

# 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. It is implemented as a cloud native function and offers a unified database for storing application, subscription, authentication, service authorization, policy data, session binding and Application state information. It provides a HTTP2 based RESTful interface for other 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 29.505 Release 15 specification UDM
- Is compliant to 3GPP 29.519 Release 16 (backward compatible with Release 15) specification for PCF
- Has tiered architecture providing separation between the connectivity, business logic and data layers
- Uses Oracle MySQL NDB Cluster CGE Edition as backend database in the Data Tier
- Registers with NRF in the 5G network so that the other NFs in the network can discover UDR through NRF
- Registers UDR 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

**Unstructured Data Storage Function (UDSF)** is a part of Oracle's 5G UDR solution. It supports storage and retrieval of unstructured data by any 5G NF. The specifications of UDSF are presently not defined by 3GPP.

**5G SLF** functionality is also a part of Oracle's 5G UDR solution. It:

- Supports Nudr-groupid-map service as defined by 3GPP
- Registers with NRF for Nudr-groupid-map service

- Is 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

## My Oracle Support

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- 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.

# 2

## REST Specifications

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

### Operations Supported for PCF Data

This section provides information about the operations supported for PCF Data (PCF as consumer).

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

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

**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"> <li>• <b>400 :</b> "Invalid URI sent from client"</li> <li>• <b>404 :</b> "Subscriber does not exist"</li> <li>• <b>404 :</b> "Data field does not exist "</li> <li>• <b>400 :</b> "Unknown key, the key provided in the request is invalid"</li> </ul>

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

## Provisioning Operations for PCF Data

This section provides provisioning operations for PCF data.

**Resource Name:** AM, SM, UEPolicySet

**HTTP Method:** PUT, GET, DELETE

**Base URI:** *{apiRoot}/nudr-dr-prov/v1/policy-data/{ueld}*

Operation Type	Sample REST URL	Possible Error Codes
PUT	http://localhost:8080/nudr- dr-prov/v2/policy-data/ msisdn-461772271137732 <b>Payload:</b> See <a href="#">PUT-AM SM UEPolicyData</a>	<ul style="list-style-type: none"> <li>• 400 : "Blob syntax error with corresponding error details"</li> <li>• 400 : "Invalid URI sent from client"</li> <li>• 404 : "Subscriber does not exist"</li> </ul>
PUT (update or delete PCF data)	update am-data and delete sm-data Payload: See <a href="#">PUT - update am-data and delete sm-data</a>	

Operation Type	Sample REST URL	Possible Error Codes
GET	http://localhost:8080/nudr-dr-prov/v2/policy-data/msisdn-461772271137732	<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist"</li> <li>• <b>400:</b> "Unknown key, the key provided in the request is invalid"</li> </ul>
DELETE	http://localhost:8080/nudr-dr-prov/v2/policy-data/msisdn-461772271137732	<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist"</li> <li>• <b>400:</b> "Unknown key, the key provided in the request is invalid"</li> </ul>

## 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	<b>Sample URI:</b> 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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>



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

**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><b>Sample URI:</b> http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ authentication-data/ authentication-status</p> <p><b>Payload:</b></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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>
GET	<p><b>Sample URI:</b> 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
	<b>Sample URI:</b> 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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>

**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	<b>Sample URI:</b> http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ context-data	Output: See <a href="#">GET-ContextData</a>	
	<b>Sample URI:</b> http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ context-data? context-dataset- names=SMSF_3GPP	Output: <a href="#">GET - Context Data - SMSF</a>	

**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><b>Sample URI:</b>  <a href="http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/context-data/amf-3gpp-access">http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/context-data/amf-3gpp-access</a>                      Payload: See <a href="#">PUT - Amf3GppAccessRegistration</a></p>		<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>
PATCH	<p><b>Sample URI:</b> <a href="http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/context-data/amf-3gpp-access">http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/context-data/amf-3gpp-access</a>                      Payload: See <a href="#">PATCH - Amf3GppAccessRegistration</a></p>		<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>
GET	<p><b>Sample URI:</b>  <a href="http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/context-data/amf-3gpp-access">http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/context-data/amf-3gpp-access</a></p>	Output: See <a href="#">GET-Amf3GppAccessRegistration</a>	<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>
	<p><b>Sample URI:</b> <a href="http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/context-data/amf-3gpp-access?fields=pei,ratType,epsIinterworkingInfo,backupAmfInfo,drFlag">http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/context-data/amf-3gpp-access?fields=pei,ratType,epsIinterworkingInfo,backupAmfInfo,drFlag</a></p>	Output: See <a href="#">GET-Amf3GppAccessRegistration</a>	

**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	<b>Sample URI:</b> http://localhost:8080/ nudr-dr/v2/ subscription-data/ imsi-911000000028/ context-data/amf- non-3gpp-access Payload: See <a href="#">PUT- AmfNon3GppAccess Registration</a>		<ul style="list-style-type: none"><li>• <b>400:</b> "Invalid URI sent from client"</li><li>• <b>404:</b> "Subscriber does not exist"</li></ul>

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PATCH	<p><b>Sample URI:</b> 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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>

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

**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	<b>Sample URI:</b> 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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>



**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><b>Sample URI:</b> 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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	}		
DELETE	<b>Sample URI:</b> 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	<b>Sample URI:</b> 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",    "emergencyServic   es": true,    "supportedFeatur   es":   "supFeature1",    "pcscfRestoratio   nCallbackUri":   "http://ocnrf-   ambassador.defau   lt.svc.cluster.l   ocal/nnrf-   nfm/v1/nf-   instances" }           </pre>	<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	<b>Sample URI:</b> 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><b>Sample URI:</b> 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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>

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

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	<b>Sample URI:</b> 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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>



Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	<b>Sample URI:</b> 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.emteshurwlddooeh",     "realm": "uLmBAnz2b7S60evNkC7tHvcEZidEXppNIp7Le9yXzucgboiXFRkYg6597LBi31nOBxEBV2ZePCfKpUiEB0ULZMxudPsPepud.emteshurwlddooeh"   } }           </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><b>Sample URI:</b> 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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>

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

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
GET	<b>Sample URI:</b> 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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	<b>Sample URI:</b> 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.emteshurwlddoeh",     "realm": "uLmBAnz2b7S60evNkC7tHvcEZidEXppNIp7Le9yXzucgboiXFRkYg6597LBi31nOBxEBV2ZePCfKpUiEB0ULZMxudPsPepud.emteshurwlddoeh"   } }</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	<b>Sample URI:</b> http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000089/77889/provisioned-data/am-data	Output: See <a href="#">GET - AccessAndMobilitySubscriptionData</a>	<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>

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

**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	<b>Sample URI:</b> 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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>

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
	<b>Sample URI:</b> http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000089/7889/provisioned-data/smf-selection-subscription-data?fields=subscribedSnssaiInfos,supportedFeatures	Output: <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/{ueId}/{servingPlmnId}/provisioned-data/sm-data

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

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	<b>Sample URI:</b> 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
	<b>Sample URI:</b> 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><b>Sample URI:</b> http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000028/7889/provisioned-data/sm-data?dnn=dnn1&amp;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><b>Sample URI:</b> http://localhost:8080/nudr/v2/subscription-data/imsi-91100000028/77889/provisioned-data/sm-data?single-nssai=1-ABC654&amp;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	<b>Sample URI:</b> http://localhost:8080/udr-dr/v2/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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>

**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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>

**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	<b>Sample URI:</b> http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000089/77889/provisioned-data	Output: <a href="#">GET-ProvisionedData</a>	<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>
	<b>Sample URI:</b> http://localhost:8080/nudr-dr/v2/subscription-data/imsi-911000000089/77889/provisioned-data?dataset-names=AM,SM	Output: <a href="#">GET-ProvisionedData</a>	<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>

**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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
PUT	<p><b>Sample URI:</b> 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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>

**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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>
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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>

**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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>

**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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>

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-       a2a3-2a2ae2dbcce       4"     },     "ppSubsRegTimer"     : {       "referenceId":       1,       "afInstanceId":       "f9dc5b9c-       a460-11e9-       a2a3-2a2ae2dbcce       4",       "subsRegTimer":       12     },     "ppDlPacketCount     ": 1   } }           </pre>	<ul style="list-style-type: none"> <li>• <b>400</b>: "Invalid URI sent from client"</li> <li>• <b>404</b>: "Subscriber does not exist"</li> <li>• <b>404</b>: "Data field does not exist "</li> </ul>

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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>
	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	Output: <pre>{   "gpsiList":   [     "msisdn-101176983803402"   ],   "supiList":   [     "imsi-516737872"   ,     "imsi-516737873"   ] }</pre>	<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>

## 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"> <li>• <b>400</b>: "Invalid URI sent from client"</li> <li>• <b>404</b>: "Data field does not exist "</li> <li>• <b>404</b>: "Subscriber does not exist"</li> <li>• <b>400</b>: "Unknown key, the key provided in the request is invalid"</li> </ul>



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><b>Payload:</b></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"> <li>• <b>400:</b> " Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>

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 <b>Payload:</b>  {  "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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>

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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>
	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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>400:</b> "Unknown key, the key provided in the request is invalid"</li> </ul>

**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 <a href="#">PUT-Amf3GppAccessRegistration</a>		<ul style="list-style-type: none"> <li>• <b>400</b>: "Invalid URI sent from client"</li> <li>• <b>404</b>: "Subscriber does not exist"</li> </ul>
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: <a href="#">GET - Amf3GppAccessRegistration</a>	

**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 <a href="#">PUT- AmfNon3GppAccess Registration</a>		<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>
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 <a href="#">GET- AmfNon3GppAccess Registration</a>	<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>

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"> <li>• <b>400</b>: "Invalid URI sent from client"</li> <li>• <b>404</b>: "Subscriber does not exist"</li> <li>• <b>404</b>: "Data field does not exist "</li> </ul>

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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>

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"> <li>• <b>400</b>: "Invalid URI sent from client"</li> <li>• <b>404</b>: "Subscriber does not exist"</li> <li>• <b>404</b>: "Data field does not exist "</li> </ul>
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"> <li>• <b>400</b>: "Invalid URI sent from client"</li> <li>• <b>404</b>: "Subscriber does not exist"</li> <li>• <b>404</b>: "Data field does not exist "</li> </ul>

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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>

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

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:  <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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>



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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>

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

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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>

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.emteshurwldooeh",     "realm": "uLmBAnz2b7S60evNkC7tHvcEZidEXppNIp7Le9yXzucgboiXFRkYg6597LBi31nOBxEBV2ZePCfKpUiEB0ULZMxudPsPepud.emteshurwldooeh"   } }</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: <a href="#">GET-AccessAndMobilitySubscriptionData</a>	<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist in data table"</li> </ul>

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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist in data table"</li> </ul>
PUT	Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000089/77889/provisioned-data/am-data Payload: See <a href="#">PUT - AccessAndMobilitySubscriptionData</a>		<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>
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"> <li>• <b>400</b>: "Invalid URI sent from client"</li> <li>• <b>404</b>: "Subscriber does not exist"</li> </ul>

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	<pre>"sharedSnsaiInfoId": "96367-9z }MD*" }</pre>		
DELETE	<p>Sample URI: <a href="http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-91100000089/77889/provisioned-data/smf-selection-subscription-data">http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-91100000089/77889/provisioned-data/smf-selection-subscription-data</a></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	<p>Output:</p> <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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>

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
	Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000089/7889/provisioned-data/smf-selection-subscription-data?fields=subscribedSnssaiInfos	Output: <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"> <li>• <b>400</b>: "Invalid URI sent from client"</li> <li>• <b>404</b>: "Subscriber does not exist"</li> <li>• <b>404</b>: "Data field does not exist "</li> </ul>

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: <a href="#">GET-SessionManagementSubscriptionData-Provisioning</a>	<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>
	Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000089/77889/provisioned-data/sm-data?fields=internalGroupIds,dnnConfigurations	Output: <a href="#">GET-SessionManagementSubscriptionData-Provisioning</a>	<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>
PUT	Sample URI: http://localhost:8080/nudr-dr-prov/v1/subscription-data/imsi-911000000089/77889/provisioned-data/sm-data Payload: <a href="#">PUT-SessionManagementSubscriptionData</a>		<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>
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"> <li>• <b>400</b>: "Invalid URI sent from client"</li> <li>• <b>404</b>: "Subscriber does not exist"</li> <li>• <b>404</b>: "Data field does not exist "</li> </ul>

Operation Type	Sample Request REST URL	Sample Response	Possible Error Codes
	<b>Sample URI:</b> 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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>

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": [     "16994-1JD",     "693599-9--GX"   ] }</pre>		<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>
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	<pre> http://localhost:8080/ nudr-dr-prov/v1/ subscription-data/ imsi-911000000028/7 7889/provisioned- data/trace-data  {  "traceRef": "0702 07-baE6Dd",  "traceDepth": "MINIMUM",  "neTypeList": "0f4FBefe95bF8",  "eventList": "855B5bf7beC3AFB 8c",  "collectionEntit yIpv4Addr": "26.118.255.253" ,  "collectionEntit yIpv6Addr": "2001:db8:85a3:: 8a2e:370:7334" } </pre>		<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>



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"> <li>• <b>400</b>: "Invalid URI sent from client"</li> <li>• <b>404</b>: "Subscriber does not exist"</li> <li>• <b>404</b>: "Data field does not exist "</li> </ul>
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"> <li>• <b>400</b>: "Invalid URI sent from client"</li> <li>• <b>404</b>: "Subscriber does not exist"</li> </ul>
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"> <li>• <b>400</b>: "Invalid URI sent from client"</li> <li>• <b>404</b>: "Subscriber does not exist"</li> <li>• <b>404</b>: "Data field does not exist "</li> </ul>
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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>
	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 Payload:</p> <pre>{   "StringTypeElements": {     "1": "s"   },   "IntegerTypeElements": {     "1": 1   },   "NumberTypeElements": {     "1": 1.1   },   "BooleanTypeElements": {     "1": true   } }</pre>		<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>
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"> <li>• <b>400</b>: "Invalid URI sent from client"</li> <li>• <b>404</b>: "Subscriber does not exist"</li> </ul>
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"> <li>• <b>400</b>: "Invalid URI sent from client"</li> <li>• <b>404</b>: "Subscriber does not exist"</li> <li>• <b>404</b>: "Data field does not exist "</li> </ul>

**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</p> <p>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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>

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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>

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/ nuds-dr-prov/v1/ subscription-data/ imsi-911000000028/e e-profile-data Payload:</p> <pre>{   "restrictedEvent   Types":   [ "LOSS_OF_CONNEC   TIVITY", "CHANGE_   OF_SUPI_PEI ASSO   CIATION" ],   "supportedFeatur   es": "fcB2fFC084F   c2d5B4Afcfa2Df86   14" }</pre>		<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>
GET	<p>http://localhost:8080/ nuds-dr-prov/v1/ subscription-data/ imsi-911000000028/e e-profile-data</p>	<p>Output:</p> <pre>{   "supportedFeatur   es":   "fcB2fFC084Fc2d5   B4Afcfa2Df8614",   "restrictedEvent   Types": [     "LOSS_OF_CONNECT     IVITY",     "CHANGE_OF_SUPI_     PEI_ASSOCIATION"   ] }</pre>	<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>

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  {  "supiList": ["imsi-516737872 ", "imsi-51673787 3"],  "gpsiList": ["msisdn-1011769 83803402"] }		<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>

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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>404:</b> "Data field does not exist "</li> </ul>
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"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> </ul>

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":   "3a84eBBb8C694Cc   e4ebA2FCC9307af1   A",   "sorXmacIue":   "3a84eBBb8C694Cc   e4ebA2FCC9307af1   F",   "ueUpdateStatus":   "NOT_SENT",   "provisioningTime":   "2012-04-23T18:2   5:43.511Z" }</pre>	<ul style="list-style-type: none"> <li>• <b>400</b>: "Invalid URI sent from client"</li> <li>• <b>404</b>: "Subscriber does not exist"</li> <li>• <b>404</b>: "Data field does not exist "</li> </ul>
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	<b>Header-Location:</b> http://localhost:8080/nudr-dr/v2/subscription-data/nai-990991@nai/context-data/sdm-subscriptions <b>RequestData:</b> See <a href="#">POST-SDMSubscriptions</a>	<b>Header-Location:</b> http://localhost:8080/nudr-dr/v2/subscription-data/nai-990991@nai/context-data/sdm-subscriptions/5 <b>Output:</b> See <a href="#">POST-SDMSubscriptions</a>	<ul style="list-style-type: none"> <li>• <b>400</b>: "Duplicate subscription"</li> <li>• <b>404</b>: "Subscriber does not exist"</li> <li>• <b>400</b>: "Schema Validation failure "</li> <li>• <b>404</b>: "Data does not exist "</li> </ul>

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

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	<b>Output:</b> See <a href="#">Get-Output-SubscriptionDataSubscriptions</a>	<ul style="list-style-type: none"> <li><b>400:</b> "Invalid URI sent from client "</li> </ul>
PATCH	http://localhost:8080/nudr-dr/v2/subscription-data/subs-to-notify/7 <b>RequestData:</b>  <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 Data

This section provides information about operations supported for SLF Data 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:



**Note:**

The following table has provisioning operations for SLF GroupName.



Operation Type	Sample Request	Sample Response	Notes
PUT	<pre> 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" } } </pre>	201 Created	
DELETE	<pre> http://localhost:8080/ slf-group-prov/v1/slf- group? slfGroupName="IMSG rp1" </pre>	204 No Content	

Operation Type	Sample Request	Sample Response	Notes
GET	http://localhost:8080/slf-group-prov/v1/slf-group?slfGroupName="IMSGrp1"	200 OK  {  "slfGroupName": "IMSGrp1",  "slfGroupType": "LteHss",  "nfGroupIDs": {  "NEF": "nef- group-name1",  "UDM": "udm- group-name1",  "PCF": "pcf- group-name1",  "AUSF": "ausf- group-name1" } }	

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/ nuds-group-id-map- prov/v1/slf-group/ accountID-123456789 12345678912345678	200 OK <b>Response</b> <pre>{   "profile- data": {     "imsi": ["2222222221", "2222222222"],     "nai": ["test@vzw.com"]   },   "accountID": ["12345678912345 678912345678"],   "msisdn": ["19195225555", "19195225556"],   "extid": ["user@vzw.com"] },   "slfGroupName": "IMSGrp1" }</pre>	You must provision SLFGroupName before provisioning subscriber.

Operation Type	Sample request	Sample response	Notes
PUT	<pre>http://localhost:8080/ nudr-group-id-map- prov/v1/slf-group/ accountID-123456789 12345678912345678  Body  {   "profile- data": {     "imsi": ["2222222221", "2222222222"],     "nai": ["test@vzw.com"]   },   "accountID": ["12345678912345 678912345678"],   "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	<pre>http:// localhost:8080/ nudr-group-id- map-prov/v1/slf- group/ accountid-12345 678910 {"profile-data": {</pre>	201 Created	400 Bad Request: "details": { "<FQDN>":"Sch ema 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": { "&lt;SEG&gt;" : " {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" : { "&lt;FQDN/ SEG&gt;" : " {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": { "&lt;FQDN&gt;": "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": { "&lt;SEG&gt;" : " {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" : {&lt;FQDN/ SEG&gt;" : {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": {"&lt;FQDN&gt;":"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": { "&lt;SEG&gt;" : " {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" : {&lt;FQDN/ SEG&gt;" : {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/ 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": {"&lt;FQDN&gt;":"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" : { "&lt;SEG&gt;" : " {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" : {&lt;FQDN/ SEG&gt;" : {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-222222221", "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/msisd-1919522555		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, <b>custom</b> for am-data. <b>Payload:</b></p> <pre>PUT-schemablob  { "\$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"> <li>• <b>405:</b> "Operation not allowed" (for nudr-dr)</li> <li>• <b>400:</b> Incase of json syntax error, an appropriate error message is sent from SQL db.</li> </ul>

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> { "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>This operation adds one new schema with version tag as "v1" and database points to "v1" now.</p> <p>To rollback to any other schema version, which already exists in database, see <a href="https://localhost:9443/nudr-dr-mgm/v1/policy-data/schema/am-data/version/v0">https://localhost:9443/nudr-dr-mgm/v1/policy-data/schema/am-data/version/v0</a>.</p>	



Operation Type	URI	Sample Schema	Possible Error Codes
GET	<ul style="list-style-type: none"> <li>• To get currently supported schema: https://localhost:9443/nudr-dr-mgm/v1/policy-data/schema/am-data</li> <li>• To get all schema versions supported by a resource. https://localhost:9443/nudr-dr-mgm/v1/policy-data/schema/am-data?version=all</li> <li>• To get any specific schema version: https://localhost:9443/nudr-dr-mgm/v1/policy-data/schema/am-data?version=v1</li> </ul>		<b>405:</b> "Operation not allowed" (for nudr-dr)
DELETE	<ul style="list-style-type: none"> <li>• Schema, which is currently in use could not be deleted.</li> <li>• To delete any other stored schema: https://localhost:9443/nudr-dr-mgm/v1/policy-data/schema/am-data/version/v1</li> </ul>		<b>405:</b> "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"> <li>• <b>400</b>: "Invalid URI sent from client"</li> <li>• <b>404</b>: "Subscriber does not exist"</li> <li>• <b>400</b>: "Unknown key, the key provided in the request is invalid"</li> <li>• <b>400</b>: "Blob syntax error with corresponding error details"</li> </ul>
GET	https://localhost:9443/nudsf-dr/v1/udsf/msisdn-1111111111/udsf-data		<ul style="list-style-type: none"> <li>• <b>400</b>: "Invalid URI sent from client"</li> <li>• <b>404</b>: "Subscriber does not exist"</li> <li>• <b>404</b>: "Data field does not exist"</li> <li>• <b>400</b>: "Unknown key, the key provided in the request is invalid"</li> </ul>
DELETE	https://localhost:9443/nudsf-dr/v1/udsf/msisdn-1111111111/udsf-data		<ul style="list-style-type: none"> <li>• <b>400</b>: "Invalid URI sent from client"</li> <li>• <b>404</b>: "Subscriber does not exist"</li> <li>• <b>400</b>: "Unknown key, the key provided in the request is invalid"</li> </ul>

## 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" }	<b>400</b> : "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"> <li>• <b>400</b>: "Schema validation failed for this request"</li> <li>• <b>404</b>: "Not found "</li> </ul>
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/" }	<b>404</b> : "Requested data not found"
DELETE	http://localhost:8080/nudr-dr/v2/policy-data/subs-to-notify/4	-	<b>404</b> : "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

## Provisioning Operations for Profile Data

This section provides provisioning operations for Profile 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), <a href="https://localhost:9443/nudr-dr-prov/v1/profile-data/msisdn-1111111114">https://localhost:9443/nudr-dr-prov/v1/profile-data/msisdn-1111111114</a> <b>Payload :</b> See <a href="#">POST-ProfileData</a> You can add profile-data and policy-data in single rest request. For sample data blob, see <a href="#">POST-Profile Data and Policy Data</a> You can add profile-data and SLF-data in single rest request. For sample data blob, see <a href="#">POST-Profile Data and SLF Data</a>	<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>400:</b> "Unknown key, the key provided in the request is invalid"</li> <li>• <b>400:</b> "Payload should contain key-value pair present in URI"</li> <li>• <b>400:</b> "Invalid content request data supplied"</li> <li>• <b>400:</b> "Occurrence constraint violation"</li> <li>• <b>400:</b> "Duplicate key"</li> </ul>

Operation Type	Sample REST URL	Possible Error Codes
PUT	https://localhost:9443/nudr-dr-prov/v1/profile-data/nai-3333333332 Payload: <a href="#">PUT-ProfileData</a>	<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>400:</b> "Unknown key, the key provided in the request is invalid"</li> <li>• <b>400:</b> " Payload should contain key-value pair present in URI "</li> <li>• <b>400:</b> "Invalid content request data supplied"</li> <li>• <b>400:</b> "Occurrence constraint violation"</li> </ul>
DELETE	This operation deletes all data from all DATA tables (PCF, UDM etc.), https://localhost:9443/nudr-dr-prov/v1/profile-data/nai-3333333332	<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>400:</b> "Unknown key, the key provided in the request is invalid"</li> </ul>
GET	https://localhost:9443/nudr-dr-prov/v1/profile-data/msisdn-1111111113	<ul style="list-style-type: none"> <li>• <b>400:</b> "Invalid URI sent from client"</li> <li>• <b>404:</b> "Subscriber does not exist"</li> <li>• <b>400:</b> "Unknown key, the key provided in the request is invalid"</li> </ul>

# 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
    }
}

```

## PUT-AM SM UEPolicyData

```

{
    "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
  }
},
"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": {
      "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
}
},
"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": {
        "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
}
}
},
"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": {
                "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
},
"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
}
}
}
},
"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": {
```





```
        "mcc": "976",
        "mnc": "31"
    },
    "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": null
}

```

Delete all PCF data

```

{
  "sm-data": null,
  "am-data": null,
  "ue-policy-set": null
}

```

## 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](#)
- [#unique\\_59](#)
- [#unique\\_60](#)
- [#unique\\_61](#)

### 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"]
  }
}

```

## 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-919090909010@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",
        "urrrpIndicator": 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": [
                "dl1fdA",
                "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
      }
    ]
  },
  "sharedSnsaiInfosId": "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": [
        "dl1fdA",
        "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"
      }
    }
  }
}

```



## 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",
"urrpIndicator" : 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-919090909010@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=gpsis,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
}
```