/v1/nf-instances
- GET: ocscp/scpc-configuration/v1/nf-instances/nfInstanceIds

It retrieves NF profiles for all supported types and applies filters based on query parameters. Additional query parameters have been introduced to refine profile retrieval.

Supported query parameters are:

- nf-type
- service-names
- nf-instance-id
- limit
- max-payload-size
- topologySource
- isActive
- profileOwnership

It retrieves the "_links" object containing the URI of each NF in SCP, or an empty object if no NFs match the query parameters such as nf-type or service-names.

Existing value:

```
{
  "href": "http://ocscp-scpc-configuration.scpsvc.svc.cluster.local:8081/ocscp/scpc-configuration/v1/nf-instances/3faf2bbc-6e4a-2828-a507-a14ef8e1bc7b"}

```

New value:

```
{
  "href": "http://ocscp-scpc-configuration.scpsvc.svc.cluster.local:8081/ocscp/scpc-configuration/v1/nf-instances/LOCAL?nf-instance-id=3faf2bbc-6e4a-2828-a507-a14ef8e1bc7b"}

```

Static or Local profiles can be configured in the following Topology Source Info mode:

- LOCAL
- NRF_AND_LOCAL

Profiles from NRF can be learned in following TSI modes:

- NRF
- NRF_AND_LOCAL

The retrieved NF profile includes metadata along with the NF profile data. PATCH support has been removed, and local modification of NRF-learned profiles is no longer supported.

Resources and Methods Overview

Retrieves NF profile for all supported NFs and applies filters based on query parameters:

```
GET : ocscp/scpc-configuration/v1/nf-instances Collapse source
Request:
curl -X 'GET' \
  'http://10.75.224.47:32740/ocscp/scpc-configuration/v1/nf-instances?nf-
instance-id=3faf2bbc-6e4a-2828-a507-a14ef8e1bc7b&max-payload-size=123' \
  -H 'accept: application/json'
```

Response:

```
[
  {
    "nfInstanceId": "3faf2bbc-6e4a-2828-a507-a14ef8e1bc7b",
    "nfType": "NRF",
    "nfStatus": "REGISTERED",
    "plmnList": [
      {
        "mcc": "410",
        "mnc": "215"
      },
      {
        "mcc": "410",
        "mnc": "216"
      }
    ],
    "interPlmnFqdn": "nrfr2l2.5gc.mnc215.mcc410.3gppnetwork.org",
    "priority": 10,
    "capacity": 10000,
    "locality": "Loc2r2",
    "nfServicePersistence": false,
    "nfServices": [
      {
        "serviceInstanceId": "fe137ab7-740a-46ee-aa5c-951806d77b01",
        "serviceName": "nnrf-nfm",
        "versions": [
          {
            "apiVersionInUri": "v1",
            "apiFullVersion": "1.0.0"
          }
        ],
        "scheme": "http",
        "nfServiceStatus": "REGISTERED",
        "fqdn": "nrfr2l2svc.scpsvc.svc.cluster.local",
        "interPlmnFqdn": "nrfr2l2.5gc.mnc215.mcc410.3gppnetwork.org",
        "ipEndpoints": [
          {
            "port": 8080
          }
        ]
      }
    ]
  }
]
```

```

        "priority": 1,
        "capacity": 5000,
        "load": 0
    },
    {
        "serviceInstanceId": "fe137ab7-740a-46ee-aa5c-951806d77b02",
        "serviceName": "nnrf-disc",
        "versions": [
            {
                "apiVersionInUri": "v1",
                "apiFullVersion": "1.0.0"
            }
        ],
        "scheme": "http",
        "nfServiceStatus": "REGISTERED",
        "fqdn": "nrfr2l2svc.scpsvc.svc.cluster.local",
        "interPlmnFqdn": "nrfr2l2.5gc.mnc215.mcc410.3gppnetwork.org",
        "ipEndPoints": [
            {
                "port": 8080
            }
        ],
        "priority": 1,
        "capacity": 5000,
        "load": 0
    },
    {
        "serviceInstanceId": "fe137ab7-740a-46ee-aa5c-951806d77b03",
        "serviceName": "nnrf-oauth2",
        "versions": [
            {
                "apiVersionInUri": "v1",
                "apiFullVersion": "1.0.0"
            }
        ],
        "scheme": "http",
        "nfServiceStatus": "REGISTERED",
        "fqdn": "nrfr2l2svc.scpsvc.svc.cluster.local",
        "interPlmnFqdn": "nrfr2l2.5gc.mnc215.mcc410.3gppnetwork.org",
        "ipEndPoints": [
            {
                "port": 8080
            }
        ],
        "priority": 1,
        "capacity": 5000,
        "load": 0
    }
],
"nrfRegionOrSetId": "setnrfr1.nrfset.5gc.mnc012.mcc345",
"nfSetIdList": [
    "setnrfr1.nrfset.5gc.mnc012.mcc345"
],
"olchSupportInd": false,
"topologySource": "LOCAL",
"isActive": true,

```

```

    "profileOwnership": "USER"
  }
]

```

Retrieves the URI list for all supported NFs based on topology source:

```

GET : ocscp/scpc-configuration/v1/nf-instances/nfInstanceIds Collapse source
Request:
curl -X 'GET' \
'http://10.75.224.47:32740/ocscp/scpc-configuration/v1/nf-instances/
nfInstanceIds?nf-type=NRF' \
-H 'accept: application/json'

```

```

Response:
{
  "_links": [
    {
      "href": "http://ocscp-scpc-configuration.scpsvc.svc.cluster.local:8081/
ocscp/scpc-configuration/v1/nf-instances/LOCAL?nf-instance-
id=3faf2bbc-6e4a-2828-a507-a14ef8e1bc7b"
    },
    {
      "href": "http://ocscp-scpc-configuration.scpsvc.svc.cluster.local:8081/
ocscp/scpc-configuration/v1/nf-instances/LOCAL?nf-instance-
id=3faf2bbc-6e4a-2828-a507-b14ef8e1bc7a"
    },
    {
      "href": "http://ocscp-scpc-configuration.scpsvc.svc.cluster.local:8081/
ocscp/scpc-configuration/v1/nf-instances/LOCAL?nf-instance-
id=3faf3bbc-6e4a-2828-a507-a14ef8e1bc6a"
    },
    {
      "href": "http://ocscp-scpc-configuration.scpsvc.svc.cluster.local:8081/
ocscp/scpc-configuration/v1/nf-instances/LOCAL?nf-instance-
id=3faf3bbc-6e4a-2828-a507-a14ef8e1bc6b"
    },
    {
      "href": "http://ocscp-scpc-configuration.scpsvc.svc.cluster.local:8081/
ocscp/scpc-configuration/v1/nf-instances/LOCAL?nf-instance-
id=6faf1bbc-6e4a-2828-a507-a14ef8e1bc5a"
    },
    {
      "href": "http://ocscp-scpc-configuration.scpsvc.svc.cluster.local:8081/
ocscp/scpc-configuration/v1/nf-instances/LOCAL?nf-instance-
id=6faf1bbc-6e4a-2828-a507-a14ef8e1bc5b"
    }
  ]
}

```

Retrieves NF profile for all supported or specific NFs having topology as LOCAL:

```

GET : ocscp/scpc-configuration/v1/nf-instances/LOCAL Collapse source
Request:
curl -X 'GET' \
'http://10.75.224.47:32740/ocscp/scpc-configuration/v1/nf-instances/LOCAL?

```

```
nf-instance-id=3faf2bbc-6e4a-2828-a507-a14ef8e1bc7b' \
-H 'accept: application/json'
```

Response:

```
[
  {
    "nfInstanceId": "3faf2bbc-6e4a-2828-a507-a14ef8e1bc7b",
    "nfType": "NRF",
    "nfStatus": "REGISTERED",
    "plmnList": [
      {
        "mcc": "410",
        "mnc": "215"
      },
      {
        "mcc": "410",
        "mnc": "216"
      }
    ],
    "interPlmnFqdn": "nrfr2l2.5gc.mnc215.mcc410.3gppnetwork.org",
    "priority": 10,
    "capacity": 10000,
    "locality": "Loc2r2",
    "nfServicePersistence": false,
    "nfServices": [
      {
        "serviceInstanceId": "fe137ab7-740a-46ee-aa5c-951806d77b01",
        "serviceName": "nnrf-nfm",
        "versions": [
          {
            "apiVersionInUri": "v1",
            "apiFullVersion": "1.0.0"
          }
        ],
        "scheme": "http",
        "nfServiceStatus": "REGISTERED",
        "fqdn": "nrfr2l2svc.scpsvc.svc.cluster.local",
        "interPlmnFqdn": "nrfr2l2.5gc.mnc215.mcc410.3gppnetwork.org",
        "ipEndpoints": [
          {
            "port": 8080
          }
        ],
        "priority": 1,
        "capacity": 5000,
        "load": 0
      },
      {
        "serviceInstanceId": "fe137ab7-740a-46ee-aa5c-951806d77b02",
        "serviceName": "nnrf-disc",
        "versions": [
          {
            "apiVersionInUri": "v1",
            "apiFullVersion": "1.0.0"
          }
        ]
      }
    ]
  }
]
```

```

        "scheme": "http",
        "nfServiceStatus": "REGISTERED",
        "fqdn": "nrfr2l2svc.scpsvc.svc.cluster.local",
        "interPlmnFqdn": "nrfr2l2.5gc.mnc215.mcc410.3gppnetwork.org",
        "ipEndpoints": [
            {
                "port": 8080
            }
        ],
        "priority": 1,
        "capacity": 5000,
        "load": 0
    },
    {
        "serviceInstanceId": "fe137ab7-740a-46ee-aa5c-951806d77b03",
        "serviceName": "nnrf-oauth2",
        "versions": [
            {
                "apiVersionInUri": "v1",
                "apiFullVersion": "1.0.0"
            }
        ],
        "scheme": "http",
        "nfServiceStatus": "REGISTERED",
        "fqdn": "nrfr2l2svc.scpsvc.svc.cluster.local",
        "interPlmnFqdn": "nrfr2l2.5gc.mnc215.mcc410.3gppnetwork.org",
        "ipEndpoints": [
            {
                "port": 8080
            }
        ],
        "priority": 1,
        "capacity": 5000,
        "load": 0
    }
],
"nrfRegionOrSetId": "setnrfr1.nrfset.5gc.mnc012.mcc345",
"nfSetIdList": [
    "setnrfr1.nrfset.5gc.mnc012.mcc345"
],
"olcHSupportInd": false,
"topologySource": "LOCAL",
"isActive": true,
"profileOwnership": "USER"
}
]

```

Updates or creates the NF profile record for a given NF instance ID having topology as LOCAL:

```

PUT : ocscf/scpc-configuration/v1/nf-instances/LOCAL Collapse source
Request:
curl -X 'PUT' \
'http://10.75.224.47:32740/ocscf/scpc-configuration/v1/nf-instances/LOCAL' \
-H 'accept: application/json' \

```



```

-H 'Content-Type: application/json' \
-d '{
  "nfInstanceId": "8faf1bbc-6e4a-4454-a507-aef01a101a27",
  "nfType": "NEF",
  "nfStatus": "REGISTERED",
  "nrfRegionOrSetId": "setnrfl1.nrfset.5gc.mnc012.mcc345",
  "nfSetIdList": [
    "setocnef.nefset.5gc.mnc012.mcc345"
  ],
  "plmnList": [
    {
      "mcc": "310",
      "mnc": "14"
    }
  ],

  "priority": 5,
  "load": 20,
  "capacity": 1000,
  "locality": "Loc7",
  "nfServices": [
    {
      "serviceName": "nnef-eventexposure",
      "nfServiceStatus": "REGISTERED",
      "serviceInstanceId": "8faf1bbc-6e4a-4454-a507-aef01a101a11",
      "apiPrefix": "USWest",
      "versions": [
        {
          "apiVersionInUri": "v1",
          "apiFullVersion": "1.0.0"
        }
      ],
      "scheme": "http",
      "fqdn": "ocnefnsgateway.ocnef.svc.us.lab.oracle.com",
      "interPlmnFqdn": "ocnefnsgateway.ocnef.svc.us.lab.oracle.com",
      "load": 20,
      "ipEndpoints": [
        {
          "port": null
        }
      ]
    },
    {
      "serviceName": "3gpp-as-session-with-qos",
      "nfServiceStatus": "REGISTERED",
      "serviceInstanceId": "8faf1bbc-6e4a-4454-a507-aef01a101a22",
      "apiPrefix": "USWest",
      "versions": [
        {
          "apiVersionInUri": "v1",
          "apiFullVersion": "1.0.0"
        }
      ],
      "scheme": "http",
      "fqdn": "ocnefnsgateway.ocnef.svc.us.lab.oracle.com",
      "interPlmnFqdn": "ocnefnsgateway.ocnef.svc.us.lab.oracle.com",

```

```

        "load": 20,
        "ipEndPoints": [
            {
                "port": 8080
            }
        ]
    },
    {
        "serviceName": "3gpp-traffic-influence",
        "nfServiceStatus": "REGISTERED",
        "serviceInstanceId": "8faf1bbc-6e4a-4454-a507-aef01a101a33",
        "apiPrefix": "USWest",
        "versions": [
            {
                "apiVersionInUri": "v1",
                "apiFullVersion": "1.0.0"
            }
        ],
        "scheme": "http",
        "fqdn": "ocnefnsgateway.ocnef.svc.us.lab.oracle.com",
        "interPlmnFqdn": "ocnefnsgateway.ocnef.svc.us.lab.oracle.com",
        "load": 20,
        "ipEndPoints": [
            {
                "port": 8080
            }
        ]
    }
]
}'

```

Response:
201 CREATED

Update self SCP profile:

Request:

```

curl -X 'PUT' \
'http://10.75.224.197:31612/ocscp/scpc-configuration/v1/nf-instances/LOCAL' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "nfInstanceId": "6faf1bbc-6e4a-4454-a507-a14ef8e1bc5e",
  "nfType": "SCP",
  "nfStatus": "REGISTERED",
  "plmnList": [
    {
      "mcc": "410",
      "mnc": "213"
    }
  ],
  "fqdn": "ocscp-scp-worker.scpsvc.svc.cluster.local",
  "priority": 0,
  "capacity": 90,

```

```

"load": 0,
"locality": "Loc7",
"customInfo": {
  "mateScpInfoList": [
    {
      "mateSCPLocalities": [
        "Loc10"
      ],
      "capacity": 500,
      "priority": 5,
      "scpFqdn": "ocscp-scp-worker.scpsvc1.svc.cluster.local",
      "scpInstanceId": "8faf1bbc-6e4a-4454-a507-a14ef8e1bc5e"
    },
    {
      "mateSCPLocalities": [
        "Loc11"
      ],
      "capacity": 501,
      "priority": 6,
      "scpFqdn": "ocscp-scp-worker.scpsvc2.svc.cluster.local",
      "scpInstanceId": "8faf1bbc-6e4a-4454-a507-a14ef8e1bc5f"
    }
  ],
  "mateSiteInfo": {
    "mateSite1": {
      "mateSiteLocalities": [
        "Loc21",
        "Loc22"
      ]
    },
    "mateSite2": {
      "mateSiteLocalities": [
        "Loc31",
        "Loc32"
      ]
    }
  },
  "isAdminSuspended": false,
  "supportedNRFRegionOrSetIdList": [
    "setnrfl1.nrfset.5gc.mnc012.mcc345",
    "setnrfr1.nrfset.5gc.mnc012.mcc345",
    "setnrfr2.nrfset.5gc.mnc012.mcc345"
  ]
},
"nfServicePersistence": false,
"servingScope": [
  "Loc7",
  "Loc8",
  "Loc9",
  "USEast"
],
"nfSetIdList": [
  "setscpl1.scpset.5gc.mnc012.mcc345"
],
"scpInfo": {
  "scpPrefix": "scpPrefix",

```

```

        "scpPorts": {
            "http": 8000,
            "https": 9443
        }
    },
    "lcHSupportInd": false,
    "olcHSupportInd": false,
    "mediation_status": "DISABLED"
}'

```

Response:
200 UPDATED

Deletes NF profile record for a given NF instance ID having topology as LOCAL:

```

DELETE : ocscp/scpc-configuration/v1/nf-instances/LOCAL Collapse source
Request:
curl -X 'DELETE' \
'http://10.75.224.47:32740/ocscp/scpc-configuration/v1/nf-instances/LOCAL?
nf-instance-id=8faf1bbc-6e4a-4454-a507-aef01a101a27' \
-H 'accept: application/json'

```

Response:
204 NO_CONTENT

Retrieves NF profile for all supported or specific NFs having topology as NRF:

```

GET : ocscp/scpc-configuration/v1/nf-instances/NRF Collapse source
Request:
curl -X 'GET' \
'http://10.75.224.47:32740/ocscp/scpc-configuration/v1/nf-instances/NRF' \
-H 'accept: application/json'

```

```

Response:
[
  {
    "nfInstanceId": "8faf1bbc-6e4a-4454-a507-aef01a101a27",
    "nfType": "NEF",
    "nfStatus": "REGISTERED",
    "plmnList": [
      {
        "mcc": "310",
        "mnc": "014"
      }
    ],
    "priority": 5,
    "capacity": 1000,
    "load": 20,
    "locality": "Loc7",
    "nfServicePersistence": false,
    "nfServices": [
      {
        "serviceInstanceId": "8faf1bbc-6e4a-4454-a507-aef01a101a11",
        "serviceName": "nnef-eventexposure",
        "versions": [

```

```
{
  "apiVersionInUri": "v1",
  "apiFullVersion": "1.0.0"
},
{
  "scheme": "http",
  "nfServiceStatus": "REGISTERED",
  "fqdn": "ocnefnsgateway.ocnef.svc.us.lab.oracle.com",
  "interPlmnFqdn": "ocnefnsgateway.ocnef.svc.us.lab.oracle.com",
  "ipEndPoints": [
    {
      "port": 80
    }
  ],
  "apiPrefix": "USWest",
  "load": 20
},
{
  "serviceInstanceId": "8faf1bbc-6e4a-4454-a507-aef01a101a22",
  "serviceName": "3gpp-as-session-with-qos",
  "versions": [
    {
      "apiVersionInUri": "v1",
      "apiFullVersion": "1.0.0"
    }
  ],
  "scheme": "http",
  "nfServiceStatus": "REGISTERED",
  "fqdn": "ocnefnsgateway.ocnef.svc.us.lab.oracle.com",
  "interPlmnFqdn": "ocnefnsgateway.ocnef.svc.us.lab.oracle.com",
  "ipEndPoints": [
    {
      "port": 8080
    }
  ],
  "apiPrefix": "USWest",
  "load": 20
},
{
  "serviceInstanceId": "8faf1bbc-6e4a-4454-a507-aef01a101a33",
  "serviceName": "3gpp-traffic-influence",
  "versions": [
    {
      "apiVersionInUri": "v1",
      "apiFullVersion": "1.0.0"
    }
  ],
  "scheme": "http",
  "nfServiceStatus": "REGISTERED",
  "fqdn": "ocnefnsgateway.ocnef.svc.us.lab.oracle.com",
  "interPlmnFqdn": "ocnefnsgateway.ocnef.svc.us.lab.oracle.com",
  "ipEndPoints": [
    {
      "port": 8080
    }
  ],
  "apiPrefix": "USWest",
  "load": 20
}
```

```

        "apiPrefix": "USWest",
        "load": 20
    }
],
"nrfRegionOrSetId": "setnrfl1.nrfset.5gc.mnc012.mcc345",
"nfSetIdList": [
    "setocnef.nefset.5gc.mnc012.mcc345"
],
"olchSupportInd": false,
"topologySource": "NRF",
"isActive": true,
"profileOwnership": "NRF"
}
]

```

Deletes NF profile record for a given NF instance ID having topology as NRF:

DELETE : ocscpc/scpc-configuration/v1/nf-instances/NRF Collapse source
Request:
curl -X 'DELETE' \
'http://10.75.224.47:32740/ocscpc/scpc-configuration/v1/nf-instances/NRF?nf-
instance-id=8faf1bbc-6e4a-4454-a507-aef01a101a27' \
-H 'accept: application/json'

Response:
204 NO_CONTENT

Resources

The following table describes the resource name to retrieve, add, update, or remove the NF profile configuration data:

Table 2-459 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Request Body and Query Parameters	Description
nf-instances (Store)	/ocscpc/scpc-configuration/v1/nf-instances/	GET	Query parameters: • NFType • ServiceName • NF instance ID • Maximum number of NF profiles • Maximum payload size • topologySource • isActive • profileOwnership	Retrieves NF profile for all supported NFs and applies filters based on the query parameters. Response status code: • 200, OK, SearchResult, See below SearchResult section. • 400 Bad Request, ProblemDetails • 500 Internal server error, ProblemDetails

Table 2-459 (Cont.) Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Request Body and Query Parameters	Description
	/ocscp/scpc-configuration/v1/nf-instances/nfinstanceids	GET	Query parameters: - NFType (M) - array(ServiceName) (O)	Retrieves URI list for all supported NFs based on nfType and topology source. Response status code: 200, OK, UriList The response body contains a "_links" object with the URI of each NF in the SCP, or an empty object if there are no learned or configured NFs, or if no NFs match the specified "nf-type" query parameter. 400 Bad Request, ProblemDetails 500 Internal server error, ProblemDetails
nf-instances (Document)	/ocscp/scpc-configuration/v1/nf-instances/LOCAL	GET	Query parameters: - nf-instance-id(O) Body - n/a	Retrieves NF profile for all supported or specific NFs having topology as LOCAL. Response status code: 200 OK, NFProfileWrapper
		PUT	Body: NFProfile	Updates or creates NF profile record for a given NF instance ID having topology as LOCAL. The PUT method is not supported when topology source is set to NRF. Response status code: 200 OK, 201 Created
		DELETE	Query parameter: - nf-instance-id(M) Body - n/a	Removes NF profile record for a given NF instance ID having topology as LOCAL. The DELETE method is not supported when topology source is set to NRF. Response status code: 204, NO content
nf-instances (Document)	/ocscp/scpc-configuration/v1/nf-instances/NRF	GET	Query parameter: - nf-instance-id(O) Body - n/a	Retrieves NF profile for all supported or specific NFs having topology as NRF. Response status code: 200 OK, NFProfileWrapper

Table 2-459 (Cont.) Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Request Body and Query Parameters	Description
		DELETE	Query parameter: • nf-instance-id(M) Body • n/a	Removes NF profile record for a given NF instance ID having topology as NRF. The DELETE method is not supported when topology source is set to NRF or NRF_AND_LOCAL. Response status code: 204, NO content

Table 2-460 Query Parameters

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
nf-type	NFType	M	1	This Information Element (IE) specifies the NF type of the NF service producer being queried.
service-names	array(ServiceName)	O	1..N	If included, this IE contains an array of service names for which SCP is queried to provide NF profiles. The SCP returns NF profiles that have at least one NF service matching the service names in this list. If not included, SCP returns all NF service names registered in the NF profile.
nf-instance-id	NfInstanceId	O	0..1	Identifies the NF instance being queried.
limit	integer	O	0..1	Specifies the maximum number of NF profiles to be returned in the response.
max-payload-size	integer	O	0..1	Specifies the maximum payload size (before compression, if any) of the response, expressed in kilobytes. When present, SCP limits the number of NF profiles returned so that the response does not exceed the indicated maximum payload size.
topologySource	TopologySource	O	1	Specifies the topology source from which the NF is learned. Allowed values for topologySource are LOCAL and NRF.
isActive	Boolean	O	1	Indicates whether to retrieve eligible active NF profiles for routing. Allowed values for isActive are true and false.

Table 2-460 (Cont.) Query Parameters

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
profileOwnership	ProfileOwnership	O	1	Specifies the source responsible for managing the NF profile. Allowed values for profileOwnership are SCP, NRF, and USER. - SCP: Represents SCP owned copy of NRF learned profiles created when localNfTopologyCfgMode is set to AUTO in the Topology Source Info REST API. - NRF: Represents profile learned through notification. - USER: Represents profile learned at SCP statically through the NF Profile Configuration REST API.

Table 2-461 SearchResult

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
nfInstances	array(NFProfileWrapper)	M	1..N	Contains an array of NF instance profiles along with associated metadata, matching the search criteria specified by the query parameters. An empty array indicates that no NF instances match the search criteria.

Table 2-462 UriList

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
_links	map(LinksValueSchema)	O	1..N	Added into the JSON hypermedia object definition.

Table 2-463 NFProfileWrapper

Field Name	Data Type	P	Range	Description
isActive	String	M	true, false	Indicates whether the active NF profile is eligible for routing. This is in read only mode.

Table 2-463 (Cont.) NFProfileWrapper

Field Name	Data Type	P	Range	Description
profileOwnership	String	M	SCP, NRF, USER	Identifies the source responsible for managing the NF profile. This is in read only mode. - SCP: Represents SCP- owned copy of NRF learnt profile created when localNfTopologyCfgMode is set to AUTO in the Topology Source Information REST API. - NRF: Represents profile learnt through notification. - USER: Represents profile learnt at SCP statically through the NF Profile Configuration REST API.
topologySource	String	M	LOCAL, NRF	Identifies the topology source from which the NF is learned. This is in read only mode.
NfProfile				

Updating Self SCP Profile

The following self SCP profile parameters can be updated using this REST API. You cannot update any other self SCP profile parameters.

- locality
- priority
- capacity
- load
- servingScope
- plmnList
- customInfo.mateScpInfoList
- customInfo.mateSiteInfo

For more information about the above mentioned parameters, see the "Global Parameters" section in *Oracle Communications Cloud Native Core, Service Communication Proxy Installation, Upgrade, and Fault Recovery Guide*.

Note

Ensure that SCP automatically triggers an SCP profile update request to NRF whenever any self SCP profile parameter is updated.

Updating SCP Serving Locality Parameters

When SCP routes SBI requests to NFs, its serving locality set determines whether requests are routed directly or through inter-SCP routing.

SCP's serving locality set is determined by the following factors:

- Statically configured `servingScope`
- Statically configured `customInfo.mateSiteInfo`
- Dynamic learning of other SCP profiles and their `servingScope`

Updating `servingScope` and `customInfo.mateSiteInfo` can impact SBI request routing. Any modification to these parameters may trigger additional actions by SCP, depending on the updated values. These actions include:

- Fetching external SCP profiles from NRF and reprocessing them.
- Fetching affected NF profiles from NRF and reprocessing them.

It is recommended to update `servingScope` and `customInfo.mateSiteInfo` only during a maintenance period. Additionally, the following pre-update and post-update actions are recommended.

Preupdate Procedures

- Ensure that the SCP-Notification and SCP-Audit pods are in healthy states.
- Ensure that no external audit has been triggered or if triggered, that it has been completed.
- Verify that the `SCPNrfHeartbeatFailureForRegionOrSetId` alert is not active in the system. It indicates that SCP has no connectivity issues with NRF.

Postupdate Procedures

After submitting the REST API request, in case of a failure response, review the error details and take the required action. If the response is successful, it indicates that SCP has accepted the request, however, this does not imply that the serving locality update has been completed.

When the REST API request is accepted, you should monitor the following alerts:

- `SCPNfTopologyForceRefreshAuditFailure`
 - If this alert is raised, it indicates that the operation is incomplete.
 - In such cases, you should wait for the next scheduled audit cycle to complete, as it ensures all required audit operations are performed.
 - Until the next audit cycle is completed, you must not submit another SCP profile locality update request.
 - Note that this alert may be raised even after the `SCPSelfProfileUpdateSuccess` alert.
- `SCPSelfProfileUpdateSuccess`: If this alert is raised and the `SCPNfTopologyForceRefreshAuditFailure` alert is not raised, SCP serving locality update operation can be considered successful.

Updating SCP Serving Locality when SCP is in the `deRegistered` or `outOfService` Status

Updating SCP profile's `servingScope` or `mateSiteInfo` may require SCP to fetch SCP or NF profiles from NRF. This is done by performing a forced, on-demand audit of those profiles.

However, when SCP is in the `deRegistered` or `outOfService` state, the Audit service is not running. Therefore, any update to SCP profile's `servingScope` or `mateSiteInfo` while SCP is in one of these states will not be completed immediately. Instead, the update task remains in the in-progress state until SCP state changes back to `inService` or `suspended`, at which point the task is completed.

Note

While a serving locality update task is in-progress, you cannot update these SCP profile parameters again until the previous task is completed.

2.48 Configuring NF Discovery Mode

The `nfdiscovery-mode-cfg` REST API creates, updates, and removes the NF discovery mode configuration in SCP. It determines the source of NF discovery for Model D delegated discovery requests or Model C discovery requests in SCP when the `nf-discovery-enhancement` parameter is enabled.

If `nf-discovery-enhancement` is disabled, NRF becomes the default discovery source. If `nf-discovery-enhancement` is enabled but no matching rule is found in the NF discovery mode REST API, NRF becomes the discovery source in those scenarios.

The following matching keys can be configured in this REST API:

- `targetNfTypes`
- `requesterNfTypes`
- `serviceNames`
- `targetPlmnList`
- `requesterPlmnList`
- `apiRootHdrPresnt`
- `groupIdList`

`targetNfTypes` is the only mandatory key to configure in the rules. The above mentioned matching keys are compared with the NF discovery headers for Model D indirect discovery communication or with the NF query parameters for Model C indirect discovery communication.

The `NfDiscoverySource` parameter is used to generate the discovery response using the following options:

- **NRF:** Generates the discovery response by querying the NRF.
- **SCP:** Generates the discovery response locally based on the NF discovery rule configuration API.
- **SCP_FOLLOWED_BY_NRF:** Generates the discovery response locally. If no matching rule is found and `ruleNotFound` is configured in `discoveryModeFallbackCriteria`, it falls back to NRF.
- **NRF_FOLLOWED_BY_SCP:** Generates the discovery response by querying NRF. If discovery fails and the error codes are in the configured error list (`discoveryModeFallbackCriteria`), it falls back to SCP.

You can configure `routeToNrf` to explicitly configure NRF to discover NF profiles for Model D indirect discovery communication or Model C indirect discovery communication.

This REST API provides a mechanism to enhance the NF discovery response from the NRF for both Model D indirect discovery communication and Model C indirect discovery communication by configuring `enhanceNfDiscoveryRspCfg`.

Resources

The following table describes the resource name to retrieve, add, update, or remove the nfdiscovery-mode-cfg configuration data:

Table 2-464 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
nfdiscovery-mode-cfg	/ocscp/scpc-configuration/{version}/nfdiscovery-mode-cfg	GET	Retrieves all NF discovery mode configurations.
nfdiscovery-mode-cfg	/ocscp/scpc-configuration/{version}/nfdiscovery-mode-cfg/{ruleName}	GET	Retrieves NF discovery mode configuration for a given ruleName.
nfdiscovery-mode-cfg	/ocscp/scpc-configuration/{version}/nfdiscovery-mode-cfg/{ruleName}	PUT	Creates or updates the NF discovery mode configuration for a given ruleName. A maximum of 250 records can be configured.
nfdiscovery-mode-cfg	/ocscp/scpc-configuration/{version}/nfdiscovery-mode-cfg/{ruleName}	DELETE	Deletes NF discovery mode configuration for given ruleName.

Resource Definition

GET

This resource fetches all the nfdiscovery-mode-cfg configuration.

Resource URI: /ocscp/scpc-configuration/{version}/nfdiscovery-mode-cfg

The following table describes the data model supported by the GET response body on this resource:

Table 2-465 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
nFDiscoveryModeConfigWrapper	M	1..N	200 OK	Indicates nFDiscoveryModeConfig configuration.
ProblemDetails	M	1	500 Internal Server Error	Indicates database access error.

This resource fetches the nfdiscovery-mode-cfg configuration based on resourceName.

Resource URI: /ocscp/scpc-configuration/{version}/nfdiscovery-mode-cfg/{ruleName}

The following table describes the path parameter supported by the GET response body on this resource:

Table 2-466 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
ruleName	String	M	Indicates the name of the rule defined in the database for nFDiscoveryModeConfig. It is a unique string used to identify the record.

The following table describes data structures supported by the GET response body on these resources:

Table 2-467 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
nFDiscoveryModeConfigWrapper	M	1	200 OK	Indicates the nFDiscoveryModeConfig configurations.
ProblemDetails	M	1	404 Not Found	Returns 404 error code with problem details if no record is present with specified ruleName.
ProblemDetails	M	1	500 Internal Server Error	Indicates database access error.

Sample of a Successful GET API

```
curl -X 'GET' \
  'http://10.75.212.69:31111/ocscp/scpc-configuration/v1/nfdiscovery-mode-cfg/rule1' \
  -H 'accept: application/json'
```

```
{
  "ruleName": "rule1",
  "data": {
    "apiRootHdrPresent": true,
    "targetNfTypes": [
      "UDM",
      "PCF"
    ],
    "requesterNfTypes": [
      "SMF"
    ],
    "serviceNames": [
      "nudm-uecm"
    ],
    "targetPlmnList": [
```

```

    {
      "mcc": "141",
      "mnc": "744"
    }
  ],
  "requesterPlmnList": [
    {
      "mcc": "361",
      "mnc": "839"
    }
  ],
  "nfDiscoverySource": "SCP",
  "routeToNrf": {
    "nfInstanceIdList": [
      {
        "nfInstanceId": "7Ad8448d-7Db9-cD3f-2809-bBF9D2faCbD3",
        "priority": 3,
        "capacity": 65535
      },
      {
        "nfInstanceId": "8Ad8448d-7Db9-cD3f-2809-bBF9D2faCbD3",
        "priority": 9,
        "capacity": 65535
      }
    ],
    "nfSetIdList": [
      {
        "nfsetId": "setnrfl1.nrfset.5gc.mnc012.mcc345",
        "priority": 1,
        "capacity": null
      }
    ],
    "hostList": {
      "fqdnList": [
        {
          "fqdn": "nrf2svc.scpsvc.svc.cluster.local",
          "priority": 655,
          "capacity": 6
        }
      ],
      "ipv4AddressList": [
        {
          "ipAddress": "12.87.76.90",
          "priority": null,
          "capacity": 65
        }
      ],
      "ipv6AddressList": null
    }
  },
  "discoveryModeFallbackCriteria": [
    "304",
    "ruleNotFound"
  ],
  "enhanceNfDiscoveryRspCfg": {
    "enabled": false,

```

```

    "includeAllNfsOfNfSet": false,
    "addedNfPriorityCapacityInfo": [
      {
        "localities": [
          "loc1"
        ],
        "priority": 10,
        "capacity": 1
      },
      {
        "localities": [
          "loc2"
        ],
        "priority": 0,
        "capacity": null
      }
    ],
    "allNfPriorityCapacityInfo": null
  }
},
"createdTimestamp": "2025-04-24 08:05:38",
"updatedTimestamp": "2025-04-24 08:05:38"
}

```

Sample of an Error GET API

```

curl -X 'GET' \
  'http://10.75.212.69:30411/ocscp/scpc-configuration/v1/nfdiscovery-mode-cfg/noRule' \
  -H 'accept: application/json'

```

```

{
  "title": "Not Found",
  "status": 404,
  "detail": "NF Discovery mode configuration data not found for the given ruleName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfdiscovery-mode-cfg/noRule",
  "cause": "DATA_NOT_FOUND"
}

```

404 Error: Not Found

PUT

This resource configures nfdiscovery-mode-cfg for a given data.

Resource URI: /ocscp/scpc-configuration/{version}/nfdiscovery-mode-cfg/{ruleName}

The following table describes the path parameter supported by this resource:

Table 2-468 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
ruleName	String	M	Indicates the name of the rule defined in the database for nFDiscoveryModeConfig. It is a unique string used to identify the record.

The following table describes the data model supported by the PUT request body on this resource:

Table 2-469 Request Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Code	Description
nFDiscoveryModeConfigWrapper	M	1	200 OK	Indicates successful update or replacement of the nFDiscoveryModeConfig configurations with the specified ruleName.
nFDiscoveryModeConfigWrapper	M	1	201 Created	Indicates the successful update or replacement of the nFDiscoveryModeConfig settings for the specified ruleName.
ProblemDetails	M	1	400 Bad Request	Returns 400 error code with problem details if any validation fails in the request body.
ProblemDetails	M	1	500 Internal Server Error	Indicates the database access error.

Sample of a Successful PUT API

```
curl -X 'PUT' \
  'http://10.75.212.69:31111/ocscp/scpc-configuration/v1/nfdiscovery-mode-cfg/rule1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d
```

```
{
  "ruleName": "rule1",
  "data": {
    "apiRoothdrPresent": true,
    "targetNfTypes": [
      "UDM",
      "PCF"
    ],
    "requesterNfTypes": [
      "SMF"
    ],
  },
}
```

```

"serviceNames": [
  "nudm-uecm"
],
"targetPlmnList": [
  {
    "mcc": "141",
    "mnc": "744"
  }
],
"requesterPlmnList": [
  {
    "mcc": "361",
    "mnc": "839"
  }
],
"nfDiscoverySource": "SCP",
"routeToNrf": {
  "nfInstanceIdList": [
    {
      "priority": 3,
      "nfInstanceId": "7Ad8448d-7Db9-cD3f-2809-bBF9D2faCbD3",
      "capacity": 65535
    },
    {
      "priority": 9,
      "nfInstanceId": "8Ad8448d-7Db9-cD3f-2809-bBF9D2faCbD3",
      "capacity": 65535
    }
  ],
  "nfSetIdList": [
    {
      "priority": 1,
      "nfsetId": "setnrfl1.nrfset.5gc.mnc012.mcc345"
    }
  ],
  "hostList": {
    "fqdnList": [
      {
        "priority": 655,
        "capacity": 6,
        "fqdn": "nrf2svc.scpsvc.svc.cluster.local"
      }
    ],
    "ipv4AddressList": [
      {
        "capacity": 65,
        "ipAddress": "12.87.76.90"
      }
    ]
  }
},
"discoveryModeFallbackCriteria": [
  "304",
  "ruleNotFound"
],
"enhanceNfDiscoveryRspCfg": {

```

```
"enabled": false,
"includeAllNfsOfNfSet": false,
"addedNfPriorityCapacityInfo": [
  {
    "priority": 10,
    "localities": [
      "loc1"
    ],
    "capacity": 1
  },
  {
    "priority": 0,
    "localities": [
      "loc2"
    ]
  }
]
}'
```

Response:

```
{
  "ruleName": "rule1",
  "data": {
    "apiRootHdrPresent": true,
    "targetNfTypes": [
      "UDM",
      "PCF"
    ],
    "requesterNfTypes": [
      "SMF"
    ],
    "serviceNames": [
      "nudm-uecm"
    ],
    "targetPlmnList": [
      {
        "mcc": "141",
        "mnc": "744"
      }
    ],
    "requesterPlmnList": [
      {
        "mcc": "361",
        "mnc": "839"
      }
    ],
    "nfDiscoverySource": "SCP",
    "routeToNrf": {
      "nfInstanceIdList": [
        {
          "nfInstanceId": "7Ad8448d-7Db9-cD3f-2809-bBF9D2faCbD3",
          "priority": 3,
          "capacity": 65535
        }
      ]
    }
  }
}
```

```

        {
            "nfInstanceId": "8Ad8448d-7Db9-cD3f-2809-bBF9D2faCbD3",
            "priority": 9,
            "capacity": 65535
        }
    ],
    "nfSetIdList": [
        {
            "nfsetId": "setnrfl1.nrfset.5gc.mnc012.mcc345",
            "priority": 1,
            "capacity": null
        }
    ],
    "hostList": {
        "fqdnList": [
            {
                "fqdn": "nrf2svc.scpsvc.svc.cluster.local",
                "priority": 655,
                "capacity": 6
            }
        ],
        "ipv4AddressList": [
            {
                "ipAddress": "12.87.76.90",
                "priority": null,
                "capacity": 65
            }
        ],
        "ipv6AddressList": null
    },
    "discoveryModeFallbackCriteria": [
        "304",
        "ruleNotFound"
    ],
    "enhanceNfDiscoveryRspCfg": {
        "enabled": false,
        "includeAllNfsOfNfSet": false,
        "addedNfPriorityCapacityInfo": [
            {
                "localities": [
                    "loc1"
                ],
                "priority": 10,
                "capacity": 1
            },
            {
                "localities": [
                    "loc2"
                ],
                "priority": 0,
                "capacity": null
            }
        ],
        "allNfPriorityCapacityInfo": null
    }
}

```

```

    },
    "createdTimestamp": "2025-04-24 08:05:38",
    "updatedTimestamp": "2025-04-24 08:05:38"
  }
}

```

Sample of an Error PUT API

```

curl -X 'PUT' \
  'http://10.75.212.69:30411/ocscp/scpc-configuration/v1/nfdiscovery-mode-cfg/rule2' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{"ruleName":"rule2"}'

```

```

{
  "title": "Bad Request",
  "status": 400,
  "detail": "Field data must not be null or empty. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfdiscovery-mode-cfg/rule2",
  "cause": "OPTIONAL_IE_INCORRECT"
}

```

400 Error: Bad Request

DELETE

This resource removes the nfdiscovery-mode-cfg configuration based on resourceName.

Resource URI: /ocscp/scpc-configuration/{version}/nfdiscovery-mode-cfg/{ruleName}

The following table describes the path parameter supported by this resource:

Table 2-470 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
ruleName	String	M	Indicates the name of the rule defined in the database for nFDiscoveryModeConfig. It is a unique string used to identify the record.

The following table describes the data model supported by the DELETE response body on this resource:

Table 2-471 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
NA	M	1	204 No Content	Indicates the successful deletion of the nFDiscoveryModeConfig record.
ProblemDetails	M	1	404 Not Found	Returns a 404 error code with problem details if no record exists for the specified ruleName.
ProblemDetails	M	1	403 Forbidden	Returns a 403 error code with problem details if the user tries to delete the default record.
ProblemDetails	M	1	500 Internal Server Error	Indicates the database access error.

Sample of a Successful of DELETE API

```
curl -X 'DELETE' \
  'http://10.75.212.69:30411/ocscp/scpc-configuration/v1/nfdiscovery-mode-cfg/rule1' \
  -H 'accept: */*'
```

Response: 204 No Content

Sample of an Error DELETE API

```
curl -X 'DELETE' \
  'http://10.75.212.69:30411/ocscp/scpc-configuration/v1/nfdiscovery-mode-cfg/rule101' \
  -H 'accept: */*'
```

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "NF Discovery mode configuration data not found for the given ruleName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfdiscovery-mode-cfg/rule101",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

Data Model

The following table describes data model for request or response:

Table 2-472 NFDiscoveryModeConfigWrapper

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
ruleName	String	M	Indicates the name of the rule defined in the database for nFDiscoveryModeConfig. It is a unique string used to identify the record. Allowed character combinations should be alpha-numeric, hyphen, and underscore.
data	Json (nFDiscoveryModeConfig)	M	Indicates a JSON structure that holds different NF discovery mode configurations.
createdTimestamp	String	Read Only	Indicates the timestamp when the record is created in the database. It is not required in the request, but it is present in the response.
updatedTimestamp	String	Read Only	Indicates the timestamp when the record is last updated in the database. It is not required in the request, but it is present in the response.

A default entry is created with the default key and the JSON structure. Deleting the defaultRule is not allowed, although it can be modified.

```
{
  "ruleName": "defaultRule",
  "data": {
    "targetNfTypes": [
      "*"
    ],
    "nfDiscoveryMode": "NRF"
  }
}
```

JSON Schema

Table 2-473 NFDiscoveryModeConfig

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
targetNfTypes	List<String>	M	Indicates the list of any valid NFType configured in Configuring NFTypes-NFServices .
requesterNfTypes	List<String>	O	For default rule, "*" is allowed for targetNfTypes. "*" indicates all nfTypes These NF discovery criteria are matched with the query parameters in the NF discovery request from the consumer in Model C indirect communication. They are also matched with the discovery headers of the Model D delegated service request in Model D indirect communication. If any attribute is absence, it indicates that it is applicable for all. Either 3GPP-defined NFType as per TS29.510 or custom NFType.

Table 2-473 (Cont.) NfDiscoveryModeConfig

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
apiRootHdrPresent	Boolean	O	Manages the configuration of NF discovery request. If this parameter is set to true, the configuration applies only when the NF discovery request contains the 3gpp-Sbi-Target-Apiroot header. If this parameter is set to false, the configuration applies only when the NF discovery request does not contain the 3gpp-Sbi-Target-Apiroot header. If this parameter is not configured in a rule, the configuration applies to every NF discovery request. Allowed values: true or false
serviceNames	List<String>	O	Indicates the list of any valid NF service-name configured in Configuring NFTypes-NFServices . Either 3GPP-defined serviceName as per TS29.510 or user-defined custom service names pointing to a targetNfType.
targetPlmnList	List<PlmnId>	O	Indicates the list of valid target PLMN IDs. Validate if all the PLMN IDS are in the correct format. mcc or mnc cannot be null. "mcc" must be three digits, and "mnc" must 2 or 3 digits.
requesterPlmnList	List<PlmnId>	O	Indicates the list of valid PLMN IDs. Validate if all the PLMN IDS are in the correct format. mcc or mnc cannot be null. "mcc" must be three digits, and "mnc" must 2 or 3 digits.
groupIdList	List<String>	O	Provides the identity of the groups of NFs of the target NF type to be discovered.
nfDiscoverySource	Enumeration (NfDiscoverySource)	M	Defines the source of NF discovery for Model D delegated discovery requests and Model C discovery requests to obtain the discovery response. Allowed values: - SCP: Performs NF discovery locally. It uses the NF static discovery REST API to perform discovery. - NRF: Generates the discovery response by querying the NRF. This is the existing behavior. - SCP_FOLLOWED_BY_NRF: Generates the discovery response locally. If no matching rule exists in the NF static discovery API and ruleNotFound, a custom error string, is configured in discoveryModeFallbackCriteria, it falls back to the NRF to perform discovery. - NRF_FOLLOWED_BY_SCP: Generates the discovery response by querying NRF. If discovery fails and the error codes in the response are in the configured error list in discoveryModeFallbackCriteria, it falls back to SCP to discover the profiles. If NfDiscoverySource is SCP_FOLLOWED_BY_NRF or NRF_FOLLOWED_BY_SCP, it is mandatory to configure discoveryModeFallbackCriteria.

Table 2-473 (Cont.) NfDiscoveryModeConfig

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
routeToNrf	Object (RouteToNrfConfig)	O	Indicates which NRF to use for NF discovery. This configuration is applicable in the following nfDiscoveryMode values: - NRF - SCP_FOLLOWED_BY_NRF - NRF_FOLLOWED_BY_SCP The RouteToNRF configuration overrides the NRF selection from the consumer NF as received in the 3gpp-Sbi-Target-Apiroot header. If this attribute is not configured, the 3gpp-Sbi-Target-Apiroot header is used to discover NF profiles. If the 3gpp-Sbi-Target-Apiroot header is not present in the incoming request, NF discovery uses the local NRF. Local NRF information is fetched from the nrf-configuration API. <pre>curl -X 'GET' 'http://10.75.213.60:32673/ocscp/scpc-configuration/v1/nrf-configuration' -H 'accept: application/json'</pre> If any combination of nfInstanceIdList, nfSetIdList, and hostList is configured in routeToNrf, SCP tries all configured NRFs for discovery based on priority and capacity when an error occurs with a previously tried NRF. If SCP receives error responses from all configured NRFs, it does not fall back to the local NRF. If none of the NRFs configured in routeToNrf is known to SCP, SCP tries to perform discovery using routing information, including NRF information if available. If routing information is not available, SCP falls back to the local NRF to perform discovery. The preference order to get NRF details is as follows: - routeToNrf 3gpp-Sbi-Target-Apiroot header - Local NRF

Table 2-473 (Cont.) NfDiscoveryModeConfig

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
discoveryModeFallbackCriteria	List<String>	C	Indicates the list of HTTP error codes and custom error strings for which fallback applies. It lists all allowed rerouting codes in the routing options. The following custom error strings are added as part of this feature: "emptyResponseFromNRF" "ruleNotFound" These NF discovery fallback conditions are used by SCP-Worker when NfDiscoverySource is SCP_FOLLOWED_BY_NRF or NRF_FOLLOWED_BY_SCP. emptyResponseFromNRF: 200 OK with empty response is received from NRF when nfdDiscoverySource is NRF. ruleNotFound: If no matching rules is found in NF static discovery API when nfdDiscoverySource is SCP. 5xx is not allowed to be configured along with any valid status code starting from 5. Allowed error codes: 301, 302, 303, 304, 307, 308, 400, 401, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 421, 422, 425, 426, 428, 429, 431, 5xx, 500, 501, 502, 503, 504, 505, 506, 507, 508, 510, 511, "connectionError", "timeout", "emptyResponseFromNRF", "ruleNotFound"
enhanceNfDiscoveryRspCfg	Object (EnhanceNfDiscoveryRspCfg)	O	Defines the configuration to enhance the delegated discovery response received from NRF. As part of this enhancement, the following can occur: - Adds additional NFs to the delegated discovery response by performing a reverse lookup based on the nfSetId of the NFs in the discovery response. - Updates the priority or capacity of either all the NFs in the discovery response or only the NFs added as a process of reverse lookup.

Table 2-474 EnhanceNfDiscoveryRspCfg

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
enabled	Boolean	M	Indicates whether an enhancement to the received delegated discovery response from NRF should be applied.

Table 2-474 (Cont.) EnhanceNfDiscoveryRspCfg

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
includeAllNfsOfNfSet	Boolean	M	Manages the addition of NFs to the NF discovery responses. If enabled, additional NFs are added to the NF discovery response based on the set ID of the NF profile received in the delegated discovery response. If disabled, no additional NFs are added to the NF discovery response, and routing is performed based on the received delegated discovery response.
addedNfPriorityCapacityInfo	List<NFLocalityInfo>	C	Overrides or assigns the priority and capacity of additionally added NFs based on the locality of the NFs received in the delegated discovery response.
allNfPriorityCapacityInfo	List<NFLocalityInfo>	C	Overrides or assigns the priority and capacity of all NFs based on the locality of the NFs received in the discovery response.

Note

- Either addedNfPriorityCapacityInfo or allNfPriorityCapacityInfo can be configured at a time.
- If includeAllNfsOfNfSet is set to false, you can configure only allNfPriorityCapacityInfo.

Table 2-475 NFLocalityInfo

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
priority	Integer	C	Indicates any valid integer between 0 and 65,535. If configured, the NF's priority is updated to this value (if the locality matches) during routing or during delegated discovery response creation. At least one of priority or capacity must be present. Allowed values for priority or capacity are 0 to 65,535.
capacity	Integer	C	Indicates any valid integer between 0 and 65,535. If configured, the NF's capacity is updated to this value (if the locality matches) during routing or during delegated discovery response creation. At least one of priority or capacity must be present. Allowed values for priority or capacity are 0 to 65,535.
localities	List<String>	O	Indicates the list of localities. Overlapping localities are not allowed. More than one empty locality list is not allowed. Note: If the locality parameter is empty, the priority or capacity update is applied to all profiles.

Table 2-476 RouteToNrfConfig

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
nfInstanceIdList	List<NfInstanceIdInfo>	C	Indicates the list of NfInstanceIdInfo objects. These objects should contain the instance IDs of NRFs to which discovery must be performed. At least one of nfInstanceIdList, nfSetIdList, or hostList must be present. The maximum size of nfInstanceIdList is 9.
nfSetIdList	List<NfSetIdInfo>	C	Indicates the list of NfSetIdInfo objects. These objects should contain the set IDs of NRFs to which discovery must be performed. At least one of nfInstanceIdList, nfSetIdList, or hostList must be present. The maximum size of the setIdList is 3.
hostList	HostInfo	C	Indicates custom HostInfo object to hold the FQDN, IPv4, or IPv6 of NFs, along with their priority and capacity information. It should contain the host information of NRFs to which discovery must be performed. At least one of nfInstanceIdList, nfSetIdList, or hostList must be present. The maximum size of the hostList is 9.

Table 2-477 NfInstanceIdInfo

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
nfInstanceId	String	M	Indicates NF instance ID of NRF to which the discovery request should be forwarded. You must validate nfInstanceId. Overlapping nfInstanceId values are not allowed in the NfInstanceIdInfo object. The priority and capacity must be in the range 0 to 65535.
priority	Integer	O	Indicates any valid integer between 0 and 65535. If configured, the NF's priority is updated to this value. You must validate nfInstanceId. Overlapping nfInstanceId values are not allowed in the NfInstanceIdInfo object. The priority and capacity must be in the range 0 to 65535.
capacity	Integer	O	Indicates any valid integer between 0 and 65535. If configured, the NF's capacity is updated to this value. You must validate nfInstanceId. Overlapping nfInstanceId values are not allowed in the NfInstanceIdInfo object. The priority and capacity must be in the range 0 to 65535.

Table 2-478 NfSetIdInfo

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
nfSetId	String	M	Indicates NF Set ID of NRF to which the discovery request should be forwarded. You must validate nfSetId. Overlapping nfSetId values are not allowed in the NfSetIdInfo object. The priority and capacity must be in the range 0 to 65535.
priority	Integer	O	Indicates any valid integer between 0 and 65535. If configured, the NF's priority is updated to this value. You must validate nfSetId. Overlapping nfSetId values are not allowed in the NfSetIdInfo object. The priority and capacity must be in the range 0 to 65535.
capacity	Integer	O	Indicates any valid integer between 0 and 65535. If configured, the NF's capacity is updated to this value. You must validate nfSetId. Overlapping nfSetId values are not allowed in the NfSetIdInfo object. The priority and capacity must be in the range 0 to 65535.

Table 2-479 HostInfo

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
fqdnList	List<FqdnInfo>	C	Indicates the list of FqdnInfo objects. At least one of fqdnList, ipv4AddressList, or ipv6AddressList must be present.
ipv4AddressList	List<IpAddressInfo>	C	Indicates the list of IpAddressInfo objects. At least one of fqdnList, ipv4AddressList, or ipv6AddressList must be present.
ipv6AddressList	List<IpAddressInfo>	C	Indicates the list of IpAddressInfo objects. At least one of fqdnList, ipv4AddressList, or ipv6AddressList must be present.

Table 2-480 FqdnInfo

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
fqdn	String	M	Indicates the FQDN of NRF to which the discovery request should be forwarded. You must validate fqdn. Overlapping fqdn values are not allowed in the fqdnInfo object. The priority and capacity must be in the range 0 to 65535.
priority	Integer	O	Indicates any valid integer between 0 and 65535. If configured, the NF's priority is updated to this value. You must validate fqdn. Overlapping fqdn values are not allowed in the fqdnInfo object. The priority and capacity must be in the range 0 to 65535.

Table 2-480 (Cont.) FqdnInfo

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
capacity	Integer	O	Indicates any valid integer between 0 and 65535. If configured, the NF's capacity is updated to this value. You must validate fqdn. Overlapping fqdn values are not allowed in the fqdnInfo object. The priority and capacity must be in the range 0 to 65535.

Table 2-481 IpAddressInfo

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
ipAddress	String	M	Indicates the IP address of NRF to which the discovery request should be forwarded. You must validate the IP address format based on whether it is IPv4 or IPv6. Overlapping IP addresses are not allowed within an ipAddressInfo object. The priority and capacity must be in the range 0 to 65,535.
priority	Integer	O	Indicates any valid integer between 0 and 65535. If configured, the NF's priority is updated to this value. You must validate the IP address format based on whether it is IPv4 or IPv6. Overlapping IP addresses are not allowed within an ipAddressInfo object. The priority and capacity must be in the range 0 to 65,535.
capacity	Integer	O	Indicates any valid integer between 0 and 65535. If configured, the NF's capacity is updated to this value. You must validate the IP address format based on whether it is IPv4 or IPv6. Overlapping IP addresses are not allowed within an ipAddressInfo object. The priority and capacity must be in the range 0 to 65,535.

The matching keys are compared with the NF discovery headers in the following sequence to determine the source of NF discovery:

1. targetNfTypesList
2. apiRootHdrPresnt
3. requesterNfTypes
4. serviceNames
5. targetPlmnList
6. requesterPlmnList
7. groupIdList

2.49 Configuring Static NF Discovery

The Static NF Discovery REST API defines the criteria for creating NF discovery response at SCP when the discovery source is set to SCP in `nfdiscovery-mode-cfg` and the `nf-discovery-enhancement` parameter is enabled.

- Multiple discovery parameters can be configured as static matching criteria, but only `target-nf-type` and `requester-nf-type` are mandatory.
- There is no default rule for this REST API.
- If any discovery parameter is not configured in a static rule, that parameter is not considered when matching the rule even if it is present in the discovery request (it is treated as a don't care condition). The NF discovery criteria is present in:
 - query parameters of NF discovery request received from consumer NFs in Model C indirect communication.
 - discovery headers of Model D delegated service request in Model D indirect communication.
- SCP creates the NF discovery response based on static NF discovery configuration and learned NF topology available at SCP and forwards the created NF discovery response to consumer NF for Model C indirect communication.
- For Model D indirect communication, SCP uses static NF discovery configuration to obtain the list of producer NFs (`nfInstanceIdList`, `nfSetIdList`, and `hostList`) for routing.
- This REST API supports configuration of additional query parameters beyond the static parameters dynamically at runtime. To add a dynamic query parameter from the CNC Console, do the following:
 1. On the CNC Console, click **NF Discovery Enhancement** and select the **Discovery Query Param Binding Info** option.
 2. In the **Dynamic IE List** section, add the required query parameter for static discovery. The added parameters can be used in Static NF Discovery REST API as a match criterion. This configuration can be done as defined in [Provision of Dynamic Key Addition Through ie-binding-info](#).
- Managing query parameters such as `Limit`, `max-payload-size`, and `max-payload-size-ext`:
 - These query parameters cannot be used directly in the Static NF Discovery REST API and cannot be configured statically. This configuration is restricted.
 - These parameters are applicable only for Model C indirect communication requests.
 - In a Model C NF discovery request, if any of these parameters are included as query parameters, they are applied implicitly when generating the discovery response locally.
 - These parameters are not applicable for Model D delegated discovery in the case of static discovery.
 - The `preferred-api-versions` is a string formatted as `{operator}+{API Version}`. Eg: `"=1.2.4.operator-ext"`, `">1.2.4"`, `"^2.3.0"`.
 - If `preferred-api-versions` is used as matching criteria in the Static NF Discovery REST API, during rule matching the value of this discovery header in the incoming SBI request is matched as an exact string against the configured rule.
 - The value `"=1.2.4"` and `"1.2.4"` of `preferred-api-version` is considered for the same during rule match.

Resources

The following table describes the resource name to retrieve, add, or update the nfdiscovery-cfg configuration data:

Table 2-482 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
nfdiscovery-cfg	/ocscp/scpc-configuration/{version}/nfdiscovery-cfg	GET	Retrieves all static NF discovery rules from the database.
nfdiscovery-cfg	/ocscp/scpc-configuration/{version}/nfdiscovery-cfg/{ruleName}	GET	Retrieves static NF discovery rule from database for the given ruleName.
nfdiscovery-cfg	/ocscp/scpc-configuration/{version}/nfdiscovery-cfg/{ruleName}	PUT	Creates or updates static NF discovery rule for the given ruleName. A maximum of 1000 records are allowed to be configured.
nfdiscovery-cfg	/ocscp/scpc-configuration/{version}/nfdiscovery-cfg/{ruleName}	DELETE	Removes static NF discovery rule for given ruleName.

Resource Definition

GET

This resource fetches all the nfdiscovery-cfg configuration.

Resource URI: /ocscp/scpc-configuration/{version}/nfdiscovery-cfg

The following table describes the data model supported by the GET response body on this resource:

Table 2-483 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
staticNfDiscoveryCfgWrapper	M	1..N	200 OK	Indicates staticNfDiscCfg configuration.

This resource fetches the nfdiscovery-cfg configuration based on ruleName.

Resource URI: /ocscp/scpc-configuration/{version}/nfdiscovery-cfg/{ruleName}

The following table describes the path parameter supported by the GET response body on this resource:

Table 2-484 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
ruleName	String	M	Indicates the name of the rule defined in the database for staticNfDiscCfg. It is a unique string used to identify the record.

The following table describes data structures supported by the GET response body on these resources:

Table 2-485 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
staticNfDiscCfgWrapper	M	1	200 OK	Indicates staticNfDiscCfg configurations.
ProblemDetails	M	1	404 Not Found	Returns 404 error code with problem details if no record exists for the specified ruleName.

Sample of a Successful GET API

```
curl -X 'GET' \
  'http://10.75.212.69:30411/ocscp/scpc-configuration/v1/nfdiscovery-cfg/rule2V3' \
  -H 'accept: application/json'
```

```
{
  "ruleName": "rule2V3",
  "data": {
    "target-nf-type": "PCF",
    "requester-nf-type": "AMF",
    "target-nf-instance-id": null,
    "target-nf-fqdn": null,
    "service-names": [
      "npcf-am-policy-control",
      "npcf-policyauthorization",
      "npcf-bdtpolicycontrol"
    ],
    "target-plmn-list": [
      {
        "mcc": "127",
        "mnc": "115"
      },
      {
        "mcc": "123",
```

```
        "mnc": "789"
      }
    ],
    "requester-plmn-list": [
      {
        "mcc": "227",
        "mnc": "215"
      }
    ],
    "snssais": null,
    "requester-snssais": null,
    "nsi-list": null,
    "dnn-list": null,
    "group-id-list": [
      "group1-v2",
      "g1-v2"
    ],
    "supi-ranges": [
      {
        "start": "1500",
        "end": "3000"
      },
      {
        "start": "1234567890000",
        "end": "1234567890050"
      }
    ],
    "gpsi-ranges": [
      {
        "start": "1234567890000",
        "end": "1234567890050"
      },
      {
        "start": "1130",
        "end": "2000"
      }
    ],
    "routing-indicators": null,
    "imsi-ranges": null,
    "msisdn-ranges": null,
    "supported-data-sets": null,
    "notification-type-list": [
      "N1_MESSAGES",
      "LOCATION_NOTIFICATION"
    ],
    "n1-msg-class": null,
    "n2-info-class": null,
    "access-type-list": null,
    "external-group-identity": "extgroupid-group@host",
    "internal-groupid-range-list": null,
    "preferred-api-versions": null,
    "preferred-locality-list": null,
    "serving-scope": null,
    "requester-nf-instance-id": null,
    "requester-nf-instance-fqdn": null,
    "tai-range-list": null,
```

```

    "guami-list": null,
    "ipv4-address-ranges": null,
    "ipv6-prefix-ranges": null,
    "pgw": null,
    "serving-client-types": null,
    "serving-rat-types": null,
    "remote-plmn-list": null,
    "nf-discovery-result": {
      "nfInstanceIdList": null,
      "nfSetIdList": null,
      "nfGroupId": "12345678W",
      "hostList": null,
      "validityPeriod": "12h57s"
    }
  },
  "createdTimestamp": "2025-11-03 08:53:59",
  "updatedTimestamp": "2025-11-03 08:53:59"
}

```

Sample of an Error GET API

```

curl -X 'GET' \
  'http://10.75.212.69:30411/ocscp/scpc-configuration/v1/nfdiscovery-cfg/noRule' \
  -H 'accept: application/json'

```

```

{
  "title": "Not Found",
  "status": 404,
  "detail": "Static NF Discovery configuration data not found for the given ruleName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfdiscovery-cfg/noRule",
  "cause": "DATA_NOT_FOUND"
}

```

404 Error: Not Found

PUT

This resource configures nfdiscovery-cfg for a given data.

Resource URI: /ocscp/scpc-configuration/{version}/nfdiscovery-cfg/{ruleName}

The following table describes the path parameter supported by this resource:

Table 2-486 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
ruleName	String	M	Indicates the name of the rule defined in the database for staticNfDiscCfg. It is a unique string used to identify the record.

The following table describes the data model supported by the PUT request body on this resource:

Table 2-487 Request Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
staticNfDiscCfgWrapper	M	1	Adds or updates staticNfDiscCfgWrapper.

The following table describes the data structure supported by the PUT response body on this resource:

Table 2-488 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
staticNfDiscCfgWrapper	M	1	200 OK	Indicates successful update or replacement of staticNfDiscCfg configurations with the given ruleName.
staticNfDiscCfgWrapper	M	1	201 Created	Indicates successful creation of staticNfDiscCfg configurations with ruleName.
ProblemDetails	M	1	400 Bad Request	Returns 404 error code with problem details if no record is present with specified ruleName.

Note

To create distinct rules, see [Criteria for Overlapping Rules](#).

Sample of a Successful PUT API

```

curl -X 'PUT' \
  'http://10.75.224.47:31046/ocscp/scpc-configuration/v1/nfdiscovery-cfg/
rule1111' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "ruleName": "rule1111",
    "data": {
      "target-nf-type": "PCF",
      "requester-nf-type": "AMF",
      "requester-nf-instance-id": "11111113-aaaa-aaaa-aaaa-111111111111",
      "target-nf-set-id": "set1.pcfset.5gc.mnc012.mcc345",
      "service-names": [
        "npcf-smpolicycontrol", "npcf-am-policy-control"
      ],
      "target-plmn-list": [{"mcc": "127", "mnc": "115"}, {"mcc": "123", "mnc": "789"}],
      "requester-plmn-list": [{"mcc": "227", "mnc": "215"}],
      "preferred-locality-list": [
        "USEast", "Loc1"
      ],
      "nsi-list": [
        "slice-1",
        "slice-2"
      ],
      "routing-indicators": [
        "7665",
        "1234"
      ],
      "nf-discovery-result": {
        "nfSetIdList": [{"nfsetId": "set1.pcfset.5gc.mnc012.mcc345"},
{"nfsetId": "set2.pcfset.5gc.mnc012.mcc345"},
{"nfsetId": "set3.pcfset.5gc.mnc012.mcc345"}],
        "nfGroupId": "12345678W",
        "validityPeriod": "12h57s"
      }
    }
  }'

```

```

{
  "ruleName": "rule1111",
  "data": {
    "target-nf-type": "PCF",
    "requester-nf-type": "AMF",
    "target-nf-instance-id": null,
    "target-nf-fqdn": null,
    "service-names": [
      "npcf-smpolicycontrol",
      "npcf-am-policy-control"
    ],
    "target-plmn-list": [
      {
        "mcc": "127",

```

```

        "mnc": "115"
      },
      {
        "mcc": "123",
        "mnc": "789"
      }
    ],
    "requester-plmn-list": [
      {
        "mcc": "227",
        "mnc": "215"
      }
    ],
    "snssais": null,
    "requester-snssais": null,
    "nsi-list": [
      "slice-1",
      "slice-2"
    ],
    "dnn-list": null,
    "group-id-list": null,
    "supi-ranges": null,
    "gpsi-ranges": null,
    "routing-indicators": [
      "7665",
      "1234"
    ],
    "imsi-ranges": null,
    "msisdn-ranges": null,
    "supported-data-sets": null,
    "notification-type-list": null,
    "n1-msg-class": null,
    "n2-info-class": null,
    "access-type-list": null,
    "external-group-identity": null,
    "internal-groupid-range-list": null,
    "preferred-api-versions": null,
    "preferred-locality-list": [
      "USEast",
      "Loc1"
    ],
    "serving-scope": null,
    "requester-nf-instance-id": "11111113-aaaa-aaaa-aaaa-111111111111",
    "requester-nf-instance-fqdn": null,
    "tai-range-list": null,
    "guami-list": null,
    "ipv4-address-ranges": null,
    "ipv6-prefix-ranges": null,
    "pgw": null,
    "serving-client-types": null,
    "serving-rat-types": null,
    "remote-plmn-list": null,
    "nf-discovery-result": {
      "nfInstanceIdList": null,
      "nfSetIdList": [
        {

```

```

        "nfsetId": "set1.pcfset.5gc.mnc012.mcc345",
        "priority": null,
        "capacity": null
    },
    {
        "nfsetId": "set2.pcfset.5gc.mnc012.mcc345",
        "priority": null,
        "capacity": null
    },
    {
        "nfsetId": "set3.pcfset.5gc.mnc012.mcc345",
        "priority": null,
        "capacity": null
    }
],
"nfGroupId": "12345678W",
"hostList": null,
"validityPeriod": "12h57s"
},
"target-nf-set-id": "set1.pcfset.5gc.mnc012.mcc345"
},
"createdTimestamp": "2025-11-06 06:32:50",
"updatedTimestamp": "2025-11-06 06:32:50"
}

```

Sample of an Error PUT API

```

curl -X 'PUT' \
'http://10.75.212.69:30411/ocscp/scpc-configuration/v1/nfdiscovery-cfg/
rule2' \
-H 'accept: */*' \
-H 'Content-Type: application/json' \
-d '{"ruleName":"rule2","data":{"target-nf-type":"UDM","requester-nf-
type":"SMF","service-names":["npcf-smpolicycontrol"],"nf-discovery-result":
{"nfsetIdList":
["set5.udmset.5gc.mnc015.mcc327"],"nfGroupId":"12345678W","validityPeriod":100
}}}'

```

```

{
  "title": "Bad Request",
  "status": 400,
  "detail": "One or more combinations of nfType and serviceName are not
configured in the nftypes-nfservices resource API. Please refer to the User
Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfdiscovery-cfg/rule2",
  "cause": "OPTIONAL_IE_INCORRECT"
}

```

400 Error: Bad Request

DELETE

This resource removes the nfdiscovery-cfg configuration based on ruleName.

Resource URI: /ocscp/scpc-configuration/{version}/nfdiscovery-cfg/{ruleName}

The following table describes the path parameter supported by this resource:

Table 2-489 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
ruleName	String	M	Indicates the name of the rule defined in the database for staticNfDiscCfg. It is a unique string to identify the record.

The following table describes the data structure supported by the DELETE response body on this resource:

Table 2-490 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
NA	M	1	204 No Content	Indicates successful removal of the staticNfDiscCfg record.
ProblemDetails	M	1	404 Not Found	Returns 404 error code with problem details if no record is present with specified ruleName.

Sample of a Successful of DELETE API

```
curl -X 'DELETE' \
  'http://10.75.212.69:30411/ocscp/scpc-configuration/v1/nfdiscovery-cfg/rule1' \
  -H 'accept: */*'
```

204 No Content

Sample of an Error DELETE API

```
curl -X 'DELETE' \
  'http://10.75.212.69:30411/ocscp/scpc-configuration/v1/nfdiscovery-cfg/
```



```
rule101' \
-H 'accept: */*'

{
  "title": "Not Found",
  "status": 404,
  "detail": "Static NF Discovery configuration data not found for the given
query parameter(s). Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfdiscovery-cfg/rule101",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

Data Model

The following table describes data model for request or response:

Table 2-491 StaticNfDiscoveryCfgWrapper

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
ruleName	String	M	Indicates the name of the rule defined in the database for staticNfDiscCfg. It is a unique string to identify the record. Allowed character combinations should be alpha-numeric, hyphen, and underscore.
data	Json (StaticNfDiscoveryData)	M	Indicates JSON structure to hold different static NF discovery request configurations.
createdTimestamp	String	Read Only	Indicates the timestamp when the record is created in the database. It is not required in the request, but it is present in the response.
updatedTimestamp	String	Read Only	Indicates the timestamp when the record is last updated in the database. It is not required in the request, but it is present in the response.

Json Schema

Table 2-492 StaticNfDiscoveryData

Match Order	Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
1	target-nf-type	String	M	Indicates any valid NF type as defined in Configuring NFTypes-NFServices .
2	requester-nf-type	String	M	Contains the NF type of the requester NF that is invoking the Nnrf_NFDiscovery service. All NFTypes configured in Configuring NFTypes-NFServices can be used.

Table 2-492 (Cont.) StaticNfDiscoveryData

Match Order	Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
3	target-nf-instance-id	String	O	Provides identity of the NF instance being discovered. NfInstanceId: type: string format: uuid
4	target-nf-fqdn	String	O	Indicates the FQDN of the target NF instance being discovered.
5	service-names	List<String>	O	Indicates the list of any valid NF service-name configured in Configuring NFTypes-NFServices pointing to configured target-nf-type.
6	target-plmn-list	List<PlmnId>	O	Indicates the list of valid target PLMN IDs. These are validated as per the following data model: PlmnId: type: object properties: mcc: \$ref: '#/components/schemas/Mcc' mnc: \$ref: '#/components/schemas/Mnc' required: - mcc - mnc Mcc: type: string pattern: '^\\d{3}\$' Mnc: type: string pattern: '^\\d{2,3}\$'

Table 2-492 (Cont.) StaticNfDiscoveryData

Match Order	Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
7	requester-plmn-list	List<PlmnId>	O	Indicates the list of valid requester PLMN IDs. These are validated as per the following data model: <pre> PlmnId: type: object properties: mcc: \$ref: '#/components/schemas/Mcc' mnc: \$ref: '#/components/schemas/Mnc' required: - mcc - mnc Mcc: type: string pattern: '^d{3}\$' Mnc: type: string pattern: '^d{2,3}\$'</pre>
8	snssais	List<Snssai>	O	Contains the list of S-NSSAIs that are served by the NF (Service) instances being discovered. <pre> Snssai: type: object properties: sst: type: integer minimum: 0 maximum: 255 sd: type: string pattern: '^([A-Fa-f0-9]{6})\$' required: - sst</pre>

Table 2-492 (Cont.) StaticNfDiscoveryData

Match Order	Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
9	requester-snssais	List<Snssai>	O	Contain the list of S-NSSAI of the requester NF. <pre> Snssai: type: object properties: sst: type: integer minimum: 0 maximum: 255 sd: type: string pattern: '^[A-Za-f0-9]{6}\$' required: - sst </pre>
10	nsi-list	List<String>	O	Contains the list of NSI IDs that are served by the services being discovered. <pre> nsi-list in: query description: NSI IDs that are served by the services being discovered schema: type: array items: type: string minItems: 1 style: form explode: false </pre>
11	dnn-list	List<String>	O	Contains the network identifier of DNN, and it may additionally contain an operator identifier. <pre> Dnn: type: string </pre>
12	group-id-list	List<String>	O	Indicates the identity of the groups of the NFs of the target NF type to be discovered. <pre> NfGroupId: type: string </pre>

Table 2-492 (Cont.) StaticNfDiscoveryData

Match Order	Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
13	supi-ranges	List<SupiRange>	O	Indicates the list of ranges of SUPIs whose profile data is available. Supports only start and end with condition start <= end and no overlapping SUPI ranges are allowed to be configured in a single rule. SupiRange: description: A range of SUPIs (subscriber identities), either based on a numeric range, or based on regular-expression matching type: object properties: start: type: string pattern: '^([0-9])+\$' end: type: string pattern: '^([0-9])+\$' pattern: type: string
14	gpsi-ranges	List<IdentityRange>	O	Indicates the list of ranges of GPSIs whose profile data is available. Supports only start and end with condition start <= end and no overlapping identity ranges are allowed to be configured in a single rule. IdentityRange: description: A range of GPSIs (subscriber identities), either based on a numeric range, or based on regular-expression matching type: object properties: start: type: string pattern: '^([0-9])+\$' end: type: string pattern: '^([0-9])+\$' pattern: type: string

Table 2-492 (Cont.) StaticNfDiscoveryData

Match Order	Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
15	routing-indicators	List<String>	O	Indicates the list of routing indicator information that allows network signaling to be routed using SUCI. <pre> routingIndicators: type: array items: type: string pattern: '^[0-9]{1,4}\$' minItems: 1 </pre>
16	imsi-ranges	List<ImsiRange>	O	Indicates the list of IMSI ranges for which profile data is available. Supports start and end with condition start <= end and no overlapping IMSI ranges are allowed to configured in a single rule. <pre> ImsiRange: description: A range of IMSIs (subscriber identities), either based on a numeric range, or based on regular-expression matching type: object properties: start: type: string pattern: '^[0-9]+\$' end: type: string pattern: '^[0-9]+\$' pattern: type: string </pre> Note: Either the start and end attributes, or the pattern attribute, must be present.

Table 2-492 (Cont.) StaticNfDiscoveryData

Match Order	Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
17	msisdn-ranges	List<IdentityRange>	O	Indicates the list of MSISDN ranges for which profile data is available. Supports start and end with condition start <= end and no overlapping identity ranges are allowed to configured in a single rule. IdentityRange: description: A range of GPSIs (subscriber identities), either based on a numeric range, or based on regular-expression matching type: object properties: start: type: string pattern: '^[\0-9]+\$' end: type: string pattern: '^[\0-9]+\$' pattern: type: string Note: Either the start and end attributes, or the pattern attribute, must be present.

Table 2-492 (Cont.) StaticNfDiscoveryData

Match Order	Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
18	supported-data-sets	List<DataSetId>	O	Indicates the list of supported data sets. DataSetId: description: Types of data sets and subsets stored in UDR anyOf: - type: string enum: - SUBSCRIPTION - POLICY - EXPOSURE - APPLICATION - A_PFD - A_AFTI - A_IPTV - A_BDT - A_SPD - A_EASD - A_AMI - P_UE - P_SCD - P_BDT - P_PLMNUE - P_NSSCD - P_MBSCD - type: string

Table 2-492 (Cont.) StaticNfDiscoveryData

Match Order	Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
19	notification-type-list	List<Notification Type>	O	Indicates the types of notifications used in the default notification URIs in the NF Profile of an NF instance. NotificationType: description: Types of notifications used in Default Notification URIs in the NF Profile of an NF Instance anyOf: - type: string enum: - N1_MESSAGES - N2_INFORMATION - LOCATION_NOTIFICATION - DATA_REMOVAL_NOTIFICATION - DATA_CHANGE_NOTIFICATION - LOCATION_UPDATE_NOTIFICATION - NSSAA_REAUTH_NOTIFICATION - NSSAA_REVOC_NOTIFICATION - MATCH_INFO_NOTIFICATION - DATA_RESTORATION_NOTIFICATION - TSCTS_NOTIFICATION - LCS_KEY_DELIVERY_NOTIFICATION - UUAA_MM_AUTH_NOTIFICATION

Table 2-492 (Cont.) StaticNfDiscoveryData

Match Order	Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
20	n1-msg-class	N1MessageClasses	O	Contains the N1 message class of default notification subscriptions that must be registered in the NF profile or NF service of the NF instances being discovered. N1MessageClass: anyOf: - type: string enum: - 5GMM - SM - LPP - SMS - UPDP - LCS - type: string
21	n2-info-class	N2InformationClass	O	Contains the notification type of default notification subscriptions that must be registered in the NF profile or NF service of the NF instances being discovered. N2InformationClass: description: Enumeration for N2 Information Class anyOf: - type: string enum: - SM - NRPPa - PWS - PWS-BCAL - PWS-RF - RAN - V2X - PROSE - type: string
22	access-type-list	List<AccessType>	O	Indicates whether access is through 3GPP or non-3GPP. AccessType: type: string enum: - 3GPP_ACCESS - NON_3GPP_ACCESS

Table 2-492 (Cont.) StaticNfDiscoveryData

Match Order	Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
23	external-group-identity	String	O	Contains the external group identifier of the requester UE, used to search for an appropriate NF. ExtGroupId: type: string pattern: '^extgroupid-[@]+@[@]+\$'
24	internal-groupId-range-list	List<InternalGroupIdRange>	O	Indicates the list of ranges of internal group identifiers for which profile data is available. InternalGroupIdRange: description: A range of Group IDs (internal group identities), either based on a numeric range, or based on regular-expression matching type: object properties: start: \$ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId' end: \$ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId' pattern: type: string Note: Either the start and end attributes, or the pattern attribute, must be present. GroupId: type: string pattern: '^([A-Za-f0-9]{8}-[0-9]{3}-[0-9]{2,3}-([A-Za-f0-9][A-Za-f0-9]){1,10})\$'

Table 2-492 (Cont.) StaticNfDiscoveryData

Match Order	Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
25	preferred-api-versions	List<PreferredApiVersionsMap>	O	Indicates the preferred API version of the services supported by the target NF instances. The key of the map is the serviceName for which the preferred API version is provided. Each element contains the API version indication for the service identified by the key. An API version indication is a string formatted as {operator}+{API Version}. The supported operators are: "=" ">" ">=" "<" "<=" "^" If no operator is provided in the API version indication, "=" operator is applied. Example of an API version indication: ">1.2.4" , "^2.3.0" Note: When matching preferred-api-version with the configured rules, an exact match is performed with the incoming request.
26	preferred-locality-list	List<String>	O	Indicates preferred target NF's location.
27	serving-scope	List<String>	O	Contains the list of areas that can be served by the NF instances to be discovered. <pre> name: serving-scope in: query description: areas that can be served by the target NF schema: type: array items: type: string minItems: 1 </pre>
28	requester-nf-instance-id	String	O	Contains the NF instance ID of the requester NF. <pre> NfInstanceId: type: string format: uuid </pre>
29	requester-nf-instance-fqdn	String	O	Contains the FQDN of the requester NF that invokes the Nnrf_NFDiscovery service. <pre> Fqdn: description: Fully Qualified Domain Name type: string </pre>

Table 2-492 (Cont.) StaticNfDiscoveryData

Match Order	Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
30	tai-range-list	List<TaiRange>	O	Indicates the range of Tracking Area Identity. <pre> TaiRange: description: Range of TAIs (Tracking Area Identities) type: object required: - plmnId - tacRangeList properties: plmnId: \$ref: 'TS29571_CommonData.yaml#/ components/schemas/PlmnId' tacRangeList: type: array items: \$ref: '#/components/ schemas/TacRange' minItems: 1 nid: \$ref: 'TS29571_CommonData.yaml#/ components/schemas/Nid' TacRange: description: Range of TACs (Tracking Area Codes) type: object properties: start: type: string pattern: '^[A-Fa-f0-9]{4} [A-Fa-f0-9]{6})\$' end: type: string pattern: '^[A-Fa-f0-9]{4} [A-Fa-f0-9]{6})\$' pattern: type: string </pre>

Table 2-492 (Cont.) StaticNfDiscoveryData

Match Order	Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
				Note: Either the start and end attributes, or the pattern attribute, must be present. Nid: <pre>type: string pattern: '^[A-Fa-f0-9]{11}\$'</pre>
31	guami-list	List<Guami>	O	Indicates Guamis of the NF instances for which status is requested to be monitored. Guami: <pre>type: object properties: plmnId: \$ref: '#/components/schemas/PlmnIdNid' amfId: \$ref: '#/components/schemas/AmfId' required: - plmnId - amfId</pre> PlmnIdNid: <pre>type: object required: - mcc - mnc properties: mcc: \$ref: '#/components/schemas/Mcc' mnc: \$ref: '#/components/schemas/Mnc' nid: \$ref: '#/components/schemas/Nid'</pre> AmfId: <pre>type: string pattern: '^[A-Fa-f0-9]{6}\$'</pre>

Table 2-492 (Cont.) StaticNfDiscoveryData

Match Order	Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
32	ipv4-address-ranges	List<Ipv4AddressRange>	O	Indicates the range of IPv4 address of the UE. <pre> Ipv4AddressRange: description: Range of IPv4 addresses type: object properties: start: \$ref: 'TS29571_CommonData.yaml#/ components/schemas/Ipv4Addr' end: \$ref: 'TS29571_CommonData.yaml#/ components/schemas/Ipv4Addr' Ipv4Addr: type: string pattern: '^(([0-9] [1-9] [0-9] 1[0-9][0-9] 2[0-4][0-9] 25[0-5])\.){3}([0-9] [1-9][0-9] 1[0-9][0-9] 2[0-4][0-9] 25[0-5])\$' example: '198.51.100.1' description: > String identifying a IPv4 address formatted in the 'dotted decimal' notation as defined in RFC 1166. </pre>

Table 2-492 (Cont.) StaticNfDiscoveryData

Match Order	Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
33	ipv6-prefix-ranges	List<Ipv6PrefixRange>	O	Indicates the range of IPv6 prefixes. <pre> Ipv6PrefixRange: description: Range of IPv6 prefixes type: object properties: start: \$ref: 'TS29571_CommonData.yaml#/ components/schemas/Ipv6Prefix' end: \$ref: 'TS29571_CommonData.yaml#/ components/schemas/Ipv6Prefix' Ipv6Prefix: type: string allof: - pattern: '^((: 0? ([1-9a-f][0-9a-f]{0,3})):)(0? ([1-9a-f][0-9a-f]{0,3})):){0,6}(: 0? ([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' description: > String identifying an IPv6 address prefix formatted according to clause 4 of RFC 5952. Ipv6Prefix data type may contain an individual /128 IPv6 address.</pre>

Table 2-492 (Cont.) StaticNfDiscoveryData

Match Order	Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
34	pgw	String	O	Contains the PGW FQDN received by the AMF from the MME, used to find the combined SMF or PGW. <pre> name: pgw in: query description: PGW FQDN of a combined PGW-C and SMF schema: \$ref: 'TS29571_CommonDat a.yaml#/components/schemas/Fqdn' </pre>
35	serving-client-types	List<ExternalClientType>	O	Indicates that NFs dedicated to serving the specified client type must be discovered. <pre> ExternalClientType: anyOf: - type: string enum: - EMERGENCY_SERVICES - VALUE_ADDED_SERVICES - PLMN_OPERATOR_SERVICES - LAWFUL_INTERCEPT_SERVICES - PLMN_OPERATOR_BROADCAST_SERVICES - PLMN_OPERATOR_OM - PLMN_OPERATOR_ANONYMOUS_STATISTICS - PLMN_OPERATOR_TARGET_MS_SERVICE_SUPPORT - type: string </pre>

Table 2-492 (Cont.) StaticNfDiscoveryData

Match Order	Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
36	serving-rat-types	List<RatType>	O	Contains the RAT type that the target NF must support. RatType: <pre> anyOf: - type: string enum: - NR - EUTRA - WLAN - VIRTUAL - NB_IOT - WIRELINE - WIRELINE_CABLE - WIRELINE_BBF - LTE-M - NR_U - EUTRA_U - TRUSTED_N3GA - TRUSTED_WLAN - UTRA - GERA - NR_LEO - NR_MEO - NR_GEO - NR_OTHER_SAT - NR_REDCAP - WB_E_UTRAN_LEO - WB_E_UTRAN_MEO - WB_E_UTRAN_GEO - WB_E_UTRAN_OTHERSAT - NB_IOT_LEO - NB_IOT_MEO - NB_IOT_GEO - NB_IOT_OTHERSAT - LTE_M_LEO - LTE_M_MEO - LTE_M_GEO - LTE_M_OTHERSAT - type: string description: Indicates the radio access used.</pre>

Table 2-492 (Cont.) StaticNfDiscoveryData

Match Order	Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
37	remote-plmn-list	List<Plmnid>	O	Contains the remote PLMN ID that must be reachable through SCP. <pre> PlmnId: type: object properties: mcc: \$ref: '#/components/schemas/Mcc' mnc: \$ref: '#/components/schemas/Mnc' required: - mcc - mnc Mcc: type: string pattern: '^\\d{3}\$' Mnc: type: string pattern: '^\\d{2,3}\$'</pre>
38	nf-discovery-result	Json (StaticNfDiscoveryResult)	M	Contains information of producer NFs.

Note

- When configuring a rule, validations on the matching keys are applied in accordance with 3GPP specifications.
- The incoming discovery request includes discovery query parameters as defined in TS 29.510, but the configured rules can use different data types.
- Only target-nf-type and requester-nf-type discovery query parameters are mandatory. All other parameters are optional and are ignored during matching if they are not configured in the rule. For more information, see [Rule Matching Criteria](#).

Table 2-493 PreferredApiVersionsMap

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
serviceName	String	M	Indicates service name of the target producer NF.
apiVersions	List<String>	M	Indicates supported apiVersions of the target producer NF.

Table 2-494 StaticNfDiscoveryResult

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
nfInstanceIdList	List<NfInstanceIdInfo>	C	Indicates the list of NfInstanceIdInfo objects. Each NfInstanceIdInfo can include priority, capacity, and NF instance ID. This means that routing to the NF instance is based on the configured priority or capacity, rather than the published priority or capacity. At least one of nfInstanceIdList, nfSetIdList, hostList, or nfGroupId must be present. If an NF profile is included in nfInstanceIdList, nfSetIdList, and hostList, the priority and capacity are applied in the following order: 1. nfInstanceIdList 2. hostList • fqdn • ipv6 address • ipv6 address 3. nfSetIdList
nfSetIdList	List<NfSetIdInfo>	C	Indicates the list of NfSetIdInfo objects. Each NfSetIdInfo can include priority, capacity, and NF set ID. This means that routing to the NF instances in this set is based on the configured priority or capacity, rather than the published priority or capacity. At least one of nfInstanceIdList, nfSetIdList, hostList, or nfGroupId must be present. If an NF profile is included in nfInstanceIdList, nfSetIdList, and hostList, the priority and capacity are applied in the following order: 1. nfInstanceIdList 2. hostList • fqdn • ipv6 address • ipv6 address 3. nfSetIdList

Table 2-494 (Cont.) StaticNfDiscoveryResult

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
hostList	HostInfo	C	Provides the list of following objects: • FqdnInfo: It can have priority, capacity, and NF FQDN. It means routing on this NF instance of this FQDN happens as per the configured priority or capacity instead of published priority or capacity. • IpAddressInfo: This object can be used to configure priority or capacity and ipv4address or ipv6address. When configured, routing on this NF instance of this IP address happens as per the configured priority or capacity instead of published priority or capacity. At least one of nfInstanceIdList, nfSetIdList, hostList, or nfGroupId must be present. If an NF profile is included in nfInstanceIdList, nfSetIdList, and hostList, the priority and capacity are applied in the following order: 1. nfInstanceIdList 2. hostList • fqdn • ipv6 address • ipv6 address 3. nfSetIdList
nfGroupId	String	C	Indicates NF group ID. At least one of nfInstanceIdList, nfSetIdList, hostList, or nfGroupId must be present. If an NF profile is included in nfInstanceIdList, nfSetIdList, and hostList, the priority and capacity are applied in the following order: 1. nfInstanceIdList 2. hostList • fqdn • ipv6 address • ipv6 address 3. nfSetIdList
validityPeriod	String	M	Defines the validity of the discovery response. Indicates the validity of the discovery response. For Model C indirect communication, the SCP generates the discovery response locally and sets this value as the response validity. This parameter is not relevant for Model D discovery request. The value is in the pHqMrS format, where p, q, and r are integers, and H, M, and S or h, m, and s denote hours, minutes, and seconds, respectively. Range: 1 second to 168 hours.

Note

nfGroupId is not used when generating the NF discovery response.

Table 2-495 NfInstanceIdInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
nfInstanceId	String	M	Indicates the NF instance ID of the producer NF that must be included in NF discovery. You must validate nfInstanceId. Overlapping nfInstanceId values are not allowed within the NfInstanceIdInfo object. Priority or capacity ranges from 0 to 65535.
priority	Integer	O	If configured, the NF instance priority is updated to the configured value in the NF discovery response. If priority is not configured, the published priority of the NF instance is used. You must validate nfinstancelid. Overlapping nfinstancelid values are not allowed within the NfInstanceIdInfo object. Priority or capacity ranges from 0 to 65535.
capacity	Integer	O	The NF instance capacity is updated to the configured value in the NF discovery response. If capacity is not configured, the published capacity of the NF instance is used. You must validate nfInstanceId. Overlapping nfInstanceId values are not allowed within the NfInstanceIdInfo object. Priority or capacity ranges from 0 to 65535.

Table 2-496 NfSetIdInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
nfSetId	String	M	Includes all producer NF instances of the specified NFSetId in the NF discovery response. You must validate nfsetId. Overlapping nfsetId values are not allowed within the nfSetIdInfo object. Priority or capacity ranges from 0 to 65535.
priority	Integer	O	Updates the priority of all producer NF instances in the set to the configured value in the NF discovery response. If priority is not configured, the published priority of the NF instance is used. You must validate nfsetId. Overlapping nfsetId values are not allowed within the nfSetIdInfo object. Priority or capacity ranges from 0 to 65535.

Table 2-496 (Cont.) NfSetIdInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
capacity	Integer	O	Updates the capacity of all NF instances in the set to the configured value in the NF discovery response. If capacity is not configured, the published capacity of the NF instance is used. You must validate nfsetId. Overlapping nfsetId values are not allowed within the nfSetIdInfo object. Priority or capacity ranges from 0 to 65535.

Table 2-497 HostInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
fqdnList	FqdnInfo	C	Indicates the list of FqdnInfo objects. At least one of fqdnList, ipv4AddressList, or ipv6AddressList must be configured if hostList is present.
ipv4AddressList	IpAddressInfo	C	Indicates the list of IpAddressInfo objects. At least one of fqdnList, ipv4AddressList, or ipv6AddressList must be configured if hostList is present.
ipv6AddressList	IpAddressInfo	C	Indicates the list of IpAddressInfo objects. At least one of fqdnList, ipv4AddressList, or ipv6AddressList must be configured if hostList is present.

Table 2-498 FqdnInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
fqdn	String	M	Indicates the FQDN of the NF instance. You must validate fqdns. Overlapping fqdns values are not allowed within the fqdnInfo object. Priority or capacity ranges from 0 to 65535.
priority	Integer	O	Indicates the priority of NF instances. If configured, priority of NF instance is updated with configured value in NF discovery response. If priority is not configured, then published priority of NF instance is used. You must validate fqdns. Overlapping fqdns values are not allowed within the fqdnInfo object. Priority or capacity ranges from 0 to 65535.

Table 2-498 (Cont.) FqdnInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
capacity	Integer	O	Updates the capacity of NF instance with configured value in NF discovery response. If capacity is not configured, then published capacity of NF instance is used. You must validate fqdns. Overlapping fqdns values are not allowed within the fqdninfo object. Priority or capacity ranges from 0 to 65535.

Table 2-499 IpAddressInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
ipAddress	String	M	Indicates valid IPv4 or IPv6 address of the producer NFs. You must validate ipAddress based on IPv4 or IPv6. Overlapping ipAddress values are not allowed within the ipAddressinfo object. Priority or capacity ranges from 0 to 65535.
priority	Integer	O	Indicates the priority of NF instance. If configured, priority of NF instance is updated with configured value in NF discovery response. If priority is not configured, then published priority of NF instance is used. You must validate ipAddress based on IPv4 or IPv6. Overlapping ipAddress values are not allowed within the ipAddressinfo object. Priority or capacity ranges from 0 to 65535.
capacity	Integer	O	Updates the capacity of NF instance with configured value in NF discovery response. If capacity is not configured, then published capacity of NF Instance is used. You must validate ipAddress based on IPv4 or IPv6. Overlapping ipAddress values are not allowed within the ipAddressinfo object. Priority or capacity ranges from 0 to 65535.

Provision of Dynamic Key Addition Through ie-binding-info

The existing discovery query parameter configured in ie-registry is as follows:

```
{
  "name": "access-type",
  "metaData": {
    "dataType": "AccessType",
    "description": "contain the access type required to be supported by
target network function",
    "validationRegex": "3gppDefinedValidation",
    "isActive": true,
```



```

        "ieType": "3GPP_DISCOVERY_QUERY_PARAM"
    }
}

```

To configure this parameter in the `nfdiscovery-cfg` resource, configure the record in `ie-binding-info` as follows:

```

[
  {
    "resourceName": "nfdiscovery-cfg",
    "ieList": {
      "staticIeList": [
        {
          "ieName": "target-nf-type",
          "cardinality": "SINGLE",
          "ieAlias": "target-nf-type"
        },
        {
          "ieName": "requester-nf-type",
          "cardinality": "SINGLE",
          "ieAlias": "requester-nf-type"
        },
        {
          "ieName": "service-names",
          "cardinality": "LIST",
          "ieAlias": "service-names"
        },
        {.....}
      ],
      "dynamicIeList": [
        {
          "ieName": "access-type",
          "cardinality": "LIST",
          "ieAlias": "my-access-type"
        }
      ]
    },
  }
]

```

In the `nfdiscovery-cfg` resource, you can create a rule, and the required validations are applied according to the `ie-registry` configuration:

```

{
  "ruleName": "rule1",
  "data": {
    "target-nf-type": "UDM",
    "requester-nf-type": "PCF",
    "target-nf-instance-id": "8faf2bbc-6e4a-2828-a507-a14ef8e1bc7b",
    "target-nf-fqdn": "udm1svc.scpsvc.svc.cluster.local",
    "service-names": [
      "nudm-uecm"
    ],
    "target-plmn-list": [

```

```

        {
            "mcc": "741",
            "mnc": "25"
        }
    ],
    "requester-plmn-list": [
        {
            "mcc": "505",
            "mnc": "469"
        }
    ],
    "snssais": [
        {
            "sd": "EBa634",
            "sst": 123
        },
        {
            "sd": "90F64c",
            "sst": 156
        }
    ],
    "requester-snssais": [
        {
            "sd": "EBa638",
            "sst": 123
        },
        {
            "sd": "90F64d",
            "sst": 239
        }
    ],
    "my-access-type": [
        "NON_3GPP_ACCESS"
    ].
    {.....}
    ],
    "nf-discovery-result": {
        "nfInstanceIdList": null,
        "nfSetIdList": null,
        "nfGroupId": "12345678W",
        "hostList": null,
        "validityPeriod": "12h57s"
    }
}
}

```

Criteria for Overlapping Rules

Overlapping rules are not allowed. Two rules are considered overlapping if they satisfy both of the following conditions:

- The exact same matching keys are present in both rules.
- The value corresponding to a matching key can be of two types:
 - String: The values for that key must be exactly the same in both rules.
 - List: The intersection of the values for that key must be non-empty.

Matching Keys

All parameter combinations must be unique to define a new rule. This includes all statically defined discovery query parameters (from target-nf-types through remote-plmn-id), along with any dynamic discovery parameters, if applicable.

The discovery response is stored in nf-discovery-result corresponding to a set of matching keys.

Rule Matching Criteria

To match a rule, if an existing rule contains a key, the incoming discovery request must include that key with the same value. Any additional keys in the incoming discovery request that are not present in the existing rule are treated as optional and do not affect matching.

The following examples represent rule match with the received discovery request:

Configured rule:

```
{
  "ruleName": "rule3V7",
  "data": {
    "target-nf-type": "PCF",
    "requester-nf-type": "AMF",
    "service-names": [
      "npcf-am-policy-control",
      "npcf-policyauthorization",
      "npcf-bdtpolicycontrol"
    ],
    "target-plmn-list": [
      {
        "mcc": "127",
        "mnc": "115"
      },
      {
        "mcc": "123",
        "mnc": "789"
      }
    ],
    "internal-groupId-range-list": [
      {
        "start": "abcdef12-001-45-a1b2",
        "end": "abcdef12-001-45-a1ff"
      }
    ],
    "preferred-locality-list": [
      "USEast",
      "Loc1"
    ],
    "ipv4-address-ranges": [
      {
        "start": "10.0.0.1",
        "end": "10.0.0.100"
      },
      {
        "start": "20.5.0.1",
        "end": "20.10.0.100"
      }
    ]
  }
}
```

```

        {
            "start": "10.70.0.1",
            "end": "10.80.0.100"
        }
    ],
    "imsi-ranges": [
        {
            "start": "3501",
            "end": "6001"
        },
        {
            "start": "9001",
            "end": "10301"
        }
    ],
    "nf-discovery-result": {
        "nfGroupId": "12345678W",
        "validityPeriod": "12h57s"
    }
}

```

Incoming discovery rule1: It matches rule1 because the exact set of key value pairs defined in rule1 is present.

```

Then Run 1 Times "Then Send Message to PCF SMPolicyControl Create
SMPolicyAssociation amf1 Accept=application/json|Content-Type=application/
json|Name=Something|3gpp-sbi-discovery-target-nf-type=PCF|3gpp-sbi-discovery-
requester-nf-type=AMF|3gpp-Sbi-discovery-preferred-locality=Loc1|3gpp-sbi-
discovery-target-plmn-list=[{"mcc":"127","mnc":"115"},
{"mcc":"123","mnc":"789"}]|3gpp-sbi-discovery-service-names=npcf-
policyauthorization|3gpp-sbi-discovery-imsi=3800|3gpp-sbi-discovery-internal-
group-identity=abcdef12-001-45-a1b7|3gpp-sbi-discovery-ue-ipv4-
address=20.7.0.0 /var/lib/jenkins/ocscp_tests/data/SMPolicy.json"

```

Incoming discovery rule2: It does not match rule1 because target-plmn-list is not present in the incoming discovery request.

```

Then Run 1 Times "Then Send Message to PCF SMPolicyControl Create
SMPolicyAssociation amf1 Accept=application/json|Content-Type=application/
json|Name=Something|3gpp-sbi-discovery-target-nf-type=PCF|3gpp-sbi-discovery-
requester-nf-type=AMF|3gpp-Sbi-discovery-preferred-locality=Loc1|3gpp-sbi-
discovery-service-names=npcf-policyauthorization|3gpp-sbi-discovery-imsi=3800|
3gpp-sbi-discovery-internal-group-identity=abcdef12-001-45-a1b7|3gpp-sbi-
discovery-ue-ipv4-address=20.7.0.0 /var/lib/jenkins/ocscp_tests/data/
SMPolicy.json"

```

Incoming discovery rule3: It matches rule1 because all key value pairs defined in rule1 are present in the incoming discovery request and ue-ipv4-prefix is optional and is therefore ignored.

```
Then Run 1 Times "Then Send Message to PCF SMPolicyControl Create
SMPolicyAssociation amf1 Accept=application/json|Content-Type=application/
json|Name=Something|3gpp-sbi-discovery-target-nf-type=PCF|3gpp-sbi-discovery-
requester-nf-type=AMF|3gpp-Sbi-discovery-preferred-locality=Loc1|3gpp-sbi-
discovery-target-plmn-list=[{"mcc":"127","mnc":"115"},
{"mcc":"123","mnc":"789"}]|3gpp-sbi-discovery-service-names=npcf-
policyauthorization|3gpp-sbi-discovery-imsi=3800|3gpp-sbi-discovery-internal-
group-identity=abcdef12-001-45-a1b7|3gpp-sbi-discovery-ue-ipv4-
address=20.7.0.0|3gpp-sbi-discovery-requester-nf-instance-
id=8faf2bbc-6e4a-2828-a507-a14ef8e1bc7b /var/lib/jenkins/ocscp_tests/data/
SMPolicy.json"
```

The following sample discovery header format to be followed:

```
Then Run 1 Times "Then Send Message to PCF SMPolicyControl Create
SMPolicyAssociation amf1
Accept=application/json
Content-Type=application/json
Name=Something
3gpp-sbi-discovery-target-nf-type=PCF
3gpp-sbi-discovery-requester-nf-type=AMF
3gpp-Sbi-discovery-preferred-locality=Loc1
3gpp-sbi-discovery-requester-nf-instance-id=8faf2bbc-6e4a-2828-a507-
a14ef8e1bc7b
3gpp-sbi-discovery-target-nf-instance-id=1faf1bbc-6e4a-3994-a507-a14ef8e1bc01
3gpp-sbi-discovery-target-plmn-list=[{"mcc":"127","mnc":"115"},
{"mcc":"123","mnc":"789"}]
3gpp-sbi-discovery-service-names=npcf-policyauthorization
3gpp-sbi-discovery-target-nf-fqdn:udm1svc.scpsvc.svc.cluster.local
3gpp-sbi-discovery-requester-plmn-list=[{"mcc":"227","mnc":"215"}]
3gpp-sbi-discovery-snssais=[{"sd": "abcdef", "sst": 124}]
3gpp-sbi-discovery-requester-snssais=[{"sd": "abcdef", "sst": 124}, {"sd":
"ecdef", "sst": 29}]
3gpp-sbi-discovery-nsi-list=slice-1,clice2
3gpp-sbi-discovery-dnn=AMF
3gpp-sbi-discovery-group-id-list=group1,group10
3gpp-sbi-discovery-supi=msisdn-1234567890001
3gpp-sbi-discovery-routing-indicator=1234
3gpp-sbi-discovery-imsi=12345
3gpp-sbi-discovery-msisdn=2000
3gpp-sbi-discovery-data-set=SUBSCRIPTION,POLICY
3gpp-sbi-discovery-notification-type=LOCATION_NOTIFICATION
3gpp-sbi-discovery-n1-msg-class=UPDP
3gpp-sbi-discovery-n2-info-class=SM
3gpp-sbi-discovery-access-type=3GPP_ACCESS, NON_3GPP_ACCESS
3gpp-sbi-discovery-external-group-identity=extgroupid-group@host
3gpp-sbi-discovery-internal-group-identity=abcdef12-001-45-a1b2
3gpp-sbi-discovery-preferred-api-versions={"npcf-
policyauthorization": ">1.2.0"}
3gpp-sbi-discovery-preferred-locality=Loc1
```

```

3gpp-sbi-discovery-serving-scope=Loc2
3gpp-Sbi-discovery-requester-nf-instance-fqdn=amf1svc.scpsvc.svc.cluster.local
3gpp-sbi-discovery-tai={"plmnId": {"mnc": "131", "mcc": "421"}, "tac": "aefd"}
3gpp-sbi-discovery-guami={"plmnId": {"mnc": "131", "mcc": "421"}, "amfId":
"C9CF0d"}
3gpp-sbi-discovery-ue-ipv4-address=100.23.0.0
3gpp-sbi-discovery-ue-ipv6-prefix=240e:006a:0000:0000::/32
3gpp-sbi-discovery-pgw=udm1svc.scpsvc.svc.cluster.local
3gpp-sbi-discovery-client-type=EMERGENCY_SERVICES
3gpp-sbi-discovery-rat-type=VIRTUAL
3gpp-sbi-discovery-remote-plmn-id={"mcc": "227", "mnc": "215"}
/var/lib/jenkins/ocscp_tests/data/SMPolicy.json"

```

2.50 Configuring NF Selection Mode

The NF Selection REST API is used to enhance NF selection and routing in SCP for Model C and Model D indirect communication when the `nf-selection-enhancement` parameter is enabled.

This configuration is applicable for:

- Model C SBI requests that carry the `3gpp-target-api-root` header, the `Routing Binding` header, or both.
- Model D SBI requests that carry the `3gpp-target-api-root` header and `Discovery` headers.

This configuration is not applicable for Model D SBI requests that carry only `Discovery` headers.

You can configure rules using the following matching keys:

- `targetNfTypeList` (mandatory)
- `serviceNamesList`
- `requesterNfTypeList`
- `targetPlmnList`
- `requesterPlmnList`

Within a single rule, `nfSelectionModeInfoList` can be configured to match the NF selection mode based on the presence or absence of incoming request headers.

This REST API provides the following selection modes:

- **CONSUMER_NF_SELECTION:** This is the default NF selection mode. If no rules match an incoming SBI request, this mode is selected for the request. In this mode, SCP performs the functionalists from SCP 25.2.100, with no impact on routing.
- **ENHANCED_CONSUMER_NF_SELECTION:** This mode provides the capabilities of the NF Selection enhancements. Using this mode, you can override the consumer NF selection as follows:
 - If the `3gpp-target-api-root` header is present in the request, the first routing attempt might not be to the producer NF identified by that header. Instead, SCP first routes the request to another NF in the same NF set based on priority and capacity.
 - You can configure priority and capacity based on locality information. In this case, SCP can use the configured priority or capacity instead of the published priority or capacity.
 - You can achieve load balancing across all producer NFs in a set by configuring equal priority and capacity.

There is one default rule for this REST API.

Resources

The following table describes the resource name to retrieve, add, update, or remove the nfselection-mode-config configuration data:

Table 2-500 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
nfselection-mode-config	/ocscp/scpc-configuration/{version}/nfselection-mode-config	GET	Retrieves all records for NF selection mode configurations.
nfselection-mode-config	/ocscp/scpc-configuration/{version}/nfselection-mode-config/{ruleName}	GET	Retrieves NF selection mode configuration for the given ruleName.
nfselection-mode-config	/ocscp/scpc-configuration/{version}/nfselection-mode-config/{ruleName}	PUT	Creates or updates NF selection mode configuration for the given ruleName.
nfselection-mode-config	/ocscp/scpc-configuration/{version}/nfselection-mode-config/{ruleName}	DELETE	Removes NF selection mode configuration for the given ruleName.

Resource Definition

GET

This resource fetches all the nfselection-mode-config configuration.

Resource URI: /ocscp/scpc-configuration/{version}/nfselection-mode-config

The following table describes the data model supported by the GET response body on this resource:

Table 2-501 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
NfSelectionModeWrapper	M	1..N	200 OK	Returns the records for all NF selection mode configurations.

This resource fetches the nfselection-mode-config configuration based on ruleName.

Resource URI: /ocscp/scpc-configuration/{version}/nfselection-mode-config/{ruleName}

The following table describes the path parameter supported by the GET response body on this resource:

Table 2-502 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
ruleName	String	M	Indicates the name of the rule defined in the database for nfselection-mode-config. It is a unique string to identify the record.

The following table describes data structures supported by the GET response body on these resources:

Table 2-503 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
NfSelectionModeWrapper	M	1	200 OK	Returns the nf-selection-mode configuration for the given ruleName.
ProblemDetails	M	1	404 Not Found	Returns 404 error code with problem details if no record is present with specified ruleName.

Sample of a Successful GET API

```
curl -X 'GET' \
  'http://10.75.212.108:31878/ocscp/scpc-configuration/v1/nfselection-mode-config/rule1' \
  -H 'accept: application/json'
```

```
{
  "ruleName": "rule1",
  "nfSelectionModeCfgData": {
    "targetNfTypeList": [
      "UDM"
    ],
    "serviceNamesList": [
      "nudm-uecm"
    ],
    "nfSelectionModeInfoList": [
      {
        "headerMatchList": [
          {
            "headerName": "3gpp-sbi-apiroot",
            "headerStatus": "PRESENT"
          },
          {
            "headerName": "name",
            "headerStatus": "PRESENT"
          }
        ]
      }
    ]
  }
}
```



```

    },
    {
      "headerName": "name1",
      "headerStatus": "ABSENT"
    }
  ],
  "nfSelectionMode": "ENHANCED_CONSUMER_NF_SELECTION",
  "enhancedConsumerNFSelectionInfo": {
    "enabled": "true",
    "includeAllNFs": "true",
    "addedNfPriorityCapacityInfo": [
      {
        "priority": 1,
        "capacity": 65535,
        "localities": [
          "Loc8"
        ]
      },
      {
        "priority": 2,
        "capacity": 65535,
        "localities": [
          "Loc9"
        ]
      },
      {
        "priority": 2,
        "capacity": 65535,
        "localities": [
          "Loc11"
        ]
      }
    ]
  }
},
{
  "headerMatchList": [
    {
      "headerName": "3gpp-sbi-apiroot",
      "headerStatus": "PRESENT"
    },
    {
      "headerName": "name",
      "headerStatus": "ABSENT"
    }
  ],
  {
    "headerName": "name1",
    "headerStatus": "ABSENT"
  }
],
"nfSelectionMode": "ENHANCED_CONSUMER_NF_SELECTION",
"enhancedConsumerNFSelectionInfo": {
  "enabled": "true",
  "includeAllNFs": "true",
  "allNfPriorityCapacityInfo": [
    {

```

```

    "priority":1,
    "capacity":65535,
    "localities":[
        "Loc8"
    ]
},
{
    "priority":2,
    "capacity":65535,
    "localities":[
        "Loc9"
    ]
},
{
    "priority":2,
    "capacity":65535,
    "localities":[
        "Loc11"
    ]
}
]
}
}
}
}
}
```

Sample of an Error GET API

```
curl -X 'GET' \
      'http://10.75.212.108:31878/ocscp/scpc-configuration/v1/nfselection-mode-
      config/rule4' \
      -H 'accept: application/json'
```

```
{
  "title": "Not Found",
  "status": 404,
  "detail": " NF Selection configuration data not found for the given
ruleName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfselection-mode-config/rule4",
  "cause": "DATA_NOT_FOUND"
}
404 Error: Not Found
```

PUT

This resource configures `nfselection-mode-config` for a given data.

Resource URI: /ocscp/scpc-configuration/{version}/nfselection-mode-config/{ruleName}

The following table describes the path parameter supported by this resource:

Table 2-504 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
ruleName	String	M	Indicates the name of the rule defined in the database for nfselection-mode-config. It is a unique string to identify the record.

The following table describes the data model supported by the PUT request body on this resource:

Table 2-505 Request Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
NfSelectionModeWrapper	M	1	Indicates the JSON structure to hold the configuration for nfselection-mode-config for a ruleName.

The following table describes data structures supported by the PUT response body on these resources:

Table 2-506 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
NfSelectionModeWrapper	M	1	200 OK	Indicates successful update or replacement of NfSelectionModeCfg with the given ruleName.
NfSelectionModeWrapper	M	1	201 Created	Indicates successful creation of NfSelectionModeCfg with ruleName.
ProblemDetails	M	1	400 Bad Request	Returns 400 error code with problem details if any validation fails in request body.

Sample of a Successful PUT API

```
curl -X 'PUT' \
  'http://10.75.212.108:30630/ocscp/scpc-configuration/v1/nfselection-mode-config/rule1' \
  -H 'accept: */*' \
```

```
-H 'Content-Type: application/json' \
-d
```

```
{
  "ruleName": "rule1",
  "nfSelectionModeCfgData": {
    "targetNfTypeList": [
      "UDM"
    ],
    "serviceNamesList": [
      "nudm-uecm"
    ],
    "nfSelectionModeInfoList": [
      {
        "headerMatchList": [
          {
            "headerName": "3gpp-sbi-apiroot",
            "headerStatus": "PRESENT"
          },
          {
            "headerName": "name",
            "headerStatus": "PRESENT"
          }
        ],
        {
          "headerName": "name1",
          "headerStatus": "ABSENT"
        }
      ],
      "nfSelectionMode": "ENHANCED_CONSUMER_NF_SELECTION",
      "enhancedConsumerNFSelectionInfo": {
        "enabled": "true",
        "includeAllNfs": "true",
        "addedNfPriorityCapacityInfo": [
          {
            "priority": 1,
            "capacity": 65535,
            "localities": [
              "Loc8"
            ]
          },
          {
            "priority": 2,
            "capacity": 65535,
            "localities": [
              "Loc9"
            ]
          },
          {
            "priority": 2,
            "capacity": 65535,
            "localities": [
              "Loc11"
            ]
          }
        ]
      }
    ]
  }
}
```

```

    ]
  },
  {
    "headerMatchList":[
      {
        "headerName":"3gpp-sbi-apiroot",
        "headerStatus":"PRESENT"
      },
      {
        "headerName":"name",
        "headerStatus":"ABSENT"
      },
      {
        "headerName":"name1",
        "headerStatus":"ABSENT"
      }
    ],
    "nfSelectionMode":"ENHANCED_CONSUMER_NF_SELECTION",
    "enhancedConsumerNFSelectioninfo":{
      "enabled": "true",
      "includeAllNfs": "true",
      "allNfPriorityCapacityInfo":[
        {
          "priority":1,
          "capacity":65535,
          "localities":[
            "Loc8"
          ]
        },
        {
          "priority":2,
          "capacity":65535,
          "localities":[
            "Loc9"
          ]
        },
        {
          "priority":2,
          "capacity":65535,
          "localities":[
            "Loc11"
          ]
        }
      ]
    }
  }
]
}'
{
  "ruleName": "rule1",
  "nfSelectionModeCfgData": {
    "targetNfTypeList": [
      "UDM"
    ]
  }
}

```

```

],
"requesterNfTypeList": null,
"serviceNamesList": [
  "nudm-uecm"
],
"targetPlmnList": null,
"requesterPlmnList": null,
"nfselectionModeInfoList": [
  {
    "headerMatchList": [
      {
        "headerName": "3gpp-sbi-apiroot",
        "headerStatus": "PRESENT"
      },
      {
        "headerName": "name",
        "headerStatus": "PRESENT"
      },
      {
        "headerName": "name1",
        "headerStatus": "ABSENT"
      }
    ],
    "nfSelectionMode": "ENHANCED_CONSUMER_NF_SELECTION",
    "enhancedConsumerNFSelectionInfo": {
      "enabled": true,
      "includeAllNfs": true,
      "addedNfPriorityCapacityInfo": [
        {
          "localities": [
            "Loc8"
          ],
          "priority": 1,
          "capacity": 65535
        },
        {
          "localities": [
            "Loc9"
          ],
          "priority": 2,
          "capacity": 65535
        },
        {
          "localities": [
            "Loc11"
          ],
          "priority": 2,
          "capacity": 65535
        }
      ],
      "allNfPriorityCapacityInfo": null
    }
  },
  {
    "headerMatchList": [
      {

```

```

        "headerName": "3gpp-sbi-apiroot",
        "headerStatus": "PRESENT"
      },
      {
        "headerName": "name",
        "headerStatus": "ABSENT"
      },
      {
        "headerName": "name1",
        "headerStatus": "ABSENT"
      }
    ],
    "nfSelectionMode": "ENHANCED_CONSUMER_NF_SELECTION",
    "enhancedConsumerNFSelectionInfo": {
      "enabled": true,
      "includeAllNfs": true,
      "addedNfPriorityCapacityInfo": null,
      "allNfPriorityCapacityInfo": [
        {
          "localities": [
            "Loc8"
          ],
          "priority": 1,
          "capacity": 65535
        },
        {
          "localities": [
            "Loc9"
          ],
          "priority": 2,
          "capacity": 65535
        },
        {
          "localities": [
            "Loc11"
          ],
          "priority": 2,
          "capacity": 65535
        }
      ]
    }
  ],
  "createdTimestamp": "2025-09-17 09:54:49",
  "updatedTimestamp": "2025-09-17 09:54:49"
}

```

Sample of an Error PUT API

```

curl -X 'PUT' \
  'http://10.75.212.108:31878/ocscp/scpc-configuration/v1/nfselection-mode-
  config/rule4' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \

```

```
-d '{
  "ruleName": "rule4"
}'
```

```
{
  "title": "Bad Request",
  "status": 400,
  "detail": "Field data must not be null or empty",
  "instance": "/ocscp/scpc-configuration/v1/nfselection-mode-config/rule4",
  "cause": "INVALID_VALUE"
}
```

DELETE

This resource removes the nfselection-mode-config configuration based on resourceName.

Resource URI: /ocscp/scpc-configuration/{version}/nfselection-mode-config/{ruleName}

The following table describes the path parameter supported by this resource:

Table 2-507 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
ruleName	String	M	Indicates the name of the rule defined in the database for nfselection-mode-config. It is a unique string to identify the record.

The following table describes the data model supported by the DELETE response body on this resource:

Table 2-508 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
NA	M	1	204 No Content	Indicates successful removal of the NfSelectionModeCfg record.
ProblemDetails	M	1	403 Forbidden	Returns 403 error code with problem details if user try to remove the default record.
ProblemDetails	M	1	404 Not Found	Returns 404 error code with problem details if no record is present with specified ruleName.

Sample of a Successful of DELETE API

```
curl -X 'DELETE' \
  'http://10.75.212.108:31878/ocscp/scpc-configuration/v1/nfselection-mode-
  config/rule3' \
  -H 'accept: */*'
```

204 No Content

Sample of an Error DELETE API

```
curl -X 'DELETE' \
  'http://10.75.212.108:31878/ocscp/scpc-configuration/v1/nfselection-mode-
  config/rule4' \
  -H 'accept: */*'
```

```
"title": "Not Found",
"status": 404,
"detail": " NF Selection configuration data not found for the given query
parameter(s). Please refer to the User Guide.",
"instance": "/ocscp/scpc-configuration/v1/nfselection-mode-config/rule2",
"cause": "DATA_NOT_FOUND"
}
404 Error: Not Found
```

Default rule:

```
{
  "ruleName": "defaultRule",
  "nfSelectionModeCfgData": {
    "targetNfTypeList": [
      ""
    ],
    "nfSelectionModeInfoList": [
      {
        "nfSelectionMode": "CONSUMER_NF_SELECTION"
      }
    ]
  }
}
```

Data Model

The following table describes data model for request or response:

Table 2-509 NfSelectionModeWrapper

Parameter	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
ruleName	String	M	Indicates the name of the rule defined in the database for nfselection-mode-config. It is a unique string used to identify the record. Allowed character combinations should be alpha-numeric, hyphen, and underscore.
nfSelectionModeCfgData	NfSelectionModeCfg	M	Indicates JSON to hold different NF selection mode configurations.
createdTimestamp	String	Read Only	Indicates the timestamp when the record is created in the database. It is not required in the request, but it is present in the response.
updatedTimestamp	String	Read Only	Indicates the timestamp when the record is last updated in the database. It is not required in the request, but it is present in the response.

Table 2-510 NfSelectionModeCfg

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
targetNfTypeList	List<String>	M	Indicates the list of any valid NfType as defined in Configuring NFTypes-NFServices . For default rule, "*" is allowed.
requesterNfTypeList	List<String>	O	Indicates the list of any valid NfType as defined in Configuring NFTypes-NFServices .
serviceNamesList	List<String>	O	Indicates the list of any valid NF service-name as defined in Configuring NFTypes-NFServices .
targetPlmnList	List<PlmnId>	O	Indicates the list of valid PLMN IDs.
requesterPlmnList	List<PlmnId>	O	
nfSelectionModeInfoList	List<NfSelectionModeInfo>	M	Indicates the list of custom objects that define the NF selection mode configuration for initial and subsequent service requests.

Table 2-511 NfSelectionModeInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
headerMatchList	List<HeaderInfo>	O	Indicates a list of headerInfo objects that are used to match the rule with the incoming request headers. Ensure that duplicate header names are not present in the list. <pre>"headerMatchList": [{ "headerName": "3gpp-sbi-apiroot", "headerStatus": "PRESENT" }, { "headerName": "name", "headerStatus": "ABSENT" }, { "headerName": "name1", "headerStatus": "ABSENT" }]</pre>
nfSelectionMode	NfSelectionMode	M	Indicates the NF selection mode for initial and subsequent requests: • CONSUMER_NF_SELECTION • ENHANCED_CONSUMER_NF_SELECTION For any request, if no matching rule is present, then the CONSUMER_NF_SELECTION mode becomes the default. In the CONSUMER_NF_SELECTION mode, existing behavior of SCP take effect.
enhancedConsumerNFSelectioninfo	EnhancedConsumerNFSelectionInfo	C	This is an optional parameter and is applicable when nfSelectionMode is ENHANCED_CONSUMER_NF_SELECTION. It is a JSON object, which holds the configuration to enhance the producer NF selection for routing. This parameter is mandatory when the NF selection mode is ENHANCED_CONSUMER_NF_SELECTION.

Table 2-512 HeaderInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
headerName	String	O	Indicates the header name. headerName must not be null or empty if headerMatchList is configured.

Table 2-512 (Cont.) HeaderInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
headerStatus	Enumeration (HeaderValueMatchEnum)	O	An ENUM indicating whether the specified header must be present or absent in the request for the configuration to apply. Allowed values: • "PRESENT" • "ABSENT"

Table 2-513 EnhancedConsumerNFSelectionInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
enabled	Boolean	M	Indicates whether the enhancement to consumer NF selection should be applied.
includeAllNfs	Boolean	M	Indicates whether reverse lookup based on the set IDs in the routing information received in the request is applicable. If the value is false, the system finds all producer NFs according to the current SCP behavior. If it is true, SCP finds producer NFs from both the local NF pool and the foreign NF pool. The final producer NF list may include both local and foreign producers.

Table 2-513 (Cont.) EnhancedConsumerNFSelectionInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
addedNfPriorityCapacityInfo	List<NfPriorityCapacityInfo>	C	Indicates the list of custom JSON objects that hold the priority and capacity configuration based on locality. This configuration applies only to added NFs: - NFs apart from the NF sent in the target-api-root header. - If only the routing binding header is sent with bl=nfirst, all NFs except the one referenced by nfirst are considered added NFs. - If the routing binding header is received with bl other than bl=nfirst, then all NFs are considered added NFs. In the following example, the allNfPriorityCapacityInfo list has the localities parameter set to null at index 0 and non-null for all other entries, therefore, it is valid. If a producer NF's locality does not match the allNfPriorityCapacityInfo list, the priority or capacity value at index 0 are applied. Routing proceeds based on the updated priority or capacity: <pre>"allNfPriorityCapacityInfo": [{ "priority": 1, "capacity": 1000 }, { "localities": ["Loc9"], "priority": 2, "capacity": 65535 }, { "localities": ["Loc11"], "priority": 2, "capacity": 65535 }]</pre> In the following example, the allNfPriorityCapacityInfo list has the localities parameter set to null at both index 0 and index 1, so it is an invalid configuration: <pre>"allNfPriorityCapacityInfo": [{ "priority": 1, "capacity": 65535 }, </pre>

Table 2-513 (Cont.) EnhancedConsumerNFSelectionInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
			<pre> { "priority": 2, "capacity": 65535 }, { "localities": ["Loc11"], "priority": 2, "capacity": 65535 }] </pre> If present, addedNfPriorityCapacityInfo must contain at least one element. Either addedNfPriorityCapacityInfo or nfPriorityCapacityInfo can be configured.
allNfPriorityCapacityInfo	List<NfPriorityCapacityInfo>	C	Indicates a list of custom JSON objects that hold the priority and capacity configuration based on locality. This configuration is applicable for all NFs selected for routing.

Table 2-514 NfPriorityCapacityInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
capacity	Integer	C	Indicates any valid integer between 0 and 65,535. If configured, the NF's capacity is updated to this value (if the locality matches) during routing or during delegated discovery response creation. At least one of priority or capacity must be present. Allowed values for priority or capacity are 0 to 65,535.
priority	Integer	C	Indicates any valid integer between 0 and 65,535. If configured, the NF's priority is updated to this value (if the locality matches) during routing or during delegated discovery response creation. At least one of priority or capacity must be present. Allowed values for priority or capacity are 0 to 65,535.
localities	List<String>	O	Indicates the list of localities. Overlapping localities are not allowed. More than one empty locality list is not allowed. Note: If the locality parameter is empty, the priority or capacity update is applied to all profiles.

The order of match keys is as follows:

1. targetNfTypesList

2. requesterNfTypesList
3. serviceNamesList
4. targetPlmnList
5. requesterPlmnList

2.51 Configuring IE Registry

This section describes the Information Element (IE) Registry REST API parameters used to create, update, and delete discovery parameter records in the registry. Each record in the registry represents a discovery parameter. A discovery parameter can be defined by 3GPP specifications or can be a custom parameter.

Each record contains metadata about the discovery parameter, including the following:

- Type (3GPP or Custom)
- Description
- Validation regex
- Active status indicator

These records are referenced by other APIs, including the Nf-Discovery-Static API (nf-discovery-static-api).

The different types of discovery parameters are as follows:

- 3GPP-defined parameters
- Custom discovery query parameters

This REST API provides separate endpoints for managing the above mentioned parameters.

Resources

The following table describes the resource name to retrieve, add, or update ie-registry configuration data:

Table 2-515 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
3GPP-Defined			
ie-registry	/ocscp/scpc-configuration/{version}/ie-registry/discovery-query-param/3gpp-defined	GET	Retrieves the configuration of all 3GPP-defined discovery query parameters from the registry.
ie-registry	/ocscp/scpc-configuration/{version}/ie-registry/discovery-query-param/3gpp-defined/{paramName}	GET	Retrieves the configuration of 3GPP-defined discovery query parameters from the registry for a given paramName.
ie-registry	/ocscp/scpc-configuration/{version}/ie-registry/discovery-query-param/3gpp-defined/{paramName}	PUT	Updates the configuration of 3GPP-defined discovery query parameters in the registry for a given paramName.
Custom			

Table 2-515 (Cont.) Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
ie-registry	/ocscp/scpc-configuration/{version}/ie-registry/discovery-query-param/custom	GET	Retrieves the configuration of all custom discovery query parameters from the registry.
ie-registry	/ocscp/scpc-configuration/{version}/ie-registry/discovery-query-param/custom/{paramName}	GET	Retrieves the configuration of custom discovery query parameters from the registry for a given paramName.
ie-registry	/ocscp/scpc-configuration/{version}/ie-registry/discovery-query-param/custom/{paramName}	PUT	Creates or updates the configuration of custom discovery query parameters in the registry for a given paramName.
ie-registry	/ocscp/scpc-configuration/{version}/ie-registry/discovery-query-param/custom/{paramName}	DELETE	Removes the configuration of custom discovery query parameters from the registry for a given paramName.

Resource Definition (3GPP-Defined)**GET**

This resource fetches all the 3gpp-defined ie-registry configuration.

Resource URI: /ocscp/scpc-configuration/{version}/ie-registry/discovery-query-param/3gpp-defined

The following table describes the data model supported by the GET response body on this resource:

Table 2-516 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
DiscQPIEWraapper	M	1..N	200 OK	Returns the configuration of all 3GPP-defined query parameters defined in the registry.

This resource fetches the 3GPP-defined ie-registry configuration based on paramName.

Resource URI: /ocscp/scpc-configuration/{version}/ie-registry/discovery-query-param/3gpp-defined/{paramName}

The following table describes the path parameter supported by the GET response body on this resource:

Table 2-517 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
paramName	String	M	Indicates the name of the discovery query parameter defined in the configuration. It is a unique identifier for the record.

The following table describes data structures supported by the GET response body on these resources:

Table 2-518 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
DiscQPIEWapper	M	1	200 OK	Returns the configuration for the given 3GPP-defined query parameter, identified by paramName, as defined in the registry.
ProblemDetails	M	1	404 Not Found	Returns a 404 error code with problem details if no record exists for the specified paramName.

Sample Successful GET Response:

```
curl -X 'GET' \
      'http://<localhost>:31111/ocscp/scpc-configuration/v1/ie-registry/
discovery-query-param/3gpp-defined/target-nf-type'
```

```
curl -X 'GET' \
      'http://<localhost>:31111/ocscp/scpc-configuration/v1/ie-registry/
discovery-query-param/3gpp-defined/target-nf-type'
      \ -H 'accept: application/json' {  "name": "target-nf-type",
"metaData": {
    "dataType": "NFType",    "description": "NF type of the target NF
being discovered.",    "validationRegex": "3gppDefinedValidation",
"isActive": true,
    "ieType": "3GPP_DISCOVERY_QUERY_PARAM"  },  "createdTimestamp":
"2025-09-12
11:09:08",  "updatedTimestamp": "2025-09-12 11:09:08"
}
```

Sample Error GET Response:

```
curl -X 'GET' \
      'http://<localhost>:31111/ocscp/scpc-configuration/v1/ie-registry/discovery-
```

```

query-param/3gpp-defined/target-nf-type1' \
-H 'accept: application/json'

{
  "title": "Not Found",
  "status": 404,
  "detail": "Parameter provided is not 3gpp defined. Please refer to the User
Guide.",
  "instance": "/ocscp/scpc-configuration/v1/ie-registry/discovery-query-param/
3gpp-defined/target-nf-type1",
  "cause": "DATA_NOT_FOUND"
}

```

PUT

This resource configures 3GPP-defined ie-registry for a given data.

Resource URI: /ocscp/scpc-configuration/{version}/ie-registry/discovery-query-param/3gpp-defined/{paramName}

The following table describes the path parameter supported by this resource:

Table 2-519 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
paramName	String	M	Indicates the name of the discovery query parameter defined in the configuration. It is a unique identifier for the record.

The following table describes the data model supported by the PUT response body on this resource:

Table 2-520 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Code	Description
DiscQPIWrapper	M	1	200 OK	Indicates a successful update of the given 3GPP-defined query parameter identified by paramName.
DiscQPIWrapper	M	1	201 Created	Indicates the successful creation of the given 3GPP-defined query parameter identified by paramName.
ProblemDetails	M	1	400 Bad Request	Returns a 400 error code with problem details if any validation fails in the request body.

Sample Successful PUT Response:

```

curl -X 'PUT' \
'http://<localhost>:31111/ocscp/scpc-configuration/v1/ie-registry/discovery-
query-param/3gpp-defined/requester-nf-type' \
-H 'accept: application/json' \

```

```
-H 'Content-Type: application/json' \
-d '

{
  "name": "requester-nf-type",
  "metaData": {
    "dataType": "NFType",
    "description": "NF type of the target NF being discovered12.",
    "validationRegex": "3gppDefinedValidation",
    "isActive": true,
    "ieType": "3GPP_DISCOVERY_QUERY_PARAM"
  }
}'

{
  "name": "requester-nf-type",
  "metaData": {
    "dataType": "NFType",
    "description": "NF type of the target NF being discovered12.",
    "validationRegex": "3gppDefinedValidation",
    "isActive": true,
    "ieType": "3GPP_DISCOVERY_QUERY_PARAM"
  },
  "createdTimestamp": "2025-09-12 11:09:08",
  "updatedTimestamp": "2025-09-19 08:50:00"
}
```

Sample Error PUT Response:

```
curl -X 'PUT' \
'http://<localhost>:31111/ocscp/scpc-configuration/v1/ie-registry/discovery-
query-param/3gpp-defined/target-nf-type' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d

'{
  "name": "target-nf-type1",
  "metaData": {
    "dataType": "NFType",
    "description": "NF type of the target NF being discovered1.",
    "validationRegex": "3gppDefinedValidation",
    "isActive": true,
    "ieType": "3GPP_DISCOVERY_QUERY_PARAM"
  },
  "createdTimestamp": "2025-09-12 11:09:08",
  "updatedTimestamp": "2025-09-12 11:09:08"
}'

{
  "title": "Bad Request",
  "status": 400,
  "detail": "Please provide same name in Path Variable(paramName) and Request
```

```

Body(name). Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/ie-registry/discovery-query-param/
3gpp-defined/target-nf-type",
  "cause": "INVALID_REQUEST_BODY"
}

```

Resource Definition (Custom)

GET

This resource fetches all custom ie-registry configuration.

Resource URI: /ocscp/scpc-configuration/{version}/ie-registry/discovery-query-param/custom

The following table describes the data structure supported by the GET response body on this resource:

Table 2-521 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
DiscQPIEWapper	M	1..N	200 OK	Returns the configuration of all custom query parameters defined in the registry.

This resource fetches the 3GPP-defined ie-registry configuration based on paramName.

Resource URI: /ocscp/scpc-configuration/{version}/ie-registry/discovery-query-param/custom/{paramName}

The following table describes the path parameter supported by the GET response body on this resource:

Table 2-522 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
paramName	String	M	Indicates the name of the discovery query parameter defined in the configuration. It is a unique identifier for the record.

The following table describes data structures supported by the GET response body on these resources:

Table 2-523 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
DiscQPIEWapper	M	1	200 OK	Returns the configuration for the given custom query parameter, identified by paramName, as defined in the registry.

Table 2-523 (Cont.) Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
ProblemDetails	M	1	404 Not Found	Returns a 404 error code with problem details if no record exists for the specified paramName.

Sample Successful GET Response:

```
{
  "name": "access-type1",
  "metaData": {
    "dataType": "String",
    "description": "contain the access type required to be supported by
target network function1",
    "validationRegex": null,
    "isActive": true,
    "ieType": "CUSTOM_DISCOVERY_QUERY_PARAM"
  },
  "createdTimestamp": "2025-09-24 08:42:09",
  "updatedTimestamp": "2025-09-24 08:42:09"
}
```

Sample Error GET Response:

```
curl -X 'GET' \
  'http://<localhost>:32740/ocscp/scpc-configuration/v1/ie-registry/discovery-
query-param/custom/test' \
  -H 'accept: application/json'
```

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "Discovery Query Param configuration data not found for the given
query parameter(s). Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/ie-registry/discovery-query-param/
custom/test",
  "cause": "DATA_NOT_FOUND"
}
```

PUT

This resource configures custom ie-registry for a given data.

Resource URI: /ocscp/scpc-configuration/{version}/ie-registry/discovery-query-param/custom/{paramName}

The following table describes the path parameter supported by this resource:

Table 2-524 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
paramName	String	M	Indicates the name of the discovery query parameter defined in the configuration. It is a unique identifier for the record.

The following table describes the data model supported by the PUT response body on this resource:

Table 2-525 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Code	Description
DiscQPIWrapper	M	1	200 OK	Indicates a successful update of the given custom query parameter identified by paramName.
DiscQPIWrapper	M	1	201 Created	Indicates the successful creation of the given custom query parameter identified by paramName.
ProblemDetails	M	1	400 Bad Request	Returns a 400 error code with problem details if any validation fails in the request body.

Sample Successful PUT Response:

```
curl -X 'PUT' \
  'http://<localhost>:32740/ocscp/scpc-configuration/v1/ie-registry/discovery-
  query-param/custom/access-type1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '
```

```
{
  "name": "access-type1",
  "metaData": {
    "dataType": "String",
    "description": "contain the access type required to be supported by
target network function1",
    "isActive": true,
    "ieType": "3GPP_DISCOVERY_QUERY_PARAM"
  }
}'
```

```
{
  "name": "access-type1",
  "metaData": {
    "dataType": "String",
    "description": "contain the access type required to be supported by
target network function1",
    "validationRegex": null,
    "isActive": true,
```

```

    "ieType": "CUSTOM_DISCOVERY_QUERY_PARAM"
  },
  "createdTimestamp": "2025-09-24 08:46:45",
  "updatedTimestamp": "2025-09-24 08:46:45"
}

```

Sample Error PUT Response:

```

curl -X 'PUT' \
  'http://<localhost>:32740/ocscp/scpc-configuration/v1/ie-registry/discovery-
  query-param/custom/access-type1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d

```

```

' {
  "name": "access-type1",
  "metaData": {
    "dataType": "nftype",
    "description": "contain the access type required to be supported by
target network function1",
    "isActive": true,
    "ieType": "3GPP_DISCOVERY_QUERY_PARAM"
  }
}'

{
  "title": "Bad Request",
  "status": 400,
  "detail": "Allowed dataType for custom parameters are: String, Boolean,
Integer. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/ie-registry/discovery-query-param/
custom/access-type1",
  "cause": "INVALID_REQUEST_BODY"
}

```

DELETE

This resource removes the custom ie-registry configuration based on paramName.

Resource URI: /ocscp/scpc-configuration/{version}/ie-registry/discovery-
query-param/custom/{paramName}

The following table describes the path parameter supported by this resource:

Table 2-526 Path Parameter

Name	Data Type	Mandator y (M) or Optional (O)	Description
paramName	String	M	Indicates the name of the discovery query parameter defined in the configuration. It is a unique identifier for the record.

The following table describes the data model supported by the DELETE response body on this resource:

Table 2-527 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
NA	M	1	204 No Content	Indicates the successful deletion of the custom query parameter identified by paramName.
ProblemDetails	M	1	404 Not Found	Returns a 404 error code with problem details if no record exists for the specified paramName.

Sample of a Successful DELETE Response:

```
curl -X 'DELETE' \
  'http://<localhost>:32740/ocscp/scpc-configuration/v1/ie-registry/discovery-
  query-param/custom/access-type1' \
  -H 'accept: application/json'
```

Response:
204

Sample of an Error DELETE Response:

```
curl -X 'DELETE' \
  'http://<localhost>:32740/ocscp/scpc-configuration/v1/ie-registry/discovery-
  query-param/custom/access-type2' \
  -H 'accept: application/json'
```

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "Discovery Query Param configuration data not found for the given
  query parameter(s). Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/ie-registry/discovery-query-param/
  custom/access-type2",
  "cause": "DATA_NOT_FOUND"
}
```

Data Model

The following table describes data model for request or response:

Table 2-528 DiscQPIWrapper

Parameter Name	Data Type	Mandatory (M) or Optional (O)	Description
name	String	M	Indicates the discovery query parameter name, defined in the registry, is a unique string that can be either 3GPP-defined or custom and is used to store the associated metadata.
metaData	IEInfo	M	Indicates a JSON structure that holds different metadata for the given query parameter.
createdTimestamp	String	Read Only	Indicates the timestamp of the created record. It is not required in the request, but it is included in the response.
updatedTimestamp	String	Read Only	Indicates the timestamp of the updated record, not required in request, but would be present in the response.

Table 2-529 IEInfo

Parameter Name	Data Type	Mandatory (M) or Optional (O)	Description
dataType	String	M	Indicates the name of the data type of the query parameter, as defined in 3GPP Spec 29510 or in custom query parameters. 3GPP-defined: Defines the name of the data type defined in the 3GPP Spec 29510. Example: - paramName = 'target-nf-type', dataType = 'NfType' - paramName = 'requester-nf-instance-id', dataType = 'NfInstanceId' - paramName = 'requester-snssais', dataType = 'array(Snssai)' - paramName = 'smf-serving-area', dataType = 'string' Custom: Defines the name of the data type for custom query parameters added to the registry. For custom query parameters, the data type supports only three values: "Integer" "String" "Boolean"
description	String	O	Describes the query parameters. 3gpp-defined: Allows to update only the description of these query parameters. Custom: If the parameter is used in other APIs, this updates only the description for custom query parameters. Otherwise, all parameter can be updated.

Table 2-529 (Cont.) IEInfo

Parameter Name	Data Type	Mandatory (M) or Optional (O)	Description
validationRegex	String	O	Indicates regular expression that defines the query parameters during configuration. This API has the following restrictions on this parameter. 3gpp-defined: - You cannot define a validation regular expression for 3GPP-defined query parameters because these parameters are validated according to 3GPP specifications. - This parameter has the value "3gppDefinedValidation", and you are not allowed to modify it. Custom: - You can define a validation regular expression for parameters whose data type is either "String" or "Integer". - For the "Boolean" data type, you cannot provide a regular expression because the only allowed values are "true" and "false". - If validationRegex is present, the parameter value is validated against it. An error is returned if the provided value does not match the pattern.
isActive	Boolean	M	Indicates whether the parameter is active. If it is active, it can be referenced in other APIs. Otherwise, an error is returned. - If a parameter is already active and is used in other APIs, it cannot be set to false. - Currently, all 3GPP-defined query parameters are not active. The list of active parameters are described in Table 2-530.
ieType	Enum	O	The value of this parameter is 3GPP_DISCOVERY_QUERY_PARAM for 3GPP-defined query parameters and CUSTOM_DISCOVERY_QUERY_PARAM for custom query parameters.

Note

- You can update only the descriptions of the 3GPP-defined query parameters.
- You can update the description for custom query parameters only if the parameter is used in the ie-binding-info API.

Default Records

Table 2-530 Default Records

Query Parameters	Data Type	Description	ValidationRegex	IsActive	ieType
target-nf-type	NFType	NF type of the target NF being discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM

Table 2-530 (Cont.) Default Records

Query Parameters	Data Type	Description	ValidationRegex	IsActive	ieType
requester-nf-type	NFType	NF type of the consumer NF that is invoking the Nnrf_NFDiscovery service.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
requester-nf-instance-id	NfInstanceId	The NF instance ID of the consumer NF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
service-names	array(ServiceName)	An array of service names for which the NRF is queried to provide the list of NF profiles.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
requester-nf-instance-fqdn	Fqdn	The FQDN of the consumer NF that is invoking the Nnrf_NFDiscovery service.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
target-plmn-list	array(PlmnId)	Contains the PLMN ID of the target NF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
requester-plmn-list	array(PlmnId)	The PLMN ID of the consumer NF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
requester-snpn-list	array(PlmnIdNid)	Contains the SNPN ID of the consumer NF.	3gppDefinedValidation	False	3GPP_DISCOVERY_QUERY_PARAM
target-nf-instance-id	NfInstanceId	Identity of the NF instance being discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
target-nf-fqdn	Fqdn	FQDN of the target NF instance being discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
hnrf-uri	Uri	Contains the API URI of the NFDiscovery Service of the NRF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
snssais	array(Snssai)	Contains the list of S-NSSAIs that are served by the NF (Service) instances being discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
requester-snssais	array(Snssai)	Contains the list of S-NSSAI of the consumer NF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
plmn-specific-snssai-list	array(PlmnSnssai)	Contains the list of S-NSSAI that are served by the NF service being discovered for the corresponding PLMN.	3gppDefinedValidation	False	3GPP_DISCOVERY_QUERY_PARAM
requester-plmn-specific-snssai-list	array(PlmnSnssai)	Contains the list of S-NSSAI of the requester NF, for each of the PLMNs it supports.	3gppDefinedValidation	False	3GPP_DISCOVERY_QUERY_PARAM
nsi-list	array(string)	Contains the list of NSI ID that are served by the services being discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
dnn	Dnn	Contains the network identifier and may additionally contain the operator identifier.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
smf-serving-area	string	Contains the serving area of SMF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
tai	Tai	Tracking area identity.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM

Table 2-530 (Cont.) Default Records

Query Parameters	Data Type	Description	ValidationRegex	IsActive	ieType
amf-region-id	AmfRegionId	AMY region identity.	3gppDefinedValidation	False	3GPP_DISCOVERY_QUERY_PARAM
amf-set-id	AmfSetId	AMF set identity.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
guami	Guami	Used to search for an appropriate AMF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
supi	Supi	SUPI of the requester UE to search for an appropriate NF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
ue-ipv4-address	Ipv4Addr	IPv4 address of the UE for which a BSF needs to be discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
ip-domain	string	IPv4 address domain of the UE for which a BSF needs to be discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
ue-ipv6-prefix	Ipv6Prefix	IPv6 prefix of the UE for which a BSF needs to be discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
pgw-ind	boolean	Indicates whether a combined PGW-C/SMF needs to be discovered or standalone SMF needs to be discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
pgw	Fqdn	Contains the PGW FQDN received by the AMF to find the combined SMF/PGW.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
gpsi	Gpsi	Contains the GPSI of the requester UE to search for appropriate NF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
external-group-identity	ExtGroupId	Contains the external group identifier to search for appropriate NF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
pfd-data	PfdData	Contains the application identifiers or application function identifiers in PFD management.	3gppDefinedValidation	False	3GPP_DISCOVERY_QUERY_PARAM
data-set	DataSetId	Includes the data set to be supported by the NF to be discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
routing-indicator	string	Contains information that allows to route network signaling with SUCI to an AUSF and UDM instance capable to serve the subscriber.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
group-id-list	array(NfGroupId)	Identity of the groups of the NFs of the target NF type to be discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
dnai-list	array(Dnai)	containS the data network access identifiers.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
upf-iwk-eps-ind	boolean	indicates whether UPF supporting networking with EPS needs to be discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
chf-supported-plmn	PlmnId	containS the PLMN ID that CHF supports.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
preferred-locality	string	Preferred target NF location (ex-geographic location, data center).	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM

Table 2-530 (Cont.) Default Records

Query Parameters	Data Type	Description	ValidationRegex	IsActive	ieType
access-type	AccessType	Contains the access type required to be supported by target NF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
supported-features	SupportedFeatures	Features required to be supported by the target NF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
required-features	array(SupportedFeatures)	List of features required to be supported by the target NF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
complex-query	ComplexQuery	Used to override the default logical relationship of query parameters.	3gppDefinedValidation	False	3GPP_DISCOVERY_QUERY_PARAM
limit	integer	Maximum number of NFProfiles to be returned in the response.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
max-payload-size	integer	Maximum payload size of the response, expressed in kilo octets.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
max-payload-size-ext	integer	Maximum payload size of the response, it is used when consumer support payload size bigger than 2 million octets.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
pdu-session-types	array(PduSessionType)	List of the PDU session types requested to be supported by target NF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
event-id-list	array(EventId)	Contains the list of events requested to be supported by the Nnwdaf AnalyticsInfo Service.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
nnwdaf-event-list	array(NnwdafEvent)	Contains the list of events requested to be supported by the Nnwdaf EventsSubscription Service.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
atsss-capability	AtsssCapability	Indicates the ATSSS capability of the target UPF needs to be supported.	3gppDefinedValidation	False	3GPP_DISCOVERY_QUERY_PARAM
upf-ue-ip-addr-ind	boolean	Indicates whether a UPF supporting allocating UE IP addresses needs to be discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
client-type	ExternalClientType	Indicates that NFs serving the specified client type needs to be discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
lmf-id	LMFIdentification	Contain LMF identification to be discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
an-node-type	AnNodeType	Contains the AN Node type which is required to be supported by target NF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
rat-type	RatType	Contains the RAT type which is required to be supported by target NF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
target-snpn	PlmnIdNid	Included when NF services of a specific SNPN needs to be discovered.	3gppDefinedValidation	False	3GPP_DISCOVERY_QUERY_PARAM

Table 2-530 (Cont.) Default Records

Query Parameters	Data Type	Description	ValidationRegex	IsActive	ieType
af-ee-data	AfEventExposureData	Contain the application events, and optionally application function identifiers, application identifier of the AFs.	3gppDefinedValidation	False	3GPP_DISCOVERY_QUERY_PARAM
w-agf-info	WAgfInfo	Contain the W-AGF identifiers of the N3 terminations which is received by the SMF to find the combined W-AGF/UPF.	3gppDefinedValidation	False	3GPP_DISCOVERY_QUERY_PARAM
tngf-info	TngfInfo	Contains the TNGF identifiers of the N3 terminations which is received by the SMF to find the combined TNGF/UPF.	3gppDefinedValidation	False	3GPP_DISCOVERY_QUERY_PARAM
twif-info	TwifInfo	Contains the TWIF identifiers of the N3 terminations which is received by the SMF to find the combined TWIF/UPF.	3gppDefinedValidation	False	3GPP_DISCOVERY_QUERY_PARAM
target-nf-set-id	NfSetId	Contains the target NF Set ID.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
target-nf-service-set-id	NfServiceSetId	Contains the target NF Service Set ID.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
preferred-tai	Tai	The NRF shall prefer NF profiles that can serve the TAI.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
nef-id	NefId	Contains the NEF ID of the NEF to be discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
preferred-nf-instances	array(NfInstanceId)	Contains the list of preferred candidate NF Instance IDs.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
notification-type	NotificationType	Contains the notification type of default notification subscriptions that shall be registered in the NF Profile or NF Services of the NF instances being discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
n1-msg-class	N1MessageClass	Contains the notification type of default notification subscriptions that shall be registered in the NF Profile or NF Services of the NF instances being discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
n2-info-class	N2InformationClass	Contains the notification type of default notification subscriptions that shall be registered in the NF Profile or NF Services of the NF instances being discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
serving-scope	array(string)	Contains the list of areas that can be served by the NF instances to be discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
imsi	string	contain the IMSI of the requester UE to search for an appropriate NF	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
ims-private-identity	string	Contains the IMS private identity of the requester UE to search for an appropriate NF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM

Table 2-530 (Cont.) Default Records

Query Parameters	Data Type	Description	ValidationRegex	IsActive	ieType
ims-public-identity	string	Contains the IMS public identity of the requester UE to search for an appropriate NF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
msisdn	string	Contains the MSISDN of the requester UE to search for an appropriate NF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
internal-group-identity	GroupId	Contains the internal group identifier of the UE to search for an appropriate NF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
preferred-api-versions	map(string)	Contains the preferred API version of the services that are supported by the target NF instances.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
v2x-support-ind	boolean	Indicates whether a PCF supporting V2X policy/parameter provisioning needs to be discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
redundant-gtpu	boolean	Indicates whether a UPF supporting redundant GTP-U path needs to be discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
redundant-transport	boolean	Indicates whether a UPF supporting redundant transport path on the transport layer in the corresponding network slice needs to be discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
ipups	boolean	Indicates whether a UPF which is configured for IPUPS is requested to be discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
scp-domain-list	array(string)	Contains the SCP domains target NF or SCP belongs to.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
address-domain	Fqdn	Contains the address domain that shall be reachable through the SCP.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
ipv4-addr	Ipv4Addr	Contains the IPv4 address that shall be reachable through the SCP.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
ipv6-prefix	Ipv6Prefix	Contains the IPv6 prefix that shall be reachable through the SCP.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
served-nf-set-id	NfSetId	Contains the NF Set ID that shall be reachable through the SCP.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
remote-plmn-id	PlmnId	Contains the remote PLMN ID that shall be reachable through the SCP.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
data-forwarding	boolean	Indicates the UPFs configured for data forwarding needs to be discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
preferred-msi-full-plmn	boolean	Indicates that NRF shall prefer NF profiles that can serve the full PLMN.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
requester-features	Supported Features	Included if at least one feature is supported by the requester NF.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
realm-id	string	Contains the realm id for which a UDSF shall be discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM

Table 2-530 (Cont.) Default Records

Query Parameters	Data Type	Description	ValidationRegex	IsActive	ieType
storage-id	string	Contains the storage id for the realm id indicated in the realm id IE for which a UDSF shall be discovered.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
vsmf-support-ind	boolean	Indicates that target SMFs that supports V-SMF capability are preferred.	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM
ims-domain-name	string	Indicates the IP Multimedia Subsystem (IMS) domain name to search for a target Data Channel Signaling Function (DCSF).	3gppDefinedValidation	True	3GPP_DISCOVERY_QUERY_PARAM

2.52 Configuring IE Binding Info

The Information Element (IE) Binding Info REST API links parameters defined in the IE-Registry REST API to other APIs. It enables runtime binding of parameters from the IE-Registry to the Nf-discovery-static REST API.

The Nf-discovery-static REST API uses static parameters to configure rules for static NF discovery. These parameters are usually set during deployment and cannot be changed at runtime. However, this REST API allows users to configure parameters for the Nf-discovery-static REST API dynamically at runtime.

This resource supports the NF Group ID Retrieval REST API for the Subscriber ID to NF Group ID feature. It allows you to dynamically configure the runtime parameters in the queryMatch section that are used for NF Group ID retrieval.

Resources

The following table describes the resource name to retrieve, add, or update the ie-binding-info configuration data:

Table 2-531 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
ie-binding-info	/ocscp/scpc-configuration/{version}/ie-binding-info	GET	Retrieves ie-binding-info for all resources configured in the database.
ie-binding-info	/ocscp/scpc-configuration/{version}/ie-binding-info/{resourceName}	GET	Retrieves ie-binding-info for the specified resourceName.
ie-binding-info	/ocscp/scpc-configuration/{version}/ie-binding-info/{resourceName}	PUT	Creates or updates ie-binding-info for the specified resourceName.
ie-binding-info	/ocscp/scpc-configuration/{version}/ie-binding-info/{resourceName}	DELETE	Removes ie-binding-info for the specified resourceName.

Default Record

There is one default record for this API that is added during SCP deployment. This default record is for the NF static discovery API resource, that is, nfdiscovery-cfg. You are not allowed to remove this default record.

default-record for ie-binding-info api

```
[
  {
    "resourceName": "nfdiscovery-cfg",
    "ieList": {
      "staticIeList": [
        {
          "ieName": "target-nf-type",
          "cardinality": "SINGLE",
          "ieAlias": "target-nf-type"
        },
        {
          "ieName": "requester-nf-type",
          "cardinality": "SINGLE",
          "ieAlias": "requester-nf-type"
        },
        {
          "ieName": "service-names",
          "cardinality": "LIST",
          "ieAlias": "service-names"
        },
        {
          "ieName": "target-plmn-list",
          "cardinality": "LIST",
          "ieAlias": "target-plmn-list"
        },
        {
          "ieName": "requester-plmn-list",
          "cardinality": "LIST",
          "ieAlias": "requester-plmn-list"
        },
        {
          "ieName": "target-nf-instance-id",
          "cardinality": "SINGLE",
          "ieAlias": "target-nf-instance-id"
        },
        {
          "ieName": "target-nf-fqdn",
          "cardinality": "SINGLE",
          "ieAlias": "target-nf-fqdn"
        },
        {
          "ieName": "snssais",
          "cardinality": "LIST",
          "ieAlias": "snssais"
        },
        {
          "ieName": "requester-snssais",
          "cardinality": "LIST",
          "ieAlias": "requester-snssais"
        }
      ]
    }
  }
]
```

```

{
  "ieName": "nsi-list",
  "cardinality": "LIST",
  "ieAlias": "nsi-list"
},
{
  "ieName": "dnn",
  "cardinality": "LIST",
  "ieAlias": "dnn-list"
},
{
  "ieName": "supi",
  "cardinality": "LIST",
  "ieAlias": "supi-ranges"
},
{
  "ieName": "gpsi",
  "cardinality": "LIST",
  "ieAlias": "gpsi-ranges"
},
{
  "ieName": "external-group-identity",
  "cardinality": "SINGLE",
  "ieAlias": "external-group-identity"
},
{
  "ieName": "data-set",
  "cardinality": "LIST",
  "ieAlias": "supported-data-sets"
},
{
  "ieName": "routing-indicator",
  "cardinality": "LIST",
  "ieAlias": "routing-indicators"
},
{
  "ieName": "group-id-list",
  "cardinality": "LIST",
  "ieAlias": "group-id-list"
},
{
  "ieName": "preferred-locality",
  "cardinality": "LIST",
  "ieAlias": "preferred-locality-list"
},
{
  "ieName": "access-type",
  "cardinality": "LIST",
  "ieAlias": "access-type-list"
},
{
  "ieName": "notification-type",
  "cardinality": "LIST",
  "ieAlias": "notification-type-list"
},
{

```

```

        "ieName": "n1-msg-class",
        "cardinality": "SINGLE",
        "ieAlias": "n1-msg-class"
    },
    {
        "ieName": "n2-info-class",
        "cardinality": "SINGLE",
        "ieAlias": "n2-info-class"
    },
    {
        "ieName": "serving-scope",
        "cardinality": "LIST",
        "ieAlias": "serving-scope"
    },
    {
        "ieName": "imsi",
        "cardinality": "LIST",
        "ieAlias": "imsi-ranges"
    },
    {
        "ieName": "msisdn",
        "cardinality": "LIST",
        "ieAlias": "msisdn-ranges"
    },
    {
        "ieName": "internal-group-identity",
        "cardinality": "LIST",
        "ieAlias": "internal-groupid-range-list"
    },
    {
        "ieName": "preferred-api-versions",
        "cardinality": "LIST",
        "ieAlias": "preferred-api-versions"
    },
    {
        "ieName": "requester-nf-instance-fqdn",
        "cardinality": "SINGLE",
        "ieAlias": "requester-nf-instance-fqdn"
    },
    {
        "ieName": "requester-nf-instance-id",
        "cardinality": "SINGLE",
        "ieAlias": "requester-nf-instance-id"
    },
    {
        "ieName": "tai",
        "cardinality": "LIST",
        "ieAlias": "tai-range-list"
    },
    {
        "ieName": "guami",
        "cardinality": "LIST",
        "ieAlias": "guami-list"
    },
    {
        "ieName": "ue-ipv4-address",

```

```

        "cardinality": "LIST",
        "ieAlias": "ipv4-address-ranges"
      },
      {
        "ieName": "ue-ipv6-prefix",
        "cardinality": "LIST",
        "ieAlias": "ipv6-prefix-ranges"
      },
      {
        "ieName": "pgw",
        "cardinality": "SINGLE",
        "ieAlias": "pgw"
      },
      {
        "ieName": "rat-type",
        "cardinality": "LIST",
        "ieAlias": "serving-rat-types"
      },
      {
        "ieName": "client-type",
        "cardinality": "LIST",
        "ieAlias": "serving-client-types"
      },
      {
        "ieName": "remote-plmn-id",
        "cardinality": "LIST",
        "ieAlias": "remote-plmn-list"
      }
    ],
    "dynamicIeList": null
  },
  "createdTimestamp": "2025-09-12 11:09:09",
  "updatedTimestamp": "2025-09-12 11:09:09"
}
]

```

Resource Definition

GET

This resource fetches all the ie-binding-info configuration.

Resource URI: /ocscp/scpc-configuration/{version}/ie-binding-info

The following table describes the data model supported by the GET response body on this resource:

Table 2-532 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
IEBindingInfoBaseWrapper	M	1..N	200 OK	Returns all ie-binding-info records in the database.

This resource fetches the ie-binding-info configuration based on resourceName.

Resource URI: /ocscp/scpc-configuration/{version}/ie-binding-info/{resourceName}

The following table describes the path parameter supported by the GET response body on this resource:

Table 2-533 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
resourceName	String	M	Indicates the name of the SCP resource for which ie-binding-info is configured in the database. It is a unique identifier for the record.

The following table describes data structures supported by the GET response body on these resources:

Table 2-534 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
IEBindingInfoBaseWrapper	M	1	200 OK	Returns all ie-binding-info records in the database.
ProblemDetails	M	1	404 Not Found	Returns a 404 error with problem details if no record exists for the specified resourceName.

Sample Successful GET Response:

```
curl -X 'GET' \
'http://<localhost>:32299/ocscp/scpc-configuration/v1/ie-binding-info/nfdiscovery-cfg' \
-H 'accept: application/json'
```

```
{
  "resourceName": "nfdiscovery-cfg",
  "ieList": {
    "staticIeList": [
      {
        "ieName": "target-nf-type",
        "cardinality": "SINGLE",
        "ieAlias": "target-nf-type"
      },
      {
        "ieName": "requester-nf-type",
        "cardinality": "SINGLE",
        "ieAlias": "requester-nf-type"
      }
    ]
  }
}
```

```

    "ieName": "service-names",
    "cardinality": "LIST",
    "ieAlias": "service-names"
  },
  {
    "ieName": "target-plmn-list",
    "cardinality": "LIST",
    "ieAlias": "target-plmn-list"
  },
  {
    "ieName": "requester-plmn-list",
    "cardinality": "LIST",
    "ieAlias": "requester-plmn-list"
  },
  {
    "ieName": "target-nf-instance-id",
    "cardinality": "SINGLE",
    "ieAlias": "target-nf-instance-id"
  },
  {
    "ieName": "target-nf-fqdn",
    "cardinality": "SINGLE",
    "ieAlias": "target-nf-fqdn"
  },
  {
    "ieName": "snssais",
    "cardinality": "LIST",
    "ieAlias": "snssais"
  },
  {
    "ieName": "requester-snssais",
    "cardinality": "LIST",
    "ieAlias": "requester-snssais"
  },
  {
    "ieName": "nsi-list",
    "cardinality": "LIST",
    "ieAlias": "nsi-list"
  },
  {
    "ieName": "dnn",
    "cardinality": "SINGLE",
    "ieAlias": "dnn"
  },
  {
    "ieName": "supi",
    "cardinality": "SINGLE",
    "ieAlias": "supi"
  },
  {
    "ieName": "gpsi",
    "cardinality": "SINGLE",
    "ieAlias": "gpsi"
  },
  {
    "ieName": "external-group-identity",

```

```
"cardinality": "SINGLE",
"ieAlias": "external-group-identity"
},
{
  "ieName": "data-set",
  "cardinality": "LIST",
  "ieAlias": "data-set"
},
{
  "ieName": "routing-indicator",
  "cardinality": "SINGLE",
  "ieAlias": "routing-indicator"
},
{
  "ieName": "group-id-list",
  "cardinality": "LIST",
  "ieAlias": "group-id-list"
},
{
  "ieName": "preferred-locality",
  "cardinality": "SINGLE",
  "ieAlias": "preferred-locality"
},
{
  "ieName": "access-type",
  "cardinality": "SINGLE",
  "ieAlias": "access-type"
},
{
  "ieName": "notification-type",
  "cardinality": "SINGLE",
  "ieAlias": "notification-type"
},
{
  "ieName": "n1-msg-class",
  "cardinality": "SINGLE",
  "ieAlias": "n1-msg-class"
},
{
  "ieName": "n2-info-class",
  "cardinality": "SINGLE",
  "ieAlias": "n2-info-class"
},
{
  "ieName": "serving-scope",
  "cardinality": "LIST",
  "ieAlias": "serving-scope"
},
{
  "ieName": "imsi",
  "cardinality": "SINGLE",
  "ieAlias": "imsi"
},
{
  "ieName": "msisdn",
  "cardinality": "SINGLE",
```

```
"ieAlias": "msisdn"
},
{
  "ieName": "internal-group-identity",
  "cardinality": "SINGLE",
  "ieAlias": "internal-group-identity"
},
{
  "ieName": "preferred-api-versions",
  "cardinality": "LIST",
  "ieAlias": "preferred-api-versions"
},
{
  "ieName": "requester-nf-instance-fqdn",
  "cardinality": "SINGLE",
  "ieAlias": "requester-nf-instance-fqdn"
},
{
  "ieName": "requester-nf-instance-id",
  "cardinality": "SINGLE",
  "ieAlias": "requester-nf-instance-id"
},
{
  "ieName": "tai",
  "cardinality": "SINGLE",
  "ieAlias": "tai"
},
{
  "ieName": "guami",
  "cardinality": "SINGLE",
  "ieAlias": "guami"
},
{
  "ieName": "ue-ipv4-address",
  "cardinality": "SINGLE",
  "ieAlias": "ue-ipv4-address"
},
{
  "ieName": "ue-ipv6-prefix",
  "cardinality": "SINGLE",
  "ieAlias": "ue-ipv6-prefix"
},
{
  "ieName": "pgw",
  "cardinality": "SINGLE",
  "ieAlias": "pgw"
},
{
  "ieName": "rat-type",
  "cardinality": "SINGLE",
  "ieAlias": "rat-type"
},
{
  "ieName": "client-type",
  "cardinality": "SINGLE",
  "ieAlias": "client-type"
```



```

    },
    {
      "ieName": "remote-plmn-id",
      "cardinality": "SINGLE",
      "ieAlias": "remote-plmn-id"
    }
  ],
  "dynamicIeList": null
},
"createdTimestamp": "2025-04-22 08:50:18",
"updatedTimestamp": "2025-04-23 07:03:04"
}

```

Sample Error GET Response:

```

curl -X 'GET' \
'http://<localhost>:32299/ocscp/scpc-configuration/v1/ie-binding-info/nfdiscovery-cfg1' \
-H 'accept: application/json'

```

```

{
  "title": "Not Found",
  "status": 404,
  "detail": "IE Binding Info configuration not found for the given query parameter(s). Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/ie-binding-info/nfdiscovery-cfg1",
  "cause": "DATA_NOT_FOUND"
}

```

PUT

This resource configures ie-binding-info for a given data.

Resource URI: /ocscp/scpc-configuration/{version}/ie-binding-info/{resourceName}

The following table describes the path parameter supported by this resource:

Table 2-535 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
resourceName	String	M	Indicates the name of the SCP resource for which ie-binding-info is configured in the database. It is a unique identifier for the record.

The following table describes the data model supported by the PUT request body on this resource:

Table 2-536 Request Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
IEBindingInfoBaseWrapper	M	1	Adds or updates DiscoveryQueryParamSetWrapper.

The following table describes the data model supported by the PUT response body on this resource:

Table 2-537 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Code	Description
IEBindingInfoBaseWrapper	M	1	200 OK	Indicates a successful update or replacement of parameter information for the specified resourceName.
IEBindingInfoBaseWrapper	M	1	201 Created	Indicates successful creation of parameter information for the specified resourceName.
ProblemDetails	M	1	400 Bad Request	Returns a 400 error with problem details if validation of the request body fails.

Sample Successful PUT Response:

```
curl -X 'PUT' \
  'http://<localhost>:31111/ocscp/scpc-configuration/v1/ie-binding-info/test' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d

'{
  "resourceName": "test",
  "ieList": {
    "staticIeList": [
      {
        "ieName": "target-nf-type",
        "cardinality": "SINGLE",
        "ieAlias": "target-nf-type"
      },
      {
        "ieName": "requester-nf-type",
        "cardinality": "SINGLE",
        "ieAlias": "requester-nf-type"
      },
      {
        "ieName": "service-names",
        "cardinality": "LIST",
        "ieAlias": "service-names"
      }
    ]
  }
}
```

```

    },
    {
      "ieName": "target-plmn-list",
      "cardinality": "LIST",
      "ieAlias": "target-plmn-list"
    },
    {
      "ieName": "requester-plmn-list",
      "cardinality": "LIST",
      "ieAlias": "requester-plmn-list"
    },
    {
      "ieName": "target-nf-instance-id",
      "cardinality": "SINGLE",
      "ieAlias": "target-nf-instance-id"
    },
    {
      "ieName": "target-nf-fqdn",
      "cardinality": "SINGLE",
      "ieAlias": "target-nf-fqdn"
    },
    {
      "ieName": "snssais",
      "cardinality": "LIST",
      "ieAlias": "snssais"
    },
    {
      "ieName": "requester-snssais",
      "cardinality": "LIST",
      "ieAlias": "requester-snssais"
    },
    {
      "ieName": "nsi-list",
      "cardinality": "LIST",
      "ieAlias": "nsi-list"
    },
    {
      "ieName": "dnn",
      "cardinality": "LIST",
      "ieAlias": "dnn-list"
    },
    {
      "ieName": "supi",
      "cardinality": "LIST",
      "ieAlias": "supi-ranges"
    },
    {
      "ieName": "gpsi",
      "cardinality": "LIST",
      "ieAlias": "gpsi-ranges"
    },
    {
      "ieName": "external-group-identity",
      "cardinality": "SINGLE",
      "ieAlias": "external-group-identity"
    },
  },

```

```
{
  "ieName": "data-set",
  "cardinality": "LIST",
  "ieAlias": "supported-data-sets"
},
{
  "ieName": "routing-indicator",
  "cardinality": "LIST",
  "ieAlias": "routing-indicators"
},
{
  "ieName": "group-id-list",
  "cardinality": "LIST",
  "ieAlias": "group-id-list"
},
{
  "ieName": "preferred-locality",
  "cardinality": "LIST",
  "ieAlias": "preferred-locality-list"
},
{
  "ieName": "access-type",
  "cardinality": "LIST",
  "ieAlias": "access-type-list"
},
{
  "ieName": "notification-type",
  "cardinality": "LIST",
  "ieAlias": "notification-type-list"
},
{
  "ieName": "n1-msg-class",
  "cardinality": "SINGLE",
  "ieAlias": "n1-msg-class"
},
{
  "ieName": "n2-info-class",
  "cardinality": "SINGLE",
  "ieAlias": "n2-info-class"
},
{
  "ieName": "serving-scope",
  "cardinality": "LIST",
  "ieAlias": "serving-scope"
},
{
  "ieName": "imsi",
  "cardinality": "LIST",
  "ieAlias": "imsi-ranges"
},
{
  "ieName": "msisdn",
  "cardinality": "LIST",
  "ieAlias": "msisdn-ranges"
},
{
}
```

```

        "ieName": "internal-group-identity",
        "cardinality": "LIST",
        "ieAlias": "internal-groupid-range-list"
    },
    {
        "ieName": "preferred-api-versions",
        "cardinality": "LIST",
        "ieAlias": "preferred-api-versions"
    },
    {
        "ieName": "requester-nf-instance-fqdn",
        "cardinality": "SINGLE",
        "ieAlias": "requester-nf-instance-fqdn"
    },
    {
        "ieName": "requester-nf-instance-id",
        "cardinality": "SINGLE",
        "ieAlias": "requester-nf-instance-id"
    },
    {
        "ieName": "tai",
        "cardinality": "LIST",
        "ieAlias": "tai-range-list"
    },
    {
        "ieName": "guami",
        "cardinality": "LIST",
        "ieAlias": "guami-list"
    },
    {
        "ieName": "ue-ipv4-address",
        "cardinality": "LIST",
        "ieAlias": "ipv4-address-ranges"
    },
    {
        "ieName": "ue-ipv6-prefix",
        "cardinality": "LIST",
        "ieAlias": "ipv6-prefix-ranges"
    },
    {
        "ieName": "pgw",
        "cardinality": "SINGLE",
        "ieAlias": "pgw"
    },
    {
        "ieName": "rat-type",
        "cardinality": "LIST",
        "ieAlias": "serving-rat-types"
    },
    {
        "ieName": "client-type",
        "cardinality": "LIST",
        "ieAlias": "serving-client-types"
    }
],
"dynamicIeList": null

```

```
}}'
```

Response:

```
{
  "resourceName": "test",
  "ieList": {
    "staticIeList": [
      {
        "ieName": "target-nf-type",
        "cardinality": "SINGLE",
        "ieAlias": "target-nf-type"
      },
      {
        "ieName": "requester-nf-type",
        "cardinality": "SINGLE",
        "ieAlias": "requester-nf-type"
      },
      {
        "ieName": "service-names",
        "cardinality": "LIST",
        "ieAlias": "service-names"
      },
      {
        "ieName": "target-plmn-list",
        "cardinality": "LIST",
        "ieAlias": "target-plmn-list"
      },
      {
        "ieName": "requester-plmn-list",
        "cardinality": "LIST",
        "ieAlias": "requester-plmn-list"
      },
      {
        "ieName": "target-nf-instance-id",
        "cardinality": "SINGLE",
        "ieAlias": "target-nf-instance-id"
      },
      {
        "ieName": "target-nf-fqdn",
        "cardinality": "SINGLE",
        "ieAlias": "target-nf-fqdn"
      },
      {
        "ieName": "snssais",
        "cardinality": "LIST",
        "ieAlias": "snssais"
      },
      {
        "ieName": "requester-snssais",
        "cardinality": "LIST",
        "ieAlias": "requester-snssais"
      },
      {
        "ieName": "nsi-list",
        "cardinality": "LIST",
```

```

        "ieAlias": "nsi-list"
    },
    {
        "ieName": "dnn",
        "cardinality": "LIST",
        "ieAlias": "dnn-list"
    },
    {
        "ieName": "supi",
        "cardinality": "LIST",
        "ieAlias": "supi-ranges"
    },
    {
        "ieName": "gpsi",
        "cardinality": "LIST",
        "ieAlias": "gpsi-ranges"
    },
    {
        "ieName": "external-group-identity",
        "cardinality": "SINGLE",
        "ieAlias": "external-group-identity"
    },
    {
        "ieName": "data-set",
        "cardinality": "LIST",
        "ieAlias": "supported-data-sets"
    },
    {
        "ieName": "routing-indicator",
        "cardinality": "LIST",
        "ieAlias": "routing-indicators"
    },
    {
        "ieName": "group-id-list",
        "cardinality": "LIST",
        "ieAlias": "group-id-list"
    },
    {
        "ieName": "preferred-locality",
        "cardinality": "LIST",
        "ieAlias": "preferred-locality-list"
    },
    {
        "ieName": "access-type",
        "cardinality": "LIST",
        "ieAlias": "access-type-list"
    },
    {
        "ieName": "notification-type",
        "cardinality": "LIST",
        "ieAlias": "notification-type-list"
    },
    {
        "ieName": "n1-msg-class",
        "cardinality": "SINGLE",
        "ieAlias": "n1-msg-class"
    }

```

```

    },
    {
      "ieName": "n2-info-class",
      "cardinality": "SINGLE",
      "ieAlias": "n2-info-class"
    },
    {
      "ieName": "serving-scope",
      "cardinality": "LIST",
      "ieAlias": "serving-scope"
    },
    {
      "ieName": "imsi",
      "cardinality": "LIST",
      "ieAlias": "imsi-ranges"
    },
    {
      "ieName": "msisdn",
      "cardinality": "LIST",
      "ieAlias": "msisdn-ranges"
    },
    {
      "ieName": "internal-group-identity",
      "cardinality": "LIST",
      "ieAlias": "internal-groupid-range-list"
    },
    {
      "ieName": "preferred-api-versions",
      "cardinality": "LIST",
      "ieAlias": "preferred-api-versions"
    },
    {
      "ieName": "requester-nf-instance-fqdn",
      "cardinality": "SINGLE",
      "ieAlias": "requester-nf-instance-fqdn"
    },
    {
      "ieName": "requester-nf-instance-id",
      "cardinality": "SINGLE",
      "ieAlias": "requester-nf-instance-id"
    },
    {
      "ieName": "tai",
      "cardinality": "LIST",
      "ieAlias": "tai-range-list"
    },
    {
      "ieName": "guami",
      "cardinality": "LIST",
      "ieAlias": "guami-list"
    },
    {
      "ieName": "ue-ipv4-address",
      "cardinality": "LIST",
      "ieAlias": "ipv4-address-ranges"
    },
  },

```



```

    {
      "ieName": "ue-ipv6-prefix",
      "cardinality": "LIST",
      "ieAlias": "ipv6-prefix-ranges"
    },
    {
      "ieName": "pgw",
      "cardinality": "SINGLE",
      "ieAlias": "pgw"
    },
    {
      "ieName": "rat-type",
      "cardinality": "LIST",
      "ieAlias": "serving-rat-types"
    },
    {
      "ieName": "client-type",
      "cardinality": "LIST",
      "ieAlias": "serving-client-types"
    }
  ],
  "dynamicIeList": null
},
"createdTimestamp": "2025-09-24 15:34:26",
"updatedTimestamp": "2025-09-24 15:34:26"
}

```

Sample Error PUT Response:

```

Request: curl -X 'PUT' \
'http://<localhost>:32299/ocscf/scpc-configuration/v1/ie-binding-info/
nfdiscovery-cfg' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d

```

```

' {
  "resourceName": "nfdiscovery-cfg",
  "ieList": {
    "staticIeList": [
      {
        "ieName": "target-nf-type",
        "cardinality": "SINGLE",
        "ieAlias": "target-nf-type"
      },
      {
        "ieName": "requester-nf-type",
        "cardinality": "SINGLE",
        "ieAlias": "requester-nf-type"
      },
      {
        "ieName": "service-names",
        "cardinality": "LIST",
        "ieAlias": "service-names"
      }
    ]
  }
}

```

```

    },
    {
      "ieName": "target-plmn-list",
      "cardinality": "LIST",
      "ieAlias": "target-plmn-list"
    },
    {
      "ieName": "requester-plmn-list",
      "cardinality": "LIST",
      "ieAlias": "requester-plmn-list"
    },
    {
      "ieName": "target-nf-instance-id",
      "cardinality": "SINGLE",
      "ieAlias": "target-nf-instance-id"
    },
    {
      "ieName": "target-nf-fqdn",
      "cardinality": "SINGLE",
      "ieAlias": "target-nf-fqdn"
    },
    {
      "ieName": "snssais",
      "cardinality": "LIST",
      "ieAlias": "snssais"
    },
    {
      "ieName": "requester-snssais",
      "cardinality": "LIST",
      "ieAlias": "requester-snssais"
    },
    {
      "ieName": "nsi-list",
      "cardinality": "LIST",
      "ieAlias": "nsi-list"
    },
    {
      "ieName": "dnn",
      "cardinality": "SINGLE",
      "ieAlias": "dnn"
    },
    {
      "ieName": "supi",
      "cardinality": "SINGLE",
      "ieAlias": "supi"
    },
    {
      "ieName": "gpsi",
      "cardinality": "SINGLE",
      "ieAlias": "gpsi"
    },
    {
      "ieName": "external-group-identity",
      "cardinality": "SINGLE",
      "ieAlias": "external-group-identity"
    },
  },

```

```
{
  "ieName": "data-set",
  "cardinality": "LIST",
  "ieAlias": "data-set"
},
{
  "ieName": "routing-indicator",
  "cardinality": "SINGLE",
  "ieAlias": "routing-indicator"
},
{
  "ieName": "group-id-list",
  "cardinality": "LIST",
  "ieAlias": "group-id-list"
},
{
  "ieName": "preferred-locality",
  "cardinality": "SINGLE",
  "ieAlias": "preferred-locality"
},
{
  "ieName": "access-type",
  "cardinality": "SINGLE",
  "ieAlias": "access-type"
},
{
  "ieName": "notification-type",
  "cardinality": "SINGLE",
  "ieAlias": "notification-type"
},
{
  "ieName": "n1-msg-class",
  "cardinality": "SINGLE",
  "ieAlias": "n1-msg-class"
},
{
  "ieName": "n2-info-class",
  "cardinality": "SINGLE",
  "ieAlias": "n2-info-class"
},
{
  "ieName": "serving-scope",
  "cardinality": "LIST",
  "ieAlias": "serving-scope"
},
{
  "ieName": "imsi",
  "cardinality": "SINGLE",
  "ieAlias": "imsi"
},
{
  "ieName": "msisdn",
  "cardinality": "SINGLE",
  "ieAlias": "msisdn"
},
{
  "ieName": "data-set",
  "cardinality": "LIST",
  "ieAlias": "data-set"
}
```

```
"ieName": "internal-group-identity",
"cardinality": "SINGLE",
"ieAlias": "internal-group-identity"
},
{
  "ieName": "preferred-api-versions",
  "cardinality": "LIST",
  "ieAlias": "preferred-api-versions"
},
{
  "ieName": "requester-nf-instance-fqdn",
  "cardinality": "SINGLE",
  "ieAlias": "requester-nf-instance-fqdn"
},
{
  "ieName": "requester-nf-instance-id",
  "cardinality": "SINGLE",
  "ieAlias": "requester-nf-instance-id"
},
{
  "ieName": "tai",
  "cardinality": "SINGLE",
  "ieAlias": "tai"
},
{
  "ieName": "guami",
  "cardinality": "SINGLE",
  "ieAlias": "guami"
},
{
  "ieName": "ue-ipv4-address",
  "cardinality": "SINGLE",
  "ieAlias": "ue-ipv4-address"
},
{
  "ieName": "ue-ipv6-prefix",
  "cardinality": "SINGLE",
  "ieAlias": "ue-ipv6-prefix"
},
{
  "ieName": "pgw",
  "cardinality": "SINGLE",
  "ieAlias": "pgw"
},
{
  "ieName": "rat-type",
  "cardinality": "SINGLE",
  "ieAlias": "rat-type"
},
{
  "ieName": "client-type",
  "cardinality": "SINGLE",
  "ieAlias": "client-type"
},
{
  "ieName": "remote-plmn-id",
```

```

"cardinality": "SINGLE",
"ieAlias": "remote-plmn-id"
},
],
"dynamicIeList": [{"name": "remote-plmn-id",
"cardinality": "SINGLE",
"keyNameInRule": "remote-plmn-id"
}]
}
}'

```

Response:

```

{
  "title": "Bad Request",
  "status": 400,
  "detail": "Duplicate ieName 'remote-plmn-id' not allowed. Please refer to the
User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/ie-binding-info/nfdiscovery-cfg",
  "cause": "INVALID_REQUEST_BODY"
}

```

DELETE

This resource removes the ie-binding-info configuration based on resourceName.

Resource URI: /ocscp/scpc-configuration/{version}/ie-binding-info/{resourceName}

The following table describes the path parameter supported by this resource:

Table 2-538 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
resourceName	String	M	Indicates the name of the SCP resource for which ie-binding-info is configured in the database. It is a unique identifier for the record.

The following table describes the data model supported by the DELETE response body on this resource:

Table 2-539 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
NA	M	1	204 No Content	Indicates successful deletion of the record.
ProblemDetails	M	1	404 Not Found	Returns a 404 error with problem details if no record exists for the specified resourceName.
ProblemDetails	M	1	403 Forbidden	Returns a 403 error with problem details if the user attempts to delete the default record.

Sample of a Successful DELETE Response:

```
curl -X 'DELETE' \
'http://<localhost>:32299/ocscp/scpc-configuration/v1/ie-binding-info/
nfdiscovery-cfg2' \
-H 'accept: application/json'
```

```
{}
```

Sample of an Error DELETE Response:

```
curl -X 'DELETE' \
'http://<localhost>:32299/ocscp/scpc-configuration/v1/ie-binding-info/
nfdiscovery-cfg' \
-H 'accept: application/json'
```

```
{
  "title": "Forbidden",
  "status": 403,
  "detail": "User is not allowed to delete record for resourceName
nfdiscovery-cfg. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/ie-binding-info/nfdiscovery-cfg",
  "cause": "DATA_CANT_DELETED"
}
```

Data Model

The following table describes data model for request or response:

Table 2-540 IEBindingInfoBaseWrapper

Field Name	Data Type	Mandatory (M) or Optional (O)	Description
resourceName	String	M	Indicates the name of the SCP resource for which ie-binding-info is configured in the database. It is a unique identifier for the record.
ieList	IEList	M	Indicates a JSON structure that contains all information for all supported parameters for the specified resource.
createdTimestamp	String	Read Only	Indicates the timestamp of the created record. It is not required in the request, but is included in the response.
updatedTimestamp	String	Read Only	Indicates the timestamp of the updated record. It is not required in the request, but is included in the response.

Table 2-541 IEList

Field Name	Data Type	Mandatory (M) or Optional (O)	Description
staticIeList	List<IEBindingMetadata>	M	Contains a list of predefined discovery query parameters defined for the specified resourceName. This list cannot be updated. It is read only.

Table 2-541 (Cont.) IEList

Field Name	Data Type	Mandatory (M) or Optional (O)	Description
dynamicIeList	List<IEBindingMetadata>	O	Contains a list of discovery query parameters that can be added at runtime and used for the specified resourceName. Parameters already present in staticParamList cannot be used again in dynamicParamList.

Table 2-542 IEBindingMetadata

Field Name	Data Type	Mandatory (M) or Optional (O)	Description
ieName	String	M	Indicates the name of the information element defined in the IE-Registry REST API. This information element can be either 3GPP-defined or custom. The value of this parameter must match the paramName defined in the IE-Registry API. This parameter can be added only if its name is not present in staticIeList or dynamicIeList. It can be added only if the record it references in the IE-Registry exists and its isActive flag is set to true.
cardinality	Enumeration	M	Indicates whether ieName can be configured as a single object or a list of objects. It is the name of the cardinality enumeration. Allowed values: • LIST • SINGLE
ieAlias	String	M	Indicates the other name for the same parameter, which can be used as JSON key in response body. For static parameters, ieName and ieAlias are exactly the same as staticIeList cannot be modified. For dynamic parameters, ieName and ieAlias can be the same or different depending on what you want to configure. ieAlias must contain only lowercase letters, digits, hyphen and underscore. For more information, see dynamic parameters SCP Static NF Discovery Rest API#Provisionofdynamickeyadditionthroughie-binding-info

nfgpridretrieval-cfg Resource

The ie-binding-info REST API enables integration between the IE Registry REST API and other REST APIs that require the dynamic inclusion of additional parameters in their structure. The parameters intended for dynamic addition must first be defined in the IE Registry REST API along with the necessary metadata. These parameters can then be incorporated into the target REST API by referencing them in the dynamic parameters list.

The nfgpridretrieval-cfg resource supports the NF Group ID Retrieval REST API for the Subscriber ID to Group ID Resolution feature. It allows users to dynamically configure runtime parameters in the queryMatch section for NF Group ID retrieval.

Table 2-543 IE Binding Information Resources

Resource Name	Resource URI	HTTP Method	Description
ie-binding-info	/ocscp/scpc-configuration/{version}/ie-binding-info/nfgrpiddretreival-cfg	GET	Retrieves IE binding information for nfgrpiddretreival-cfg.
ie-binding-info	/ocscp/scpc-configuration/{version}/ie-binding-info/nfgrpiddretreival-cfg	PUT	Creates or updates IE binding information for nfgrpiddretreival-cfg.

GET

Retrieves the IE binding information associated with nfgrpiddretreival-cfg.

Resource URI: /ocscp/scpc-configuration/{version}/ie-binding-info/nfgrpiddretreival-cfg

Table 2-544 Response Body

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Code	Description
IEBindingInfoBaseWrapper	M	1	200 OK	Identifies the parameter information for the specified resource name.
ProblemDetails	M	1	404 Not Found	Identifies details about a resource that the system cannot find.

Sample Successful GET Response:

```
curl -X 'GET' \
  'http://<host>:<port>/ocscp/scpc-configuration/v1/ie-binding-info/nfgrpiddretreival-cfg' \
  -H 'accept: application/json'

{
  "resourceName": "nfgrpiddretreival-cfg",
  "ieList": {
    "staticIeList": [
      {"ieName": "target-nf-type-list", "cardinality": "LIST", "ieAlias": "target-nf-type-list"},
      {"ieName": "subscriberid-type-list", "cardinality": "LIST", "ieAlias": "subscriberid-type-list"},
      {"ieName": "method-list", "cardinality": "LIST", "ieAlias": "method-list"},
      {"ieName": "api-specific-resource-uri", "cardinality": "SINGLE", "ieAlias": "api-specific-resource-uri"}
    ],
    "dynamicIeList": null
  },
  "createdTimestamp": "2026-02-04 12:23:07",
  "updatedTimestamp": "2026-02-04 12:23:07"
}
```


PUT

Creates IE binding information when the resource does not exist. Updates the dynamic IE list when the resource exists.

Resource URI: /ocscp/scpc-configuration/{version}/ie-binding-info/nfgrpIdretrieval-cfg

Table 2-545 Data Structures Supported by the PUT Request Body on this Resource

Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
IEBindingInfoBaseWrapper	M	1	Indicates DiscoveryQueryParamSetWrapper to be added or updated.

Table 2-546 Data Structures Supported by the PUT Response Body on this Resource

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Code	Description
IEBindingInfoBaseWrapper	M	1	200 OK	Indicates that the system updated the parameter information.
IEBindingInfoBaseWrapper	M	1	201 Created	Indicates that the system created the parameter information.
ProblemDetails	M	1	400 Bad Request	Identifies invalid request content.

Sample Successful PUT Response:

```
curl -X 'PUT' \
  'http://10.75.213.177:31849/ocscp/scpc-configuration/v1/ie-binding-info/nfgrpIdretrieval-cfg' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "resourceName": "nfgrpIdretrieval-cfg",
    "ieList": {
      "staticIeList": [
        {
          "ieName": "target-nf-type-list",
          "cardinality": "LIST",
          "ieAlias": "target-nf-type-list"
        },
        {
          "ieName": "subscriberid-type-list",
          "cardinality": "LIST",
          "ieAlias": "subscriberid-type-list"
        },
        {
          "ieName": "method-list",
          "cardinality": "LIST",
          "ieAlias": "method-list"
        }
      ]
    }
  }
```

```

    },
    {
      "ieName": "api-specific-resource-uri",
      "cardinality": "SINGLE",
      "ieAlias": "api-specific-resource-uri"
    }
  ],
  "dynamicIeList": [
    {
      "ieName": "gpsi",
      "cardinality": "SINGLE",
      "ieAlias": "gpsiAsSingle"
    }
  ]
}

```

```

{
  "resourceName": "nfgrpIdretrieval-cfg",
  "ieList": {
    "staticIeList": [
      {
        "ieName": "target-nf-type-list",
        "cardinality": "LIST",
        "ieAlias": "target-nf-type-list"
      },
      {
        "ieName": "subscriberid-type-list",
        "cardinality": "LIST",
        "ieAlias": "subscriberid-type-list"
      },
      {
        "ieName": "method-list",
        "cardinality": "LIST",
        "ieAlias": "method-list"
      },
      {
        "ieName": "api-specific-resource-uri",
        "cardinality": "SINGLE",
        "ieAlias": "api-specific-resource-uri"
      }
    ],
    "dynamicIeList": [
      {
        "ieName": "gpsi",
        "cardinality": "SINGLE",
        "ieAlias": "gpsiAsSingle"
      }
    ]
  },
  "createdTimestamp": "2025-07-16 13:42:15",

```

```

    "updatedTimestamp": "2025-07-18 12:42:41"
  }

```

Sample Error PUT API (while updating target-nf-type cardinality from LIST to SINGLE)

```

curl -X 'PUT' \
  'http://10.75.213.177:31849/ocscp/scpc-configuration/v1/ie-binding-info/
nfgrpIdretrieval-cfg' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "resourceName": "nfgrpIdretrieval-cfg",
    "ieList": {
      "staticIeList": [
        {
          "ieName": "target-nf-type-list",
          "cardinality": "SINGLE",
          "ieAlias": "target-nf-type-list"
        },
        {
          "ieName": "subscriberid-type-list",
          "cardinality": "LIST",
          "ieAlias": "subscriberid-type-list"
        },
        {
          "ieName": "method-list",
          "cardinality": "LIST",
          "ieAlias": "method-list"
        },
        {
          "ieName": "api-specific-resource-uri",
          "cardinality": "SINGLE",
          "ieAlias": "api-specific-resource-uri"
        }
      ],
      "dynamicIeList": [
        {
          "ieName": "gpsi",
          "cardinality": "SINGLE",
          "ieAlias": "gpsi"
        }
      ]
    }
  }'

{
  "title": "Bad Request",
  "status": 400,
  "detail": "Static List update is not allowed. Please refer to the User
Guide.",
  "instance": "/ocscp/scpc-configuration/v1/ie-binding-info/nfgrpIdretrieval-
cfg",
  "cause": "INVALID_REQUEST_BODY"
}

```

Table 2-547 Data Model

Name	Data Type	Mandatory (M) or Optional (O)	Description
resourceName	String	M	Indicates unique resource name for which all the supported parameters information needs to be stored.
ieList	IEList	M	Indicates the JSON structure to hold all the information of all the supported parameters.
createdTimestamp	String	Read Only	Indicates the timestamp of the created record. It is not required in the request, but it is included in the response.
updatedTimestamp	String	Read Only	Indicates the timestamp of the updated record, not required in request, but would be present in the response.

Table 2-548 IEList

Name	Data Type	Mandatory (M) or Optional (O)	Description
staticIeList	List<IEMetaData>	M	Contains the information of already configured parameters for the given resourceName. This value cannot be updated.
dynamicIeList	List<IEMetaData>	O	Contains the information of extra parameters that the resourceName supports. The parameters already present in staticParamList cannot be used again in dynamicParamList.

Table 2-549 IEMetaData

Name	Data Type	Mandatory (M) or Optional (O)	Description
ieName	String	M	Indicates the name of the parameter already present in ie-registry REST API that needs to be added dynamically.
cardinality	String	M	Specifies whether the IE accepts LIST or SINGLE input.
ieAlias	String	M	Specifies the key name used when a dynamic IE is added to a static discovery rule.

Note

The default nfgrpIdretrieval-cfg record cannot be deleted.

Table 2-550 staticIeList

IE Name	Cardinality	IE Alias
target-nf-type-list	LIST	target-nf-type-list
subscriberid-type-list	LIST	subscriberid-type-list
method-list	LIST	method-list
api-specific-resource-uri	SINGLE	api-specific-resource-uri

Default Records for Resource Name (nfgrpiddretrieval-cfg)

```

{
  "resourceName": "nfgrpiddretrieval-cfg",
  "ieList": {
    "staticIeList": [
      {
        "ieName": "target-nf-type-list",
        "cardinality": "LIST",
        "ieAlias": "target-nf-type-list"
      },
      {
        "ieName": "subscriberid-type-list",
        "cardinality": "LIST",
        "ieAlias": "subscriberid-type-list"
      },
      {
        "ieName": "method-list",
        "cardinality": "LIST",
        "ieAlias": "method-list"
      },
      {
        "ieName": "api-specific-resource-uri",
        "cardinality": "SINGLE",
        "ieAlias": "api-specific-resource-uri"
      }
    ],
    "dynamicIeList": null
  },
  "createdTimestamp": "2026-02-04 12:23:07",
  "updatedTimestamp": "2026-02-04 12:23:07"
}

```

2.53 Configuring Next Hop Roaming Proxy Routing Config

The Next Hop Roaming Proxy Routing Config REST API configures routing parameters for the next hop roaming proxy.

Resources

The following table describes the resource name to retrieve, add, update, or remove the roaming-proxy-selection-info configuration data:

Table 2-551 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
routing-config/next-hop-roaming-proxy	/ocscp/scpc-configuration/{version}/routing-config/next-hop-roaming-proxy	GET	Retrieves all nextHopRoamingProxyRoutingConfig records.
routing-config/next-hop-roaming-proxy	/ocscp/scpc-configuration/{version}/routing-config/next-hop-roaming-proxy/{configName}	GET	Retrieves nextHopRoamingProxyRoutingConfig for the given configName if the record exists.
routing-config/next-hop-roaming-proxy	/ocscp/scpc-configuration/{version}/routing-config/next-hop-roaming-proxy/{configName}	PUT	Creates or updates the nextHopRoamingProxyRoutingConfig record.
routing-config/next-hop-roaming-proxy	/ocscp/scpc-configuration/{version}/routing-config/next-hop-roaming-proxy/{configName}	DELETE	Removes nextHopRoamingProxyRoutingConfig for the given configName. The default record (defaultNextHopRoamingProxyConfig) cannot be removed.

Resource Definition**GET**

This resource fetches nextHopRoamingProxyRoutingConfigData configuration.

Resource URI: /ocscp/scpc-configuration/{version}/routing-config/next-hop-roaming-proxy

The following table describes the data model supported by the GET response body on this resource:

Table 2-552 Response Body Parameters

Parameter	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
nextHopRoamingProxyRoutingConfigData	M	1	200 OK	Indicates successful retrieval of all nextHopRoamingProxyRoutingConfigData objects.

This resource fetches nextHopRoamingProxyRoutingConfigData configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/routing-config/next-hop-roaming-proxy/{configName}

The following table describes the path parameter supported by the GET response body on this resource:

Table 2-553 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Fetches configurations based on configName.

The following table describes data structures supported by the GET response body on these resources:

Table 2-554 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
nextHopRoamingProxyRoutingConfigData	M	1	200 OK	Indicates successful retrieval of nextHopRoamingProxyRoutingConfigData objects.
ProblemDetails	M	1	404 Not Found	Indicates problem details.

Sample of a Successful GET API

```
curl -X 'GET' 'http://10.75.213.61:32586/ocscp/scpc-configuration/v1/routing-config/next-hop-roaming-proxy/config2' -H 'accept: application/json'
```

```
{
  "configName": "config2",
  "nextHopRoamingProxyRoutingConfigData": {
    "totalTransactionLifetime": "7s",
    "responseTimeout": "4s",
    "service": {
      "maxRoutingAttempts": 2
    },
    "serviceEndpoint": {
      "maxRoutingAttempts": 1
    },
    "reRouteConditionList": [
      {
        "statusCode": "307"
      },
      {
        "statusCode": "308"
      },
      {
        "statusCode": "429"
      }
    ]
  }
}
```

```

    },
    {
      "statusCode": "5xx"
    },
    {
      "statusCode": "timeout"
    },
    {
      "statusCode": "connectionError"
    }
  ],
  "exceptions": [
    {
      "name": "No_Host",
      "action": "Send_Answer",
      "error_profile": "default_exception_error_no_host"
    },
    {
      "name": "Destination_Exhausted",
      "action": "Send_Answer",
      "error_profile": "default_exception_error_destination_exhausted"
    }
  ]
},
"createdTimestamp": "2025-08-13 09:09:46",
"updatedTimestamp": "2025-08-13 09:09:46"
}

```

Sample of an Error GET API

```
curl -X 'GET' 'http://10.75.213.61:32586/ocscp/scpc-configuration/v1/routing-config/next-hop-roaming-proxy/config3' -H 'accept: application/json'
```

```

{
  "title": "Not Found",
  "status": 404,
  "detail": "Next Hop Roaming Proxy Routing Configuration data not found against given configName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/routing-config/next-hop-roaming-proxy/c2342v",
  "cause": "DATA_NOT_FOUND"
}

```

404 Error: Not Found

PUT

This resource configures nextHopRoamingProxyRoutingConfig for the given data.

Resource URI: /ocscp/scpc-configuration/{version}/routing-config/next-hop-roaming-proxy/{configName}

The following table describes the path parameter supported by this resource:

Table 2-555 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Indicates the key for the PUT operation.

The following table describes the data structure supported by the PUT request body on this resource:

Table 2-556 Request Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
nextHopRoamingProxyRoutingConfigData	M	1	Adds or updates nextHopRoamingProxyRoutingConfigData.

The following table describes the data structure supported by the PUT response body on this resource:

Table 2-557 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Code	Description
nextHopRoamingProxyRoutingConfigData	M	1	200 OK	Indicates successful update of nextHopRoamingProxyRouting configurations.
nextHopRoamingProxyRoutingConfigData	M	1	201 Created	Indicates successful creation of nextHopRoamingProxyRouting configurations.
ProblemDetails	M	1	400 Bad Request	Indicates problem details, for example, invalid exceptions provided inside nextHopRoamingProxy. The name value is invalid.
ProblemDetails	M	1	403 Forbidden	Updates the default record results.

Sample of a Successful PUT API

```
curl -X 'PUT' \
  'http://10.75.224.103:32265/ocscp/scpc-configuration/v1/routing-config/next-hop-roaming-proxy/config1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d
' {
  "configName": "config1",
```

```

"nextHopRoamingProxyRoutingConfigData": {
  "totalTransactionLifetime": "7s",
  "responseTimeout": "4s",
  "service": {
    "maxRoutingAttempts": 2
  },
  "serviceEndpoint": {
    "maxRoutingAttempts": 1
  },
  "reRouteConditionList": [
    {
      "statusCode": "307"
    },
    {
      "statusCode": "308"
    },
    {
      "statusCode": "429"
    },
    {
      "statusCode": "5xx"
    },
    {
      "statusCode": "timeout"
    },
    {
      "statusCode": "connectionError"
    }
  ],
  "exceptions": [
    {
      "name": "No_Host",
      "action": "Send_Answer",
      "error_profile": "default_exception_error_no_host"
    },
    {
      "name": "Destination_Exhausted",
      "action": "Send_Answer",
      "error_profile": "default_exception_error_destination_exhausted"
    }
  ]
},
"createdTimestamp": "2025-08-13 09:09:46",
"updatedTimestamp": "2025-08-13 09:09:46"
} '

```

Response:

```

{
  "configName": "config1",
  "nextHopRoamingProxyRoutingConfigData": {
    "totalTransactionLifetime": "7s",
    "responseTimeout": "4s",
    "service": {
      "maxRoutingAttempts": 2
    },

```

```

    "serviceEndpoint": {
      "maxRoutingAttempts": 1
    },
    "reRouteConditionList": [
      {
        "statusCode": "307"
      },
      {
        "statusCode": "308"
      },
      {
        "statusCode": "429"
      },
      {
        "statusCode": "5xx"
      },
      {
        "statusCode": "timeout"
      },
      {
        "statusCode": "connectionError"
      }
    ],
    "exceptions": [
      {
        "name": "No_Host",
        "action": "Send_Answer",
        "error_profile": "default_exception_error_no_host"
      },
      {
        "name": "Destination_Exhausted",
        "action": "Send_Answer",
        "error_profile": "default_exception_error_destination_exhausted"
      }
    ]
  },
  "createdTimestamp": "2025-08-13 09:09:46",
  "updatedTimestamp": "2025-08-13 09:09:46"
}

```

Sample of an Error PUT API

```

curl -X 'PUT' \
  'http://10.75.224.103:30937/ocscp/scpc-configuration/v1/routing-config/next-hop-roaming-proxy/defaultNextHopRoamingProxyConfig' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d

```

```

' {
  {
    "configName": "defaultNextHopRoamingProxyConfig",
    "nextHopRoamingProxyRoutingConfigData": {

```

```

    "totalTransactionLifetime": "7s",
    "responseTimeout": "4s",
    "service": {
      "maxRoutingAttempts": 2
    },
    "serviceEndpoint": {
      "maxRoutingAttempts": 1
    },
    "reRouteConditionList": [
      {
        "statusCode": "307"
      },
      {
        "statusCode": "308"
      },
      {
        "statusCode": "429"
      },
      {
        "statusCode": "5xx"
      },
      {
        "statusCode": "timeout"
      },
      {
        "statusCode": "connectionError"
      }
    ],
    "exceptions": [
      {
        "name": "No_Host",
        "action": "Send_Answer",
        "error_profile": "default_exception_error_no_host"
      },
      {
        "name": "Destination_Exhausted",
        "action": "Send_Answer",
        "error_profile": "default_exception_error_destination_exhausted"
      }
    ]
  },
  "createdTimestamp": "2025-08-13 09:09:46",
  "updatedTimestamp": "2025-08-13 09:09:46"
}'

```

Response:

```

{
  "title": "Forbidden",
  "status": 403,
  "detail": "The default configuration cannot be updated. Please refer to
the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/routing-config/next-hop-roaming-
proxy/defaultNextHopRoamingProxyConfig",
  "cause": "MODIFICATION_NOT_ALLOWED"
}

```

403 Error: Forbidden

DELETE

This resource removes the nextHopRoamingProxyRoutingConfigData configuration based on the configName.

Resource URI: /ocscp/scpc-configuration/{version}/routing-config/next-hop-roaming-proxy/{configName}

The following table describes the path parameter supported by this resource:

Table 2-558 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Indicates the configName to be removed.

The following table describes the data structure supported by the DELETE response body on this resource:

Table 2-559 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
n/a	M	1	204 No Content	Indicates deletion.
ProblemDetails	M	1	404 Not Found	Indicates problem details stating that Next Hop Roaming Proxy Routing Config Data is not found for the corresponding configName.
ProblemDetails	M	1	403 Forbidden	Removes the default record.

Sample of a Successful of DELETE API

```
curl -X 'DELETE' \
  'http://10.75.224.103:32265/ocscp/scpc-configuration/v1/routing-config/next-hop-roaming-proxy/config1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

204 No Content

Sample of an Error DELETE API

```
curl -X 'DELETE' \
  'http://10.75.224.103:32265/ocscp/scpc-configuration/v1/routing-config/next-hop-roaming-proxy/config5' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "Next Hop Roaming Proxy Routing Configuration data not found against given configName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/routing-config/next-hop-roaming-proxy/config5",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

Data Model

The following table describes data model for request or response:

Table 2-560 nextHopRoamingProxyRoutingConfigData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description	Applicable to NF Service Level	Applicable to Pod level within NF
totalTransactionLifetime	String	M	Indicates that the time consumed in processing all retries should not exceed the total transaction time. The total time allowed to forward a request, including initial and all subsequent routing attempts. Default value: NA Range: 100 - 240000 ms or 1 - 240 s	Yes	Yes
responseTimeout	String	M	Indicates the allotted time to respond to a message request. When the response timeout expires, SCP performs alternate rerouting to the available alternate NF or pod, or sends an error message. Default value: NA Range: 100 - 50000 ms or 1 - 50 s	Yes	Yes
service	NextHopSeppServiceV2	M	See Table 2-561 Default value: NA Range: NA	-	-

Table 2-560 (Cont.) nextHopRoamingProxyRoutingConfigData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description	Applicable to NF Service Level	Applicable to Pod level within NF
serviceEndpoint	NextHopSeppServiceEndpointV2	M	See Table 2-562 Default value: NA Range: NA	-	-

Table 2-560 (Cont.) nextHopRoamingProxyRoutingConfigData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description	Applicable to NF Service Level	Applicable to Pod level within NF
reRouteConditionList	Array(ProblemData)	O	Specifies the HTTP response codes and error conditions under which the SCP attempts alternate routing. If the upstream server responds with any of the configured response codes, SCP attempts rerouting based on the configured alternate routing mechanism. If SCP encounters errors such as "connectionError" or "timeout" while routing to the upstream server, and these errors are configured, SCP attempts re-routing based on the configured alternate routing mechanism. If not provided, it is initialized with the values specified in the default column. You can add additional entries as applicable, in addition to the default ones. Default value: <pre> "reRouteConditionList ": [{ "statusCode": "5xx" }, { "statusCode": "429" }, { "statusCode": "307" }, { "statusCode": "308" }, { "statusCode": "timeout" }, { </pre>	Yes	Yes

Table 2-560 (Cont.) nextHopRoamingProxyRoutingConfigData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description	Applicable to NF Service Level	Applicable to Pod level within NF
			<pre> "statusCode": "connectionError" }] Range: 301, 302, 303, 304, 307, 308, 400, 401, 403, 404, 405, 406, 407, 408, 409 , 410, 411, 412, 413, 414, 415, 416, 417, 421, 422, 425, 426, 428, 429, 431, 451, 500, 501, 502, 503, 504, 505, 506, 507, 508, 510, 511, 5xx, "connectionError" , "timeout" configured in enginnerging config table. </pre>		

Table 2-560 (Cont.) nextHopRoamingProxyRoutingConfigData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description	Applicable to NF Service Level	Applicable to Pod level within NF
exceptions	Array(Exception ErrorResponse)	O	Host not found Action Specifies the action taken when request routing is abandoned because the host FQDN cannot be resolved. Options are as follows: - Abandon with no answer. - Sends answer with configured http status code. If error_profile is present, response is created based on parameters present in referred error profile form the ERROR_PROFILE_CONFIG table. Default value: Sends answer with configured http status code (Default 400). Range: This range is fixed, and you cannot add additional entries to this list. If a fewer than two entries are configured, the missing entries are automatically added as specified in the default value column. If more than two entries are provided, the request is rejected.	Yes	No

Table 2-560 (Cont.) nextHopRoamingProxyRoutingConfigData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description	Applicable to NF Service Level	Applicable to Pod level within NF
	Destination Exhausted Action	O	Specifies the action taken when a request cannot be processed due to exhaustion of internal resources. Options are as follows: - Abandon with no Answer - Sends a response with the configured http status code. If an error_profile is present, the response is generated based on the parameters defined in the referenced Error Profile from the ERROR_PROFILE_CONFIG table. Default value: Sends answer with configured http status code (Default 504). Range: This range is fixed, and you cannot add additional entries to this list. If a fewer than two entries are configured, the missing entries are automatically added as specified in the default value column. If more than two entries are provided, the request is rejected.	Yes	No

Table 2-561 NextHopSeppServiceV2

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description	Applicable to NF Service Level	Applicable to Pod level within NF
maxRoutingAttempts	int	M	Specifies the number of re-route attempts (retries) at the service level. This is the maximum number of times SCP is allowed to forward a request message. If the maximum routing attempts value is set to 1 for both service and pod level, the total transaction lifetime parameter value is not required, and if the maximum routing attempts value (including both service and pod level) is greater than 1, total transaction lifetime value is considered in rerouting processing. Default value: NA Range: 1 - 5	Yes	Yes

Table 2-562 NextHopSeppServiceEndpointV2

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description	Applicable to NF Service Level	Applicable to Pod level within NF
maxRoutingAttempts	int	M	Specifies the number of re-route attempts (retries) at the NF or pod level. This is the maximum number of times SCP is allowed to forward a request message. If the maximum routing attempts value is set to 1 for both service and pod level, the total transaction lifetime parameter value is not required, and if the maximum routing attempts value (including both service and pod level) is greater than 1, total transaction lifetime value is considered in rerouting processing. Default value: NA Range: 1 - 5	Yes	Yes

Table 2-563 ProblemData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description	Applicable to NF Service Level	Applicable to Pod level within NF
statusCode	String	O	Specifies the HTTP response codes for which SCP attempts alternate routing. If the upstream server responds with any of the configured response codes, SCP attempts rerouting based on the configured alternate routing mechanism. SCP attempts to reroute the request in cases such as response timeout, connection failure, refused stream, or receipt of a GOAWAY frame on any connection. These events are not configurable and are inherently supported by SCP. Default value: NA Range: 301, 302, 303, 304, 307, 308, 400, 401, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 421, 422, 425, 426, 428, 429, 431, 451, 500, 501, 502, 503, 504, 505, 506, 507, 508, 510, 511, 5xx as configured in enginnerging config table. Sample values <pre>"reRouteConditionList": [{ "statusCode": "5xx" }, { "statusCode": "429" }, </pre>	Yes	Yes

Table 2-563 (Cont.) ProblemData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description	Applicable to NF Service Level	Applicable to Pod level within NF
			<pre> { "statusCode": "307" }, { "statusCode": "308" }, { "statusCode": "timeout" }, { "statusCode": "connectionError" }] </pre>		

Table 2-564 ExceptionErrorResponse

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description	Applicable to NF Service Level	Applicable to Pod level within NF
action	string	M	Indicates the action to be taken when the above mentioned exception name is received.	Yes	Yes
error_profile	string	O	Indicates the name of error profile referred in ERROR_PROFILE_CONFIG. If provided, response is created based on the error profile parameters.	Yes	Yes

2.54 Configuring Roaming Proxy Selection Info

The Roaming Proxy Selection Info REST API is used to configure custom roaming proxy selection rules on the SCP. These rules are used to construct discovery queries for roaming proxy selection. For custom roaming proxy NF types, the SCP performs static discovery as the supported discovery source.

Resources

The following table describes the resource name to retrieve, add, update, or remove the roaming-proxy-selection-info configuration data:

Table 2-565 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
roaming-proxy-selection-info	/ocscp/scpc-configuration/{version}/proxy-info/roaming-proxy-selection-info	GET	Retrieves the roaming proxy selection configuration for the specified query parameter, if a matching record exists.
roaming-proxy-selection-info	/ocscp/scpc-configuration/{version}/proxy-info/roaming-proxy-selection-info/{configName}	GET	Retrieves the roaming proxy selection configuration for the specified configName, if a matching record exists.
roaming-proxy-selection-info	/ocscp/scpc-configuration/{version}/proxy-info/roaming-proxy-selection-info/{configName}	PUT	Creates a roaming proxy selection configuration using the provided NF discovery parameters. The nfType parameter cannot be updated for an existing configuration. The combination of nfType and targetPlmnList must be unique across all records.
roaming-proxy-selection-info	/ocscp/scpc-configuration/{version}/proxy-info/roaming-proxy-selection-info/{configName}	DELETE	Removes the roaming proxy selection configuration for the given configName.

Resource Definition**GET**

This resource fetches all the roaming-proxy-selection-info configuration.

Resource URI: /ocscp/scpc-configuration/{version}/proxy-info/roaming-proxy-selection-info

The following table describes the data model supported by the GET response body on this resource:

Table 2-566 Response Body Parameters

Parameter	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
roamingProxySelectionCfg	M	1..N	200 OK	Indicates roaming-proxy-selection-info configuration.

This resource fetches the roaming-proxy-selection-info configuration based on roamingProxyInfoCfg.

Resource URI: /ocscp/scpc-configuration/{version}/proxy-info/roaming-proxy-routing-info/{roamingProxySelectionCfgName}

The following table describes the path parameter supported by the GET response body on this resource:

Table 2-567 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
roamingProxySelectionCfgName	String	M	Fetches configuration for the corresponding roamingProxySelectionCfgName.

The following table describes data structures supported by the GET response body on these resources:

Table 2-568 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
roamingProxySelectionCfg	M	1	200 OK	Indicates roaming-proxy-selection-info configuration.
ProblemDetails	M	1	404 Not Found	Indicates problem details.

Sample of a Successful GET API

```
curl -X 'GET' 'http://10.75.225.15:30349/ocscp/scpc-configuration/v1/proxy-info/roaming-proxy-selection-info/config1' -H 'accept: application/json'
```

```
{
  "configName": "config1",
  "roamingProxySelectionCfgData": {
    "isRoamingRequest": true,
    "targetPlmnList": [
      {
        "mcc": "*",
        "mnc": "*"
      }
    ],
    "nfType": "5GNIF",
    "nfDiscoveryParams": {
      "mandatory": {
        "target-nf-type": {
          "value": "5GNIF"
        }
      },
      "requester-nf-type": {
        "source": "SCP",

```



```

        "value": "SCP"
      },
      "preferred-locality": {
        "source": "SCP",
        "value": "Loc1"
      },
      "remote-plmn-id": {
        "source": "CONSUMER",
        "value": "{ \"mcc\": \"123\", \"mnc\": \"456\" }"
      },
      "requester-snssais": {
        "source": "CONSUMER",
        "value": "[{ \"sd\": \"1A3F22\", \"sst\": \"2\" }]"
      },
      "target-nf-fqdn": {
        "source": "CONSUMER",
        "value": "udm1.default.svc.cluster.local"
      },
      "snssais": {
        "source": "CONSUMER",
        "value": "[{ \"sd\": \"1A3F22\", \"sst\": \"2\" }]"
      },
      "target-nf-set-id": {
        "source": "CONSUMER",
        "value": "set1.udmset.5gc.mnc015.mcc327"
      },
      "limit": {
        "value": "5"
      },
      "max-payload-size": {
        "value": "124"
      },
    },
    "optional": {
      "target-nf-instance-id": {
        "source": "CONSUMER",
        "value": "550e8400-e29b-41d4-a716-446655440000"
      },
      "requester-plmn-list": {
        "source": "CONSUMER",
        "value": "[{ \"mcc\": \"123\", \"mnc\": \"456\" }]"
      }
    }
  }
}

```

Sample of an Error GET API

```
curl -X 'GET' 'http://10.75.225.15:30349/ocscp/scpc-configuration/v1/proxy-
info/roaming-proxy-selection-info/CfgName23' -H 'accept: application/json'
```

```
{
```

```

"title": "Not Found",
"status": "404",
"detail": "roaming-proxy-selection-info data not found against given
roamingProxySelectionCfgName. Please refer to the User Guide.",
"instance": "/ocscp/scpc-configuration/v1/proxy-info/roaming-proxy-selection-
info/config23",
"cause": "DATA_NOT_FOUND"
}

```

404 Error: Not Found

PUT

This resource configures the roaming-proxy-routing-info configuration data.

Resource URI: /ocscp/scpc-configuration/{version}/proxy-info/roaming-proxy-selection-info/{configName}

The following table describes the path parameter supported by this resource:

Table 2-569 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Indicates the key for PUT operation.

The following table describes the data structure supported by the PUT request body on this resource:

Table 2-570 Request Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
roamingProxySelectionCfg	M	1	Indicates the roaming-proxy-selection-info configurations to be added or modified.

The following table describes the data structure supported by the PUT response body on this resource:

Table 2-571 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Code	Description
roamingProxySelectionCfgWrapper	M	1	201 Created	Indicates a new roaming-proxy-selection-info configuration creation.

Table 2-571 (Cont.) Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Code	Description
roamingProxySelectionCfgWrapper	M	1	200 OK	Updates an existing record.
ProblemDetails	M	1	400 Bad Request	Indicates problem details.
ProblemDetails	M	1	403 Forbidden	Updates those parameters that cannot be modified.

Sample of a Successful PUT API

```
curl -X 'PUT' \ 'http://10.75.225.15:30349/ocscp/scpc-configuration/v1/proxy-
info/roaming-proxy-selection-info/config1'\ -H 'accept: application/json'
\ -H 'Content-Type: application/json' \ -d
```

```
{
  "configName": "config1",
  "roamingProxySelectionCfgData": {
    "isRoamingRequest": true,
    "targetPlmnList": [
      {
        "mcc": "*",
        "mnc": "*"
      }
    ],
    "nfType": "5GNIF",
    "nfDiscoveryParams": {
      "mandatory": {
        "target-nf-type": {
          "value": "5GNIF"
        },
        "requester-nf-type": {
          "source": "SCP",
          "value": "SCP"
        },
        "preferred-locality": {
          "source": "SCP",
          "value": "Loc1"
        },
        "remote-plmn-id": {
          "source": "CONSUMER",
          "value": "{ \"mcc\": \"123\", \"mnc\": \"456\" }"
        },
        "requester-snssais": {
          "source": "CONSUMER",
          "value": "[{ \"sd\": \"1A3F22\", \"sst\": \"2\" }]"
        }
      }
    }
  }
}
```

```

        "target-nf-fqdn": {
          "source": "CONSUMER",
          "value": "udm1.default.svc.cluster.local"
        },
        "snssais": {
          "source": "CONSUMER",
          "value": "[{ \"sd\": \"1A3F22\", \"sst\": \"2\" }]"
        },
        "limit": {
          "value": "5"
        },
        "max-payload-size": {
          "value": "124"
        }
      },
      "optional": {
        "target-nf-set-id": {
          "source": "CONSUMER",
          "value": "set1.udmset.5gc.mnc015.mcc327"
        },
        "requester-plmn-list": {
          "source": "CONSUMER",
          "value": "[{ \"mcc\": \"123\", \"mnc\": \"456\" }]"
        }
      }
    }
  }
}

```

Response

```

{
  "configName": "config1",
  "roamingProxySelectionCfgData": {
    "targetPlmnList": [
      {
        "mcc": "*",
        "mnc": "*"
      }
    ],
    "nfType": "5GNIF",
    "nfDiscoveryParams": {
      "mandatory": {
        "target-nf-type": {
          "value": "5GNIF"
        },
        "requester-nf-type": {
          "source": "SCP",
          "value": "SCP"
        },
        "preferred-locality": {
          "source": "SCP",
          "value": "Loc1"
        },
        "remote-plmn-id": {
          "source": "CONSUMER",
          "value": "[{ \"mcc\": \"123\", \"mnc\": \"456\" }]"
        }
      }
    }
  }
}

```

```

    },
    "requester-snssais": {
      "source": "CONSUMER",
      "value": "[{ \"sd\": \"1A3F22\", \"sst\": \"2\" }]"
    },
    "target-nf-fqdn": {
      "source": "CONSUMER",
      "value": "udm1.default.svc.cluster.local"
    },
    "snssais": {
      "source": "CONSUMER",
      "value": "[{ \"sd\": \"1A3F22\", \"sst\": \"2\" }]"
    },
    "limit": {
      "value": "5"
    },
    "max-payload-size": {
      "value": "124"
    }
  },
  "optional": {
    "target-nf-set-id": {
      "source": "CONSUMER",
      "value": "set1.udmset.5gc.mnc015.mcc327"
    },
    "requester-plmn-list": {
      "source": "CONSUMER",
      "value": "[{ \"mcc\": \"123\", \"mnc\": \"456\" }]"
    }
  }
},
"isRoamingRequest": true
},
"createdTimestamp": "2026-03-18 06:08:18",
"updatedTimestamp": "2026-03-18 06:08:18"
}

```

Sample of an Error PUT API

```

curl -X 'PUT' \
  'http://10.75.225.15:30349/ocscp/scpc-configuration/v1/proxy-info/roaming-
proxy-selection-info/CfgName5' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d

```

```

'{
  "roamingProxySelectionCfgName": "config1",
  "roamingProxySelectionCfgData": {
    "isRoamingRequest": true,
    "target-plmn-list": [{"mcc": "*", "mnc": "*}],
    "nfType":
"5GNIF",

```

```

    "nfDiscoveryParams": {
      "mandatory": {
        "target-nf-type": {
          "value": "5GNIF"
        },
        "remote-plmn-id": {
          "source": "CONSUMER",
          "value": "{\"mcc\": *, \"mnc\": *}"
        },
        "routing-indicator": {
          "source": "CONSUMER",
          "value": ""
        },
        "preferred-locality": {
          "source": "SCP",
          "value": "Loc1"
        },
        "requester-nf-type": {
          "source": "SCP",
          "value": "SCP"
        }
      },
      "optional": {
        "requester-plmn-list": {
          "source": "SCP/CONSUMER",
          "value": "[{\"mcc\": *, \"mnc\": *}, {\"mcc\": *, \"mnc\": *}]"
        }
      }
    }
  }
}'

```

Response:

```

{
  "title": "Bad Request",
  "status": 400,
  "detail": "roamingProxySelectionCfgName in request Body does not match with roamingProxySelectionCfgName provided in API. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-info/roaming-proxy-selection-info/CfgName4",
  "cause": "INVALID_KEY_COMBINATION"
}

```

DELETE

This resource removes the roaming-proxy-selection-info configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/proxy-info/roaming-proxy-proxy-selection-info/{configName}

The following table describes the path parameter supported by this resource:

Table 2-572 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
roamingProxySelectionCfgName	String	M	Removes configurations based on configName.

The following table describes the data structure supported by the DELETE response body on this resource:

Table 2-573 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
None	-	1	204 No Content	Returns only a response code in a successful scenario.
ProblemDetails	M	1	404 Not Found	Indicates problem details.

Sample of a Successful of DELETE API

```
curl -X 'DELETE' \
  'http://10.75.225.15:30349/ocscp/scpc-configuration/v1/proxy-info/roaming-proxy-selection-info/CfgName5' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

204 OK

Sample of an Error DELETE API

```
curl -X 'DELETE' \
  'http://10.75.225.15:30349/ocscp/scpc-configuration/v1/proxy-info/roaming-proxy-selection-info/CfgName7' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "roaming-proxy-selection-info data not found against given"
```

```

roamingProxySelectionCfgName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-support-info/roaming-
proxy-routing-info/CfgName7",
  "cause": "DATA_NOT_FOUND"
}

```

404 Error: Not Found

Data Model

The following table describes data model for request or response:

Table 2-574 RoamingProxySelectionCfg

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	This is a unique key to identify records. Length: 256 Allowed character combinations should be alpha-numeric, hyphen, and underscore.
isRoamingRequest	Boolean(true/false)	O	This is a roaming request.
target-plmn-list	array(PlmnId)	O	This is target networks' PLMN IDs.
nfType	NFType	M	This is custom roaming proxy or proxy NF type (the role must be CUSTOM_5G_ROAMING_PROXY)
mandatory	NfDiscoveryParameters	M	These mandatory custom roaming proxy discovery parameters are used by SCP to construct discovery queries for static discovery of the custom roaming proxy. If SCP is unable to extract values for the configured mandatory parameters, it returns an error to the consumer NF.
optional	NfDiscoveryParameters	O	These optional custom roaming proxy discovery parameters are used by SCP when constructing discovery queries for static discovery of the custom roaming proxy. If SCP is unable to extract values for any configured optional parameters, it proceeds with the discovery process without including those parameters.

Table 2-575 NfDiscoveryParams

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
source	String	C	Indicates the source to retrieve the value of the discovery parameter.
value	String	C	Indicates a fallback value that can be used if the parameter value cannot be extracted on the basis of source.

Table 2-576 List of Supported Discovery Parameters

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
target-nf-type	NFType	M	Indicates the NF type of the target NF to be discovered. The "source" is not applicable. target-nf-type can only have "value" configured. "value" must be equal to RoamingProxySelectionCfg NFType Default value: 5GNIF
requester-nf-type	NFType	M	Indicates the NF type of the requester NF that performs discovery. "source" can be SCP or CONSUMER. "value" must be a valid NF type configured in the nfTypes-nfServices REST API. Default value: SCP
preferred-locality	String	O	Indicates the preferred target NF location. "source" can be CSCP or CONSUMER. "value" can be a locality string. Default value: SCP
requester-plmn-list	array(PlmnId)	O	Indicates a list of PLMN IDs of the requester NF. "source" can be SCP or CONSUMER. "value" must be a valid list of PlmnId json string. Default value: NA
requester-snssais	array(Snssai)	O	Indicates a list of S-NSSAIs of the requester NF. "source" can be SCP or CONSUMER. "value" must be a valid list of Snssai json string. Default value: NA

Table 2-576 (Cont.) List of Supported Discovery Parameters

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
remote-plmn-id	PlmnId	O	Indicates the PLMN ID that is reachable through target NF. "source" can only be CONSUMER. "source" SCP is not applicable. "value" must be a valid PlmnId json string. Default value: NA U M E R
target-nf-instance-id	NfInstanceId	O	Indicates the NF instance of target NF. "source" can only be CONSUMER. "source" SCP is not applicable. "value" must be a valid NF instance ID. Default value: U M E R
target-nf-fqdn	Fqdn	O	Indicates the FQDN of target NF. "source" can only be CONSUMER. "source" SCP is not applicable. "value" must be a valid FQDN. Default value: NA U M E R
target-nf-set-id	NfSetId	O	Indicates the NF set ID of target NF. "source" can only be CONSUMER. "source" SCP is not applicable. "value" must be a valid NF Set ID. Default value: NA U M E R
snssais	array(Snssai)	O	Discovers the target NF belonging to Slices List. "source" can only be CONSUMER. "source" SCP is not applicable. "value" must be a valid Snssai json string. Default value: NA U M E R

Table 2-576 (Cont.) List of Supported Discovery Parameters

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
limit	Integer	O	Indicates the maximum number of NFProfiles to be returned in the response. "source" is not applicable. "value" must be a valid integer in the range. Default value: min:1, max:12
max-payload-size	Integer	O	Indicates the maximum payload size (before compression if any) of the response, expressed in kilooctets. "source" is not applicable. "value" must be a valid integer in the range. The minimum and maximum values can be configured through Helm. Default value: min:124, max:2000
max-payload-size-ext	Integer	O	Indicates the maximum payload size (before compression if any) of the response, expressed in kilooctets. "source" is not applicable. "value" must be a valid integer in the range. The minimum and maximum values can be configured through Helm. Default value: min:124, max:2000

2.55 Configuring Roaming Proxy Support Config

The Roaming Proxy Support Config REST API configures roaming proxy support information. The configurations are as follows:

- Specifies the JSON pointers to extract attributes from the custom roaming proxy NF profile. These pointers enable SCP to accurately read the custom roaming proxy NF profile.
- Formats supported by custom roaming proxy for headers such as Via, Server, LCI, and OCI.

Resources

The following table describes the resource name to retrieve, add, update, or remove the roaming-proxy-support-config configuration data:

Table 2-577 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
roaming-proxy-support-config	/ocscp/scpc-configuration/{version}/proxy-support-info/roaming-proxy-support-config	GET	- Retrieves the roaming proxy support configuration for the specified query parameters, such as nfType and configName, if a matching record exists. - Retrieves all roaming proxy support configurations if no query parameters are provided.
roaming-proxy-support-config	/ocscp/scpc-configuration/{version}/proxy-support-info/roaming-proxy-support-config/{configName}	GET	Retrieves the roaming proxy support configuration for the specified configName if a matching record exists.
roaming-proxy-support-config	/ocscp/scpc-configuration/{version}/proxy-support-info/roaming-proxy-support-config/{configName}	PUT	- Creates a roaming proxy support configuration with profile attribute mapping and supported header formats. - nfType must be unique across all records. - nfType cannot be updated for an existing configuration. - The default record cannot be updated.
roaming-proxy-support-config	/ocscp/scpc-configuration/{version}/proxy-support-info/roaming-proxy-support-config/{configName}	DELETE	- Removes the roaming proxy support configuration for the specified configName. - The default record cannot be deleted.

Resource Definition**GET**

This resource fetches all the roaming-proxy-support-config configuration.

Resource URI: /ocscp/scpc-configuration/{version}/proxy-support-info/roaming-proxy-support-config

The following table describes the data model supported by the GET response body on this resource:

Table 2-578 Response Body Parameters

Parameter	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
RoamingProxySupportWrapper	M	1..N	200 OK	Indicates roaming proxy support configurations.

This resource fetches the roaming-proxy-support-config configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/proxy-support-info/roaming-proxy-support-config/{configName}

The following table describes the path parameter supported by the GET response body on this resource:

Table 2-579 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Fetches the corresponding configuration for the specified configName.

The following table describes data structures supported by the GET response body on these resources:

Table 2-580 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
RoamingProxySupportWrapper	M	1	200 OK	Indicates the roaming-proxy-support-config configurations.
ProblemDetails	M	1	404 Not Found	Indicates the problem details.

This resource fetches all the roaming-proxy-support-config configuration based on nfType and configname query parameter:

Resource URI: /ocscp/scpc-configuration/{version}/proxy-support-info/roaming-proxy-support-config?configName={value}&nfType={value2}

The following table describes query parameters supported by this resource:

Table 2-581 Query Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	O	Provide any number of query parameters, up to a maximum of two.
nfType	String	O	

The following table describes data structures supported by the GET response body on these resources:

Table 2-582 Data Structures

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
RoamingProxySupportWrapper	M	1	200 OK	Indicates the roaming-proxy-support-config configurations.
ProblemDetails	M	1	404 Not Found	Indicates the problem details.

Sample of a Successful GET API

```
curl -X 'GET' 'http://10.75.225.15:30349/ocscp/scpc-configuration/v1/proxy-support-info/roaming-proxy-support-config/config1' -H 'accept: application/json'
```

```
{
  "configName": "config1",
  "roamingProxySupportData": {
    "nfType": "5G-NIF",
    "nfProfileMappingInfoData": {
      "scheme": {
        "jsonPointer": "/customInfo/scheme",
        "defaultValue": "http"
      },
      "port": {
        "jsonPointer": "/customInfo/ipEndpoints/0/port",
        "defaultValue": 80
      },
      "apiPrefix": "/customInfo/apiPrefix",
      "remotePlmnList": "/customInfo/remotePlmnList",
      "plmnList": "/customInfo/plmnList",
      "fqdn": "/fqdn",
      "ipv4Addresses": "/ipv4Addresses",
      "ipv6Addresses": "/ipv6Addresses",
      "priority": "/priority",
      "capacity": "/capacity",
      "load": "/load",
      "loadTimeStamp": "/loadTimeStamp",
      "locality": "/locality",
      "lcHSupportInd": "/lcHSupportInd",
      "olcHSupportInd": "/olcHSupportInd"
    },
    "headerFormatInfoData": {
      "via": {
        "format": [
          "NFTYPE",
          "FQDN"
        ],
        "separator": "HYPHEN"
      }
    }
  }
}
```

```

    },
    "server": {
      "format": [
        "NFTYPE",
        "FQDN"
      ],
      "separator": "HYPHEN"
    },
    "3gpp-Sbi-Lci": {
      "lcScope": "<NFTYPE>-FQDN"
    },
    "3gpp-Sbi-Oci": {
      "olcScope": "<NFTYPE>-FQDN"
    }
  }
},
"createdTimestamp": "2025-01-28 02:26:30.0",
"updatedTimestamp": "2025-01-28 02:26:30.0"
}

```

Sample 1 of an Error GET API

```

curl -X 'GET' 'http://<localhost>:30349/ocscp/scpc-configuration/v1/proxy-
support-info/roaming-proxy-support-config/config11' -H 'accept: application/
json'

```

```

{
  "title": "Not Found",
  "status": "404",
  "detail": "Roaming Proxy Support Configuration data not found against given
configName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-support-info/roaming-proxy-
support-config/config11",
  "cause": "DATA_NOT_FOUND"
}

```

404 Error: Not Found

Sample 2 of an Error GET API

```

curl -X 'GET' 'http://<localhost>:30349/ocscp/scpc-configuration/v1/proxy-
support-info/roaming-proxy-support-config?nfType=PCF' -H 'accept: application/
json'

```

```

{
  "title": "Not Found",
  "status": "404",
  "detail": "Roaming Proxy Support Configuration data not found against given
query parameter(s). Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-support-info/roaming-proxy-
support-config/config11",
  "cause": "DATA_NOT_FOUND"
}

```

}

404 Error: Not Found

PUT

This resource configures roaming-proxy-support-config for the given data.

Resource URI: /ocscp/scpc-configuration/{version}/proxy-support-info/
roaming-proxy-support-config/{configName}

The following table describes the path parameter supported by this resource:

Table 2-583 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Indicates the key for the PUT operation.

The following table describes the data structure supported by the PUT request body on this resource:

Table 2-584 Request Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
RoamingProxySupportWrapper	M	1	Indicates the roaming-proxy-support-config configurations to be added or modified.

The following table describes the data structure supported by the PUT response body on this resource:

Table 2-585 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Code	Description
RoamingProxySupportWrapper	M	1	201 Created	Indicates creation of a new roaming-proxy-support-config configuration.
RoamingProxySupportWrapper	M	1	200 OK	Updates an existing record.
ProblemDetails	M	1	400 Bad Request	Indicates the problem details.
ProblemDetails	M	1	403 Forbidden	Updates the default data record.

Sample of a Successful PUT API

```
curl -X 'PUT' \
  'http://10.75.212.109:30777/ocscp/scpc-configuration/v1/proxy-support-info/
roaming-proxy-support-config/config1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "config1",
    "roamingProxySupportData": {
      "nfType": "5G-NIF",
      "nfProfileMappingInfoData": {
        "proxyPorts": {
          "jsonPointer": "/customInfo/proxyPorts",
          "defaultValue": {
            "http": 80,
            "https": 443
          }
        },
        "remotePlmnList": "/customInfo/remotePlmnList"
      }
    }
  }'
```

```
{
  "configName": "config1",
  "roamingProxySupportData": {
    "nfType": "5G-NIF",
    "nfProfileMappingInfoData": {
      "scheme": null,
      "port": null,
      "proxyPorts": {
        "jsonPointer": "/customInfo/proxyPorts",
        "defaultValue": {
          "http": 80,
          "https": 443
        }
      },
      "remotePlmnList": "/customInfo/remotePlmnList",
      "apiPrefix": null,
      "plmnList": null,
      "fqdn": null,
      "ipv4Addresses": null,
      "ipv6Addresses": null,
      "priority": null,
      "capacity": null,
      "load": null,
      "loadTimeStamp": null,
      "locality": null,
      "lcHSupportInd": null,
      "olcHSupportInd": null
    },
    "headerFormatInfoData": {
      "via": {
        "format": [
```

```

        "NFType": "NFType",
        "FQDN": "FQDN"
    },
    "separator": "HYPHEN"
},
"server": {
    "format": [
        "NFType",
        "FQDN"
    ],
    "separator": "HYPHEN"
},
"3gpp-Sbi-Lci": {
    "lcScope": "<NFType>-FQDN"
},
"3gpp-Sbi-Oci": {
    "olcScope": "<NFType>-FQDN"
}
}
},
"createdTimestamp": "2025-11-28 11:43:53",
"updatedTimestamp": "2025-11-28 11:43:53"
}

```

Sample 1 of an Error PUT API

```

curl -X 'PUT' \
'http://10.75.225.15:30349/ocscp/scpc-configuration/v1/proxy-support-info/
roaming-proxy-support-config/config23' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
    "configName": "config55",
    "roamingProxySupportData": {
        "nfType": "5G-NIF",
        "nfProfileMappingInfoData": {
            "proxyPorts": {
                "jsonPointer": "/customInfo/proxyPorts",
                "defaultValue": [
                    {
                        "http": 80,
                        "https": 443
                    }
                ]
            },
            "remotePlmnList": "/customInfo/remotePlmnList"
        }
    }
}'

{
    "title": "Bad Request",
    "status": 400,
    "detail": "Please provide same configName in Path Variable and Request Body.
Please refer to the User Guide.",
}

```

```
"instance": "/ocscp/scpc-configuration/v1/proxy-support-info/roaming-proxy-
support config/config23",
"cause": "MANDATORY_IE_INCORRECT"
}
```

Sample 2 of an Error PUT API

```
curl -X 'PUT' \
'http://10.75.225.15:30349/ocscp/scpc-configuration/v1/proxy-support-info/
roaming-proxy-support-config/config7' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "configName": "config7",
  "roamingProxySupportData": {
    "nfType": "5G-NIF",
    "nfProfileMappingInfoData": {
      "scheme": {
        "jsonPointer": "/customInfo/scheme",
        "defaultValue": "http"
      },
      "proxyPorts": {
        "jsonPointer": "/customInfo/proxyPorts",
        "defaultValue": {
          "http": 80,
          "https": 443
        }
      }
    },
    "remotePlmnList": "/customInfo/remotePlmnList"
  },
  "createdTimestamp": "2025-01-28 02:26:30.0",
  "updatedTimestamp": "2025-01-28 02:26:30.0"
}'
```

```
{
  "title": "Bad Request",
  "status": 400,
  "detail": "scheme and proxyPorts cannot be configured together. Please refer
to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-support-info/roaming-proxy-
support config/config7",
  "cause": "INVALID_KEY_COMBINATION"
}
```

Sample 3 of an Error PUT API

```
curl -X 'PUT' \
'http://10.75.225.15:30349/ocscp/scpc-configuration/v1/proxy-support-info/
roaming-proxy-support-config/config8' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
```

```

    "configName": "config8",
    "roamingProxySupportData": {
      "nfType": "5G-NIF",
      "nfProfileMappingInfoData": {
        "scheme": {
          "jsonPointer": "/customInfo/scheme",
          "defaultValue": "http"
        },
        "remotePlmnList": "/customInfo/remotePlmnList"
      }
    },
    "createdTimestamp": "2025-01-28 02:26:30.0",
    "updatedTimestamp": "2025-01-28 02:26:30.0"
  }
}'

```

```

{
  "title": "Bad Request",
  "status": 400,
  "detail": "Both 'scheme' and 'port' must be provided together. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-support-info/roaming-proxy-support-config/config7",
  "cause": "INVALID_KEY_COMBINATION"
}

```

Note: We will be getting same error message if only port is provided in the configuration

Sample 4 of an Error PUT API

```

curl -X 'PUT' \
  'http://10.75.212.109:30777/ocscp/scpc-configuration/v1/proxy-support-info/roaming-proxy-support-config/defaultRoamingProxyConfig' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "defaultRoamingProxyConfig",
    "roamingProxySupportData": {
      "nfType": "5G-NIF",
      "nfProfileMappingInfoData": {
        "scheme": {
          "jsonPointer": "/customInfo/scheme",
          "defaultValue": "http"
        },
        "port": {
          "jsonPointer": "/customInfo/port",
          "defaultValue": 80
        },
        "proxyPorts": null,
        "remotePlmnList": "/customInfo/remotePlmnList",
        "apiPrefix": null,
        "plmnList": null,
        "fqdn": null,
        "ipv4Addresses": null,

```

```

        "ipv6Addresses": null,
        "priority": null,
        "capacity": null,
        "load": null,
        "loadTimeStamp": null,
        "locality": null,
        "lcHSupportInd": null,
        "olcHSupportInd": null
    },
    "headerFormatInfoData": {
        "via": {
            "format": [
                "NFTYPE",
                "FQDN"
            ],
            "separator": "HYPHEN"
        },
        "server": {
            "format": [
                "NFTYPE",
                "FQDN"
            ],
            "separator": "HYPHEN"
        },
        "3gpp-Sbi-Lci": {
            "lcScope": "<NFTYPE>-FQDN"
        },
        "3gpp-Sbi-Oci": {
            "olcScope": "<NFTYPE>-FQDN"
        }
    },
    "createdTimestamp": "2025-11-28 11:39:21",
    "updatedTimestamp": "2025-11-28 11:39:21"
}'

```

```

{
  "title": "Forbidden",
  "status": 403,
  "detail": "The default configuration cannot be updated. Please refer to the
User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-support-info/roaming-proxy-
support-config/defaultRoamingProxyConfig",
  "cause": "MODIFICATION_NOT_ALLOWED"
}

```

DELETE

This resource removes the roaming-proxy-support-config configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/proxy-support-info/
roaming-proxy-support-config/{configName}

The following table describes the path parameter supported by this resource:

Table 2-586 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Removes the configuration for the specified configName.

The following table describes the data structure supported by the DELETE response body on this resource:

Table 2-587 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
None	-	1	204 No Content	Returns only response code in case of successful responses.
ProblemDetails	M	1	404 Not Found	Indicates problem details.
ProblemDetails	M	1	403 Forbidden	Removes the default data record.

Sample of a Successful of DELETE API

```
curl -X 'DELETE' \
      'http://<localhost>:30349/ocscp/scpc-configuration/v1/proxy-support-info/roaming-proxy-support-config/config2' \
      -H 'accept: application/json' \
      -H 'Content-Type: application/json'
```

204 OK

Sample 1 of an Error DELETE API

```
curl -X 'DELETE' \
      'http://<localhost>:30349/ocscp/scpc-configuration/v1/proxy-support-info/roaming-proxy-support-config/config7' \
      -H 'accept: application/json' \
      -H 'Content-Type: application/json'
```

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "Roaming Proxy Support Configuration data not found against"
```

```
given configName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-support-info/roaming-
proxy-support-config/config7",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

Sample 1 of an Error DELETE API

```
curl -X 'DELETE' \
'http://<localhost>:31817/ocscp/scpc-configuration/v1/proxy-support-info/
roaming-proxy-support-config/defaultRoamingProxyConfig' \
-H 'accept: application/json'
```

```
{
  "title": "Forbidden",
  "status": 403,
  "detail": "The default configuration cannot be deleted. Please refer to the
User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-support-info/roaming-proxy-
support-config/defaultRoamingProxyConfig",
  "cause": "DATA_CANT_DELETED"
}
```

403 Error: Forbidden

Data Model

The following table describes data model for request or response:

Table 2-588 RoamingProxySupportWrapper

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Indicates the unique configName to identify a record. Length: 256 Default value: NA Range: Allowed character combinations should be alpha- numeric, hyphen, and underscore.
roamingProxySupportData	RoamingProxySupportData	M	Defines the roaming proxy support configurations. Default value: NA Range: NA

Table 2-588 (Cont.) RoamingProxySupportWrapper

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
createdTimestamp	String	Read Only	Timestamp of the created record. This is not required in the request, but it is present in the response. Default value: NA Range: NA
updatedTimestamp	String	Read Only	Timestamp of the updated record. This is not required in the request, but it is present in the response. Default value: NA Range: NA

Table 2-589 RoamingProxySupportData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
nfType	String	M	Indicates the NF type of the custom roaming proxy. Only NF types with the NF role set to "CUSTOM_5G_ROAMING_PROXY" are allowed. The NF type cannot be updated for an existing configuration. The NF type must be unique across all records. Default value: NA Range: All the NF Types configured in the nfTypes-nfServices REST API with NF role as "CUSTOM_5G_ROAMING_PROXY".
nfProfileMappingInfoData	NfProfileMappingInfoData	M	Indicates the NF profile attribute mapping information, represented as JSON pointers. Default value: NA Range: NA

Table 2-589 (Cont.) RoamingProxySupportData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
headersFormatInfoData	HeadersFormatInfoData	O	Formats supported by the custom roaming proxy for the headers such as Via, Server, LCI, and OCI. Default value: <pre> { "via": { "format": ["NFTYPE", "FQDN"], "separator": "HYPHEN" }, "server": { "format": ["NFTYPE", "FQDN"], "separator": "HYPHEN" }, "3gpp-Sbi-Lci": { "lcScope": "<NFTYPE>-FQDN" }, "3gpp-Sbi-Oci": { "olcScope": "<NFTYPE>-FQDN" } } </pre> Range: NA

Table 2-590 NfProfileMappingInfoData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
scheme	SchemeInfo	C	Indicates the HTTP scheme of the roaming proxy NF instance. Either proxyPorts or a combination of scheme and port must be configured for the roaming proxy. If proxyPorts is not present in the configuration, then scheme and port become mandatory parameters. Default value: NA Range: NA
port	PortInfo	C	Indicates the port of the roaming proxy NF instance. Either proxyPorts or a combination of scheme and port must be configured for the roaming proxy. If proxyPorts is not present in the configuration, then scheme and port become mandatory parameters. Default value: NA Range: NA
proxyPorts	ProxyPortInfo	C	Indicates the HTTP scheme and port of the roaming proxy NF instance. Either proxyPorts or a combination of scheme and port must be configured for the roaming proxy. If the scheme and port combination is not present in the configuration, then proxyPorts becomes a mandatory parameter. Default value: NA Range: NA
apiPrefix	String	O	Indicates the API prefix of the roaming proxy NF instance. It is a JSON pointer used to extract the value from a specific location within the NF profile. A string parameter is expected at the given JSON pointer in the registered NF profile. Default value: NA Range: Valid json pointer
remotePlmnList	String	M	Indicates the list of PLMN IDs served by the roaming proxy NF instance. It is a JSON pointer used to extract the value from a specific location within the NF profile. If the value is missing at the specified jsonPointer location for this attribute, it indicates that any PLMN serves all PLMNs. An array of PLMN IDs is expected at the given JSON pointer in the registered NF profile. Default value: NA Range: Valid json pointer

Table 2-590 (Cont.) NfProfileMappingInfoData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
plmnList	String	O	Indicates the list of PLMN IDs of the roaming proxy NF instance. It is a JSON pointer used to extract the value from a specific location within the NF profile. An array of PLMN IDs is expected at the given JSON pointer in the registered NF profile. Default value: NA Range: Valid json pointer
ipv4Addresses	String	O	Indicates the IPv4 addresses of the roaming proxy NF instance. It is a JSON pointer used to extract the value from a specific location within the NF profile. A string parameter is expected at the given JSON pointer in the registered NF profile. Default value: NA Range: Valid json pointer
ipv6Addresses	String	O	Indicates the IPv6 addresses of the roaming proxy NF instance. It is a JSON pointer used to extract the value from a specific location within the NF profile. A string parameter is expected at the given JSON pointer in the registered NF profile. Default value: NA Range: Valid json pointer
priority	String	O	Indicates the priority of the roaming proxy NF instance. The priority is relative to other roaming proxy instances and is used for roaming proxy selection. Lower values indicate a higher priority. It is a JSON pointer used to extract the value from a specific location within the NF profile. An integer parameter in the range of 0 to 65535 is expected at the given JSON pointer in the registered NF profile. Default value: NA Range: Valid json pointer
capacity	String	O	Indicates the capacity of the roaming proxy NF instance. The capacity is expressed as a weight relative to other roaming proxy instances. It is a JSON pointer used to extract the value from a specific location within the NF profile. An integer parameter in the range of 0 to 65535 is expected at the given JSON pointer in the registered NF profile. Default value: NA Range: Valid json pointer

Table 2-590 (Cont.) NfProfileMappingInfoData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
load	String	O	Indicates the dynamic load information of the roaming proxy NF instance. It represents the current load percentage of the instance. It is a JSON pointer used to extract the value from a specific location within the NF profile. An integer parameter in the range of 0 to 100 is expected at the given JSON pointer in the registered NF profile. Default value: NA Range: Valid json pointer
loadTimeStamp	String	O	Indicates the point in time at which the latest load information, sent by the NF in the "load" attribute of the NF profile, was generated at the NF instance. It is a JSON pointer used to extract the value from a specific location within the NF profile. A DateTime parameter is expected at the given JSON pointer in the registered NF profile. Default value: NA Range: Valid json pointer
locality	String	O	Indicates the locality of the roaming proxy NF instance. It is a JSON pointer used to extract the value from a specific location within the NF profile. A string parameter is expected at the given JSON pointer in the registered NF profile. Default value: NA Range: Valid json pointer
lchSupportInd	String	O	Indicates whether the NF supports load control based on the LCI header. It is a JSON pointer used to extract the value from a specific location within the NF profile. A boolean parameter is expected at the given JSON pointer in the registered NF profile. Default value: NA Range: Valid json pointer
olchSupportInd	String	O	Indicates whether the NF supports overload control based on the OCI header. It is a JSON pointer used to extract the value from a specific location within the NF profile. A boolean parameter is expected at the given JSON pointer in the registered NF profile. Default value: NA Range: Valid json pointer

Table 2-591 SchemeInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
jsonPointer	String	M	Indicates a JSON pointer used to extract a value from a specific location within the NF profile. A string parameter is expected at the given JSON pointer in the registered NF profile. Default value: NA Range: Valid json pointer
defaultValue	String	M	If the specified location in the jsonPointer does not contain a value, the scheme should be determined from the following sources in the following order: 1. proxy-info/roaming-proxy-info REST API 2. defaultValue Default value: NA Range: • http • https

Table 2-592 PortInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
jsonPointer	String	M	Indicates a JSON pointer used to extract a value from a specific location within the NF profile. A string parameter is expected at the given JSON pointer in the registered NF profile. Default value: NA Range: Valid json pointer

Table 2-592 (Cont.) PortInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
defaultValue	int	M	If the specified location in the jsonPointer does not contain a value, the port value should be determined from the following sources in the following order: - Roaming Proxy Info REST API - defaultValue Default value: NA Range: 0-65535

Table 2-593 ProxyPortInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
jsonPointer	String	M	Indicates a JSON pointer used to extract a value from a specific location within the NF profile. Default value: NA Range: 0-65535
defaultValue	ProxyPortDefault Config	M	If the specified location in the jsonPointer does not contain a value, the port value should be determined from the following sources in the specified order: - proxy-info/roaming-proxy-info REST API - defaultValue Default value: NA Range: NA

Table 2-594 ProxyPortDefaultConfig

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
http	String	C	Indicates the Http port value. Either http or https or both should be provided. Default value: NA Range: 0-65535
https	String	C	Indicates the Https port value. Either http, https, or both must be provided. If both https and http are provided, preference is given to https, and the HTTPS port is used for routing. Default value: NA Range: 0-65535

Table 2-595 HeadersFormatInfoData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
via	HeaderFormatSeparatorInfo	O	Indicates the Via header format. Default value: NA Range: NA
server	HeaderFormatSeparatorInfo	O	Indicates the Server header format. Default value: NA Range: NA
3gpp-Sbi-Lci	LciHeaderFormatInfo	O	Indicates the lcScope format for the LCI header. Default value: NA Range: NA
3gpp-Sbi-Oci	OciHeaderFormatInfo	O	Indicates the olcScope format for the LCI header. Default value: NA Range: NA

Table 2-596 HeaderFormatSeparatorInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
format	Array(String)	O	Defines the structure of the header with different NF information elements. Duplicate values are not allowed in the array. NFTYPE is a mandatory element of the header format and must be placed at the first position. Valid examples are as follows: [NFTYPE, NFINSTANCEID] [NFTYPE, FQDN] Default value: ["NFTYPE", "FQDN"] Range: Allowed values are: - NFTYPE - FQD - NNFINSTANCEID
separator	String	O	Specifies the delimiter used to join the elements of the headers defined in the format. Default value: "HYPHEN" Range: Allowed values are: - HYPHEN - SPACE

Table 2-597 LciHeaderFormatInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
lcScope	String	O	Specifies the format of the lcScope in the 3GPP-SBI-LCI header. Default value: "<NFTYPE>-FQDN" Range: Allowed values are: "NF-Instance" "<NFTYPE>-FQDN"

Table 2-598 OciHeaderFormatInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
0lcScope	String	O	Specifies the format of the 0lcScope in the 3gpp-Sbi-Oci header. Default value: "<NFType>-FQDN" Range: Allowed values are: "NF-Instance" "<NFType>-FQDN"

The default record of roaming proxy support:

```
{
  "configName": "defaultRoamingProxyConfig",
  "roamingProxySupportData": {
    "nfType": "*",
    "nfProfileMappingInfoData": {
      "scheme": {
        "jsonPointer": "/customInfo/scheme",
        "defaultValue": "http"
      },
      "port": {
        "jsonPointer": "/customInfo/port",
        "defaultValue": 80
      },
      "proxyPorts": null,
      "remotePlmnList": "/customInfo/remotePlmnList",
      "apiPrefix": null,
      "plmnList": null,
      "fqdn": null,
      "ipv4Addresses": null,
      "ipv6Addresses": null,
      "priority": null,
      "capacity": null,
      "load": null,
      "loadTimeStamp": null,
      "locality": null,
      "lcHSupportInd": null,
      "olcHSupportInd": null
    },
    "headerFormatInfoData": {
      "via": {
        "format": [
          "NFType",

```

```

        "FQDN"
      ],
      "separator": "HYPHEN"
    },
    "server": {
      "format": [
        "NFTYPE",
        "FQDN"
      ],
      "separator": "HYPHEN"
    },
    "3gpp-Sbi-Lci": {
      "lcScope": "<NFTYPE>-FQDN"
    },
    "3gpp-Sbi-Oci": {
      "olcScope": "<NFTYPE>-FQDN"
    }
  }
},
"createdTimestamp": "2025-11-28 11:39:21",
"updatedTimestamp": "2025-11-28 11:39:21"
}

```

2.56 Configuring Proxy Selection Routing Mode

The Proxy Selection Routing Mode REST API enables the creation of rules for selecting the roaming proxy type used for routing egress roaming requests. Rule selection is determined based on remotePlmnList.

If no rules match a particular roaming request, the default rule, defaultProxySelectionRoutingMode, is applied to all PLMNs.

To configure a custom roaming proxy as the next-hop roaming proxy, complete the following prerequisites:

- Configure a custom roaming proxy in the nfTypes-nfServices REST API.
- Enable the custom_roaming_proxy_support parameter under the interplmn_routing feature using the scp-features REST API.

Resources

The following table describes the resource name to retrieve, add, update, or remove the proxy-selection-routing-mode configuration data:

Table 2-599 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
proxy-selection-routing-mode	/ocscp/scpc-configuration/{version}/proxy-selection-routing-mode	GET	Retrieves the proxy selection routing mode configurations.
proxy-selection-routing-mode	/ocscp/scpc-configuration/{version}/proxy-selection-routing-mode/{configName}	GET	Retrieves the proxy selection routing mode configuration for the specified configName.

Table 2-599 (Cont.) Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
proxy-selection-routing-mode	/ocscp/scpc-configuration/{version}/proxy-selection-routing-mode/{configName}	PUT	Creates or updates the proxy selection routing mode configuration. customRoamingProxySupport must be enabled for the interplmn_routing feature using the SCP Features REST API.
proxy-selection-routing-mode	/ocscp/scpc-configuration/{version}/proxy-selection-routing-mode/{configName}	DELETE	Removes the proxy selection routing mode configuration for the given configName. The default record, defaultProxySelectionRoutingMode, cannot be removed.

Resource Definition**GET**

This resource fetches all the proxy-selection-routing-mode configuration.

Resource URI: /ocscp/scpc-configuration/{version}/proxy-selection-routing-mode

The following table describes the data model supported by the GET response body on this resource:

Table 2-600 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
ProxySelectionRoutingModeWrapper	M	1..N	200 OK	Indicates the proxy-selection-routing-mode configurations.

This resource fetches the proxy-selection-routing-mode configuration based on the given configName.

Resource URI: /ocscp/scpc-configuration/{version}/proxy-selection-routing-mode/{configName}

The following table describes the path parameter supported by the GET response body on this resource:

Table 2-601 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Fetches the corresponding configuration for the specified configName.

The following table describes data structures supported by the GET response body on these resources:

Table 2-602 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
ProxySelectionRoutingModeWrapper	M	1	200 OK	Indicates the proxy-selection-routing-mode configurations.
ProblemDetails	M	1	404 Not Found	Indicates the problem details.

Sample of a Successful GET API

```
curl -X 'GET' 'http://<localhost>:32586/ocscp/scpc-configuration/v1/proxy-selection-routing-mode/defaultProxySelectionRoutingMode' -H 'accept: application/json'
```

```
{
  "configName": "defaultProxySelectionRoutingMode",
  "isRoamingRequest": true,
  "remotePlmnList": [{"mcc": "*", "mnc": "*"}],
  "nextHopProxyRoutingMode": ["SEPP"]
}
```

Sample of an Error GET API

```
curl -X 'GET' 'http://<localhost>:32586/ocscp/scpc-configuration/v1/proxy-selection-routing-mode/config108' -H 'accept: application/json'
```

```
{
  "title": "Not Found",
  "status": "404",
  "detail": "Proxy Selection Routing Mode configuration not found against given configName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-selection-routing-mode/"
}
```

```
config108",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

PUT

This resource configures the proxy-selection-routing-mode configuration for a given data.

Resource URI: /ocscp/scpc-configuration/{version}/proxy-selection-routing-mode/{configName}

The following table describes the path parameter supported by this resource:

Table 2-603 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Indicates the key for PUT operation.

The following table describes the data structure supported by the PUT request body on this resource:

Table 2-604 Request Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
ProxySelectionRoutingModeWrapper	M	1	Indicates the proxy selection and routing mode configurations to be added or modified.

The following table describes the data structure supported by the PUT response body on this resource:

Table 2-605 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Code	Description
ProxySelectionRoutingModeWrapper	M	1	201 Created	Indicates the creation of a new proxy selection and routing mode configuration.
ProxySelectionRoutingModeWrapper	M	1	200 OK	Updates an existing record.
ProblemDetails	M	1	400 Bad Request	Indicates the details of the problem.

Table 2-605 (Cont.) Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Code	Description
ProblemDetails	M	1	403 Forbidden	The update operation is not allowed on non-modifiable fields, such as isRoamingRequest. Adding a custom roaming proxy to the nextHopProxyRoutingMode parameter is not allowed when the customRoamingProxySupport parameter is set to false in the inter-PLMN routing feature under the SCP features configuration.

Sample of a Successful PUT API

```
curl -X 'PUT' \
  'http://<localhost>:32265/ocscp/scpc-configuration/v1/proxy-selection-
routing-mode/config1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "config1",
    "isRoamingRequest": true,
    "remotePlmnList":[{"mcc": "123", "mnc": "456"}],
    "nextHopProxyRoutingMode": ["SEPP"]
  }'
```

```
{
  "configName": "config1",
  "isRoamingRequest": true,
  "remotePlmnList":[{"mcc": "123", "mnc": "456"}],
  "nextHopProxyRoutingMode": ["SEPP"],
  "createdTimestamp": "2024-04-25 14:50:56.0",
  "updatedTimestamp": "2024-04-25 14:50:56.0"
}
```

Sample 1 of an Error PUT API

```
curl -X 'PUT' \
  'http://<localhost>:32265/ocscp/scpc-configuration/v1/proxy-selection-
routing-mode/config2' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "config2",
    "isRoamingRequest": true,
    "remotePlmnList":[{"mcc": "123", "mnc": "456"}]
```

```
}'
```

```
{
  "title": "Bad Request",
  "status": 400,
  "detail": "Field nextHopProxyRoutingMode should not be null or empty.
Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-selection-routing-mode/
config2",
  "cause": "MANDATORY_IE_INCORRECT"
}
```

400 Error: Bad Request

Sample 2 of an Error PUT API

```
curl -X 'PUT' \
'http://<localhost>:32465/ocscp/scpc-configuration/v1/proxy-selection-
routing-mode/custom' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "configName": "custom",
  "isRoamingRequest": true,
  "remotePlmnList": [
    {
      "mcc": "121",
      "mnc": "121"
    }
  ],
  "nextHopProxyRoutingMode": [
    "SEPP"
  ]
}'
```

```
{
  "title": "Forbidden",
  "status": 403,
  "detail": "Addition of custom roaming proxy NF Type to
'nextHopProxyRoutingMode' is allowed only if 'customRoamingProxySupport' flag
is set to true in the 'interplmn_routing' feature (resource name scp-
features). Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-selection-routing-mode/
custom",
  "cause": "OPERATION_NOT_ALLOWED"
}
```

403 Error: Forbidden

Sample 3 of an Error PUT API

```
curl -X 'PUT' \
  'http://<localhost>:32265/ocscp/scpc-configuration/v1/proxy-selection-
routing-mode/config2' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "config2",
    "isRoamingRequest": true,
    "remotePlmnList":[{"mcc": "123", "mnc": "456"}],
    "nextHopProxyRoutingMode": ["UDM"]
  }'

{
  "title": "Bad Request",
  "status": 400,
  "detail": "The given nfType should either be SEPP or any nfType with
NfRole as CUSTOM_5G_ROAMING_PROXY. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-selection-routing-mode/
config2",
  "cause": "MANDATORY_IE_INCORRECT"
}
```

Sample 4 of an Error PUT API

```
curl -X 'PUT' \
  'http://<localhost>:32265/ocscp/scpc-configuration/v1/proxy-selection-
routing-mode/config2' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "config2",
    "isRoamingRequest": false,
    "remotePlmnList":[{"mcc": "123", "mnc": "456"}],
    "nextHopProxyRoutingMode": ["SEPP"]
  }'

{
  "title": "Bad Request",
  "status": 400,
  "detail": "isRoamingRequest flag needs to be true for proxy selection in
roaming request routing. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-selection-routing-mode/
config2",
  "cause": "MANDATORY_IE_INCORRECT"
}
```


Sample 5 of an Error PUT API: If there is a proxy-selection-routing-mode configuration with remotePlmnList:{"mcc": "123", "mnc": "456"} defined, and if you are adding a new configuration with remotePlmnList : [{"mcc": "123", "mnc": "456"}, {"mcc": "222", "mnc": "121"}]

```
curl -X 'PUT' \
  'http://<localhost>:32265/ocscp/scpc-configuration/v1/proxy-selection-
routing-mode/config2' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "config2",
    "isRoamingRequest": true,
    "remotePlmnList":[{"mcc": "123", "mnc": "456"}, {"mcc": "222", "mnc":
"121"}],
    "nextHopProxyRoutingMode": ["5GNIF"]
  }'

{
  "title": "Bad Request",
  "status": 400,
  "detail": "Invalid remotePlmnList due to partial or full match with the
existing configuration(s). Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-selection-routing-mode/
config2",
  "cause": "MANDATORY_IE_INCORRECT"
}
```

DELETE

This resource removes the proxy-selection-routing-mode configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/proxy-selection-routing-mode/{configName}

The following table describes the path parameter supported by this resource:

Table 2-606 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Removes configurations based on the configName.

The following table describes the data structure supported by the DELETE response body on this resource:

Table 2-607 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
None	-	1	204 No Content	Returns only the response code.
ProblemDetails	M	1	404 Not Found	Indicates the problem details.
ProblemDetails	M	1	403 Forbidden	Removes the default data.

Sample of a Successful of DELETE API

```
curl -X 'DELETE' \
  'http://<localhost>:32265/ocscp/scpc-configuration/v1/proxy-selection-
routing-mode/config1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

204 No Content

Sample of an Error DELETE API

```
curl -X 'DELETE' \
  'http://<localhost>:32265/ocscp/scpc-configuration/v1/proxy-selection-
routing-mode/defaultProxySelectionRoutingMode' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

```
{
  "title": "Forbidden",
  "status": 403,
  "detail": "The default configuration cannot be deleted. Please refer to
the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-selection-routing-mode/
defaultProxySelectionRoutingMode",
  "cause": "DATA_CANT_DELETED"
}
```

404 Error: Not Found

Data Model

The following table describes data model for request or response:

Table 2-608 ProxySelectionRoutingModeWrapper

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
configName	String	M	1	Indicates a unique configName used to identify a record. Length: 256 Default value: NA Range: Allowed character combinations should be alpha-numeric, hyphen, and underscore.
isRoamingRequest	Boolean	O	1	Identifies roaming requests. Default value: true Range: true
remotePlmnList	array<PlmnId>	M	1...N	Indicates the list of target network's PLMN IDs. Both mcc and mnc as '*' indicates that any PLMN is reachable through the roaming proxy routing instance. Valid configuration for remotePlmnList: - Either both MCC and MNC must be '*', or both should have values. Valid value example: [{"mcc": "123", "mnc": "234"}] [{"mcc": "*", "mnc": "*"}] - Invalid value example: [{"mcc": "*", "mnc": "234"}] [{"mcc": "212", "mnc": "*"}] [{"mcc": "*", "mnc": "*"}], {"mcc": "123", "mnc": "891"}] Partial or complete overlap of the remotePlmnList with existing configurations is not allowed. Default value: NA Range: All valid PLMN Ids according to TS 23.003 and 29.571 [{"mcc": "*", "mnc": "*"}]

Table 2-608 (Cont.) ProxySelectionRoutingModeWrapper

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
nextHopProxyRoutingMode	array<String>	M	1...N	Indicates a prioritized list of proxy NF types that are selected at SCP for routing roaming requests. If all available proxies of a configured NF type are unable to serve the request, SCP falls back to the next configured proxy NF type for selection and routing. Note: Only one value of roaming proxy is allowed in this list: [SEPP] [<custom roaming proxy NF Type>] Default value: NA Range: [SEPP] - Any configured nfType with nfRole as CUSTOM_5G_ROAMING_PROXY
createdTimestamp	String	Read only	-	Indicates the timestamp when the record is created in the database. It is not required in the request, but it is present in the response. Default value: Range:
updatedTimestamp	String	Read only	-	Indicates the timestamp when the record is last updated in the database. It is not required in the request, but it is present in the response. Default value: Range:

2.57 Configuring Next Hop Proxy NF Service Config

The Next Hop Proxy NF Service Config REST API is used to configure next hop proxy NF service settings, which define the service-specific configuration to be applied when routing to a next hop proxy. This configuration is used in NF Service Config Set REST API.

Resources

The following table describes the resource name to retrieve, add, update, or remove the nfservice-config/next-hop-proxy configuration data:

Table 2-609 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
nfservice-config/next-hop-proxy	/ocscp/scpc-configuration/{version}/nfservice-config/next-hop-proxy	GET	Retrieves all Next Hop Proxy NF Service Configuration records.
nfservice-config/next-hop-proxy	/ocscp/scpc-configuration/{version}/nfservice-config/next-hop-proxy/{configName}	GET	Retrieves the Next Hop Proxy NF Service Configuration for the given configName, if the record exists.

Table 2-609 (Cont.) Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
nfservice-config/next-hop-proxy	/ocscp/scpc-configuration/{version}/nfservice-config/next-hop-proxy/{configName}	PUT	Adds or updates the Next Hop Proxy NF Service Configuration for a configName.
nfservice-config/next-hop-proxy	/ocscp/scpc-configuration/{version}/nfservice-config/next-hop-proxy/{configName}	DELETE	Removed the Next Hop Proxy NF Service Configuration for the given configName. default record (defaultnextHopProxyConfig) cannot be deleted.

Resource Definition**GET**

This resource fetches all the next-hop-proxy NF service configuration.

Resource URI: /ocscp/scpc-configuration/{version}/nfservice-config/next-hop-proxy

The following table describes the data model supported by the GET response body on this resource:

Table 2-610 Response Body Parameters

Data Type	Mandator y (M), Optional (O), or Conditional (C)	Cardinalit y	Response Codes	Description
NextHopProxyNfServiceConfigWrapper	M	1...N	200 OK	Indicates the successful retrieval of all nextHopProxyNfServiceData configurations.

This resource fetches the next-hop-proxy NF Service configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/nfservice-config/next-hop-proxy/{configName}

The following table describes the path parameter supported by the GET response body on this resource:

Table 2-611 Path Parameter

Name	Data Type	Mandator y (M), Optional (O), or Conditional (C)	Description
configName	String	M	Fetches configurations based on the configName.

The following table describes data structures supported by the GET response body on these resources:

Table 2-612 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
NextHopProxyNfServiceConfigWrapper	M	1	200 OK	Indicates the successful retrieval of nextHopProxyNfServiceData for the given configName.
ProblemDetails	M	1	404 Not Found	Indicates the problem details.

Sample of a Successful GET API

Request:

```
curl -X 'GET' 'http://<localhost>:32586/ocscp/scpc-configuration/v1/nf-service-config/next-hop-proxy/defaultNextHopProxyNfServiceConfig' -H 'accept: application/json'
```

Response:

```
{
  "configName": "defaultNextHopProxyConfig",
  "nextHopProxyNfServiceData": {
    "loadBasedCongestionControlEnabled": true,
    "nfServiceLoadBasedCongestionControlCfg": "defaultRuleForNextHopScp"
  },
  "createdTimestamp": "2025-04-25 14:50:56.0",
  "updatedTimestamp": "2025-04-25 14:50:56.0"
}
```

Sample of an Error GET API

Request:

```
curl -X 'GET' 'http://<localhost>:32586/ocscp/scpc-configuration/v1/nf-service-config/next-hop-proxy/config3' -H 'accept: application/json'
```

Response:

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "Next Hop Proxy NF Service Configuration not found against given configName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nf-service-config/next-hop-proxy/config3",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

PUT

This resource configures next-hop-proxy NF service configuration for the given data.

Resource URI: //ocscp/scpc-configuration/{version}/nfservice-config/next-hop-proxy/{configName}

The following table describes the path parameter supported by this resource:

Table 2-613 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Indicates the key for the PUT operation.

The following table describes the data structure supported by the PUT request body on this resource:

Table 2-614 Request Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
NextHopProxyNfServiceConfigWrapper	M	1	Indicates the next hop proxy NF service configuration to be added or updated.

The following table describes the data structure supported by the PUT response body on this resource:

Table 2-615 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Code	Description
NextHopProxyNfServiceConfigWrapper	M	1	200 OK	Indicates successful update of nextHopProxyNfServiceData configuration.
NextHopProxyNfServiceConfigWrapper	M	1	201 Created	Indicates successful creation of nextHopProxyNfServiceData configuration.
ProblemDetails	M	1	400 Bad Request	Indicates the problem details.

Sample of a Successful PUT API

Request:

```
curl -X 'PUT' \
'http://<localhost>:32265/ocscp/scpc-configuration/v1/nfservice-config/next-hop-proxy/config1' \
```

```
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d ' {
  "configName": "config1",
  "nextHopProxyNfServiceData": {
    "loadBasedCongestionControlEnabled": true,
    "nfServiceLoadBasedCongestionControlCfg": "defaultRuleForNextHopScp"
  }
} '
```

Response:

```
{
  "configName": "config1",
  "nextHopProxyNfServiceData": {
    "loadBasedCongestionControlEnabled": true,
    "nfServiceLoadBasedCongestionControlCfg": "defaultRuleForNextHopScp"
  },
  "createdTimestamp": "2024-04-24 14:50:56.0",
  "updatedTimestamp": "2024-04-24 14:50:56.0"
}
```

Sample 1 of an Error PUT API

Request:

```
curl -X 'PUT' \
'http://<localhost>:30937/ocscp/scpc-configuration/v1/nf-service-config/next-hop-proxy/config' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d ' {
  "configName": "config",
  "nextHopProxyNfServiceData": {
    "loadBasedCongestionControlEnabled": true,
    "nfServiceLoadBasedCongestionControlCfg": "rule"
  },
  "createdTimestamp": "2025-08-11 11:06:17",
  "updatedTimestamp": "2025-08-11 11:06:17"
} '
```

Response:

```
{
  "title": "Bad Request",
  "status": 400,
  "detail": "The given value for
nextHopProxyNfServiceData.nfServiceLoadBasedCongestionControlCfg is not
configured in Congestion Control (Resource name is congestion-control).
Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nf-service-config/next-hop-proxy/
config",
  "cause": "MANDATORY_IE_INCORRECT"
}
```


DELETE

This resource removes the next-hop-proxy NF Service Configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/nfservice-config/next-hop-proxy/{configName}

The following table describes the path parameter supported by this resource:

Table 2-616 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Removes next-hop-proxy NF service configuration based on configName.

The following table describes the data structure supported by the DELETE response body on this resource:

Table 2-617 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
N/A	M	1	204 No Content	Indicates successful deletion.
ProblemDetails	M	1	404 Not Found	Indicates problem details.
ProblemDetails	M	1	403 Forbidden	Removes default data results.

Sample of a Successful of DELETE API

Request:

```
curl -X 'DELETE' \
  'http://<localhost>:32265/ocscp/scpc-configuration/v1/nfservice-config/next-hop-proxy/config1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

Response: 204 OK

Sample of an Error DELETE API

Request:

```
curl -X 'DELETE' \
  'http://<localhost>:32265/ocscp/scpc-configuration/v1/nfservice-config/next-hop-proxy/config5' \
  -H 'accept: application/json' \
```

```
-H 'Content-Type: application/json'
```

Response:

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "Next Hop Proxy NF Service Configuration not found against
given configName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfservice-config/next-hop-proxy/
config5",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

Data Model

The following table describes data model for request or response:

Table 2-618 NextHopProxyNfServiceConfigWrapper

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Indicates a unique configName key to identify record. Length: 256 Default value: NA Range: Allowed character combinations should be alpha-numeric, hyphen, and underscore.
nextHopProxyNfServiceData	NextHopSCP	O	Indicates service specific configuration to apply when routing to next hop proxy. Default value: defaultRuleForNextHopScp Range: NA

Table 2-619 NextHopSCP

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
loadBasedCongestionControlEnabled	Boolean	M	Enables or disables congestion control for the associated service on the next hop proxy. Length: 256 Default value: true Range: true or false
nfServiceLoadBasedCongestionControlCfg	String	M	Indicates the name of the rule that holds the congestion control configuration. Based on the settings defined in this rule, congestion control is applied to the next hop proxy. Default value: NA Range: NA

Default Next Hop Proxy Nf Service Configuration:

```
{
  "configName": "defaultNextHopRoamingProxyConfig",
  "nextHopRoamingProxyNfServiceData": {
    "loadBasedCongestionControlEnabled": true,
    "nfServiceLoadBasedCongestionControlCfg": "defaultRuleForNextHopSepp"
  }
  "createdTimestamp": "2025-04-14 14:50:56.0",
  "updatedTimestamp": "2025-04-14 14:50:56.0"
}
```

2.58 Configuring Next Hop Proxy Routing Config

The Next Hop Proxy Routing Config REST API is used to configure next hop proxy routing.

Resources

The following table describes the resource name to retrieve, add, update, or remove the routing-config/next-hop-proxy configuration data:

Table 2-620 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
routing-config/next-hop-proxy	/ocscp/scpc-configuration/{version}/routing-config/next-hop-proxy	GET	Retrieves all nextHopProxyRoutingConfig records.
routing-config/next-hop-proxy	/ocscp/scpc-configuration/{version}/routing-config/next-hop-proxy/{configName}	GET	Gets nextHopProxyRoutingConfig for given configName, if record exists.
routing-config/next-hop-proxy	/ocscp/scpc-configuration/{version}/routing-config/next-hop-proxy/{configName}	PUT	Creates or updates nextHopProxyRoutingConfig record.
routing-config/next-hop-proxy	/ocscp/scpc-configuration/{version}/routing-config/next-hop-proxy/{configName}	DELETE	Deletes nextHopProxyRoutingConfig for the given configName.

Resource Definition

GET

This resource fetches all the nextHopProxyRouting configuration.

Resource URI: /ocscp/scpc-configuration/{version}/routing-config/next-hop-proxy

The following table describes the data model supported by the GET response body on this resource:

Table 2-621 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
nextHopProxyRoutingConfigData	M	1	200 OK	Indicates successful fetch of all nextHopProxyRoutingConfigData objects

This resource fetches the nextHopConfig configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/routing-config/next-hop-proxy/{configName}

The following table describes the path parameter supported by the GET response body on this resource:

Table 2-622 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Fetches configurations based on configName.

The following table describes data structures supported by the GET response body on these resources:

Table 2-623 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
nextHopProxyRoutingConfigData	M	1	200 OK	Indicates successful fetch of nextHopProxyRoutingConfigData configurations.
ProblemDetails	M	1	404 Not Found	Indicates problem details.

Sample of a Successful GET API

```
curl -X 'GET' 'http://10.75.213.61:32586/ocscp/scpc-configuration/v1/routing-
config/next-hop-proxy/config1' -H 'accept: application/json'
```

```
{
  "configName": "config1",
  "nextHopProxyRoutingConfigData": {
    "totalTransactionLifetime": "7s",
    "responseTimeout": "4s",
    "reRouteConditionList": [ {
      "statusCode": "307"
    },
    {
      "statusCode": "308"
    },
    {
      "statusCode": "429"
    },
    {
      "statusCode": "5xx"
    },
    {
      "statusCode": "timeout"
    },
    {
      "statusCode": "connectionError"
    }
  ],
  "service": {
    "maxRoutingAttempts": 2
  },
  "serviceEndpoint": {
    "maxRoutingAttempts": 1
  },
  "exceptions": [
    {
      "name": "Destination_Exhausted",
      "action": "Send_Answer",
      "error_code": 504,
      "error_response": "Gateway Timeout",
      "error_profile": "default_exception_error_destination_exhausted"
    }
  ]
}
"createdTimestamp": "2024-04-24 14:50:56.0",
"updatedTimestamp": "2024-04-24 14:50:56.0"
}
```

Sample of an Error GET API

```
curl -X 'GET' 'http://10.75.213.61:32586/ocscp/scpc-configuration/v1/routing-config/next-hop-proxy/config3' -H 'accept: application/json'
```

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "Next Hop Proxy Routing Configuration not found against given configName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/routing-config/next-hop-proxy/c2342v",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

PUT

This resource configures nextHopProxyRoutingConfig for the given data.

Resource URI: /ocscp/scpc-configuration/{version}/routing-config/next-hop-proxy/{configName}

The following table describes the path parameter supported by this resource:

Table 2-624 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Indicates the key for the PUT operation.

The following table describes the data structure supported by the PUT request body on this resource:

Table 2-625 Request Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
nextHopProxyRoutingConfigData	M	1	nextHopProxyRoutingConfigData to be added or updated.

The following table describes the data structure supported by the PUT response body on this resource:

Table 2-626 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Code	Description
nextHopProxyRoutingConfigData	M	1	200 OK	Indicates successful update of nextHopProxyRoutingConfigData configurations.
nextHopProxyRoutingConfigData	M	1	201 Created	Indicates successful creation of nextHopProxyRoutingConfigData configurations.
ProblemDetails	M	1	400 Bad Request	Problem details
ProblemDetails	M	1	403 Forbidden	Updating default data results

Sample of a Successful PUT API

```
curl -X 'PUT' \
  'http://10.75.224.103:32265/ocscp/scpc-configuration/v1/routing-config/next-hop-proxy/config1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "config1",
    "nextHopProxyRoutingConfigData": {
      "totalTransactionLifetime": "7s",
      "responseTimeout": "4s",
      "reRouteConditionList": [{
        "statusCode": "connectionError"
      }
    ],
    "service": {
      "maxRoutingAttempts": 2
    },
    "serviceEndpoint": {
      "maxRoutingAttempts": 1
    },
    "exceptions": [
      {
        "name": "Destination_Exhausted",
        "action": "Send_Answer",
        "error_code": 504,
        "error_response": "Gateway Timeout",
        "error_profile": "default_exception_error_destination_exhausted"
      }
    ]
  }
}'

{
  "configName": "config1",
```

```

"nextHopProxyRoutingConfigData": {
  "totalTransactionLifetime": "7s",
  "responseTimeout": "4s",
  "reRouteConditionList": [{
    "statusCode": "connectionError"
  }
],
  "service": {
    "maxRoutingAttempts": 2
  },
  "serviceEndpoint": {
    "maxRoutingAttempts": 1
  },
  "exceptions": [
    {
      "name": "Destination_Exhausted",
      "action": "Send_Answer",
      "error_code": 504,
      "error_response": "Gateway Timeout",
      "error_profile": "default_exception_error_destination_exhausted"
    }
  ]
}
}
"createdTimestamp": "2024-04-24 14:50:56.0",
"updatedTimestamp": "2024-04-24 14:50:56.0"
}

```

Sample 1 of an Error PUT API

```

curl -X 'PUT' \
'http://<localhost>:30937/ocscp/scpc-configuration/v1/routing-config/next-hop-proxy/defaultNextHopProxyConfig' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "configName": "defaultNextHopProxyConfig",
  "nextHopProxyRoutingConfigData": {
    "totalTransactionLifetime": "7s",
    "responseTimeout": "4s",
    "reRouteConditionList": [{
      "statusCode": "connectionError"
    }
  ],
  "service": {
    "maxRoutingAttempts": 2
  },
  "serviceEndpoint": {
    "maxRoutingAttempts": 1
  },
  "exceptions": [
    {
      "name": "Destination_Exhausted",
      "action": "Send_Answer",
      "error_code": 504,

```



```
        "error_response": "Gateway Timeout",
        "error_profile": "default_exception_error_destination_exhausted"
      }
    ]
  }
}
"createdTimestamp": "2024-04-24 14:50:56.0",
"updatedTimestamp": "2024-04-24 14:50:56.0"
}'

{
  "title": "Forbidden",
  "status": 403,
  "detail": "The default configuration cannot be updated. Please refer to
the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/routing-config/next-hop-proxy/
defaultNextHopProxyConfig",
  "cause": "MODIFICATION_NOT_ALLOWED"
}
```

403 Error: Forbidden

DELETE

This resource removes the nextHopProxyRouting configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/routing-config/next-hop-proxy/{configName}

The following table describes the path parameter supported by this resource:

Table 2-627 Path Parameter

Name	Data Type	Mandator y (M), Optional (O), or Condition al (C)	Description
configName	String	M	Deletes configurations based on combination of configName.o

The following table describes the data structure supported by the DELETE response body on this resource:

Table 2-628 Response Body Parameters

Data Type	Mandator y (M), Optional (O), or Condition al (C)	Cardinalit y	Response Codes	Description
n/a	M	1	204 No Content	Successful deletion
ProblemDetails	M	1	404 Not Found	Problem details

Table 2-628 (Cont.) Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
ProblemDetails	M	1	403 Forbidden	Deleting default data results

Sample of a Successful of DELETE API

Request:

```
curl -X 'DELETE' \
  'http://<localhost>:32265/ocscp/scpc-configuration/v1/routing-config/next-hop-proxy/config1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

Response: 204 No Content

Sample of an Error DELETE API

Request:

```
curl -X 'DELETE' \
  'http://<localhost>:32265/ocscp/scpc-configuration/v1/routing-config/next-hop-proxy/config5' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

Response:

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "Next Hop Proxy Routing Configuration data not found against given configName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/routing-config/next-hop-proxy/config5",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

Data Model

The following table describes data model for request or response:

Table 2-629 nextHopProxyRoutingConfigData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description	Applicable to NF Service Level	Applicable to Pod level within NF
service	NextHopSCPServiceV2	M	See Table 2-630 .		
serviceEndpoint	NextHopSCPServiceEndpointV2	M	See Table 2-630 .		
responseTimeout	String	M	Indicates the allotted time to respond to a message request. When the response timeout expires, the SCP performs alternate rerouting to an available alternate NF or pod, or sends an error message. Default value: NA Range: 100 - 50000 ms or 1 - 50 s	Yes	Yes

Table 2-629 (Cont.) nextHopProxyRoutingConfigData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description	Applicable to NF Service Level	Applicable to Pod level within NF
reRouteConditionList	array(ProblemData)	O	Error conditions on which SCP attempts alternate routing. If SCP encounters errors such as "connectionError" or "timeout" while routing to the upstream server, and if these errors are configured, SCP attempts rerouting based on the configured alternate routing mechanism. If no value is provided in rerouteConditionList, or if it is empty, then SCP treats it as no reroute conditions configured for the rule. Rerouting does not occur based on an empty list. During upgrade, rerouteConditionList consists of only connectionError, and no other default values are populated. The routing behavior is impacted if any new status code is added. Apart from the default value, you can add more status codes to reRouteConditionList (status codes present in the value range). Default value: <pre> "reRouteConditionList": [{ "statusCode": "307" }, { "statusCode": "308" }, { "statusCode": "429" }, { "statusCode": "5xx" }, { "statusCode": </pre>	Yes	Yes

Table 2-629 (Cont.) nextHopProxyRoutingConfigData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description	Applicable to NF Service Level	Applicable to Pod level within NF
			<pre>"timeout" }, { "statusCode": "connectionError" }]</pre> Note: These default values are applied only to the default record that is automatically populated during a fresh SCP installation. After installation, if you create a new rule and provide reRouteConditionList as empty, it is preserved as empty. Range: 301, 302, 303, 304, 307, 308, 400, 401, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 421, 422, 425, 426, 428, 429, 431, 451, 500, 501, 502, 503, 504, 505, 506, 507, 508, 510, 511, 5xx, "connectionError", "timeout"		
totalTransactionLifetime	String	M	The total time consumed in processing all retries must not exceed the total transaction lifetime. This defines the total time allowed to forward a request, including the initial attempt and all subsequent routing attempts. Default value: NA Range: 100 - 240000 ms or 1 - 240 s	Yes	Yes

Table 2-629 (Cont.) nextHopProxyRoutingConfigData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description	Applicable to NF Service Level	Applicable to Pod level within NF
exceptions	Array(Exception ErrorResponse)	O	Indicates the destination exhausted action. Specifies the action taken when a request cannot be processed because an internal resource is exhausted. Options are: - Abandon with no answer. - Sends an answer with the configured HTTP status code. If error_profile is present, the response is created based on the parameters in the referenced Error Profile. Default value: Send Answer with configured http status code (Default 504). Range: - Only 1 entry is allowed. - If you do not provide any entry, default entry shall be added. - If more than 1 entry is added, it will be rejected.	Yes	Yes

Table 2-630 NextHopSCPSERVICEV2

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description	Applicable to NF Service Level	Applicable to Pod level within NF
maxRoutingAttempts	int	M	Specifies the number of rerouting attempts, or retries, at the service level. Specifies the maximum number of times the SCP is allowed to forward a request message. If the maximum routing attempts value is set to 1, the total transaction lifetime value is not required. If the maximum routing attempts value is greater than 1, the total transaction lifetime value is considered during rerouting processing. Default value: NA Range: 1-5	Yes	Yes

Table 2-631 NextHopSCPServiceEndpointV2

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description	Applicable to NF Service Level	Applicable to Pod level within NF
maxRoutingAttempts	int	M	Specifies the number of rerouting attempts, or retries, at the NF or pod level. Specifies the maximum number of times the SCP is allowed to forward a request message. If the maximum routing attempts value is set to 1 for both the service and pod levels, the total transaction lifetime value is not required. If the maximum routing attempts value, considering both service and pod levels, is greater than 1, the total transaction lifetime value is considered during rerouting processing. Default value: NA Range: 1 - 5	Yes	Yes

Table 2-632 ProblemData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description	Applicable to NF Service Level	Applicable to Pod level within NF
statusCode	String	O	Specifies the error conditions under which the SCP attempts alternate routing. If SCP encounters errors such as "connectionError", "timeout", or any other configured error while routing to the upstream server, it attempts rerouting based on the configured alternate routing mechanism. If not provided, it is initialized with the values specified in the default column. Default value: 301, 302, 303, 304, 307, 308, 400, 401, 403, 404, 405, 406, 407, 408, 409 , 410, 411, 412, 413, 414, 415, 416, 417, 421, 422, 425, 426, 428, 429, 431, 451, 500, 501, 502, 503, 504, 505, 506, 507, 508, 510, 511, 5xx as configured in enginnerging config table. Range: "reRouteConditionList": <pre>[{ "statusCode": "5xx" }, { "statusCode": "429" }, { "statusCode": "307" }, { "statusCode": "308" }, { "statusCode": "timeout" }, {</pre>	Yes	Yes

Table 2-632 (Cont.) ProblemData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description	Applicable to NF Service Level	Applicable to Pod level within NF
			<pre> "statusCode": "connectionError" }] </pre>		

Table 2-633 ExceptionErrorResponse

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description	Applicable to NF Service Level	Applicable to Pod level within NF
name	string	M	Name of the exception.	Yes	Yes
action	string	M	Indicates the action to be taken when the above mentioned exception name is received.	Yes	Yes
error_profile	string	O	Name of error profile referred in ERROR_PROFILE_CONFIG. If provided, response will be created based on the error profile parameters.	Yes	Yes

2.59 Configuring Roaming Proxy Info

The Roaming Proxy Info REST API is used to configure custom roaming proxy routing settings for each NF instance. The specified parameter values are used when configuring custom roaming proxy NF profiles if those values are missing from the designated JSON path in the received NF profile, as defined in the roaming-proxy-support-config REST API.

The parameter values are determined based on the following priority order:

1. Obtain the value from the received NF profile at the JSON path specified in the roaming-proxy-support-config REST API.
2. If the previous step fails, use the value configured using the roaming-proxy-info REST API.
3. If both previous steps fail, use the default values present in the roaming-proxy-support-config REST API.

Resources

The following table describes the resource name to retrieve, add, update, or remove the roaming-proxy-info configuration data:

Table 2-634 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
roaming-proxy-info	/ocscp/scpc-configuration/{version}/proxy-info/roaming-proxy-info	GET ALL	Retrieves all the roaming proxy info configurations.
roaming-proxy-info	/ocscp/scpc-configuration/{version}/proxy-info/roaming-proxy-info/{configName}	GET	Retrieves the roaming proxy info configuration for the specified configName.
roaming-proxy-info	/ocscp/scpc-configuration/{version}/proxy-info/roaming-proxy-info/{configName}	PUT	Creates or updates the roaming proxy info for the specified configName. • nfType and nfInstancelid cannot be modified for an existing configuration. • nfInstancelid must be unique across all configurations.
roaming-proxy-info	/ocscp/scpc-configuration/{version}/proxy-info/roaming-proxy-info/{configName}	DELETE	Deletes the roaming proxy info configuration for the specified configName.

Resource Definition**GET**

This resource fetches roaming-proxy-info configuration.

Resource URI: /ocscp/scpc-configuration/{version}/proxy-info/roaming-proxy-info

The following table describes the data model supported by the GET response body on this resource:

Table 2-635 Response Body Parameters

Parameter	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
RoamingProxyInfoWrapper []	M	1..N	200 OK	Indicates all the roaming-proxy-info configuration.

This resource fetches the roaming-proxy-info configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/proxy-info/roaming-proxy-info/{configName}

The following table describes the path parameter supported by the GET response body on this resource:

Table 2-636 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Fetches the corresponding configuration for configName

The following table describes data structures supported by the GET response body on these resources:

Table 2-637 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
RoamingProxyInfoWrapper	M	1	200 OK	Indicates roaming-proxy-info configuration.
ProblemDetails	M	1	404 Not Found	Indicates the problem details.

Sample of a Successful GET API

Request:

```
curl -X 'GET' 'http://<localhost>:30349/ocscp/scpc-configuration/v1/proxy-info/roaming-proxy-info/config1' -H 'accept: application/json'
```

Response:

```
{
  "configName": "config1",
  "roamingProxyInfoCfgData": {
    "nfType": "5GNIF",
    "nfInstanceId": "3faf2bbc-6e4a-2828-a507-a14ef8e1bc7b",
    "roamingProxyInfo": {
      "scheme": "http",
      "port": 65535,
      "proxyPorts": null,
      "remotePlmnList": [
        {
          "mcc": "",
          "mnc": ""
        }
      ]
    }
  },
  "createdTimestamp": "2025-11-28 11:52:31",
  "updatedTimestamp": "2025-11-28 11:52:31"
}
```

Sample of an Error GET API

Request:

```
curl -X 'GET' 'http://<localhost>:30349/ocscp/scpc-configuration/v1/proxy-info/roaming-proxy-info/CfgName11' -H 'accept: application/json'
```

Response:

```
{
  "title": "Not Found",
  "status": "404",
  "detail": "Roaming Proxy Info Configuration data not found against given configName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-info/roaming-proxy-info/config11",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

PUT

This resource adds or updates the roaming-proxy-info configuration data.

Resource URI: /ocscp/scpc-configuration/{version}/proxy-info/roaming-proxy-info/{configName}

The following table describes the path parameter supported by this resource:

Table 2-638 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Indicates the Key for the PUT operation.

The following table describes the data structure supported by the PUT request body on this resource:

Table 2-639 Request Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
RoamingProxyInfoWrapper	M	1	Indicates the roaming-proxy-info configurations to be added or modified.

The following table describes the data structure supported by the PUT response body on this resource:

Table 2-640 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Code	Description
RoamingProxyInfoWrapper	M	1	201 Created	Indicates new roaming-proxy-info configuration creation.
RoamingProxyInfoWrapper	M	1	200 OK	Updates existing record.
ProblemDetails	M	1	400 Bad Request	Indicates the problem details
ProblemDetails	M	1	403 Forbidden	Updates those parameters that cannot be modified.

Sample of a Successful PUT API

Request:

```
curl -X 'PUT' \
  'http://<localhost>:31249/ocscp/scpc-configuration/v1/proxy-info/roaming-
  proxy-info/config2' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "config2",
    "roamingProxyInfoCfgData": {
      "nfType": "TEST1",
      "nfInstanceId": "3faf2bbc-6e4a-2828-a507-a14ef8e1bc7b",
      "roamingProxyInfo": {
        "scheme": "http",
        "port": 65535,
        "remotePlmnList": [
          {
            "mcc": "",
            "mnc": ""
          }
        ]
      }
    },
    "createdTimestamp": "string",
    "updatedTimestamp": "string"
  }'
```

Response

```
{
  "configName": "config2",
  "roamingProxyInfoCfgData": {
    "nfType": "TEST1",
    "nfInstanceId": "3faf2bbc-6e4a-2828-a507-a14ef8e1bc7b",
    "roamingProxyInfo": {
      "scheme": "http",
      "port": 65535,
      "proxyPorts": null,

```

```

        "remotePlmnList": [
            {
                "mcc": "*",
                "mnc": "*"
            }
        ]
    },
    "createdTimestamp": "2025-11-28 11:52:31",
    "updatedTimestamp": "2025-11-28 11:52:31"
}

```

Sample of an Error PUT API

##Sample 1:

Request:

```

curl -X 'PUT' \
  'http://<localhost>:31249/ocscp/scpc-configuration/v1/proxy-info/roaming-
proxy-info/CfgName2' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "aa",
    "roamingProxyInfoCfgData": {
      "nfType": "aa",
      "nfInstanceId": "6faf1bbc-6e4a-2828-a507-a14ef8e1bc5b",
      "roamingProxyInfo": {
        "proxyPorts": {
          "http": 65535
        },
        "remotePlmnList": [
          {
            "mcc": "222",
            "mnc": "788"
          }
        ]
      }
    },
    "createdTimestamp": "string",
    "updatedTimestamp": "string"
  }'

```

Response:

```

{
  "title": "Bad Request",
  "status": 400,
  "detail": "Please provide same configName in Path Variable and Request Body.
Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-info/roaming-proxy-info/
CfgName2",
  "cause": "MANDATORY_IE_INCORRECT"
}

```

##Sample 2:

If a record with configName as "config" exists::
 {"configName": "config", "roamingProxyInfoCfgData":

```
{
  "nfType": "5GNIF",
  "nfInstanceId": "6faf1bbc-6e4a-2828-a507-a14ef8e1bc5b",
  "roamingProxyInfo": {
    "proxyPorts": {
      "http": 65535
    },
    "remotePlmnList": [
      {
        "mcc": "222",
        "mnc": "788"
      }
    ]
  }
}
```

and an attempt to modify the unmodifiable fields is performed

Request:

```
curl -X 'PUT' \
  'http://<localhost>:31249/ocscp/scpc-configuration/v1/proxy-info/roaming-proxy-info/CfgName2' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "config",
    "roamingProxyInfoCfgData": {
      "nfType": "5GNIF",
      "nfInstanceId": "6faf1bbc-6e4a-2828-a507-a14ef8e1bc5c",
      "roamingProxyInfo": {
        "proxyPorts": {
          "http": 65535
        },
        "remotePlmnList": [
          {
            "mcc": "222",
            "mnc": "788"
          }
        ]
      }
    }
  },
  "createdTimestamp": "string",
  "updatedTimestamp": "string"
}'
```

Response:

```
{
  "title": "Forbidden",
  "status": 403,
  "detail": "nfInstanceId should not be modified for existing configuration. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-info/roaming-proxy-info/config",
  "cause": "MODIFICATION_NOT_ALLOWED"
}
```

##Sample 3:

If a record with configName as "config" exists::

```
{
  "configName": "config",
  "roamingProxyInfoCfgData": {
    "nfType": "5GNIF",
    "nfInstanceId": "6faf1bbc-6e4a-2828-a507-a14ef8e1bc5b",
    "roamingProxyInfo": {
      "proxyPorts": {
        "http": 65535
      },
      "remotePlmnList": [
        {
          "mcc": "222",
          "mnc": "788"
        }
      ]
    }
  }
}
```

and an attempt to add a new record with same nfInstanceId is performed.

Request:

```
curl -X 'PUT' \
  'http://<localhost>:31249/ocscp/scpc-configuration/v1/proxy-info/roaming-proxy-info/CfgName2' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "config1",
```

```

"roamingProxyInfoCfgData": {
  "nfType": "5GNIIF2",
  "nfInstanceId": "6faf1bbc-6e4a-2828-a507-a14ef8e1bc5b",
  "roamingProxyInfo": {
    "proxyPorts": {
      "http": 80
    },
    "remotePlmnList": [
      {
        "mcc": "123",
        "mnc": "321"
      }
    ]
  }
},
"createdTimestamp": "string",
"updatedTimestamp": "string"
}'
Response:
{
  "title": "Bad Request",
  "status": 400,
  "detail": "The specified nfInstanceId is already in use by configuration
config. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-info/roaming-proxy-info/
config1",
  "cause": "MANDATORY_IE_INCORRECT"
}

```

DELETE

This resource removes the roaming-proxy-info configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/proxy-info/roaming-proxy-info/{configName}

The following table describes the path parameter supported by this resource:

Table 2-641 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Removes configurations based on configName.

The following table describes the data structure supported by the DELETE response body on this resource:

Table 2-642 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
None	M	1	204 No Content	Returns only response code in case of successful responses.
ProblemDetails	M	1	404 Not Found	Indicates the problem details.

Sample of a Successful of DELETE API

Request:

```
curl -X 'DELETE' \
  'http://<localhost>:30349/ocscp/scpc-configuration/v1/proxy-info/roaming-
  proxy-info/CfgName2' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

Response: 204 OK

Sample of an Error DELETE API

Request:

```
curl -X 'DELETE' \
  'http://<localhost>:30349/ocscp/scpc-configuration/v1/proxy-info/roaming-
  proxy-info/CfgName7' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

Response:

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "Roaming Proxy Info Configuration data not found against given
  configName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/proxy-info/roaming-proxy-info/
  CfgName7",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

Data Model

The following table describes data model for request or response:

Table 2-643 RoamingProxyInfoWrapper

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
configName	String	M	1	configName is unique key to identify record. Allowed character combinations should be alpha-numeric, hyphen, and underscore.
roamingProxyInfoCfgData	RoamingProxyInfoCfgData	M	-	This parameter defines roaming proxy info configurations data.
createdTimestamp	String	Read only	-	Time stamp of created record, not needed in request, but would be present in response
updatedTimestamp	String	Read only	-	Time stamp of updated record, not needed in request, but would be present in response

Table 2-644 RoamingProxyInfoCfgData

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
nfType	NFType	M	1	Specifies the NF type of the custom roaming proxy. Only NF types with the NF role set to CUSTOM_5G_ROAMING_PROXY are allowed. The NF type cannot be updated for an existing configuration. Length: 100 Range: Includes all NF types configured in the nfTypes-nfServices REST API with the NF role set to CUSTOM_5G_ROAMING_PROXY.
nfInstanceId	NFInstanceId	M	1	Specifies the NF instance ID of the custom roaming proxy NF instance. The nfInstanceId must be unique across all configurations. The nfInstanceId cannot be modified for an existing configuration.
roamingProxyInfo	RoamingProxyInfo	M	0.. 1	This parameter defines the roaming proxy information configuration data.

Table 2-645 RoamingProxyInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
scheme	String	C	0..1	Specifies the HTTP scheme of the roaming proxy NF instance. Either proxyPorts or a combination of scheme and port must be configured for the roaming proxy. If proxyPorts is not present in the configuration, then both scheme and port are mandatory parameters.

Table 2-645 (Cont.) RoamingProxyInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
port	Integer	C	0..1	Specifies the port of the roaming proxy NF instance. Either proxyPorts or a combination of scheme and port must be configured for the roaming proxy. If proxyPorts is not present in the configuration, then both scheme and port are mandatory parameters.
proxyPorts	ProxyPortDefault Config	C	0..1	Specifies the HTTP scheme and port of the roaming proxy NF instance. Either proxyPorts or a combination of scheme and port must be configured for the roaming proxy. If the scheme and port combination is not present in the configuration, then proxyPorts becomes a mandatory parameter.
remotePlmnList	array(mcc, mnc)	M	1..N	Specifies the list of PLMN IDs served by the roaming proxy NF instance. Provides a JSON pointer to extract the value from a specific location within the NF profile. If the value is missing at the specified jsonPointer location for this attribute, it indicates that any PLMN can serve all PLMNs. An array of PLMN IDs is expected at the given JSON path in the registered NF profile.
mcc	String	M	1..1	Indicates Mobile Country Code.
mnc	String	M	1..1	Indicates Mobile Network Code

Table 2-646 RoamingProxyInfo

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
http	Integer	O	0..1	Specifies the HTTP port value to be used. If neither HTTP nor HTTPS is provided, an error is returned. If only HTTP is provided and HTTPS is not, the response includes only the HTTP field, and conversely. Range: 0-65535
https	Integer	O	0..1	Specifies the HTTPS port value to be used. If neither HTTP nor HTTPS values are provided, an error is returned. If only HTTPS is provided and HTTP is not, the response includes only the HTTPS field, and vice versa. Range: 0-65535

2.60 Configuring Next Hop Roaming Proxy NF Service Config

The Next Hop Roaming Proxy NF Service Config REST API is used to configure Next Hop Roaming Proxy NF service configurations, which define the service-specific settings to be applied when routing to a next hop roaming proxy. This configuration is used in the SCP NF Service Config Set REST API.

Resources

The following table describes the resource name to retrieve, add, update, or remove the nfservice-config/next-hop-roaming-proxy configuration data:

Table 2-647 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
nfservice-config/next-hop-roaming-proxy	/ocscp/scpc-configuration/{version}/nfservice-config/next-hop-roaming-proxy	GET	Retrieves all Next Hop Roaming Proxy NF Service Configuration records.
nfservice-config/next-hop-roaming-proxy	/ocscp/scpc-configuration/{version}/nfservice-config/next-hop-roaming-proxy/{configName}	GET	Gets the Next Hop Roaming Proxy NF Service Configuration for a given configName, if record exists.
nfservice-config/next-hop-roaming-proxy	/ocscp/scpc-configuration/{version}/nfservice-config/next-hop-roaming-proxy/{configName}	PUT	Adds or updates the Next Hop Roaming Proxy NF Service Configuration for a configName
nfservice-config/next-hop-roaming-proxy	/ocscp/scpc-configuration/{version}/nfservice-config/next-hop-roaming-proxy/{configName}	DELETE	Delete Next Hop Roaming Proxy NF Service Configuration for the given configName. The default record (defaultnextHopRoamingProxyConfig) cannot be deleted.

Resource Definition

GET

This resource fetches all the next-hop-roaming-proxy NF service configurations.

Resource URI: /ocscp/scpc-configuration/{version}/nfservice-config/next-hop-roaming-proxy

The following table describes the data model supported by the GET response body on this resource:

Table 2-648 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
NextHopRoamingProxyNfServiceConfigWrapper	M	1...N	200 OK	Indicates the successful retrieval of all nextHopRoamingProxyNfServiceData configurations.

This resource fetches next-hop-roaming-proxy Nf Service configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/nfservice-config/next-hop-roaming-proxy/{configName}

The following table describes the path parameter supported by the GET response body on this resource:

Table 2-649 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Fetches configurations based on the configName.

The following table describes data structures supported by the GET response body on these resources:

Table 2-650 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
NextHopRoamingProxyNfServiceConfigWrapper	M	1	200 OK	Indicates the successful retrieval of nextHopRoamingProxyNfServiceData for the given configName.
ProblemDetails	M	1	404 Not Found	Indicates the problem details.

Sample of a Successful GET API

Request:

```
curl -X 'GET' 'http://<localhost>:32586/ocscp/scpc-configuration/v1/nfservice-config/next-hop-roaming-proxy/defaultNextHopRoamingProxyConfig' -H 'accept:
```

```
application/json'

Response:
{
  "configName": "defaultNextHopRoamingProxyConfig",
  "nextHopRoamingProxyNfServiceData": {
    "loadBasedCongestionControlEnabled": true,
    "nfServiceLoadBasedCongestionControlCfg": "defaultRuleForNextHopSepp"
  }
  "createdTimestamp": "2024-04-25 14:50:56.0",
  "updatedTimestamp": "2024-04-25 14:50:56.0"
}
```

Sample of an Error GET API

```
Request:
curl -X 'GET' 'http://<localhost>:32586/ocscp/scpc-configuration/v1/nfservice-
config/next-hop-roaming-proxy/config3' -H 'accept: application/json'

Response:
{
  "title": "Not Found",
  "status": 404,
  "detail": "Next Hop Roaming Proxy NF Service Configuration not found
against given configName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfservice-config/next-hop-
roaming-proxy/config3",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

PUT

This resource configures next-hop-roaming-proxy NF service configuration for a given data.

Resource URI: /ocscp/scpc-configuration/{version}/nfservice-config/next-hop-roaming-proxy/{configName}

The following table describes the path parameter supported by this resource:

Table 2-651 Path Parameter

Name	Data Type	Mandator y (M), Optional (O), or Condition al (C)	Description
configName	String	M	Indicates the key for the PUT operation.

The following table describes the data structure supported by the PUT request body on this resource:

Table 2-652 Request Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
NextHopRoamingProxyNfServiceConfigWrapper	M	1	Indicates the next hop proxy NF service configuration to be added or updated.

The following table describes the data structure supported by the PUT response body on this resource:

Table 2-653 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Code	Description
NextHopRoamingProxyNfServiceConfigWrapper	M	1	200 OK	Indicates successful update of nextHopRoamingProxyNfServiceData configuration.
NextHopRoamingProxyNfServiceConfigWrapper	M	1	201 Created	Indicates successful creation of nextHopRoamingProxyNfServiceData configuration.
ProblemDetails	M	1	400 Bad Request	Indicates the problem details.

Sample of a Successful PUT API

Request:

```
curl -X 'PUT' \
  'http://<localhost>:32265/ocscp/scpc-configuration/v1/nf-service-config/next-hop-roaming-proxy/config1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "config1",
    "nextHopRoamingProxyNfServiceData": {
      "loadBasedCongestionControlEnabled": true,
      "nfServiceLoadBasedCongestionControlCfg": "defaultRuleForNextHopSepp"
    }
  }'
```

Response:

```
{
  "configName": "config1",
  "nextHopRoamingProxyNfServiceData": {
    "loadBasedCongestionControlEnabled": true,
    "nfServiceLoadBasedCongestionControlCfg": "defaultRuleForNextHopSepp"
  },
  "createdTimestamp": "2024-04-25 14:50:56.0",
}
```

```
"updatedAtTimestamp": "2024-04-25 14:50:56.0"
}
```

Sample 1 of an Error PUT API

Request:

```
curl -X 'PUT' \
'http://<localhost>:30937/ocscp/scpc-configuration/v1/nfservice-config/next-hop-roaming-proxy/config1' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "configName": "cfg",
  "nextHopRoamingProxyNfServiceData": {
    "loadBasedCongestionControlEnabled": true,
    "nfServiceLoadBasedCongestionControlCfg": "defaultRuleForNextHopSepp"
  }
}'
```

Response:

```
{
  "title": "Bad Request",
  "status": 400,
  "detail": "Please provide same configName in Path Variable and Request Body. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nfservice-config/next-hop-roaming-proxy/config1",
  "cause": "MANDATORY_IE_INCORRECT"
}
```

DELETE

This resource removes next-hop-roaming-proxy NF service configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/nfservice-config/next-hop-roaming-proxy/{configName}

The following table describes the path parameter supported by this resource:

Table 2-654 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Removes next-hop-roaming-proxy NF service configuration based on configName.

The following table describes the data structure supported by the DELETE response body on this resource:

Table 2-655 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
N/A	M	1	204 No Content	Indicates successful deletion.
ProblemDetails	M	1	404 Not Found	Indicates problem details.
ProblemDetails	M	1	403 Forbidden	Removes default data results.

Sample of a Successful of DELETE API

Request:

```
curl -X 'DELETE' \
  'http://<localhost>:32265/ocscp/scpc-configuration/v1/nf-service-config/next-hop-roaming-proxy/config1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

Response: 204 OK

Sample of an Error DELETE API

Request:

```
curl -X 'DELETE' \
  'http://<localhost>:32265/ocscp/scpc-configuration/v1/nf-service-config/next-hop-roaming-proxy/config5' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json'
```

Response:

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "Next Hop Roaming Proxy NF Service Configuration not found against given configName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nf-service-config/next-hop-roaming-proxy/config5",
  "cause": "DATA_NOT_FOUND"
}
```

404 Error: Not Found

Data Model

The following table describes data model for request or response:

Table 2-656 NextHopRoamingProxyNfServiceConfigWrapper

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Indicates a unique configName key to identify record. Length: 256 Default value: NA Range: Allowed character combinations should be alpha-numeric, hyphen, and underscore.
nextHopRoamingProxyNfServiceData	NextHopSEPP	O	Indicates service specific configuration to apply when routing to next hop roaming proxy. Default value: defaultRuleForNextHopScp Range: NA

Table 2-657 NextHopSEPP

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
loadBasedCongestionControlEnabled	Boolean	M	Enables or disables congestion control for the associated service on the next hop roaming proxy. Default value: true Range: true or false
nfServiceLoadBasedCongestionControlCfg	String	M	Indicates the name of the rule that holds the congestion control configuration. Based on the settings defined in this rule, congestion control is applied to the next hop roaming proxy. Default value: defaultRuleForNextHopSepp Range: NA

Default Next Hop Roaming Proxy Nf Service Configuration:

```
{
  "configName": "defaultNextHopRoamingProxyConfig",
  "nextHopRoamingProxyNfServiceData": {
    "loadBasedCongestionControlEnabled": true,
    "nfServiceLoadBasedCongestionControlCfg": "defaultRuleForNextHopSepp"
  }
  "createdTimestamp": "2025-04-14 14:50:56.0",
  "updatedTimestamp": "2025-04-14 14:50:56.0"
}
```

2.61 Configuring NF Group ID Retrieval

The NF Group ID Retrieval REST API is used to configure how SCP performs subscriber ID to group ID resolution. It allows you to define matching rules, control whether resolution is invoked or skipped, configure NF discovery inputs, and handle failures in a predictable manner.

- **Match Criteria Definition:** Rules can be matched using fixed configuration values such as subscriber ID type, target NF type, HTTP method, or API resource URI. Additionally, the API supports dynamic matching through `queryMatch`, allowing SCP to evaluate and process requests based on query parameters.
- **Rule Actions (Invoke or Skip):** When a rule matches, the configured action determines whether SCP should perform group ID resolution or bypass it. This allows you to apply group ID resolution only where required and avoid unnecessary processing for requests.
- **NF Discovery Configuration:** The API allows you to configure mandatory and optional NF discovery parameters required to locate the correct Oracle Communications Cloud Native Core, Unified Data Repository (UDR) before resolution is performed. This provides flexibility in how SCP identifies the target NF (UDR).
- **NF Discovery Exception Handling:** You can define how SCP should behave when NF discovery fails or returns an unexpected result.
- **NF GroupID Resolution Exception Handling:** You can also define how SCP should behave when group ID resolution itself fails after UDR discovery is complete.

Note

Ensure that you have configured the following REST APIs:

- `subid_to_nfgrp_id_resolution`
- `ie-registry/discovery-query-param/custom`
- `ie-registry/discovery-query-param/3gpp-defined`
- `ie-binding-info/nfgrp_idretrieval-cfg`
- `exception-config-set`

Resources

The following table describes the resource name to retrieve, add, update, or remove the `nf-grp-id-retrieval-rule-cfg` configuration data:

Table 2-658 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
<code>nf-grp-id-retrieval-rule-cfg</code>	<code>/ocscp/scpc-configuration/{version}/nf-grp-id-retrieval-rule-cfg</code>	GET	Retrieves NF group ID retrieval configurations based on <code>configName</code> , <code>targetNfType</code> , and <code>subscriberIdType</code> . If no query parameters are provided, all configurations are returned.

Table 2-658 (Cont.) Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
nf-grp-id-retrieval-rule-cfg	/ocscp/scpc-configuration/{version}/nf-grp-id-retrieval-rule-cfg/{configName}	GET	Retrieves the NF group ID retrieval configuration associated with the specified configName.
nf-grp-id-retrieval-rule-cfg	/ocscp/scpc-configuration/{version}/nf-grp-id-retrieval-rule-cfg/{configName}	PUT	Creates or updates the NF group ID retrieval configuration for the specified configName. defaultRule can be updated.
nf-grp-id-retrieval-rule-cfg	/ocscp/scpc-configuration/{version}/nf-grp-id-retrieval-rule-cfg/{configName}	DELETE	Removes the NF group ID retrieval configuration for the specified configName.

Resource Definition**GET**

This resource fetches all the NF groupID retrieval configurations.

Resource URI: /ocscp/scpc-configuration/{version}/nf-grp-id-retrieval-rule-cfg

The following table describes the data structure supported by the GET response body on this resource:

Table 2-659 Response Body Parameters

Parameter Name	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
NfGrpIdRetrievalCfgWrapper	M	1..N	200 OK	Indicates the nf-grp-id-retrieval-rule-cfg configuration.

This resource fetches the Nf GrpId Retrieval Cfg Wrapper configuration based on NfGrpIdRetrievalCfgWrapper.

Resource URI: /ocscp/scpc-configuration/{version}/nf-grp-id-retrieval-rule-cfg/{configName}

The following table describes the path parameter supported by the GET response body on this resource:

Table 2-660 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
NfGrpIdRetrievalCfgWrapper	String	M	Fetches the configuration associated with the specified configName.

The following table describes data structures supported by the GET response body on these resources:

Table 2-661 Response Body Parameters

Parameter Name	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
NfGrpIdRetrievalCfgWrapper	M	1	200 OK	Indicates the nf-grp-id-retrieval-rule-cfg configuration.
ProblemDetails	M	1	404 Not Found	Indicates failure case for data not found.

This resource fetches all the Nf GrpId Retrieval Cfg Wrapper configuration based on the nfType and configName query parameters.

Resource URI: ocscp/scpc-configuration/v1/nf-grp-id-retrieval-rule-cfg?configName={value1}&targetNfType={value2}&subscriberIdType={value3}'

The following table describes the query parameters:

Table 2-662 Query Parameters

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	O	Provide any number of query parameter (maximum three)
targetNfType	String	O	
subscriberIdType	String	O	

The following table describes data structures supported by the GET response body on these resources:

Table 2-663 Response Body Parameters

Parameter Name	Mandator y (M), Optional (O), or Conditional (C)	Cardinalit y	Response Codes	Description
NfGrpIdRetrievalCfgWrapper	M	1	200 OK	Indicates the nf-grp-id-retrieval-rule-cfg configuration.
ProblemDetails	M	1	404 Not Found	Indicates failure case for data not found.

Sample of a Successful GET API (Default Rule))

```
curl -X 'GET' 'http://10.75.224.47:30246/ocscp/scpc-configuration/v1/nf-grp-id-retrieval-rule-cfg/defaultNFGrpIdRetrievalRule' -H 'accept: application/json'
```

```
{
  "configName": "defaultNFGrpIdRetrievalRule",
  "data": {
    "targetNfTypeList": [
      ""
    ],
    "subscriberIdTypeList": [
      "SUPI",
      "GPSI",
      "ROUTINGINDICATOR",
      "IMPU",
      "IMPI",
      "IMSI",
      "MSISDN"
    ],
    "methodList": null,
    "apiSpecificResourceUri": null,
    "queryMatch": null,
    "action": "INVOKE_GROUPID_RESOLUTION",
    "nfDiscoveryParams": {
      "mandatory": {
        "service-names": {
          "value": "nudr-group-id-map"
        },
        "target-nf-type": {
          "value": "UDR"
        },
        "requester-nf-type": {
          "value": "SCP"
        }
      },
      "optional": null
    },
    "nfDiscoveryExceptionConfigSetName": "defaultNfDiscoveryForNfGroupId",
  }
}
```

```

        "nfGroupIdResolutionExceptionConfigSetName": "defaultNfGroupIdResolution"
    },
    "createdTimestamp": "2026-03-05 06:47:21",
    "updatedTimestamp": "2026-03-05 06:47:21"
}

```

Sample of an Error GET API

```

curl -X 'GET' 'http://10.75.224.150:31609/ocscp/scpc-configuration/v1/nf-grp-id-retrieval-rule-cfg/defaultRule23' -H 'accept: application/json'

```

```

{
  "title": "Not Found",
  "status": 404,
  "detail": "NF Group ID Resolution Configuration data not found against given query parameter(s), Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nf-grp-id-retrieval-rule-cfg/defaultRule23",
  "cause": "DATA_NOT_FOUND"
}

```

Sample of a Successful GET API (configName, targetNfType, subscriberIdType)

```

curl -X 'GET' 'http://10.75.224.106:31788/ocscp/scpc-configuration/v1/nf-grp-id-retrieval-rule-cfg?configName=defaultNFGrpIdRetrievalRule&targetNfType=%2A&subscriberIdType=SUPI' -H 'accept: application/json'

```

```

[
  {
    "configName": "defaultNFGrpIdRetrievalRule",
    "data": {
      "targetNfTypeList": [
        "*"
      ],
      "subscriberIdTypeList": [
        "SUPI",
        "GPSI",
        "ROUTINGINDICATOR",
        "IMPU",
        "IMPI",
        "IMSI",
        "MSISDN"
      ],
      "methodList": null,
      "apiSpecificResourceUri": null,
      "queryMatch": null,
      "action": "INVOKE_GROUPID_RESOLUTION",
      "nfDiscoveryParams": {
        "mandatory": {
          "service-names": {
            "source": null,

```

```

        "value": "nudr-group-id-map"
      },
      "target-nf-type": {
        "source": null,
        "value": "UDR"
      },
      "requester-nf-type": {
        "source": null,
        "value": "SCP"
      }
    },
    "optional": null
  },
  "nfDiscoveryExceptionConfigSetName": "defaultNfDiscoveryForNfGroupId",
  "nfGroupIdResolutionExceptionConfigSetName":
"defaultNfGroupIdResolution"
},
"createdTimestamp": "2026-06-09 07:46:45",
"updatedTimestamp": "2026-06-09 07:46:45"
}
]

```

PUT

This resource configures nf-group-id-retrieval-rule-cfg configuration for a given data.

Resource URI: /ocscp/scpc-configuration/{version}/nf-grp-id-retrieval-rule-cfg/{configName}

The following table describes the request parameter supported by this resource:

Table 2-664 Request Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
configName	String	M	1	Indicates the key for PUT operation.

The following table describes the data structure supported by the PUT request body on this resource:

Table 2-665 Request Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
NfGrpIdRetrievalCfgWrapper	M	1	Indicates the NF group ID retrieval rule information to be created or updated.

The following table describes the data structure supported by the PUT response body on this resource:

Table 2-666 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Code	Description
NfGrpIdRetrievalCf gWrapper	M	1	201 Created	Indicates new NF groupId retrieval rule information creation.
NfGrpIdRetrievalCf gWrapper	M	1	200 OK	Updates the existing record.
ProblemDetails	M	1	400 Bad Request	Indicates the problem details.

Sample of a Successful PUT API

```
curl -X 'PUT' \
  'http://10.75.224.106:30884/ocscp/scpc-configuration/v1/nf-grp-id-retrieval-
  rule-cfg/rule2' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "rule2",
    "data": {
      "targetNfTypeList": [
        "UDM"
      ],
      "subscriberIdTypeList": [
        "SUPI",
        "GPSI"
      ],
      "methodList": [
        "GET",
        "PUT"
      ],
      "apiSpecificResourceUri": ".*",
      "queryMatch": [
        {
          "name": "preferred-locality-single",
          "value": "USEast",
          "matchType": "EXACT"
        }
      ],
      "action": "INVOKE_GROUPID_RESOLUTION",
      "nfDiscoveryParams": {
        "mandatory": {
          "service-names": {
            "value": "nudr-group-id-map"
          },
          "target-nf-type": {
            "value": "UDR"
          },
          "requester-nf-type": {
```

```

        "value": "SCP"
      }
    },
    "optional": {
      "requester-plmn-list": {
        "source": "CONSUMER",
        "value": [
          {
            "mcc": "100",
            "mnc": "200"
          }
        ]
      }
    }
  },
  "nfDiscoveryExceptionConfigSetName": "defaultNfDiscoveryForNfGroupId",
  "nfGroupIdResolutionExceptionConfigSetName": "defaultNfGroupIdResolution"
}'

```

Request:

```

{
  "configName": "rule2",
  "data": {
    "targetNfTypeList": [
      "UDM"
    ],
    "subscriberIdTypeList": [
      "SUPI",
      "GPSI"
    ],
    "methodList": [
      "GET",
      "PUT"
    ],
    "apiSpecificResourceUri": ".*",
    "queryMatch": [
      {
        "name": "preferred-locality-single",
        "value": "USEast",
        "matchType": "EXACT"
      }
    ],
    "action": "INVOKE_GROUPID_RESOLUTION",
    "nfDiscoveryParams": {
      "mandatory": {
        "service-names": {
          "value": "nudr-group-id-map"
        }
      },
      "target-nf-type": {
        "value": "UDR"
      }
    }
  }
}

```

```

    },
    "requester-nf-type": {
      "value": "SCP"
    }
  },
  "optional": {
    "requester-plmn-list": {
      "source": "CONSUMER",
      "value": [
        {
          "mcc": "100",
          "mnc": "200"
        }
      ]
    }
  }
},
"nfDiscoveryExceptionConfigSetName": "defaultNfDiscoveryForNfGroupId",
"nfGroupIdResolutionExceptionConfigSetName": "defaultNfGroupIdResolution"
}
}

```

Sample of an Error PUT API

```

curl -X 'PUT' \
'http://10.75.224.106:30884/ocscp/scpc-configuration/v1/nf-grp-id-retrieval-
rule-cfg/rule1' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "configName": "rule1",
  "data": {
    "targetNfTypeList": [
      "UDM"
    ],
    "subscriberIdTypeList": [
      "SUPI",
      "GPSI"
    ],
    "action": "GROUPID_RESOLUTION",
    "nfDiscoveryParams": {
      "mandatory": {
        "service-names": {
          "value": "nudr-group-id-map"
        },
        "target-nf-type": {
          "value": "UDR"
        },
        "requester-nf-type": {
          "value": "SCP"
        }
      }
    },
    "nfDiscoveryExceptionConfigSetName": "defaultNfDiscoveryFailure",
    "nfGroupIdResolutionExceptionConfigSetName":

```

```
"defaultNfGroupIdResolutionFailure"
  }
}'
```

```
{
  "title": "Bad Request",
  "status": 400,
  "detail": "Invalid value: GROUPID_RESOLUTION for field: action. Allowed
values: [INVOKE_GROUPID_RESOLUTION, SKIP_GROUPID_RESOLUTION]. Please refer to
the User Guide.",
  "cause": "INVALID_VALUE"
}
```

DELETE

This resource removes the nf-group-id-retrieval-rule-cfg configuration data.

Resource URI: /ocscp/scpc-configuration/{version}/nf-grp-id-retrieval-rule-cfg/{configName}

The following table describes the path parameter supported by this resource:

Table 2-667 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Removes the configuration based on configName.

The following table describes the data structure supported by the DELETE response body on this resource:

Table 2-668 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
None	M	1	204 No Content	In successful cases, only response code is returned.
ProblemDetails	M	1	404 Not Found	In failure cases when the data is not found.

Sample of a Successful of DELETE API

```
curl -X 'DELETE' 'http://10.75.224.150:31609/ocscp/scpc-configuration/v1/nf-grp-id-retrieval-rule-cfg/rule1' -H 'accept: application/json'
```

204 OK

Sample of an Error DELETE API

```
curl -X 'DELETE' 'http://10.75.224.47:30246/ocscp/scpc-configuration/v1/nf-grp-id-retrieval-rule-cfg/rule4' -H 'accept: application/json'
```

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "NF Group ID Resolution Configuration data not found against
given query parameter(s), Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nf-grp-id-retrieval-rule-cfg/
rule4",
  "cause": "DATA_NOT_FOUND"
}
```

Data Model

The following table describes data model for request or response:

Table 2-669 Data Model

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Indicates the unique name of the NF group ID retrieval rule configuration. This identifies the rule and is used as its key. Range: Only allowed alphanumeric values. Length should be <= 256.
targetNfTypeList	Array(NfType)	M	Indicates the list of target NF types for which this rule is applicable. When a request matches one of these NF types, the rule can be considered for NF group ID retrieval. Note: The * value indicates that all NF types from the supportedNfTypes list of the SCP feature subid_to_nfgrp_id_resolution are included. Range: supportedNfTypes from SCP feature API (subid_to_nfgrp_id_resolution).

Table 2-669 (Cont.) Data Model

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
subscriberIdTypeList	Array(SubecriberIdType)	M	Indicates the ordered list of subscriber ID types to use for NF group ID retrieval. The order represents priority, from highest to lowest preference. Range: • SUPI • GPSI • ROUTINGINDICATOR • IMPI • IMPU • IMSI • MSISDN
methodList	Array(Method)	O	Indicates the list of HTTP methods for which this rule applies, such as GET, POST, or PUT. If * is used, the rule applies to all supported methods that are within the specified range. Range: • GET • PUT • POST • PATCH • DELETE • OPTIONS • *
apiSpecificResourceUri	String	O	Indicates API-specific resource URI pattern used as an optional matching condition. This helps restrict the rule to requests targeting a particular API path. Range: valid regex Length should be <= 512
queryMatch	Array(QueryMatch)	O	Indicates the additional list of query-match conditions for rule selection. queryMatch is a structured rule-definition attribute that describes matching criteria. It is designed as a list of condition objects, where each condition defines: • the parameter to evaluate (name). • the comparison style (matchType). • the comparison input (value or range). queryMatch is the rule's condition model, expressed in a consistent JSON format. Range: Parameter should be allowed from IE Binding Info REST API (nfgrpiddretrieval-cfg) dynamicList.

Table 2-669 (Cont.) Data Model

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
action	String	M	Indicates the action to perform when the configured rule criteria is matched. Supported actions are: • INVOKE_GROUPID_RESOLUTION to trigger group ID resolution. • SKIP_GROUPID_RESOLUTION to bypass it. Range: • INVOKE_GROUPID_RESOLUTION • SKIP_GROUPID_RESOLUTION
nfDiscoveryParam	nfDiscoveryParam	C	Indicates the configuration used during NF (UDR) discovery as part of the group ID retrieval process. Range: Mandatory when action is INVOKE_GROUPID_RESOLUTION.
nfDiscoveryExceptionConfigSetName	String	O	Indicates configName from the Exception Config Set REST API to use when NF (UDR) discovery for NF group ID retrieval fails. Note: If a specific rule is configured but the incoming request does not meet the rule's matching conditions, the system falls back to the default rule. Even if a rule is matched, the system falls back to the default rule when the associated nfDiscoveryExceptionConfigSetName does not contain a configuration for the encountered condition. Example: • Rule 1 is associated with nfDiscoveryExceptionConfigSetName = specificDiscoveryRule1. • The configuration set defines the action "Send Error" for an NF Discovery response with status code 400. • If Rule 1 is matched, but the NF Discovery response status code is 500, no matching exception configuration exists in specificDiscoveryRule1. • In this case, the system falls back to the default rule and applies the action defined in the default exception configuration. defaultRuleName: defaultNfDiscoveryForNfGroupId Range: The value must be obtained from the Exception Config Set created through the Exception Config Set API, where exceptionConfigType is set to NF_DISCOVERY_FOR_NF_GROUPID.

Table 2-669 (Cont.) Data Model

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
nfGroupIdResolutionExceptionConfigSetName	String	O	Indicates configName from the Exception Config Set REST API to use when NF group ID resolution fails. Note: If a specific rule is configured but the incoming request does not meet the rule's matching conditions, the system falls back to the default rule. Even if a specific rule is matched, the system falls back to the default rule when the associated nfGroupIdResolutionExceptionConfigSetName does not contain a matching exception configuration for the encountered condition. Example: - Rule 1 is associated with nfGroupIdResolutionExceptionConfigSetName = specificResolutionRule1. - Rule 1 defines the action "Send Error" when the NF Resolution Failure response status code is 400. - If Rule 1 is matched, but the NF Resolution Failure response status code is 500, no matching exception configuration exists in specificResolutionRule1. - In this case, the system falls back to the default rule and applies the action configured. defaultRuleName: defaultNfGroupIdResol Range: The value must be obtained from the Exception Config Set REST API with type NF_GROUPID_RESOLUTION.

Table 2-670 QueryMatch Data Model (Optional Attribute)

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
name	String	M	Indicates the name of the query parameter. It is validated against the allowed parameter list. Range: The IE Binding Info REST API nfgrpiddretrieval-cfg:dynamicIeList.ieAliasName

Table 2-670 (Cont.) QueryMatch Data Model (Optional Attribute)

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
matchType	MatchType	M	Indicates one of the supported match operators: - exact: Precise match. - prefix: Match starts with a substring. - regex: Regular expression. - range: Within a specified range (requires range attribute). - presence: Parameter is present or absent. - contains: For LIST-type parameters, checks if the value is part of the list. Range: - exact - prefix - regex - range - presence - contains
value	Object	C	Indicates the value to match, required for all matchTypes except range. The data type must align with the parameter. When matchType is not range, then the value should be present. Range: - The contains matchType can only be used for parameters with LIST cardinality as defined in Configuring IE Binding Info. Otherwise, an error is triggered. - For presence matchType, supported values are present or absent. - Data types of given parameter should be matched with the ie-registry data-type.
range	Object	C	Indicates that matchType is range. Note: Range matching supports the following range types: SupiRange, GpsiRange, ImsiRange, Ipv4Range, Ipv6Range, TaiRange, InternalGroupIdRange, and IdentityRange. It also supports numeric ranges defined by valid start and end values. Range: Supports only range-type objects containing start and end values. The start value must be less than the end value, and both values cannot be empty.

Java Regex Escaping Characters

When you enter a regular expression in Java-based configuration, escape each regular-expression backslash with one additional backslash.

Special Characters in Regex

The following characters have special meaning in a regular expression. Escape a character when the expression must match the literal character.

\ . ^ \$ * + ? () [] { } |

Table 2-671 Comparison between Normal Regex and Java Regex String

What to Match	Normal Regex	Java String Regex
Single backslash	\\	"\\\\"
Dot	\.	"\\."
Star	*	"*"
Plus	\+	"\\+"
Question mark	\?	"\\?"
Opening parenthesis	\(	"\\(""
Closing parenthesis	\)	"\\)"
Opening square bracket	\[	"\\[""
Closing square bracket	\]	"\\]"
Opening curly brace	\{	"\\{""
Closing curly brace	\}	"\\}"
Pipe	\	"\\ "
Caret as a literal	\^	"\\^"
Dollar sign as a literal	\\$	"\\\$"

Table 2-672 Regex Escaping Examples

Actual Input	Normal Regex	Java String Regex
abc.def	^abc\.def\$	"^abc\\.def\$"
price\$100	^price\\$100\$	"^price\\\$100\$"
file(name).txt	^file\(name\)\.txt\$	"^file\\(name\\)\\.txt\$"
a+b*c?	^a\\+b*c\\?\$	"^a\\+b*c\\?\$"
[test]	^\\[test\\]\$	"^\\[test\\]\$"

Table 2-673 QueryMatch Data Model

Field Name	Data Type	P	Range	Description
name	String	M	IE Binding Info resource name: nfgrpiddretrieval- cfg : dynamicIeList.ieAliasN ame	Indicates the name of the query parameter. It is validated against allowed parameter list.

Table 2-673 (Cont.) QueryMatch Data Model

Field Name	Data Type	P	Range	Description
matchType	MatchType	M	exact, prefix, regex, range, presence, or contains	Specifies the supported match operator: - exact: Precise match - prefix: Match starts with a substring - regex: Regular expression - range: Within a specified range (requires range attribute) - presence: Parameter is present or absent (value should specify) - contains: For LIST-type parameters; checks if the value is part of the list
value	Object	C	- The contains matchType can only be used for parameters with LIST cardinality; otherwise, an error is triggered. - For presence matchType, the supported value is present or absent. - Data types of a given parameter should be matched with the ie-registry data-type.	The value to match, required for all matchTypes except range. Data type must align with the parameter. When matchType is not range, then value should be present.
range	Object	C	Supports only range type objects which contain start and end. Start should be less than end and both cannot be empty. Note: The range matching supports specific range types, such as SupiRange, GpsiRange, ImsiRange, Ipv4Range, Ipv6Range, TaiRange, InternalGroupIdRange, and IdentityRange. It also supports numeric ranges with valid start and end values.	Used only when matchType is range.

The following examples show how to configure queryMatch for different match types:

Exact Match

```
"queryMatch": [
  {
    "name": "preferred-locality-single",
    "value": "USEast",
    "matchType": "EXACT"
```

```
    }  
  ]  
}
```

Prefix Match

```
"queryMatch": [  
  {  
    "name": "preferred-locality-single",  
    "value": "US",  
    "matchType": "PREFIX"  
  }  
]
```

Regex Match

```
"queryMatch": [  
  {  
    "name": "preferred-locality-single",  
    "value": "[a-zA-Z]",  
    "matchType": "REGEX"  
  }  
]
```

Presence Match

```
"queryMatch": [  
  {  
    "name": "preferred-locality-single",  
    "value": "present",  
    "matchType": "PRESENCE"  
  }  
]
```

Contains Match

```
"queryMatch": [  
  {  
    "name": "requester-plmn-list",  
    "value": [  
      {  
        "mnc": "313",  
        "mcc": "323"  
      }  
    ],  
    "matchType": "CONTAINS"  
  }  
]
```

Range Match

```
"queryMatch": [  
  {  
    "name": "supi-list",
```

```

    "range": [
      {
        "start": "10000",
        "end": "20000"
      },
      {
        "start": "25000",
        "end": "30000"
      }
    ],
    "matchType": "RANGE"
  }
]

```

Table 2-674 NF Discovery Parameter Data Model (Conditional Attribute)

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
mandatory	NfDiscoveryParams	M	Contains the list of required NF discovery parameters used by SCP to construct the UDR discovery query. These parameters must be available to process the request. Otherwise, SCP handles the process according to the configured exception config set config. Range: - All parameters are validated against the IE Registry REST API. - target-nf-type is connected to UDR and cannot be modified. - service-names is connected to nudr-group-id-map and cannot be modified. - requester-nf-type is a mandatory attribute and can include both source and value. - The same parameter cannot be configured in both mandatory and optional.
Optional	NfDiscoveryParams	O	Contains the list of non-mandatory NF discovery parameters that SCP can use to discover UDR using discovery query. The missing optional parameters do not block discovery, and SCP continues processing with the available values. Range: - All parameters are validated against the IE Registry REST API. - The same parameter cannot be configured as both mandatory and optional.

Table 2-675 NF Discovery Parameters Data Model

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
source	String	C	Identifies whether the parameter value should be taken from SCP or CONSUMER. For mandatory parameters, if the source value is unavailable and no valid fallback is configured, processing may fail. Range: - SCP - CONSUMER
value	Object	C	Defines a valid fallback value for the parameter. Range: It must match the data type allowed by the IE Registry REST API and is used when the source does not provide a value.

JSON Format

```
{
  "configName": "rule1",
  "data": {
    "targetNfTypeList": [
      "UDM"
    ],
    "subscriberIdTypeList": [
      "SUPI",
      "GPSI"
    ],
    "methodList": [
      "GET",
      "PUT"
    ],
    "apiSpecificResourceUri": ".*",
    "queryMatch": [
      {
        "name": "preferred-locality-single",
        "value": "USEast",
        "matchType": "EXACT"
      }
    ],
    "action": "INVOKE_GROUPID_RESOLUTION",
    "nfDiscoveryParams": {
      "mandatory": {
        "service-names": {
          "value": "nudr-group-id-map"
        },
        "target-nf-type": {
          "value": "UDR"
        },
        "requester-nf-type": {
          "value": "SCP"
        }
      }
    }
  }
}
```

```

    }
  },
  "optional": {
    "requester-plmn-list": {
      "source": "CONSUMER",
      "value": [
        {
          "mcc": "100",
          "mnc": "200"
        }
      ]
    }
  }
},
"nfDiscoveryExceptionConfigSetName": "defaultNfDiscoveryFailure",
"nfGroupIdResolutionExceptionConfigSetName":
"defaultNfGroupIdResolutionFailure"
},
"createdTimestamp": "2026-02-19 09:38:45",
"updatedTimestamp": "2026-02-19 10:22:29"
}

```

Table 2-676 Database: OCSCP_NF_GROUP_ID_RETRIEVAL_CONFIG

Name	Description
config_name	Name of the configuration. Type: Varchar Length: 256 Attribute: Primary Key
nf_Grp_Id_Retrieval_Rule_Data	Map of JSON data of the nf_Grp_Id_Retrieval_Rule_Data attribute. <pre> {"v1": {"action": "INVOKE_GROUPID_RESOLUTION", "targetNfTypeList": ["*"], "nfDiscoveryParams": {"mandatory": {"service- names": {"value": "nudr-group-id-map"}, "target-nf-type": {"value": "UDR"}, "requester-nf-type": {"value": "SCP"}}}, "subscriberIdTypeList": ["SUPI", "GPSI", "ROUTINGINDICATOR", "IMPU", "IMPI", "IMSI", "MSISDN"], "nfDiscoveryExceptionConfigSetName": "defaultNfDiscoveryForNfGroupId", "nfGroupIdResolutionExceptionConfigSetName": "defaultNfGroupIdResolution"}} </pre> Type: JSON Length: NA Attribute: NA

Table 2-676 (Cont.) Database: OCSCP_NF_GROUP_ID_RETRIEVAL_CONFIG

Name	Description
Creation_Timestamp	Records the creation time. Type: TIMESTAMP Length: NA Attribute: NA
Updated_Timestamp	Records the update time. Type: TIMESTAMP Length: NA Attribute: NA

2.62 Configuring Exception Config Set

The Exception Config Set REST API configures how SCP handles different error scenarios instead of always returning an error response. It supports rule-based handling based on attributes such as statusCode, cause, customCause, and exceptionConfigType, thereby improving consistency.

In addition, a specific exceptionConfigType is introduced for NF_DISCOVERY_FOR_NF_GROUPID and NF_GROUPID_RESOLUTION, enabling actions such as CONTINUE_NF_DISCOVERY_WITHOUT_NF_GROUPID or SEND_ERROR_RESPONSE, with enhancements.

Note

Ensure that the error-response-profile REST API is configured.

Resources

The following table describes the resource name to retrieve, add, update, or remove the exception-config-set configuration data:

Table 2-677 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
exception-config-set	/ocscp/scpc-configuration/{version}/exception-config-set	GET	Retrieves all configured exception config set configurations available for the specified REST API version.
exception-config-set	/ocscp/scpc-configuration/{version}/exception-config-set/{configName}	GET	Retrieves the exception config set configuration associated with the specified configName.
exception-config-set	/ocscp/scpc-configuration/{version}/exception-config-set/{configName}	PUT	Creates a new exception config set or updates an existing configuration for the specified configName, including updates to defaultRule.
exception-config-set	/ocscp/scpc-configuration/{version}/exception-config-set/{configName}	DELETE	Removes the exception config set configuration associated with the specified configName, default rules deletion are not allowed.

Resource Definition**GET**

This resource fetches all the exception config set configurations.

Resource URI: /ocscp/scpc-configuration/{version}/exception-config-set

The following table describes the data structure supported by the GET response body on this resource:

Table 2-678 Response Body Parameters

Parameter Name	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
Array(ExceptionConfigSetWrapper)	M	1..N	200 OK	Indicates exception-config-set configurations

This resource fetches the exception-config-set configuration based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/exception-config-set/{configName}

The following table describes the path parameter supported by the GET response body on this resource:

Table 2-679 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
ExceptionConfigSetWrapper	String	M	Fetches the configuration associated with the specified configName.

The following table describes data structures supported by the GET response body on these resources:

Table 2-680 Response Body Parameters

Parameter Name	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
ExceptionConfigSetWrapper	M	1	200 OK	Indicates exception-config-set configuration.

Table 2-680 (Cont.) Response Body Parameters

Parameter Name	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
ProblemDetails	M	1	404 Not Found	Indicates failure cases for data not found.

Sample of a Successful GET API (defaultNfDiscoveryForNfGroupId and defaultNfGroupIdResolution)

```
curl -X 'GET' \
'http://10.75.225.127:32119/ocscp/scpc-configuration/v1/exception-config-set' \
-H 'accept: application/json'
```

```
[
  {
    "configName": "defaultNfDiscoveryForNfGroupId",
    "exceptionConfigRuleData": {
      "exceptionConfigType": "NF_DISCOVERY_FOR_NF_GROUPID",
      "exceptionConfigData": [
        {
          "exceptionConditions": [
            {
              "statusCode": "*"
            }
          ],
          "action": "CONTINUE_NF_DISCOVERY_WITHOUT_NF_GROUPID"
        }
      ]
    },
    "createdTimestamp": "2026-03-26 05:13:50",
    "updatedTimestamp": "2026-03-26 05:13:50"
  },
  {
    "configName": "defaultNfGroupIdResolution",
    "exceptionConfigRuleData": {
      "exceptionConfigType": "NF_GROUPID_RESOLUTION",
      "exceptionConfigData": [
        {
          "exceptionConditions": [
            {
              "statusCode": "*"
            }
          ],
          "action": "CONTINUE_NF_DISCOVERY_WITHOUT_NF_GROUPID"
        }
      ]
    }
  }
]
```

```

    },
    "createdTimestamp": "2026-03-26 05:13:51",
    "updatedTimestamp": "2026-03-26 05:13:51"
  }
]

```

Sample of an Error GET API

```

curl -X 'GET' \
  'http://10.75.225.127:32119/ocscp/scpc-configuration/v1/exception-config-set/rule1' \
  -H 'accept: application/json'

```

```

{
  "title": "Not Found",
  "status": 404,
  "detail": "Exception Config Set configuration not found against given query parameter(s). Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/exception-config-set/rule1",
  "cause": "DATA_NOT_FOUND"
}

```

PUT

This resource configures the exception-config-set configuration data.

Resource URI: /ocscp/scpc-configuration/{version}/exception-config-set/{configName}

The following table describes the request parameter supported by this resource:

Table 2-681 Request Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
configName	String	M	1	Indicates the key for PUT operation.

The following table describes the data structure supported by the PUT request body on this resource:

Table 2-682 Request Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Description
exceptionConfigSetRuleData	M	1	Indicates exception config set configuration to be created or updated.

The following table describes the data structure supported by the PUT response body on this resource:

Table 2-683 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Code	Description
exceptionConfigSetWrapper	M	1	201 Created	Indicates a newly created exception config set rule information.
exceptionConfigSetWrapper	M	1	200 OK	Updates existing record.
ProblemDetails	M	1	400 Bad Request	Indicates failure case for bad request.

Sample of a Successful PUT API

```
curl -X 'PUT' \
  'http://10.75.225.127:32119/ocscp/scpc-configuration/v1/exception-config-set/rule1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "rule1",
    "exceptionConfigRuleData": {
      "exceptionConfigType": "NF_DISCOVERY_FOR_NF_GROUPID",
      "exceptionConfigData": [
        {
          "exceptionConditions": [
            {
              "statusCode": "*"
            }
          ],
          "action": "CONTINUE_NF_DISCOVERY_WITHOUT_NF_GROUPID"
        }
      ]
    }
  }'
```

```
{
  "configName": "rule1",
  "exceptionConfigRuleData": {
    "exceptionConfigType": "NF_DISCOVERY_FOR_NF_GROUPID",
    "exceptionConfigData": [
      {
        "exceptionConditions": [
          {
            "statusCode": "*"
          }
        ],

```

```

        "action": "CONTINUE_NF_DISCOVERY_WITHOUT_NF_GROUPID"
    }
}
},
"createdTimestamp": "2026-03-05 10:20:16",
"updatedTimestamp": "2026-03-05 10:20:16"
}

```

Sample of an Error PUT API

```

curl -X 'PUT' \
'http://10.75.225.127:32119/ocscp/scpc-configuration/v1/exception-config-set/defaultNfDiscoveryForNfGroupId' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "configName": "defaultNfDiscoveryForNfGroupId",
  "exceptionConfigRuleData": {
    "exceptionConfigType": "NF_DISCOVERY_FOR_NF_GROUPID1",
    "exceptionConfigData": [
      {
        "exceptionConditions": [
          {
            "statusCode": "*"
          }
        ],
        "action": "CONTINUE_NF_DISCOVERY_WITHOUT_NF_GROUPID"
      }
    ]
  }
}'

```

```

{
  "title": "Bad Request",
  "status": 400,
  "detail": "Invalid value: NF_DISCOVERY_FOR_NF_GROUPID1 for field: exceptionConfigType. Allowed values: [NF_DISCOVERY_FOR_NF_GROUPID, NF_GROUPID_RESOLUTION]. Please refer to the User Guide.",
  "cause": "INVALID_VALUE"
}

```

Sample of an Error PUT API

```

curl -X 'PUT' \
'http://10.75.225.127:32119/ocscp/scpc-configuration/v1/exception-config-set/defaultNfDiscoveryForNfGroupId' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "configName": "defaultNfDiscoveryForNfGroupId",
  "exceptionConfigRuleData": {
    "exceptionConfigType": "NF_GROUPID_RESOLUTION",
    "exceptionConfigData": [

```

```

        {
          "exceptionConditions": [
            {
              "statusCode": "*"
            }
          ],
          "action": "CONTINUE_NF_DISCOVERY_WITHOUT_NF_GROUPID"
        }
      ]
    }
  },
  {
    "title": "Bad Request",
    "status": 400,
    "detail": "Field 'exceptionConfigType' cannot be updated from 'NF_DISCOVERY_FOR_NF_GROUPID' to 'NF_GROUPID_RESOLUTION' for a default rule or referenced rule. Please refer to the User Guide.",
    "cause": "OPERATION_NOT_ALLOWED"
  }
]
}

```

DELETE

This resource removes the exception-config-set configuration data.

Resource URI: /ocscp/scpc-configuration/{version}/exception-config-set/{configName}

The following table describes the path parameter supported by this resource:

Table 2-684 Path Parameter

Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Removes configurations based on configName.

The following table describes the data structure supported by the DELETE response body on this resource:

Table 2-685 Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
None	M	1	204 No Content	In successful cases, only response code is returned.

Table 2-685 (Cont.) Response Body Parameters

Data Type	Mandatory (M), Optional (O), or Conditional (C)	Cardinality	Response Codes	Description
ProblemDetails	M	1	404 Not Found	In failure cases when the data is not found.

Sample of a Successful of DELETE API

```
curl -X 'DELETE' 'http://10.75.224.150:31609/ocscp/scpc-configuration/v1/exception-config-set/rule1' -H 'accept: application/json'
```

204 OK

Sample of an Error DELETE API

```
curl -X 'DELETE' 'http://10.75.224.47:30246/ocscp/scpc-configuration/v1/exception-config-set/rule4' -H 'accept: application/json'
```

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "Exception Config Set configuration not found against given query parameter(s). Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/exception-config-set/rule4",
  "cause": "DATA_NOT_FOUND"
}
```

Sample of an Error DELETE API (Default rules not allowed to delete)

```
curl -X 'DELETE' \
  'http://10.75.225.127:32119/ocscp/scpc-configuration/v1/exception-config-set/defaultNfDiscoveryForNfGroupId' \
  -H 'accept: application/json'
```

```
{
  "title": "Forbidden",
  "status": 403,
  "detail": "Default rules 'defaultNfDiscoveryForNfGroupId' and 'defaultNfGroupIdResolution' are not allowed to be deleted. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/exception-config-set/defaultNfDiscoveryForNfGroupId",
  "cause": "DATA_CANT_DELETED"
}
```

Data Model

The following table describes data model for request or response:

Table 2-686 Data Model

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
configName	String	M	Indicates a unique name of the exception config set. This name is used to identify and reference the exception handling configuration. Range: - Allows alpha-numeric strings. - Length <= 256.
exceptionConfigType	ExceptionConfigType	M	Specifies the type of exception handling configuration being created. This attribute determines whether the configuration is used for handling exceptions during NF discovery for NF group ID retrieval or during the NF group ID resolution process. Note: This attribute cannot be modified for default rules or for rules referenced by SCP NF Group ID Retrieval REST API configurations. Range: - NF_DISCOVERY_FOR_NF_GROUPID - NF_GROUPID_RESOLUTION
exceptionConfigData	Array(exceptionConfigData)	M	Contains the list of exception handling rules defined for the selected exceptionConfigType. Each rule includes the error conditions to be matched and the action that must be taken when those configured exception conditions are satisfied. Range: Data contains exceptionConditions and action as a mandatory parameter.

Table 2-687 ExceptionConfigData Data Model

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
exceptionConditions	Array(ExceptionCondition)	M	Indicates the list of conditions used to identify when an exception rule should be applied. Each condition can include values such as statusCode, cause, and customCause. When the configured condition matches the received error or response, the corresponding action is triggered. Range: - statusCode - cause - customCause

Table 2-687 (Cont.) ExceptionConfigData Data Model

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
action	String	M	Indicates the action to be taken when the configured exception conditions are matched. This determines whether SCP should continue NF discovery without NF group ID or send an error response. Range: - CONTINUE_NF_DISCOVERY_WITHOUT_NF_GROUPID - SEND_ERROR_RESPONSE
errorProfile	String	C	Indicates the name of the error profile to be used when the selected action is SEND_ERROR_RESPONSE. This attribute is required only for SEND_ERROR_RESPONSE action and must refer to a valid entry from the error profile configuration. Range: name as defined in Configuring Error Profiles.

Table 2-688 ExceptionCondition Data Model

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
statusCode	String	M	Indicates the status condition used to match the exception rule. It can also use predefined internal error identifiers such as mandatoryQueryParamInfoMissing or responseDecodeFailure. This attribute is mandatory and is used to decide whether the exception condition is satisfied. Range: 300 - 522 *: Matches all status codes. - Predefined values: - mandatoryQueryParamInfoMissing: Indicates that a required query parameter is missing. - responseDecodeFailure: Indicates a failure while decoding the response.
cause	String	C	Indicates predefined reasons associated with the exception. This attribute accepts only application-defined values. If a user-defined explanation is required, this attribute must be set to CUSTOM. Range: - Error profiles described in Table 2-149. - CUSTOM

Table 2-688 (Cont.) ExceptionCondition Data Model

Parameter Name	Data Type	Mandatory (M), Optional (O), or Conditional (C)	Description
customCause	String	C	Indicates optional user-defined explanation for the exception. This attribute is applicable only when cause is set to CUSTOM. For all other cause values, this attribute must remain null. Range: AnyString when cause is CUSTOM. length <= 256

JSON Format

```

{
  "configName": "defaultNfDiscoveryForNfGroupId",
  "exceptionConfigRuleData": {
    "exceptionConfigType": "NF_DISCOVERY_FOR_NF_GROUPID",
    "exceptionConfigData": [
      {
        "exceptionConditions": [
          {
            "statusCode": "*"
          }
        ],
        "action": "CONTINUE_NF_DISCOVERY_WITHOUT_NF_GROUPID"
      }, {
        "exceptionConditions": [
          {
            "statusCode": "400",
            "cause": "CUSTOM",
            "customCause": "DISCOVERY_FAILURE"
          }
        ],
        "action": "SEND_ERROR_RESPONSE",
        "errorProfile": "defaultErrorProfile"
      }
    ]
  },
  "createdTimestamp": "2026-03-05 10:20:16",
  "updatedTimestamp": "2026-03-05 10:20:16"
}

```

Table 2-689 Database: OCSCP_EXCEPTION_CONFIG_SET

Name	Description
config_name	Name of the configuration. Type: Varchar Length: 256 Attribute: Primary Key

Table 2-689 (Cont.) Database: OCSCP_EXCEPTION_CONFIG_SET

Name	Description
Exception_Config_Data	Map of JSON data of the Exception_Config_Data attribute for config_name.defaultNfDiscoveryForNfGroupId. <pre>{ "v1": { "exceptionConfigData": [{ "action": "CONTINUE_NF_DISCOVERY_WITHOUT_NF_GROUPID", "exceptionConditions": [{ "statusCode": "*" }], "exceptionConfigType": "NF_DISCOVERY_FOR_NF_GROUPID" }] } }</pre> Type: JSON Length: NA Attribute: NA
Creation_Timestamp	Records the creation time. Type: TIMESTAMP Length: NA Attribute: NA
Updated_Timestamp	Records the update time. Type: TIMESTAMP Length: NA Attribute: NA

2.63 Configuring NF Topology Audit

The NF Topology Audit Configuration REST API specifies audit settings at NRF set level. You can define the audit interval and the maximum audit traffic rate for NRF management or discovery service traffic toward each NRF set.

Using this REST API, you can configure the following values:

- Audit interval for each NRF set.
- Audit traffic rate for NRF management or discovery service traffic toward each NRF set.

Resources

The following table describes the resources that retrieve, create, update, or delete NF topology audit configuration data:

Table 2-690 Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
nf-topology-audit-cfg	/ocscp/scpc-configuration/{version}/nf-topology-audit-cfg	GET	Retrieves all NF topology audit configuration records.
nf-topology-audit-cfg	/ocscp/scpc-configuration/{version}/nf-topology-audit-cfg/{configName}	GET	Retrieves the NF topology audit configuration record identified by configName.

Table 2-690 (Cont.) Resources

Resource Name	Resource URI	HTTP Method or Custom Operation	Description
nf-topology-audit-cfg	/ocscp/scpc-configuration/{version}/nf-topology-audit-cfg/{configName}	PUT	Creates or updates the NF topology audit configuration record identified by configName.
nf-topology-audit-cfg	/ocscp/scpc-configuration/{version}/nf-topology-audit-cfg/{configName}	DELETE	Deletes the NF topology audit configuration record identified by configName.

Resource Definition**GET**

The resource retrieves all nf-topology-audit-cfg configuration records.

Resource URI: /ocscp/scpc-configuration/{version}/nf-topology-audit-cfg

The following table describes the data structure supported by the GET response body on this resource:

Table 2-691 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
nfTopologyAuditCfg Wrapper	M	1..N	200 OK	Indicates NF topology audit configuration records.

The resource retrieves an nf-topology-audit-cfg configuration record based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/nf-topology-audit-cfg/{configName}

The following table describes the path parameter supported by this resource:

Table 2-692 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Indicates the name provided to the configuration created in the DB for nfTopologyAuditCfg. The value is unique for each configuration.

The following table describes the data structures supported by the GET response body on this resource:

Table 2-693 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
nfTopologyAuditCfgWrapper	M	1	200 OK	Indicates nfTopologyAuditCfg configurations.
ProblemDetails	M	1	404 Not Found	Returns 404 error code with problem details if no record is present with specified configName.

Sample Successful GET Response:

```
curl -X 'GET' \
  'http://<host>:31100/ocscp/scpc-configuration/v1/nf-topology-audit-cfg' \
  -H 'accept: application/json'
```

```
[
  {
    "configName": "default",
    "data": {
      "nrfSetIdList": [
        ""
      ],
      "performAudit": true,
      "intervalInSeconds": 60,
      "maxAuditRate": {
        "ratePerNRF": 100
      }
    }
  }
]
```

```
curl -X 'GET' \
  'http://<host>:31100/ocscp/scpc-configuration/v1/nf-topology-audit-cfg/default' \
  -H 'accept: application/json'
```

```
{
  "configName": "default",
  "data": {
    "nrfSetIdList": [
      ""
    ],
    "performAudit": true,
    "intervalInSeconds": 60,
    "maxAuditRate": {
      "ratePerNRF": 100
    }
  }
}
```

Sample Error GET Response:

```
curl -X 'GET' \
  'http://<host>:31100/ocscp/scpc-configuration/v1/nf-topology-audit-cfg/
nrfsetl1' \
  -H 'accept: application/json'

{
  "title": "Not Found",
  "status": 404,
  "detail": "NF Topology Audit configuration not found for the given
configName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nf-topology-audit-cfg/nrfsetl1",
  "cause": "DATA_NOT_FOUND"
}
```

PUT

The resource creates or updates an nf-topology-audit-cfg configuration record.

Resource URI: /ocscp/scpc-configuration/{version}/nf-topology-audit-cfg/{configName}

The following table describes the path parameter supported by this resource:

Table 2-694 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Indicates the name of configuration defined in the DB for nfTopologyAuditCfg. It is a unique string to identify the record.

The following table describes the data structure supported by the PUT request body on this resource:

Table 2-695 Request Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Description
nfTopologyAuditCfgWrapper	M	1	Indicates nfTopologyAuditCfgWrapper to be added or updated.

The following table describes the data structures supported by the PUT response body on this resource:

Table 2-696 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
nfTopologyAuditCfgWrapper	M	1	200 OK	Indicates that the nfTopologyAuditCfg configuration for the specified configName was updated successfully.
nfTopologyAuditCfgWrapper	M	1	201 Created	Indicates that the nfTopologyAuditCfg configuration for the specified configName was created successfully.
ProblemDetails	M	1	400 Bad Request	Returns a 400 Bad Request error with problem details if a validation check fails.
ProblemDetails	M	1	403 Forbidden	Returns 403 error code with problem details if : - the default configuration's nrfSetIdList is changed. - the custom configuration's nrfSetIdList is set to asterisk (*).

Sample Successful PUT Response:

```
curl -X 'PUT' \
  'http://<host>:31100/ocscp/scpc-configuration/v1/nf-topology-audit-cfg/nrfsetl1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "nrfsetl1",
    "data": {
      "nrfSetIdList": [
        "setnrfl1.nrfset.5gc.mnc012.mcc345"
      ],
      "performAudit": true,
      "intervalInSeconds": 180,
      "maxAuditRate": {
        "ratePerNRF": 100
      }
    }
  }'
```

```
{
  "configName": "nrfsetl1",
  "data": {
    "nrfSetIdList": [
      "setnrfl1.nrfset.5gc.mnc012.mcc345"
    ],
    "performAudit": true,
    "intervalInSeconds": 180,
    "maxAuditRate": {
      "ratePerNRF": 100
    }
  }
}
```

```
    }
  }
}
```

Sample Error PUT Response:

```
curl -X 'PUT' \
'http://<host>:31100/ocscp/scpc-configuration/v1/nf-topology-audit-cfg/
nrfsetl1' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "configName": "nrfsetl1",
  "data": {
    "nrfSetIdList": [],
    "performAudit": true,
    "intervalInSeconds": 180,
    "maxAuditRate": {
      "ratePerNRF": 10
    }
  }
}'
```

```
{
  "title": "Bad Request",
  "status": 400,
  "detail": "NRFSetIdList should not be empty. Please refer to the User
Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nf-topology-audit-cfg/nrfsetl1",
  "cause": "MANDATORY_IE_MISSING"
}
```

```
curl -X 'PUT' \
'http://<host>:31100/ocscp/scpc-configuration/v1/nf-topology-audit-cfg/
default' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "configName": "default",
  "data": {
    "nrfSetIdList": [
      "setnrfl1.nrfset.5gc.mnc012.mcc345"
    ],
    "performAudit": true,
    "intervalInSeconds": 180,
    "maxAuditRate": {
      "ratePerNRF": 10
    }
  }
}'
```

```
{
  "title": "Forbidden",
```



```

    "status": 403,
    "detail": "NRFSetID for the default config must be '*' and cannot be
changed. Please refer to the User Guide.",
    "instance": "/ocscp/scpc-configuration/v1/nf-topology-audit-cfg/default",
    "cause": "MANDATORY_IE_INCORRECT"
  }

```

```

curl -X 'PUT' \
  'http://<host>:31100/ocscp/scpc-configuration/v1/nf-topology-audit-cfg/
nrfsetl1' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "configName": "nrfsetl1",
    "data": {
      "nrfSetIdList": [
        "*"
      ],
      "performAudit": true,
      "intervalInSeconds": 180,
      "maxAuditRate": {
        "ratePerNRF": 10
      }
    }
  }'

```

```

{
  "title": "Forbidden",
  "status": 403,
  "detail": "NRFSetID cannot be asterisk for custom configuration. Please
refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nf-topology-audit-cfg/custom",
  "cause": "MANDATORY_IE_INCORRECT"
}

```

DELETE

The resource deletes an nf-topology-audit-cfg configuration record based on configName.

Resource URI: /ocscp/scpc-configuration/{version}/nf-topology-audit-cfg/{configName}

The following table describes the path parameter supported by this resource:

Table 2-697 Path Parameter

Name	Data Type	Mandatory (M) or Optional (O)	Description
configName	String	M	Specifies the name of the configuration that is defined in the database for nfTopologyAuditCfg. The name must be unique and identifies the configuration record.

The following table describes the data structures supported by the DELETE response body on this resource:

Table 2-698 Response Body Parameters

Data Type	Mandatory (M) or Optional (O)	Cardinality	Response Codes	Description
NA	M	1	204 No Content	Indicates successful deletion of the nfTopologyAuditCfg configuration record.
ProblemDetails	M	1	404 Not Found	If no record exists for the specified configName, the service returns HTTP status code 404 with problem details.
ProblemDetails	M	1	403 Forbidden	If the operator attempts to delete the default configuration, the service returns an HTTP 403 Forbidden response.

Sample Successful DELETE Response:

```
curl -X 'DELETE' \
  'http://<host>:31100/ocscp/scpc-configuration/v1/nf-topology-audit-cfg/nrfsetl1' \
  -H 'accept: application/json'
```

Response Code: 204

Sample Error DELETE Response:

```
curl -X 'DELETE' \
  'http://<host>:31100/ocscp/scpc-configuration/v1/nf-topology-audit-cfg/nrfsetl2' \
  -H 'accept: application/json'
```

```
{
  "title": "Not Found",
  "status": 404,
  "detail": "NF Topology Audit Configuration data not found against given
configName. Please refer to the User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nf-topology-audit-cfg/nrfsetl2",
  "cause": "DATA_NOT_FOUND"
}
```

```
curl -X 'DELETE' \
  'http://<host>:31100/ocscp/scpc-configuration/v1/nf-topology-audit-cfg/default' \
  -H 'accept: application/json'
```

```
{
  "title": "Forbidden",
  "status": 403,
  "detail": "The default configuration cannot be deleted. Please refer to the
```

```
User Guide.",
  "instance": "/ocscp/scpc-configuration/v1/nf-topology-audit-cfg/default",
  "cause": "DATA_CANT_DELETED"
}
```

Data Model

The following table describes the request and response data model for nfTopologyAuditCfgWrapper:

Table 2-699 nfTopologyAuditCfgWrapper

Field Name	Column Name in DB	Data Type	Mandatory (M) or Optional (O)	Description
configName	Config_Name	String	M	Specifies the case-insensitive name of the configuration that is defined in the database for nfTopologyAuditCfg data. The name must be unique and identifies the configuration record.
data	Config_Data	JSON (nfTopologyAuditCfgData)	M	Json structure to hold different NF Topology Audit configurations.
createdTimestamp	Creation_Timestamp	String	Read Only	Indicates the timestamp of the created record. It is not required in the request, but it is included in the response.
updatedTimestamp	Updated_Timestamp	String	Read Only	Indicates the timestamp of the updated record, not required in request, but would be present in the response.

JSON Schema

The following table describes nfTopologyAuditCfgData:

Table 2-700 nfTopologyAuditCfgData

Field Name	Data Type	Mandatory (M) or Optional (O)	Description	Range	Default Value
nrfSetIdList	Set<String>	M	Specifies the NRF set IDs to which the NF Topology Audit configuration applies. Note: - An NRF set ID can belong to only one custom configuration. - For an NRF set ID, the service applies the custom configuration if one exists. Otherwise, the service applies the default configuration.	Any valid and configured NRF Set ID	*

Table 2-700 (Cont.) nfTopologyAuditCfgData

Field Name	Data Type	Mandatory (M) or Optional (O)	Description	Range	Default Value
performAudit	boolean	M	Specifies whether to run scheduled audits for the NRF set IDs listed in <code>nrfSetIdList</code>. • <code>true</code>: Runs scheduled audits for the configured NRF set IDs. • <code>false</code>: Does not run scheduled audits for the configured NRF set IDs. If the operator changes <code>performAudit</code> from <code>true</code> to <code>false</code>: • Any audit that is already in progress continues to run. • Future scheduled audits do not run. If the operator changes <code>performAudit</code> from <code>false</code> to <code>true</code>, the service starts an immediate scheduled audit if no audit is currently in progress. Note: When the NRF Bootstrap feature is enabled, the <code>performAudit</code> attribute in the NRF SRV Configuration API takes precedence over the <code>performAudit</code> attribute for the specified NRF set IDs. The service continues to use other parameters, such as <code>intervalInSeconds</code> and <code>maxAuditRate</code>, from this configuration. This behavior does not affect on-demand audits.	true or false	true
intervalInSeconds	int	M	Specifies the interval between scheduled audit cycles for the configured NRF set IDs. Note: If you update this parameter, the service uses the updated value to calculate the start time of the next scheduled audit cycle after the current scheduled audit completes.	60 through 86400, inclusive	Value from <code>auditInterval</code> in <code>ocscp_values.yaml</code>
maxAuditRate	JSON (<code>maxAuditRateCfgData</code>)	M	Specifies the audit rate by using the <code>ratePerNRF</code> parameter. Note: If you update this parameter, the service applies the updated value immediately to the current audit cycle.	NA	NA

The following table describes `maxAuditRateCfgData`:

Table 2-701 maxAuditRateCfgData

Field Name	Data Type	Mandatory (M) or Optional (O)	Description	Range	Default Value
ratePerNRF	int	M	Specifies the maximum audit request rate, in requests per second, for NRF Management or Discovery services for each NRF set. Specifies an integer value in the supported range.	5 through 1000, inclusive	100

Default Configuration

```
{
  "configName": "default",
  "data": {
    "nrfSetIdList": [
      "*"
    ],
    "performAudit": true,
    "intervalInSeconds": 120,
    "maxAuditRate": {
      "ratePerNRF": 100
    }
  }
}
```

Note: You cannot delete the default configuration. For the default configuration, operators can reconfigure only performAudit, intervalInSeconds, and ratePerNRF.

Dependency Check

The dependency check applies between the NF Topology Audit Configuration API, the NRF SRV Configuration API, and SCP Feature (NRFBootstrap) REST API.

- NRF Bootstrap can replace static NRF SetIDs (from YAML) with dynamic ones (from NRF SRV Config), which can orphan custom NF Topology Audit configurations tied to old SetIDs.
- A dependency check is enforced when enabling or disabling NRF Bootstrap and when adding NRF SRV records. Proceed only if all existing custom audit configs remain applicable (wildcard ["*"] is always applicable).
- If a custom audit would become stale (targets a SetID that would be unlearned or not present), the operation is blocked with HTTP 403 Forbidden and guidance to remove or update the conflicting audit config.
- Scenario A (SRV record exists before enabling):
 - Enabling succeeds with no custom audits or when the audited SetID is retained (including mixed static and dynamic).
 - Enabling fails if the audited SetID would be unlearned.
 - Disabling mirrors this logic (fails if a dynamic-targeted audit would be orphaned).

- Scenario B (enable first, then add SRV):
 - Adding an SRV record fails if its SetIDs conflict with existing custom audits.
 - Adding an SRV record succeeds if it includes the audited SetID(s).

Note

Upgrade Impact

- During SCP upgrade, toggling the NRF Bootstrap feature may switch between static (YAML-derived) and dynamic (NRF SRV-derived) NRF SetIDs, causing previously active SetIDs to be unlearned.
- No automatic dependency check is enforced during upgrade. The system doesn't block stale NF Topology Audit configurations at this time.
- You must ensure that no stale NF Topology Audit configurations remain after migration.