

Oracle® Communications

Cloud Native Core, Provisioning Gateway

Interface Specification Guide



Release 25.1.201
G35122-02
October 2025

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Contents

1	Introduction	
1.1	Overview	1
1.2	Provisioning Gateway Modes	1
1.3	References	1
2	SOAP/XML Interface on 5G UDR	
2.1	Understanding SOAP/XML Interface	1
2.1.1	SOAP Header Format	2
2.1.2	SOAP Request or Response Format	2
2.1.3	Status Codes and Error Messages	3
2.1.4	Basic XML Message Format	5
2.1.5	List of Messages	9
2.2	Supported SOAP/XML Operations	10
2.3	Supported SOAP/XML Request Operations for Custom Entities	133
2.3.1	Supported SOAP/XML Request for Custom Entities	159
3	REST Specifications of Provisioning Gateway	
3.1	Operations Supported for Provisioning Gateway	1
4	Configuration API Specifications	
4.1	Configuration APIs for Provisioning Gateway Microservices	1
4.2	Configuration APIs for Log Level	35
4.3	Configuration APIs for Export and Import	52
4.4	List of Errors and its Details	54

Preface

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

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The following text conventions are used in this document:

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

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Acronyms

The following table provides information about the acronyms and the terminologies used in the document:

Table Acronyms and Terminologies

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
ASM	Aspen Service Mesh
AUSF	Authentication Server Function
CNE	Oracle Communications Cloud Native Core, Cloud Native Environment
cnPCRF	Cloud Native Policy and Charging Rules Function
EIC	Equipment Identity Check
EIR	Equipment Identity Register
NEF	Oracle Communications Cloud Native Core, Network Exposure Function
NF	Network Function
NRF	Oracle Communications Cloud Native Core, Network Repository Function
NSI ID	Network Slice Instance Identifier
NSSAI	Network Slice Selection Assistance Information
NSSF	Oracle Communications Cloud Native Core, Network Slice Selection Function
NSSP	Network Slice Selection Policy
PDB	Provisioning Database
PDBA	Provisioning Database Application
PDBI	Provisioning Database Interface
PEI	Permanent Equipment Identifier
PCF	Policy Control Function
PSP	Pod Security Policy
PVC	Persistent Volume Claim
REST	Representational State Transfer
SBA	Service-Based Architecture (SBA)
SBI	Service Based Interface
SEPP	Oracle Communications Cloud Native Core, Security Edge Protection Proxy
SH	Diameter Interface
SLF	Subscriber Location Function
SMF	Session Management Function
SOAP	Simple Object Access Protocol
UDM	Unified Data Management

Table (Cont.) Acronyms and Terminologies

Field	Description
UDR	Oracle Communications Cloud Native Core, Unified Data Repository
UDSF	Unstructured Data Storage Function

What's New in This Guide

This section lists the documentation updates for release 25.1.2xx.

Release 25.1.201 - G35122-02, October 2025

- There are no updates to the guide in this release.

Release 25.1.200 - G35122-01, July 2025

- Added the following errorCodeProfiles to the GET and PUT operations of the PROVGW-GLOBAL request in the [Configuration APIs for Provisioning Gateway Microservices](#) section:
 - SERVER_ERROR_PLAIN_TEXT_BODY
 - NON_ASM_SLF_IGW_DOWN_CONNECTION
 - NON_ASM_SLF_IGW_DOWN_REQUEST
 - NON_ASM_SLF_DRSERVICE_DOWN_REQUEST
- Updated the packageName to micronaut from springframework for the GET and PUT operations of the following request in the [Configuration APIs for Log Level](#) section:
 - provgw-service
 - auditor-service
 - provgw-config
- Updated the entire payload for the GET and PUT operations of the following request in the [Configuration APIs for Log Level](#) section:
 - igw/logging
 - egw/logging

1

Introduction

This guide describes the SOAP/XML, REST, and API specifications of Provisioning Gateway.

1.1 Overview

Integration of Provisioning Gateway with 5G UDR provides all features required for the Converged Policy DB solution.

Converged Policy DB solution is a converged solution for 4G and 5G UDR. It provides provisioning endpoints for SOAP/XML interface with backward compatible interface specifications of 4G UDR.

Features

Provisioning Gateway supports following features:

- Supports all default entities of 4G UDR
- Supports custom entities and fields on the SOAP/XML interface
- Supports TLS on HTTP1.1
- Supports configuration of SEC via SEC.yaml file to add entity or field names
- Converts the input request as per the SEC.yaml definition

1.2 Provisioning Gateway Modes

The modes of Provisioning Gateway are:

- **SLF Mode:** This mode is applicable when Provisioning Gateway is deployed with UDR for SLF. In this mode, Provisioning Gateway is configured to connect to multiple segments of SLF. Each segment has two SLFs. For REST API specifications of SLF, see the **Operations Supported for SLF Data** in the *Oracle Communications Cloud Native Core, Unified Data Repository REST Specification Guide*.
- **UDR Mode:** This mode is applicable when Provisioning Gateway is deployed with UDR for Converged Policy DB solution. In this mode, Provisioning Gateway supports SOAP/XML interface, which is a used provision in the 4G Policy Data. For SOAP/XML API specifications, see the [Supported SOAP/XML Operations](#) section in this guide.

1.3 References

Refer to the following documents for more information on Provisioning Gateway usage in 5G Cloud Native Environment.

- *Oracle Communications Cloud Native Core, Provisioning Gateway Installation Guide*
- *Oracle Communications Cloud Native Core, Unified Data Repository User Guide*
- *Oracle Communications Cloud Native Core, Unified Data Repository Installation, Upgrade, and Fault Recovery Guide*

- *Oracle Communications Cloud Native Core, Unified Data Repository Network Impact Report*

2

SOAP/XML Interface on 5G UDR

Overview

4G UDR supports SOAP/XML interface as a provisioning interface. To provide similar experience on 5G UDR, Converged Policy DB solution supports integration of SOAP/XML interface on the Provisioning Gateway application.

Converged Policy DB solution is a converged solution for 4G and 5G UDR. It provides provisioning endpoints for SOAP/XML interface with backward compatible interface specifications of 4G UDR. The Provisioning Gateway:

- Exposes SOAP endpoints to which customer provisioning systems (like BOSS) connects and send SOAP/XML requests.
- Converts the SOAP/XML requests and sends the corresponding REST/JSON requests to 5G UDR for provisioning the subscriber and all other 4G entities.

Note

- 5G UDR or Provisioning Gateway solution does not support pool profile or entities.
- The 4G policy data is stored on 5G UDR using VSA feature. For more details on REST/JSON requests, see the *Oracle Communications Cloud Native Core, Unified Data Repository REST Specification Guide*.
- 5G Policy data provisioning is not supported.

2.1 Understanding SOAP/XML Interface

UDR supports a SOAP based provisioning interface for management of subscriber data. This interface supports querying, creation, modification and deletion of subscriber data.

The SOAP Messages and SOAP Replies are sent over the HTTP protocol. Each SOAP Message or Reply contains a UDR format XML request or response. It supports XML request types like update, insert, delete and select.

A SOAP provisioning client application is responsible for:

- Establishing a TCP/IP connection with Provisioning Gateway IP and port number.
- Creating and sending SOAP request messages to the Provisioning Gateway.
- Receiving and processing SOAP response messages received from the Provisioning Gateway.
- Detecting and handling connection errors. It is recommended that the TCP keep-alive interval for the client on the TCP/IP connection is set to detect and report a disconnection problem promptly.

2.1.1 SOAP Header Format

In the SOAP messages, the user authentication is part of the SOAP envelope header.

2.1.2 SOAP Request or Response Format

The SOAP interface uses SOAP as a wrapper of XML requests and responses. A sample SOAP request and response format is shared below:

SOAP Request Format

```
<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope
xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:ns1="http://www.oracle.com/udr/">
  <SOAP-ENV:Body>
    <ns1:processTransaction>
      <![CDATA[REQUEST]]>
    </ns1:processTransaction>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

Sample SOAP Request

```
<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope
xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:ns1="http://www.oracle.com/udr/">
  <SOAP-ENV:Body>
    <ns1:processTransaction>
      <![CDATA[
        <req name="insert">
          <ent name="Subscriber"/>
          <set>
            <expr><attr name="MSISDN"/>
            <value val="33628323201"/></expr>
            <expr><attr name="BillingDay"/>
            <value val="12"/></expr>
          </set>
        </req>
      ]]>
    </ns1:processTransaction>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

The SOAP interface uses the following wrapper for the XML response and error codes.

SOAP Response Format

```
<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope
xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:ns1="http://www.oracle.com/udr/">
<
  <SOAP-ENV:Body>
    <ns1:message error="ErrorCode">
      <![CDATA[RESPONSE]]>
    </ns1:message>
  </SOAP-ENV:Body>
  |
  <SOAP-ENV:Body
SOAP-ENV:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
    <SOAP-ENV:Fault>
      ...
    </SOAP-ENV:Fault> </SOAP-ENV:Body>
  >
</SOAP-ENV:Envelope>
```

Sample SOAP Response

```
<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope
xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:ns1="http://www.oracle.com/udr/">
<
  <SOAP-ENV:Body>
    <ns1:message error="ErrorCode">
      <![CDATA[<req name="insert" resonly="y">
        <res error="0" affected="1"/>
      </req>]]>
    </ns1:message>
  </SOAP-ENV:Body>
```

Note

Either the **<ns1:message>** or **<SOAP-ENV:Fault>** element is present, but not both. The content of the **<SOAP-ENV:Fault>** element depends on the SOAP error that occurs and can vary, which is not listed here.

2.1.3 Status Codes and Error Messages

If an error occurs in processing the request or in message format, then the following error result code is sent:

- Request transaction, '**<message error="0">: normal**' is sent and processed. This implies that there is a problem with the content of the request message. For example: problem with format or value out of range. UDR generates these error code numbers.
- **<message error="0">** but the message content has **<res error=error code number**.
- **<message error="10">**: Communication problem, unable to process the request transaction. The response does not contain any other response/error content.
- **<message error="20">**: Unable to parse the request transaction. The response does not contain any other response/error content.

Example: Response message indicates success:

```
<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope
xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:ns1="http://www.oracle.com/udr/">
<SOAP-ENV:Body>
<ns1:message error="0">
<![CDATA[<req name="insert" resonly="y">
<res error="0" affected="1"/>
</req>]]>
</ns1:message>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

Example: Response message returns an error code:

```
<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope
xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:ns1="http://www.oracle.com/udr/">
<SOAP-ENV:Body>
<ns1:message error="0">
<![CDATA[<req name="insert" resonly="y">
<res error="70019" affected="0"/>
</req>]]>
</ns1:message>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

Example: Response message when a communication error occurs:

```
<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope
xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
```

```

xmlns:ns1="http://www.oracle.com/udr/">
<SOAP-ENV:Body>
<ns1:message error="10"></ns1:message>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

Example: Response message when a request parsing failure occurs:

```

<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope
xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:ns1="http://www.oracle.com/udr/">
<SOAP-ENV:Body>
<ns1:message error="20"></ns1:message>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

Example: Response message when a SOAP Fault occurs:

```

<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope
xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:ns1="http://www.oracle.com/udr/">
<SOAP-ENV:Body
SOAP-ENV:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"> <SOAP-
ENV:Fault>
<faultcode>SOAP-ENV:Client</faultcode> <faultstring>Method
'processTransaction' not implemented: method name or namespace not
recognized</faultstring>
<detail></detail>
</SOAP-ENV:Fault>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

2.1.4 Basic XML Message Format

Request

The following code snippet describes the basic layout of an XML request, with all different options and parameters. UDR requests consists of different combinations of the parameters, which are listed for illustrative purposes. Following examples are given for parameters that are relevant for each request:

```

<req name="reqname" [resonly="resonly"] [id="id"]>
<ent name="entityname"/>
<select>
<expr><attr name="fieldName"/>
</select>

```

```

<set>
<expr><attr name="fieldName"/><value val="fieldValue"/></expr>
<expr><attr name="fieldName"/><op value="="/><value val="" isnull="y"/></expr>

<oper name="AddToSet">
<expr><attr name="setFieldName"/><value val="setFieldValue"/></expr>
</oper>

<oper name="RemoveFromSet">
<expr><attr name="setFieldName"/><value val="setFieldValue"/></expr>
</oper>

<expr><attr name="cdataFieldName"/><op value="="/><cdata>
<![CDATA[
cdataFieldValue
]]></cdata></expr>

</set>

<where>
<expr><attr name="keyName"/><op value="="/><value val="keyValue"/></expr>
<expr><attr name="rowKeyName"/><op value="="/><value val="rowKeyValue"/></expr>
<expr><attr name="instanceFieldName"/><op value="="/>
<value val="instanceFieldValue"/></expr>
</where>

<oper name="operName">
<expr><attr name="fieldName"/><value val="fieldValue"/></expr>
</oper>

</req>

```

The **reqname** attribute indicates the type of request being sent. **Values** are either insert, update, delete, or select, depending on the request.

① Note

The **resonly** attribute controls whether or not the original request is included along with the response. The **resonly** attribute is optional, and if set to y, then the original request is not included in the response (result only). If **resonly** is set to n, then the original request is included in the response. The default value of the flag (when the **resonly** attribute is not supplied) is n—that is, return the request in the response.

Provisioning Gateway uses the **id attribute** to correlate request and response messages. The **id** attribute is optional and if specified, is an integer between 1 and 4294967295 expressed as a decimal number in ASCII. If a user specifies the **id** attribute in a request, then provisioning gateway returns the same **id** attribute and its value in the corresponding response. So, a unique **id** value must be sent in each request message to differentiate responses.

The **entityname** attribute identifies the provisioning entity type on which the request is performed. Its values are either subscriber, DynamicQuotaEntity, QuotaEntity or StateEntity depending on the request, which match the configured entity values in the SEC.

When a field value is included to be set (for example in an insert/update request), a **<set>** element is present. In this, one or many **<expr><attr name="fieldName"/><value val="fieldValue"/></expr>** elements are present. The **fieldName** indicates the name of the field being set, and the **fieldValue** is the value to set it to. To delete the value of a field, set the fieldValue as empty (""), and additionally specify the attribute **isnull="y"**.

When a field value is included to be retrieved (for example in a select request), a **<select>** element is present. In this, one or many **<expr><attr name="fieldName"/></expr>** elements are present. The **fieldName** indicates the name of the field being retrieved. For a select request, at least one field value must be requested. Only the fields requested returns in the response.

When a field is a list type (such as entitlement in profile), an embedded operation request is used to add/remove values from the list. This is performed by including the element **<oper name="operName">** where **operName** is either 'AddToSet' (to add a values to a list) or 'RemoveFromSet' (to remove a values from a list). The name of the field being modified is specified in **setFieldName**, and the values being added/removed are specified in **setFieldValue**. You can specify multiple comma separated values in the **setFieldValue**, or with each individual value in a separate **<expr><attr name="setFieldName"/><value val="setFieldValue"/></expr>** element.

Note

The **ns** attribute is optional, and you can provide its value for backward compatibility with the legacy SPR. Its value is not validated, and ignored.

To set a field as an XML data blob, the **cdataFieldValue** contains a **<cdata>** element, and the data in the constructs of an XML CDATA section. The CDATA section starts with **<![CDATA[**, then the **cdataFieldValue** containing the XML data blob, and the CDATA section ends with **]]>**.

Most commands identify the subscriber for whom the provisioning request is made by specifying the subscriber address in the **<where>** element. When the **<where>** element value is present, a key type/value must be provided. Depending on the command, **keyType** can be IMSI, MSISDN or AccountId. The value of the key (of the indicated key type) is set in **keyValue**.

Depending on the **keyType**, it validates the **keyValue** as shown below:

Table 2-1 keyValue Validation for keyType

keyType	keyValue validation
IMSI	5 to 15 numeric digits
MSISDN	5 to 15 numeric digits NOTE: A preceding + (plus) symbol is not supported, and is rejected.
AccountId	1 to 36 characters (allowed values follow <code>^[a-zA-Z0-9]{1,36}\$</code> regex)

When a request performs an action on a specific row in an entity (such as updating a field value in a specific quota instance), the row key field name used to select the row is specified in **rowKeyName**. The value of key is specified in **rowKeyValue**. If a field in the row can indicate uniqueness, in the case of more than one row having the same **rowKeyName/rowKeyValue**, then this field is specified in **instanceFieldName/instanceFieldValue**. When the **reqname** is set to operation, the **<oper>** element is present. This defines the operation name in **operName**.

XML Comments in a Request

A SOAP request may contain XML comments, such as:

```
<!--comment-->
```

- If the comment is in the request, it is ignored.
- If the comment is a part of the XML blob for an opaque entity, in the CDATA constraint, then the comment stores in the XML blob.
- If the comment is contained with the XML blob for a transparent entity, in the CDATA constraint, then the comment is not stored in the XML blob.

Response

The following code snippet describes the basic layout of an XML response, with all different options and parameters included. UDR responses are made up of different combinations of the parameters, which are listed for illustrative purposes.

```

<req name="reqname" [resonly="resonly"] [id="id"]>
originalXMLRequest

<res error="error" affected="affected"/>

<rset>

<row>
<rv>rowValue</rv>
<rv>
<![CDATA[
cdataRowValue
]]>
<rv></rv>
<rv null="y"/>
</row>

</rset>
</req>

```

The **reqname** attribute contains the same value as sent in the request. The values are either insert, update, delete, select, or operation, depending on the request. If the resonly attribute is part of the request, the same value is returned in the response.

If the **id** attribute is included in the request, the same value is returned in the response. The originalXMLRequest element is the text of the original XML request that is sent. This is only present if the resonly="n" attribute is set in the original request (or the resonly attribute is not supplied, as the default value is n).

The **error** attribute indicates the outcome of the request. The 0 value indicates success. Any other value indicates failure. The possible errors for each request is detailed in the following section for each request. The list of error codes.

The **affected** attribute indicates the number of affected subscribers. A value of 1 (or more) is expected for success and 0 for failure.

If a select request is sent (or with some operation requests), result data returned is contained in a **<rset>** (rowset) element. An **<rset>** can be zero (if matching data was not found) or one **<row>** element (UDR does not support returning multiple **<row>** elements). In a **<row>** are one

or more <rv> (row value) elements containing a rowValue detailing the requested field value. One <rv> element corresponds for every fieldValue requested in the select request. The <rv> elements are given in the same order as the fieldValues are specified.

① Note

An <rv> element can contain an entire XML CDATA section, starting with <![CDATA[, then the cdataRowValue containing the XML data blob, and the CDATA section ends with]]>. If the <rv> element represents a valid field that is not present in the XML data blob, then it is indicated with <rv null="y">. If the field is present in the XML blob with an empty value, then it is indicated with <rv></rv>. Whenever XML blob data is returned, fields may not be returned in the order they are defined in the SEC. The fields may return in any order.

2.1.5 List of Messages

The following table provides a list of operations/messages for subscriber data. Each row of the table represents a command.

Table 2-2 Summary of Supported Subscriber Commands

Operation Type	Command	SOAP
Subscriber Profile	Create Profile	insert
	Get Profile	select
	Delete Profile	delete
Subscriber Field	Add Field Value	update (using "AddToSet" operation)
	Get Field	select
	Update Field	update
	Delete Field	update, null
	Delete Field Value	update (using "RemoveFromSet" operation)
Subscriber Opaque Data	Create Opaque Data	insert
	Get Opaque Data	select
	Update Opaque Data	update
	Delete Opaque Data	update (using "isnull" attribute)
Subscriber Data Row	Create Row	insert
	Get Row	select
	Delete Row	delete
	Get Row Field	select
Subscriber Data Row Field	Update Row Field	update
	Delete Row Field	update (using "isnull" attribute)
	Create Data Field	insert
Subscriber Data Field	Get Data Field	select
	Update Data Field	update
	Delete Data Field	update (using "isnull" attribute)
Subscriber Special Operation	Reset Quota	operation
	Get Subscription Status	operation

2.2 Supported SOAP/XML Operations

The 5G UDR supports following SOAP/XML operations:

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
Subscriber Commands	Create Profile only	<pre><req name="insert" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="Account Id"/><value val="10404723 525"/></expr> <expr><attr name="MSISDN" /><value val="33123654 862"/></expr> <expr><attr name="IMSI"/ ><value val="18456954 7984229"/></ expr> <expr><attr name="Billing Day"/><value val="1"/></ expr> <expr><attr name="Entitle ment"/ ><value val="DayPass, DayPassPlus"/ ></expr> </set> </req></pre>	<pre><req name="insert" resonly="y"> <res error="0" affected="1"/ > </req></pre>	- In subscriber profile, Provisioning Gateway is not considering the "extid" as a key as it is not present in 4G UDR, so only imsi, msisdn,accountId and nai are considered as a key. - Anyone among four (imsi, msisdn, accountId and nai) must be present in the payload to construct the URI.	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
	Create Profile with entities	<pre> <req name="insert" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="Account Id"/><value val="17832221 2122"/></ expr> <expr><attr name="MSISDN" /><value val="15145551 234,151412345 67"/></expr> <expr><attr name="IMSI"/ ><value val="30237012 3456789"/></ expr> <expr><attr name="Billing Day"/><value val="6"/></ expr> <expr><attr name="Entitle ment"/ ><value val="DayPass, DayPassPlus"/ ></expr> <expr><attr name="Quota"/ ><op value="="/> <cdata>&lt;!</pre>	<pre> <req name="insert" resonly="y"> <res error="0" affected="1"/ > </req></pre>	It supports Quota entity operations for "usage" as a element string. Similarly for other entities, it supports the default Element string type. Example: Quota -> usage, DynamicQuota -> definition, State -> state	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre> [CDATA[<?xml version="1.0" encoding="UTF-8"?> <usage> <version>3</version> <quota name="Weekend"> <totalVolume> 100</totalVolume> <Type>quota</Type> <QuotaState>active</QuotaState> <nextResetTime>2014-01-10T02:00:00</nextResetTime> <cid>9223372036854775808</cid> </quota> <quota name="Evenings"> </pre>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre> <totalVolume> 100</ totalVolume> <Type>quota</ Type> <QuotaState>a ctive</ QuotaState> <nextResetTim e>2014-02-01T 00:00:00</ nextResetTime > <cid>92233720 36854775809</ cid> </quota> </ usage>]]&gt; </ cdata> </expr> <expr><attr name="State"/ ><op value="="/> <cdata>&lt;![CDATA[<?xml version="1.0" encoding="UTF -8"?> <state> <version>1</ version> </pre>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre><property> <name>mcc</ name> <value>302</ value> </ property> <property> <name>expire< /name> <value>2014-0 2-09T11:20:32 </value> </ property> </ state>]]&gt; </ cdata> </expr> </set> </req></pre>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
	Retrieve Subscriber	<pre> <req name="select" resonly="y"> <ent name="Subscriber"/> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654 862"/></expr> </where> </req> </pre>	<pre> <req name="select" resonly="y"> <res error="0" affected="1"/> <rset> <row> <rv> <![CDATA[<?xml version="1.0" encoding="UTF-8"?> <subscriber> <field name="Account Id">104047235 25</field> <field name="MSISDN" >33123654862< /field> <field name="IMSI">1 8456954798422 9</field> <field name="Billing Day">1</ field> <field name="Tier">< /field> <field name="Entitle ment">Weekpas s</field> <field </pre>	Only the First Key from the set of multiple keys in the where clause is taken into consideration. Other Keys are ignored.	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
			<pre> name="Entitlement">DayPass </field> </ subscriber>]]> </rv> </row> </rset> </req> </pre>		
	Delete Subscriber	<pre> <req name="delete" > <ent name="Subscriber"/> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654 862"/></expr> </where> </req> </pre>	<pre> <req name="delete" > <req name="delete" > <ent name="Subscriber"/> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654 862"/></expr> </where> </req> <res error="0" affected="1"/ > </req> </pre>	Only the First Key from the set of multiple keys in the where clause is taken into consideration. Other Keys are ignored.	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
Subscriber Field Commands	Add new fields	<pre> <req name="update" resonly="y" id="13579"> <ent name="Subscriber"/> <set> <oper name="AddToSet"> <expr><attr name="Entitlement"/> <value val="DayPass" /></expr> </oper> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654862"/></expr> </where> </req> </pre>	<pre> <req name="update" resonly="y" id="13579"> <res error="0" affected="1"/> </req> </pre>	The AddToSet and RemoveFromSet commands always return success, because of the PATCH operations on UDR.	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Add to an existing value in a multivalued field <pre> <req name="update" resonly="y" id="13579"> <res error="0" affected="1"/ > </req> <req name="update" resonly="y" id="13579"> <ent name="Subscriber"/> <set> <oper name="AddToSet"> <expr><attr name="Entitlement"/ ><value val="DayPass" /></expr> </oper> </set> <where> <expr><attr name="MSISDN" /><op value="" /> <value val="33123654 862" /></expr> </where> </req> </pre>	<pre> <req name="update" resonly="y" id="13579"> <res error="0" affected="1"/ > </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Add Multivalued fields <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <oper name="AddToSet"> <expr><attr name="Entitlement"/> <value val="HighSpeed"/></expr> <expr><attr name="Entitlement"/> <value val="Unlimited"/></expr> </oper> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654862"/></expr> </where> </req> </pre>	<pre> <req name="update" resonly="y" id="13579"> <res error="0" affected="1"/> </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Add to an exiting not-multi valued field <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <oper name="AddToSet"> <expr><attr name="Tier"/> <value val="Gold"/>< /expr> </oper> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654862"/></expr> </where> </req> </pre>	<pre> <req name="update" resonly="y"> <res error="70034" affected="0"/ > </req> </pre>	It returns Success and not 70034, because of PATCH operation.	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Add Keys to Existing Subscriber <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <oper name="AddToSet"> <expr><attr name="MSISDN" /><value val="14161234567"/></expr> <expr><attr name="MSISDN" /><value val="1919111222"/></expr> <expr><attr name="Entitlement"/> <value val="DayPass" /></expr> </oper> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="15145551234"/></expr> </where> </req> </pre>	<pre> <<req name="update" resonly="y"> <res error="0" affected="1"/> > </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Single update request with multiple AddToSet <pre> <req name="update" resonly="y"> <res error="0" affected="1"/> <ent name="Subscriber"/> <set> <oper name="AddToSet"> <expr> <attr name="IMSI"/> <value val="3444444444"/> </expr> </oper> <oper name="AddToSet"> <expr> <attr name="Entitlement"/> <value val="GoldPlusMember3"/> </expr> </oper> </set> </where> </ent> </req> </pre>	<pre> <<req name="update" resonly="y"> <res error="0" affected="1"/> </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre><attr name="MSISDN" /> <op value="="/> <value val="55555530 08"/> </ expr> </where> </req></pre>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
	Get field commands	Get fields of a subscriber <pre> <req name="select" resonly="y"> <ent name="Subscriber"/> <select> <expr><attr name="MSISDN" /></expr> <expr><attr name="Entitlement"/></ expr> <expr><attr name="Tier"/> </expr> <expr><attr name="Billing Day"/></expr> </select> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654 862"/></expr> </where> </req> </pre>	<pre> <req name="select" resonly="y"> <res error="0" affected="1"/ > <rset> <row> <rv>331236548 62</rv> <rv>DayPass,W eekPass,Weeke nd</rv> <rv>Prepaid</ rv> <rv>23</rv> </row> </rset> </req> </pre>	It has error scenarios where if custom20 is empty and it does not fail the request instead, send empty tag.	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Undefined field retrieval (Rating) <pre> <req name="select" resonly="y"> <ent name="Subscriber"/> <select> <expr><attr name="Tier"/> </expr> <expr><attr name="Rating" /></expr> <expr><attr name="Billing Day"/></expr> </select> <where> <expr><attr name="NAI"/ ><op value="="/> <value val="john.smith@operator.com"/></expr> </where> </req> </pre>	<pre> <req name="select" resonly="y"> <res error="70015" affected="0"/ > </req> </pre>	If the field "Rating" is not defined then it returns an error.	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		Get custom fields of a subscriber <pre> <req name="select" resonly="y"> <ent name="Subscriber"/> <select> <expr><attr name="MSISDN" /></expr> <expr><attr name="Entitlement"/></expr> <expr><attr name="Tier"/></expr> <expr><attr name="BillingDay"/></expr> <expr><attr name="custom1" /></expr> <expr><attr name="custom2" /></expr> <expr><attr name="custom3" /></expr> <expr><attr name="custom4" /></expr> <expr><attr name="custom5" /></expr> <expr><attr name="custom6" /></expr> </pre>	<pre> <req name="select" resonly="y"> <res affected="1" error="0"/> <rset> <row> <rv>5555553003</rv> <rv>DayPassPlus,DayPass</rv> <rv null="y"/> <rv>2</rv> <rv>val1</rv> <rv>val2</rv> <rv>val3</rv> <rv>val4</rv> <rv>val5</rv> <rv>val6</rv> <rv>val7</rv> <rv>val8</rv> <rv>val9</rv> <rv>val10</rv> <rv>val11</rv> <rv>val12</rv> <rv>val13</rv> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		"/></expr> <expr><attr name="custom7 "/></expr> <expr><attr name="custom8 "/></expr> <expr><attr name="custom9 "/></expr> <expr><attr name="custom1 0"/></expr> <expr><attr name="custom1 1"/></expr> <expr><attr name="custom1 2"/></expr> <expr><attr name="custom1 3"/></expr> <expr><attr name="custom1 4"/></expr> </select> <where> <expr><attr name="IMSI"/ ><op value="="/> <value val="33333330 03"/></expr> </where> </req>	<rv>val14</rv > </row> </rset> </req>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Get entities of a subscriber <pre> <req name="select" resonly="y"> <ent name="Subscriber"/> <select> <expr><attr name="MSISDN" /></expr> <expr><attr name="Billing Day"/></expr> <expr><attr name="Quota"/ ></expr> <expr><attr name="State"/ ></expr> </select> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654 862"/></expr> </where> </req> </pre>	<pre> <req name="select" resonly="y"> <res error="0" affected="1"/ > <rset> <row> <rv>331236548 62</rv> <rv>23</rv> <rv> <! [CDATA[<?xml version="1.0" encoding="UTF -8"?> <usage> <version>3</ version> <quota name="Aggrega teLimit"> <cid>92233720 36854775807</ cid> <time>3422</ time> <totalVolume> 1000</ totalVolume> <inputVolume> 980</ inputVolume> </pre>	These Requests are not supported. Use the get requests for each entity individually. You should have unique request for entities and entity fields.	N

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
			<pre> <outputVolume>20</outputVolume> <serviceSpecific>12</serviceSpecific> <nextResetTime>2011-04-22T00:00:00-05:00</nextResetTime> </quota> </usage>]]> </rv> <rv> <![CDATA[<?xml version="1.0" encoding="UTF-8"?> <state> <version>1</version> <property> <name>mcc</name> <value>315</value> </property> <property> <name>expire< </pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
			<pre>/name> <value>2010-0 2-09T11:20:32 </value> </property> <property> <name>approve d</name> <value>yes</ value> </property> </ state>]]> </rv> </row> </rset> </req></pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
	Update Field Commands	Update Fields <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="Billing Day"/><value val="23"/></ expr> <expr><attr name="Tier"/ ><value val="Gold"/>< /expr> </set> <where> <expr><attr name="IMSI"/ ><op value="="/> <value val="30580123 4567890"/></ expr> </where> </req> </pre> ** This scenario follows invalid billing day too.	<pre> <req name="update" resonly="y"> <res error="0" affected="1"/ > </req> </pre>	If there are updates for multivalued files then provisioning gateway combines and sends required array.	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Update Keys <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="MSISDN" /> <value val="14161234 567"/></expr> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="15145551 234"/></expr> </where> </req> </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="1"/ > </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Update Keys <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="Account ID"/><value val="77777777 77"/></expr> <expr><attr name="MSISDN" /><value val="77777777 7777"/></ expr> <expr><attr name="NAI"/ ><value val="77777777 7777777"/></ expr> </set> </where> <expr><attr name="MSISDN" /><op value="="/> <value val="15145551 234"/></expr> </where> </req> </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="1"/ > </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Update Key with multiple values in a single line <pre> <req name="update" resonly="y"> <res error="0" affected="1"/ > </req> <set> <expr><attr name="IMSI"/ ><value val="23423432 30191,2342343 230192"/></ expr> </set> <where><expr> <attr name="MSISDN" /><op value="="/ ><value val="55555530 04"/></expr> </where></ req> </pre>			Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Update AccountId with multiple values in a single line <pre> <req name="update" resonly="y">< res affected="0" error="70007" /></req> <set> <expr><attr name="Account Id"/><value val="23423432 30191,2342343 230192"/></ expr> </set> <where><expr> <attr name="MSISDN" /><op value="="/ ><value val="55555530 04"/></expr> </where></ req> </pre>			Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Update AccountId with multiple values in separate lines <pre> <req name="update" resonly="y">< ent name="Subscriber"/> <set> <expr><attr name="Account Id"/><value val="23423432 30191"/></ expr> <expr><attr name="Account Id"/><value val="23423432 30192"/></ expr> </set> <where><expr> <attr name="MSISDN" /><op value="="/ ><value val="55555530 04"/></expr> </where></ req> </pre>	<pre> <req name="update" resonly="y">< res affected="0" error="70007" /></req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		Update Key with multiple values in separate lines <pre> <req name="update" resonly="y">< ent name="Subscriber"/> <set> <expr><attr name="IMSI"/ ><value val="23423432 30191"/></ expr> <expr><attr name="IMSI"/ ><value val="23423432 30192"/></ expr> </set> <where><expr> <attr name="MSISDN" /><op value="="/ ><value val="55555530 04"/></expr> </where></ req> </pre>	<pre> <req name="update" resonly="y">< res affected="1" error="0"/></ req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Update Fields and Entities <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="Billing Day"/><value val="23"/></ expr> <expr><attr name="State"/ ><op value="="/> <cdata><![[CDATA[<?xml version="1.0" encoding="UTF -8"?> <state> <version>1</ version> <property> <name>mcc</ name> <value>302</ value> </ property> <property> <name>expire< /name> <value>2014-0 </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="1"/ > </req> </pre>	Provisioning Gateway should reject requests with cdata in the expr tag for update operations.	N

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre>2-09T11:20:32 </value> </ property> </ state>]]> </ cdata> </expr> </set> <where> <expr><attr name="IMSI"/ ><op value="="/> <value val="30580123 4567890"/></ expr> </where> </req></pre>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Multiple values fields Example 1 <pre><req name="update" resonly="y"> <ent name="Subscriber"/> <set></pre> Example 2 <pre><expr><attr name="Entitlement"/> <value val="Weekend, Evening"/></expr> </set> <where></pre> Example 3 <pre><expr><attr name="IMSI"/> <op value="="/></pre> Example 4 <pre><value val="30580123 4567890"/></expr> </where> </req></pre> Example 5 <pre><req name="update" resonly="y"> <ent name="Subscriber"/> <set></pre> Example 6 <pre><expr><attr name="Entitlement"/> <value val="Weekend" /></expr></pre>	Example 1 <pre><req name="update" resonly="y"> <res error="0" affected="1"/> </req></pre> Example 2 <pre><req name="update" resonly="y"> <res error="0" affected="1"/> </req></pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		<pre><expr><attr name="Entitle ment"/ ><value val="Evening" /></expr> </set> <where> <expr><attr name="IMSI"/ ><op value="="/> <value val="30580123 4567890"/></ expr> </where> </req></pre>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Single update request with AddToSet and RemoveFromSet <pre> <req name="update" resonly="y"> <res error="0" affected="1"/ > </req> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <oper name="AddToSet"> <expr><attr name="MSISDN" /><value val="6555553004"/></expr> </oper> <oper name="RemoveFromSet"> <expr><attr name="MSISDN" /><value val="5555553004"/></expr> </oper> <oper name="AddToSet"> <expr><attr name="MSISDN" /><value val="7555553004"/></expr> </oper> </set> <where><expr> <attr name="MSISDN" /><op value="="/ ><value </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="1"/ > </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		val="55555530 04"/></expr> </where> </req>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		Single update request with AddToSet, RemoveFromSet and with other subscriber fields <pre> <req name="update" resonly="y"> <res error="0" affected="1"/> </ req> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <oper name="AddToSet"> <expr> <attr name="IMSI"/> <value val="4444444444"/> </expr> </oper> <oper name="RemoveFromSet"> <expr> <attr name="Entitlement"/> <value val="HighSpeed"/> </expr> </oper> </set> </req> </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="1"/> </ req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre> <attr name="custom2" /> <op value="="/> <value val="2017-03-24T13:15:30"/> </ expr> </set> <where> <expr> <attr name="MSISDN" /> <op value="="/> <value val="5555553006"/> </ expr> </where> </req> </pre>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		Update single valued fields with multiple values in separate lines <pre> <req name="update" resonly="y">< res affected="1" error="0"/></ req> <set> <expr><attr name="Tier"/ ><value val="Silver"/ ></expr> <expr><attr name="Tier"/ ><value val="Gold"/>< /expr> </set> <where><expr> <attr name="MSISDN" /><op value="="/ ><value val="55555530 04"/></expr> </where></ req> </pre>	<pre> <req name="update" resonly="y">< res affected="1" error="0"/></ req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Update and delete for the same field <pre> <req name="update" resonly="y">< ent name="Subscriber"/> <set> <expr><attr name="Tier"/ ><value val="Silver"/ ></expr> <expr><attr name="Tier"/ ><op value="="/ ><value val="" isnull="y"/>< /expr> </set> <where><expr> <attr name="MSISDN" /><op value="="/ ><value val="55555530 04"/></expr> </where></ req>> </pre>	<pre> <req name="update" resonly="y">< res affected="1" error="0"/></ req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		Delete and update for the same field <req name="update" resonly="y"><ent name="Subscriber"/><set> <expr><attr name="Tier"/><op value="="/><value val="" isnull="y"/></expr> <expr><attr name="Tier"/><value val="Silver"/></expr> </set> <where><expr><attr name="MSISDN"/><op value="="/><value val="5555553004"/></expr></where></req>	<req name="update" resonly="y"><res affected="1" error="0"/></req>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
	Delete field commands	Delete Fields Example 1 <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="Billing Day"/><op value="="/> <value val="" isnull="y"/>< /expr> <expr><attr name="Tier"/ ><op value="="/> <value val="" isnull="y"/>< /expr> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654 862"/></expr> </where> </req> </pre> Example 2 <pre> <req name="update" resonly="y"> <ent </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="1"/ > </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre> name="Subscriber"/> <set> <expr><attr name="Billing Day"/><op value=""/> <value val="24"/></ expr> <expr><attr name="Tier"/ ><op value=""/> <value val="" isnull="y"/>< /expr> </set> <where> <expr><attr name="MSISDN" /><op value=""/> <value val="33123654 862"/></expr> </where> </req> </pre>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		Deleting not existing files (Message) <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="Message" /><op value=""/> <value val="" isnull="y"/>< /expr> </set> <where> <expr><attr name="MSISDN" /><op value=""/> <value val="33123654862"/></expr> </where> </req> </pre>	<pre> <req name="update" resonly="y"> <res error="70015" affected="0"/ > </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Delete Key <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="MSISDN" /><op value=""/> <value val="" isnull="y"/>< /expr> </set> <where> <expr><attr name="MSISDN" /><op value=""/> <value val="15145551 234"/></expr> </where> </req>	<req name="update" resonly="y"> <res error="0" affected="1"/ > </req>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Deleting the only key <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="NAI"/> <op value="="/> <value val="" isnull="y"/>< /expr> </set> <where> <expr><attr name="NAI"/> <op value="="/> <value val="mum@foo.com"/></expr> </where> </req> </pre>	<pre> <req name="update" resonly="y"> <res error="70044" affected="0"/> </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		Update and delete for the same field <pre> <req name="update" resonly="y">< ent name="Subscriber"/> <set> <expr><attr name="Tier"/ ><value val="Silver"/ ></expr> <expr><attr name="Tier"/ ><op value="="/ ><value val="" isnull="y"/>< /expr> </set> <where><expr> <attr name="MSISDN" /><op value="="/ ><value val="55555530 04"/></expr> </where></ req>> </pre>	<pre> <req name="update" resonly="y">< res affected="1" error="0"/></ req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Delete and update for the same field <pre> <req name="update" resonly="y"><ent name="Subscriber"/> <set> <expr><attr name="Tier"/ ><op value="="/ ><value val="" isnull="y"/>< /expr> <expr><attr name="Tier"/ ><value val="Silver"/ ></expr> </set> <where><expr> <attr name="MSISDN" /><op value="="/ ><value val="55555530 04"/></expr> </where></ req> </pre>	<pre> <req name="update" resonly="y"><res affected="1" error="0"/></req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
	Delete field value	Remove field and multi-valued fields <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <oper name="RemoveFromSet"> <expr><attr name="Entitlement"/> <value val="DayPass" /></expr> </oper> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654862"/></expr> </where> </req> </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="1"/> </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Deleting multi-valued fields <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <oper name="RemoveFromSet"> <expr><attr name="Entitlement"/> ><value val="WeekendPass"/></expr> <expr><attr name="Entitlement"/> ><value val="Unlimited"/></expr> </oper> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654862"/></expr> </where> </req> </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="1"/> </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		Remove keys <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <oper name="RemoveFromSet"> <expr><attr name="MSISDN" /><value val="14161234567"/></expr> </oper> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="15145551234"/></expr> </where> </req> </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="1"/> </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
Row-level commands/ Entity Commands	Add Row	Add Opaque Entity Quota <pre> <req name="insert" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="Quota"/ ><op value="="/ ><cdata> <!-- [CDATA[<?xml version="1.0" encoding="UTF-8"?> <usage> <version>3</ version> <quota name="AggregateLimit"> <cid>92233720 36854775807</ cid> <time>3422</ time> <totalVolume> 1000</ totalVolume> <inputVolume> 980</ inputVolume> <outputVolume >20</ outputVolume> <serviceSpeci </pre>	<pre> <req name="insert" resonly="y"> <res error="0" affected="1"/ > </req> </pre>	- Insert request with where clause and expr with cdata is considered as entity addition. - Insert request with where clause and expr without cdata tag replaces the existing subscriber information, because it is a PUT operation.	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre> fic>12</ serviceSpecif ic> <nextResetTim e>2010-05-22T 00:00:00-05:0 0</ nextResetTime > </quota> </usage>]]&gt;</ cdata></expr> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654 862"/></expr> </where> </req> </pre>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		Add Transparent Entity <pre> <req name="insert" resonly="y"> <res error="0" affected="1"/ > </req> <expr><attr name="MSISDN" /><value val="33123654 862"/></expr> <expr><attr name="name"/ ><value val="Q1"/></ expr> <expr><attr name="cid"/ ><value val="92233720 36854999999"/ ></expr> <expr><attr name="time"/ ><value val="10:10"/> </expr> <expr><attr name="totalVo lume"/ ><value val="55000"/> </expr> <expr><attr name="inputVo lume"/ ><value val="50000"/> </expr> </pre>			Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre><expr><attr name="outputV olume"/ ><value val="5000"/>< /expr> <expr><attr name="service Specific"/ ><value val="services pecific"/></ expr> <expr><attr name="nextRes etTime"/> <value val="1961-12- 15T09:04:03"/ ></expr> </set> </req></pre>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		Add Transparent Entity with Where clause <pre> <req name="insert" resonly="y"> <ent name="QuotaEn tity"/> <set> <expr><attr name="name"/ ><value val="Q2"/></ expr> <expr><attr name="cid"/ ><value val="92233720 36854999999"/ ></expr> <expr><attr name="time"/ ><value val="10:10"/> </expr> <expr><attr name="totalVo lume"/ ><value val="55000"/> </expr> <expr><attr name="inputVo lume"/ ><value val="50000"/> </expr> <expr><attr name="outputV olume"/ ><value val="5000"/>< </pre>	<pre> <req name="insert" resonly="y"> <res error="0" affected="1"/ > </req> </pre>	These requests can have multiple keys in where clause too. However, it takes the first key as the key.	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		/expr> <expr><attr name="service Specific"/ ><value val="services pecific"/></ expr> <expr><attr name="nextRes etTime"/> <value val="1961-12- 15T09:04:03"/ ></expr> </set> <where> <expr><attr name="MSISDN" /><op value=""/> <value val="15141234 567"/></expr> </where> </req>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		Add Opaque DynamicQuota <pre> <req name="insert" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="Dynamic Quota"/><op value="="/> <cdata> <!-- [CDATA[<?xml version="1.0" encoding="UTF -8"?> <definition> <version>1</ version> <DynamicQuota name="Aggrega teLimit"> <Type>pass</ Type> <InstanceId>1 5678</ InstanceId> <Priority>4</ Priority> <InitialTime> 135</ InitialTime> <InitialTotal Volume>2000</ InitialTotalV olume> </pre>	<pre> <req name="insert" resonly="y"> <res error="0" affected="1"/ > </req> </pre>	The following request is not supported where both Entity and subscriber fields are retrieved. <pre> <req name="select" resonly="y"> <ent name="Subscriber"/> <select> <expr><attr name="IMSI"/> </expr> <expr><attr name="Quota"/ ></expr> </select> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654 862"/></expr> </where> </req> </pre>	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre> <InitialInput Volume>1500</ InitialInputV olume> <InitialOutput tVolume>500</ InitialOutput Volume> <InitialServi ceSpecific>4< / InitialServic eSpecific> <activationda tetime>2015-0 3-09T11:20:32 </ activationdat etime> <expirationda tetime>2015-0 4-09T11:20:32 </ expirationdat etime> <InterimRepor tingInterval> 100</ InterimReport ingInterval> <Duration>10< /Duration> </ DynamicQuota> </definition>]]&gt;</ CDATA></expr> </set> <where> <expr><attr name="MSISDN" /><op </pre>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre>value=""/> <value val="33123654 862"/></expr> </where> </req></pre>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Add Transparent Dynamic Quota <pre> <req name="insert" resonly="y"> <ent name="Dynamic QuotaEntity"/ > <set> <expr><attr name="MSISDN" /><value val="15145551 234"/></expr> <expr><attr name="name"/ ><value val="DQ1"/></ expr> <expr><attr name="Type"/ ><value val="top- up"/></expr> <expr><attr name="Instanc eId"/><value val="15678"/> </expr> <expr><attr name="Priorit y"/><value val="4"/></ expr> <expr><attr name="Initial Time"/ ><value val="135"/></ expr> <expr><attr </pre>	<pre> <req name="insert" resonly="y"> <res error="0" affected="1"/ > </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre> name="Initial TotalVolume"/ ><value val="2000"/>< /expr> <expr><attr name="Initial InputVolume"/ ><value val="1500"/>< /expr> <expr><attr name="Initial OutputVolume" /><value val="500"/></ expr> <expr><attr name="Initial ServiceSpecif ic"/><value val="4"/></ expr> <expr><attr name="activat iondatetime"/ ><value val="2015-05- 22T00:00:00-0 5:00"/></ expr> <expr><attr name="expirat iondatetime"/ ><value val="2015-05- 29T00:00:00-0 5:00"/></ expr> <expr><attr name="Interim ReportingInte rval"/ ><value </pre>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre>val="100"/></expr> <expr><attr name="Duration"/><value val="10"/></expr> </set> </req></pre>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		Add Opaque State data <pre> <req name="insert" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="State"/ ><op value="="/ ><cdata> <!-- [CDATA[<?xml version="1.0" encoding="UTF -8"?> <state> <version>1</ version> <property> <name>mcc</ name> <value>315</ value> </property> <property> <name>expire< /name> <value>2010-0 2-09T11:20:32 </value> </property> <property> <name>approve d</name> <value>yes</ value> </pre>	<pre> <req name="insert" resonly="y"> <res error="0" affected="1"/ > </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre> </property> </state>]]></cdata></expr> </set> <where> <expr><attr name="MSISDN" /><op value="" /> <value val="33123654 862" /></expr> </where> </req> </pre>			
		Add Transparent State data with where clause <pre> <req name="insert" resonly="y"> <res error="0" affected="1"/ > </req> <expr><attr name="mcc"/ ><value val="315" /></expr> </set> <where> <expr><attr name="MSISDN" /><op value="" /> <value val="15141234 567" /></expr> </where> </req> </pre>	<pre> <req name="insert" resonly="y"> <res error="0" affected="1"/ > </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Add Transparent State data without where clause <pre> <req name="insert" resonly="y"> <ent name="StateEntity"/> <set> <expr><attr name="MSISDN" /><value val="15145551234"/></expr> <expr><attr name="mcc"/ ><value val="315"/></expr> </set> </req> </pre>	<pre> <req name="insert" resonly="y"> <res error="0" affected="1"/ > </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
	GET ROW data	Get Opaque Quota data <pre> <req name="select" resonly="y"> <ent name="Subscriber"/> <select> <expr><attr name="Quota"/> </expr> </select> <where> <expr><attr name="MSISDN" /><op value="="/> </expr> <value val="33123654862"/></expr> </where> </req> </pre>	<pre> <req name="select" resonly="y"> <res error="0" affected="1"/> </req> <rset> <row> <rv> <![CDATA[<?xml version="1.0" encoding="UTF-8"?> <usage> <version>3</version> <quota name="AggregateLimit"> <cid>9223372036854775807</cid> <time>3422</time> <totalVolume>1000</totalVolume> <inputVolume>980</inputVolume> </pre>	The following request is not supported where you are retrieving both Entity and subscriber fields Expand source	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
			<outputVolume>20</outputVolume> <serviceSpecific>12</serviceSpecific> <nextResetTime>2011-04-22T00:00:00-05:00</nextResetTime> </quota> </usage>]]> </rv> </row> </rset> </req>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Get Multiple Opaque Data <pre> <req name="select" resonly="y"> <res error="0" affected="1"/ > <rset> <row> <rv> <!-- [CDATA[<?xml version="1.0" encoding="UTF-8"?> <usage> <version>3</version> <quota name="AggregateLimit"> <value val="33123654862"/></expr> </where> </req> </where> </rv> </row> </rset> </res> </select> </req> </pre>	<pre> <req name="select" resonly="y"> <res error="0" affected="1"/ > <rset> <row> <rv> <!-- [CDATA[<?xml version="1.0" encoding="UTF-8"?> <usage> <version>3</version> <quota name="AggregateLimit"> <cid>9223372036854775807</cid> <time>3422</time> <totalVolume>1000</totalVolume> <inputVolume>980</inputVolume> <outputVolume> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
			>20</outputVolume> <serviceSpecific>12</serviceSpecific> <nextResetTime>2011-04-22T00:00:00-05:00</nextResetTime> </quota> </usage>]]> </rv> <rv null="y"/> </row> </rset> </req>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		Get quota row <pre> <req name="select" resonly="y"> <ent name="QuotaEn tity"/> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654 862"/></expr> <expr><attr name="name"/ ><op value="="/ ><value val="Q1"/></ expr> </where> </req> </pre>	<pre> <req name="select" resonly="y"> <res error="0" affected="1"/ > <rset> <row> <rv> <![CDATA[<?xml version="1.0" encoding="UTF -8"?> <usage> <version>3</ version> <quota name="Q1"> <cid>92233720 36854775807</ cid> <time>3422</ time> <totalVolume> 1000</ totalVolume> <inputVolume> 980</ inputVolume> <outputVolume >20</ outputVolume> <serviceSpeci fic>12</ </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
			<pre>serviceSpecific> <nextResetTime>2011-04-22T 00:00:00-05:00</ nextResetTime > </ quota> </ usage>]]> </rv> </row> </rset> </req></pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		Two quotas with same name <pre> <req name="select" resonly="y"> <ent name="QuotaEntity"/> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654862"/></expr> </where> </req> </pre>	<pre> <req name="select" resonly="y"> <res error="0" affected="1"/> <rset> <row> <rv> <![CDATA[<?xml version="1.0" encoding="UTF-8"?> <usage> <version>3</version> <quota name="Weekend"> <cid>11223344</cid> <time>3422</time> <totalVolume>1000</totalVolume> <inputVolume>980</inputVolume> <outputVolume>20</outputVolume> <serviceSpecific>12</serviceSpecific>]> </rv> </row> </rset> </res> </req> </pre>	Combination of name and cid is considered as unique for quota. Same with name and instance_id for dynamic quotas	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
			<pre> <nextResetTime>2011-04-22T 00:00:00-05:00</ nextResetTime> </ quota> </ usage>]]> </rv> </row> <row> <rv> <! [CDATA[<?xml version="1.0" encoding="UTF-8"?> <usage> <version>3</ version> <quota name="Weekend"> <cid>99887766 </cid> <time>1232</ time> <totalVolume> 2000</ totalVolume> <inputVolume> 440</ inputVolume> <outputVolume> 8220</ outputVolume> <serviceSpeci fic>99</ </pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
			<pre>serviceSpecific> <nextResetTime>2011-04-22T 00:00:00-05:00</ nextResetTime> </ quota> </ usage>]]> </rv> </row> </rset> </req></pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		Quota name and cid <req name="select" resonly="y"> <res error="0" affected="1"/> <ent name="QuotaEntity"/> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654862"/></expr> <expr><attr name="name" /><op value="="/> <value val="Weekend" /></expr> <expr><attr name="cid" /><op value="="/> <value val="11223344" /></expr> </where> </req>	<req name="select" resonly="y"> <res error="0" affected="1"/> <rset> <row> <rv> <![CDATA[<?xml version="1.0" encoding="UTF-8"?> <usage> <version>3</version> <quota name="Weekend"> <cid>11223344</cid> <time>3422</time> <totalVolume>1000</totalVolume> <inputVolume>980</inputVolume> <outputVolume>20</outputVolume> <serviceSpecific>12</serviceSpecific> </quota> </rv> </row> </rset> </res> </req>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
			<pre><nextResetTime>2011-04-22T00:00:00-05:00</nextResetTime> </ quota> </ usage>]]> </rv> </row> </rset> </req></pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Get non-existent transparent quota <pre> <req name="select" resonly="y"> <res error="70027" affected="0"/ > </req> <expr><attr name="MSISDN" /><op value=""/> <value val="33123654 862"/></expr> <expr><attr name="name"/ ><op value=""/ ><value val="Weekend" /></expr> <expr><attr name="cid"/ ><op value=""/ ><value val="11223344 "/></expr> </where> </req> </pre>	<pre> <req name="select" resonly="y"> <res error="70027" affected="0"/ > </req> </pre>	The response is same in both the cases, "data not found" and not is null="y"	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Get non existent opaque data <pre> <req name="select" resonly="y"> <ent name="QuotaEntity"/> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654862"/></expr> <expr><attr name="name"/ ><op value="="/ ><value val="Weekday" /></expr> </where> </req> </pre>			Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		Get Dynamic Quota Data <pre> <req name="select" resonly="y"> <res error="0" affected="1"/ > <rset> <row> <rv> <! <expr><attr name="MSISDN" /><op value="="/> <value val="33123654 862"/></expr> <expr><attr name="name"/ ><op value="="/> <value val="DQ1"/></ expr> <expr><attr name="Instanc eId"/><op value="="/> <value val="11223344 "/></expr> </where> </req> </pre>	<pre> <req name="select" resonly="y"> <res error="0" affected="1"/ > <rset> <row> <rv> <![CDATA[<?xml version="1.0" encoding="UTF -8"?> <definition> <version>1</ version> <DynamicQuota name="DQ1"> <Type>pass</ Type> <InstanceId>1 1223344</ InstanceId> <Priority>4</ Priority> <InitialTime> 135</ InitialTime> <InitialTotal Volume>2000</ InitialTotalV olume> <InitialInput Volume>1500</ InitialInputV olume> </pre>	This returns only one DQ because the name is unique	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
			<pre> <InitialOutputVolume>500</InitialOutputVolume> <InitialServiceSpecific>4</InitialServiceSpecific> <activationdate>2015-05-22T00:00:00-05:00</activationdate> <expirationdate>2015-05-29T00:00:00-05:00</expirationdate> <InterimReportingInterval>100</InterimReportingInterval> <Duration>10</Duration> </DynamicQuota> </definition>]]> </rv> </row> <row> <rv> <![CDATA[<?xml version="1.0" encoding="UTF-8"?> <definition> </pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
			<pre> <version>1</ version> <DynamicQuota name="DQ1"> <Type>top- up</Type> <InstanceId>1 1223344</ InstanceId> <Priority>3</ Priority> <InitialTime> 125</ InitialTime> <InitialTotal Volume>1000</ InitialTotalV olume> <InitialInput Volume>500</ InitialInputV olume> <InitialOutpu tVolume>500</ InitialOutput Volume> <InitialServi ceSpecific>4< / InitialServic eSpecific> <activationda tetime>2015-0 5-22T00:00:00 -05:00</ activationdat etime> <expirationda </pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
			<pre>tetime>2015-05-29T00:00:00-05:00</expirationdate> <InterimReportingInterval>100</InterimReportingInterval> <Duration>10</Duration> </DynamicQuota> </definition>]]> </rv> </row> </rset> </req></pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
	Delete row	Delete opaque type <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="Quota"/> <op value="="/> <value val="" isnull="y"/>< /expr> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654 862"/></expr> </where> </req> </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="1"/> </req> </pre>	The following request is supported where you delete subscriber fields along with entities. <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="Entitlement"/><op value="="/> <value val="" isnull="y"/>< /expr> <expr><attr name="Quota"/> <op value="="/> <value val="" isnull="y"/>< /expr> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654 862"/></expr> </where> </req> </pre>	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Delete state opaque type <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="State"/> <op value="="/> <value val="" isnull="y"/> </expr> </set> <where> <expr><attr name="MSISDN" /> <op value="="/> <value val="33123654862"/> </expr> </where> </req> </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="1"/> </req> </pre>	The following request is not supported where you delete subscriber fields along with entities. <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="Tier"/> <op value="="/> <value val="" isnull="y"/> </expr> <expr><attr name="State"/> <op value="="/> <value val="" isnull="y"/> </expr> </set> <where> <expr><attr name="MSISDN" /> <op value="="/> <value val="33123654862"/> </expr> </where> </req> </pre>	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		Delete DQ opaque type <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="Dynamic Quota"/><op value="="/> <value val="" isnull="y"/>< /expr> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654 862"/></expr> </where> </req> </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="1"/ > </req> </pre>	The following request is not supported where you delete subscriber fields along with entities <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="Tier"/ ><op value="="/> <value val="" isnull="y"/>< /expr> <expr><attr name="Dynamic Quota"/><op value="="/> <value val="" isnull="y"/>< /expr> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654 862"/></expr> </where> </req> </pre>	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Delete quota with quota name <pre> <req name="delete" resonly="y"> <ent name="QuotaEntity"/> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654862"/></expr> <expr><attr name="name"/ ><op value="="/ ><value val="Q1"/></expr> </where> </req> </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="1"/ > </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Delete qouta with name and cid <pre> <req name="delete" resonly="y"> <ent name="QuotaEntity"/> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654862"/></expr> <expr><attr name="name"/ ><op value="="/ ><value val="Q4"/></expr> <expr><attr name="cid"/ ><op value="="/ ><value val="11223344"/></expr> </where> </req> </pre>	<pre> <req name="delete" resonly="y"> <res error="0" affected="1"/ > </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Delete Dynamic Quota with name and type <pre> <req name="delete" resonly="y"> <ent name="QuotaEntity"/> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654862"/></expr> <expr><attr name="name"/ ><op value="="/ ><value val="Q4"/></expr> <expr><attr name="cid"/ ><op value="="/ ><value val="11223344"/></expr> </where> </req> </pre>	<pre> <req name="delete" resonly="y"> <res error="0" affected="1"/ > </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
	Update row	Update opaque qouta <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="Quota"/ ><op value="="/ ><cdata> <![CDATA[<? xml version="1.0" encoding="UTF -8"?> <usage> <version>3</ version> <quota name="AggregateLimit"> <cid>92233720 36854775807</ cid> <time>3422</ time> <totalVolume> 1000</ totalVolume> <inputVolume> 980</ inputVolume> <outputVolume >20</ outputVolume> <serviceSpeci </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="0"/ > </req> </pre>	This does not support because both entity and subscriber profile fields can not be updated at the same time.	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre>fic>12</serviceSpecific> <nextResetTime>2010-05-22T00:00:00-05:00</nextResetTime> </quota> </usage>]]></cdata></expr> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654862"/></expr> </where> </req></pre>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Update opaque state <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="State"/ ><op value="="/ ><cdata> <![CDATA[<? xml version="1.0" encoding="UTF-8"?> <state> <version>1</version> <property> <name>mcc</name> <value>315</value> </property> <property> <name>expire</name> <value>2010-02-09T11:20:32</value> </property> <property> <name>approved</name> <value>yes</value> </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="0"/ > </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		<pre> </property> </state>]]></cdata></ expr> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654 862"/></expr> </where> </req></pre>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		Update opaque DQ <pre> <req name="update" resonly="y"> <ent name="Subscriber"/> <set> <expr><attr name="Dynamuc Quota"/><op value=""/><![CDATA[<?xml version="1.0" encoding="UTF -8"?> <definition> <version>1</ version> <DynamicQuota name="Aggrega teLimit"> <Type>pass</ Type> <InstanceId>1 5678</ InstanceId> <Priority>4</ Priority> <InitialTime> 135</ InitialTime> <InitialTotal Volume>2000</ InitialTotalV olume> <InitialInput Volume>1500</ </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="0"/ > </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre> InitialInputVolume> <InitialOutputVolume>500</InitialOutputVolume> <InitialServiceSpecific>4</InitialServiceSpecific> <activationdate>2015-03-09T11:20:32</activationdate> <expirationdate>2015-04-09T11:20:32</expirationdate> <InterimReportingInterval>100</InterimReportingInterval> <Duration>10</Duration> </DynamicQuota> </definition>]]></cdata></expr> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value </pre>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre> val="33123654 862"/></expr> </where> </req> </pre>			
Row Field Commands	Get row field	<pre> Get quota field <req name="select" resonly="y"> <ent name="QuotaEntity"/> <select> <expr><attr name="inputVolume"/></ expr> </select> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654 862"/></expr> <expr><attr name="name"/ ><op value="="/ ><value val="Q1"/></ expr> </where> </req> </pre>	<pre> <req name="select" resonly="y"> <res error="0" affected="1"/ > <rset> <row> <rv>980</rv> </row> </rset> </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		Multiple quota query parameters <pre> <req name="select" resonly="y"> <ent name="QuotaEn tity"/> <select> <expr><attr name="outputV olume"/></ expr> </select> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654 862"/></expr> <expr><attr name="name"/ ><op value="="/ ><value val="Q3"/></ expr> <expr><attr name="cid"/ ><op value="="/ ><value val="11223344 "/></expr> </where> </req> </pre>	<pre> <req name="select" resonly="y"> <res error="0" affected="1"/ > <rset> <row> <rv>4000</rv> </row> </rset> </req> </pre>	Note: Returns only one out of two object that are present in database.	Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Get multiple qouta fields <pre> <req name="select" resonly="y"> <ent name="QuotaEntity"/> <select> <expr><attr name="inputVolume"/></expr> <expr><attr name="outputVolume"/></expr> <expr><attr name="totalVolume"/></expr> </select> <where> <expr><attr name="MSISDN"/><op value="="/> <value val="33123654862"/></expr> <expr><attr name="name"/><op value="="/> <value val="Q1"/></expr> </where> </select> </req> </pre>	<pre> <req name="select" resonly="y"> <res error="0" affected="1"/> <rset> <row> <rv>980</rv> <rv></rv> <rv null="y"/> </row> </rset> </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Get DQ parameters <pre> <req name="select" resonly="y"> <ent name="Dynamic QuotaEntity"/ > <select> <expr><attr name="InstanceId" /></expr> <expr><attr name="Initial TotalVolume" / ></expr> <expr><attr name="Initial InputVolume" / ></expr> </select> <where> <expr><attr name="MSISDN" /><op value="=" /> <value val="15145551 234" /></expr> <expr><attr name="name" / ><op value="=" /> <value val="DQ3" /></ expr> <expr><attr name="InstanceId" /><op value="=" /> </pre>	<pre> <req name="select" resonly="y"> <res error="0" affected="1" / > <rset> <row> <rv>15678</rv> > <rv>2000</rv> <rv>1500</rv> </row> </rset> </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		<pre><value val="15678"/> </expr> </where> </req></pre>			
	update row field	<pre><req name="update" resonly="y"> <ent name="QuotaEn tity"/> <set> <expr><attr name="inputVo lume"/> <value val="1000"/>< /expr> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654 862"/></expr> <expr><attr name="name"/> <op value="="/> <value val="Q1"/></ expr> </where> </req></pre>	<pre><req name="update" resonly="y"> <res error="0" affected="1"/ > </req></pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Dynamic Quota field update <pre> <req name="update" resonly="y"> <res error="0" affected="1"/ > </req> <set> <expr><attr name="Initial TotalVolume"/ ><value val="1000"/>< /expr> <expr><attr name="Initial InputVolume"/ ><value val="1000"/>< /expr> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="15145551 234"/></expr> <expr><attr name="name"/ ><op value="="/> <value val="DQ1"/></ expr> <expr><attr name="InstanceId" /><op value="="/> </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="1"/ > </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre><value val="15678"/> </expr> </where> </req></pre>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Update QuotaEntity fields with multiple values in separate lines <pre> <req name="update" resonly="y">< ent name="QuotaEntity"/> <set> <expr><attr name="outputVolume"/ ><value val="2000"/>< /expr> <expr><attr name="outputVolume"/ ><value val="3000"/>< /expr> </set> <where> <expr><attr name="MSISDN" /><op value="="/ ><value val="33123654862"/></expr> <expr><attr name="name"/ ><op value="="/ ><value val="Q1"/></expr> </pre>	<pre> <req name="update" resonly="y">< res affected="1" error="0"/></req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		</where> </req>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Update and delete for the same QuotaEntity field <pre> <req name="update" resonly="y">< ent name="QuotaEn tity"/> <set> <expr><attr name="outputV olume"/ ><value val="4000"/>< /expr> <expr><attr name="outputV olume"/><op value="="/ ><value val="" isnull="y"/>< /expr> </set> <where> <expr><attr name="MSISDN" /><op value="="/ ><value val="33123654 862"/></expr> <expr><attr name="name"/ ><op value="="/ ><value val="Q1"/></ expr> </pre>	<pre> <req name="update" resonly="y">< res affected="1" error="0"/></ req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		</where> </req>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		Delete and update for the same QuotaEntity field <req name="update" resonly="y"><ent name="QuotaEntity"/> <set> <expr><attr name="outputVolume"/><op value="="/><value val="" isnull="y"/></expr> <expr><attr name="outputVolume"/><value val="4000"/></expr> </set> <where> <expr><attr name="MSISDN"/><op value="="/><value val="33123654862"/></expr> <expr><attr name="name"/><op value="="/><value val="Q1"/></expr>	<req name="update" resonly="y"><res affected="1" error="0"/></req>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre> </where> </req> </pre>			
	Delete row field commands	<pre> delete quota field <req name="update" resonly="y"> <ent name="QuotaEntity"/> <set> <expr><attr name="inputVolume"/><op value="="/> <value val="" isnull="y"/>< /expr> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654862"/></expr> <expr><attr name="name"/ ><op value="="/ ><value val="Q1"/></ expr> </where> </req> </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="1"/ > </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre> <req name="update" resonly="y"> <ent name="QuotaEntity"/> <set> <expr><attr name="outputVolume"/><op value=""/> <value val="" isnull="y"/>< /expr> </set> <where> <expr><attr name="MSISDN" /><op value=""/> <value val="33123654862"/></expr> <expr><attr name="name"/ ><op value=""/ ><value val="Q4"/></ expr> <expr><attr name="cid"/ ><op value=""/ ><value val="11223344 "/></expr> </where> </req> </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="1"/ > </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre> <req name="update" resonly="y"> <ent name="Dynamic QuotaEntity"/ > <set> <expr><attr name="Initial InputVolume"/ ><op value="="/> <value val="" isnull="y"/>< /expr> </set> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="15145551 234"/></expr> <expr><attr name="IMSI"/ ><op value="="/> <value val="30237012 3456789"/></ expr> <expr><attr name="name"/ ><op value="="/> <value val="DQ1"/></ expr> </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="1"/ > </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		<pre> <expr><attr name="InstanceId"/><op value="="/> <value val="11223344 "/></expr> </where> </req> </pre>			
Data Filed commands (State only)	Get data filed	<pre> <req name="select" resonly="y"> <ent name="StateEn tity"/> <select> <expr><attr name="mcc"/>< /expr> <expr><attr name="expire" /></expr> <expr><attr name="duratio n"/></expr> </select> <where> <expr><attr name="MSISDN" /><op value="="/> <value val="33123654 862"/></expr> </where> </req> </pre>	<pre> <req name="select" resonly="y"> <res error="0" affected="1"/ > <rset> <row> <rv>315</rv> <rv>2015-02-0 9T11:20:32</r v> <rv null="y"/> </row> </rset> </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
	Update data field	<pre> <req name="update" resonly="y"> <ent name="StateEntity"/> <set> <expr><attr name="mcc"/> ><value val="302"/></expr> <expr><attr name="approved"/><value val="no"/></expr> </set> <where> <expr><attr name="IMSI"/> ><op value="="/> <value val="302370123456789"/></expr> </where> </req> </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="1"/> </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
	Delete Data field	<pre> <req name="update" resonly="y"> <ent name="StateEntity"/> <set> <expr><attr name="mcc"/> ><op value="="/> ><value val="" isnull="y"/>< /expr> </set> <where> <expr><attr name="IMSI"/> ><op value="="/> <value val="30237012 3456789"/></ expr> </where> </req> </pre>	<pre> <req name="update" resonly="y"> <res error="0" affected="1"/> </req> </pre>		Y

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
Special Operation Commands	Reset Quota	<pre> <req name="operation"> <oper name="ResetQuota"> <expr> <param name="MSISDN" /> <op value=""/> <value val="33123654862"/> </ expr> <expr> <param name="name"/> <op value=""/> <value val="Q1"/> </ expr> </oper> </req> </pre>	<pre> <req name="operation" resonly="y"> <res error="0" affected="1"/> </req> </pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		Three keys are provided for the subscriber, and all keys are valid for the subscriber <pre> <req name="operation" resonly="y"> <res error="0" affected="1"/> </req> <expr> <param name="MSISDN" /> <op value=""/> <value val="33123654862"/> </ expr> <expr> <param name="IMSI"/> <op value=""/> <value val="184569547984229"/> </ expr> <expr> <param name="NAI"/> <op value=""/> </pre>	<pre> <req name="operation" resonly="y"> <res error="0" affected="1"/> </req> </pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		<pre><value val="mum@foo. com"/> </ expr> <expr> <param name="name"/> <op value="="/> <value val="Q1"/> </ expr> </oper> </req></pre>			

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		<pre> <req name="operation"> <oper name="Reset" ent="QuotaEntity"> <expr> <param name="MSISDN" /> <op value=""/> <value val="33123654862"/> </ expr> <expr> <param name="name"/> <op value=""/> <value val="Q1"/> </ expr> <expr> <param name="cid" /> <op value=""/> <value val="1234"/> </ expr> </pre>	<pre> <req name="operation" resonly="y"> <res error="0" affected="1"/> </req> </pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
		<pre> </oper> </req> </pre>			
		Quota data does not contain a Quota row called Q6 <pre> <req name="operati on"> <oper name="ResetQu ota"> <expr> <param name="MSISDN" /> <op value=""/> <value val="33123654 862"/> </ expr> <expr> <param name="name"/> <op value=""/> <value val="Q6"/> </ expr> </oper> </req> </pre>	<pre> <req name="operati on" resonly="y"> <res error="70032" affected="0"/ > </req> </pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
	Get Subscription Status	<pre> <req name="operation"> <oper name="GetSubscriptionStatus"> <expr> <param name="MSISDN" /> <op value=""/> <value val="33123654862"/> </ expr> </oper> </req> </pre>	<pre> <req name="operation" resonly="y"> <res error="0" affected="1"/> <rset> <row> <rv> <SubscriptionStatus> <subscribingClient name="seagull1a.seagull1.com"> <userIdentity name="sip:222222222@ims.mnc480.mcc311.3gppnetwork.org"> <creationTime>"1545220213" </creationTime> <expirationTime>"1545220213" </expirationTime> </ </pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
			<pre>userIdentity> </ subscribingCl ient> </ SubscriptionS tatus> </rv> </ row> </rset> </req></pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		The subscriber has two subscriptions from a single client and on two keys (imsi:222222222 and MSISDN: 33123654862) <pre> <req name="operati on" resonly="y"> <res error="0" affected="1"/ > <rset> <row> <rv> <Subscription Status> <param name="MSISDN" /> <op value=""/> <value val="33123654 862"/> </ expr> </oper> </req> </pre>	<pre> <req name="operati on" resonly="y"> <res error="0" affected="1"/ > <rset> <row> <rv> <Subscription Status> <subscribingC lient name="seagull 1a.seagull1.c om"> <userIdentity name="sip:222 222222@ims.m nc480.mcc311. 3gppnetwork.o rg"> <creationTime >"1545220213" </ creationTime> <expirationTi me>"154522021 3"</ expirationTim e> </ </pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Support ed (Y/N)
			<pre>userIdentity> <userIdentity name="tel: 33123654862"> <creationTime >"1545220213" </ creationTime> <expirationTi me>"154522021 3"</ expirationTim e> </ userIdentity> </ subscribingCl ient> </ SubscriptionS tatus> </rv> </ row> </rset> </req></pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
		The subscriber has three subscriptions from two clients and on two keys (imsi:222222222 and MSISDN: 33123654862) <pre> <req name="operation" resonly="y"> <res error="0" affected="1"/> <rset> <row> <rv> <Subscription Status> <param name="MSISDN" /> <op value=""/> <value val="33123654862"/> </ expr> </oper> </req> </pre>	<pre> <req name="operation" resonly="y"> <res error="0" affected="1"/> <rset> <row> <rv> <Subscription Status> <subscribingC lient name="seagull 1a.seagull1.c om"> <userIdentity name="tel: 33123654862"> <creationTime >"1545220213" </ creationTime> <expirationTi me>"0"</ expirationTim e> </ userIdentity> <userIdentity </pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
			<pre> name="sip:222 2222222@ims.m nc480.mcc311. 3gppnetwork.o rg"> <creationTime >"1545220213" </ creationTime> <expirationTi me>"0"</ expirationTim e> </ userIdentity> </ subscribingCl ient> <subscribingC lient name="seagull 1b.seagull1.c om"> <userIdentity name="tel: 33123654862"> <creationTime >"1545220213" </ creationTime> <expirationTi me>"0"</ </pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	Notes	Supported (Y/N)
			<pre> expirationTime> </ userIdentity> </ subscribingClient> </ SubscriptionStatus> </rv> </ row> </rset> </req> </pre>		
		The subscriber does not have any subscription. <pre> <req name="operation"> <oper name="GetSubscriptionStatus"> <expr> <param name="MSISDN" /> <op value="="/> <value val="33123654862"/> </ expr> </oper> </req> </pre>	<pre> <req name="operation" resonly="y"> <res error="70032" affected="0"/> </req> </pre>		

2.3 Supported SOAP/XML Request Operations for Custom Entities

The SOAP/XML request operations meant for custom entities are:

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
Subscriber Commands	Create Profile with custom fields	request <pre> <req name="insert" resonly="y"> <ent name="Subscriber" /> <set> <expr><attr name="AccountId"/ ><value val="10404723525" /></expr> <expr><attr name="MSISDN"/ ><value val="33123654862" /></expr> <expr><attr name="IMSI"/ ><value val="184569547984 229"/></expr> <expr><attr name="BillingDay" /><value val="1"/></expr> <expr><attr name="Entitlement "/><value val="DayPass,DayP assPlus"/></expr> <expr><attr name="customsubs1 "/><value val="SubsData1"/> </expr> <expr><attr name="customsubs2 "/><value val="SubsData2"/> </expr> </set> </req> </pre>	response <pre> <req name="insert" resonly="y"> <res error="0" affected="1"/> </req> </pre>	- Custom Fields should only be provided with string values. - Custom Fields should not be treated as Multivalued Fields. - convertTo Sec Flag is responsible for the type of validation, but the request is always sent to UDR in sec format.

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
	Create Profile with custom entities	request <pre> <req name="insert" resonly="y"> <ent name="Subscriber" /> <set> <expr><attr name="AccountId"/ ><value val="178322212122 "/></expr> <expr><attr name="MSISDN"/ ><value val="15145551234, 15141234567"/></ expr> <expr><attr name="IMSI"/ ><value val="302370123456 789"/></expr> <expr><attr name="BillingDay" /><value val="6"/></expr> <expr><attr name="Entitlement "/><value val="DayPass,DayP assPlus"/></expr> <expr><attr name="CustomEntit y"/><op value="="/> <cdata>&lt;! [CDATA[<?xml version="1.0" encoding="UTF-8"? > <customusage> <customouterfield 1>CustomOuterFiel d1</ customouterfield1 > <customent> <custominnerfield 1>CustomInnerFiel </pre>	response <pre> <req name="insert" resonly="y"> <res error="0" affected="1"/> </req> </pre>	Custom Entity can only be inserted in the Opaque entity format.

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
		d1</ custominnerfield1 > <custominnerfield 2>CustomInnerFiel d2</ custominnerfield2 > </customent> </ customusage>]]> ; </cdata> </ expr> </set> </req>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
	Retrieve Subscriber having custom fields	request <pre> <req name="select" resonly="y"> <ent name="Subscriber" /> <where> <expr><attr name="MSISDN"/ ><op value="="/> <value val="33123654862" /></expr> </where> </req> </pre>	response <pre> <req name="select" resonly="y"> <res error="0" affected="1"/> <rset> <row> <rv> <![CDATA[<?xml version="1.0" encoding="UTF-8"? > <subscriber> <field name="ACCOUNTID"> 10404723525</ field> <field name="BillingDay" >1</field> <field name="customsubs1" ">SubsData1</ field> <field name="customsubs2" ">SubsData2</ field> <field name="Entitlement" ">DayPass</field> <field name="Entitlement" ">DayPassPlus</ field> <field name="IMSI">18456 9547984229</ field> <field name="MSISDN">331 23654862</field> <field name="SequenceNum ber">0</field> </subscriber>]]> </rv> </row> </rset> </res> </req> </pre>	

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
			<pre> </row> </rset> </req> </pre>	
Subscriber Field Commands	Adding Custom fields	request <pre> <req name="update" resonly="y"> <ent name="Subscriber" /> <set> <oper name="AddToSet"> <expr><attr name="customsubs1" /><value val="SubsData3"/> </expr> <expr><attr name="customsubs2" /><value val="SubsData4"/> </expr> </oper> </set> <where> <expr><attr name="MSISDN"/ ><op value="="/> <value val="33123654862" /></expr> </where> </req> </pre>	response <pre> <req name="update" resonly="y"> <res error="0" affected="1"/> </req> </pre>	Since Custom Field is not a multivalued field, update request with AddToSet as operation name, replaces the old value.

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
	get custom field commands	get custom fields of a subscriber request <pre> <req name="select" resonly="y"> <ent name="Subscriber" /> <select> <expr><attr name="customsubs1" /></expr> <expr><attr name="customsubs2" /></expr> </select> <where> <expr><attr name="MSISDN"/ ><op value="="/> <value val="33123654862" /></expr> </where> </req> </pre>	response <pre> <req name="select" resonly="y"> <res error="0" affected="1"/> <rset> <row> <rv>SubsData3</rv> > <rv>SubsData4</rv> > </row> </rset> </req> </pre>	

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
	Update Custom Field Commands	Update Fields request <pre> <req name="update" resonly="y"> <ent name="Subscriber" /> <set> <expr><attr name="customsubs1" /><value val="SubsData5"/> </expr> <expr><attr name="customsubs2" /><value val="SubsData6"/> </expr> </set> <where> <expr><attr name="IMSI"/><op value="="/> <value val="305801234567 890"/></expr> </where> </req> </pre>	response <pre> <req name="update" resonly="y"> <res error="0" affected="1"/> </req> </pre>	

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
	delete custom field commands	delete fields request <pre> <req name="update" resonly="y"> <ent name="Subscriber" /> <set> <expr><attr name="customsubs1" /><op value="="/> <value val="" isnull="y"/></ expr> <expr><attr name="customsubs2" /><op value="="/> <value val="" isnull="y"/></ expr> </set> <where> <expr><attr name="MSISDN"/ /><op value="="/> <value val="33123654862" /></expr> </where> </req> </pre>	response <pre> <req name="update" resonly="y"> <res error="0" affected="1"/> </req> </pre>	

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
		deleting not existing field (Message), not mentioned in sec request <pre> <req name="update" resonly="y"> <ent name="Subscriber" /> <set> <expr><attr name="Message"/ ><op value="="/> <value val="" isnull="y"/></ expr> </set> <where> <expr><attr name="MSISDN"/ ><op value="="/> <value val="33123654862" /></expr> </where> </req> </pre>	response <pre> <req name="update" resonly="y"> <res affected="0" error="70015"/> </req> </pre>	- Any operation with invalid field (field not mentioned in sec), always fails with 70015 as the error code. - Request never reaches UDR, so even non existing subscriber request fails with 70015, if unknown field supplied in set clause.

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
	Delete field value	remove field and multi-valued fields request <pre> <req name="update" resonly="y"> <ent name="Subscriber" /> <set> <oper name="RemoveFromSet" /> <expr><attr name="customsubs1" /><value val="SubsData1"/> </expr> </oper> </set> <where> <expr><attr name="MSISDN"/ ><op value="="/> <value val="33123654862" /></expr> </where> </req> </pre>	response <pre> <req name="update" resonly="y"> <res error="0" affected="1"/> </req> </pre>	Since Custom Field is not a multivalued field, update request with RemoveFromSet as operation name deletes the complete field instead of removing few values from it.

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
Row-level commands/ Entity Commands	Add Row	Add Opaque Custom Entity (CustomEntity) request <pre> <req name="insert" resonly="y"> <ent name="Subscriber" /> <set> <expr><attr name="CustomEntity" /><op value=""/> <cdata><!-- [CDATA[<?xml version="1.0" encoding="UTF-8"? > <customusage> <customouterfield 1>CustomOuterField1</ customouterfield1 > <customent> <custominnerfield 1>CustomInnerField1</ custominnerfield1 > <custominnerfield 2>CustomInnerField2</ custominnerfield2 > </ </pre>	response <pre> <req name="insert" resonly="y"> <res error="0" affected="1"/> </req> </pre>	Custom Entity can only be inserted in the Opaque entity format.

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
		<pre>customer> </ customusage>]]&gt; ; </cdata> </expr> </set> <where> <expr><attr name="MSISDN"/ ><op value="="/> <value val="33123654862" /></expr> </where> </req></pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
		Add Quota Row with custom fields request <pre> <req name="insert" resonly="y"> <ent name="Subscriber" /> <set> <expr><attr name="Quota"/ ><op value="="/ ><cdata> &lt;![CDATA[<? xml version="1.0" encoding="UTF-8"? > <usage> <version>3</ version> <quota name="AggregateLi mit"> <cid>922337203685 4775807</cid> <time>3422</ time> <totalVolume>1000 </totalVolume> <inputVolume>980< / inputVolume> <outputVolume>20< / outputVolume> <serviceSpecific> 12</ serviceSpecific> <nextResetTime>20 10-05-22T00:00:00 -05:00</ nextResetTime> </pre>	response <pre> <req name="insert" resonly="y"> <res error="0" affected="1"/> </req> </pre>	Custom Entity insertion using Transparent entity format request instantly fails with 70030 error code.

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
		<pre><customq1>CustomD ata1</customq1> <customq2>CustomD ata2</customq2> </quota> </usage>]]&gt;</cdata></ expr> </set> <where> <expr><attr name="MSISDN"/ ><op value="="/> <value val="33123654862" /></expr> </where> </req></pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
		Add Transparent QuotaEntity with customfields request <pre> <req name="insert" resonly="y"> <ent name="QuotaEntity" /> <set> <expr><attr name="name"/ ><value val="Q2"/></expr> <expr><attr name="cid"/ ><value val="922337203685 4999999"/></expr> <expr><attr name="time"/ ><value val="10:10"/></ expr> <expr><attr name="totalVolume" /><value val="55000"/></ expr> <expr><attr name="inputVolume" /><value val="50000"/></ expr> <expr><attr name="outputVolum e"/><value val="5000"/></ expr> <expr><attr name="customq1"/ ><value val="CustomData1" /></expr> <expr><attr name="customq2"/ ><value val="CustomData2" </pre>	response <pre> <req name="insert" resonly="y"> <res error="0" affected="1"/> </req> </pre>	

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
		<pre> /></expr> <expr><attr name="serviceSpec ific"/><value val="serviceSpeci fic"/></expr> <expr><attr name="nextResetTi me"/> <value val="1961-12-15T0 9:04:03"/></expr> </set> <where> <expr><attr name="MSISDN"/ ><op value="="/> <value val="15141234567" /></expr> </where> </req> </pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
	GET ROW data	get Opaque CustomEntity data request <pre> <req name="select" resonly="y"> <ent name="Subscriber" /> <select> <expr><attr name="CustomEntit y"/></expr> </select> <where> <expr><attr name="MSISDN"/ ><op value="="/> <value val="33123654862" /></expr> </where> </req> </pre>	response <pre> <req name="select" resonly="y"> <res error="0" affected="1"/> <rset> <row> <rv> <![CDATA[<?xml version="1.0" encoding="UTF-8"? > <customusage> <customent> <custominnerfield 1>CustomInnerFiel d1</ custominnerfield1 > <custominnerfield 2>CustomInnerFiel d2</ custominnerfield2 > </customent> <customouterfield 1>CustomOuterFiel d1</ customouterfield1 > <SequenceNumber>0 </SequenceNumber> </customusage>]]> </rv> </row> </rset> </req> </pre>	

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
		get Multiple Opaque Quota Data and CustomEntity where Quota Data have customFields request <pre> <req name="select" resonly="y"> <ent name="Subscriber" /> <select> <expr><attr name="Quota"/></expr> <expr><attr name="CustomEntit y"/></expr> </select> <where> <expr><attr name="MSISDN"/ ><op value="="/> <value val="33123654862" /></expr> </where> </req> </pre>	response <pre> <req name="select" resonly="y"> <res error="0" affected="1"/> <rset> <row> <rv> <![CDATA[<?xml version="1.0" encoding="UTF-8"? > <customusage> <customent> <custominnerfield 1>CustomInnerFiel d1</ custominnerfield1 > <custominnerfield 2>CustomInnerFiel d2</ custominnerfield2 > </customent> <customouterfield 1>CustomOuterFiel d1</ customouterfield1 > <SequenceNumber>0 </SequenceNumber> </ customusage>]]]]> <![CDATA[> </rv> </rv> <![CDATA[<?xml version="1.0" encoding="UTF-8"? > </pre>	

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
			<pre> <usage> <quota name="AggregateLi mit"> <cid>922337203685 4775807</cid> <inputVolume>980< /inputVolume> <nextResetTime>20 10-05-22T00:00:00 -05:00</ nextResetTime> <outputVolume>20< /outputVolume> <serviceSpecific> 12</ serviceSpecific> <time>3422</time> <totalVolume>1000 </totalVolume> <customq1>CustomD ata1</customq1> <customq2>CustomD ata2</customq2> </quota> <SequenceNumber>0 </SequenceNumber> <version>3</ version> </usage>]]]]><![CDATA[> </rv> </row> </rset> </req> </pre>	

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
	delete row	delete opaque custom entity type request <pre> <req name="update" resonly="y"> <ent name="Subscriber" /> <set> <expr><attr name="CustomEntity"/><op value="="/> <value val="" isnull="y"/></expr> </set> <where> <expr><attr name="MSISDN"/> <op value="="/> <value val="33123654862" /></expr> </where> </req> </pre>	response <pre> <req name="update" resonly="y"> <res error="0" affected="1"/> </req> </pre>	

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
	Update row	update opaque Custom Entity request <pre> <req name="update" resonly="y"> <ent name="Subscriber" /> <set> <expr><attr name="CustomEntity" /><op value=""/> <cdata>&lt;![CDATA[<?xml version="1.0" encoding="UTF-8"? > <customusage> <customouterfield 1>CustomOuterField1</ customouterfield1 > <customent> <custominnerfield 1>CustomInnerField1</ custominnerfield1 > <custominnerfield 2>CustomInnerField2</ custominnerfield2 > </ </pre>	response <pre> <req name="update" resonly="y"> <res error="0" affected="1"/> </req> </pre>	

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
		<pre>customer> </ customusage>]]&gt; ; </cdata> </expr> </set> <where> <expr><attr name="MSISDN"/ ><op value="="/> <value val="33123654862" /></expr> </where> </req></pre>		

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
		update opaque Quota with custom fields request <pre> <req name="update" resonly="y"> <ent name="Subscriber" /> <set> <expr><attr name="Quota"/ ><op value="="/ ><cdata> <![CDATA[<?xml version="1.0" encoding="UTF-8"? > <usage> <version>3</ version> <quota name="AggregateLi mit"> <cid>922337203685 4775807</cid> <time>3422</ time> <totalVolume>1000 </totalVolume> <inputVolume>980< / inputVolume> <outputVolume>20< / outputVolume> <serviceSpecific> 12</ serviceSpecific> <nextResetTime>20 10-05-22T00:00:00 -05:00</ nextResetTime> <customq1>CustomD ata1</customq1> </pre>	response <pre> <req name="update" resonly="y"> <res error="0" affected="1"/> </req> </pre>	

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
		<pre> <customq2>CustomD ata2</customq2> </quota> </usage>]]></cdata></ expr> </set> <where> <expr><attr name="MSISDN"/ ><op value="="/> <value val="33123654862" /></expr> </where> </req> </pre>		
Row Field Commands	get row field	get quota custom field request <pre> <req name="select" resonly="y"> <ent name="QuotaEntity "/> <select> <expr><attr name="customq1"/> </expr> <expr><attr name="customq2"/> </expr> </select> <where> <expr><attr name="MSISDN"/ ><op value="="/> <value val="33123654862" /></expr> <expr><attr name="name"/><op value="="/> <value val="Q1"/></expr> </where> </req> </pre>	response <pre> <req name="select" resonly="y"> <res error="0" affected="1"/> <rset> <row> <rv>CustomData1</ rv> <rv>CustomData2</ rv> </row> </rset> </req> </pre>	selecting custom fields from custom entity with this request instantly fails with 70030, field based operations are not supported on custom entity.

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
	update row field	update quota custom field request <pre> <req name="update" resonly="y"> <ent name="QuotaEntity" /> <set> <expr><attr name="customq1"/ ><value val="customdataupdated"/></expr> </set> <where> <expr><attr name="MSISDN"/ ><op value="="/> <value val="33123654862" /></expr> <expr><attr name="name"/><op value="="/> <value val="Q1"/></expr> </where> </req> </pre>	response <pre> <req name="update" resonly="y"> <res error="0" affected="1"/> </req> </pre>	- Custom fields support all the field based operation with the default entities. - Unknown fields (Not mentioned in sec), instantly fails with error code 70015.

SOAP Operation Type	Operation Type	SOAP/XML Details	SOAP/XML Response	NOTES
	delete row field commands	delete quota custom field request <pre> <req name="update" resonly="y"> <ent name="QuotaEntity" /> <set> <expr><attr name="customq1"/ ><op value="="/> <value val="" isnull="y"/></expr> </set> <where> <expr><attr name="MSISDN"/ ><op value="="/> <value val="33123654862" /></expr> <expr><attr name="name"/><op value="="/> <value val="Q1"/></expr> </where> </req> </pre>	response <pre> <req name="update" resonly="y"> <res error="0" affected="1"/> </req> </pre>	

2.3.1 Supported SOAP/XML Request for Custom Entities

The following sample **SEC.yaml** file shares the SOAP/XML request having custom fields and entities:

```

secEntity: |
- name: QuotaEntity
  elementString: usage
  innerElemenString: quota
  outerFields:
    - version
    - quota
    - SequenceNumber
  innerFields:
    - name

```

- cid
- time
- totalVolume
- inputVolume
- outputVolume
- serviceSpecific
- nextResetTime
- Type
- grantedTotalVolume
- grantedInputVolume
- grantedOutputVolume
- grantedTime
- grantedServiceSpecific
- QuotaState
- RefInstanceId
- customq1
- customq2
- name: DynamicQuotaEntity
 - elementString: definition
 - innerElementString: DynamicQuota
 - outerFields:
 - version
 - DynamicQuota
 - SequenceNumber
 - innerFields:
 - Type
 - name
 - InstanceId
 - Priority
 - InitialTime
 - InitialTotalVolume
 - InitialInputVolume
 - InitialOutputVolume
 - InitialServiceSpecific
 - activationdatetime
 - expirationdatetime
 - purchaseddatetime
 - Duration
 - InterimReportingInterval
 - customdq1
 - customdq2
- name: Subscriber
 - elementString: subscriber
 - outerFields:
 - IMSI
 - MSISDN
 - NAI
 - EXTID
 - ACCOUNTID
 - BillingDay
 - Entitlement
 - Tier
 - SequenceNumber
 - customsubs1
 - customsubs2
- name: StateEntity

```

elementString: state
innerElemenString: property
outerFields:
  - version
  - property
  - SequenceNumber
innerFields:
  - name
  - value
- name: CustomEntity
  elementString: customusage
  innerElemenString: customent
  outerFields:
    - customouterfield1
    - customent
  innerFields:
    - custominnerfield1
    - custominnerfield2

```

A sample **convertToSec Flag** description is as follows:

Default Value: true

Supported Values: (true/false)

if set to true :

the request will be validated with the sec in the case-insensitive format and will be converted to the sec mentioned case.

if set to false :

the request will be validated with the sec in the case-sensitive format. if the case doesn't match with the sec mentioned case, requests will instantly fail with 70015

NOTE:

* Sec validation will always happen, whether convertToSec flag set to true/false.

* The behaviour remains constant for Custom Fields and Entites

3

REST Specifications of Provisioning Gateway

This chapter describes the REST Specifications of Provisioning Gateway.

3.1 Operations Supported for Provisioning Gateway

The provisioning operations for SLF using Provisioning Gateway are as follows:

Note

5G UDR supports only scoped requests.

Table 3-1 Provisioning Operations for SLF

Operation Type		Sample Request	Sample Response	Possible Error Codes	Action from Provisioning System
Activation	PUT Note 1	http://localhost:8080/nudr-group-id-map-prov/v1/slf-group/accountid-12345678910 {"profile-data": { "SUPI": "imsi-2222222221", "accountID": "12345678910", "GPSI": "msisdn-19195226666" }, "slfGroupName": "IMSGrp1", "CHFGroupId": "CHFGrp1" } }	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.
				500 Internal Server Error: "details": {"<SEG>": "{response}"}	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.

Table 3-1 (Cont.) Provisioning Operations for SLF

Operation Type		Sample Request	Sample Response	Possible Error Codes	Action from Provisioning System
				404 Not Found: Destination not found	Provisioning request error. See Problem Details. Action: Correct the payload or the key and resend.
Modify SUPI	PUT Note 1	http://localhost:8080/nudr-group-id-map-prov/v1/slf-group/accountid-12345678910 { "profile-data": { "SUPI": "imsi-333333333", "accountID": "12345678910", "GPSI": "msisdn-19195226666" }, "slfGroupName": "IMSGrp1", "CHFGroupId": "CHFGrp1" } }	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.
				500 Internal Server Error: "details": { "<SEG>": "{response}" }	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.

Table 3-1 (Cont.) Provisioning Operations for SLF

Operation Type		Sample Request	Sample Response	Possible Error Codes	Action from Provisioning System
Modify GPSI	PUT Note 1	<pre>http://localhost:8080/nudr-group-id-map-prov/v1/slf-group/accountid-12345678910 {"profile-data": { "SUPI": "imsi-2222222221", "accountID": "12345678910", "GPSI": "msisdn-19999999999", } 'slfGroupName": "IMSGrp1", "CHFGroupId": "CHFGrp1"}</pre>	201 Created	400 Bad Request: "details": { "<FQDN>": "Schema validation failed" }	Provisioning request error. See Problem Details. Action: Correct the payload or the key and resend.
				500 Internal Server Error: "details": { "<SEG>": "{response}" }	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 IMS Group	PUT Note 1	<pre>http://localhost:8080/nudr-group-id-map-prov/v1/slf-group/accountid-12345678910 {"profile-data": { "SUPI": "imsi-2222222221", "accountID": "12345678910",</pre>	201 Created	400 Bad Request: "details": { "<FQDN>": "Schema validation failed" }	Provisioning request error. See Problem Details. Action: Correct the payload or the key and resend.

Table 3-1 (Cont.) Provisioning Operations for SLF

Operation Type		Sample Request	Sample Response	Possible Error Codes	Action from Provisioning System
		<pre>"GPSI":"msisdn-1919522666", } 'slfGroupName": "IMSGrp2", "CHFGroupId": "CHFGrp1"}</pre>		500 Internal Server Error: <pre>"details": {"<SEG>" : "{response}"}</pre> Prov gateway Processing Failed	Transient error with UDR's Internal error. Action: Provisioning system to queue and retry the command.
				503 Service Unavailable: <pre>"details" : {<FQDN/SEG>": {response}"}</pre>	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.
Activation with multiple keys in SUPI and GPSI	PUT Note 1	<pre>http://localhost:8080/ nudr-group-id-map-prov/v1/slf-group/ accountid-12345678910 {"profile-data": { "SUPI": ["imsi-222222221", "nai-test@vzw.com"]}, "accountID": "12345678910",</pre>	201 Created	400 Bad Request: <pre>"details": {"<FQDN>":"Schema validation failed"}</pre>	Provisioning request error. See Problem Details. Action: Correct the payload or the key and resend.

Table 3-1 (Cont.) Provisioning Operations for SLF

Operation Type		Sample Request	Sample Response	Possible Error Codes	Action from Provisioning System
		<pre>"GPSI": ["msisdn-191952 25555" , "extid- user@vzw.com"] }, "slfGroupName": "IMSGrp1", "CHFGroupId": "CHFGrp1"}</pre>		500 Internal Server Error: <pre>"details": {"<SEG>": "{response}"}</pre> Prov gateway Processing Failed	Transient error with UDR's Internal error. Action: Provisioning system to queue and retry the command.
				503 Service Unavailable: <pre>"details": {<FQDN/SEG>": {response}"}</pre>	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.
DELETE	DELETE Note 2	http://localhost:8080/nudr-group-id-map-prov/v1/slf-group/accountid-12345678910	204 No Content	404 Not Found: Subscriber does not exist	Provisioning request error. See Problem Details. Action: Correct the payload or the key and resend.
				503 Service Unavailable: <pre>"details": {<FQDN/SEG>": {response}"}</pre>	Transient error with UDR's Internal error. Action: Provisioning system to queue and retry the command.

Table 3-1 (Cont.) Provisioning Operations for SLF

Operation Type		Sample Request	Sample Response	Possible Error Codes	Action from Provisioning System
				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": { "SUPI": ["imsi-222222221", "nai-test@vzw.com"], "accountID":	404 Not Found: Subscriber does not exist	Provisioning request error. See Problem Details. Action: Correct the payload or the key and resend.
	GET Note 3	http://localhost:8080/nudr-group-id-map-prov/v1/slf-group/imsi-222222221	: "12345678910", "GPSI": ["msisdn-1919522555", "extid-user@vzw.com"], }, "slfGroupName":	500 Internal Server Error: "details": { "<SEG>": "{response}" }	Transient error with UDR's Internal error. Action: Provisioning system to queue and retry the command.
	GET Note 3	http://localhost:8080/nudr-group-id-map-prov/v1/slf-group/msisdn-1919522555	"IMSGrp1", "CHFGroupId": "CHFGrp1" }	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.

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 Title and Detail information under Problem Details in Error Response:

Table 3-2 Title and Detail Information

Error Codes	Title	Detail
400	Request Validation Failed	Request failed from SLF.
		Key provided in the URI is invalid
		URL subscriber id not present in the payload
		Non-Numeric values are used as the value for numeric key (IMSI, MSISDN) in the URI
		Invalid URI received by Provgw
415	Unsupported Media Type	Unsupported Media type is added in the request header
406	Media Type Not Acceptable	Invalid Accept header is added in the request
404	Subscriber does not exist / Group Not Found / NOT FOUND	SLF responded with "Subscriber does not exist" or "Group Not Found"
		Invalid Routes configured in ingress gateway (IGW - unknownRouteException)
409	Response Conflict	Response body received from multiple SLF does not match for successful GET response.
503	Service Unavailable / SERVICE_UNAVAILABLE	Anyone or all the SLF goes down
		IP address of a backend service could not be determined. (IGW - unknownHostException)
		Timeout has occurred on a socket read or accept. (IGW - socketTimeoutException)
		Error connecting a socket to a remote address and port. (IGW - connectTimeoutException)
500	Internal Server Error	SLF responded with "Internal Server Error"
		No response received from the SLF and the request timed-out
		Some exception occurred while processing the request

4

Configuration API Specifications

This section describes configuration APIs for Provisioning Gateway.

The configuration REST APIs are exposed directly on the provgw-config microservice of Provisioning Gateway as it does not use Ingress Gateway for traffic (OAM traffic). These APIs are consumed by CNC Console GUI. For more information about CNC Console GUI, see *Oracle Communications Cloud Native Core, Unified Data Repository User Guide*.

This section includes:

- [Configuration APIs for Provisioning Gateway Microservices](#)
- [Configuration APIs for Log Level](#)
- [Configuration APIs for Export and Import](#)
- [List of Errors and its Details](#)

4.1 Configuration APIs for Provisioning Gateway Microservices

This section describes the configuration APIs for Provisioning Gateway microservices.

Table 4-1 Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
GET	URI: http://localhost:5001/ provgw-config/v1/ udr.provgwservice.cfg/ PROVGW-SERVICE	Result Code: 200 OK Payload <pre> { "tracingEnabled": false, "soapService_udrIp": "ocudr- ingressgateway- prov.ocudr", "soapService_udrSigna llingIp": "ocudr- ingressgateway- sig.ocudr", "retryErrorCodes": [500, 503], "retryCount": 2, "retryInterval": 2 }</pre>	NA

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
GET	URI : http://localhost:5001/ provgw-config/v1/ udr.auditorservice.cfg/ AUDITOR-SERVICE	Result Code: 200 OK Payload <pre> { "auditPause": false, "daysToKeepExportedFiles": 1, "startTime": "14/09/2022 17:32:10", "segment1SLFInstanceId": "Segment1SLFInstanceId", "segment2SLFInstanceId": "Segment2SLFInstanceId", "maximumDiscrepanciesCount": 1000000, "deleteExportedFilesAfterAudit": true, "frequencyOfPeriodicDump": "ONE_TIME", "maxNumberAuditReports": 3 } </pre>	NA

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
GET	URI: http://localhost:5001/ provgw-config/v1/ udr.provgw.global.cfg/ PROVGW-GLOBAL	Result Code: 200 OK Payload <pre> { "usageMode": "SLF", "outgoingHttps": false, "configClientConnectT imeout": 1000, "configClientReadTime out": 1000, "segDetails": [{ "nameOfSegment": "SEG-1", "fqdnValues": ["udr1- ingressgateway.udr1", "udr2- ingressgateway.udr2"], "preferredFqdn": "udr1- ingressgateway.udr1" }, { "nameOfSegment": "SEG-2", "fqdnValues": ["udr3- ingressgateway.udr3", "10.10.x.y:8081"], "preferredFqdn": "udr3- ingressgateway.udr3" }] }] } </pre>	NA

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
		<pre>], "errorCodeProfiles": [{ "name": "INVALID_SLF_IP", "errorCode": "503", "errorCause": "DNS resolution", "errorTitle": "Service Unavailable", "errorDescription": "Service Unavailable" }, { "name": "INCORRECT_SLF_PORT", "errorCode": "503", "errorCause": "", "errorTitle": "Service Unavailable", "errorDescription": "Service Unavailable" }, { "name": "DRPROV_UNKNOWN_HOST" }, "errorCode": "400", "errorCause": "Unknown Host Exception at IGW", "errorTitle": "Unknown Host Exception", </pre>	

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
		<pre> "errorDescription": "DRPROV down and GW unable to resolve on non-asm" }, { "name": "GW_BLACKLIST_IP", "errorCode": "500", "errorCause": "Encountered Blacklist IP exception at IGW", "errorTitle": "Internal Server Error", "errorDescription": "GW down and ProvGw unable to resolve on non-asm" }, { "name": "SLF_503_CONNECTTIMEO UT", "errorCode": "503", "errorCause": "Connect Timeout", "errorTitle": "Service Unavailable", "errorDescription": "Service Unavailable" }, { "name": "SLF_503_CONNECTREFUS ED", "errorCode": "503", </pre>	

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
		<pre> "errorCause": "Connection refused", "errorTitle": "Service Unavailable", "errorDescription": "Service Unavailable" }, { "name": "SLF_503_timeout-5000 ms", "errorCode": "503", "errorCause": "Total timeout 5000 ms elapsed", "errorTitle": "Service Unavailable", "errorDescription": "Service Unavailable" }, { "name": "SLF_503_SERVICEISDOW N", "errorCode": "503", "errorCause": "Service is down", "errorTitle": "Service Unavailable", "errorDescription": "Service Unavailable" }, { "name": "SERVER_ERROR_PLAIN_T </pre>	

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
		<pre> EXT_BODY", "errorCode": "503", "errorCause": "", "errorTitle": "", "errorDescription": "" }, { "name": "NON_ASM_SLF_IGW_DOWN _CONNECTION", "errorCode": "408", "errorCause": "Connection timeout at EGW", "errorTitle": "Connection timeout", "errorDescription": "Connection timeout" }, { "name": "NON_ASM_SLF_IGW_DOWN _REQUEST", "errorCode": "408", "errorCause": "Request Timeout at EGW", "errorTitle": "Request Timeout", "errorDescription": "Request Timeout" }, { "name": "NON_ASM_SLF_DRSERVIC E_DOWN_REQUEST", </pre>	

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
		<pre>"errorCode": "408", "errorCause": "Request Timeout at IGW", "errorTitle": "Request Timeout", "errorDescription": "Request Timeout" }] }</pre>	

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
GET	URI: http://localhost:5001/ provgw-config/v1/ udr.provgwservice.sec.cfg/ PROVGW-SERVICE-SEC	Result Code: 200 OK Payload <pre> { "enablesec": true, "secEntities": [{ "outerFields": ["quota", "SequenceNumber", "version"], "innerFields": ["totalVolume", "RefInstanceId", "grantedTotalVolume", "outputVolume", "Type", "grantedInputVolume", "grantedOutputVolume" , "grantedTime", "grantedServiceSpecif ic", "name", "nextResetTime", "time", "inputVolume", "serviceSpecific", </pre>	NA

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
		<pre> "cid", "QuotaState"], "name": "QuotaEntity", "elementString": "usage", "innerElementString": "quota" }, { "outerFields": ["DynamicQuota", "SequenceNumber", "version"], "innerFields": ["InstanceId", "purchaseddatetime", "Priority", "InitialInputVolume", "Duration", "InterimReportingInterval", "InitialOutputVolume"], "Type", "activationdatetime", "expirationdatetime", "InitialTotalVolume", </pre>	

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
		<pre> "name", "InitialServiceSpecific", "InitialTime"], "name": "DynamicQuotaEntity", "elementString": "definition", "innerElementString": "DynamicQuota" }, { "outerFields": ["MSISDN", "Tier", "NAI", "IMSI", "SequenceNumber", "EXTID", "ACCOUNTID", "BillingDay", "Entitlement"], "innerFields": null, "name": "Subscriber", "elementString": "subscriber", "innerElementString": null </pre>	

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
		<pre> }, { "outerFields": ["property", "SequenceNumber", "version"], "innerFields": ["name", "value"], "name": "StateEntity", "elementString": "state", "innerElemenString": "property" }] }</pre>	

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
GET	URI: http://localhost:5001/ provgw-config/v1/ udr.auditorstatus.cfg/ AUDIT_FILE_STATUS	Result Code: 200 OK Payload <pre>[{ "status": "AUDIT_COMPLETED", "startTime": "19/02/2024 22:00:34", "endTime": "19/02/2024 22:01:28", "auditReportID": "audit202402192200340 0", "matchCount": 11999996, "totalAuditedSubscrib ersSegment1": 12000003, "mismatchCount": 7, "progress": 100.0, "totalAuditedSubscrib ersSegment2": 12000005 }, { "status": "AUDIT_COMPLETED", "startTime": "19/02/2024 21:40:24", "endTime": "19/02/2024 21:41:18", "auditReportID": "audit202402192140240 0", "matchCount": 11999996,</pre>	404 Data field does not exist: If the database does not exist

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
		<pre>"totalAuditedSubscribersSegment1": 12000003, "mismatchCount": 7, "progress": 100.0, "totalAuditedSubscribersSegment2": 12000005 }]</pre>	

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
GET	URI: http://localhost:5001/provgw/nf-common-component/v1/igw/errorcodeprofiles	<pre>[{ "name": "ERR_NOT_FOUND", "errorCode": 404, "errorCause": "Cause Not Found", "errorTitle": "errorTitle Not Found", "errorDescription": "errorDescription Not Found" }, { "name": "ERR_RATE_LIMIT", "errorCode": 503, "errorCause": "TOO_MANY_REQUESTS at IGW", "errorTitle": "Too many requests sent. Service is overloaded at IGW", "errorDescription": "TOO_MANY_REQUESTS" }, { "name": "ERR_UNKNOWN_HOST", "errorCode": 400, "errorCause": "Unknown Host Exception at IGW", "errorTitle": "Unknown Host Exception",</pre>	NA

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
		<pre> "errorDescription": "Unknown Host Exception" }, { "name": "ERR_CCA_HEADER_VALID ATION", "errorCode": 403, "errorCause": "CCA_VERIFICATION_FAI LURE", "errorTitle": "CCA_HEADER_INVALID" }] </pre>	

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
GET	URI: http://localhost:5001/provgw/nf-common-component/v1/egw/errorcodeprofiles	<pre>[{ "name": "ERR_NOT_FOUND", "errorCode": 404, "errorCause": "Cause Not Found", "errorTitle": "errorTitle Not Found", "errorDescription": "errorDescription Not Found" }, { "name": "ERR_REQUEST_TIMEOUT" , "errorCode": 503 }, { "name": "ERR_UNKNOWN_HOST", "errorCode": 400, "errorCause": "Unknown Host Exception at EGW", "errorTitle": "Unknown Host Exception", "errorDescription": "Unknown Host Exception" }]</pre>	NA

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
GET	URI: http://localhost:5001/provgw/nf-common-component/v1/igw/routesconfiguration	<pre>[{ "id": "traffic_mapping_rest_group_prov", "uri": "http://provgw-provgw-service:5001", "order": 1, "predicates": [{ "args": { "pattern": "/*" }, "name": "Path" }] }]</pre>	NA

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
PUT	URI: http://localhost:5001/ provgw-config/v1/ udr.provgwservice.cfg/ PROVGW-SERVICE	Result Code: 200 OK Payload <pre>{ "tracingEnabled": false, "soapService_udrIp": "ocudr- ingressgateway- prov.ocudr", "soapService_udrSigna llingIp": "ocudr- ingressgateway- sig.ocudr", "retryErrorCodes": [500, 503], "retryCount": 3, "retryInterval": 2 }</pre>	400 Bad Request: JSONObject[<Para meterName>] not found. 400 Bad Request: Read Only field can not be modified 400 Bad Request: Invalid schema content supplied

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
PUT	URI: http://localhost:5001/ provgw-config/v1/ udr.auditorservice.cfg/ AUDITOR-SERVICE	Result Code: 200 OK Payload <pre>{ "auditPause": false, "daysToKeepExportedFiles": 1, "startTime": "14/09/2022 17:32:10", "segment1SLFInstanceId": "Segment1SLFInstanceId", "segment2SLFInstanceId": "Segment2SLFInstanceId", "maximumDiscrepanciesCount": 1000000, "deleteExportedFilesAfterAudit": true, "frequencyOfPeriodicDump": "ONE_TIME", "maxNumberAuditReports": 3 }</pre>	400 Bad Request: JSONObject[<ParameterName>] not found. 400 Bad Request: Read Only field can not be modified 400 Bad Request: Invalid schema content supplied

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
PUT	URI: http://localhost:5001/provgw-config/v1/udr.provgw.global.cfg/PROVGW-GLOBAL	Result Code: 200 OK Payload <pre> { "usageMode": "SLF", "outgoingHttps": false, "configClientConnectT imeout": 1000, "configClientReadTime out": 1000, "segDetails": [{ "nameOfSegment": "SEG-1", "fqdnValues": ["udr1- ingressgateway.udr1", "udr2- ingressgateway.udr2"], "preferredFqdn": "udr1- ingressgateway.udr1" }, { "nameOfSegment": "SEG-2", "fqdnValues": ["udr3- ingressgateway.udr3", "10.10.x.y:8081"], "preferredFqdn": "udr3- ingressgateway.udr3" }] } </pre>	400 Bad Request: JSONObject[<ParameterName>] not found. 400 Bad Request: Read Only field can not be modified 400 Bad Request: Invalid schema content supplied

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
		<pre>], "errorCodeProfiles": [{ "name": "INVALID_SLF_IP", "errorCode": "503", "errorCause": "DNS resolution", "errorTitle": "Service Unavailable", "errorDescription": "Service Unavailable" }, { "name": "INCORRECT_SLF_PORT", "errorCode": "503", "errorCause": "", "errorTitle": "Service Unavailable", "errorDescription": "Service Unavailable" }, { "name": "DRPROV_UNKNOWN_HOST" }, { "errorCode": "400", "errorCause": "Unknown Host Exception at IGW", "errorTitle": "Unknown Host Exception", </pre>	

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
		<pre> "errorDescription": "DRPROV down and GW unable to resolve on non-asm" }, { "name": "GW_BLACKLIST_IP", "errorCode": "500", "errorCause": "Encountered Blacklist IP exception at IGW", "errorTitle": "Internal Server Error", "errorDescription": "GW down and ProvGw unable to resolve on non-asm" }, { "name": "SLF_503_CONNECTTIMEO UT", "errorCode": "503", "errorCause": "Connect Timeout", "errorTitle": "Service Unavailable", "errorDescription": "Service Unavailable" }, { "name": "SLF_503_CONNECTREFUS ED", "errorCode": "503", </pre>	

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
		<pre> "errorCause": "Connection refused", "errorTitle": "Service Unavailable", "errorDescription": "Service Unavailable" }, { "name": "SLF_503_timeout-5000 ms", "errorCode": "503", "errorCause": "Total timeout 5000 ms elapsed", "errorTitle": "Service Unavailable", "errorDescription": "Service Unavailable" }, { "name": "SLF_503_SERVICEISDOW N", "errorCode": "503", "errorCause": "Service is down", "errorTitle": "Service Unavailable", "errorDescription": "Service Unavailable" }, { "name": "SERVER_ERROR_PLAIN_T </pre>	

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
		<pre> EXT_BODY", "errorCode": "503", "errorCause": "", "errorTitle": "", "errorDescription": "" }, { "name": "NON_ASM_SLF_IGW_DOWN _CONNECTION", "errorCode": "408", "errorCause": "Connection timeout at EGW", "errorTitle": "Connection timeout", "errorDescription": "Connection timeout" }, { "name": "NON_ASM_SLF_IGW_DOWN _REQUEST", "errorCode": "408", "errorCause": "Request Timeout at EGW", "errorTitle": "Request Timeout", "errorDescription": "Request Timeout" }, { "name": "NON_ASM_SLF_DRSERVIC E_DOWN_REQUEST", </pre>	

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
		<pre> "errorCode": "408", "errorCause": "Request Timeout at IGW", "errorTitle": "Request Timeout", "errorDescription": "Request Timeout" }] } </pre> Note: Do not change the default value of configClientConnectTimeout and configClientReadTimeout parameters unless required.	

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
PUT	URI: http://localhost:5001/ provgw-config/v1/ udr.provgwservice.sec.cfg/ PROVGW-SERVICE-SEC	Result Code: 200 OK Payload <pre> { "enablesec": true, "secEntities": [{ "outerFields": ["quota", "SequenceNumber", "version"], "innerFields": ["totalVolume", "RefInstanceId", "grantedTotalVolume", "outputVolume", "Type", "grantedInputVolume", "grantedOutputVolume" , "grantedTime", "grantedServiceSpecif ic", "name", "nextResetTime", "time", "inputVolume", "serviceSpecific", </pre>	400 Bad Request: JSONObject[<Para meterName>] not found. 400 Bad Request: Invalid schema content supplied

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
		<pre> "cid", "QuotaState"], "name": "QuotaEntity", "elementString": "usage", "innerElementString": "quota" }, { "outerFields": ["DynamicQuota", "SequenceNumber", "version"], "innerFields": ["InstanceId", "purchaseddatetime", "Priority", "InitialInputVolume", "Duration", "InterimReportingInterval", "InitialOutputVolume", , "Type", "activationdatetime", "expirationdatetime", "InitialTotalVolume", </pre>	

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
		<pre> "name", "InitialServiceSpecif ic", "InitialTime"], "name": "DynamicQuotaEntity", "elementString": "definition", "innerElemenString": "DynamicQuota" }, { "outerFields": ["MSISDN", "Tier", "NAI", "IMSI", "SequenceNumber", "EXTID", "ACCOUNTID", "BillingDay", "Entitlement"], "innerFields": null, "name": "Subscriber", "elementString": "subscriber", "innerElemenString": null </pre>	

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
		<pre> }, { "outerFields": ["property", "SequenceNumber", "version"], "innerFields": ["name", "value"], "name": "StateEntity", "elementString": "state", "innerElemenString": "property" }] }</pre>	

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
PUT	URI: http://localhost:5001/provgw/nf-common-component/v1/igw/errorcodeprofiles	Result Code: 200 OK <pre>[{ "name": "ERR_NOT_FOUND", "errorCode": 404, "errorCause": "Cause Not Found", "errorTitle": "errorTitle Not Found", "errorDescription": "errorDescription Not Found" }, { "name": "ERR_RATE_LIMIT", "errorCode": 503, "errorCause": "TOO_MANY_REQUESTS at IGW", "errorTitle": "Too many requests sent. Service is overloaded at IGW", "errorDescription": "TOO_MANY_REQUESTS" }, { "name": "ERR_UNKNOWN_HOST", "errorCode": 400, "errorCause": "Unknown Host Exception at IGW", "errorTitle": "Unknown Host</pre>	400 Bad Request: Could not Validate Json

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
		<pre>Exception", "errorDescription": "Unknown Host Exception" }, { "name": "ERR_CCA_HEADER_VALID ATION", "errorCode": 403, "errorCause": "CCA_VERIFICATION_FAI LURE", "errorTitle": "CCA_HEADER_INVALID" }]</pre>	

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
PUT	URI: http://localhost:5001/provgw/nf-common-component/v1/egw/errorcodeprofiles	<pre> Result Code: 200 OK [{ "name": "ERR_NOT_FOUND", "errorCode": 404, "errorCause": "Cause Not Found", "errorTitle": "errorTitle Not Found", "errorDescription": "errorDescription Not Found" }, { "name": "ERR_REQUEST_TIMEOUT" , "errorCode": 503 }, { "name": "ERR_UNKNOWN_HOST", "errorCode": 400, "errorCause": "Unknown Host Exception at EGW", "errorTitle": "Unknown Host Exception", "errorDescription": "Unknown Host Exception" }] </pre>	400 Bad Request: Could not Validate Json

Table 4-1 (Cont.) Configuration APIs for Provisioning Gateway Microservices

Operation Type	Request	Response	Notes
PUT	URI: http://localhost:5001/provgw/nf-common-component/v1/igw/routesconfiguration	Result Code: 200 OK <pre>[{ "id": "traffic_mapping_rest_group_prov", "uri": "http://provgw-provgw-service:5001", "order": 1, "predicates": [{ "args": { "pattern": "/*" }, "name": "Path" }] }]</pre> Note: Only two URI values are supported as follows: - SLF mode: "uri": "http://provgw-provgw-service:5001" - UDR mode: "uri": "http://provgw-provgw-service:62001"	400 Bad Request: Could not Validate Json

4.2 Configuration APIs for Log Level

This section describes the configuration APIs for log level.

Table 4-2 Configuration APIs for Log Level

Operation Type	Request	Response	Notes
GET	URI: http://localhost:5001/provgw-config/v1/provgw-service/logging	Result Code: 200 OK Payload <pre> { "packageLogLevel": [{ "packageName": "root", "logLevelForPackage": "WARN" }, { "packageName": "jetty", "logLevelForPackage": "WARN" }, { "packageName": "micronaut", "logLevelForPackage": "WARN" }, { "packageName": "cxf", "logLevelForPackage": "WARN" }], "appLogLevel": "WARN" }</pre>	NA

Table 4-2 (Cont.) Configuration APIs for Log Level

Operation Type	Request	Response	Notes
-	URI: http://localhost:5001/provgw-config/v1/auditor-service/logging	Result Code: 200 OK Payload <pre> { "packageLogLevel": [{ "packageName": "root", "logLevelForPackage": "WARN" }, { "packageName": "jetty", "logLevelForPackage": "WARN" }, { "packageName": "micronaut", "logLevelForPackage": "WARN" }, { "packageName": "cxf", "logLevelForPackage": "WARN" }], "appLogLevel": "INFO" }</pre>	NA

Table 4-2 (Cont.) Configuration APIs for Log Level

Operation Type	Request	Response	Notes
-	URI: http://localhost:5001/provgw/nf-common-component/v1/igw/logging	Result Code: 200 OK Payload <pre> { "appLogLevel": "WARN", "logDiscarding": { "enabled": false, "featureToThresholdMa pping": [{ "feature": "RATE_LIMITING", "thresholdFactor": 100 }, { "feature": "OVERLOAD_CONTROL", "thresholdFactor": 100 }, { "feature": "ROUTE_LEVEL_RATE_LIM ITING", "thresholdFactor": 100 }, { "feature": "RSS_RATE_LIMITING", "thresholdFactor": 100 }, { "feature": "EGRESS_RATE_LIMITING </pre>	NA

Table 4-2 (Cont.) Configuration APIs for Log Level

Operation Type	Request	Response	Notes
		<pre>"", "thresholdFactor": 100 }], }, "packageLogLevel": [{ "packageName": "root", "logLevelForPackage": "WARN" }, { "packageName": "oauth", "logLevelForPackage": "WARN" }], "logSubscriberInfo": "DISABLED", "additionalErrorLoggi ng": "DISABLED" }</pre>	

Table 4-2 (Cont.) Configuration APIs for Log Level

Operation Type	Request	Response	Notes
-	URI: http://localhost:5001/provgw/nf-common-component/v1/egw/logging	Result Code: 200 OK Payload <pre> { "appLogLevel": "WARN", "logDiscarding": { "enabled": false, "featureToThresholdMa pping": [{ "feature": "RATE_LIMITING", "thresholdFactor": 100 }, { "feature": "NOTIFICATION_RATE_LI MITING", "thresholdFactor": 100 }], }, "packageLogLevel": [{ "packageName": "root", "logLevelForPackage": "WARN" }, { "packageName": "oauth", "logLevelForPackage": "WARN" }] } </pre>	NA

Table 4-2 (Cont.) Configuration APIs for Log Level

Operation Type	Request	Response	Notes
		<pre>], "logSubscriberInfo": "DISABLED", "additionalErrorLoggi ng": "DISABLED" }</pre>	

Table 4-2 (Cont.) Configuration APIs for Log Level

Operation Type	Request	Response	Notes
-	URI: http://localhost:5001/provgw-config/v1/all/logging	Result Code: 200 OK Payload <pre>[{ "auditor- service": "{\"packageLogLevel\":" : [{\\"packageName\":"\r oot\","logLevelForPa ckage\":"WARN\"}, {\\"packageName\":"je tty\","logLevelForPa ckage\":"WARN\"}, {\\"packageName\":"mi cronaut\","logLevelF orPackage\":"WARN\"} , {\\"packageName\":"cx f\","logLevelForPack age\":"WARN\"}],\\"ap pLogLevel\":"INFO\"} ", "prov- ingressgateway": "{\"appLogLevel\":"W ARN\","logDiscarding \":" {\\"enabled\":"false,\" featureToThresholdMap ping\":" [{\\"feature\":"RATE_ LIMITING\","threshol dFactor\":"100}, {\\"feature\":"OVERLO AD_CONTROL\","thresh oldFactor\":"100}, {\\"feature\":"ROUTE_ LEVEL_RATE_LIMITING\" ,\"thresholdFactor\":" 100}, {\\"feature\":"RSS_RA TE_LIMITING\","thres holdFactor\":"100}, {\\"feature\":"EGRESS _RATE_LIMITING\","th resholdFactor\":"100}] },\\"packageLogLevel\":" :</pre>	NA

Table 4-2 (Cont.) Configuration APIs for Log Level

Operation Type	Request	Response	Notes
		<pre>[{"packageName":"root","logLevelForPackage":"WARN"}, {"packageName":"oauth","logLevelForPackage":"WARN"}], "logSubscriberInfo":{"DISABLED","additionalErrorLogging":{"DISABLED"}}, "provgw-service": {"packageNameLogLevel": : [{"packageName":"root","logLevelForPackage":"WARN"}, {"packageName":"jetty","logLevelForPackage":"WARN"}, {"packageName":"micronaut","logLevelForPackage":"WARN"} , {"packageName":"cxf","logLevelForPackage":"WARN"}], "appLogLevel":"WARN"} ", "provgw-config": {"packageNameLogLevel": : [{"packageName":"root","logLevelForPackage":"WARN"}, {"packageName":"jetty","logLevelForPackage":"WARN"}, {"packageName":"micronaut","logLevelForPackage":"WARN"} , {"packageName":"cxf","logLevelForPackage":"WARN"}], "appLogLevel":"WARN"} ", "prov-</pre>	

Table 4-2 (Cont.) Configuration APIs for Log Level

Operation Type	Request	Response	Notes
		<pre>egressgateway": {"appLogLevel":"WARN", "logDiscarding": {"enabled":false, "featureToThresholdMapping": [{"feature":"RATE_LIMITING", "thresholdFactor":100}, {"feature":"NOTIFICATION_RATE_LIMITING", "thresholdFactor":100}]}}, "packageLogLevel": [{"packageName":"root", "logLevelForPackage":"WARN"}, {"packageName":"oauth", "logLevelForPackage":"WARN"}]}, "logSubscriberInfo":"DISABLED", "additionalErrorLogging":"DISABLED"} }</pre>	

Table 4-2 (Cont.) Configuration APIs for Log Level

Operation Type	Request	Response	Notes
-	URI : http://localhost:5001/provgw-config/v1/provgw-config/logging	Result Code: 200 OK Payload <pre> { "packageLogLevel": [{ "packageName": "root", "logLevelForPackage": "WARN" }, { "packageName": "jetty", "logLevelForPackage": "WARN" }, { "packageName": "micronaut", "logLevelForPackage": "WARN" }, { "packageName": "cxf", "logLevelForPackage": "WARN" }], "appLogLevel": "WARN" }</pre>	NA

Table 4-2 (Cont.) Configuration APIs for Log Level

Operation Type	Request	Response	Notes
PUT	URI: http://localhost:5001/provgw-config/v1/provgw-service/logging	Result Code: 200 OK Payload <pre> { "packageLogLevel": [{ "packageName": "root", "logLevelForPackage": "WARN" }, { "packageName": "jetty", "logLevelForPackage": "WARN" }, { "packageName": "micronaut", "logLevelForPackage": "WARN" }, { "packageName": "cxf", "logLevelForPackage": "WARN" }], "appLogLevel": "WARN" }</pre>	400 Bad Request: Schema validation failed

Table 4-2 (Cont.) Configuration APIs for Log Level

Operation Type	Request	Response	Notes
-	URI: http://localhost:5001/provgw-config/v1/auditor-service/logging	Result Code: 200 OK Payload <pre> { "packageLogLevel": [{ "packageName": "root", "logLevelForPackage": "WARN" }, { "packageName": "jetty", "logLevelForPackage": "WARN" }, { "packageName": "micronaut", "logLevelForPackage": "WARN" }, { "packageName": "cxf", "logLevelForPackage": "WARN" }], "appLogLevel": "WARN" }</pre>	400 Bad Request: Schema validation failed

Table 4-2 (Cont.) Configuration APIs for Log Level

Operation Type	Request	Response	Notes
-	URI: http://localhost:5001/provgw/nf-common-component/v1/igw/logging	Result Code: 200 OK Payload <pre> { "appLogLevel": "WARN", "logDiscarding": { "enabled": false, "featureToThresholdMa pping": [{ "feature": "RATE_LIMITING", "thresholdFactor": 100 }, { "feature": "NOTIFICATION_RATE_LI MITING", "thresholdFactor": 100 }], }, "packageLogLevel": [{ "packageName": "root", "logLevelForPackage": "WARN" }, { "packageName": "oauth", "logLevelForPackage": "WARN" }] } </pre>	400 Bad Request: Could not Validate Json

Table 4-2 (Cont.) Configuration APIs for Log Level

Operation Type	Request	Response	Notes
		<pre>], "logSubscriberInfo": "DISABLED", "additionalErrorLoggi ng": "DISABLED" }</pre>	

Table 4-2 (Cont.) Configuration APIs for Log Level

Operation Type	Request	Response	Notes
-	URI: http://localhost:5001/provgw/nf-common-component/v1/egw/logging	Result Code: 200 OK Payload <pre> { "appLogLevel": "WARN", "logDiscarding": { "enabled": false, "featureToThresholdMa pping": [{ "feature": "RATE_LIMITING", "thresholdFactor": 100 }, { "feature": "NOTIFICATION_RATE_LI MITING", "thresholdFactor": 100 }], }, "packageLogLevel": [{ "packageName": "root", "logLevelForPackage": "WARN" }, { "packageName": "oauth", "logLevelForPackage": "WARN" }] } </pre>	400 Bad Request: Could not Validate Json

Table 4-2 (Cont.) Configuration APIs for Log Level

Operation Type	Request	Response	Notes
		<pre>], "logSubscriberInfo": "DISABLED", "additionalErrorLoggi ng": "DISABLED" } </pre>	
-	URI : http://localhost:5001/provgw-config/v1/provgw-config/logging	<pre> Result Code: 200 OK Payload { "appLogLevel": "WARN", "packageLogLevel": [{ "packageName": "root", "logLevelForPackage": "WARN" }, { "packageName": "jetty", "logLevelForPackage": "WARN" }, { "packageName": "micronaut", "logLevelForPackage": "WARN" }, { "packageName": "cxf", "logLevelForPackage": "WARN" }] } </pre>	400 Bad Request: Schema validation failed

4.3 Configuration APIs for Export and Import

This section describes the configuration APIs for export and import.

Table 4-3 Configuration APIs for Export and Import

Operation Type	Request	Response	Notes
POST	URI to export all services: <code>http://localhost:8081/provgw-config/v1/export</code>	Result Code: 201 Created Payload Export resource id: 140574ec-c2cf-40c5-8436-5320efc15399	This is the first step to initiate export.
GET	URI: <code>http://localhost:8081/provgw-config/v1/export/140574ec-c2cf-40c5-8436-5320efc15399/status</code> Export resource id: 140574ec-c2cf-40c5-8436-5320efc15399	Payload { "status": "DONE", "exportResourceId": "140574ec-c2cf-40c5-8436-5320efc15399", "createTimeStamp": "2021-10-06T11:00:35Z", "percentage": "100", "result": "PARTIAL_SUCCESS" }	This is the second step. Keep calling this API until "percentage": "100".
GET	URI: <code>http://localhost:8081/provgw-config/v1/export/140574ec-c2cf-40c5-8436-5320efc15399/report</code> Export resource id: 140574ec-c2cf-40c5-8436-5320efc15399	-	This is the third step. This API gives complete export report.

Table 4-3 (Cont.) Configuration APIs for Export and Import

Operation Type	Request	Response	Notes
GET	URI: http://localhost:8081/provgw-config/v1/export/140574ec-c2cf-40c5-8436-5320efc15399/download Export resource id: 140574ec-c2cf-40c5-8436-5320efc15399	Result Code: 200 OK exportedFiles_1.12.0_20210706080247.zip	This is the fourth step. Use this API to download the exported zip file.
POST	URL: http://localhost:8081/provgw-config/v1/import	Result Code: 201 Created Payload Import resource id: e23e70cf-440b-4b4b-bba4-58f0a45c06ae	This is the first step to initiate import.
GET	URL: http://localhost:8081/provgw-config/v1/import/e23e70cf-440b-4b4b-bba4-58f0a45c06ae/status Import resource id: e23e70cf-440b-4b4b-bba4-58f0a45c06ae	Result Code: 200 OK Payload { "status": "DONE", "importResourceId": "a9973784-54d9-4e02-bfb9-e6ecd4896d6d", "createTimeStamp": "2021-10-06T12:03:54Z", "percentage": "100", "progress": "3 / 3 M0(s) completed", "result": "SUCCESS" }	This is the second step. Keep calling this API until "percentage": "100".

Table 4-3 (Cont.) Configuration APIs for Export and Import

Operation Type	Request	Response	Notes
GET	URL: http://localhost:8081/provgw-config/v1/import/e23e70cf-440b-4b4b-bba4-58f0a45c06ae/report Import resource id: 552a4328-21ec-43aa-a460-58ce1df407ae	Result Code: 200 OK Payload <pre>{ "report": [{ "name": "Auditor Service", "status": "1 / 1 records imported successfully." }, { "name": "ProvGateway Service", "status": "1 / 1 records imported successfully." }, { "name": "Global Configurations", "status": "1 / 1 records imported successfully." }] }</pre>	This is the third step. This API gives complete import report.

4.4 List of Errors and its Details

The list of errors and its details are as follows:

Table 4-4 Error Details

Error Detail	Error Cause	Error Message
HTTP Response Code: 400 Error Code: E555 Error Title: Bad Request	UNSPECIFIED_NF_FAILURE	Another import or export operation request is already in progress.

Table 4-4 (Cont.) Error Details

Error Detail	Error Cause	Error Message
HTTP Response Code: 400 Error Code: E554 Error Title: Bad Request	UNSPECIFIED_NF_FAILURE	• Provided file for import has unsupported file format or file content. • Error reading zip stream.
HTTP Response Code: 400 Error Code: E553 Error Title: Bad Request	OPTIONAL_QUERY_PARAM_INCORRECT	• Empty or incorrect MO passed. • MO name is not passed or the passed MO name is incorrect.
HTTP Response Code: 400 Error Code: E578 Error Title: Bad Request	MANDATORY_IE_INCORRECT /OPTIONAL_IE_INCORRECT OPTIONAL_IE_INCORRECT MANDATORY_QUERY_PARAM_INCORRECT	• Invalid payload • Invalid payload, empty payload, payload must not be empty. • Invalid payload, invalid payload, payload must have at least one valid parameter.
HTTP Response Code: 400 Error Code: E579 Error Title: Bad Request	INVALID_MSG_FORMAT	• Invalid data format
HTTP Response Code: 400 Error Code: E564 Error Title: Bad Request	OPTIONAL_IE_INCORRECT	• Invalid schema content supplied.
HTTP Response Code: 400 Error Code: E560 Error Title: Bad Request	MANDATORY_IE_INCORRECT	• Invalid URI sent from client
HTTP Response Code: 400 Error Code: E576 Error Title: Bad Request	OPTIONAL_IE_INCORRECT	• Insertion or update of invalid records to the database.
HTTP Response Code: 403 Error Code: E559 Error Title: Forbidden	MODIFICATION_NOT_ALLOWED	• Read only field can not be modified.

Table 4-4 (Cont.) Error Details

Error Detail	Error Cause	Error Message
HTTP Response Code: 404 Error Code: E550 Error Title: Not Found	DATA_NOT_FOUND	- Import or export ResourceId or report not found. Import request id <importResourceId> not found. - Import or export ResourceId or report not found. Import report with <importResourceId> does not exist. - Import or export ResourceId or report not found. Import report with <importResourceId> not found. - Import or export ResourceId or report not found. Exported files with id <exportResourceId> does not exist. - Import or export ResourceId or report not found. Export request id <exportResourceId> not found - Import or export ResourceId or report not found. Export report with <exportResourceId> does not exist. - Import or export ResourceId or report not found. Export report with <exportResourceId> not found.
HTTP Response Code: 404 Error Code: E565 Error Title: Bad Request	DATA_NOT_FOUND	Data field does not exist.
HTTP Response Code: 404 Error Code: E577 Error Title: Not Found	DATA_NOT_FOUND	Resource fetched from database failed or subscriber does not exist.
HTTP Response Code: 405 Error Code: E580 Error Title: Method Not Allowed Error	OPERATION_NOT_ALLOWED	Operation not allowed.
HTTP Response Code: 415 Error Code: E561 Error Title: Unsupported Media Type	INVALID_MSG_FORMAT	Unsupported Media Type header.
HTTP Response Code: 500 Error Code: E551 Error Title: Internal Server Error	UNSPECIFIED_NF_FAILURE	Retrieving the report or status of import or export when operation is in progress. Import or export is in progress with <completionPercent>% complete. Please try after some time.

Table 4-4 (Cont.) Error Details

Error Detail	Error Cause	Error Message
HTTP Response Code: 500 Error Code: E552 Error Title: Internal Server Error	UNSPECIFIED_NF_FAILURE	Import or export report could not be generated.
HTTP Response Code: 500 Error Code: E556 Error Title: Internal Server Error	UNSPECIFIED_NF_FAILURE	Unable to download the exported data.
HTTP Response Code: 500 Error Code: E581 Error Title: Internal Server Error	UNSPECIFIED_NF_FAILURE	Internal server error.
HTTP Response Code: 500 Error Code: E570 Error Title: Internal Server Error	UNSPECIFIED_NF_FAILURE	SQL command grammar error.
HTTP Response Code: 500 Error Code: E571 Error Title: Internal Server Error	UNSPECIFIED_NF_FAILURE	Resource accessed in an incorrect process.
HTTP Response Code: 500 Error Code: E572 Error Title: Internal Server Error	UNSPECIFIED_NF_FAILURE	Permission denied to requested resource on the database.
HTTP Response Code: 500 Error Code: E573 Error Title: Internal Server Error	UNSPECIFIED_NF_FAILURE	Database table or resource not accessible.
HTTP Response Code: 500 Error Code: E574 Error Title: Internal Server Error	UNSPECIFIED_NF_FAILURE	Transient database access issue.
HTTP Response Code: 500 Error Code: E575 Error Title: Internal Server Error	UNSPECIFIED_NF_FAILURE	Cannot acquire lock on database resource.