

Oracle® Communications

Cloud Native Unified Data Repository REST Specification Document



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The Oracle logo, consisting of a solid red square with the word "ORACLE" in white, uppercase, sans-serif font centered within it.

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1

Introduction

This document provides information about the REST specifications for Cloud Native Unified Data Repository.

Overview

The 5G Unified Data Repository (UDR) is one of the main key component of the 5G Service Based Architecture. UDR is a converged repository, which is used by 5G Network Functions to store the data.

Oracle 5G UDR is implemented as cloud native function and it offers a unified database for storing application, subscription, authentication, service authorization, policy data, session binding and Application state information. It exposes a HTTP2 based RESTful API for NF's and provisioning clients to access the stored data.

Oracle's 5G UDR:

- Leverages a common Oracle Communications Cloud Native Framework
- Is compliant to 3GPP Release 15 specification UDM
- Is compliant to 3GPP v29.519 v16.2 (backward compatible with v15.3.0, by configuration) specification for PCF
- Has tiered architecture providing separation between the connectivity, business logic and data layers
- Uses Oracle MySQL Cluster CGE backend database provides through DB Tier.
- Registers with NRF in the 5G network, so the other NFs in the network can discover UDR through NRF.
- Registers with services like DR-SERVICE and GROUP-ID-MAP.

As per 3GPP, UDR supports following functionality:

- Storage and retrieval of subscription data by the UDM.
- Storage and retrieval of policy data by the PCF.
- Storage and retrieval of structured data for exposure.
- Storage and retrieval of SLF information, consumed by NRF.
- Application data (including Packet Flow Descriptions (PFDs) for application detection, AF request information for multiple UEs), by the NEF.
- Subscription and Notification feature.

Oracle's 5G UDR provides **Unstructured Data Storage Function (UDSF)** functionality. This functionality:

- Supports storage and retrieval of unstructured data by any 5G NF. The specifications of UDSF are presently not defined by 3GPP completely.
- This functionality is part of Oracle's 5G UDR solution.

Oracle's 5G UDR provides **5G SLF** functionality. This functionality:

- Supports Nudr-groupid-map service as defined by 3GPP.
- Registers with NRF for Nudr-groupid-map service.
- Complaint with 3GPP Release 16 for APIs to be consumed by 5G NRF.
- Supports REST/JSON based provisioning APIs for SLF data.

Acronyms

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

Field	Description
5G-AN	5G Access Network
5GC	5G Core Network
5G-GUTI	5G Globally Unique Temporary Identifier
5GS	5G System
AMF	Access and Mobility Management Function
AUSF	Authentication Server Function
NEF	Network Exposure Function
NF	Network Function
NRF	Network Repository Function
NSI ID	Network Slice Instance Identifier
NSSAI	Network Slice Selection Assistance Information
NSSF	Network Slice Selection Function
NSSP	Network Slice Selection Policy
PCF	Policy Control Function
REST	Representational State Transfer
SEPP	Security Edge Protection Proxy
SLF	Subscriber Location Function
SMF	Session Management Function
UDM	Unified Data Management
UDR	Unified Data Repository
UDSF	Unstructured Data Storage Function

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Call the Customer Access Support main number at 1-800-223-1711 (toll-free in the US), or call the Oracle Support hotline for your local country from the list at <http://www.oracle.com/us/support/contact/index.html>. When calling, make the selections in the sequence shown below on the Support telephone menu:

- For Technical issues such as creating a new Service Request (SR), select 1
- For Non-technical issues such as registration or assistance with MOS, select 2

- For Hardware, Networking and Solaris Operating System Support, select 3

You are connected to a live agent who can assist you with My Oracle Support registration and opening a support ticket.

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

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REST Specifications

In this chapter, you will learn about UDR REST Specifications.

Operations Supported for PCF

This section provides information about the operations supported for PCF.

 **Note:**

All APIs supported are as per TS29.500 v16.2.

Resource Name: `AccessAndMobilityPolicyData`

HTTP Method: GET

Base URI: `{apiRoot}/nudr-dr/{version}/policy-data/ues/{ueId}/am-data`

Sample Request URL: `https://10.75.212.116:31873/nudr-dr/v2/policy-data/ues/msisdn-777777779/am-data`

Possible Error Codes:

- **400:** "Invalid URI sent from client"
- **404:** "Subscriber does not exist"
- **404:** "Data field does not exist"
- **400:** "Unknown key, the key provided in the request is invalid"

Resource Name: `SessionManagementPolicyData`

HTTP Method: GET, PATCH

Base URI: `{apiRoot}/nudr-dr/{version}/policy-data/ues/{ueId}/sm-data`

Operation Type	Sample REST URL	Possible Error Codes
GET	<p>Different samples of GET</p> <ul style="list-style-type: none"> Complete SM data GET: https://10.75.212.116:31873/nudr-dr/v2/policy-data/ues/msisdn-777777779/sm-data Using query parameters <ul style="list-style-type: none"> https://10.75.212.116:31873/nudr-dr/v2/policy-data/ues/msisdn-777777779/sm-data?dnn=dnn1&snssai={"sst":11,"sd":"abc123"}&fields=umData https://10.75.212.116:31873/nudr-dr/v2/policy-data/ues/msisdn-777777779/sm-data?dnn=dnn1&fields=umData,smPolicySnssaiData https://10.75.212.116:31873/nudr-dr/v2/policy-data/ues/msisdn-777777779/sm-data?snssai={"sst":11,"sd":"abc123"}&fields=smPolicySnssaiData 	<ul style="list-style-type: none"> 400: "Invalid URI sent from client" 404: "Subscriber does not exist" 400: "Unknown key, the key provided in the request is invalid" 404: "Requested data not found" 400: "Invalid query parameters supplied"
PATCH	<p>Base URI: <i>{apiRoot}/nudr-dr/{version}/policy-data/ues/{ueId}/sm-data</i></p> <p>Sample REST URL: See https://localhost:9443/nudr-dr/v2/policy-data/ues/msisdn-1111111111/sm-data</p> <p>Payload: See PATCH-SessionManagementPolicyData</p>	<ul style="list-style-type: none"> 400: "Blob syntax error with corresponding error details" 400: "Invalid URI sent from client" 404: "Subscriber does not exist" 400: "Unknown key, the key provided in the request is invalid" 404: Data field does not exist.

Resource Name: UEPolicySet

HTTP Method: PUT, GET, PATCH

Base URI: *{apiRoot}/nudr-dr/{version}/policy-data/ues/{ueId}/ue-policy-set*

Operation Type	Sample REST URL	Possible Error Codes
PUT	https://localhost:9443/ nudr-dr/v2/policy-data/ues/ msisdn-1111111111/ue-policy-set Payload: See PUT-UEPolicySet	<ul style="list-style-type: none"> • 400: "Blob syntax error with corresponding error details" • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 400: "Unknown key, the key provided in the request is invalid"
GET	https://localhost:9443/ nudr-dr/v2/policy-data/ues/ msisdn-1111111111/ue-policy-set	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 400: "Unknown key, the key provided in the request is invalid"
PATCH	https://localhost:9443/ nudr-dr/v2/policy-data/ues/ msisdn-1111111111/ue-policy-set Payload: See PATCH-UEPolicySet	<ul style="list-style-type: none"> • 400 : "Blob syntax error with corresponding error details" • 400 : "Invalid URI sent from client" • 404 : "Subscriber does not exist" • 400 : "Unknown key, the key provided in the request is invalid" • 404: "Data field does not exist"

Resource Name: UsageMonitoringInformation

HTTP Method: GET, PUT, DELETE

Base URI: *{apiRoot}/nudr-dr/{version}/policy-data/ues/{ueId}/sm-data/{usageMonId}*

Operation Type	Sample REST URL	Possible Error Codes
GET	https://localhost:9443/ nudr-dr/v2/policy-data/ues/ msisdn-1111111111/sm-data/mk1	<ul style="list-style-type: none"> • 400 : "Invalid URI sent from client" • 404 : "Subscriber does not exist" • 404 : "Data field does not exist " • 400 : "Unknown key, the key provided in the request is invalid"

Operation Type	Sample REST URL	Possible Error Codes
PUT	https://localhost:9443/ nudr-dr/v2/policy-data/ues/ msisdn-1111111111/sm-data/mk1 Payload: See PUT-UsageMonitoringInformation	<ul style="list-style-type: none"> • 400 : "Blob syntax error with corresponding error details" • 400 : "Invalid URI sent from client" • 404 : "Subscriber does not exist" • 400 : "Unknown key, the key provided in the request is invalid" • 404: "Data field does not exist"
DELETE	https://localhost:9443/ nudr-dr/v2/policy-data/ues/ msisdn-1111111111/sm-data/mk1	<ul style="list-style-type: none"> • 400 : "Invalid URI sent from client" • 404 : "Subscriber does not exist" • 400 : "Unknown key, the key provided in the request is invalid" • 404: "Data field does not exist"

Provisioning Operations for PCF Data

This section provides provisioning operations for PCF data.

Resource Name: ProfileData

HTTP Method: POST, PUT, DELETE, GET

BASE URI: *{apiRoot}/nudr-dr-prov/{version}/profile-data/{ue-id}*

Operation Type	Sample REST URL	Possible Error Codes
POST	This is for initial subscriber provisioning (Create subscriber), https://localhost:9443/nudr-dr-prov/v1/profile-data/msisdn-1111111114 Payload : See POST-ProfileData You can add profile-data and policy-data in single rest request. For sample data blob, see POST-Profile Data and Policy Data You can add profile-data and SLF-data in single rest request. For sample data blob, see POST-Profile Data and SLF Data	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 400: "Unknown key, the key provided in the request is invalid" • 400: "Payload should contain key-value pair present in URI" • 400: "Invalid content request data supplied" • 400: "Occurrence constraint violation" • 400: "Duplicate key"

Operation Type	Sample REST URL	Possible Error Codes
PUT	https://localhost:9443/nudr-dr-prov/v1/profile-data/nai-333333332 Payload: PUT-ProfileData	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 400: "Unknown key, the key provided in the request is invalid" • 400: " Payload should contain key-value pair present in URI " • 400: "Invalid content request data supplied" • 400: "Occurrence constraint violation"
DELETE	This operation deletes all data from all DATA tables (PCF, UDM etc.), https://localhost:9443/nudr-dr-prov/v1/profile-data/nai-333333332	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 400: "Unknown key, the key provided in the request is invalid"
GET	https://localhost:9443/nudr-dr-prov/v1/profile-data/msisdn-111111113	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 400: "Unknown key, the key provided in the request is invalid"

PCF Data Provisioning APIs

Resource Name: `AccessAndMobilityPolicyData`

HTTP Method: PUT, GET, DELETE

Base URI: `{apiRoot}/nudr-dr-prov/{version}/policy-data/{ueld}/am-data`

Operation Type	Sample REST URL	Possible Error Codes
PUT	https://10.75.212.116:31873/nudr-dr-prov/v2/policy-data/msisdn-777777779/am-data Payload: See PUT-AccessAndMobilityPolicyData	<ul style="list-style-type: none"> • 400: "Blob syntax error with corresponding error details" • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 400: "Unknown key, the key provided in the request is invalid"

Operation Type	Sample REST URL	Possible Error Codes
GET	https://10.75.212.116:31873/nudr-dr-prov/v2/policy-data/msisdn-777777779/am-data	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist" • 400: "Unknown key, the key provided in the request is invalid"
DELETE	https://10.75.212.116:31873/nudr-dr-prov/v2/policy-data/msisdn-777777779/am-data	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 400: "Unknown key, the key provided in the request is invalid"

Resource Name: SessionManagementPolicyData

HTTP Method: PUT, GET, DELETE

Base URI: *{apiRoot}/nudr-dr-prov/{version}/policy-data/{ueld}/sm-data*

Operation Type	Sample REST URL	Possible Error Codes
PUT	https://10.75.212.116:31873/nudr-dr-prov/v2/policy-data/msisdn-777777779/sm-data Payload: PUT-SessionManagementPolicyData	<ul style="list-style-type: none"> • 400: "Blob syntax error with corresponding error details" • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 400: "Unknown key, the key provided in the request is invalid"
GET	https://10.75.212.116:31873/nudr-dr-prov/v2/policy-data/msisdn-777777779/sm-data	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist" • 400: "Unknown key, the key provided in the request is invalid"
DELETE	https://10.75.212.116:31873/nudr-dr-prov/v2/policy-data/msisdn-777777779/sm-data	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 400: "Unknown key, the key provided in the request is invalid"

Resource Name: UEPolicySet

HTTP Method: PUT, GET, DELETE

Base URI: *{apiRoot}/nudr-dr-prov/{version}/policy-data/{ueId}/ue-policy-set*

Operation Type	Sample REST URL	Possible Error Codes
PUT	https://localhost:9443/nudr-dr-prov/v2/policy-data/msisdn-1111111111/ue-policy-set Payload: See PUT-UEPolicySet - Provisioning	<ul style="list-style-type: none"> • 400: "Blob syntax error with corresponding error details" • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 400: "Unknown key, the key provided in the request is invalid"
GET	https://localhost:9443/nudr-dr-prov/v2/policy-data/msisdn-1111111111/ue-policy-set	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist" • 400: "Unknown key, the key provided in the request is invalid"
DELETE	https://localhost:9443/nudr-dr-prov/v2/policy-data/msisdn-1111111111/ue-policy-set	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 400: "Unknown key, the key provided in the request is invalid"

Subscription Operations for PCF Data

In this section, you will learn about PCF Subscription Notification Formats.

Request	Notification Formats
PUT/PATCH	<pre>[{'ue-id': 'msisdn-777777779', 'smPolicyData': {'umData': {'mk1': {'scopes': {'11-abc123': {'dnn': ['dnn1'], 'snssai': {'sd': 'abc123', 'sst': 11}}, '22-abc123': {'dnn': ['dnn2'], 'snssai': {'sd': 'abc123', 'sst': 22}}, '33-abc123': {'dnn': ['dnn1', 'dnn2'], 'snssai': {'sd': 'abc123', 'sst': 33}}}}, 'limitId': 'mk1', 'umLevel': 'SERVICE_LEVEL', 'resetTime': {'period': 'YEARLY'}, 'allowedUsage': {'duration': 9000, 'totalVolume': 8888, 'uplinkVolume': 6666, 'downlinkVolume': 7777}}}, 'umDataLimits': {'mk1': {'scopes': {'11-abc123': {'dnn': ['dnn1'], 'snssai': {'sd': 'abc123', 'sst': 11}}, '22- abc123': {'dnn': ['dnn2'], 'snssai': {'sd': 'abc123', 'sst': 22}}, '33- abc123': {'dnn': ['dnn1', 'dnn2'], 'snssai': {'sd': 'abc123', 'sst': 33}}}}, 'endDate': '2018-11-05T08:17:14.090Z', 'limitId': 'mk1', 'umLevel': 'SESSION_LEVEL', 'startDate': '2018-09-05T08:17:14.090Z', 'usageLimit': {'duration': 6000, 'totalVolume': 9000, 'uplinkVolume': 5000, 'downlinkVolume': 4000}, 'resetPeriod': '2018-01-02T08:17:14.090Z'}}, 'smPolicySnssaiData': {'11-abc123': {'snssai': {'sd': 'abc123', 'sst': 11}, 'smPolicyDnnData': {'dnn1': {'dnn': 'dnn1', 'gbrDl': '7788 Kbps', 'gbrUl': '5566 Kbps', 'online': True, 'chfInfo': {'primaryChfAddress': '1.1.1.1', 'secondaryChfAddress': '2.2.2.2'}, 'offline': True, 'praInfos': {'pl': {'praId': 'pl', 'ecgiList': [{'plmnId': {'mcc': '976', 'mnc': '32'}, 'eutraCellId': '92FFdBE'}, {'plmnId': {'mcc': '977', 'mnc': '33'}, 'eutraCellId': '8F868C4'}]}, 'ncgiList': [{'plmnId': {'mcc': '976', 'mnc': '32'}, 'nrCellId': 'b2fB6fE9D'}, {'plmnId': {'mcc': '977', 'mnc': '33'}, 'nrCellId': '5d1B4127b'}]}, 'trackingAreaList': [{'tac': '5CB6', 'plmnId': {'mcc': '976', 'mnc': '32'}}, {'tac': '5CB7', 'plmnId': {'mcc': '977',</pre>

Request	Notification Formats
	<pre> 'mnc': '33'}}], 'globalRanNodeIdList': [{'plmnId': {'mcc': '965', 'mnc': '235'}, 'n3IwfId': 'fFf0f2AFbFa16CEfE7'}, {'gNbId': {'gNBValue': '1A8F1D', 'bitLength': 25}, 'plmnId': {'mcc': '967', 'mnc': '238'}}]]}}, 'bdtRefIds': {'abc': 'xyz', 'xyz': 'bdtRefIds'}, 'ipv4Index': 0, 'ipv6Index': 0, 'subscCats': ['cat1', 'cat2'], 'adcSupport': True, 'mpsPriority': True, 'allowedServices': ['ser1', 'ser2'], 'mpsPriorityLevel': 2, 'imsSignallingPrio': True, 'refUmDataLimitIds': {'mk1': {'monkey': ['monkey1', 'limitId': 'mk1']}}, 'subscSpendingLimits': True}}}, '22-abcl23': {'snssai': {'sd': 'abcl23', 'sst': 22}, 'smPolicyDnnData': {'dnn2': {'dnn': 'dnn2', 'gbrDl': '7788 Kbps', 'gbrUl': '5566 Kbps', 'online': True, 'chfInfo': {'primaryChfAddress': '1.1.1.1', 'secondaryChfAddress': '2.2.2.2'}, 'offline': True, 'praInfos': {'pl': {'praId': 'pl', 'ecgiList': [{'plmnId': {'mcc': '976', 'mnc': '32'}, 'eutraCellId': '92FFdBE'}, {'plmnId': {'mcc': '977', 'mnc': '33'}, 'eutraCellId': '8F868C4'}]}, 'ncgiList': [{'plmnId': {'mcc': '976', 'mnc': '32'}, 'nrCellId': 'b2fB6fE9D'}, {'plmnId': {'mcc': '977', 'mnc': '33'}, 'nrCellId': '5d1B4127b'}]}, 'trackingAreaList': [{'tac': '5CB6', 'plmnId': {'mcc': '976', 'mnc': '32'}}, {'tac': '5CB7', 'plmnId': {'mcc': '977', 'mnc': '33'}}]}, 'globalRanNodeIdList': [{'plmnId': {'mcc': '965', 'mnc': '235'}, 'n3IwfId': 'fFf0f2AFbFa16CEfE7'}, {'gNbId': {'gNBValue': '1A8F1D', 'bitLength': 25}, 'plmnId': {'mcc': '967', 'mnc': '238'}}]]}}, 'ipv4Index': 0, 'ipv6Index': 0, 'subscCats': ['cat1', 'cat2'], 'adcSupport': True, 'mpsPriority': True, 'allowedServices': ['ser1', 'ser2'], 'mpsPriorityLevel': 2, 'imsSignallingPrio': True, 'refUmDataLimitIds': {'mk1': {'monkey': ['monkey1', 'limitId': 'mk1']}}, </pre>

Request	Notification Formats
	<pre>'subscSpendingLimits': True}}}, '33-abc123': {'snssai': {'sd': 'abc123', 'sst': 33}, 'smPolicyDnnData': {'dnn1': {'dnn': 'dnn1', 'gbrDl': '7788 Kbps', 'gbrUl': '5566 Kbps', 'online': True, 'chfInfo': {'primaryChfAddress': '1.1.1.1', 'secondaryChfAddress': '2.2.2.2'}, 'offline': True, 'praInfos': {'pl': {'praId': 'p1', 'ecgiList': [{'plmnId': {'mcc': '976', 'mnc': '32'}, 'eutraCellId': '92FFdBE'}, {'plmnId': {'mcc': '977', 'mnc': '33'}, 'eutraCellId': '8F868C4'}] , 'ncgiList': [{'plmnId': {'mcc': '976', 'mnc': '32'}, 'nrCellId': 'b2fB6fE9D'}, {'plmnId': {'mcc': '977', 'mnc': '33'}, 'nrCellId': '5d1B4127b'}]}, 'trackingAreaList': [{'tac': '5CB6', 'plmnId': {'mcc': '976', 'mnc': '32'}}, {'tac': '5CB7', 'plmnId': {'mcc': '977', 'mnc': '33'}}]}, 'globalRanNodeIdList': [{'plmnId': {'mcc': '965', 'mnc': '235'}, 'n3IwfId': 'fFf0f2AFbFa16CEfE7'}, {'gNbId': {'gNBValue': '1A8F1D', 'bitLength': 25}, 'plmnId': {'mcc': '967', 'mnc': '238'}}]}]}, 'ipv4Index': 0, 'ipv6Index': 0, 'subscCats': ['cat1', 'cat2'], 'adcSupport': True, 'mpsPriority': True, 'allowedServices': ['ser1', 'ser2'], 'mpsPriorityLevel': 2, 'imsSignallingPrio': True, 'refUmDataLimitIds': {'mk1': {'monkey': ['monkey1'], 'limitId': 'mk1'}}, 'subscSpendingLimits': True}, 'dnn2': {'dnn': 'dnn2', 'gbrDl': '7788 Kbps', 'gbrUl': '5566 Kbps', 'online': True, 'chfInfo': {'primaryChfAddress': '1.1.1.1', 'secondaryChfAddress': '2.2.2.2'}, 'offline': True, 'praInfos': {'pl': {'praId': 'p1', 'ecgiList': [{'plmnId': {'mcc': '976', 'mnc': '32'}, 'eutraCellId': '92FFdBE'}, {'plmnId': {'mcc': '977', 'mnc': '33'}, 'eutraCellId': '8F868C4'}]}, 'ncgiList': [{'plmnId': {'mcc': '976', 'mnc': '32'},</pre>

Request	Notification Formats
	<pre>'nrCellId': 'b2fB6fE9D'}, {'plmnId': {'mcc': '977', 'mnc': '33'}, 'nrCellId': '5d1B4127b'}], 'trackingAreaList': [{'tac': '5CB6', 'plmnId': {'mcc': '976', 'mnc': '32'}}, {'tac': '5CB7', 'plmnId': {'mcc': '977', 'mnc': '33'}}], 'globalRanNodeIdList': [{'plmnId': {'mcc': '965', 'mnc': '235'}, 'n3IwfId': 'fFf0f2AFbFa16CEfE7'}, {'gNbId': {'gNBValue': '1A8F1D', 'bitLength': 25}, 'plmnId': {'mcc': '967', 'mnc': '238'}}}], 'ipv4Index': 0, 'ipv6Index': 0, 'subscCats': ['cat1', 'cat2'], 'adcSupport': True, 'mpsPriority': True, 'allowedServices': ['ser1', 'ser2'], 'mpsPriorityLevel': 2, 'imsSignallingPrio': True, 'refUmDataLimitIds': {'mk1': {'monkey': ['monkey1'], 'limitId': 'mk1'}}}, 'subscSpendingLimits': True}}}}}]</pre>
DELETE DATA	<pre>[{'ueId': 'msisdn-7777777779', 'smPolicyData': None}]</pre>
DELETE SUBSCRIBER	<pre>[{'ueId': 'msisdn-7777777779', 'uePolicySet': None, 'amPolicyData': None, 'smPolicyData': None, 'usageMonData': : None}]</pre>

Operations Supported for UDM

This section provides information about the operations supported for UDM as per 29.505 v16.2.

Sub-level Name: Authentication Data

Resource Name: AuthenticationSubscriptionData

HTTP Method: GET, PATCH

Base URI: /subscription-data/{ueId}/authentication-data/authentication-subscription

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	Sample URI: http://localhost:8080/ nldr-dr/v2/ subscription-data/ imsi-911000000028/ authentication-data/ authentication- subscription	Output: { "encOpcKey": "ABED", "encTopcKey": "ACED", "algorithmId": "algoID", "sequenceNumber" : { "sqn": "123456789ABE", "difSign": "NEGATIVE", "indLength": 5, "sqnScheme": "GENERAL", "lastIndexes": { "ausf": 5 } }, "encPermanentKey" : "ABBA", "authenticationM ethod": "5G_AKA", "protectionParam eterId": "ProtecID", "authenticationM anagementField": "ABBE" }	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	Sample URI: http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/authentication-data/authentication-subscription?fields=encOpcKey,algorithmId	Output: <pre>{ "encOpcKey": "ABED", "algorithmId": "algoID" }</pre>	
PATCH	Sample URI: http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/authentication-data/authentication-subscription Payload: <pre>case1: REPLACE [{ "op" : "replace", "path" : "/ sequenceNumber/ sqn", "value" : "123456789ABC" }] case2: ADD case3: REMOVE</pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Resource Name: AuthenticationStatus

HTTP Method: PUT, GET

Base URI: /subscription-data/{ueId}/authentication-data/authentication-status

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	<p>Sample URI: http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ authentication-data/ authentication-status</p> <p>Payload:</p> <pre>{ "nfInstanceId" : "abae35e5- cc45-4016-8dd4-8 9598e5311b9", "success" : true, "timeStamp" : "2018-01-02T08:1 7:14.090Z", "authType" : "5G_AKA", "servingNetworkN ame" : "5G:mnc123.mcc45 6.3gppnetwork.or g" }</pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"
GET	<p>Sample URI: http:// localhost:8080/nudr- dr/v2/subscription- data/ imsi-911000000028/ authentication-data/ authentication-status? fields=nfInstanceId,su ccess</p>	<p>Output:</p> <pre>{ "nfInstanceId": "abae35e5- cc45-4016-8dd4-8 9598e5311b9", "success": true }</pre>	

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	Sample URI: http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ authentication-data/ authentication-status	Output: <pre>{ "success": true, "authType": "5G_AKA", "timeStamp": "2018-01-02T08:17:14.090Z", "nfInstanceId": "abae35e5-cc45-4016-8dd4-89598e5311b9", "servingNetworkName": "5G:mnc123.mcc456.3gppnetwork.org" }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Sub-level Name: Context Data

Resource Name: ContextData

HTTP Method: GET

Base URI: /subscription-data/{uclid}/context-data

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	Sample URI: http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ context-data	Output: See GET-ContextData	
	Sample URI: http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ context-data? context-dataset- names=SMSF_3GPP	Output: GET - Context Data - SMSF	

Resource Name: Amf3GppAccessRegistration

HTTP Method: PUT, PATCH, GET

Base URI: *subscription-data/{ueid}/context-data/amf-3gpp-access*

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	<p>Sample URI: http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/context-data/amf-3gpp-access Payload: See PUT - Amf3GppAccessRegistration</p>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"
PATCH	<p>Sample URI: http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/context-data/amf-3gpp-access Payload: See PATCH - Amf3GppAccessRegistration</p>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "
GET	<p>Sample URI: http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/context-data/amf-3gpp-access</p>	Output: See GET-Amf3GppAccessRegistration	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "
	<p>Sample URI: http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/context-data/amf-3gpp-access?fields=pei,ratType,epslnterworkingInfo,backupAmfInfo,drFlag</p>	Output: See GET-Amf3GppAccessRegistration	

Resource Name: AmfNon3GppAccessRegistration

HTTP Method: PUT, PATCH, GET

Base URI: *subscription-data/{ueid}/ context-data/amf-non-3gpp-access*

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	Sample URI: http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ context-data/amf- non-3gpp-access Payload: See PUT- AmfNon3GppAccess Registration		<ul style="list-style-type: none">• 400: "Invalid URI sent from client"• 404: "Subscriber does not exist"

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PATCH	<p>Sample URI: http://localhost:8080/ nldr-dr/v2/ subscription-data/ imsi-911000000028/ context-data/amf- non-3gpp-access Payload:</p> <pre> case1: REPLACE [{ "op" : "replace", "path" : "/ backupAmfInfo/0/ guamiList/0/ plmnId/mcc", "value" : "998" }] case2: ADD [{ "op" : "add", "path" : "/ backupAmfInfo/0/ guamiList/1", "value" : { "amfId": "5678AA", "plmnId": { "mcc": "666", "mnc": "456" } } }] case3: REMOVE [{ "op" : "remove", "path" : "/ backupAmfInfo/0/ </pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	guamiList/2" }]		
GET	Sample URI: http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ context-data/amf- non-3gpp-access	Output: See GET- AmfNon3GppAccess Registration	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "
	Sample URI: http:// localhost:8080/nudr- dr/v2/subscription- data/ imsi-911000000028/ context-data/amf- non-3gpp-access? fields=amfInstancelId, guami	Output: See GET- AmfNon3GppAccess Registration	

Resource Name: SmfRegistrations

HTTP Method: GET

Base URI: *subscription-data/{ueld}/context-data/smf-registrations*

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	Sample URI: http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ context-data/smf- registrations	Output: <pre>[{ "supportedFeatures": "supFeature1", "dnn": "dnn2", "singleNssai": { "sd": "abcdef", "sst": 32 }, "smfInstanceId": "abae35e5- cc45-4016-8dd4-8 9598e5311b9", "emergencyServices": true, "pcscfRestorationCallbackUri": "http://ocnrf- ambassador.default.svc.cluster.local/nnrf- nfm/v1/nf- instances", "plmnId": { "mnc": "011", "mcc": "001" }, "pduSessionId": 123, "pgwFqdn": "abcdefgh" }]</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Resource Name: IndividualSmfRegistration

HTTP Method: PUT, DELETE, GET

Base URI: *subscription-data/{ueld}/context-data /smf-registrations/{pduSessionId}*

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	<p>Sample URI: http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ context-data/smf- registrations/123 Payload:</p> <pre>{ "smfInstanceId" : "abae35e5- cc45-4016-8dd4-8 9598e5311b9", "pduSessionId" : 123, "singleNssai" : { "sst" : 32, "sd" : "abcdef" }, "plmnId" : { "mcc" : "001", "mnc" : "011" }, "supportedFeatur es" : "supFeature1", "dnn" : "dnn2", "emergencyServic es" : true, "pcscfRestoratio nCallbackUri" : "http://ocnrf- ambassador.defau lt.svc.cluster.l ocal/nnrf- nfm/v1/nf- instances", "pgwFqdn" : "abcdefgh" }</pre>	<p>Output:</p> <pre>{ "smfInstanceId" : "abae35e5- cc45-4016-8dd4-8 9598e5311b9", "pduSessionId" : 123, "singleNssai" : { "sst" : 32, "sd" : "abcdef" }, "plmnId" : { "mcc" : "001", "mnc" : "011" }, "supportedFeatur es" : "supFeature1", "dnn" : "dnn2", "emergencyServic es" : true, "pcscfRestoratio nCallbackUri" : "http://ocnrf- ambassador.defau lt.svc.cluster.l ocal/nnrf- nfm/v1/nf- instances", "pgwFqdn" : "abcdefgh" }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	}		
DELETE	Sample URI: http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ context-data/smf- registrations/123		

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	Sample URI: http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ context-data/smf- registrations/123	Output: <pre> { "dnn": "dnn2", "plmnId": { "mcc": "001", "mnc": "011" }, "pgwFqdn": "abcdefgh", "singleNssai": { "sd": "abcdef", "sst": 32 }, "pduSessionId": 123, "smfInstanceId": "abae35e5- cc45-4016-8dd4-8 9598e5311b9", "emergencyServices": true, "supportedFeatures": "supFeature1", "pcscfRestorationCallbackUri": "http://ocnrf- ambassador.default.svc.cluster.local/nnrf- nfm/v1/nf- instances" } </pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	Sample URI: http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/context-data/smf-registrations/123?fields=singleNssai,smfInstanceId	Output: <pre> { "singleNssai": { "sd": "abcdef", "sst": 32 }, "smfInstanceId": "abae35e5-cc45-4016-8dd4-89598e5311b9" } </pre>	

Resource Name: Smf3GppAccessRegistration

HTTP Method: PUT, DELETE, GET

Base URI: *subscription-data/{uId}/context-data /smf-3gpp-access*

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	<p>Sample URI: http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ context-data/ smsf-3gpp-access Payload:</p> <pre>{ { "smsfInstanceId" : "69d3da66-9e25-1 1e9- a2a3-2a2ae2dbcce 4", "supportedFeatur es": "BA2b5d3b977eF24 58EEC80592E", "plmnId": { "mcc": "452", "mnc": "45" }, "smsfMAPAddress" : "977347916", "smsfDiameterAdd ress": { "name": "uLmBAnz2b7S6Oev NkC7tHvcEZidEXpp NIp7Le9yXzucgboi XFRkYg6597Lbi31n OBxEBV2ZePCfKpUi EB0ULZMxudPsPepu d.emteshurwldoo eh", "realm": "uLmBAnz2b7S6Oev NkC7tHvcEZidEXpp NIp7Le9yXzucgboi XFRkYg6597Lbi31n OBxEBV2ZePCfKpUi</pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	<pre>EB0ULZMxudPsPepu d.emteshurwldoo eh" } }</pre>		
DELETE	<p>Sample URI: http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ context-data/ smsf-3gpp-access</p>		

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	Sample URI: http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ context-data/ smsf-3gpp-access	Output: <pre> { "plmnId": { "mcc": "452", "mnc": "45" }, "smsfInstanceId" : "69d3da66-9e25-1 1e9- a2a3-2a2ae2dbcce 4", "smsfMAPAddress" : "977347916", "supportedFeatur es": "BA2b5d3b977eF24 58EEC80592E", "smsfDiameterAdd ress": { "name": "uLmBAnz2b7S60ev NkC7tHvcEZidEXpp NIp7Le9yXzucgboi XFRkYg6597Lbi31n OBxEBV2ZePCfKpUi EB0ULZMxudPsPepu d.emteshurwldoo eh", "realm": "uLmBAnz2b7S60ev NkC7tHvcEZidEXpp NIp7Le9yXzucgboi XFRkYg6597Lbi31n OBxEBV2ZePCfKpUi EB0ULZMxudPsPepu d.emteshurwldoo eh" } } </pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	Sample URI: http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/context-data/smsf-3gpp-access?fields=smsfDiameterAddress,smsfMAPAddress	Output: <pre> { "smsfMAPAddress" : "977347916", "smsfDiameterAddress": { "name": "uLmBAnz2b7S60evNkC7tHvcEZidEXppNIp7Le9yXzucgboiXFRkYg6597LBi31nOBxEBV2ZePCfKpUiEB0ULZMxudPsPepud.emteshurwlddoeh", "realm": "uLmBAnz2b7S60evNkC7tHvcEZidEXppNIp7Le9yXzucgboiXFRkYg6597LBi31nOBxEBV2ZePCfKpUiEB0ULZMxudPsPepud.emteshurwlddoeh" } } </pre>	

Resource Name: SmfNon3GppAccessRegistration

HTTP Method: PUT, DELETE, GET

Base URI: *subscription-data/{ueld}/context-data /smsf-non-3gpp-access*

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	<p>Sample URI: http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ context-data/smsf- non-3gpp-access</p> <p>Payload:</p> <pre>{ "plmnId": { "mcc": "452", "mnc": "45" }, "smsfInstanceId" : "69d3da66-9e25-1 1e9- a2a3-2a2ae2dbcce 4", "smsfMAPAddress" : "977347916", "supportedFeatur es": "BA2b5d3b977eF24 58EEC80592E", "smsfDiameterAdd ress": { "name": "uLmBAnz2b7S60ev NkC7tHvcEZidEXpp NIp7Le9yXzucgboi XFRkYg6597Lbi31n OBxEBV2ZePCfKpUi EB0ULZMxudPsPepu d.emteshurwldoo eh", "realm": "uLmBAnz2b7S60ev NkC7tHvcEZidEXpp NIp7Le9yXzucgboi XFRkYg6597Lbi31n OBxEBV2ZePCfKpUi EB0ULZMxudPsPepu</pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	<pre>d.emteshurwldoo eh" } }</pre>		
DELETE	<p>Sample URI: http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/context-data/smsf-non-3gpp-access</p>		

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	Sample URI: http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ context-data/smsf- non-3gpp-access	Output: <pre> { "plmnId": { "mcc": "452", "mnc": "45" }, "smsfInstanceId" : "69d3da66-9e25-1 1e9- a2a3-2a2ae2dbcce 4", "smsfMAPAddress" : "977347916", "supportedFeatur es": "BA2b5d3b977eF24 58EEC80592E", "smsfDiameterAdd ress": { "name": "uLmBAnz2b7S60ev NkC7tHvcEZidEXpp NIp7Le9yXzucgboi XFRkYg6597Lbi31n OBxEBV2ZePCfKpUi EB0ULZMxudPsPepu d.emteshurwldoo eh", "realm": "uLmBAnz2b7S60ev NkC7tHvcEZidEXpp NIp7Le9yXzucgboi XFRkYg6597Lbi31n OBxEBV2ZePCfKpUi EB0ULZMxudPsPepu d.emteshurwldoo eh" } } </pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	Sample URI: http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/context-data/smsf-non-3gpp-access?fields=smsfMAPAddress,smsfDiameterAddress	Output: <pre>{ "smsfMAPAddress" : "977347916", "smsfDiameterAddress": { "name": "uLmBAnz2b7S60evNkC7tHvcEZidEXppNIp7Le9yXzucgboiXFRkYg6597LBi31nOBxEBV2ZePCfKpUiEB0ULZMxudPsPepud.emteshurwlddooeh", "realm": "uLmBAnz2b7S60evNkC7tHvcEZidEXppNIp7Le9yXzucgboiXFRkYg6597LBi31nOBxEBV2ZePCfKpUiEB0ULZMxudPsPepud.emteshurwlddooeh" } }</pre>	

Resource Name: AccessAndMobilitySubscriptionData

HTTP Method: GET

Base URI: /subscription-data/{ueld}/{servingPlmnId}/provisioned-data /am-data

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	Sample URI: http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000089/77889/provisioned-data/am-data	Output: See GET - AccessAndMobilitySubscriptionData	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	Sample URI: http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000089/77889/provisioned-data/am-data?fields=gpsis,nssai,sorlnfo	Output: See PUT-AccessAndMobilitySubscriptionData	

Resource Name: SmfSelectionSubscriptionData

HTTP Method: GET

Base URI: /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/smf-selection-subscription-data

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	Sample URI: http://localhost:8080/udr-dr/v2/subscription-data/imsi-911000000089/77889/provisioned-data/smf-selection-subscription-data	Output: <pre> { "supportedFeatures": "692F296F2Cb3BCA76Bc1E126FeEC12" , "sharedSnsaiInfosId": "96367-9z}MD*" , "subscribedSnsaiInfos": { "snsai1": { "dnnInfos": [{ "dnn": "Dnn1" } , "iwkEpsInd": true , "lboRoamingAllowed": true , "defaultDnnIndicator": true } , { "dnn": "Dnn2" , "iwkEpsInd": true , "lboRoamingAllowed": true } } } </pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
		<pre>"defaultDnnIndicator": false }] } }</pre>	

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	<p>Sample URI: http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000089/7889/provisioned-data/smf-selection-subscription-data?fields=subscribedSnssaiInfos,supportedFeatures</p>	<p>Output:</p> <pre>{ "supportedFeatures": "692F296F2Cb3BCA76Bc1E126FeEC12" , "subscribedSnssaiInfos": { "snsai1": { "dnnInfos": [{ "defaultDnnIndicator": true, "iwkEpsInd": true, "dnn": "Dnn1" }, { "defaultDnnIndicator": false, "iwkEpsInd": true, "dnn": "Dnn2" }] } } }</pre>	

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
		<pre>"lboRoamingAllowed": true } }]</pre>	

Resource Name: SessionManagementSubscriptionData

HTTP Method: GET

Base URI: /subscription-data/{ueld}/{servingPlmnId}/provisioned-data/sm-data

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	<p>Sample URI: http://localhost:8080/nudr/v2/subscription-data/imsi-911000000089/77889/provisioned-data/sm-data</p>	<p>Output: GET-SessionManagementSubscriptionData</p>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	Sample URI: http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000089/77889/provisioned-data/sm-data?fields=internalGroupIds,singleNssai	Output: <pre>[{ "singleNssai": { "sd": "ABC654", "sst": 1 }, "internalGroupIds": ["9ABAB803-203-299-95A9", "9ABAB803-203-299-95A2", "79e0c480-719-085-f2A55e6DDc91Df802438"] }]</pre>	

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	Sample URI: http://localhost:8080/hudr-dr/v2/subscription-data/imsi-91100000028/77889/provisioned-data/sm-data?single-nssai=1-ABC654&dnn=dnn1&fields=internalGroupIds,singleNssai	Output: <pre>[{ "singleNssai": { "sd": "ABC654", "sst": 1 }, "internalGroupIds": ["9ABAB803-203-299-95A9", "9ABAB803-203-299-95A2", "79e0c480-719-085-f2A55e6DDc91Df802438"] }]</pre>	

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	<p>Sample URI: http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/7889/provisioned-data/sm-data?dnn=dnn1&fields=internalGroupIds,singleNssai</p>	<p>sm-data should be provisioned for a subscriber with same ueld, same servingPlmId but different single-Nssai</p> <p>Output:</p> <pre>[{ "singleNssai": { "sd": "ABC654", "sst": 1 }, "internalGroupIds": ["9ABAB803-203-299-95A9", "9ABAB803-203-299-95A2", "79e0c480-719-085-f2A55e6DDc91Df802438"] }, { "singleNssai": { "sst": 2 }, "internalGroupIds": ["9ABAB803-203-299-95A9", "9ABAB803-203-299-95A2", "79e0c480-719-08</pre>	

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
		<pre>5- f2A55e6DDc91Df80 2438"] }]</pre>	
	<p>Sample URI: http://localhost:8080/nudr/v2/subscription-data/imsi-911000000028/77889/provisioned-data/sm-data?single-nssai=1-ABC654&fields=internalGroupIds,singleNssai</p>	<p>Output:</p> <pre>[{ "singleNssai": { "sd": "ABC654", "sst": 1 }, "internalGroupIds": ["9ABAB803-203-299-95A9", "9ABAB803-203-299-95A2", "79e0c480-719-085-f2A55e6DDc91Df802438"] }</pre>	

Resource Name: SMSManagementSubscriptionData

HTTP Method: GET

Base URI: */subscription-data/{ueld}/{servingPlmnId}/provisioned-data/sms-mng-data*

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	Sample URI: http://localhost:8080/udr-dr/v2/subscription-data/imsi-91100000089/77889/provisioned-data/sms-mng-data	Output: <pre>{ "moSmsBarringAll": true, "moSmsSubscribed": false, "mtSmsBarringAll": true, "mtSmsSubscribed": true, "supportedFeatures": ["CAe8de215CFa721BB2AE7Ef9c5f71a2e", "moSmsBarringRoaming": true, "mtSmsBarringRoaming": false, "sharedSmsMngDataIds": ["16994-'JD", "693599-9~~GX"]] }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Resource Name: TraceData

HTTP Method: GET

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/77889/provisioned-data/trace-data	Output: <pre>{ "traceRef": "070207-baE6Dd", "eventList": "855B5bf7beC3AFB8c", "neTypeList": "0f4FBefe95bF8", "traceDepth": "MINIMUM", "collectionEntityIpv4Addr": "26.118.255.253", "collectionEntityIpv6Addr": "2001:db8:85a3::8a2e:370:7334" }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Resource Name: SMSSubscriptionData

HTTP Method: GET

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/77889/provisioned-data/sms-data	Output: <pre>{ "smsSubscribed": true, "sharedSmsSubsDataId": "63472-BTkzoYkBL1" }</pre>	

Sub-level Name: Provisioned Data

Resource Name: ProvisionedData

HTTP Method: GET

Base URI: /subscription-data/{ueId}/{servingPlmnId}/provisioned-data

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	Sample URI: http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000089/77889/provisioned-data	Output: GET-ProvisionedData	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "
	Sample URI: http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000089/77889/provisioned-data?dataset-names=AM,SM	Output: GET-ProvisionedData	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Sub-level Name: ue-update-confirmation-data

Resource Name: Sor-data

HTTP Method: GET, PUT

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/ue-update-confirmation-data/sor-data	Output: <pre>{ "sorMacIue": "3a84eBBb8C694Cce4ebA2FCC9307af1A", "sorXmacIue": "3a84eBBb8C694Cce4ebA2FCC9307af1F", "ueUpdateStatus": "NOT_SENT", "provisioningTime": "2012-04-23T18:25:43.511Z" }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	<p>Sample URI: http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/u e-update- confirmation-data/sor- data</p> <p>Payload:</p> <pre>{ "provisioningTime": "2012-04-23T18:25:43.511Z", "ueUpdateStatus": "NOT_SENT", "sorXmacIue": "3a84eBBb8C694Cce4ebA2FCC9307af1F", "sorMacIue": "3a84eBBb8C694Cce4ebA2FCC9307af1A" }</pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"

Sub-level Name: OperatorSpecificData

HTTP Method: GET, PATCH

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ operator-specific-data	Output: <pre>{ "NumberTypeElements": { "1": 1.1 }, "StringTypeElements": { "1": "s" }, "BooleanTypeElements": { "1": true }, "IntegerTypeElements": { "1": 1 } }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "
PATCH	http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ operator-specific-data Payload: <pre>case1: REPLACE [{ "op" : "replace", "path" : "/" IntegerTypeElements/1", "value" : 2 }] Case2: ADD case3: REMOVE</pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Sub-level Name: OperatorDeterminedBarringData

HTTP Method: GET

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/operator-determined-barring-data	Output: <pre>{ "roamingOdb" : "OUTSIDE_HOME_PLMN" }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Sub-level Name: ProvisionedParameterData

HTTP Method: PATCH, GET

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PATCH	http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/pp-data Payload: <pre>case1: REPLACE [{ "op" : "replace", "path" : "/ communicationCharacteristics/ ppSubsRegTimer/ subsRegTimer", "value" : 13 }] case2: ADD case3: REMOVE</pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/p p-data	Output: <pre>{ "supportedFeatures": "751b", "communicationCharacteristics": { "ppActiveTime": { "activeTime": 23, "referenceId": 2, "afInstanceId": "f9dc5b9c-a460-11e9-a2a3-2a2ae2dbcce4" }, "ppSubsRegTimer": { "referenceId": 1, "afInstanceId": "f9dc5b9c-a460-11e9-a2a3-2a2ae2dbcce4", "subsRegTimer": 12 }, "ppDlPacketCount": 1 } }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Sub-level Name: EeProfileData

HTTP Method: GET

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/e-profile-data	Output: <pre>{ "supportedFeatures": "fcB2fFC084Fc2d5B4Afcfa2Df8614", "restrictedEventTypes": ["LOSS_OF_CONNECTIVITY", "CHANGE_OF_SUPI_PEI_ASSOCIATION"] }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "
	http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/e-profile-data?fields=restrictedEventTypes	Output: <pre>{ "restrictedEventTypes": ["LOSS_OF_CONNECTIVITY", "CHANGE_OF_SUPI_PEI_ASSOCIATION"] }</pre>	

Sub-level Name: IdentityData

HTTP Method: GET

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/identity-data	<pre> Output: { "gpsiList": ["msisdn-101176983803402"], "supiList": ["imsi-516737872"], "imsi-516737873"] } </pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Provisioning Operations for UDM Data

This section provides information about the operations supported for UDM data through provisioning interface.

Resource Name: AuthenticationSubscriptionData

HTTP Method: GET, PUT, DELETE

Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/authentication-data/authentication-subscription

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	Sample URI: https:// 10.75.212.116:31873/ nudr-dr-prov/v1/ subscription-data/ msisdn-777777779/ authentication-data/ authentication- subscription	<pre> { "encOpcKey": "ABED", "encTopcKey": "ACED", "algorithmId": "algoID", "sequenceNumber" : { "sqn": "123456789ABE", "difSign": "NEGATIVE", "indLength": 5, "sqnScheme": "GENERAL", "lastIndexes": { "ausf": 5 } }, "encPermanentKey ": "ABBA", "authenticationM ethod": "5G_AKA", "protectionParam eterId": " ProtecID", "authenticationM anagementField": "ABBE" } </pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Data field does not exist " • 404: "Subscriber does not exist" • 400: "Unknown key, the key provided in the request is invalid"

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/authentication-data/authentication-subscription?fields=encOpckey,algorithmId	<pre>{ "encOpckey": "ABED", "algorithmId": "algoID" }</pre>	

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	<p>Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ authentication-data/ authentication- subscription</p> <p>Payload:</p> <pre>{ "authenticationMethod" : "5G_AKA", "encPermanentKey" : "ABBA", "protectionParameterId" : " ProtecID", "sequenceNumber" : { "sqnScheme" : "GENERAL", "sqn" : "123456789ABE", "lastIndexes" : { "ausf" : 5 }, "indLength" : 5, "difSign" : "NEGATIVE" }, "authenticationManagementField" : "ABBE", "algorithmId" : "algoID", "encOpcKey" : "ABED", "encTopcKey" :</pre>		<ul style="list-style-type: none"> • 400: " Invalid URI sent from client" • 404: "Subscriber does not exist"

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	"ACED" }		
DELETE	http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ authentication-data/ authentication- subscription		

Resource Name: AuthenticationStatus

HTTP Method: PUT, GET, DELETE

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ authentication-data/ authentication-status Payload: { "nfInstanceId" : "abae35e5- cc45-4016-8dd4-8 9598e5311b9", "success" : true, "timeStamp" : "2018-01-02T08:1 7:14.090Z", "authType" : "5G_AKA", "servingNetworkN ame" : "5G:mnc123.mcc45 6.3gppnetwork.or g" } }		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ authentication-data/ authentication-status	<pre>{ "success": true, "authType": "5G_AKA", "timeStamp": "2018-01-02T08:1 7:14.090Z", "nfInstanceId": "abae35e5- cc45-4016-8dd4-8 9598e5311b9", "servingNetworkN ame": "5G:mnc123.mcc45 6.3gppnetwork.or g" }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "
	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ authentication-data/ authentication-status? fields=nfInstanceId	<pre>{ "nfInstanceId": "abae35e5- cc45-4016-8dd4-8 9598e5311b9" }</pre>	
DELETE	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ authentication-data/ authentication-status		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 400: "Unknown key, the key provided in the request is invalid"

Sub-level Name: Context Data

Resource Name: Amf3GppAccessRegistration

HTTP Method: PUT, DELETE, GET

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ context-data/ amf-3gpp-access Payload: See PUT-Amf3GppAccessRegistration		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"
DELETE	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ context-data/ amf-3gpp-access		
	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ context-data/ amf-3gpp-access/all		
GET	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ context-data/ amf-3gpp-access? fields=pei,guami	Output: { "pei": "imei-1000000000 000001", "guami": { "plmnId": { "mnc": "123", "mcc": "001" }, "amfId": "1234AA" } } }	
	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ context-data/ amf-3gpp-access/all	Output: GET - Amf3GppAccessRegistration	

Resource Name: AmfNon3GppAccessRegistration

HTTP Method: PUT, DELETE, GET

Base URI: *subscription-data/{ueld}/ context-data/amf-non-3gpp-access*

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ context-data/amf- non-3gpp-access Payload: See PUT- AmfNon3GppAccess Registration		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"
DELETE	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ context-data/amf- non-3gpp-access		
	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000025/ context-data/amf- non-3gpp-access/all		
GET	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ context-data/amf- non-3gpp-access	Output: See GET- AmfNon3GppAccess Registration	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	<p>Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/context-data/amf-non-3gpp-access?fields=backupAmfInfo, ratType</p>	<p>Output:</p> <pre>{ "ratType": "WLAN", "backupAmfInfo": [{ "AmfName": "amf1.cluster1.net2.amf.5gc.mnc012.mcc345.3gppnetwork.org", "guamiList": [{ "plmnId": { "mnc": "456", "mcc": "002" }, "amfId": "5678AA" }, { "plmnId": { "mnc": "789", "mcc": "003" }, "amfId": "9876AA" }] }</pre>	

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
		<pre> }] }] } </pre>	
	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000025/ context-data/amf- non-3gpp-access/all		

Resource Name: SmfRegistrations

HTTP Method: GET, DELETE

Base URI: *subscription-data/{ueld}/context-data/smf-registrations*

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ context-data/smf- registrations	Output: [{ "supportedFeatures": "supFeature1", "dnn": "dnn2", "singleNssai": { "sd": "abcdef", "sst": 32 }, "smfInstanceId": "abae35e5- cc45-4016-8dd4-8 9598e5311b9", "emergencyServices": true, "pcscfRestorationCallbackUri": "http://ocnrf- ambassador.default.svc.cluster.local/nnrf- nfm/v1/nf- instances", "plmnId": { "mnc": "011", "mcc": "001" }, "pduSessionId": 123, "pgwFqdn": "abcdefgh" }]	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
DELETE	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ context-data/smf- registrations		

Resource Name: IndividualSmfRegistration

HTTP Method: PUT, DELETE, GET

Base URI: *subscription-data/{ueld}/context-data /smf-registrations/{pduSessionId}*

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	<p>Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ context-data/smf- registrations/123 Payload:</p> <pre>{ "smfInstanceId" : "abae35e5- cc45-4016-8dd4-8 9598e5311b9", "pduSessionId" : 123, "singleNssai" : { "sst" : 32, "sd" : "abcdef" }, "plmnId" : { "mcc" : "001", "mnc" : "011" }, "supportedFeatur es" : "supFeature1", "dnn" : "dnn2", "emergencyServic es" : true, "pcscfRestoratio nCallbackUri" : "http://ocnrf- ambassador.defau lt.svc.cluster.l ocal/nnrf- nfm/v1/nf- instances", "pgwFqdn" : "abcdefgh" }</pre>	<p>Output:</p> <pre>{ "smfInstanceId" : "abae35e5- cc45-4016-8dd4-8 9598e5311b9", "pduSessionId" : 123, "singleNssai" : { "sst" : 32, "sd" : "abcdef" }, "plmnId" : { "mcc" : "001", "mnc" : "011" }, "supportedFeatur es" : "supFeature1", "dnn" : "dnn2", "emergencyServic es" : true, "pcscfRestoratio nCallbackUri" : "http://ocnrf- ambassador.defau lt.svc.cluster.l ocal/nnrf- nfm/v1/nf- instances", "pgwFqdn" : "abcdefgh" }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
DELETE	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ context-data/smf- registrations/123		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "
GET	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ context-data/smf- registrations/123	Output: <pre>{ "dnn": "dnn2", "plmnId": { "mcc": "001", "mnc": "011" }, "pgwFqdn": "abcdefgh", "singleNssai": { "sd": "abcdef", "sst": 32 }, "pduSessionId": 123, "smfInstanceId": "abae35e5- cc45-4016-8dd4-8 9598e5311b9", "emergencyServices": true, "supportedFeatures": "supFeature1", "pcscfRestorationCallbackUri": "http://ocnrf- ambassador.default.svc.cluster.local/nnrf- nfm/v1/nf- instances" }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ context-data/smf- registrations/123? fields=dnn	Output: <pre> { "dnn": "dnn2", "emergencyServices": true } </pre>	

Resource Name: Smsf3GppAccessRegistration

HTTP Method: PUT, DELETE, GET

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	<p>Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ context-data/ smsf-3gpp-access Payload:</p> <pre>{ "smsfInstanceId" : "69d3da66-9e25-1 1e9- a2a3-2a2ae2dbcce 4", "supportedFeatur es" : "BA2b5d3b977eF24 58EEC80592E", "plmnId" : { "mcc" : "452", "mnc" : "45" }, "smsfMAPAddress" : "977347916", "smsfDiameterAdd ress" : { "name" : "uLmBAnz2b7S6Oev NkC7tHvcEZidEXpp NIp7Le9yXzucgboi XFRkYg6597Lbi31n OBxEBV2ZePCfKpUi EB0ULZMxudPsPepu d.emteshurwldoo eh", "realm" : "uLmBAnz2b7S6Oev NkC7tHvcEZidEXpp NIp7Le9yXzucgboi XFRkYg6597Lbi31n OBxEBV2ZePCfKpUi EB0ULZMxudPsPepu</pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	d.emteshurwldoo eh" } }		
DELETE	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ context-data/ smsf-3gpp-access		

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ context-data/ smsf-3gpp-access	Output: { "smsfInstanceId" : "69d3da66-9e25-1 1e9- a2a3-2a2ae2dbcce 4", "supportedFeatur es": "BA2b5d3b977eF24 58EEC80592E", "plmnId": { "mcc": "452", "mnc": "45" }, "smsfMAPAddress" : "977347916", "smsfDiameterAdd ress": { "name": "uLmBAnz2b7S60ev NkC7tHvcEZidEXpp NIp7Le9yXzucgboi XFRkYg6597Lbi31n OBxEBV2ZePCfKpUi EB0ULZMxudPsPepu d.emteshurwldoo eh", "realm": "uLmBAnz2b7S60ev NkC7tHvcEZidEXpp NIp7Le9yXzucgboi XFRkYg6597Lbi31n OBxEBV2ZePCfKpUi EB0ULZMxudPsPepu d.emteshurwldoo eh" } }	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/context-data/smsf-3gpp-access?fields=plmnId,smsfInstanceld	Output: <pre> { "smsfInstanceId" : "69d3da66-9e25-1 1e9- a2a3-2a2ae2dbcce 4", "plmnId": { "mnc": "45", "mcc": "452" } } </pre>	

Resource Name: SmsfNon3GppAccessRegistration

HTTP Method: PUT, DELETE, GET

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	<p>Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ context-data/smsf- non-3gpp-access</p> <p>Payload:</p> <pre>{ "smsfInstanceId" : "69d3da66-9e25-1 1e9- a2a3-2a2ae2dbcce 4", "supportedFeatur es": "BA2b5d3b977eF24 58EEC80592E", "plmnId": { "mcc": "452", "mnc": "45" }, "smsfMAPAddress" : "977347916", "smsfDiameterAdd ress": { "name": "uLmBAnz2b7S60ev NkC7tHvcEZidEXpp NIp7Le9yXzucgboi XFRkYg6597LBi31n OBxEBV2ZePCfKpUi EB0ULZMxudPsPepu d.emteshurwldoo eh", "realm": "uLmBAnz2b7S60ev NkC7tHvcEZidEXpp NIp7Le9yXzucgboi XFRkYg6597LBi31n OBxEBV2ZePCfKpUi EB0ULZMxudPsPepu</pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	<pre>d.emteshurwldoo eh" } }</pre>		
DELETE	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ context-data/smsf- non-3gpp-access		

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	Sample URI: http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ context-data/smsf- non-3gpp-access	Output: <pre> { "smsfInstanceId" : "69d3da66-9e25-1 1e9- a2a3-2a2ae2dbcce 4", "supportedFeatur es": "BA2b5d3b977eF24 58EEC80592E", "plmnId": { "mcc": "452", "mnc": "45" }, "smsfMAPAddress" : "977347916", "smsfDiameterAdd ress": { "name": "uLmBAnz2b7S60ev NkC7tHvcEZidEXpp NIp7Le9yXzucgboi XFRkYg6597Lbi31n OBxEBV2ZePCfKpUi EB0ULZMxudPsPepu d.emteshurwldoo eh", "realm": "uLmBAnz2b7S60ev NkC7tHvcEZidEXpp NIp7Le9yXzucgboi XFRkYg6597Lbi31n OBxEBV2ZePCfKpUi EB0ULZMxudPsPepu d.emteshurwldoo eh" } } </pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/context-data/smsf-non-3gpp-access?fields=plmnId,smsfDiameterAddress	<pre> Output: { "plmnId": { "mnc": "45", "mcc": "452" }, "smsfDiameterAddress": { "name": "uLmBAnz2b7S60evNkC7tHvcEZidEXppNIp7Le9yXzucgboiXFRkYg6597LBi31nOBxEBV2ZePCfKpUiEB0ULZMxudPsPepud.emteshurwlddooeh", "realm": "uLmBAnz2b7S60evNkC7tHvcEZidEXppNIp7Le9yXzucgboiXFRkYg6597LBi31nOBxEBV2ZePCfKpUiEB0ULZMxudPsPepud.emteshurwlddooeh" } } </pre>	

Resource Name: AccessAndMobilitySubscriptionData

HTTP Method: GET, PUT, DELETE

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000089/77889/provisioned-data/am-data	Sample Output: GET-AccessAndMobilitySubscriptionData	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist in data table"

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000089/77889/provisioned-data/am-data?fields=gpsis,nssai,sorlnfo		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist in data table"
PUT	Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000089/77889/provisioned-data/am-data Payload: See PUT - AccessAndMobilitySubscriptionData		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"
DELETE	Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000089/77889/provisioned-data/am-data		

Resource Name: SmfSelectionSubscriptionData

HTTP Method: PUT, DELETE, GET

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	<p>Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000089/77889/provisioned-data/smf-selection-subscription-data</p> <p>Payload:</p> <pre>{ "supportedFeatures": "692F296F2Cb3BCA76Bc1E126FeEC12" , "subscribedSnsaiInfos" :{ "snsai1": {"dnnInfos":[{ "dnn": "Dnn1" , "defaultDnnIndicator": true, "lboRoamingAllowed":true, "iwkEpsInd": true }], "dnn": "Dnn2" , "defaultDnnIndicator": false, "lboRoamingAllowed":true, "iwkEpsInd": true }]} },</pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	<pre>"sharedSnssaiInfoId": "96367-9z }MD*" }</pre>		
DELETE	<p>Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000089/77889/provisioned-data/smf-selection-subscription-data</p>		

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000089/77889/provisioned-data/smf-selection-subscription-data	Output: <pre> { "supportedFeatures": "692F296F2Cb3BCA76Bc1E126FeEC12" , "sharedSnssaiInfosId": "96367-9z}MD*" , "subscribedSnssaiInfos": { "snsai1": { "dnnInfos": [{ "dnn": "Dnn1" } , "iwkEpsInd": true , "lboRoamingAllowed": true , "defaultDnnIndicator": true } , { "dnn": "Dnn2" , "iwkEpsInd": true , "lboRoamingAllowed": true } } } </pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
		<pre>"defaultDnnIndicator": false }] } }</pre>	

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	<p>Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000089/7889/provisioned-data/smf-selection-subscription-data?fields=subscribedSnssaiInfos</p>	<p>Output:</p> <pre>{ "subscribedSnssaiInfos": { "snsai1": { "dnnInfos": [{ "defaultDnnIndicator": true, "iwkEpsInd": true, "dnn": "Dnn1", "lboRoamingAllowed": true }, { "defaultDnnIndicator": false, "iwkEpsInd": true, "dnn": "Dnn2", "lboRoamingAllowed": true }] } } }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
		} }	

Resource Name: SessionManagementSubscriptionData

HTTP Method: GET, PUT, DELETE

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000089/77889/provisioned-data/sm-data	Output: GET-SessionManagementSubscriptionData-Provisioning	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "
	Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000089/77889/provisioned-data/sm-data?fields=internalGroupIds,dnnConfigurations	Output: GET-SessionManagementSubscriptionData-Provisioning	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "
PUT	Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000089/77889/provisioned-data/sm-data Payload: PUT-SessionManagementSubscriptionData		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"
DELETE	Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000089/77889/provisioned-data/sm-data		

Resource Name: SMSManagementSubscriptionData

HTTP Method: GET, PUT, DELETE

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000089/77889/provisioned-data/sms-mng-data	Output: <pre> { "moSmsBarringAll": true, "moSmsSubscribed": false, "mtSmsBarringAll": true, "mtSmsSubscribed": true, "supportedFeatures": "CAe8de215CFa721BB2AE7Ef9c5f71a2e", "moSmsBarringRoaming": true, "mtSmsBarringRoaming": false, "sharedSmsMngDataIds": ["16994-'JD", "693599-9~~GX"] }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000089/77889/provisioned-data/sms-mng-data?fields=mtSmsSubscribed,sharedSmsMngDataIds	Output: <pre>{ "mtSmsSubscribed": true, "sharedSmsMngDataIds": ["16994-'JD", "693599-9~~GX"] }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	<p>Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000089/77889/provisioned-data/sms-mng-data</p> <p>Payload:</p> <pre>{ "supportedFeatures": "CAe8de215Cfa721BB2AE7Ef9c5f71a2e", "mtSmsSubscribed": true, "mtSmsBarringAll": true, "mtSmsBarringRoaming": false, "moSmsSubscribed": false, "moSmsBarringAll": true, "moSmsBarringRoaming": true, "sharedSmsMngDataIds": ["16994-JD", "693599-9--GX"] }</pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"
DELETE	<p>Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000089/77889/provisioned-data/sms-mng-data</p>		

Resource Name: TraceData

HTTP Method: PUT, GET, DELETE

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	<p>http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/77889/provisioned-data/trace-data</p> <pre>{ "traceRef": "070207-baE6Dd", "traceDepth": "MINIMUM", "neTypeList": "0f4FBefe95bF8", "eventList": "855B5bf7beC3AFB8c", "collectionEntityIpv4Addr": "26.118.255.253", "collectionEntityIpv6Addr": "2001:db8:85a3::8a2e:370:7334" }</pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/77889/provisioned-data/trace-data	Output: <pre>{ "traceRef": "070207-baE6Dd" , "eventList": "855B5bf7beC3AFB8c" , "neTypeList": "0f4FBefe95bF8" , "traceDepth": "MINIMUM" , "collectionEntityIpv4Addr": "26.118.255.253" , "collectionEntityIpv6Addr": "2001:db8:85a3::8a2e:370:7334" }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "
DELETE	http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/77889/provisioned-data/trace-data		

Resource Name: SMSSubscriptionData

HTTP Method:PUT, GET, DELETE

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	<p>http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-91100000028/7 7889/provisioned- data/sms-data Payload:</p> <pre>{ "smsSubscribed" : true, "sharedSmsSubsDa taId" : "63472- BtkzoYkBL1" }</pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"
GET	<p>http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-91100000028/7 7889/provisioned- data/sms-data</p>	<p>Output:</p> <pre>{ "smsSubscribed" : true, "sharedSmsSubsDa taId" : "63472- BtkzoYkBL1" }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "
DELETE	<p>http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-91100000028/7 7889/provisioned- data/sms-data</p>		

Sub-level Name: OperatorSpecificData

HTTP Method: GET, PUT, DELETE

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/operator-specific-data	Output: <pre>{ "NumberTypeElements": { "1": 1.1 }, "StringTypeElements": { "1": "s" }, "BooleanTypeElements": { "1": true }, "IntegerTypeElements": { "1": 1 } }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "
	http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/operator-specific-data?fields=NumberTypeElements	Output: <pre>{ "NumberTypeElements": { "1": 1.1 } }</pre>	

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	<p>http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/operator-specific-data</p> <p>Payload:</p> <pre>{ "StringTypeElements": { "1": "s" }, "IntegerTypeElements": { "1": 1 }, "NumberTypeElements": { "1": 1.1 }, "BooleanTypeElements": { "1": true } }</pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"
DELETE	<p>http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/operator-specific-data</p>		

Sub-level Name: OperatorDeterminedBarringData

HTTP Method: GET, PUT, DELETE

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	<p>http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/operator-determined-barring-data</p> <p>Payload:</p> <pre>{ "roamingOdb": "OUTSIDE_HOME_PL MN" }</pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"
DELETE	<p>http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/operator-determined-barring-data</p>		
GET	<p>http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/operator-determined-barring-data</p>	<p>Output:</p> <pre>{ "roamingOdb": "OUTSIDE_HOME_PL MN" }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Sub-level Name: ProvisionedParameterData

HTTP Method: GET, PUT, DELETE

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	<p>http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/pp-data Payload:</p> <pre>{ "communicationCharacteristics": { "ppSubsRegTimer": { "subsRegTimer": 12, "afInstanceId": "f9dc5b9c-a460-11e9-a2a3-2a2ae2dbcce4", "referenceId": 1 }, "ppActiveTime": { "activeTime": 23, "afInstanceId": "f9dc5b9c-a460-11e9-a2a3-2a2ae2dbcce4", "referenceId": 2 }, "ppDlPacketCount": 1 }, }</pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	<pre>"supportedFeatures": "751b" }</pre>		
DELETE	<pre>http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/p p-data</pre>		

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/p p-data	Output: <pre>{ "supportedFeatures": "751b", "communicationCharacteristics": { "ppActiveTime": { "activeTime": 23, "referenceId": 2, "afInstanceId": "f9dc5b9c-a460-11e9-a2a3-2a2ae2dbcce4" }, "ppSubsRegTimer": { "referenceId": 1, "afInstanceId": "f9dc5b9c-a460-11e9-a2a3-2a2ae2dbcce4", "subsRegTimer": 12 }, "ppDlPacketCount": 1 } }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "

Sub-level Name: EeProfileData

HTTP Method: PUT, GET, DELETE

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	<p>http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/e-profile-data</p> <p>Payload:</p> <pre>{ "restrictedEventTypes": ["LOSS_OF_CONNECTIVITY", "CHANGE_OF_SUPI_PEI_ASSOCIATION"], "supportedFeatures": "fcB2fFC084Fc2d5B4Afcfa2Df8614" }</pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"
GET	<p>http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/e-profile-data</p>	<p>Output:</p> <pre>{ "supportedFeatures": "fcB2fFC084Fc2d5B4Afcfa2Df8614", "restrictedEventTypes": ["LOSS_OF_CONNECTIVITY", "CHANGE_OF_SUPI_PEI_ASSOCIATION"] }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist"

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/e- e-profile-data? fields=restrictedEvent Types	Output: { "restrictedEvent Types": ["LOSS_OF_CONNECT IVITY", "CHANGE_OF_SUPI_ PEI_ASSOCIATION"] }	
DELETE	http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/e- e-profile-data		

Sub-level Name: IdentityData

HTTP Method: PUT, GET, DELETE

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/ identity-data <pre>{ "supiList": ["imsi-516737872 ", "imsi-51673787 3"], "gpsiList": ["msisdn-1011769 83803402"] }</pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/identity-data	Output: <pre>{ "gpsiList": ["msisdn-101176983803402"], "supiList": ["imsi-516737872" , "imsi-516737873"] }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "
DELETE	http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/identity-data		

Sub-level Name: ue-update-confirmation-data

Resource Name: Sor-data

HTTP Method: PUT, GET, DELETE

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	<p>http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/ue-update-confirmation-data/sor-data</p> <pre>{ "provisioningTime": "2012-04-23T18:25:43.511Z", "ueUpdateStatus": "NOT_SENT", "sorXmacIue": "3a84eBBb8C694Cce4ebA2FCC9307af1F", "sorMacIue": "3a84eBBb8C694Cce4ebA2FCC9307af1A" }</pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist"

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/ue-update-confirmation-data/sor-data	Output: <pre>{ "sorMacIue": "3a84eBBb8C694Cce4ebA2FCC9307af1A", "sorXmacIue": "3a84eBBb8C694Cce4ebA2FCC9307af1F", "ueUpdateStatus": "NOT_SENT", "provisioningTime": "2012-04-23T18:25:43.511Z" }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist "
DELETE	http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000028/ue-update-confirmation-data/sor-data		

Subscription Operations for UDM Data

This table provides information about the subscription operations for UDM data.

Operations Type	Sample Request REST URL	Sample Response	Possible Error codes
POST	Header-Location: http://localhost:8080/nudr-dr/v2/subscription-data/nai-990991@nai/context-data/sdm-subscriptions RequestData: See POST-SDMSubscriptions	Header-Location: http://localhost:8080/nudr-dr/v2/subscription-data/nai-990991@nai/context-data/sdm-subscriptions/5 Output: See POST-SDMSubscriptions	<ul style="list-style-type: none"> • 400: "Duplicate subscription" • 404: "Subscriber does not exist" • 400: "Schema Validation failure " • 404: "Data does not exist "

Operations Type	Sample Request REST URL	Sample Response	Possible Error codes
PUT	<p>http://localhost:8080/nudr-dr/v2/subscription-data/nai-990991@nai/context-data/sdm-subscriptions/5</p> <p>RequestData: See PUT - SDMSubscriptions</p>	-	<ul style="list-style-type: none"> • 400: "Duplicate subscription" • 404: "Subscriber does not exist" • 400: "Schema Validation failure " • 404: "Data does not exist "
GET	<p>http://localhost:8080/nudr-dr/v2/subscription-data/nai-990991@nai/context-data/sdm-subscriptions</p>	Output See: GET-SDMSubscriptions	<ul style="list-style-type: none"> • 404: "Subscriber does not exist" • 404: "Data does not exist "
PATCH	<p>http://localhost:8080/nudr-dr/v2/subscription-data/nai-990991@nai/context-data/sdm-subscriptions/5</p> <p>RequestData:</p> <pre>[{ "op": "replace", "path": "/" dnn", "value": "sbsb" }]</pre>		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data does not exist "
DELETE	<p>http://localhost:8080/nudr-dr/v2/subscription-data/nai-990991@nai/context-data/sdm-subscriptions/5</p>		<ul style="list-style-type: none"> • 404: "Subscriber does not exist" • 404: "Subscription not found"
POST	<p>http://localhost:8080/nudr-dr/v2/subscription-data/subs-to-notify</p> <p>RequestData: See Post-SubscriptionDataSubscriptions</p>	Output: See Post-Output-SubscriptionDataSubscriptions	<ul style="list-style-type: none"> • 400: "Invalid Data Content" • 400: "Duplicate subscription" • 404: "Subscriber does not exist" • 400: "Schema Validation failure " • 404: "Data does not exist "

Operations Type	Sample Request REST URL	Sample Response	Possible Error codes
GET	http://localhost:8080/nudr-dr/v2/subscription-data/subs-to-notify?ue-id=nai-990991@nai	Output: See Get-Output-SubscriptionDataSubscriptions	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client "
PATCH	http://localhost:8080/nudr-dr/v2/subscription-data/subs-to-notify/7 RequestData: <pre>[{ "op": "replace", "path": "/" supportedFeatures", "value": "sf" }]</pre>		
DELETE	http://localhost:8080/nudr-dr/v2/subscription-data/subs-to-notify?ue-id=nai-990991@nai,delete-all-nfs=true,nf-instance-id=cb59c48c-a2fa-11e9-a2a3-2a2ae2dbcce4,implicit-unsubscribe-indication=true		

Operations Supported for SLF Lookup Data

This section provides information about operations supported for SLF Lookup feature.

 **Note:**

These APIs are compliant with 3GPP TS 29.504 v16.2.0

Operation Type	Sample Request	Sample Response	Notes
GET	http://localhost:8080/nudr-group-id-map/v1/nf-group-ids?subscriber-id=msisdn-1111111111&nf-type=udm	200 OK Response Body: { "nfGroupIDs" : { "UDM" : "udm-group-name" } }	subscriber-id and nf-type parameters are mandatory in URI
GET	http://localhost:8080/nudr-group-id-map/v1/nf-group-ids?subscriber-id=msisdn-1111111111&nf-type=udm,ausf,nef	200 OK { "nfGroupIDs" : { "AUSF" : "ausf-group-name", "NEF" : "nef-group-name", "UDM" : "udm-group-name" } }	subscriber-id and nf-type parameters are mandatory in URI

Provisioning Operations for SLF Data

The provisioning operations for SLF data are as follows:

Operation Type	Sample Request	Sample Response	Notes
PUT	http://localhost:8080/slf-group-prov/v1/slf-group { "slfGroupName" : "IMSGrp1", "slfGroupType" : "LteHss", "nfGroupIDs" : { "NEF" : "nef-group-name1", "UDM" : "udm-group-name1", "PCF" : "pcf-group-name1", "AUSF" : "ausf-group-name1" } }	201 Created	

Operation Type	Sample Request	Sample Response	Notes
DELETE	http://localhost:8080/slf-group-prov/v1/slf-group?slfGroupName="IMSGrp1"	204 No Content	
GET	http://localhost:8080/slf-group-prov/v1/slf-group?slfGroupName="IMSGrp1"	200 OK <pre>{ "slfGroupName": "IMSGrp1", "slfGroupType": "LteHss", "nfGroupIDs": { "NEF": "nef- group-name1", "UDM": "udm- group-name1", "PCF": "pcf- group-name1", "AUSF": "ausf- group-name1" } }</pre>	

Following table shows the SLF Subscriber Provisioning APIs on UDR (SLF).

Operation Type	Sample request	Sample response	Notes
DELETE	http://localhost:8080/nudr-group-id-map-prov/v1/slf-group/accountID-12345678912345678912345678	204 No Content	

Operation Type	Sample request	Sample response	Notes
GET	http://localhost:8080/ nudr-group-id-map- prov/v1/slf-group/ accountID-123456789 12345678912345678	200 OK Response { "profile- data": { "imsi": ["222222221", "222222222"], "nai": ["test@vzw.com"] }, "accountID": ["12345678912345 678912345678"], "msisdn": ["1919522555", "1919522556"], "extid": ["user@vzw.com"] }, "slfGroupName": "IMSGrp1" }	

Operation Type	Sample request	Sample response	Notes
PUT	<p>http://localhost:8080/nudr-group-id-map-prov/v1/slf-group/accountID-12345678912345678912345678</p> <p>Body</p> <pre>{ "profile-data": { "imsi": ["2222222221", "2222222222"], "nai": ["test@vzw.com"] }, "accountID": ["12345678912345678912345678912345678"], "msisdn": ["19195225555", "19195225556"], "extid": ["user@vzw.com"] }, "slfGroupName": "IMSGrp1" }</pre>	201 Created	

Operations Supported for Provgw

The provisioning operations for SLF using Provgw are as follows:

Operation Type		Sample Request	Sample Response	Possible Error Codes	Action from provisioning system
Activation	PUT Note 1	<p>http://localhost:8080/nudr-group-id-map-prov/v1/slf-group/accountid-12345678910</p> <pre>{"profile-data": {</pre>	201 Created	400 Bad Request: "details": {"<FQDN>":"Schema validation failed"}	Provisioning request error. See Problem Details. Action: Correct the payload or the key and resend.

Operation Type		Sample Request	Sample Response	Possible Error Codes	Action from provisioning system
		<pre> "SUPI": "imsi-222222222 1", "accountID": "12345678910", "GPSI": "msisdn-1 9195226666", }, "slfGroupName": "IMSGrp1"} </pre>		<p>500 Internal Server Error:</p> <pre> "details": { "<SEG>" : " {response}" } </pre> <p>Prov gateway Processing Failed</p>	<p>Transient error with UDR's Internal error.</p> <p>Action: Provisioning system to queue and retry the command.</p>
				<p>503 Service Unavailable:</p> <pre> "details" : { "<FQDN/ SEG>" : " {resp onse}" } </pre>	<p>Transient error with UDR's Internal error.</p> <p>Action: Provisioning system to queue and retry the command.</p>
				<p>404 Not Found: Destination not found</p>	<p>Provisioning request error. See Problem Details. Action: Correct the payload or the key and resend.</p>
Modify SUPI	PUT Note 1	<pre> http:// localhost:8080/ nudr-group-id- map-prov/v1/slf- group/ accountid-12345 678910 {"profile-data": { "SUPI": "imsi-333333333 3", "accountID": "12345678910", </pre>	201 Created	<p>400 Bad Request:</p> <pre> "details": { "<FQDN>": "Sch ema validation failed"} </pre>	<p>Provisioning request error. See Problem Details.</p> <p>Action: Correct the payload or the key and resend.</p>

Operation Type		Sample Request	Sample Response	Possible Error Codes	Action from provisioning system
		"GPSI": "msisdn-19195226666", }, "slfGroupName": "IMSGrp1"}		500 Internal Server Error: "details": { "<SEG>" : " {response} " } Prov gateway Processing Failed	Transient error with UDR's Internal error. Action: Provisioning system to queue and retry the command.
				503 Service Unavailable: "details" : {<FQDN/SEG>": " {response} "	Transient error with UDR's Internal error. Action: Provisioning system to queue and retry the command.
				404 Not Found: Destination not found	Provisioning request error. See Problem Details. Action: Correct the payload or the key and resend.
Modify GPSI	PUT Note 1	http://localhost:8080/nudr-group-id-map-prov/v1/slf-group/accountid-12345678910 {"profile-data": {"SUPI": "imsi-2222222221",	201 Created	400 Bad Request: "details": {"<FQDN>": "Schema validation failed"}	Provisioning request error. See Problem Details. Action: Correct the payload or the key and resend.

Operation Type		Sample Request	Sample Response	Possible Error Codes	Action from provisioning system
		<pre> "accountID": "12345678910", "GPSI":"msisdn-1 9999999999", }, "slfGroupName": "IMSGrp1"} </pre>		<p>500 Internal Server Error:</p> <pre> "details": { "<SEG>" : " {response}" } </pre> <p>Prov gateway Processing Failed</p>	<p>Transient error with UDR's Internal error.</p> <p>Action: Provisioning system to queue and retry the command.</p>
				<p>503 Service Unavailable:</p> <pre> "details" : {<FQDN/ SEG>" : {response}"} </pre>	<p>Transient error with UDR's Internal error.</p> <p>Action: Provisioning system to queue and retry the command.</p>
				<p>404 Not Found:Destination not found</p>	<p>Provisioning request error. See Problem Details.</p> <p>Action: Correct the payload or the key and resend.</p>
Modify IMS Group	PUT Note 1	<pre> http:// localhost:8080/ nudr-group-id- map-prov/v1/slf- group/ accountid-12345 678910 {"profile-data": { "SUPI": "imsi-22222222 1", </pre>	201 Created	<p>400 Bad Request:</p> <pre> "details": {"<FQDN>":"Sch ema validation failed"} </pre>	<p>Provisioning request error. See Problem Details.</p> <p>Action: Correct the payload or the key and resend.</p>

Operation Type		Sample Request	Sample Response	Possible Error Codes	Action from provisioning system
		<pre> "accountID": "12345678910", "GPSI":"msisdn-1 9195226666", }, "slfGroupName": "IMSGrp2"} </pre>		<p>500 Internal Server Error:</p> <pre> "details": { "<SEG>" : " {response}" } </pre> <p>Prov gateway Processing Failed</p>	<p>Transient error with UDR's Internal error.</p> <p>Action: Provisioning system to queue and retry the command.</p>
				<p>503 Service Unavailable:</p> <pre> "details" : {<FQDN/ SEG>" : {response}" } </pre>	<p>Transient error with UDR's Internal error.</p> <p>Action: Provisioning system to queue and retry the command.</p>
				<p>404 Not Found:Destination not found</p>	<p>Provisioning request error. See Problem Details.</p> <p>Action: Correct the payload or the key and resend.</p>
Activation with multiple keys in SUPI and GPSI	PUT Note 1	<pre> http:// localhost:8080/ nldr-group-id- map-prov/v1/slf- group/ accountid-12345 678910 {"profile-data": { "SUPI": ["imsi-22222222 1", </pre>	201 Created	<p>400 Bad Request:</p> <pre> "details": {"<FQDN>":"Sch ema validation failed"} </pre>	<p>Provisioning request error. See Problem Details.</p> <p>Action: Correct the payload or the key and resend.</p>

Operation Type		Sample Request	Sample Response	Possible Error Codes	Action from provisioning system
		<pre> "nai-test@vzw.com"], "accountID": "12345678910", "GPSI": ["msisdn-191952 25555" , "extid- user@vzw.com"], }, "slfGroupName": "IMSGrp1"} </pre>		<p>500 Internal Server Error:</p> <pre> "details": { "<SEG>" : " {response}" } </pre> <p>Prov gateway Processing Failed</p>	<p>Transient error with UDR's Internal error.</p> <p>Action: Provisioning system to queue and retry the command.</p>
				<p>503 Service Unavailable:</p> <pre> "details" : {<FQDN/ SEG>" : {response}"} </pre>	<p>Transient error with UDR's Internal error.</p> <p>Action: Provisioning system to queue and retry the command.</p>
				<p>404 Not Found:Destination not found</p>	<p>Provisioning request error. See Problem Details.</p> <p>Action: Correct the payload or the key and resend.</p>
DELETE	DELETE Note 2	<pre> http:// localhost:8080/ nudr-group-id- map-prov/v1/slf- group/ accountid-12345 678910 </pre>	204 No Content	<p>404 Not Found: Subscriber does not exist</p>	<p>Provisioning request error. See Problem Details.</p> <p>Action: Correct the payload or the key and resend.</p>

Operation Type		Sample Request	Sample Response	Possible Error Codes	Action from provisioning system
				503 Service Unavailable: "details" : {<FQDN/ SEG>": {response}}	Transient error with UDR's Internal error. Action: Provisioning system to queue and retry the command.
				500 Internal Server Error: "details": { "<SEG> " : "{response}"	Transient error with UDR's Internal error. Action: Provisioning system to queue and retry the command.
Query	GET Note 3	http://localhost:8080/nudr-group-id-map-prov/v1/slf-group/accountid-12345678910	200 OK {"profile-data": { "SUP": ["imsi-2222222221", "nai-test@vzw.com"], "accountID": "12345678910", "GPSI": ["msisdn-19195225555" , "extid-user@vzw.com"], }, "slfGroupName": "IMSGrp1"}	404 Not Found: Subscriber does not exist	Provisioning request error. See Problem Details. Action: Correct the payload or the key and resend.

Operation Type		Sample Request	Sample Response	Possible Error Codes	Action from provisioning system
	GET Note 3	http://localhost:8080/nudr-group-id-map-prov/v1/slf-group/imsi-222222221		500 Internal Server Error: "details": { "<SEG>" : " {response} " } Prov gateway Processing Failed	Transient error with UDR's Internal error. Action: Provisioning system to queue and retry the command.
	GET Note 3	http://localhost:8080/nudr-group-id-map-prov/v1/slf-group/msisdn-19195225555		503 Service Unavailable: "details" : { "<FQDN/SEG>" : {response}}	Transient error with UDR's Internal error. Action: Provisioning system to queue and retry the command.
				409 Response Conflict: "details" : { "<FQDN/SEG>" : {response}, "<FQDN' / SEG'>" : {response' } }	Subscriber Data on segments do not match. See Problem Details. Action: Correct the subscriber data and resend the request.

 **Note:**

You can **Provision/Re-provision subscriber based on accountid** when a command has all keys and IMS group. Verify all keys that are already provisioned and point to one subscriber. Add keys that do not exist in SLF DB and remove keys that exist in SLF DB but are absent in command. Set IMS group value for the subscriber.

- **Delete subscriber on the basis of accountid.** This deletes all keys for subscriber and IMSgroup association.
- **Retrieve subscriber.** Return subscriber IMS group and all subscriber keys.

The SLF related error code details are as follows:

Error Codes	Title	Detail
400	Bad request	Schema Validation Failure Invalid URI Key Not Supported Invalid JSON Format
404	Not Found	Subscriber does not exist Destination Not Found Key Not Found
405	Operation Not Allowed	Operation Not Allowed
500	Internal Server Error	Invalid Result Set Access Data Access Denied Data Access Denied/Resource Failure Temporary Resource Failure Acquire Lock Failure Transaction Rollback
501	Not Implemented	Bad SQL Grammar

Management URI Schema Update

The table provides information about the operations supported for management URI schema update.

The OpenAPI for Management URI: mgmapi.yml

Operation Type	URI	Sample Schema	Possible Error Codes
PUT	https://localhost:9443/nudr-dr-mgm/v1/policy-data/schema/am-data	<p>To add a new field, custom for am-data. Payload:</p> <p>PUT-schemablob</p> <pre>{ "\$schema": "http:// json-schema.org/ draft-07/schema#" , "additionalProperties": false, "type": "object", "properties": { "subscCats": { "minItems": 1, "type": "array", "items": { "type": "string" } }, "custom": { "type": "string" }, "praInfos": { "patternProperties": { "^(.*)\$": { "additionalProperties ": false, "type": "object", "properties": { "ecgiList": { "minItems": 1, "type": "array", "items": { "additionalProperties ": false, "type": "object", "required": ["plmnId", "eutraCellId"], "properties": { "eutraCellId": { "pattern": "^[A-Fa- f0-9]{7}\$", "type": "string" }, "plmnId": { "additionalProperties ": false, "type": "object", "required": ["mcc", "mnc"], "properties":</pre>	<ul style="list-style-type: none"> • 405: "Operation not allowed" (for nudr-dr) • 400: Incase of json syntax error, an appropriate error message is sent from SQL db.

Operation Type	URI	Sample Schema	Possible Error Codes
		<pre> { "mnc": { "pattern": "^\d{2,3}\$", "type": "string" }, "mcc": { "pattern": "^\ \d{3}\$", "type": "string" } } } } } }, "globalRanNodeIdList": { "minItems": 1, "type": "array", "items": { "additionalProperties ": false, "type": "object", "required": ["plmnId"], "properties": { "gNbId": { "additionalProperties ": false, "type": "object", "required": ["bitLength", "gNbValue"], "properties": { "bitLength": { "type": "integer" }, "gnbValue": { "pattern": "^[A-Fa- f0-9]{6,8}\$", "type": "string" } } }, "plmnId": { "additionalProperties ": false, "type": "object", "required": ["mcc", "mnc"], "properties": { "mnc": { "pattern": "^\d{2,3}\$", "type": "string" }, "mcc": { "pattern": "^\ \d{3}\$", "type": "string" } } }, "n3IwfId": { "pattern": "^[A-Fa- f0-9]+\$", </pre>	

Operation Type	URI	Sample Schema	Possible Error Codes
		<pre> "type": "string" }, "ngeNbId": { "pattern": "^(MacroNGeNB-[A-Fa- f0-9]{5} LMacroNGeNB- [A-Fa-f0-9] {6} SMacroNGeNB-[A-Fa- f0-9]{5})\$", "type": "string" } } } }, "praId": { "type": "string" }, "ncgiList": { "minItems": 1, "type": "array", "items": { "additionalProperties ": false, "type": "object", "required": ["plmnId", "nrCellId"], "properties": { "plmnId": { "additionalProperties ": false, "type": "object", "required": ["mcc", "mnc"], "properties": { "mnc": { "pattern": "^\d{2,3}\$", "type": "string" }, "mcc": { "pattern": "^\ \d{3}\$", "type": "string" } } }, "nrCellId": { "pattern": "^[A-Fa- f0-9]{9}\$", "type": "string" } } } }, "trackingAreaList": { "minItems": 1, "type": "array", "items": { "additionalProperties ": false, "type": "object", "required": ["plmnId", "tac"], "properties": </pre>	

Operation Type	URI	Sample Schema	Possible Error Codes
		<pre data-bbox="862 317 1200 1014"> { "tac": { "default": "", "pattern": "([A-Fa-f0-9]{4}\$ ([A-Fa-f0-9]{6}\$)", "type": "string" }, "plmnId": { "additionalProperties ": false, "type": "object", "required": ["mcc", "mnc"], "properties": { "mnc": { "pattern": "^\d{2,3}\$", "type": "string" }, "mcc": { "pattern": "^\ \d{3}\$", "type": "string" } } } } } } } } }, "additionalProperties": false } } } </pre> <p data-bbox="862 1066 1200 1178">This operation adds one new schema with version tag as "v1" and database points to "v1" now.</p> <p data-bbox="862 1188 1200 1350">To rollback to any other schema version, which already exists in database, see https://localhost:9443/nudr-dr-mgm/v1/policy-data/schema/am-data/version/v0.</p>	

Operation Type	URI	Sample Schema	Possible Error Codes
GET	<ul style="list-style-type: none"> • To get currently supported schema: https://localhost:9443/nudr-dr-mgm/v1/policy-data/schema/am-data • To get all schema versions supported by a resource. https://localhost:9443/nudr-dr-mgm/v1/policy-data/schema/am-data?version=all • To get any specific schema version: https://localhost:9443/nudr-dr-mgm/v1/policy-data/schema/am-data?version=v1 		405: "Operation not allowed" (for nudr-dr)
DELETE	<ul style="list-style-type: none"> • Schema, which is currently in use could not be deleted. • To delete any other stored schema: https://localhost:9443/nudr-dr-mgm/v1/policy-data/schema/am-data/version/v1 		405: "Operation not allowed" (in case of deleting current schema)

UDSF Data Operations

The table given below provides information about the UDSF Data Operations.

Operations Type	URI	Notes	Possible Error codes
PUT	https://localhost:9443/nudsf-dr/v1/udsf/msisdn-1111111111/udsf-data	Sample data blob for UDSF data is: <pre>{ "a": 1, "b": 2 }</pre>	<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 400: "Unknown key, the key provided in the request is invalid" • 400: "Blob syntax error with corresponding error details"
GET	https://localhost:9443/nudsf-dr/v1/udsf/msisdn-1111111111/udsf-data		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 404: "Data field does not exist" • 400: "Unknown key, the key provided in the request is invalid"
DELETE	https://localhost:9443/nudsf-dr/v1/udsf/msisdn-1111111111/udsf-data		<ul style="list-style-type: none"> • 400: "Invalid URI sent from client" • 404: "Subscriber does not exist" • 400: "Unknown key, the key provided in the request is invalid"

Policy Data Subscription Operations

The table given below provides information about the Policy Data Subscription Operations.

 **Note:**

All APIs supported are as per TS29.500v16.2

Operations Type	URI	Notes	Possible Error codes
POST	http://localhost:8080/nudr-dr/v2/policy-data/subs-to-notify	{ "notificationUri":"http://mlu-pcf-api-gateway.mlu-pcf.svc/user-service/userservice/notification/msisdn-1871587819", "monitoredResourceUris": ["https://localhost:9443/nudr-dr-prov/v1/policy-data/msisdn-1111111111/sm-data"], "supportedFeatures":"f", "expires":"2022-04-23T18:25:43.511Z" }	400 : "Schema validation failed for this request"
PUT	http://localhost:8080/nudr-dr/v2/policy-data/subs-to-notify/4	{ "notificationUri":"http://mlu-pcf-api-gateway.mlu-pcf.svc/user-service/userservice/notification/msisdn-1871587819", "monitoredResourceUris": ["https://localhost:9443/nudr-dr-prov/v1/policy-data/msisdn-1111111111/sm-data"], "supportedFeatures":"f", "expires":"2022-04-23T18:25:43.511Z" }	<ul style="list-style-type: none"> • 400: "Schema validation failed for this request" • 404: "Not found "
GET	http://localhost:8080/nudr-dr-prov/v2/policy-data/subs-to-notify/4	{ "subscribedResources": ["policy-data/msisdn-819191945001/am-data"], "expires":"2022-04-23T18:25:43.511Z", "supportedFeatures":"f", "notificationUri": "http://http2-service.default.svc.cluster.local/policy-data/uri1/" }	404 : "Requested data not found"
DELETE	http://localhost:8080/nudr-dr/v2/policy-data/subs-to-notify/4	-	404 : "Not found"

Generic - Title and its Types in Error Response

The following table lists the titles that can be accompanied by any of its type.

Error Codes	Title	Detail
400	Bad request	Invalid Data Content Schema Validation Failure Invalid URI Occurrence Constraint Violation Key Not Supported Invalid Payload Invalid Value Invalid JSON Format Invalid Number Format
404	Not Found	Not Found
405	Operation Not Allowed	Operation Not Allowed
500	Internal Server Error	Invalid Result Set Access Data Access Denied Data Access Denied/Resource Failure Temporary Resource Failure Acquire Lock Failure Transaction Rollback
501	Not Implemented	Bad SQL Grammar

A

Payload References

In this appendix, you will learn about Payload Reference details.

Payload Reference for PCF

This section provides payload details for the following PCF Operations.

- [PATCH-SessionManagementPolicyData](#)
- [PUT-UEPolicySet](#)
- [PATCH-UEPolicySet](#)
- [PUT-UsageMonitoringInformation](#)

PATCH-SessionManagementPolicyData

```
{
  "umData": {
    "mk1": {
      "scopes": {
        "11-abc123": {
          "dnn": [
            "dnn1"
          ],
          "snssai": {
            "sd": "abc123",
            "sst": 11
          }
        },
        "22-abc123": {
          "dnn": [
            "dnn2"
          ],
          "snssai": {
            "sd": "abc123",
            "sst": 22
          }
        },
        "33-abc123": {
          "dnn": [
            "dnn1",
            "dnn2"
          ],
          "snssai": {
            "sd": "abc123",
            "sst": 33
          }
        }
      }
    }
  }
}
```

```

    },
    "limitId": "mk1",
    "umLevel": "SERVICE_LEVEL",
    "resetTime": {
      "period": "YEARLY"
    },
    "allowedUsage": {
      "duration": 9000,
      "totalVolume": 8888,
      "uplinkVolume": 6666,
      "downlinkVolume": 7777
    }
  },
  "smPolicySnssaiData": {
    "11-abc123": {
      "snssai": {
        "sd": "abc123",
        "sst": 11
      },
      "smPolicyDnnData": {
        "dnn1": {
          "dnn": "dnn1",
          "bdRefIds": {
            "abc": "bdRefIds",
            "xyz": "PCF123"
          }
        }
      }
    }
  }
}

```

PUT-UEPolicySet

```

{
  "praInfos": {
    "p1": {
      "praId": "p1",
      "trackingAreaList": [ {
        "plmnId": {
          "mcc": "976",
          "mnc": "32"
        },
        "tac": "5CB6"
      },
      {
        "plmnId": {
          "mcc": "977",
          "mnc": "33"
        },
        "tac": "5CB7"
      }
    ]
  }
}

```



```
],
  "ecgiList": [{
    "plmnId": {
      "mcc": "976",
      "mnc": "32"
    },
    "eutraCellId": "92FFdBE"
  },
  {
    "plmnId": {
      "mcc": "977",
      "mnc": "33"
    },
    "eutraCellId": "8F868C4"
  }
],
  "ncgiList": [{
    "plmnId": {
      "mcc": "976",
      "mnc": "32"
    },
    "nrCellId": "b2fB6fE9D"
  },
  {
    "plmnId": {
      "mcc": "977",
      "mnc": "33"
    },
    "nrCellId": "5d1B4127b"
  }
],
  "globalRanNodeIdList": [{
    "plmnId": {
      "mcc": "965",
      "mnc": "235"
    },
    "n3IwfId": "fFf0f2AFbFa16CEfE7"
  },
  {
    "plmnId": {
      "mcc": "967",
      "mnc": "238"
    },
    "gNbId": {
      "bitLength": 25,
      "gNBValue": "1A8F1D"
    }
  }
]
},
"subscCats": ["cat1", "cat2"],
"uePolicySections": {
```

```

    "111": {
      "upsi": "111",
      "uePolicySectionInfo": "1"
    },
    "33": {
      "upsi": "33",
      "uePolicySectionInfo": "2"
    }
  },
  "upsis": ["111", "33"],
  "allowedRouteSelDescs": {
    "965-235": {
      "servingPlmn": {
        "mcc": "965",
        "mnc": "235"
      },
      "snssaiRouteSelDescs": [{
        "snssai": {
          "sd": "abc123",
          "sst": 11
        }
      },
      "dnnRouteSelDescs": [{
        "dnn": "dnn1",
        "sscModes": ["SSC_MODE_1", "SSC_MODE_2"],
        "pduSessTypes": ["IPV4"]
      }
    ]
  }
},
  "andspInd": true,
  "pei": "imei-355375345274757",
  "osIds": ["bceafb30-31bd-4b8d-b3c2-ed79d029531a",
"cc9d9f97-0127-497c-9bca-79e8e9080ea8"]
}

```

PATCH-UEPolicySet

```

{
  "praInfos": {
    "p1": {
      "praId": "p1",
      "trackingAreaList": [{
        "plmnId": {
          "mcc": "976",
          "mnc": "32"
        },
        "tac": "5CB6"
      }
    ],
    {
      "plmnId": {
        "mcc": "977",
        "mnc": "33"
      },
      "tac": "5CB7"
    }
  }
}

```

```
    }
  ],
  "ecgiList": [{
    "plmnId": {
      "mcc": "976",
      "mnc": "32"
    },
    "eutraCellId": "92FFdBE"
  },
  {
    "plmnId": {
      "mcc": "977",
      "mnc": "33"
    },
    "eutraCellId": "8F868C4"
  }
],
  "ncgiList": [{
    "plmnId": {
      "mcc": "976",
      "mnc": "32"
    },
    "nrCellId": "b2fB6fE9D"
  },
  {
    "plmnId": {
      "mcc": "977",
      "mnc": "33"
    },
    "nrCellId": "5d1B4127b"
  }
],
  "globalRanNodeIdList": [{
    "plmnId": {
      "mcc": "965",
      "mnc": "235"
    },
    "n3IwfId": "fFf0f2AFbFa16CEfE7"
  },
  {
    "plmnId": {
      "mcc": "967",
      "mnc": "238"
    },
    "gNbId": {
      "bitLength": 25,
      "gNBValue": "1A8F1D"
    }
  }
]
},
"subscCats": ["cat1", "cat2"],
```

```

"uePolicySections": {
  "111": {
    "upsi": "111",
    "uePolicySectionInfo": "1"
  },
  "33": {
    "upsi": "33",
    "uePolicySectionInfo": "2"
  }
},
"upsis": ["111", "33"],
"allowedRouteSelDescs": {
  "965-235": {
    "servingPlmn": {
      "mcc": "965",
      "mnc": "235"
    },
    "snssaiRouteSelDescs": [{
      "snssai": {
        "sd": "abc123",
        "sst": 11
      }
    }]
  }
},
"andspInd": true,
"pei": "imei-355375345274757",
"osIds": ["bceafb30-31bd-4b8d-b3c2-ed79d029531a",
"cc9d9f97-0127-497c-9bca-79e8e9080ea8"]
}

```

PUT-UsageMonitoringInformation

```

{
  "scopes": {
    "11-abc123": {
      "dnn": [
        "dnn1"
      ],
      "snssai": {
        "sd": "abc123",
        "sst": 11
      }
    },
    "22-abc123": {
      "dnn": [
        "dnn2"
      ],
      "snssai": {
        "sd": "abc123",
        "sst": 22
      }
    },
    "33-abc123": {

```

```

    "dnn": [
      "dnn1",
      "dnn2"
    ],
    "snssai": {
      "sd": "abc123",
      "sst": 33
    }
  },
  "limitId": "mk1",
  "umLevel": "SERVICE_LEVEL",
  "resetTime": {
    "period": "YEARLY"
  },
  "allowedUsage": {
    "duration": 9000,
    "totalVolume": 8888,
    "uplinkVolume": 6666,
    "downlinkVolume": 7777
  }
}

```

Payload Reference for Provisioning System

This section provides payload details for the following Provisioning System Operations.

- [POST-ProfileData](#)
- [POST-Profile Data and Policy Data](#)
- [PUT-ProfileData](#)
- [PUT-AccessAndMobilityPolicyData](#)
- [PUT-SessionManagementPolicyData](#)
- [PUT-UEPolicySet - Provisioning](#)

POST-ProfileData

```

{
  "profile-data": {
    "MSISDN": ["1111111112", "1111111113"],
    "IMSI": ["2222222221", "2222222222", "2222222223"],
    "NAI": ["3333333331", "3333333332", "3333333333"]
  }
}

```

POST-Profile Data and Policy Data

```

{
  "profile-data": {

```

```

    "MSISDN": [
      "9111111112",
      "9211111112",
      "1111111114"
    ]
  },
  "policy-data": {
    "am-data": {
      "praInfos": {
        "pl": {
          "praId": "pl",
          "trackingAreaList": [
            {
              "plmnId": {
                "mcc": "976",
                "mnc": "32"
              },
              "tac": "5CB6"
            },
            {
              "plmnId": {
                "mcc": "977",
                "mnc": "33"
              },
              "tac": "5CB7"
            }
          ],
          "ecgiList": [
            {
              "plmnId": {
                "mcc": "976",
                "mnc": "32"
              },
              "eutraCellId": "92FFdBE"
            },
            {
              "plmnId": {
                "mcc": "977",
                "mnc": "33"
              },
              "eutraCellId": "8F868C4"
            }
          ],
          "ncgiList": [
            {
              "plmnId": {
                "mcc": "976",
                "mnc": "32"
              },
              "nrCellId": "b2fB6fE9D"
            },
            {
              "plmnId": {
                "mcc": "977",
                "mnc": "33"
              }
            }
          ]
        }
      }
    }
  }
}

```

```

    },
    "nrCellId": "5d1B4127b"
  },
  ],
  "globalRanNodeIdList": [
    {
      "plmnId": {
        "mcc": "965",
        "mnc": "235"
      },
      "n3IwfId": "fFf0f2AFbFa16CEfE7"
    },
    {
      "plmnId": {
        "mcc": "967",
        "mnc": "238"
      },
      "gNbId": {
        "bitLength": 25,
        "gNBValue": "1A8F1D"
      }
    }
  ]
},
"subscCats": [
  "cat1",
  "cat2"
]
},
"sm-data": {
  "umData": {
    "mk1": {
      "scopes": {
        "11-abc123": {
          "dnn": [
            "dnn1"
          ],
          "snssai": {
            "sd": "abc123",
            "sst": 11
          }
        },
        "22-abc123": {
          "dnn": [
            "dnn2"
          ],
          "snssai": {
            "sd": "abc123",
            "sst": 22
          }
        },
        "33-abc123": {
          "dnn": [
            "dnn1",

```

```

    "dnn2"
  ],
  "snssai": {
    "sd": "abc123",
    "sst": 33
  }
},
"limitId": "mk1",
"umLevel": "SERVICE_LEVEL",
"resetTime": {
  "period": "YEARLY"
},
"allowedUsage": {
  "duration": 9000,
  "totalVolume": 8888,
  "uplinkVolume": 6666,
  "downlinkVolume": 7777
}
},
},
"smPolicySnssaiData": {
  "11-abc123": {
    "snssai": {
      "sd": "abc123",
      "sst": 11
    },
    "smPolicyDnnData": {
      "dnn1": {
        "dnn": "dnn1",
        "bdtRefIds": {
          "abc": "bdtRefIds",
          "xyz": "PCF123"
        }
      }
    }
  }
}
},
"ue-policy-set": {
  "praInfos": {
    "p1": {
      "praId": "p1",
      "trackingAreaList": [
        {
          "plmnId": {
            "mcc": "976",
            "mnc": "32"
          },
          "tac": "5CB6"
        },
        {
          "plmnId": {
            "mcc": "977",
            "mnc": "33"
          }
        }
      ]
    }
  }
}

```



```

    },
    "tac": "5CB7"
  },
],
"ecgiList": [
  {
    "plmnId": {
      "mcc": "976",
      "mnc": "32"
    },
    "eutraCellId": "92FFdBE"
  },
  {
    "plmnId": {
      "mcc": "977",
      "mnc": "33"
    },
    "eutraCellId": "8F868C4"
  }
],
"ncgiList": [
  {
    "plmnId": {
      "mcc": "976",
      "mnc": "32"
    },
    "nrCellId": "b2fB6fE9D"
  },
  {
    "plmnId": {
      "mcc": "977",
      "mnc": "33"
    },
    "nrCellId": "5d1B4127b"
  }
],
"globalRanNodeIdList": [
  {
    "plmnId": {
      "mcc": "965",
      "mnc": "235"
    },
    "n3IwfId": "fFf0f2AFbFa16CEfE7"
  },
  {
    "plmnId": {
      "mcc": "967",
      "mnc": "238"
    },
    "gNbId": {
      "bitLength": 25,
      "gNBValue": "1A8F1D"
    }
  }
]

```

```

    }
  },
  "subscCats": [
    "cat1",
    "cat2"
  ],
  "uePolicySections": {
    "33": {
      "upsi": "33",
      "uePolicySectionInfo": "2"
    },
    "111": {
      "upsi": "111",
      "uePolicySectionInfo": "1"
    }
  },
  "upsis": [
    "111",
    "33"
  ],
  "allowedRouteSelDescs": {
    "965-235": {
      "servingPlmn": {
        "mcc": "965",
        "mnc": "235"
      },
      "snssaiRouteSelDescs": [
        {
          "snssai": {
            "sd": "abc123",
            "sst": 11
          },
          "dnnRouteSelDescs": [
            {
              "dnn": "dnn1",
              "sscModes": [
                "SSC_MODE_1",
                "SSC_MODE_2"
              ],
              "pduSessTypes": [
                "IPV4"
              ]
            }
          ]
        }
      ]
    }
  },
  "andspInd": true,
  "pei": "imei-355375345274757",
  "osIds": [
    "bceafb30-31bd-4b8d-b3c2-ed79d029531a",
    "cc9d9f97-0127-497c-9bca-79e8e9080ea8"
  ]
}

```

```
}
}
```

POST - Profile Data and SLF Data

```
{
  "profile-data": {
    "MSISDN": [
      "1111111112",
      "1111111113"
    ],
    "IMSI": [
      "2222222221",
      "2222222222",
      "2222222223"
    ],
    "NAI": [
      "3333333331",
      "3333333332",
      "3333333333"
    ]
  },
  "nf-group-ids": {
    "nfGroupIDs": {
      "NRF": "nrf-group-name",
      "UDM": "udm-group-name"
    }
  }
}
```

PUT-ProfileData

```
{
  "profile-data": {
    "MSISDN": ["1111111112", "1111111113", "1111111114", "1111111115",
    "1111111116"],
    "IMSI": ["2222222221", "2222222222", "2222222223"],
    "NAI": ["3333333331", "3333333332", "3333333333"]
  }
}
```

PUT-AccessAndMobilityPolicyData

```
{
  "praInfos": {
    "p1": {
      "praId": "p1",
      "trackingAreaList": [{
        "plmnId": {
          "mcc": "976",
          "mnc": "32"
        }
      }]
    }
  }
}
```

```

    },
    "tac": "5CB6"
  },
  {
    "plmnId": {
      "mcc": "977",
      "mnc": "33"
    },
    "tac": "5CB7"
  }
],
"ecgiList": [{
  "plmnId": {
    "mcc": "976",
    "mnc": "32"
  },
  "eutraCellId": "92FFdBE"
},
{
  "plmnId": {
    "mcc": "977",
    "mnc": "33"
  },
  "eutraCellId": "8F868C4"
}
],
"ncgiList": [{
  "plmnId": {
    "mcc": "976",
    "mnc": "32"
  },
  "nrCellId": "b2fB6fE9D"
},
{
  "plmnId": {
    "mcc": "977",
    "mnc": "33"
  },
  "nrCellId": "5d1B4127b"
}
],
"globalRanNodeIdList": [{
  "plmnId": {
    "mcc": "965",
    "mnc": "235"
  },
  "n3IwfId": "fFf0f2AFbFa16CEfE7"
},
{
  "plmnId": {
    "mcc": "967",
    "mnc": "238"
  }
},

```

```

        "gNbId": {
            "bitLength": 25,
            "gNBValue": "1A8F1D"
        }
    ]
},
"subscCats": ["cat1", "cat2"]
}

```

PUT-SessionManagementPolicyData

```

{
  "umData": {
    "mk1": {
      "scopes": {
        "11-abc123": {
          "dnn": [
            "dnn1"
          ],
          "snssai": {
            "sd": "abc123",
            "sst": 11
          }
        },
        "22-abc123": {
          "dnn": [
            "dnn2"
          ],
          "snssai": {
            "sd": "abc123",
            "sst": 22
          }
        },
        "33-abc123": {
          "dnn": [
            "dnn1",
            "dnn2"
          ],
          "snssai": {
            "sd": "abc123",
            "sst": 33
          }
        }
      },
      "limitId": "mk1",
      "umLevel": "SERVICE_LEVEL",
      "resetTime": {
        "period": "YEARLY"
      },
      "allowedUsage": {
        "duration": 9000,
        "totalVolume": 8888,

```

```

    "uplinkVolume": 6666,
    "downlinkVolume": 7777
  }
}
},
"umDataLimits": {
  "mk1": {
    "scopes": {
      "11-abc123": {
        "dnn": [
          "dnn1"
        ],
        "snssai": {
          "sd": "abc123",
          "sst": 11
        }
      },
      "22-abc123": {
        "dnn": [
          "dnn2"
        ],
        "snssai": {
          "sd": "abc123",
          "sst": 22
        }
      },
      "33-abc123": {
        "dnn": [
          "dnn1",
          "dnn2"
        ],
        "snssai": {
          "sd": "abc123",
          "sst": 33
        }
      }
    }
  },
  "endDate": "2018-11-05T08:17:14.090Z",
  "limitId": "mk1",
  "umLevel": "SESSION_LEVEL",
  "startDate": "2018-09-05T08:17:14.090Z",
  "usageLimit": {
    "duration": 6000,
    "totalVolume": 9000,
    "uplinkVolume": 5000,
    "downlinkVolume": 4000
  },
  "resetPeriod": "2018-01-02T08:17:14.090Z"
},
"smPolicySnssaiData": {
  "11-abc123": {
    "snssai": {
      "sd": "abc123",
      "sst": 11
    }
  }
}

```

```
},
"smPolicyDnnData": {
  "dnn1": {
    "dnn": "dnn1",
    "bdtRefIds": {
      "xyz": "bdtRefIds",
      "abc": "xyz"
    },
    "gbrDl": "7788 Kbps",
    "gbrUl": "5566 Kbps",
    "online": true,
    "chfInfo": {
      "primaryChfAddress": "1.1.1.1",
      "secondaryChfAddress": "2.2.2.2"
    },
    "offline": true,
    "praInfos": {
      "pl": {
        "praId": "pl",
        "trackingAreaList": [{
          "plmnId": {
            "mcc": "976",
            "mnc": "32"
          },
          "tac": "5CB6"
        },
        {
          "plmnId": {
            "mcc": "977",
            "mnc": "33"
          },
          "tac": "5CB7"
        }
      ],
      "ecgiList": [{
        "plmnId": {
          "mcc": "976",
          "mnc": "32"
        },
        "eutraCellId": "92FFdBE"
      },
      {
        "plmnId": {
          "mcc": "977",
          "mnc": "33"
        },
        "eutraCellId": "8F868C4"
      }
    ],
    "ncgiList": [{
      "plmnId": {
        "mcc": "976",
        "mnc": "32"
      }
    },
```

```

    "nrCellId": "b2fB6fE9D"
  },
  {
    "plmnId": {
      "mcc": "977",
      "mnc": "33"
    },
    "nrCellId": "5d1B4127b"
  }
],
"globalRanNodeIdList": [{
  "plmnId": {
    "mcc": "965",
    "mnc": "235"
  },
  "n3IwfId": "fFf0f2AFbFa16CEfE7"
}],
{
  "plmnId": {
    "mcc": "967",
    "mnc": "238"
  },
  "gNbId": {
    "bitLength": 25,
    "gNBValue": "1A8F1D"
  }
}
]
},
"ipv4Index": 0,
"ipv6Index": 0,
"subscCats": [
  "cat1",
  "cat2"
],
"adcSupport": true,
"mpsPriority": true,
"allowedServices": [
  "ser1",
  "ser2"
],
"mpsPriorityLevel": 2,
"imsSignallingPrio": true,
"refUmDataLimitIds": {
  "mk1": {
    "monkey": [
      "monkey1"
    ],
    "limitId": "mk1"
  }
},
"subscSpendingLimits": true

```



```

    }
  },
  "22-abc123": {
    "snssai": {
      "sd": "abc123",
      "sst": 22
    },
    "smPolicyDnnData": {
      "dnn2": {
        "dnn": "dnn2",
        "gbrDl": "7788 Kbps",
        "gbrUl": "5566 Kbps",
        "online": true,
        "chfInfo": {
          "primaryChfAddress": "1.1.1.1",
          "secondaryChfAddress": "2.2.2.2"
        },
        "offline": true,
        "praInfos": {
          "pl": {
            "praId": "pl",
            "trackingAreaList": [{
              "plmnId": {
                "mcc": "976",
                "mnc": "32"
              },
              "tac": "5CB6"
            },
            {
              "plmnId": {
                "mcc": "977",
                "mnc": "33"
              },
              "tac": "5CB7"
            }
          ],
          "ecgiList": [{
            "plmnId": {
              "mcc": "976",
              "mnc": "32"
            },
            "eutraCellId": "92FFdBE"
          },
          {
            "plmnId": {
              "mcc": "977",
              "mnc": "33"
            },
            "eutraCellId": "8F868C4"
          }
        ],
        "ncgiList": [{
          "plmnId": {
            "mcc": "976",

```

```

    "mnc": "32"
  },
  "nrCellId": "b2fB6fE9D"
},
{
  "plmnId": {
    "mcc": "977",
    "mnc": "33"
  },
  "nrCellId": "5d1B4127b"
}
],
"globalRanNodeIdList": [{
  "plmnId": {
    "mcc": "965",
    "mnc": "235"
  },
  "n3IwfId": "fFf0f2AFbFa16CEfE7"
},
{
  "plmnId": {
    "mcc": "967",
    "mnc": "238"
  },
  "gNbId": {
    "bitLength": 25,
    "gNBValue": "1A8F1D"
  }
}
]
},
"ipv4Index": 0,
"ipv6Index": 0,
"subscCats": [
  "cat1",
  "cat2"
],
"adcSupport": true,
"mpsPriority": true,
"allowedServices": [
  "ser1",
  "ser2"
],
"mpsPriorityLevel": 2,
"imsSignallingPrio": true,
"refUmDataLimitIds": {
  "mk1": {
    "monkey": [
      "monkey1"
    ],
    "limitId": "mk1"
  }
}

```

```

    },
    "subscSpendingLimits": true
  }
}
},
"33-abc123": {
  "snssai": {
    "sd": "abc123",
    "sst": 33
  },
  "smPolicyDnnData": {
    "dnn1": {
      "dnn": "dnn1",
      "gbrDl": "7788 Kbps",
      "gbrUl": "5566 Kbps",
      "online": true,
      "chfInfo": {
        "primaryChfAddress": "1.1.1.1",
        "secondaryChfAddress": "2.2.2.2"
      },
      "offline": true,
      "praInfos": {
        "pl": {
          "praId": "pl",
          "trackingAreaList": [{
            "plmnId": {
              "mcc": "976",
              "mnc": "32"
            },
            "tac": "5CB6"
          },
          {
            "plmnId": {
              "mcc": "977",
              "mnc": "33"
            },
            "tac": "5CB7"
          }
        ],
        "ecgiList": [{
          "plmnId": {
            "mcc": "976",
            "mnc": "32"
          },
          "eutraCellId": "92FFdBE"
        },
        {
          "plmnId": {
            "mcc": "977",
            "mnc": "33"
          },
          "eutraCellId": "8F868C4"
        }
      ],
      "ncgiList": [{

```

```

    "plmnId": {
      "mcc": "976",
      "mnc": "32"
    },
    "nrCellId": "b2fB6fE9D"
  },
  {
    "plmnId": {
      "mcc": "977",
      "mnc": "33"
    },
    "nrCellId": "5d1B4127b"
  }
],
"globalRanNodeIdList": [{
  "plmnId": {
    "mcc": "965",
    "mnc": "235"
  },
  "n3IwfId": "fFf0f2AFbFa16CEfE7"
},
{
  "plmnId": {
    "mcc": "967",
    "mnc": "238"
  },
  "gNbId": {
    "bitLength": 25,
    "gNBValue": "1A8F1D"
  }
}
]
},
"ipv4Index": 0,
"ipv6Index": 0,
"subscCats": [
  "cat1",
  "cat2"
],
"adcSupport": true,
"mpsPriority": true,
"allowedServices": [
  "ser1",
  "ser2"
],
"mpsPriorityLevel": 2,
"imsSignallingPrio": true,
"refUmDataLimitIds": {
  "mk1": {
    "monkey": [
      "monkey1"
    ]
  }
},

```

```
        "limitId": "mk1"
      }
    },
    "subscSpendingLimits": true
  },
  "dnn2": {
    "dnn": "dnn2",
    "gbrDl": "7788 Kbps",
    "gbrUl": "5566 Kbps",
    "online": true,
    "chfInfo": {
      "primaryChfAddress": "1.1.1.1",
      "secondaryChfAddress": "2.2.2.2"
    },
    "offline": true,
    "praInfos": {
      "p1": {
        "praId": "p1",
        "trackingAreaList": [{
          "plmnId": {
            "mcc": "976",
            "mnc": "32"
          },
          "tac": "5CB6"
        },
        {
          "plmnId": {
            "mcc": "977",
            "mnc": "33"
          },
          "tac": "5CB7"
        }
      ],
      "ecgiList": [{
        "plmnId": {
          "mcc": "976",
          "mnc": "32"
        },
        "eutraCellId": "92FFdBE"
      },
      {
        "plmnId": {
          "mcc": "977",
          "mnc": "33"
        },
        "eutraCellId": "8F868C4"
      }
    ],
    "ncgiList": [{
      "plmnId": {
        "mcc": "976",
        "mnc": "32"
      },
      "nrCellId": "b2fB6fE9D"
    }
  ],
```

```

    {
      "plmnId": {
        "mcc": "977",
        "mnc": "33"
      },
      "nrCellId": "5d1B4127b"
    }
  ],
  "globalRanNodeIdList": [{
    "plmnId": {
      "mcc": "965",
      "mnc": "235"
    },
    "n3IwfId": "fFf0f2AFbFa16CEfE7"
  }],
  {
    "plmnId": {
      "mcc": "967",
      "mnc": "238"
    },
    "gNbId": {
      "bitLength": 25,
      "gNBValue": "1A8F1D"
    }
  }
]
},
"ipv4Index": 0,
"ipv6Index": 0,
"subscCats": [
  "cat1",
  "cat2"
],
"adcSupport": true,
"mpsPriority": true,
"allowedServices": [
  "ser1",
  "ser2"
],
"mpsPriorityLevel": 2,
"imsSignallingPrio": true,
"refUmDataLimitIds": {
  "mk1": {
    "monkey": [
      "monkey1"
    ],
    "limitId": "mk1"
  }
},
"subscSpendingLimits": true
}
}

```

```
}  
}  
}
```

PUT-UEPolicySet - Provisioning

```
{  
  "praInfos": {  
    "pl": {  
      "praId": "pl",  
      "trackingAreaList": [ {  
        "plmnId": {  
          "mcc": "976",  
          "mnc": "32"  
        },  
        "tac": "5CB6"  
      },  
      {  
        "plmnId": {  
          "mcc": "977",  
          "mnc": "33"  
        },  
        "tac": "5CB7"  
      }  
    ],  
    "ecgiList": [ {  
      "plmnId": {  
        "mcc": "976",  
        "mnc": "32"  
      },  
      "eutraCellId": "92FFdBE"  
    },  
    {  
      "plmnId": {  
        "mcc": "977",  
        "mnc": "33"  
      },  
      "eutraCellId": "8F868C4"  
    }  
  ],  
  "ncgiList": [ {  
    "plmnId": {  
      "mcc": "976",  
      "mnc": "32"  
    },  
    "nrCellId": "b2fB6fE9D"  
  },  
  {  
    "plmnId": {  
      "mcc": "977",  
      "mnc": "33"  
    },  
    "nrCellId": "5d1B4127b"  
  }  
]
```

```
    }
  ],
  "globalRanNodeIdList": [{
    "plmnId": {
      "mcc": "965",
      "mnc": "235"
    },
    "n3IwfId": "fFf0f2AFbFa16CEfE7"
  },
  {
    "plmnId": {
      "mcc": "967",
      "mnc": "238"
    },
    "gNbId": {
      "bitLength": 25,
      "gNBValue": "1A8F1D"
    }
  }
]
},
"subscCats": ["cat1", "cat2"],
"uePolicySections": {
  "111": {
    "upsi": "111",
    "uePolicySectionInfo": "1"
  },
  "33": {
    "upsi": "33",
    "uePolicySectionInfo": "2"
  }
},
"upsis": ["111", "33"],
"allowedRouteSelDescs": {
  "965-235": {
    "servingPlmn": {
      "mcc": "965",
      "mnc": "235"
    },
    "snssaiRouteSelDescs": [{
      "snssai": {
        "sd": "abc123",
        "sst": 11
      }
    },
    "dnnRouteSelDescs": [{
      "dnn": "dnn1",
      "sscModes": ["SSC_MODE_1", "SSC_MODE_2"],
      "pduSessTypes": ["IPV4"]
    }
  ]
}
}
},
```



```

    "andspInd": true,
    "pei": "imei-355375345274757",
    "osIds": ["bceafb30-31bd-4b8d-b3c2-ed79d029531a",
"cc9d9f97-0127-497c-9bca-79e8e9080ea8"]
}

```

Payload Reference for UDM APIs

This section provides payload details for the following UDM APIs Operations.

- [PUT-Amf3GppAccessRegistration](#)
- [PATCH-Amf3GppAccessRegistration](#)
- [PUT-AmfNon3GppAccessRegistration](#)
- [PUT-SessionManagementSubscriptionData](#)

PATCH-Amf3GppAccessRegistration

```

case 1: REPLACE
[ {
  "op" : "replace",
  "path" : "/mnc-mcc-amfId/backupAmfInfo/0/guamiList/0/plmnId/mcc",
  "value" : "998"
} ]

```

```

case2: ADD
[ {
  "op" : "add",
  "path" : "/mnc-mcc-amfId/backupAmfInfo/0/guamiList/1",
  "value" : {
    "amfId": "5678AA",
    "plmnId": {
      "mcc": "666",
      "mnc": "456"
    }
  }
} ]

```

```

case3: REMOVE
[ {
  "op" : "remove",
  "path" : "/mnc-mcc-amfId/backupAmfInfo/0/guamiList/2"
} ]

```

PUT-Amf3GppAccessRegistration

```

{
  "amfInstanceId": "abae35e5-cc45-4016-8dd4-89598e5311b9",
  "supportedFeatures": "AF",

```

```

    "purgeFlag": true,
    "pei": "imei-1000000000000001",
    "imsVoPs": "HOMOGENEOUS_SUPPORT",
    "deregCallbackUri": "http://ocnrf-
ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances",
    "amfServiceNameDereg": "nudm-sdm",
    "pcscfRestorationCallbackUri": "http://ocnrf-
ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances",
    "amfServiceNamePcscfRest": "nausf-auth",
    "initialRegistrationInd": true,
    "guami": {
      "plmnId": {
        "mcc": "001",
        "mnc": "123"
      },
      "amfId": "1234AA"
    },
    "backupAmfInfo": [
      {
        "backupAmf":
"amf1.cluster1.net2.amf.5gc.mnc012.mcc345.3gppnetwork.org",
        "guamiList": [
          {
            "plmnId": {
              "mcc": "002",
              "mnc": "456"
            },
            "amfId": "5678AA"
          },
          {
            "plmnId": {
              "mcc": "003",
              "mnc": "789"
            },
            "amfId": "9876AA"
          }
        ]
      }
    ],
    "drFlag": true,
    "ratType": "WLAN",
    "urrrIndicator": true,
    "amfEeSubscriptionId": "subscriptionId",
    "epsInterworkingInfo": {
      "dnn1": {
        "pgwFqdn": "hijklm",
        "smfInstanceId": "abae35e5-cc45-4016-8dd4-89598e5311b9"
      },
      "dnn2": {
        "pgwFqdn": "abcdefgh",
        "smfInstanceId": "abae35e5-cc45-4016-8dd4-89598e5311b7"
      }
    }
  }
}

```

PUT-AmfNon3GppAccessRegistration

```
{
  "amfInstanceId" : "abae35e5-cc45-4016-8dd4-89598e5311b9",
  "supportedFeatures" : "AF",
  "purgeFlag" : true,
  "pei" : "imei-1000000000000001",
  "imsVoPs" : "HOMOGENEOUS_SUPPORT",
  "deregCallbackUri" : "http://ocnrf-
ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances",
  "amfServiceNameDereg" : "nudm-sdm",
  "pcscfRestorationCallbackUri" : "http://ocnrf-
ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances",
  "amfServiceNamePcscfRest" : "nausf-auth",
  "guami" : {
    "plmnId" : {
      "mcc" : "001",
      "mnc" : "123"
    },
    "amfId" : "1234AA"
  },
  "backupAmfInfo" : [
    { "backupAmf" :
"amf1.cluster1.net2.amf.5gc.mnc012.mcc345.3gppnetwork.org",
  "guamiList" : [{"plmnId" : {"mcc" : "002", "mnc" : "456"}, "amfId" :
"5678AA"}, {"plmnId" : {"mcc" : "003", "mnc" : "789"}, "amfId" :
"9876AA"}]}
  ],
  "ratType" : "WLAN",
  "amfEeSubscriptionId" : "subscriptionId",
  "urrrIndicator" : true
}
```

PUT-SessionManagementSubscriptionData

```
{
  "singleNssai": {
    "sd": "ABC654",
    "sst": 1
  },
  "internalGroupIds": [
    "9ABAB803-203-299-95A9",
    "9ABAB803-203-299-95A2",
    "79e0c480-719-085-f2A55e6DDc91Df802438"
  ],
  "dnnConfigurations": {
    "dnn1": {
      "sscModes": {
        "defaultSscMode": "SSC_MODE_1",
        "allowedSscModes": [
          "SSC_MODE_2",
          "SSC_MODE_3"
        ]
      }
    }
  }
}
```

```

    ],
    },
    "iwkEpsInd": true,
    "upSecurity": {
        "upConfid": "REQUIRED",
        "upIntegr": "REQUIRED"
    },
    "sessionAmbr": {
        "uplink": "125 Mbps",
        "downlink": "25 Mbps"
    },
    "5gQosProfile": {
        "5qi": 123,
        "arp": {
            "preemptCap": "MAY_PREEMPT",
            "preemptVuln": "PREEMPTABLE",
            "priorityLevel": 1
        },
        "priorityLevel": 79
    },
    "pduSessionTypes": {
        "defaultSessionType": "IPV4",
        "allowedSessionTypes": [
            "IPV6",
            "IPV4V6",
            "UNSTRUCTURED",
            "ETHERNET"
        ]
    },
    "staticIpAddress": [
        "1.1.1.1",
        "191.0.2.1"
    ],
    "3gppChargingCharacteristics": "123A"
},
"sharedDnnConfigurationsId": "85868-mZE$cy",
"odbPacketServices": "ALL_PACKET_SERVICES"
}

```

POST-SDMSubscriptions

```

{
    "nfInstanceId": "cb59c48c-a2fa-11e9-a2a3-2a2ae2dbcce4",
    "expires": "2012-04-23T18:25:43.511Z",
    "implicitUnsubscribe": true,
    "dnn": "sasa",
    "singleNssai": {
        "sd": "651Bf9",
        "sst": 23
    },
    "callbackReference": "udr",
    "amfServiceName": "nnrf-nfm",
    "monitoredResourceUris": [

```

```

        "http://sims-udr-2-udr-simulator.sims-udr-2:5807/nudr-dr/v2/
subscription-data/nai-990991@nai/context-data/amf-3gpp-access"
    ],
    "plmnId": {
        "mnc": "124",
        "mcc": "123"
    },
    "subscriptionId": "sa"
}

```

Post-SubscriptionDataSubscriptions

```

{
    "callbackReference": "http://10.75.212.167:8787",
    "originalCallbackReference": "http://10.75.212.167:8787",
    "ueId": "nai-990991@nai",
    "subscriptionId": "7",
    "monitoredResourceUris": [
        "http://sims-udr-2-udr-simulator.sims-udr-2:5807/nudr-dr/v2/
subscription-data/nai-990991@nai/context-data/amf-3gpp-access"
    ],
    "expiry": "2020-01-02T08:17:14.090Z",
    "supportedFeatures": "f",
    "sdmSubscription": {
        "nfInstanceId": "cb59c48c-a2fa-11e9-a2a3-2a2ae2dbcce4",
        "expires": "2012-04-23T18:25:43.511Z",
        "implicitUnsubscribe": true,
        "dnn": "sasb",
        "singleNssai": {
            "sd": "651Bf9",
            "sst": 23
        }
    },
    "callbackReference": "udr",
    "amfServiceName": "nnrf-nfm",
    "monitoredResourceUris": [
        "http://sims-udr-2-udr-simulator.sims-udr-2:5807/nudr-dr/v2/
subscription-data/nai-9190909010@nai/context-data/amf-3gpp-access"
    ],
    "plmnId": {
        "mnc": "124",
        "mcc": "123"
    },
    "subscriptionId": "sa"
}

```

PUT - SDMSubscriptions

```

{
    "nfInstanceId": "cb59c48c-a2fa-11e9-a2a3-2a2ae2dbcce4",
    "expires": "2012-04-23T18:25:43.511Z",
    "implicitUnsubscribe": true,

```

```

"dnn": "sasa",
"singleNssai": {
"sd": "651Bf9",
"sst": 23
},
"callbackReference": "udr",
"amfServiceName": "nnrf-nfm",
"monitoredResourceUris": [
"http://sims-udr-2-udr-simulator.sims-udr-2:5807/nudr-dr/v2/
subscription-data/nai-990991@nai/context-data/amf-3gpp-access"
],
"plmnId": {
"mnc": "124",
"mcc": "123"
},
"subscriptionId": "sb"
}

```

Response Reference for UDM APIs

This section provides output details for the following UDM APIs.

- [GET-ContextData](#)
- [GET-Amf3GppAccessRegistration](#)
- [GET-AmfNon3GppAccessRegistration](#)
- [PUT-AccessAndMobilitySubscriptionData](#)
- [GET-SessionManagementSubscriptionData](#)
- [GET-ProvisionedData](#)
- [GET-SessionManagementSubscriptionData- Provisioning](#)

GET-ContextData

Following is the Result Code when the Sample URL is: <http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/context-data>

```

{
  "amfNon3Gpp": {
    "imsVoPs": "HOMOGENEOUS_SUPPORT",
    "deregCallbackUri": "http://ocnrf-
ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances",
    "purgeFlag": true,
    "supportedFeatures": "AF",
    "ratType": "WLAN",
    "urrrIndicator": true,
    "amfServiceNameDereg": "nudm-sdm",
    "amfServiceNamePcscfRest": "nausf-auth",
    "guami": {
      "plmnId": {
        "mnc": "123",
        "mcc": "001"
      }
    }
  }
}

```

```

        },
        "amfId": "1234AA"
    },
    "pei": "imei-1000000000000001",
    "amfEeSubscriptionId": "subscriptionId",
    "amfInstanceId": "abae35e5-cc45-4016-8dd4-89598e5311b9",
    "pcscfRestorationCallbackUri": "http://ocnrf-
ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances",
    "backupAmfInfo": [
        {
            "backupAmf":
"amf1.cluster1.net2.amf.5gc.mnc012.mcc345.3gppnetwork.org",
            "guamiList": [
                {
                    "plmnId": {
                        "mnc": "456",
                        "mcc": "002"
                    },
                    "amfId": "5678AA"
                },
                {
                    "plmnId": {
                        "mnc": "789",
                        "mcc": "003"
                    },
                    "amfId": "9876AA"
                }
            ]
        }
    ]
},
"smsf3GppAccess": {
    "smsfInstanceId": "69d3da66-9e25-11e9-a2a3-2a2ae2dbcce4",
    "supportedFeatures": "BA2b5d3b977eF2458EEC80592E",
    "smsfMAPAddress": "977347916",
    "plmnId": {
        "mnc": "45",
        "mcc": "452"
    },
    "smsfDiameterAddress": {
        "name":
"uLmBAnz2b7S6OevNkC7tHvcEZidEXppNIp7Le9yXzucgboiXFRkYg6597LBi31nOBxEbV2Z
ePCfKpUiEB0ULZMxudPsPepud.emteshurwldooeh",
        "realm":
"uLmBAnz2b7S6OevNkC7tHvcEZidEXppNIp7Le9yXzucgboiXFRkYg6597LBi31nOBxEbV2Z
ePCfKpUiEB0ULZMxudPsPepud.emteshurwldooeh"
    }
},
"amf3Gpp": {
    "imsVoPs": "HOMOGENEOUS_SUPPORT",
    "deregCallbackUri": "http://ocnrf-
ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances",
    "purgeFlag": true,
    "supportedFeatures": "AF",
    "ratType": "WLAN",

```

```

"urrrIndicator": true,
"amfServiceNameDereg": "nudm-sdm",
"amfServiceNamePcscfRest": "nausf-auth",
"guami": {
  "plmnId": {
    "mnc": "123",
    "mcc": "001"
  },
  "amfId": "1234AA"
},
"pei": "imei-1000000000000001",
"amfEeSubscriptionId": "subscriptionId",
"drFlag": true,
"amfInstanceId": "abae35e5-cc45-4016-8dd4-89598e5311b9",
"pcscfRestorationCallbackUri": "http://ocnrf-
ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances",
"backupAmfInfo": [
  {
    "backupAmf":
"amf1.cluster1.net2.amf.5gc.mnc012.mcc345.3gppnetwork.org",
    "guamiList": [
      {
        "plmnId": {
          "mnc": "456",
          "mcc": "002"
        },
        "amfId": "5678AA"
      },
      {
        "plmnId": {
          "mnc": "789",
          "mcc": "003"
        },
        "amfId": "9876AA"
      }
    ]
  }
],
"epsInterworkingInfo": {
  "dnn2": {
    "smfInstanceId": "abae35e5-
cc45-4016-8dd4-89598e5311b7",
    "pgwFqdn": "abcdefgh"
  },
  "dnn1": {
    "smfInstanceId": "abae35e5-
cc45-4016-8dd4-89598e5311b9",
    "pgwFqdn": "hijklm"
  }
},
"initialRegistrationInd": true
},
"smsfNon3GppAccess": {
  "smfInstanceId": "69d3da66-9e25-11e9-a2a3-2a2ae2dbcce4",
  "supportedFeatures": "BA2b5d3b977eF2458EEC80592E",

```



```

"smsfMAPAddress": "977347916",
"plmnId": {
  "mnc": "45",
  "mcc": "452"
},
"smsfDiameterAddress": {
  "name":
"uLmBanz2b7S6OevNkC7tHvcEZidEXppNIp7Le9yXzucgboiXFRkYg6597LBi31nOBxEbV2Z
ePCfKpUiEB0ULZMxudPsPepud.emteshurwldooeh",
  "realm":
"uLmBanz2b7S6OevNkC7tHvcEZidEXppNIp7Le9yXzucgboiXFRkYg6597LBi31nOBxEbV2Z
ePCfKpUiEB0ULZMxudPsPepud.emteshurwldooeh"
}
}
}

```

GET - Context Data - SMSF

```

{
  "smsf3GppAccess": {
    "smsfInstanceId": "69d3da66-9e25-11e9-a2a3-2a2ae2dbcce4",
    "supportedFeatures": "BA2b5d3b977eF2458EEC80592E",
    "smsfMAPAddress": "977347916",
    "plmnId": {
      "mnc": "45",
      "mcc": "452"
    },
    "smsfDiameterAddress": {
      "name":
"uLmBanz2b7S6OevNkC7tHvcEZidEXppNIp7Le9yXzucgboiXFRkYg6597LBi31nOBxEbV2Z
ePCfKpUiEB0ULZMxudPsPepud.emteshurwldooeh",
      "realm":
"uLmBanz2b7S6OevNkC7tHvcEZidEXppNIp7Le9yXzucgboiXFRkYg6597LBi31nOBxEbV2Z
ePCfKpUiEB0ULZMxudPsPepud.emteshurwldooeh"
    }
  }
}

```

GET-ProvisionedData

Below is the output when the Sample URL is: <http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000089/77889/provisioned-data>.

```

{
  "amData": {
    "upuInfo": {
      "upuAckInd": true,
      "upuRegInd": true,
      "upuDataList": [
        {
          "secPacket": "aGVsbG8="
        }
      ]
    }
  }
}

```

```

    ],
    "provisioningTime": "2012-04-23T18:25:43.511Z",
    "upuMacIausf": "E0b0cCF4EcCC5CA55DBfeA3B2Ad3aE80",
    "counterUpu": "3Ab5"
  },
  "supportedFeatures": "692F296F2Cb3BCA76Bc1E126FeEC12",
  "mcsPriority": true,
  "activeTime": 3,
  "subscribedDnnList": [
    "hello",
    "ocudr"
  ],
  "subscribedUeAmbr": {
    "uplink": "123 Gbps",
    "downlink": "12 Gbps"
  },
  "sharedAmDataIds": [
    "62626-esp}W3A?hIgz{47Qiuuj@GR:Ped>@k`Px,76390-Cd[s[TECI"
  ],
  "coreNetworkTypeRestrictions": [
    "5GC",
    "EPC"
  ],
  "nssai": {
    "supportedFeatures": "692F296F2Cb3BCA76Bc1E126FeEC12",
    "defaultSingleNssais": [
      {
        "sd": "abc123",
        "sst": 1
      },
      {
        "sd": "abc124",
        "sst": 2
      }
    ],
    "singleNssais": [
      {
        "sd": "abc789",
        "sst": 3
      },
      {
        "sd": "abc799",
        "sst": 5
      }
    ]
  },
  "dlPacketCount": -1,
  "gpsis": [
    "msisdn-1585632",
    "msisdn-2969851"
  ],
  "rfspIndex": 123,
  "mpsPriority": true,
  "forbiddenAreas": [
    {

```

```

        "tacs": [
            "d11fdA",
            "EcccaD"
        ]
    },
],
"serviceAreaRestriction": {
    "restrictionType": "ALLOWED_AREAS",
    "maxNumOfTAs": 23,
    "areas": [
        {
            "tacs": [
                "d11fdA",
                "EcccaD"
            ]
        }
    ]
},
"odbPacketServices": "ALL_PACKET_SERVICES",
"sorInfo": {
    "sorMacIausf": "Bf85A791dCCDa7D6d9754264F02EDcBc",
    "steeringContainer": [
        {
            "plmnId": {
                "mnc": "456",
                "mcc": "123"
            },
            "accessTechList": [
                "NR"
            ]
        }
    ],
    "provisioningTime": "2012-04-23T18:25:43.511Z",
    "countersor": "8ebc",
    "ackInd": true
},
"ratRestrictions": [
    "NR",
    "WLAN",
    "EUTRA",
    "VIRTUAL"
],
"subsRegTimer": 2,
"ueUsageType": 9,
"internalGroupIds": [
    "E1465DF5-483-159-Fc23DE491edb354dABAA",
    "51e851ea-577-297-Ef4d7Cf28CaC0D"
],
"micoAllowed": true
},
"smfSelData": {
    "supportedFeatures": "692F296F2Cb3BCA76Bc1E126FeEC12",
    "subscribedSnsaiInfos": {
        "snsai1": {
            "dnnInfos": [

```

```

        {
            "defaultDnnIndicator": true,
            "iwkEpsInd": true,
            "dnn": "Dnn1",
            "lboRoamingAllowed": true
        },
        {
            "defaultDnnIndicator": false,
            "iwkEpsInd": true,
            "dnn": "Dnn2",
            "lboRoamingAllowed": true
        }
    ]
}
},
"sharedSnssaiInfosId": "96367-9z}MD*"
},
"smData": {
    "2": {
        "dnnConfigurations": {
            "dnn1": {
                "iwkEpsInd": true,
                "sessionAmbr": {
                    "uplink": "125 Mbps",
                    "downlink": "25 Mbps"
                },
                "5gQosProfile": {
                    "priorityLevel": 79,
                    "5qi": 123,
                    "arp": {
                        "preemptCap": "MAY_PREEMPT",
                        "priorityLevel": 1,
                        "preemptVuln": "PREEMPTABLE"
                    }
                }
            },
            "upSecurity": {
                "upIntegr": "REQUIRED",
                "upConfid": "REQUIRED"
            },
            "sscModes": {
                "allowedSscModes": [
                    "SSC_MODE_2",
                    "SSC_MODE_3"
                ],
                "defaultSscMode": "SSC_MODE_1"
            },
            "3gppChargingCharacteristics": "123A",
            "pduSessionTypes": {
                "defaultSessionType": "IPV4",
                "allowedSessionTypes": [
                    "IPV6",
                    "IPV4V6",
                    "UNSTRUCTURED",
                    "ETHERNET"
                ]
            }
        }
    ]
}

```

```

        },
        "staticIpAddress": [
            "1.1.1.1",
            "191.0.2.1"
        ]
    },
    },
    "singleNssai": {
        "sst": 2
    },
    "odbPacketServices": "ALL_PACKET_SERVICES",
    "internalGroupIds": [
        "9ABAB803-203-299-95A9",
        "9ABAB803-203-299-95A2",
        "79e0c480-719-085-f2A55e6DDc91Df802438"
    ],
    "sharedDnnConfigurationsId": "85868-mZE$cy"
},
"3": {
    "dnnConfigurations": {
        "dnn1": {
            "iwkEpsInd": true,
            "sessionAmbr": {
                "uplink": "125 Mbps",
                "downlink": "25 Mbps"
            },
        },
        "5gQosProfile": {
            "priorityLevel": 79,
            "5qi": 123,
            "arp": {
                "preemptCap": "MAY_PREEMPT",
                "priorityLevel": 1,
                "preemptVuln": "PREEMPTABLE"
            }
        }
    },
    "upSecurity": {
        "upIntegr": "REQUIRED",
        "upConfid": "REQUIRED"
    },
    "sscModes": {
        "allowedSscModes": [
            "SSC_MODE_2",
            "SSC_MODE_3"
        ],
        "defaultSscMode": "SSC_MODE_1"
    },
    "3gppChargingCharacteristics": "123A",
    "pduSessionTypes": {
        "defaultSessionType": "IPV4",
        "allowedSessionTypes": [
            "IPV6",
            "IPV4V6",
            "UNSTRUCTURED",
            "ETHERNET"
        ]
    }
}
]

```

```

        },
        "staticIpAddress": [
            "1.1.1.1",
            "191.0.2.1"
        ]
    },
    },
    "singleNssai": {
        "sst": 3
    },
    "OdbPacketServices": "ALL_PACKET_SERVICES",
    "internalGroupIds": [
        "9ABAB803-203-299-95A9",
        "9ABAB803-203-299-95A2",
        "79e0c480-719-085-f2A55e6DDc91Df802438"
    ],
    "sharedDnnConfigurationsId": "85868-mZE$cy"
}
},
"traceData": {
    "eventList": "855B5bf7beC3AFB8c",
    "collectionEntityIpv6Addr": "2001:db8:85a3::8a2e:370:7334",
    "collectionEntityIpv4Addr": "26.118.255.253",
    "traceRef": "070207-baE6Dd",
    "neTypeList": "0f4FBEfe95bf8",
    "traceDepth": "MINIMUM"
},
"smsMngData": {
    "moSmsBarringAll": true,
    "supportedFeatures": "CAe8de215CFa721BB2AE7Ef9c5f71a2e",
    "mtSmsBarringRoaming": false,
    "mtSmsSubscribed": true,
    "moSmsBarringRoaming": true,
    "mtSmsBarringAll": true,
    "moSmsSubscribed": false,
    "sharedSmsMngDataIds": [
        "16994-'JD",
        "693599-9~~GX"
    ]
},
"smsSubsData": {
    "sharedSmsSubsDataId": [
        "372063-P",
        "372063-O"
    ],
    "smsSubscribed": true
}
}
}

```

Below is the output when the Sample URL is <http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000089/77889/provisioned-data?dataset-names=AM,SM>

```

{
    "amData": {

```

```

"upuInfo": {
  "upuAckInd": true,
  "upuRegInd": true,
  "upuDataList": [
    {
      "secPacket": "aGVsbG8="
    }
  ],
  "provisioningTime": "2012-04-23T18:25:43.511Z",
  "upuMacIausf": "E0b0cCF4EcCC5CA55DBfeA3B2Ad3aE80",
  "counterUpu": "3Ab5"
},
"supportedFeatures": "692F296F2Cb3BCA76Bc1E126FeEC12",
"mcsPriority": true,
"activeTime": 3,
"subscribedDnnList": [
  "hello",
  "ocudr"
],
"subscribedUeAmbr": {
  "uplink": "123 Gbps",
  "downlink": "12 Gbps"
},
"sharedAmDataIds": [
  "62626-esp}W3A?hIgz{47Qiuuj@GR:Ped>@k`Px,76390-Cd[s[TECI"
],
"coreNetworkTypeRestrictions": [
  "5GC",
  "EPC"
],
"nssai": {
  "supportedFeatures": "692F296F2Cb3BCA76Bc1E126FeEC12",
  "defaultSingleNssais": [
    {
      "sd": "abc123",
      "sst": 1
    },
    {
      "sd": "abc124",
      "sst": 2
    }
  ],
  "singleNssais": [
    {
      "sd": "abc789",
      "sst": 3
    },
    {
      "sd": "abc799",
      "sst": 5
    }
  ]
},
"dlPacketCount": -1,
"gpsis": [

```

```

        "msisdn-1585632",
        "msisdn-2969851"
    ],
    "rfspIndex": 123,
    "mpsPriority": true,
    "forbiddenAreas": [
        {
            "tacs": [
                "d11fdA",
                "EcccaD"
            ]
        }
    ],
    "serviceAreaRestriction": {
        "restrictionType": "ALLOWED_AREAS",
        "maxNumOfTAs": 23,
        "areas": [
            {
                "tacs": [
                    "d11fdA",
                    "EcccaD"
                ]
            }
        ]
    },
    "odbPacketServices": "ALL_PACKET_SERVICES",
    "sorInfo": {
        "sorMacIausf": "Bf85A791dCCDa7D6d9754264F02EDcBc",
        "steeringContainer": [
            {
                "plmnId": {
                    "mnc": "456",
                    "mcc": "123"
                },
                "accessTechList": [
                    "NR"
                ]
            }
        ],
        "provisioningTime": "2012-04-23T18:25:43.511Z",
        "countersor": "8ebc",
        "ackInd": true
    },
    "ratRestrictions": [
        "NR",
        "WLAN",
        "EUTRA",
        "VIRTUAL"
    ],
    "subsRegTimer": 2,
    "ueUsageType": 9,
    "internalGroupIds": [
        "E1465DF5-483-159-Fc23DE491edb354dABAA",
        "51e851ea-577-297-Ef4d7Cf28CaC0D"
    ],

```



```

        "micoAllowed": true
    },
    "smData": {
        "2": {
            "dnnConfigurations": {
                "dnn1": {
                    "iwkEpsInd": true,
                    "sessionAmbr": {
                        "uplink": "125 Mbps",
                        "downlink": "25 Mbps"
                    },
                    "5gQosProfile": {
                        "priorityLevel": 79,
                        "5qi": 123,
                        "arp": {
                            "preemptCap": "MAY_PREEMPT",
                            "priorityLevel": 1,
                            "preemptVuln": "PREEMPTABLE"
                        }
                    }
                },
                "upSecurity": {
                    "upIntegr": "REQUIRED",
                    "upConfid": "REQUIRED"
                },
                "sscModes": {
                    "allowedSscModes": [
                        "SSC_MODE_2",
                        "SSC_MODE_3"
                    ],
                    "defaultSscMode": "SSC_MODE_1"
                },
                "3gppChargingCharacteristics": "123A",
                "pduSessionTypes": {
                    "defaultSessionType": "IPV4",
                    "allowedSessionTypes": [
                        "IPV6",
                        "IPV4V6",
                        "UNSTRUCTURED",
                        "ETHERNET"
                    ]
                },
                "staticIpAddress": [
                    "1.1.1.1",
                    "191.0.2.1"
                ]
            }
        },
        "singleNssai": {
            "sst": 2
        },
        "odbPacketServices": "ALL_PACKET_SERVICES",
        "internalGroupIds": [
            "9ABAB803-203-299-95A9",
            "9ABAB803-203-299-95A2",
            "79e0c480-719-085-f2A55e6DDc91Df802438"
        ]
    }
}

```

```

    ],
    "sharedDnnConfigurationsId": "85868-mZE$cy"
  },
  "3": {
    "dnnConfigurations": {
      "dnn1": {
        "iwkEpsInd": true,
        "sessionAmbr": {
          "uplink": "125 Mbps",
          "downlink": "25 Mbps"
        },
        "5gQosProfile": {
          "priorityLevel": 79,
          "5qi": 123,
          "arp": {
            "preemptCap": "MAY_PREEMPT",
            "priorityLevel": 1,
            "preemptVuln": "PREEMPTABLE"
          }
        }
      },
      "upSecurity": {
        "upIntegr": "REQUIRED",
        "upConfid": "REQUIRED"
      },
      "sscModes": {
        "allowedSscModes": [
          "SSC_MODE_2",
          "SSC_MODE_3"
        ],
        "defaultSscMode": "SSC_MODE_1"
      },
      "3gppChargingCharacteristics": "123A",
      "pduSessionTypes": {
        "defaultSessionType": "IPV4",
        "allowedSessionTypes": [
          "IPV6",
          "IPV4V6",
          "UNSTRUCTURED",
          "ETHERNET"
        ]
      },
      "staticIpAddress": [
        "1.1.1.1",
        "191.0.2.1"
      ]
    }
  },
  "singleNssai": {
    "sst": 3
  },
  "odbPacketServices": "ALL_PACKET_SERVICES",
  "internalGroupIds": [
    "9ABAB803-203-299-95A9",
    "9ABAB803-203-299-95A2",
    "79e0c480-719-085-f2A55e6DDc91Df802438"
  ]
}

```

```

    ],
    "sharedDnnConfigurationsId": "85868-mZE$cy"
  }
}

```

PUT-AccessAndMobilitySubscriptionData

```

{
  "gpsis": [
    "msisdn-1585632",
    "msisdn-2969851"
  ],
  "nssai": {
    "singleNssais": [
      {
        "sd": "abc789",
        "sst": 3
      },
      {
        "sd": "abc799",
        "sst": 5
      }
    ],
    "supportedFeatures": "692F296F2Cb3BCA76Bc1E126FeEC12",
    "defaultSingleNssais": [
      {
        "sd": "abc123",
        "sst": 1
      },
      {
        "sd": "abc124",
        "sst": 2
      }
    ]
  },
  "sorInfo": {
    "ackInd": true,
    "countersor": "8ebc",
    "sorMacIausf": "Bf85A791dCCDa7D6d9754264F02EDcBc",
    "provisioningTime": "2012-04-23T18:25:43.511Z",
    "steeringContainer": [
      {
        "plmnId": {
          "mcc": "123",
          "mnc": "456"
        },
        "accessTechList": [
          "NR"
        ]
      }
    ]
  },
  "upuInfo": {

```

```

        "upuAckInd": true,
        "upuRegInd": true,
        "counterUpu": "3Ab5",
        "upuDataList": [
            {
                "secPacket": "aGVsbG8="
            }
        ],
        "upuMacIausf": "E0b0cCF4EcCC5CA55DBfeA3B2Ad3aE80",
        "provisioningTime": "2012-04-23T18:25:43.511Z"
    },
    "rfspIndex": 123,
    "activeTime": 3,
    "mcsPriority": true,
    "micoAllowed": true,
    "mpsPriority": true,
    "ueUsageType": 9,
    "subsRegTimer": 2,
    "dlPacketCount": -1,
    "forbiddenAreas": [
        {
            "tacs": [
                "d11fdA",
                "EcccaD"
            ]
        }
    ],
    "ratRestrictions": [
        "NR",
        "WLAN",
        "EUTRA",
        "VIRTUAL"
    ],
    "sharedAmDataIds": [
        "62626-esp}W3A?hIgz{47Qiuuj@GR:Ped>@k`Px,76390-Cd[s[TECI"
    ],
    "internalGroupIds": [
        "E1465DF5-483-159-Fc23DE491edb354dABAA",
        "51e851ea-577-297-Ef4d7Cf28CaC0D"
    ],
    "subscribedUeAmbr": {
        "uplink": "123 Gbps",
        "downlink": "12 Gbps"
    },
    "odbPacketServices": "ALL_PACKET_SERVICES",
    "subscribedDnnList": [
        "hello",
        "ocudr"
    ],
    "supportedFeatures": "692F296F2Cb3BCA76Bc1E126FeEC12",
    "serviceAreaRestriction": {
        "areas": [
            {
                "tacs": [
                    "d11fdA",

```

```

        "EcccaD"
      ]
    }
  ],
  "maxNumOfTAs": 23,
  "restrictionType": "ALLOWED_AREAS"
},
"coreNetworkTypeRestrictions": [
  "5GC",
  "EPC"
]
}

```

GET-Amf3GppAccessRegistration

Below is the output when the sample URL is <http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/context-data/amf-3gpp-access>.

```

{
  "imsVoPs": "HOMOGENEOUS_SUPPORT",
  "deregCallbackUri": "http://ocnrf-ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances",
  "purgeFlag": true,
  "supportedFeatures": "AF",
  "ratType": "WLAN",
  "urrrIndicator": true,
  "amfServiceNameDereg": "nudm-sdm",
  "amfServiceNamePcscfRest": "nausf-auth",
  "guami": {
    "plmnId": {
      "mnc": "123",
      "mcc": "001"
    },
    "amfId": "1234AA"
  },
  "pei": "imei-1000000000000001",
  "amfEeSubscriptionId": "subscriptionId",
  "drFlag": true,
  "amfInstanceId": "abae35e5-cc45-4016-8dd4-89598e5311b9",
  "pcscfRestorationCallbackUri": "http://ocnrf-ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances",
  "backupAmfInfo": [
    {
      "backupAmf":
"amf1.cluster1.net2.amf.5gc.mnc012.mcc345.3gppnetwork.org",
      "guamiList": [
        {
          "plmnId": {
            "mnc": "456",
            "mcc": "002"
          },
          "amfId": "5678AA"
        },
        {

```

```

        "plmnId": {
            "mnc": "789",
            "mcc": "003"
        },
        "amfId": "9876AA"
    }
}
],
"epsInterworkingInfo": {
    "dnn2": {
        "smfInstanceId": "abae35e5-cc45-4016-8dd4-89598e5311b7",
        "pgwFqdn": "abcdefgh"
    },
    "dnn1": {
        "smfInstanceId": "abae35e5-cc45-4016-8dd4-89598e5311b9",
        "pgwFqdn": "hijklm"
    }
},
"initialRegistrationInd": true
}

```

Below is the output when the sample URL
is <http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/context-data/amf-3gpp-access?fields=pei,ratType,epsInterworkingInfo,backupAmfInfo,drFlag>

```

{
    "pei": "imei-1000000000000001",
    "drFlag": true,
    "ratType": "WLAN",
    "backupAmfInfo": [
        {
            "AmfName":
"amf1.cluster1.net2.amf.5gc.mnc012.mcc345.3gppnetwork.org",
            "guamiList": [
                {
                    "plmnId": {
                        "mnc": "456",
                        "mcc": "002"
                    },
                    "amfId": "5678AA"
                },
                {
                    "plmnId": {
                        "mnc": "789",
                        "mcc": "003"
                    },
                    "amfId": "9876AA"
                }
            ]
        }
    ],
    "epsInterworkingInfo": {

```

```

        "dnn2": {
            "smfInstanceId": "abae35e5-cc45-4016-8dd4-89598e5311b7",
            "pgwFqdn": "abcdefgh"
        },
        "dnn1": {
            "smfInstanceId": "abae35e5-cc45-4016-8dd4-89598e5311b9",
            "pgwFqdn": "hijklm"
        }
    }
}

```

PATCH-Amf3GppAccessRegistration

```

case 1: REPLACE
[ {
    "op" : "replace",
    "path" : "/mnc-mcc-amfId/backupAmfInfo/0/guamiList/0/plmnId/mcc",
    "value" : "998"
} ]

case2: ADD
[ {
    "op" : "add",
    "path" : "/mnc-mcc-amfId/backupAmfInfo/0/guamiList/1",
    "value" : {
        "amfId": "5678AA",
        "plmnId": {
            "mcc": "666",
            "mnc": "456"
        }
    }
} ]

case3: REMOVE
[ {
    "op" : "remove",
    "path" : "/mnc-mcc-amfId/backupAmfInfo/0/guamiList/2"
} ]

```

PUT-AmfNon3GppAccessRegistration

```

{
    "amfInstanceId" : "abae35e5-cc45-4016-8dd4-89598e5311b9",
    "supportedFeatures" : "AF",
    "purgeFlag" : true,
    "pei" : "imei-1000000000000001",
    "imsVoPs" : "HOMOGENEOUS_SUPPORT",
    "deregCallbackUri" : "http://ocnrf-ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances",
    "amfServiceNameDereg" : "nudm-sdm",
}

```

```

    "pcscfRestorationCallbackUri" : "http://ocnrf-ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances",
    "amfServiceNamePcscfRest" : "nausf-auth",
    "guami" : {
      "plmnId" : {
        "mcc" : "001",
        "mnc" : "123"
      },
      "amfId" : "1234AA"
    },
    "backupAmfInfo" : [
      { "backupAmf" :
        "amf1.cluster1.net2.amf.5gc.mnc012.mcc345.3gppnetwork.org",
        "guamiList" : [{"plmnId" : {"mcc" : "002", "mnc" : "456"}, "amfId" :
          "5678AA"}, {"plmnId" : {"mcc" : "003", "mnc" : "789"}, "amfId" :
          "9876AA"}]}
    ],
    "ratType" : "WLAN",
    "amfEeSubscriptionId": "subscriptionId",
    "urrrIndicator" : true
  }

```

GET-AmfNon3GppAccessRegistration

The output of **Sample URI**: <http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/context-data/amf-non-3gpp-access> is:

```

{
  "pei": "imei-1000000000000001",
  "guami": {
    "amfId": "1234AA",
    "plmnId": {
      "mcc": "001",
      "mnc": "123"
    }
  },
  "imsVoPs": "HOMOGENEOUS_SUPPORT",
  "ratType": "WLAN",
  "purgeFlag": true,
  "amfInstanceId": "abae35e5-cc45-4016-8dd4-89598e5311b9",
  "backupAmfInfo": [
    {
      "backupAmf":
        "amf1.cluster1.net2.amf.5gc.mnc012.mcc345.3gppnetwork.org",
      "guamiList": [
        {
          "amfId": "5678AA",
          "plmnId": {
            "mcc": "002",
            "mnc": "456"
          }
        },
        {
          "amfId": "9876AA",

```



```

                "plmnId": {
                    "mcc": "003",
                    "mnc": "789"
                }
            }
        ]
    },
    "urrrpIndicator": true,
    "deregCallbackUri": "http://ocnrf-ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances",
    "supportedFeatures": "AF",
    "amfEeSubscriptionId": "subscriptionId",
    "amfServiceNameDereg": "nudm-sdm",
    "amfServiceNamePcscfRest": "nausf-auth",
    "pcscfRestorationCallbackUri": "http://ocnrf-ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances"
}

```

The output of **Sample URI**: <http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000025/context-data/amf-non-3gpp-access/all> is:

```

{
  "active": {
    "guami": "223-004-1234AA",
    "timeStamp": "2020-04-23 09:36:24.621"
  },
  "previousActive": {
    "guami": "123-004-1234AA",
    "timeStamp": "2020-04-23 09:36:17.919"
  },
  "2020-04-23 09:36:02.444": {
    "123-001-1234AA": {
      "pei": "imei-1000000000000001",
      "guami": {
        "amfId": "1234AA",
        "plmnId": {
          "mcc": "001",
          "mnc": "123"
        }
      },
      "imsVoPs": "HOMOGENEOUS_SUPPORT",
      "ratType": "WLAN",
      "purgeFlag": true,
      "amfInstanceId": "abae35e5-cc45-4016-8dd4-89598e5311b9",
      "backupAmfInfo": [
        {
          "backupAmf":
"amf1.cluster1.net2.amf.5gc.mnc012.mcc345.3gppnetwork.org",
          "guamiList": [
            {
              "amfId": "5678AA",
              "plmnId": {
                "mcc": "002",

```

```

        "mnc": "456"
      }
    },
    {
      "amfId": "9876AA",
      "plmnId": {
        "mcc": "003",
        "mnc": "789"
      }
    }
  ]
},
"urrpIndicator": true,
"deregCallbackUri": "http://ocnrf-ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances",
"supportedFeatures": "AF",
"amfEeSubscriptionId": "subscriptionId",
"amfServiceNameDereg": "nudm-sdm",
"amfServiceNamePcscfRest": "nausf-auth",
"pcscfRestorationCallbackUri": "http://ocnrf-ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances"
},
},
"2020-04-23 09:36:10.504": {
  "123-002-1234AA": {
    "pei": "imei-1000000000000001",
    "guami": {
      "amfId": "1234AA",
      "plmnId": {
        "mcc": "002",
        "mnc": "123"
      }
    }
  },
  "imsVoPs": "HOMOGENEOUS_SUPPORT",
  "ratType": "WLAN",
  "purgeFlag": true,
  "amfInstanceId": "abae35e5-cc45-4016-8dd4-89598e5311b9",
  "backupAmfInfo": [
    {
      "backupAmf":
"amf1.cluster1.net2.amf.5gc.mnc012.mcc345.3gppnetwork.org",
      "guamiList": [
        {
          "amfId": "5678AA",
          "plmnId": {
            "mcc": "002",
            "mnc": "456"
          }
        },
        {
          "amfId": "9876AA",
          "plmnId": {
            "mcc": "003",
            "mnc": "789"
          }
        }
      ]
    }
  ]
}

```

```

    }
  }
]
},
"urrrpIndicator": true,
"deregCallbackUri": "http://ocnrf-ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances",
"supportedFeatures": "AF",
"amfEeSubscriptionId": "subscriptionId",
"amfServiceNameDereg": "nudm-sdm",
"amfServiceNamePcscfRest": "nausf-auth",
"pcscfRestorationCallbackUri": "http://ocnrf-ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances"
},
"2020-04-23 09:36:17.919": {
  "123-004-1234AA": {
    "pei": "imei-1000000000000001",
    "guami": {
      "amfId": "1234AA",
      "plmnId": {
        "mcc": "004",
        "mnc": "123"
      }
    },
    "imsVoPs": "HOMOGENEOUS_SUPPORT",
    "ratType": "WLAN",
    "purgeFlag": true,
    "amfInstanceId": "abae35e5-cc45-4016-8dd4-89598e5311b9",
    "backupAmfInfo": [
      {
        "backupAmf":
"amf1.cluster1.net2.amf.5gc.mnc012.mcc345.3gppnetwork.org",
        "guamiList": [
          {
            "amfId": "5678AA",
            "plmnId": {
              "mcc": "002",
              "mnc": "456"
            }
          },
          {
            "amfId": "9876AA",
            "plmnId": {
              "mcc": "003",
              "mnc": "789"
            }
          }
        ]
      }
    ]
  }
},
"urrrpIndicator": true,
"deregCallbackUri": "http://ocnrf-ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances",

```

```

        "supportedFeatures": "AF",
        "amfEeSubscriptionId": "subscriptionId",
        "amfServiceNameDereg": "nudm-sdm",
        "amfServiceNamePcscfRest": "nausf-auth",
        "pcscfRestorationCallbackUri": "http://ocnrf-
ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances"
    },
    "2020-04-23 09:36:24.621": {
        "223-004-1234AA": {
            "pei": "imei-1000000000000001",
            "guami": {
                "amfId": "1234AA",
                "plmnId": {
                    "mcc": "004",
                    "mnc": "223"
                }
            },
            "imsVoPs": "HOMOGENEOUS_SUPPORT",
            "ratType": "WLAN",
            "purgeFlag": true,
            "amfInstanceId": "abae35e5-cc45-4016-8dd4-89598e5311b9",
            "backupAmfInfo": [
                {
                    "backupAmf":
"amf1.cluster1.net2.amf.5gc.mnc012.mcc345.3gppnetwork.org",
                    "guamiList": [
                        {
                            "amfId": "5678AA",
                            "plmnId": {
                                "mcc": "002",
                                "mnc": "456"
                            }
                        },
                        {
                            "amfId": "9876AA",
                            "plmnId": {
                                "mcc": "003",
                                "mnc": "789"
                            }
                        }
                    ]
                }
            ],
            "urrrIndicator": true,
            "deregCallbackUri": "http://ocnrf-
ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances",
            "supportedFeatures": "AF",
            "amfEeSubscriptionId": "subscriptionId",
            "amfServiceNameDereg": "nudm-sdm",
            "amfServiceNamePcscfRest": "nausf-auth",
            "pcscfRestorationCallbackUri": "http://ocnrf-
ambassador.default.svc.cluster.local/nnrf-nfm/v1/nf-instances"
        }
    }
}

```

```
}
}
```

GET-SessionManagementSubscriptionData

```
[
  {
    "dnnConfigurations": {
      "dnn1": {
        "iwkEpsInd": true,
        "sessionAmbr": {
          "uplink": "125 Mbps",
          "downlink": "25 Mbps"
        },
        "5gQosProfile": {
          "priorityLevel": 79,
          "5qi": 123,
          "arp": {
            "preemptCap": "MAY_PREEMPT",
            "priorityLevel": 1,
            "preemptVuln": "PREEMPTABLE"
          }
        },
        "upSecurity": {
          "upIntegr": "REQUIRED",
          "upConfid": "REQUIRED"
        },
        "sscModes": {
          "allowedSscModes": [
            "SSC_MODE_2",
            "SSC_MODE_3"
          ],
          "defaultSscMode": "SSC_MODE_1"
        },
        "3gppChargingCharacteristics": "123A",
        "pduSessionTypes": {
          "defaultSessionType": "IPV4",
          "allowedSessionTypes": [
            "IPV6",
            "IPV4V6",
            "UNSTRUCTURED",
            "ETHERNET"
          ]
        },
        "staticIpAddress": [
          "1.1.1.1",
          "191.0.2.1"
        ]
      }
    },
    "singleNssai": {
      "sd": "ABC654",
      "sst": 1
    }
  },
]
```

```

        "odbPacketServices": "ALL_PACKET_SERVICES",
        "internalGroupIds": [
            "9ABAB803-203-299-95A9",
            "9ABAB803-203-299-95A2",
            "79e0c480-719-085-f2A55e6DDc91Df802438"
        ],
        "sharedDnnConfigurationsId": "85868-mZE$cy"
    }
}
]

```

GET-SessionManagementSubscriptionData- Provisioning

```

[
  {
    "dnnConfigurations": {
      "dnn1": {
        "iwkEpsInd": true,
        "sessionAmbr": {
          "uplink": "125 Mbps",
          "downlink": "25 Mbps"
        },
        "5gQosProfile": {
          "priorityLevel": 79,
          "5qi": 123,
          "arp": {
            "preemptCap": "MAY_PREEMPT",
            "priorityLevel": 1,
            "preemptVuln": "PREEMPTABLE"
          }
        },
        "upSecurity": {
          "upIntegr": "REQUIRED",
          "upConfid": "REQUIRED"
        },
        "sscModes": {
          "allowedSscModes": [
            "SSC_MODE_2",
            "SSC_MODE_3"
          ],
          "defaultSscMode": "SSC_MODE_1"
        },
        "3gppChargingCharacteristics": "123A",
        "pduSessionTypes": {
          "defaultSessionType": "IPV4",
          "allowedSessionTypes": [
            "IPV6",
            "IPV4V6",
            "UNSTRUCTURED",
            "ETHERNET"
          ]
        },
        "staticIpAddress": [
          "1.1.1.1",
          "191.0.2.1"
        ]
      }
    }
  }
]

```

```

        ]
      },
      "internalGroupIds": [
        "9ABAB803-203-299-95A9",
        "9ABAB803-203-299-95A2",
        "79e0c480-719-085-f2A55e6DDc91Df802438"
      ]
    }
  ]

```

GET-SDMSubscriptions

Following is the Result Code:

```

[
  {
    "nfInstanceId": "cb59c48c-a2fa-11e9-a2a3-2a2ae2dbcce5",
    "expires": "2012-04-23T18:25:43.511Z",
    "implicitUnsubscribe": false,
    "dnn": "sasa",
    "singleNssai": {
      "sd": "651Bf9",
      "sst": 23
    },
    "callbackReference": "udr",
    "amfServiceName": "nnrf-nfm",
    "monitoredResourceUris": [
      "http://localhost:8080/nudr-dr/v2/subscription-data/nai-990991@nai/context-data/amf-3gpp-access"
    ],
    "plmnId": {
      "mnc": "124",
      "mcc": "123"
    },
    "subscriptionId": "sa"
  },
  {
    "nfInstanceId": "cb59c48c-a2fa-11e9-a2a3-2a2ae2dbcce5",
    "expires": "2012-04-23T18:25:43.511Z",
    "implicitUnsubscribe": true,
    "dnn": "sasa",
    "singleNssai": {
      "sd": "651Bf9",
      "sst": 23
    },
    "callbackReference": "https://https://www.google.com",
    "amfServiceName": "nnrf-nfm",
    "monitoredResourceUris": [
      "http://localhost:8080/nudr-dr/v2/subscription-data/nai-990991@nai/context-data/amf-3gpp-access"
    ],
    "plmnId": {
      "mnc": "124",

```

```

        "mcc": "123"
      },
      "subscriptionId": "sa"
    }
  ]

```

Post-Output-SubscriptionDataSubscriptions

Following is the Result Code:

```

{
  "supportedFeatures": "f",
  "callbackReference": "http://10.75.212.167:8787",
  "sdmSubscription": {
    "nfInstanceId": "cb59c48c-a2fa-11e9-a2a3-2a2ae2dbcce4",
    "expires": "2012-04-23T18:25:43.511Z",
    "implicitUnsubscribe": true,
    "dnm": "sasb",
    "singleNssai": {
      "sd": "651Bf9",
      "sst": 23
    },
    "callbackReference": "udr",
    "amfServiceName": "nnrf-nfm",
    "monitoredResourceUris": [
      "http://sims-udr-2-udr-simulator.sims-udr-2:5807/nudr-dr/v2/subscription-data/nai-9190909010@nai/context-data/amf-3gpp-access"
    ],
    "plmnId": {
      "mnc": "124",
      "mcc": "123"
    },
    "subscriptionId": "sa"
  },
  "monitoredResourceUris": [
    "http://sims-udr-2-udr-simulator.sims-udr-2:5807/nudr-dr/v2/subscription-data/nai-990991@nai/context-data/amf-3gpp-access"
  ],
  "originalCallbackReference": "http://10.75.212.167:8787",
  "expiry": "2020-01-02T08:17:14.090Z",
  "subscriptionId": "7",
  "ueId": "nai-990991@nai"
}

```

Get-Output-SubscriptionDataSubscriptions

Following is the Result Code:

```

[
  {
    "supportedFeatures": "f",
    "callbackReference": "http://mlu-pcf-api-gateway.mlu-pcf.svc/user-service/userservice/notification/imsi-1111111111",

```



```

        "monitoredResourceUris": [
            "http://localhost:8080/nudr-dr/v2/subscription-data/
nai-990991@nai/context-data/amf-3gpp-access"
        ],
        "originalCallbackReference": "http://mlu-pcf-api-gateway.mlu-
pcf.svc/user-service/userservice/notification/imsi-1111111111",
        "expiry": "2020-01-02T08:17:14.090Z",
        "subscriptionId": "2",
        "ueId": "nai-990991@nai"
    },
    {
        "supportedFeatures": "f",
        "callbackReference": "http://10.75.212.167:8787",
        "sdmSubscription": {
            "supportedFeatures": "f",
            "callbackReference": "http://10.75.212.167:8787",
            "sdmSubscription": true,
            "monitoredResourceUris": [
                "http://sims-udr-2-udr-simulator.sims-udr-2:5807/nudr-
dr/v2/subscription-data/nai-990991@nai/context-data/amf-3gpp-access"
            ],
            "originalCallbackReference": "http://10.75.212.167:8787",
            "expiry": "2020-01-02T08:17:14.090Z",
            "subscriptionId": "7",
            "ueId": "nai-990991@nai"
        },
        "monitoredResourceUris": [
            "http://sims-udr-2-udr-simulator.sims-udr-2:5807/nudr-dr/v2/
subscription-data/nai-990991@nai/context-data/amf-3gpp-access"
        ],
        "originalCallbackReference": "http://10.75.212.167:8787",
        "expiry": "2020-01-02T08:17:14.090Z",
        "subscriptionId": "7",
        "ueId": "nai-990991@nai"
    }
]

```

GET - AccessAndMobilitySubscriptionData

```

{
    "gpsis": [
        "msisdn-1585632",
        "msisdn-2969851"
    ],
    "nssai": {
        "singleNssais": [
            {
                "sd": "abc789",
                "sst": 3
            },
            {
                "sd": "abc799",
                "sst": 5
            }
        ]
    }
}

```

```

],
"supportedFeatures": "692F296F2Cb3BCA76Bc1E126FeEC12",
"defaultSingleNssais": [
  {
    "sd": "abc123",
    "sst": 1
  },
  {
    "sd": "abc124",
    "sst": 2
  }
]
},
"sorInfo": {
  "ackInd": true,
  "countersor": "8ebc",
  "sorMacIausf": "Bf85A791dCCDa7D6d9754264F02EDcBc",
  "provisioningTime": "2012-04-23T18:25:43.511Z",
  "steeringContainer": [
    {
      "plmnId": {
        "mcc": "123",
        "mnc": "456"
      },
      "accessTechList": [
        "NR"
      ]
    }
  ]
},
"upuInfo": {
  "upuAckInd": true,
  "upuRegInd": true,
  "counterUpu": "3Ab5",
  "upuDataList": [
    {
      "secPacket": "aGVsbG8="
    }
  ],
  "upuMacIausf": "E0b0cCF4EcCC5CA55DBfeA3B2Ad3aE80",
  "provisioningTime": "2012-04-23T18:25:43.511Z"
},
"rfspIndex": 123,
"activeTime": 3,
"mcsPriority": true,
"micoAllowed": true,
"mpsPriority": true,
"ueUsageType": 9,
"subsRegTimer": 2,
"dlPacketCount": -1,
"forbiddenAreas": [
  {
    "tacs": [
      "dl1fdA",
      "EcccaD"
    ]
  }
]

```

```

        ]
      }
    ],
    "ratRestrictions": [
      "NR",
      "WLAN",
      "EUTRA",
      "VIRTUAL"
    ],
    "sharedAmDataIds": [
      "62626-esp}W3A?hIgz{47Qiuuj@GR:Ped>@k`Px,76390-Cd[s[TECI"
    ],
    "internalGroupIds": [
      "E1465DF5-483-159-Fc23DE491edb354dABAA",
      "51e851ea-577-297-Ef4d7Cf28CaC0D"
    ],
    "subscribedUeAmbr": {
      "uplink": "123 Gbps",
      "downlink": "12 Gbps"
    },
    "odbPacketServices": "ALL_PACKET_SERVICES",
    "subscribedDnnList": [
      "hello",
      "ocudr"
    ],
    "supportedFeatures": "692F296F2Cb3BCA76Bc1E126FeEC12",
    "serviceAreaRestriction": {
      "areas": [
        {
          "tacs": [
            "d11fdA",
            "EcccaD"
          ]
        }
      ]
    },
    "maxNumOfTAs": 23,
    "restrictionType": "ALLOWED_AREAS"
  },
  "coreNetworkTypeRestrictions": [
    "5GC",
    "EPC"
  ]
}

```

The output of **Sample URI**: <http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000089/77889/provisioned-data/am-data?fields=gpsai,nssai,sorInfo> is:

```

{
  "nssai": {
    "supportedFeatures": "692F296F2Cb3BCA76Bc1E126FeEC12",
    "defaultSingleNssais": [
      {
        "sd": "abc123",
        "sst": 1
      }
    ]
  }
}

```

```

        },
        {
            "sd": "abc124",
            "sst": 2
        }
    ],
    "singleNssais": [
        {
            "sd": "abc789",
            "sst": 3
        },
        {
            "sd": "abc799",
            "sst": 5
        }
    ]
},
"gpsis": [
    "msisdn-1585632",
    "msisdn-2969851"
],
"sorInfo": {
    "sorMacIausf": "Bf85A791dCCDa7D6d9754264F02EDcBc",
    "steeringContainer": [
        {
            "plmnId": {
                "mnc": "456",
                "mcc": "123"
            },
            "accessTechList": [
                "NR"
            ]
        }
    ],
    "provisioningTime": "2012-04-23T18:25:43.511Z",
    "countersor": "8ebc",
    "ackInd": true
}
}

```

B

UDM Subscription Notification Formats

The UDM subscription notification format for different request types are as follows:

PUT- Notification Format

```
{
  "ueId": "nai-990991@nai",
  "notifyItems": [{
    "changes": [{
      "op": "REPLACE",
      "from": "",
      "path": "$",
      "newValue": {
        "dnn": "sasa",
        "plmnId": {
          "mcc": "123",
          "mnc": "124"
        },
        "expires": "2032-04-23T18:25:43.511Z",
        "singleNssai": {
          "sd": "651Bf9",
          "sst": 25
        },
        "nfInstanceId": "db59c48c-a2fa-11e9-a2a3-2a2ae2dbcce4",
        "amfServiceName": "nnrf-nfm",
        "subscriptionId": "sb",
        "callbackReference": "udr",
        "implicitUnsubscribe": true,
        "monitoredResourceUris": ["http://localhost:8080/nudr-dr/v2/subscription-data/nai-990991@nai/context-data/sdm-subscriptions", "http://localhost:8080/nudr-dr/v2/subscription-data/nai-990991@nai/operator-determined-barring-data"]
      },
      "origValue": ""
    }],
    "resourceId": "http://localhost:8080/nudr-dr/v2/subscription-data/nai-990991@nai/context-data/sdm-subscriptions/1"
  }],
  "sdmSubscription": {
    "dnn": "sasa",
    "plmnId": {
      "mcc": "123",
      "mnc": "124"
    },
    "expires": "2032-04-23T18:25:43.511Z",
    "singleNssai": {
      "sd": "651Bf9",
      "sst": 25
    }
  }
}
```

```

    },
    "nfInstanceId": "db59c48c-a2fa-11e9-a2a3-2a2ae2dbcce4",
    "amfServiceName": "nnrf-nfm",
    "subscriptionId": "sb",
    "callbackReference": "udr",
    "implicitUnsubscribe": true,
    "monitoredResourceUris": ["http://
localhost:8080/nudr-dr/v2/subscription-data/nai-990991@nai/context-data/
sdm-subscriptions", "http://localhost:8080/nudr-dr/v2/subscription-data/
nai-990991@nai/operator-determined-barring-data"]
  },
  "originalCallbackReference": ["udr"],
  "subscriptionDataSubscriptions": [{
    "ueId": "nai-990991@nai",
    "expiry": "2020-01-02T08:17:14.090Z",
    "subscriptionId": "1",
    "sdmSubscription": true,
    "callbackReference": "http://10.75.212.167:8787",
    "supportedFeatures": "f",
    "monitoredResourceUris": ["http://
localhost:8080/nudr-dr/v2/subscription-data/nai-990991@nai/context-data/
sdm-subscriptions", "http://localhost:8080/nudr-dr/v2/subscription-data/
nai-990991@nai/operator-determined-barring-data"],
    "originalCallbackReference": "http://mlu-pcf-api-gateway.mlu-
pcf.svc/user-service/userservice/notification/imsi-9999999998"
  }]
}

```

DELETE ENTITY- Notification Format

```

{
  "ueId": "nai-990991@nai",
  "notifyItems": [{
    "changes": [{
      "op": "REMOVE",
      "from": "",
      "path": "$",
      "newValue": null,
      "origValue": ""
    }],
    "resourceId": "http://localhost:8080/nudr-dr/v2/subscription-
data/nai-990991@nai/context-data/sdm-subscriptions/1"
  }],
  "sdmSubscription": null,
  "originalCallbackReference": ["udr"],
  "subscriptionDataSubscriptions": [{
    "ueId": "nai-990991@nai",
    "expiry": "2020-01-02T08:17:14.090Z",
    "subscriptionId": "1",
    "sdmSubscription": true,
    "callbackReference": "http://10.75.212.167:8787",
    "supportedFeatures": "f",
    "monitoredResourceUris": ["http://
localhost:8080/nudr-dr/v2/subscription-data/nai-990991@nai/context-data/

```

```

sdm-subscriptions", "http://localhost:8080/nudr-dr/v2/subscription-data/
nai-990991@nai/operator-determined-barring-data"],
    "originalCallbackReference": "http://mlu-pcf-api-gateway.mlu-
pcf.svc/user-service/userservice/notification/imsi-9999999998"
    }}
}

```

Patch- Notification Format

```

{
  "ueId": "nai-990991@nai",
  "notifyItems": [{
    "changes": [{
      "op": "REPLACE",
      "from": "",
      "path": "/dnn",
      "newValue": "sbsa",
      "origValue": "sbsb"
    }],
    "resourceId": "http://localhost:8080/nudr-dr/v2/subscription-
data/nai-990991@nai/context-data/sdm-subscriptions/4"
  }],
  "sdmSubscription": {
    "dnn": "sbsa",
    "plmnId": {
      "mcc": "123",
      "mnc": "124"
    },
    "expires": "2032-04-23T18:25:43.511Z",
    "singleNssai": {
      "sd": "651Bf9",
      "sst": 25
    },
    "nfInstanceId": "db59c48c-a2fa-11e9-a2a3-2a2ae2dbcce4",
    "amfServiceName": "nnrf-nfm",
    "subscriptionId": "sb",
    "callbackReference": "udr",
    "implicitUnsubscribe": true,
    "monitoredResourceUris": ["http://
localhost:8080/nudr-dr/v2/subscription-data/nai-990991@nai/context-data/
sdm-subscriptions", "http://localhost:8080/nudr-dr/v2/subscription-data/
nai-990991@nai/operator-determined-barring-data"]
  },
  "originalCallbackReference": ["udr"],
  "subscriptionDataSubscriptions": [{
    "ueId": "nai-990991@nai",
    "expiry": "2020-01-02T08:17:14.090Z",
    "subscriptionId": "4",
    "sdmSubscription": true,
    "callbackReference": "http://10.75.212.167:8787",
    "supportedFeatures": "f",
    "monitoredResourceUris": ["http://
localhost:8080/nudr-dr/v2/subscription-data/nai-990991@nai/context-data/
sdm-subscriptions", "http://localhost:8080/nudr-dr/v2/subscription-data/

```

```
nai-990991@nai/operator-determined-barring-data"],
  "originalCallbackReference": "http://mlu-pcf-api-gateway.mlu-
pcf.svc/user-service/userservice/notification/imsi-9999999998"
}]
}
```

DELETE SUBSCRIBER- Notification Format

```
{
  "ueId": "nai-990991@nai",
  "notifyItems": {
    "changes": [{
      "op": "REMOVE",
      "from": "",
      "path": "$",
      "newValue": null,
      "origValue": null
    }],
    "resourceId": "http://localhost:8080/nudr-dr-prov/v1/profile-
data/nai-990991@nai"
  },
  "sdmSubscription": null,
  "originalCallbackReference": ["udr"],
  "subscriptionDataSubscriptions": null
}
```