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| 3GPP TS 29.505 V15.8.0 (2021-12) | |
| Technical Specification | |
| 3rd Generation Partnership Project;  Technical Specification Group Core Network and Terminals;  5G System; Usage of the Unified Data Repository services for Subscription Data;  Stage 3  (Release 15) | |
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# Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

x the first digit:

1 presented to TSG for information;

2 presented to TSG for approval;

3 or greater indicates TSG approved document under change control.

y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

z the third digit is incremented when editorial only changes have been incorporated in the document.

In the present document, modal verbs have the following meanings:

**shall** indicates a mandatory requirement to do something

**shall not** indicates an interdiction (prohibition) to do something

The constructions "shall" and "shall not" are confined to the context of normative provisions, and do not appear in Technical Reports.

The constructions "must" and "must not" are not used as substitutes for "shall" and "shall not". Their use is avoided insofar as possible, and they are not used in a normative context except in a direct citation from an external, referenced, non-3GPP document, or so as to maintain continuity of style when extending or modifying the provisions of such a referenced document.

**should** indicates a recommendation to do something

**should not** indicates a recommendation not to do something

**may** indicates permission to do something

**need not** indicates permission not to do something

The construction "may not" is ambiguous and is not used in normative elements. The unambiguous constructions "might not" or "shall not" are used instead, depending upon the meaning intended.

**can** indicates that something is possible

**cannot** indicates that something is impossible

The constructions "can" and "cannot" are not substitutes for "may" and "need not".

**will** indicates that something is certain or expected to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document

**will not** indicates that something is certain or expected not to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document

**might** indicates a likelihood that something will happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document

**might not** indicates a likelihood that something will not happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document

In addition:

**is** (or any other verb in the indicative mood) indicates a statement of fact

**is not** (or any other negative verb in the indicative mood) indicates a statement of fact

The constructions "is" and "is not" do not indicate requirements.

# 1 Scope

The present document specifies the usage of the Unified Data Repository services for subscription data. It provides the resource definition and data model for subscription data used over the Nudr Service Based Interface. The protocol definition for Nudr Service Based Interface which is specific to subscription data is also specified in the present document.

The stage 3 protocol definition for Nudr Service Based Interface which is common for subscription data, policy data, structure data and application data for exposure is specified in 3GPP TS 29.504 [2].

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 29.504: "5G System; Unified Data Repository Services; Stage 3".

[3] 3GPP TS 29.571: "5G System; Common Data Types for Service Based Interfaces Stage 3".

[4] 3GPP TS 23.501: "System Architecture for the 5G System; Stage 2".

[5] 3GPP TS 23.003: "Numbering, addressing and identification".

[6] 3GPP TS 29.503: "Unified Data Management Services".

[7] 3GPP TS 29.501: "5G System; Principles and Guidelines for Services Definition; Stage 3".

[8] 3GPP TS 29.500: "5G System; Technical Realization of Service Based Architecture; Stage 3".

[9] 3GPP TS 33.501: "Security architecture and procedures for 5G system".

[10] 3GPP TS 33.102: "3G Security; Security architecture".

[11] 3GPP TS 35.206: "An example algorithm set for the 3GPP authentication and key generation functions f1, f1\*, f2, f3, f4, f5 and f5\*; Document 2: Algorithm specification".

[12] 3GPP TS 35.231: "A second example algorithm set for the 3GPP authentication and key generation functions f1, f1\*, f2, f3, f4, f5 and f5\*; Document 1: Algorithm specification ".

[13] 3GPP TS 29.518: "5G System; Access and Mobility Management Services; Stage 3".

[14] 3GPP TR 21.900: "Technical Specification Group working methods".

[15] 3GPP TS 29.509: "Authentication Server Services; Stage 3".

[16] IETF RFC 3986: "Uniform Resource Identifier (URI): Generic Syntax".

# 3 Definitions and abbreviations

## 3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [1].

**pointer of attribute:** The pointer of the attribute identifies the location of the attribute in the JSON object. The pointer of the attribute is a string with one or more segments, each segment is the name of an attribute within that JSON object, different segments are separated with a "/".

## 3.2 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

5GC 5G Core

AMF Access and Mobility Management Function

DNN Data Network Name

GPSI Generic Public Subscription Identifier

JSON Javascript Object Notation

SMF Session Management Function

SMS Short Message Service

SMSF SMS Function

SUPI Subscription Permanent Identifier

UDM Unified Data Management

UDR Unified Data Repository

# 4 Overview

The resources, data model and usage defined in the present document are used by the 5GC NFs (e.g. UDM) to access the subscription data via the Unified Data Repository services specified in 3GPP TS 29.504 [2].

# 5 Usage of Nudr\_DataRepository Service

## 5.1 Introduction

The following clauses specify the usage of Nudr\_DataRepository service for subscription data. The principles specified in 3GPP TS 29.504 [2] are followed unless explicitly specified otherwise in the following clauses.

## 5.2 Resources

### 5.2.1 Overview



Figure 5.2.1-1: Resource URI sub-level structure for subscription data



Figure 5.2.1-2: Resource URI sub-level structure for subscription data (cont.)

Table 5.2.1-1 provides an overview of the resources and applicable HTTP methods.

Table 5.2.1-1: Resources and methods overview

|  |  |  |  |
| --- | --- | --- | --- |
| Resource name | Resource URI | HTTP method | Description |
| AuthenticationSubscription | /subscription-data/{ueId}/authentication-data/authentication-subscription | GET | Retrieve a UE's authentication subscription data |
| PATCH | Update a UE's authentication subscription data  Updates shall be limited to the sequenceNumber attribute. Attempts to patch any other attribute shall be rejected by the UDR. |
| AuthenticationSoR | /subscription-data/{ueId}/ue-update-confirmation-data/sor-data | PUT | Store UE's SOR acknowledgement information (SoR-XMAC-IUE) |
| GET | Retrieve UE's SoR acknowledgement information |
| AuthenticationUPU | /subscription-data/{ueId}/ue-update-confirmation-data/upu-data | PUT | Store UE Parameter Update acknowledgement information (UPU-XMAC-IUE) |
| GET | Retrieve UE Parameter Update acknowledgement information |
| AuthenticationStatus | /subscription-data/{ueId}/authentication-data/authentication-status | PUT | Store a UE's authentication status |
| GET | Retrieve a UE's authentication status |
| ProvisionedData | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data | GET | Retrieve the UE's subscribed Provisioned Data |
| AccessAndMobilitySubscriptionData | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data /am-data | GET | Retrieve the UE's subscribed Access and Mobility Data |
| SmfSelectionSubscriptionData | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/smf-selection-subscription-data | GET | Retrieve the UE's subscribed SMF Selection Data |
| SessionManagementSubscriptionData | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sm-data | GET | Retrieve the UE's subscribed SM Subscription Data |
| ContextData | /subscription-data/{ueId}/context-data | GET | Retrieve the UE's context Data |
| Amf3GppAccessRegistration | /subscription-data/{ueId}/context-data/amf-3gpp-access | PUT | Create and Update the AMF registration for 3GPP access |
| PATCH | Modify the AMF registration for 3GPP access |
| GET | Retrieve the AMF registration information for 3GPP access |
| AmfNon3GppAccessRegistration | /subscription-data/{ueId}/ context-data/amf-non-3gpp-access | PUT | Update the AMF registration for non 3GPP access |
| PATCH | Modify the AMF registration for non 3GPP access |
| GET | Retrieve the AMF registration information for non 3GPP access |
| SmfRegistrations | /subscription-data/{ueId}/context-data/smf-registrations | GET | Retrieve the list of the SMF registrations |
| IndividualSmfRegistration | /subscription-data/{ueId}/context-data /smf-registrations/{pduSessionId} | PUT | Store an individual SMF registration identified by PDU Session Id |
| DELETE | Delete an individual SMF registration |
| GET | Retrieve individual SMF registration |
| OperatorSpecificData | /subscription-data/{ueId}/operator-specific-data | GET | retrieve the operator specific subscription data of a UE |
| PATCH | modify the operator specific subscription data of a UE |
| OperatorDeterminedBarringData | /subscription-data/{ueId}/operator-determined-barring-data | GET | Retrieve the UE's Operator Determined Barring |
| SMSManagementSubscriptionData | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sms-mng-data | GET | Retrieve the UE's subscribed SMS management subscription data. |
| Smsf3GppAccessRegistration | /subscription-data/{ueId}/context-data /smsf-3gpp-access | PUT | Create or Update the SMSF registration |
| DELETE | Delete the SMSF registration for 3GPP access |
| GET | Retrieve the SMSF registration information |
| SmsfNon3GppAccessRegistration | /subscription-data/{ueId}/context-data /smsf-non-3gpp-access | PUT | Create or Update the SMSF registration for non 3GPP access |
| DELETE | Delete the SMSF registration for non 3GPP access |
| GET | Retrieve the SMSF registration information for non 3GPP access |
| SdmSubscriptions | /subscription-data/{ueId}/context-data/sdm-subscriptions | GET | Retrieve SDM subscriptions |
| POST | Create an individual SDM subscription |
| IndividualSdmSubscription | /subscription-data/{ueId}/context-data/sdm-subscriptions/{subsId} | PUT | Update an individual SDM subscription |
| DELETE | Delete an individual SDM subscription |
| PATCH | Update an individual SDM Subscription |
| EeSubscriptions | /subscription-data/{ueId}/context-data/ee-subscriptions | GET | Retrieve EE subscriptions |
| POST | Create an EE subscription |
| IndividualEeSubscription | /subscription-data/{ueId}/context-data/ee-subscriptions/{subsId} | PUT | Update an individual EE subscription |
| DELETE | Delete an individual EE subscription |
| PATCH | Update an individual EE subscription |
| AmfSubscriptionInfo | /subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}/amf-subscriptions | PUT | Store information related the a received Amf-EE-Subscription response |
| DELETE | Delete the Amf-EE-subscriptions |
| GET | Retrieve AMF-subscriptions |
| PATCH | Update AMF-subscriptions |
| EeProfileData | /subscription-data/{ueId}/ ee-profile-data | GET | Retrieve the UE's subscribed EE profile data. |
| ProvisionedParamenterData | /subscription-data/{ueId}/pp-data | PATCH | Update of provisioned parameters. |
| GET | Retrieves the UE's provisioned parameters. |
| SMSSubscriptionData | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sms-data | GET | Retrieve the UE's subscribed SMS subscription data. |
| SubscriptionDataSubscriptions | /subscription-data/subs-to-notify | GET | Retrieve existing subscriptions |
| POST | Create a subscription, i.e. subscribe a node to receive notification for change of data |
| DELETE | Deletes multiple subscriptions for a given UE. |
| IndividualSubscriptionDataSubscription | /subscription-data/subs-to-notify/{subsId} | DELETE | Delete the subscription identified by {subsId}, i.e. unsubscribe a node to receive notification for change of data |
| PATCH | Update an individual Subscription to notification |
| EeGroupSubscriptions | /subscription-data/group-data/{ueGroupId}/ee-subscriptions | GET | Retrieve EE subscriptions for groups of UEs |
| POST | Create an EE subscription for groups of UEs |
| IndividualEeGroupSubscription | /subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subsId} | PUT | Update an individual EE subscription for a group of UEs |
| DELETE | Delete an individual EE subscription for a group of UEs |
| PATCH | Update an individual EE subscription for a group of UEs |
| TraceData | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data /trace-data | GET | Retrieve the UE's trace configuration data |
| IdentityData | /subscription-data/{ueId}/identity-data | GET | Retrieve identity data that corresponds to the provided ueId |
| SharedData (Collection) | /subscription-data/shared-data | GET | Retrieve shared data |
| GroupIdentifiers | /subscription-data/group-data/group-identifiers | GET | Retrieve group identifiers |

### 5.2.2 Resource: AuthenticationSubscription

#### 5.2.2.1 Description

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

NOTE 1: This resource contains security-sensitive attributes, such as the long-term key of the UE (see "encPermanentKey" attribute of the AuthenticationSubscription data type in clause 5.4.2.2). No security for this is specified in this release.

NOTE 2: Although these security-sensitive attributes are stored in an encrypted form in the UDR, operators can consider its storage separately from other types of subscription data. How to achieve this in a secure way is implementation-specific; a description of a typical mechanism can be found in the informative Annex X in 3GPP TS 29.500 [8].

#### 5.2.2.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/authentication-data/authentication-subscription

This resource shall support the resource URI variables defined in table 5.2.2.2-1.

Table 5.2.2.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI (see 3GPP TS 23.501 [4] clause 5.9.2)   pattern: "^(imsi-[0-9]{5,15}|nai-.+|.+)$" |

#### 5.2.2.3 Resource Standard Methods

##### 5.2.2.3.1 GET

This method shall support the URI query parameters specified in table 5.2.2.3.1-1.

Table 5.2.2.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.2.3.1-2 and the response data structures and response codes specified in table 5.2.2.3.1-3.

Table 5.2.2.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.2.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| AuthenticationSubscription | M | 1 | 200 OK | Upon success, a response body containing the AuthenticationSubscription shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.2.3.2 PATCH

This method is used to modify the authentication data of UE in the UDR.

This method shall support the URI query parameters specified in table 5.2.2.3.2-1.

Table 5.2.2.3.2-1: URI query parameters supported by the PATCH method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.2.3.2-2 and the response data structures and response codes specified in table 5.2.2.3.2-3.

Table 5.2.2.3.2-2: Data structures supported by the PATCH Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| array(PatchItem) | M | 1..N | Contains the delta data to the authentication subscription of a UE |

Table 5.2.2.3.2-3: Data structures supported by the PATCH Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon successful modification there is no body in the response message. |
| ProblemDetails | M | 1 | 403 Forbidden | One or more attributes are not allowed to be modified according to e.g. policy or local configuration.  The invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified.  The cause attribute shall be set to "MODIFY\_NOT\_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.3 Resource: AccessAndMobilitySubscriptionData

#### 5.2.3.1 Description

This resource represents the subscribed AccessAndMobilitySubscriptionData for a SUPI for use in a serving PLMN. It is queried by the AMF via the UDM after registering.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.3.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/am-data

This resource shall support the resource URI variables defined in table 5.2.3.2-1.

Table 5.2.3.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)  pattern: "^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |
| servingPlmnId | Represents the Serving PLMN ID (<MCC><MNC>)  pattern: "^[0-9]{5,6}$" |

#### 5.2.3.3 Resource Standard Methods

##### 5.2.3.3.1 GET

This method shall support the URI query parameters specified in table 5.2.3.3.1-1.

Table 5.2.3.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| fields | array(string) | C | 1..N | When the NF consumer only retrieves a subset of the resource, the " fields " query parameter shall be included. The " fields " query parameter contains the pointers of the attribute(s) to be retrieved. |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.3.3.1-2 and the response data structures and response codes specified in table 5.2.3.3.1-3.

Table 5.2.3.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.3.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| AccessAndMobilitySubscriptionData | M | 1 | 200 OK | Upon success, a response body containing the Access and Mobility Subscription Data shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.4 Resource: SmfSelectionSubscriptionData

#### 5.2.4.1 Description

This resource represents the subscribed SmfSelectionSubscriptionData for a SUPI. It is queried by the UDM triggered by the AMF after registering.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.4.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/smf-selection-subscription-data

This resource shall support the resource URI variables defined in table 5.2.4.2-1.

Table 5.2.4.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)  pattern: "^(imsi-[0-9]{5,15}|nai-.+-|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |
| servingPlmnId | Represents the Serving PLMN ID (<MCC><MNC>)  pattern: "^[0-9]{5,6}$" |

#### 5.2.4.3 Resource Standard Methods

##### 5.2.4.3.1 GET

This method shall support the URI query parameters specified in table 5.2.4.3.1-1.

Table 5.2.4.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| fields | array(string) | C | 1..N | When the NF consumer only retrieves a subset of the resource, the " fields " query parameter shall be included. The " fields " query parameter contains the pointers of the attribute(s) to be retrieved. |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.4.3.1-2 and the response data structures and response codes specified in table 5.2.4.3.1-3.

Table 5.2.4.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.4.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| SmfSelectionSubscriptionData | M | 1 | 200 OK | Upon success, a response body containing the SMF Selection Subscription Data for the user shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.5 Resource: SessionManagementSubscriptionData

#### 5.2.5.1 Description

This resource represents the subscribed SessionManagementSubscriptionData for a SUPI. It is queried by the UDM triggered by the SMF during session setup, using one or both of query parameters representing the selected network slice and the DNN.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.5.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sm-data

This resource shall support the resource URI variables defined in table 5.2.5.2-1.

Table 5.2.5.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)   pattern: "^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |
| servingPlmnId | Represents the Serving PLMN ID (<MCC><MNC>)  pattern: "^[0-9]{5,6}$" |

#### 5.2.5.3 Resource Standard Methods

##### 5.2.5.3.1 GET

This method shall support the URI query parameters specified in table 5.2.5.3.1-1.

Table 5.2.5.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| single-nssai | Snssai | O | 0..1 |  |
| dnn | Dnn | O | 0..1 |  |
| fields | array(string) | C | 1..N | When the NF consumer only retrieves a subset of the resource, the " fields " query parameter shall be included. The " fields " query parameter contains the pointers of the attribute(s) to be retrieved. |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

If "single-nssai" is not included, and "dnn" is not included, UDR shall return all DNN configurations for all network slice(s).

If "single-nssai" is included, and "dnn" is not included, UDR shall return all DNN configurations for the requested network slice identified by "single-nssai".

If "single-nssai" is not included, and "dnn" is included, UDR shall return all DNN configurations identified by "dnn" for all network slices where such DNN is available.

If "single-nssai" is included, and "dnn" is included, UDR shall return the DNN configuration identified by "dnn", if such DNN is available in the network slice identified by "single-nssai".

This method shall support the request data structures specified in table 5.2.5.3.1-2 and the response data structures and response codes specified in table 5.2.5.3.1-3.

Table 5.2.5.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.5.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| array(SessionManagementSubscriptionData) | M | 1..N | 200 OK | Upon success, a response body containing the Session Management Subscription data shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.6 Resource: Amf3GppAccessRegistration

#### 5.2.6.1 Description

This resource is used to represent AMF registrations to be stored in the UDR by the UDM.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.6.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/amf-3gpp-access

This resource shall support the resource URI variables defined in table 5.2.6.2-1.

Table 5.2.6.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)   pattern: "^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |

#### 5.2.6.3 Resource Standard Methods

##### 5.2.6.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.6.3.1-1.

Table 5.2.6.3.1-1: URI query parameters supported by the PUT method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.6.3.1-2 and the response data structures and response codes specified in table 5.2.6.3.1-3.

Table 5.2.6.3.1-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| Amf3GppAccessRegistration | M | 1 | The AMF registration for 3GPP access is replaced with the received information. |

Table 5.2.6.3.1-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned |
| Amf3GppAccessRegistration | M | 1 | 201 Created | Upon success, a response body containing a representation of the created Individual Amf3GppAccessRegistration resource shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.6.3.2 PATCH

This method is used to modify AMF registration data for 3GPP access in the UDR.

This method shall support the URI query parameters specified in table 5.2.6.3.2-1.

Table 5.2.6.3.2-1: URI query parameters supported by the PATCH method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.6.3.2-2 and the response data structures and response codes specified in table 5.2.6.3.2-3.

Table 5.2.6.3.2-2: Data structures supported by the PATCH Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| array(PatchItem) | M | 1..N | Contains the delta data to the AMF registration data for 3GPP access |

Table 5.2.6.3.2-3: Data structures supported by the PATCH Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon successful modification there is no body in the response message. |
| ProblemDetails | M | 1 | 403 Forbidden | One or more attributes are not allowed to be modified according to e.g. policy or local configuration.  The invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified.  The cause attribute shall be set to "MODIFY\_NOT\_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.6.3.3 GET

This method shall support the URI query parameters specified in table 5.2.6.3.1-1.

Table 5.2.6.3.3-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| fields | array(string) | C | 1..N | When the NF consumer only retrieves a subset of the resource, the " fields " query parameter shall be included. The " fields " query parameter contains the pointers of the attribute(s) to be retrieved. |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.6.3.3-2 and the response data structures and response codes specified in table 5.2.6.3.3-3.

Table 5.2.6.3.3-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.6.3.3-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| Amf3GppAccessRegistration | M | 1 | 200 OK | Upon success, a response body containing the Amf3GppAccessRegistration shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.7 Resource: AmfNon3GppAccessRegistration

#### 5.2.7.1 Description

This resource is used to represent AMF registrations to be stored in the UDR.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.7.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/amf-non-3gpp-access

This resource shall support the resource URI variables defined in table 5.2.7.2-1.

Table 5.2.7.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)   pattern: "^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |

#### 5.2.7.3 Resource Standard Methods

##### 5.2.7.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.7.3.1-1.

Table 5.2.7.3.1-1: URI query parameters supported by the PUT method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.7.3.1-2 and the response data structures and response codes specified in table 5.2.7.3.1-3.

Table 5.2.7.3.1-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| AmfNon3GppAccessRegistration | M | 1 | The AMF registration for non 3GPP access is replaced with the received information. |

Table 5.2.7.3.1-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned |
| AmfNon3GppAccessRegistration | M | 1 | 201 Created | Upon success, a response body containing a representation of the created Individual AmfNon3GppAccessRegistration resource shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.7.3.2 PATCH

This method is used to modify AMF registration data for non-3GPP access in the UDR.

This method shall support the URI query parameters specified in table 5.2.7.3.2-1.

Table 5.2.7.3.2-1: URI query parameters supported by the PATCH method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.7.3.2-2 and the response data structures and response codes specified in table 5.2.7.3.2-3.

Table 5.2.7.3.2-2: Data structures supported by the PATCH Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| array(PatchItem) | M | 1..N | Contains the delta data to the AMF registration data for non-3GPP access |

Table 5.2.7.3.2-3: Data structures supported by the PATCH Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon successful modification there is no body in the response message. |
| ProblemDetails | M | 1 | 403 Forbidden | One or more attributes are not allowed to be modified according to e.g. policy or local configuration.  The invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified.  The cause attribute shall be set to "MODIFY\_NOT\_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.7.3.3 GET

This method shall support the URI query parameters specified in table 5.2.7.3.1-1.

Table 5.2.7.3.3-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| fields | array(string) | C | 1..N | When the NF consumer only retrieves a subset of the resource, the " fields " query parameter shall be included. The " fields " query parameter contains the pointers of the attribute(s) to be retrieved. |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.7.3.3-2 and the response data structures and response codes specified in table 5.2.7.3.3-3.

Table 5.2.7.3.3-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.7.3.3-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| AmfNon3GppAccessRegistration | M | 1 | 200 OK | Upon success, a response body containing the Amf3GppAccessRegistration shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.8 Resource: SmfRegistrations

#### 5.2.8.1 Description

This resource is used to represent SMF registrations to be stored in the UDR.

This resource is modelled with the Store resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.8.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/ subscription-data/{ueId}/context-data/smf-registrations

This resource shall support the resource URI variables defined in table 6.2.3.4.2-1.

Table 5.2.8.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See clause 6.4.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [2] clause 5.9.2)  pattern: "^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |

#### 5.2.8.3 Resource Standard Methods

##### 5.2.8.3.1 GET

This method shall support the URI query parameters specified in table 5.2.8.3.1-1.

Table 5.2.8.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.8.3.1-2 and the response data structures and response codes specified in table 5.2.8.3.1-3.

Table 5.2.8.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.8.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| SmfRegList | M | 1 | 200 OK | Upon success, a response body containing the list of SMF registrations of the relevant UE shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.9 Resource: IndividualSmfRegistration

#### 5.2.9.1 Description

This resource is used to represent individual PDU session SMF registrations to be stored in the UDR.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.9.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/{ueId}/context-data/smf-registrations/{pduSessionId}

This resource shall support the resource URI variables defined in table 5.2.9.2-1.

Table 5.2.9.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See clause 6.4.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [11] clause 5.9.2)  pattern: "^(imsi-[0-9]{5,15}|nai-.+-|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |
| pduSessionId | The pduSessionId identifies an individual SMF registration. |

#### 5.2.9.3 Resource Standard Methods

##### 5.2.9.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.9.3.1-1.

Table 5.2.9.3.1-1: URI query parameters supported by the PUT method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.9.3.1-2 and the response data structures and response codes specified in table 5.2.9.3.1-3.

Table 5.2.9.3.1-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| SmfRegistration | M | 1 | The registration that is to be created |

Table 5.2.9.3.1-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| SmfRegistration | M | 1 | 201 Created | Upon success, a response body containing a representation of the created Individual SmfRegistration resource shall be returned. |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.9.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.9.3.2-1.

Table 5.2.9.3.2-1: URI query parameters supported by the DELETE method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.9.3.2-2 and the response data structures and response codes specified in table 5.2.9.3.2-3.

Table 5.2.9.3.2-2: Data structures supported by the DELETE Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.9.3.2-3: Data structures supported by the DELETE Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.9.3.3 GET

This method shall support the URI query parameters specified in table 5.2.9.3.3-1.

Table 5.2.9.3.3-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| fields | array(string) | C | 1..N | When the NF consumer only retrieves a subset of the resource, the " fields " query parameter shall be included. The " fields " query parameter contains the pointers of the attribute(s) to be retrieved. |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.9.3.3-2 and the response data structures and response codes specified in table 5.2.9.3.3-3.

Table 5.2.9.3.3-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.9.3.3-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| SmfRegistration | M | 1 | 200 OK | The SMF registration that is to be retrieved |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.10 Resource: OperatorSpecificData

#### 5.2.10.1 Description

This resource represents the UE's operator specific data.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.10.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/operator-specific-data

This resource shall support the resource URI variables defined in table 5.2.10.2-1.

Table 5.2.10.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)   pattern: "^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |
| NOTE: The content of ueId SUPI or GPSI depends on the service. | |

#### 5.2.10.3 Resource Standard Methods

##### 5.2.10.3.1 GET

This method is used to retrieve operator specific data from the UDR.

This method shall support the URI query parameters specified in table 5.2.10.3.1-1.

Table 5.2.10.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| fields | array(string) | C | 1..N | When the NF consumer only retrieves a subset of the resource, the " fields " query parameter shall be included. The " fields " query parameter contains the pointers of the attribute(s) to be retrieved. |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.10.3.1-2 and the response data structures and response codes specified in table 5.2.10.3.1-3.

Table 5.2.10.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.10.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| map(OperatorSpecificDataContainer) | M | 1..N | 200 OK | Upon success, a response body containing a map shall be returned. The key of the map is operator specific data element name and the value is the operator specific data of the UE. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.10.3.2 PATCH

This method is used to modify operator specific data in the UDR.

This method shall support the URI query parameters specified in table 5.2.10.3.2-1.

Table 5.2.10.3.2-1: URI query parameters supported by the PATCH method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.10.3.2-2 and the response data structures and response codes specified in table 5.2.10.3.2-3.

Table 5.2.10.3.2-2: Data structures supported by the PATCH Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| array(PatchItem) | M | 1..N | Contains the delta data to the operator specific data |

Table 5.2.10.3.2-3: Data structures supported by the PATCH Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon successful modification there is no body in the response message. |
| ProblemDetails | M | 1 | 403 Forbidden | One or more attributes are not allowed to be modified according to e.g. policy or local configuration.  The invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified.  The cause attribute shall be set to "MODIFY\_NOT\_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.11 Resource: Smsf3GppAccessRegistration

#### 5.2.11.1 Description

This resource represents registered SMSF for 3GPP access.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).-

#### 5.2.11.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/smsf-3gpp-access

This resource shall support the resource URI variables defined in table 5.2.11.2-1.

Table 5.2.11.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)  pattern: "^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |

#### 5.2.11.3 Resource Standard Methods

##### 5.2.11.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.11.3.1-1.

Table 5.2.11.3.1-1: URI query parameters supported by the PUT method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.11.3.1-2 and the response data structures and response codes specified in table 5.2.11.3.1-3.

Table 5.2.11.3.1-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| SmsfRegistration | M | 1 | The SMSF registration for 3GPP access is created or updated with the received information. |

Table 5.2.11.3.1-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned |
| SmsfRegistration | M | 1 | 201 Created | Upon success, a response body containing a representation of the created Individual SmsfRegistration for 3GPP access resource shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.11.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.11.3.2-1.

Table 5.2.11.3.2-1: URI query parameters supported by the DELETE method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.11.3.2-2 and the response data structures and response codes specified in table 5.2.11.3.2-3.

Table 5.2.11.3.2-2: Data structures supported by the DELETE Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  | The request body shall be empty. |

Table 5.2.11.3.2-3: Data structures supported by the DELETE Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.11.3.4 GET

This method shall support the URI query parameters specified in table 5.2.11.3.4-1.

Table 5.2.11.3.4-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| fields | array(string) | C | 1..N | When the NF consumer only retrieves a subset of the resource, the " fields " query parameter shall be included. The " fields " query parameter contains the pointers of the attribute(s) to be retrieved. |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.11.3.4-2 and the response data structures and response codes specified in table 5.2.11.3.4-3.

Table 5.2.11.3.4-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.11.3.4-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| SmsfRegistration | M | 1 | 200 OK | Upon success, a response body containing the SMSF registration for 3GPP access Data shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.12 Resource: SmsfNon3GppAccessRegistration

#### 5.2.12.1 Description

This resource represents registered SMSF for Non 3GPP access.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.12.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/smsf-non-3gpp-access

This resource shall support the resource URI variables defined in table 5.2.12.2-1.

Table 5.2.12.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)  pattern: "^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |

#### 5.2.12.3 Resource Standard Methods

##### 5.2.12.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.12.3.1-1.

Table 5.2.12.3.1-1: URI query parameters supported by the PUT method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.12.3.1-2 and the response data structures and response codes specified in table 5.2.12.3.1-3.

Table 5.2.12.3.1-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| SmsfRegistration | M | 1 | The SMSF registration for non 3GPP access is created or updated with the received information. |

Table 5.2.12.3.1-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned |
| SmsfRegistration | M | 1 | 201 Created | Upon success, a response body containing a representation of the created Individual SmsfRegistration for non 3GPP access resource shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.12.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.12.3.2-1.

Table 5.2.12.3.2-1: URI query parameters supported by the DELETE method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.12.3.2-2 and the response data structures and response codes specified in table 5.2.12.3.2-3.

Table 5.2.12.3.2-2: Data structures supported by the DELETE Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  | The request body shall be empty. |

Table 5.2.12.3.2-3: Data structures supported by the DELETE Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.12.3.4 GET

This method shall support the URI query parameters specified in table 5.2.12.3.4-1.

Table 5.2.12.3.4-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| fields | array(string) | C | 1..N | When the NF consumer only retrieves a subset of the resource, the " fields " query parameter shall be included. The " fields " query parameter contains the pointers of the attribute(s) to be retrieved. |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.12.3.4-2 and the response data structures and response codes specified in table 5.2.12.3.4-3.

Table 5.2.12.3.4-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.12.3.4-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| SmsfRegistration | M | 1 | 200 OK | Upon success, a response body containing the SMSF registration for non 3GPP access Data shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.13 Resource: SMSManagementSubscriptionData

#### 5.2.13.1 Description

This resource represents the subscribed SMSManagementSubscriptionData for a SUPI for use in a serving PLMN. It is queried by the SMSF via the UDM after registering.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.13.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sms-mng-data

This resource shall support the resource URI variables defined in table 5.2.13.2-1.

Table 5.2.13.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)  pattern: "^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |
| servingPlmnId | Represents the Serving PLMN ID (<MCC><MNC>)  pattern: "^[0-9]{5,6}$" |

#### 5.2.13.3 Resource Standard Methods

##### 5.2.13.3.1 GET

This method shall support the URI query parameters specified in table 5.2.13.3.1-1.

Table 5.2.13.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.13.3.1-2 and the response data structures and response codes specified in table 5.2.13.3.1-3.

Table 5.2.13.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.13.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| SmsManagementSubscriptionData | M | 1 | 200 OK | Upon success, a response body containing the SMS Management Subscription Data shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.14 Resource: ProvisionedParamenterData

#### 5.2.14.1 Description

This resource represents the subscribed ProvisionedParameterData for a GPSI. It is triggered by the AF/NEF via the UDM to update provisioned data stored for the subscriber.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.14.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/pp-data

This resource shall support the resource URI variables defined in table 5.2.14.2-1.

Table 5.2.14.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)  pattern: "^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |

#### 5.2.14.3 Resource Standard Methods

##### 5.2.14.3.1 GET

This method retrieves the provisioned data of a given UE.

This method shall support the URI query parameters specified in table 5.2.14.3.1-1.

Table 5.2.14.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.14.3.1-2 and the response data structures and response codes specified in table 5.2.14.3.1-3.

Table 5.2.14.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.14.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| PpData | M | 1 | 200 OK | Upon success, a response body is returned containing the provisioned data of the GPSI. |

##### 5.2.14.3.2 PATCH

This method is used to modify the provisioned parameter data in the UDR.

This method shall support the URI query parameters specified in table 5.2.14.3.2-1.

Table 5.2.14.3.2-1: URI query parameters supported by the PATCH method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.14.3.2-2 and the response data structures and response codes specified in table 5.2.14.3.2-3.

Table 5.2.14.3.2-2: Data structures supported by the PATCH Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| array(PatchItem) | M | 1..N | Contains the delta data to the provisioned parameter data |

Table 5.2.14.3.2-3: Data structures supported by the PATCH Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon successful modification there is no body in the response message. |
| ProblemDetails | M | 1 | 403 Forbidden | One or more attributes are not allowed to be modified according to e.g. policy or local configuration.  The invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified.  The cause attribute shall be set to "MODIFY\_NOT\_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.15 Resource: SMSSubscriptionData

#### 5.2.15.1 Description

This resource represents the subscribed SMS Subscription Data for a SUPI for use in a serving PLMN. It is queried by the AMF via the UDM after registering.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.15.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/{serving-plmn-id}/provisioned-data/sms-data

This resource shall support the resource URI variables defined in table 5.2.15.2-1.

Table 5.2.15.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| Ue-id | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)  pattern: "^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |
| serving-plmn-id | Represents the Serving PLMN ID (<MCC><MNC>)  pattern: "^[0-9]{5,6}$" |

#### 5.2.15.3 Resource Standard Methods

##### 5.2.15.3.1 GET

This method shall support the URI query parameters specified in table 5.2.15.3.1-1.

Table 5.2.15.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.15.3.1-2 and the response data structures and response codes specified in table 5.2.15.3.1-3.

Table 5.2.15.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.15.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| SmsSubscriptionData | M | 1 | 200 OK | Upon success, a response body containing the SMS Management Subscription Data shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.16 Resource: SdmSubscriptions

#### 5.2.16.1 Description

This resource represents the collection of SDM Subscriptions for a UE.

This resource is modelled with the Collection resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.16.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/sdm-subscriptions

This resource shall support the resource URI variables defined in table 5.2.16.2-1.

Table 5.2.16.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)  pattern: "(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-.+|.+)" |

#### 5.2.16.3 Resource Standard Methods

##### 5.2.16.3.1 GET

This method shall support the URI query parameters specified in table 5.2.16.3.1-1.

Table 5.2.16.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.16.3.1-2 and the response data structures and response codes specified in table 5.2.16.3.1-3.

Table 5.2.16.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.16.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| array(SdmSubscription) | M | 1..N | 200 OK | Upon success, a response body containing the individual SDM subscriptions shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.16.3.2 POST

This method shall support the URI query parameters specified in table 5.2.16.3.2-1.

Table 5.2.16.3.2-1: URI query parameters supported by the POST method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.16.3.1-2 and the response data structures and response codes specified in table 5.2.16.3.1-3.

Table 5.2.16.3.2-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| SdmSubscription | M | 1 | Identifies the subscriber data subscription to be stored in the UDR. |

Table 5.2.16.3.2-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| SdmSubscription | M | 1 | 201 Created | Upon success, a response body containing a representation of the UeId's Individual subscription resource shall be returned.  The HTTP response shall include a "Location" HTTP header that contains the resource URI of the created resource. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.17 Resource: IndividualSdmSubscription

#### 5.2.17.1 Description

This resource represents an individual SDM Subscription for a UE.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.17.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/sdm-subscriptions/{subsId}

This resource shall support the resource URI variables defined in table 5.2.17.2-1.

Table 5.2.17.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)  pattern: "^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |
| subsId | Identifier of the subscription (as allocated by the UDR) |

#### 5.2.17.3 Resource Standard Methods

##### 5.2.17.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.17.3.1-1.

Table 5.2.17.3.1-1: URI query parameters supported by the PUT method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.17.3.1-2 and the response data structures and response codes specified in table 5.2.17.3.1-3.

Table 5.2.17.3.1-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| SdmSubscription | M | 1 | The individual SDM subscription that is to be stored |

Table 5.2.17.3.1-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned. |
| ProblemDetails | M | 1 | 404 Not Found | If the resource does not exist, a response code of 404 Not Found shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.17.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.17.3.2-1.

Table 5.2.17.3.2-1: URI query parameters supported by the DELETE method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.17.3.2-2 and the response data structures and response codes specified in table 5.2.17.3.2-3.

Table 5.2.17.3.2-2: Data structures supported by the DELETE Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.17.3.2-3: Data structures supported by the DELETE Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.17.3.3 PATCH

This method shall support the URI query parameters specified in table 5.2.17.3.3-1.

Table 5.2.17.3.3-1: URI query parameters supported by the PATCH method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.17.3.3-2 and the response data structures and response codes specified in table 5.2.17.3.3-3.

Table 5.2.17.3.3-2: Data structures supported by the PATCH Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| array(PatchItem) | M | 1..N | Contains the delta data to the Individual SDM Subscription data. |

Table 5.2.17.3.3-3: Data structures supported by the PATCH Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon successful modification, there is no body in the response message. |
| ProblemDetails | M | 1 | 404 Not Found | The resource corresponding to the SubscriptionId can't be found.  The "cause" attribute shall be set to:  - SUBSCRIPTION\_NOT\_FOUND |
| M | 1 | 403 Forbidden | One or more attributes are not allowed to be modified.  The "cause" attribute shall be set to:  - MODIFY\_NOT\_ALLOWED |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.18 Resource: EeSubscriptions

#### 5.2.18.1 Description

This resource represents the collection of EE Subscriptions for a UE.

This resource is modelled with the Collection resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.18.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/ee-subscriptions

This resource shall support the resource URI variables defined in table 5.2.18.2-1.

Table 5.2.18.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)  pattern: "^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |

#### 5.2.18.3 Resource Standard Methods

##### 5.2.18.3.1 GET

This method shall support the URI query parameters specified in table 5.2.18.3.1-1.

Table 5.2.18.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.18.3.1-2 and the response data structures and response codes specified in table 5.2.18.3.1-3.

Table 5.2.18.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.18.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| array(EeSubscription) | M | 1..N | 200 OK | Upon success, a response body containing the individual EE subscriptions shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.18.3.2 POST

This method shall support the URI query parameters specified in table 5.2.18.3.2-1.

Table 5.2.18.3.2-1: URI query parameters supported by the POST method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.18.3.1-2 and the response data structures and response codes specified in table 5.2.18.3.1-3.

Table 5.2.18.3.2-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| EeSubscription | M | 1 | Identifies the subscriber data subscription to be stored in the UDR. |

Table 5.2.18.3.2-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| EeSubscription | M | 1 | 201 Created | Upon success, a response body containing a representation of the UeId's Individual subscription resource shall be returned.  The HTTP response shall include a "Location" HTTP header that contains the resource URI of the created resource. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.19 Resource: IndividualEeSubscription

#### 5.2.19.1 Description

This resource represents an individual EE Subscription for a UE.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.19.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}

This resource shall support the resource URI variables defined in table 5.2.19.2-1.

Table 5.2.19.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)  pattern: "^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |
| subsId | Identifier of the subscription (allocated by the UDR) |

#### 5.2.19.3 Resource Standard Methods

##### 5.2.19.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.19.3.1-1.

Table 5.2.19.3.1-1: URI query parameters supported by the PUT method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.19.3.1-2 and the response data structures and response codes specified in table 5.2.19.3.1-3.

Table 5.2.19.3.1-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| EeSubscription | M | 1 | The individual EE subscription that is to be stored |

Table 5.2.19.3.1-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned. |
| ProblemDetails | M | 1 | 404 Not Found | If the resource does not exist, a response code of 404 Not Found shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.19.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.19.3.2-1.

Table 5.2.19.3.2-1: URI query parameters supported by the DELETE method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.19.3.2-2 and the response data structures and response codes specified in table 5.2.19.3.2-3.

Table 5.2.19.3.2-2: Data structures supported by the DELETE Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.19.3.2-3: Data structures supported by the DELETE Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.19.3.3 PATCH

This method shall support the URI query parameters specified in table 5.2.19.3.3-1.

Table 5.2.19.3.3-1: URI query parameters supported by the PATCH method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.19.3.3-2 and the response data structures and response codes specified in table 5.2.19.3.3-3.

Table 5.2.19.3.3-2: Data structures supported by the PATCH Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| array(PatchItem) | M | 1..N | Contains the delta data to the Individual EE Subscription data |

Table 5.2.19.3.3-3: Data structures supported by the PATCH Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon successful modification, there is no body in the response message. |
| ProblemDetails | M | 1 | 404 Not Found | The resource corresponding to the SubscriptionId can't be found.  The "cause" attribute shall be set to:  - SUBSCRIPTION\_NOT\_FOUND |
| M | 1 | 403 Forbidden | One or more attributes are not allowed to be modified.  The "cause" attribute shall be set to:  - MODIFY\_NOT\_ALLOWED |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.19A Resource: IndividualEeGroupSubscription

#### 5.2.19A.1 Description

This resource represents an individual EE Subscription for a group of UEs or any UE (i.e. all UEs).

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.19A.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subsId}

This resource shall support the resource URI variables defined in table 5.2.19A.2-1.

Table 5.2.19A.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueGroupId | Represents the identifier of the Group of UEs. For this resource, either External Group Identifier or any UE shall be present.  Pattern: '^(extgroupid-[^@]+@[^@]+|anyUE)$' |
| subsId | Identifier of the subscription (allocated by the UDM) |

#### 5.2.19A.3 Resource Standard Methods

##### 5.2.19A.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.19A.3.1-1.

Table 5.2.19A.3.1-1: URI query parameters supported by the PUT method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.19A.3.1-2 and the response data structures and response codes specified in table 5.2.19A.3.1-3.

Table 5.2.19A.3.1-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| EeSubscription | M | 1 | The individual EE subscription for the group of UEs that is to be stored |

Table 5.2.19A.3.1-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned. |
| ProblemDetails | M | 1 | 404 Not Found | If the resource does not exist, a response code of 404 Not Found shall be returned. |
| NOTE: In addition, common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.19A.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.19A.3.2-1.

Table 5.2.19A.3.2-1: URI query parameters supported by the DELETE method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.19A.3.2-2 and the response data structures and response codes specified in table 5.2.19A.3.2-3.

Table 5.2.19.3.2-2: Data structures supported by the DELETE Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.19A.3.2-3: Data structures supported by the DELETE Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned. |
| NOTE: In addition, common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.19A.3.3 PATCH

This method shall support the URI query parameters specified in table 5.2.19A.3.3-1.

Table 5.2.19A.3.3-1: URI query parameters supported by the PATCH method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.19A.3.3-2 and the response data structures and response codes specified in table 5.2.19A.3.3-3.

Table 5.2.19A.3.3-2: Data structures supported by the PATCH Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| array(PatchItem) | M | 1..N | Contains the delta data to the Individual EE Group Subscription data |

Table 5.2.19A.3.3-3: Data structures supported by the PATCH Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon successful modification, there is no body in the response message. |
| ProblemDetails | M | 1 | 404 Not Found | The resource corresponding to the SubscriptionId can't be found.  The "cause" attribute shall be set to:  - SUBSCRIPTION\_NOT\_FOUND |
| M | 1 | 403 Forbidden | One or more attributes are not allowed to be modified.  The "cause" attribute shall be set to:  - MODIFY\_NOT\_ALLOWED |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.20 Resource: SubscriptionDataSubscriptions

#### 5.2.20.1 Description

This resource is used to represent explicit subscriber data subscriptions to notifications.

#### 5.2.20.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/subs-to-notify

This resource shall support the resource URI variables defined in table 5.2.20.2-1.

Table 5.2.20.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |

#### 5.2.20.3 Resource Standard Methods

##### 5.2.20.3.1 POST

This method shall support the URI query parameters specified in table 5.2.20.3.1-1.

Table 5.2.20.3.1-1: URI query parameters supported by the POST method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.20.3.1-2 and the response data structures and response codes specified in table 5.2.20.3.1-3.

Table 5.2.20.3.1-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| SubscriptionDataSubscriptions | M | 1 | Identifies the subscriber data subscription to be stored in the UDR. |

Table 5.2.20.3.1-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| SubscriptionDataSubscriptions | M | 1 | 201 Created | Upon success, a response body containing a representation of the UeId's Individual subscription resource shall be returned.  The HTTP response shall include a "Location" HTTP header that contains the resource URI of the created resource. |
| ProblemDetails | M | 1 | 404 Not Found | The "cause" attribute shall be set to the following application error:  - SUBSCRIPTION\_NOT\_FOUND |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.20.3.2 GET

This method shall support the URI query parameters specified in table 5.2.20.3.2-1.

Table 5.2.20.3.2-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| ue-id | VarUeId | M | 1 | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: "^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.20.3.2-2 and the response data structures and response codes specified in table 5.2.20.3.2-3.

Table 5.2.20.3.2-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.20.3.2-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| array(SubscriptionDataSubscriptions) | M | 0..N | 200 OK | Upon success, a response body containing the individual subscriptions shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.20.3.3 DELETE

This method shall support the URI query parameters specified in table 5.2.20.3.3-1.

Table 5.2.20.3.3-1: URI query parameters supported by the DELETE method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| ue-id | VarUeId | M | 1 | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) of the UE associated to this subscription.  Pattern: "^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |
| nf-instance-id | NfInstanceId | C | 0..1 | If included, this IE shall contain the Instance ID of the original NF Service Consumer of the UDM that created the subscription, and the UDR shall delete all subscriptions associated to the ue-id that were created by this specific nf-instance-id.  If not included, the UDR shall delete all subscriptions matching the rest of query parameters.  (See NOTE) |
| delete-all-nfs | boolean | C | 0..1 | If included, this IE indicates that the UDR shall delete all subscriptions associated to the ue-id.  (See NOTE) |
| implicit-unsubscribe-indication | boolean | O | 0..1 | If included, this IE shall contain the content of the "implicitUnsubscribe" attribute sent during the creation of the subscription in UDM.  If it is set to true, it means that the UDR shall delete all those subscriptions from NF Service Consumers of UDM, whose implicitUnsubscribe value is set to true.  It not included, or set to false, the UDR shall delete all subscriptions matching the rest of query parameters. |
| NOTE: Either "nf-instance-id" or "delete-all-nfs" shal be included in the request. | | | | |

This method shall support the request data structures specified in table 5.2.20.3.3-2 and the response data structures and response codes specified in table 5.2.20.3.3-3.

Table 5.2.20.3.3-2: Data structures supported by the DELETE Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  | The request body shall be empty. |

Table 5.2.20.3.3-3: Data structures supported by the DELETE Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned. |
| NOTE: In addition, common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.21 Resource: IndividualSubscriptionDataSubscription

#### 5.2.21.1 Description

This resource is used to represent an individual subscriber data subscriptions to notifications.

#### 5.2.21.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/subs-to-notify/{subsId}

This resource shall support the resource URI variables defined in table 5.2.21.2-1.

Table 5.2.21.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| subsId | The subsId identifies an individual SubscriptionDataSubscriptions to notifications. The value is allocated by the UDR during creation of the SubscriptionDataSubscriptions resource. |

#### 5.2.21.3 Resource Standard Methods

##### 5.2.21.3.1 DELETE

This method shall support the URI query parameters specified in table 5.2.21.3.1-1.

Table 5.2.21.3.1-1: URI query parameters supported by the DELETE method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.21.3.1-2 and the response data structures and response codes specified in table 5.2.21.3.1-3.

Table 5.2.21.3.1-2: Data structures supported by the DELETE Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  | The request body shall be empty. |

Table 5.2.21.3.1-3: Data structures supported by the DELETE Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.21.3.2 PATCH

This method shall support the URI query parameters specified in table 5.2.21.3.2-1.

Table 5.2.21.3.2-1: URI query parameters supported by the PATCH method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.21.3.2-2 and the response data structures and response codes specified in table 5.2.21.3.2-3.

Table 5.2.21.3.2-2: Data structures supported by the PATCH Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| array(PatchItem) | M | 1..N | Contains the delta data to the Individual Subscription Data Subscription. |

Table 5.2.21.3.2-3: Data structures supported by the PATCH Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon successful modification, there is no body in the response message. |
| ProblemDetails | M | 1 | 404 Not Found | The resource corresponding to the SubscriptionId can't be found.  The "cause" attribute shall be set to:  - SUBSCRIPTION\_NOT\_FOUND |
| M | 1 | 403 Forbidden | One or more attributes are not allowed to be modified.  The "cause" attribute shall be set to:  - MODIFY\_NOT\_ALLOWED |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.22 Resource: TraceData

#### 5.2.22.1 Description

This resource represents the trace configuration data for a SUPI for use in a serving PLMN. It is queried by the AMF via the UDM after registering.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.22.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/trace-data

This resource shall support the resource URI variables defined in table 5.2.22.2-1.

Table 5.2.22.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)  pattern: "^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |
| servingPlmnId | Represents the Serving PLMN ID (<MCC><MNC>)  pattern: "^[0-9]{5,6}$" |

#### 5.2.22.3 Resource Standard Methods

##### 5.2.3.3.1 GET

This method shall support the URI query parameters specified in table 5.2.22.3.1-1.

Table 5.2.22.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.22.3.1-2 and the response data structures and response codes specified in table 5.2.22.3.1-3.

Table 5.2.22.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.3.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| TraceData | M | 1 | 200 OK | Upon success, a response body containing the Trace Configuration Data shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

#### 5.2.23 Resource: IdentityData

##### 5.2.23.1 Description

This resource represents the identity data. It is queried by the UDM by GPSI or SUPI.

##### 5.2.23.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/identity-data

This resource shall support the resource URI variables defined in table 5.2.23.2-1.

Table 5.2.23.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)  pattern: "^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |

##### 5.2.23.3 Resource Standard Methods

###### 5.2.23.3.1 GET

This method shall support the URI query parameters specified in table 5.2.23.3.1-1.

Table 5.2.23.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.23.3.1-2 and the response data structures and response codes specified in table 5.2.23.3.1-3.

Table 5.2.23.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.23.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| IdentityData | M | 1 | 200 OK | Upon success, a response body containing the identity data that corresponds to the provided ueId |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.24 Resource: AuthenticationStatus

#### 5.2.24.1 Description

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.24.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/authentication-data/authentication-status

This resource shall support the resource URI variables defined in table 5.2.24.2-1.

Table 5.2.24.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI (see 3GPP TS 23.501 [4] clause 5.9.2)   pattern: "^(imsi-[0-9]{5,15}|nai-.+|.+)$" |

#### 5.2.24.3 Resource Standard Methods

##### 5.2.24.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.24.3.1-1.

Table 5.2.24.3.1-1: URI query parameters supported by the PUT method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.24.3.1-2 and the response data structures and response codes specified in table 5.2.24.3.1-3.

Table 5.2.24.3.1-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| AuthEvent | M | 1 | To store the authentication status of the UE. |

Table 5.2.24.3.1-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.24.3.2 GET

This method shall support the URI query parameters specified in table 5.2.24.3.2-1.

Table 5.2.24.3.2-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| fields | array(string) | C | 1..N | When the NF consumer only retrieves a subset of the resource, the "fields" query parameter shall be included. The "fields" query parameter contains the pointers of the attribute(s) to be retrieved. |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.24.3.2-2 and the response data structures and response codes specified in table 5.2.24.3.2-3.

Table 5.2.24.3.2-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.24.3.2-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| AuthEvent | M | 1 | 200 OK | Upon success, a response body containing the AuthEvent shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.25 Resource: AuthenticationSoR

#### 5.2.25.1 Description

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.25.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/ue-update-confirmation-data/sor-data

This resource shall support the resource URI variables defined in table 5.2.25.2-1.

Table 5.2.25.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI (see 3GPP TS 23.501 [4] clause 5.9.2)   pattern: "^(imsi-[0-9]{5,15}|nai-.+|.+)$" |

#### 5.2.25.3 Resource Standard Methods

##### 5.2.25.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.25.3.1-1.

Table 5.2.25.3.1-1: URI query parameters supported by the PUT method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.25.3.1-2 and the response data structures and response codes specified in table 5.2.25.3.1-3.

Table 5.2.25.3.1-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| SorData | M | 1 | The SoR acknowledgement information to be stored temporarily. |

Table 5.2.25.3.1-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.25.3.2 GET

This method shall support the URI query parameters specified in table 5.2.25.3.2-1.

Table 5.2.25.3.2-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.25.3.2-2 and the response data structures and response codes specified in table 5.2.25.3.2-3.

Table 5.2.25.3.2-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.25.3.2-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| SorData | M | 1 | 200 OK | Upon success, a response body containing the SorData shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.25A Resource: AuthenticationUPU

#### 5.2.25A.1 Description

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.25A.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/ue-update-confirmation-data/upu-data

This resource shall support the resource URI variables defined in table 5.2.25A.2-1.

Table 5.2.25A.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI (see 3GPP TS 23.501 [4] clause 5.9.2)   pattern: "^(imsi-[0-9]{5,15}|nai-.+|.+)$" |

#### 5.2.25A.3 Resource Standard Methods

##### 5.2.25A.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.25A.3.1-1.

Table 5.2.25A.3.1-1: URI query parameters supported by the PUT method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.25A.3.1-2 and the response data structures and response codes specified in table 5.2.25A.3.1-3.

Table 5.2.25A.3.1-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| UpuData | M | 1 | The UPU acknowledgement information to be stored temporarily. |

Table 5.2.25A.3.1-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.25A.3.2 GET

This method shall support the URI query parameters specified in table 5.2.25A.3.2-1.

Table 5.2.25A.3.2-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.25A.3.2-2 and the response data structures and response codes specified in table 5.2.25A.3.2-3.

Table 5.2.25A.3.2-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.25A.3.2-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| UpuData | M | 1 | 200 OK | Upon success, a response body containing the UpuData shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.26 Resource: ProvisionedData

#### 5.2.26.1 Description

This resource represents the subscribed ProvisionedData for a UE ID for use in a serving PLMN.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.26.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/{servingPlmnId}/provisioned-data

This resource shall support the resource URI variables defined in table 5.2.26.2-1.

Table 5.2.26.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)  pattern: "^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |
| servingPlmnId | Represents the Serving PLMN ID (<MCC><MNC>)  pattern: "^[0-9]{5,6}$" |

#### 5.2.26.3 Resource Standard Methods

##### 5.2.26.3.1 GET

This method shall support the URI query parameters specified in table 5.2.26.3.1-1.

Table 5.2.26.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| dataset-names | array(DataSetName) | O | 1..N | If included, this IE shall contain the names of data sets to the retrieved. If not included, all provisioned data sets shall be returned. |

This method shall support the request data structures specified in table 5.2.26.3.1-2 and the response data structures and response codes specified in table 5.2.26.3.1-3.

Table 5.2.26.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.26.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| ProvisionedDataSets | M | 1 | 200 OK | Upon success, a response body containing the requested data sets shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.27 Resource: OperatorDeterminedBarringData

#### 5.2.27.1 Description

This resource represents the subscribed OperatorDeterminedBarringData for a SUPI. It is queried by the UDM during registration.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.27.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/operator-determined-barring-data

This resource shall support the resource URI variables defined in table 5.2.27.2-1.

Table 5.2.27.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)  pattern: "(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-.+|.+)" |

#### 5.2.27.3 Resource Standard Methods

##### 5.2.27.3.1 GET

This method shall support the URI query parameters specified in table 5.2.27.3.1-1.

Table 5.2.27.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.27.3.1-2 and the response data structures and response codes specified in table 5.2.27.3.1-3.

Table 5.2.27.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.27.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| OdbData | M | 1 | 200 OK | Upon success, a response body containing the Operator Determined Barring Data shall be returned. |
| NOTE: In addition, common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.28 Resource: EeProfileData

##### 5.2.28.1 Description

This resource represents a list of the Event Exposure Profile Data. It is queried by the UDM by either GPSI or SUPI.

##### 5.2.28.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/ee-profile-data

This resource shall support the resource URI variables defined in table 5.2.28.2-1.

Table 5.2.28.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)  pattern: "(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)". |

##### 5.2.28.3 Resource Standard Methods

###### 5.2.28.3.1 GET

This method shall support the URI query parameters specified in table 5.2.28.3.1-1.

Table 5.2.28.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| fields | array(string) | C | 1-..N | When the NF consumer only retrieves a subset of the resource, the " fields " query parameter shall be included. The " fields " query parameter contains the pointers of the attribute(s) to be retrieved. |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.28.3.1-2 and the response data structures and response codes specified in table 5.2.28.3.1-3.

Table 5.2.28.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.28.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| EeProfileData | M | 1 | 200 OK | Upon success, a response body containing the Event Exposure Profile that corresponds to the provided ueId |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.29 Resource: EeGroupSubscriptions

#### 5.2.29.1 Description

This resource represents the collection of EE Subscriptions for a group of UEs or any UE (i.e. all UEs).

This resource is modelled with the Collection resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.29.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/group-data/{ueGroupId}/ee-subscriptions

This resource shall support the resource URI variables defined in table 5.2.29.2-1.

Table 5.2.29.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueGroupId | Represents the identifier of the Group of UEs. For this resource, either External Group Identifier or any UE shall be present.  pattern: '^(extgroupid-[^@]+@[^@]+|anyUE)$' |

#### 5.2.29.3 Resource Standard Methods

##### 5.2.29.3.1 GET

This method shall support the URI query parameters specified in table 5.2.29.3.1-1.

Table 5.2.29.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |

This method shall support the request data structures specified in table 5.2.29.3.1-2 and the response data structures and response codes specified in table 5.2.29.3.1-3.

Table 5.2.29.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.29.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| array(EeSubscription) | M | 1..N | 200 OK | Upon success, a response body containing the individual EE subscriptions for the groups of UEs shall be returned. |
| NOTE: In addition, common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.29.3.2 POST

This method shall support the URI query parameters specified in table 5.2.29.3.2-1.

Table 5.2.29.3.2-1: URI query parameters supported by the POST method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.19.3.2-2 and the response data structures and response codes specified in table 5.2.29.3.2-3.

Table 5.2.29.3.2-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| EeSubscription | M | 1 | Identifies the data subscription to be stored in the UDR. |

Table 5.2.29.3.2-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| EeSubscription | M | 1 | 201 Created | Upon success, a response body containing a representation of the Individual subscription resource shall be returned.  The HTTP response shall include a "Location" HTTP header that contains the resource URI of the created resource. |
| NOTE: In addition, common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.30 Resource: SharedData

#### 5.2.30.1 Description

This resource represents the collection of data that can be shared by multiple UEs.

#### 5.2.30.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/shared-data

This resource shall support the resource URI variables defined in table 5.2.30.2-1.

Table 5.2.30.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |

#### 5.2.30.3 Resource Standard Methods

##### 5.2.30.3.1 GET

This method shall support the URI query parameters specified in table 5.2.30.3.1-1.

Table 5.2.30.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| shared-data-ids | array(SharedDataId) | M | 1..N |  |

This method shall support the request data structures specified in table 5.2.30.3.1-2 and the response data structures and response codes specified in table 5.2.30.3.1-3.

Table 5.2.30.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.30.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| array(SharedData) | M | 1..N | 200 OK | Upon success, a response body containing a list of SharedData shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.31 Resource: AmfSubscriptionInfo

#### 5.2.31.1 Description

This resource represents information relevant to an individual EE Subscription for a UE. Depending on the Event Types of the EeSubscription, the UDM may need to consume the Namf\_EventExposure\_Subscribe service operation to subscribe at the AMF (see 3GPP TS 29.518 [13]). After successful subscription at the AMF, the UDM needs to store within the UDR related information, e.g. the SubscriptionId allocated by the AMF.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.31.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}/amf-subscriptions

This resource shall support the resource URI variables defined in table 5.2.31.2-1.

Table 5.2.31.2-1: Resour ce URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)  pattern: "(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)" |
| subsId | Identifier of the subscription (allocated by the UDM) |

#### 5.2.31.3 Resource Standard Methods

##### 5.2.31.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.31.3.1-1.

Table 5.2.31.3.1-1: URI query parameters supported by the PUT method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.31.3.1-2 and the response data structures and response codes specified in table 5.2.31.3.1-3.

Table 5.2.31.3.1-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| array(AmfSubscriptionInfo) | M | 1..N | AMF subscription info for one or two AMFs |

Table 5.2.31.3.1-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.31.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.31.3.2-1.

Table 5.2.31.3.2-1: URI query parameters supported by the DELETE method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.31.3.2-2 and the response data structures and response codes specified in table 5.2.31.3.2-3.

Table 5.2.31.3.2-2: Data structures supported by the DELETE Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.31.3.2-3: Data structures supported by the DELETE Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.31.3.3 GET

This method shall support the URI query parameters specified in table 5.2.31.3.3-1.

Table 5.2.31.3.3-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.31.3.3-2 and the response data structures and response codes specified in table 5.2.31.3.3-3.

Table 5.2.31.3.3-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.31.3.3-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| array(AmfSubscriptionInfo) | M | 1..N | 200 OK | Upon success, a response body containing AMF Subscription Infos shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

##### 5.2.31.3.4 PATCH

This method is used to modify the AMF subscription Infos in the UDR.

This method shall support the URI query parameters specified in table 5.2.31.3.4-1.

Table 5.2.31.3.4-1: URI query parameters supported by the PATCH method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 5.2.31.3.2-2 and the response data structures and response codes specified in table 5.2.31.3.4-3.

Table 5.2.31.3.4-2: Data structures supported by the PATCH Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| array(PatchItem) | M | 1..N | Contains the delta data to the provisioned parameter data |

Table 5.2.31.3.4-3: Data structures supported by the PATCH Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon successful modification there is no body in the response message. |
| ProblemDetails | M | 1 | 403 Forbidden | One or more attributes are not allowed to be modified according to e.g. policy or local configuration.  The invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified.  The cause attribute shall be set to "MODIFY\_NOT\_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.32 Resource: ContextData

#### 5.2.32.1 Description

This resource represents the ContextData for a UE ID.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

#### 5.2.32.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data

This resource shall support the resource URI variables defined in table 5.2.32.2-1.

Table 5.2.32.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)  pattern: "^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+)$" |

#### 5.2.32.3 Resource Standard Methods

##### 5.2.32.3.1 GET

This method shall support the URI query parameters specified in table 5.2.32.3.1-1.

Table 5.2.32.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| context-dataset-names | array(ContextDataSetName) | M | 2..N | If included, this IE shall contain the names of context data sets to be retrieved. If not included, all context data sets shall be returned. |

This method shall support the request data structures specified in table 5.2.32.3.1-2 and the response data structures and response codes specified in table 5.2.32.3.1-3.

Table 5.2.32.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.32.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| ContextDataSets | M | 1 | 200 OK | Upon success, a response body containing the requested context data sets shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

### 5.2.33 Resource: GroupIdentifiers

#### 5.2.33.1 Description

This resource represents the collection of data that can be shared by multiple UEs.

#### 5.2.33.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/group-data/group-identifiers

This resource shall support the resource URI variables defined in table 5.2.33.2-1.

Table 5.2.33.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |

#### 5.2.33.3 Resource Standard Methods

##### 5.2.33.3.1 GET

This method shall support the URI query parameters specified in table 5.2.33.3.1-1.

Table 5.2.33.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [4] clause 6.6 |
| ext-groud-id | ExtGroupId | C | 0..1 | External Group ID |
| int-group-id | GroupId | C | 0..1 | Internal Group ID |
| NOTE: Either ext-group-id or int-group-id shall be present in the request. | | | | |

Either the ext-group-id or the int-group-id shall be present in the request.

This method shall support the request data structures specified in table 5.2.33.3.1-2 and the response data structures and response codes specified in table 5.2.33.3.1-3.

Table 5.2.33.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.33.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| GroupIdentifiers | M | 1 | 200 OK | Upon success, a response body containing the group identifier(s) shall be returned. |
| NOTE: In addition, common data structures as listed in table 5.5-1 are supported. | | | | |

## 5.3 Notifications

### 5.3.1 General

This clause describes the resources to provide Notification to NF service consumers which have explicitly or implicitly subscribed to UDR to be notified when data is changed.

### 5.3.2 Data Change Notification

The POST method shall be used for Data Change Notifications.

- For explicit subscriptions (i.e., subscriptions created under the "subs-to-notif" collection resource, the URI shall be as provided during the subscription procedure;

- For implicit subscriptions, the UDR shall use either a locally configured callback URI of the UDM, or the UDR may retrieve from NRF a default notification URI stored by UDM in NRF during the NF registration procedure.

- The UDM should register in NRF a default notification URI globally at NF Profile level, rather than registering individual default notification URIs per NF Service.

NOTE 1: If the UDM registers different default notification URIs per NF Service, then how UDR determines which resources are monitored per UDM service is implementation dependent.

The "callback" clause of the OpenAPI specification found in Annex A.2 associated to the POST method of the "subs-to-notif" resource shall be used as the notification request for both explicit and implicit subscriptions.

NOTE 2: For explicit subscriptions, a stateless UDM/NF provides a URI which identifies a set of UDMs/NFs; a stateful UDM/NF provides a specific URI identifying a node.

Resource URI: {callbackReference}

Support of URI query parameters is specified in table 5.3.2-1.

Table 5.3.2-1: URI query parameters supported by the POST method

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

Support of request data structures is specified in table 5.3.2-2 and of response data structures and response codes is specified in table 5.3.2-3.

Table 5.3.2-2: Data structures supported by the POST Request Body

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| DataChangeNotify | M | 1 |  |

Table5.3.2-3: Data structures supported by the POST Response Body

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Upon success, an empty response body shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

## 5.4 Data Model

### 5.4.1 General

This clause specifies the application data model supported by the API.

Table 5.4.1-1 specifies the data types defined for the Nudr service based interface protocol.

Table 5.4.1-1: Nudr Subscriber Data specific Data Types

|  |  |  |
| --- | --- | --- |
| Data type | Clause defined | Description |
| AuthenticationSubscription | 5.4.2.2 | A UE's authentication data |
| OperatorSpecificDataContainer | 5.4.2.3 | Container for operator specific data |
| SmfRegList | 5.4.2.4 | The list of all the SMF registrations of a UE |
| SubscriptionDataSubscriptions | 5.4.2.5 | A subscription to notifications. |
| DataChangeNotify | 5.4.2.6 | Container for data which have changed and notification was requested when changed. |
| IdentityData | 5.4.2.7 | Identity data corresponds to the provided ueId |
| ProvisionedDataSets | 5.4.2.8 |  |
| SorData | 5.4.2.9 | Used to store the status of the latest SOR data update |
| UpuData | 5.4.2.9A | Used to store the status of the latest UPU data update |
| AmfSubscriptionInfo | 5.4.2.19 | Information the UDR stores and retrieves related to active subscriptions at the AMF(s) |
| EeProfileData | 5.4.2.20 | Event Exposure Profile Data |
| ContextDataSets | 5.4.2.22 |  |
| AuthMethod | 5.4.3.3 |  |
| DataSetName | 5.4.3.4 |  |
| ContextDataSetName | 5.4.3.6 |  |
| SqnScheme | 5.4.3.7 |  |
| Sign | 5.4.3.8 |  |
| UeUpdateStatus | 5.4.3.9 |  |

Table 5.4.1-2 specifies data types re-used by the Nudr service based interface protocol from other specifications, including a reference to their respective specifications and when needed, a short description of their use within the Nudr service based interface.

Table 5.4.1-2: Nudr re-used Data Types

|  |  |  |
| --- | --- | --- |
| ` | Reference | Comments |
| AccessAndMobilitySubscriptionData | 3GPP TS 29.503 [6] | Access and Mobility Subscription Data |
| SmfSelectionSubscriptionData | 3GPP TS 29.503 [6] | SMF Selection Subscription Data |
| SessionManagementSubscriptionData | 3GPP TS 29.503 [6] | Session Management Subscription Data |
| Amf3GppAccessRegistration | 3GPP TS 29.503 [6] |  |
| AmfNon3GppAccessRegistration | 3GPP TS 29.503 [6] | The complete set of information relevant to the AMF where the UE has registered via non 3GPP access. |
| SmfRegistration | 3GPP TS 29.503 [6] |  |
| SmsfRegistration | 3GPP TS 29.503 [6] |  |
| SmsManagementSubscriptionData | 3GPP TS 29.503 [6] |  |
| SupportedFeatures | 3GPP TS 29.571 [7] | Used to negotiate the applicability of the optional features |
| ProblemDetails | 3GPP TS 29.571 [7] | Detailed information about the status code. |
| PpData | 3GPP TS 29.503 [6] |  |
| SmsSubscriptionData | 3GPP TS 29.503 [6] |  |
| PatchItem | 3GPP TS 29.571 [7] | Data structure used for JSON patch. |
| SdmSubscription | 3GPP TS 29.503 [6] |  |
| EeSubscription | 3GPP TS 29.503 [6] |  |
| Uri | 3GPP TS 29.571 [7] |  |
| TraceData | 3GPP TS 29.571 [7] |  |
| Dnn | 3GPP TS 29.571 [7] | Data Network Name |
| Snssai | 3GPP TS 29.571 [7] | Single NSSAI |
| VarUeId | 3GPP TS 29.571 [7] | String represents the SUPI or GPSI. |
| NfInstanceId | 3GPP TS 29.571 [7] |  |
| NotifyItem | 3GPP TS 29.571 [7] | Common data type used for data change notification. |
| OdbData | 3GPP TS 29.571 [7] | Operator Determined Barring Data |
| EventType | 3GPP TS 29.503 [6] |  |
| ExtGroupId | 3GPP TS 29.503 [6] | External Group Identifier |
| PduSessionId | 3GPP TS 29.571 [7] |  |
| DateTime | 3GPP TS 29.571 [7] |  |
| UpuMac | 3GPP TS 29.509 [15] |  |

### 5.4.2 Structured data types

#### 5.4.2.1 Introduction

This clause defines the structures to be used in resource representations.

#### 5.4.2.2 Type: AuthenticationSubscription

Table 5.4.2.2-1: Definition of type AuthenticationSubscription

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| authenticationMethod | AuthMethod | M | 1 | String containing the Authentication Method ( "5G\_AKA" , "EAP\_AKA\_PRIME, "EAP\_TLS"...)." |
| encPermanentKey | string | C | 0..1 | The encrypted value (hexstring) of the permanent authentication key (K) (see 3GPP TS 33.501 [9]).  It shall be present if the authentication method is "5G\_AKA" or "EAP\_AKA\_PRIME". |
| protectionParameterId | string | C | 0..1 | Identifies a parameter set securely stored in the UDM(ARPF) that can be used to decrypt the encPermanentKey (and encOpcKey or encTopcKey if present). Values and their meaning are HPLMN-operator specific.  It shall be present if the authentication method is "5G\_AKA" or "EAP\_AKA\_PRIME". |
| sequenceNumber | SequenceNumber | C | 0..1 | String containing the SQN as defined in 3GPP TS 33.102 [10].  It shall be present if the authentication method is "5G\_AKA" or "EAP\_AKA\_PRIME". |
| authenticationManagementField | string | C | 0..1 | Hexstring containing the Authentication management field as defined in 3GPP TS 33.501 [9].  It shall be present if the authentication method is "5G\_AKA" or "EAP\_AKA\_PRIME".  Pattern: '^[A-Fa-f0-9]{4}$' |
| algorithmId | string | C | 0..1 | Identifies a parameter set securely stored in the UDM(ARPF) that provides details on the algorithm and parameters used to generate authentication vectors. Values and their meaning are HPLMN-operator specific.  It shall be present if the authentication method is "5G\_AKA" or "EAP\_AKA\_PRIME". |
| encOpcKey | string | O | 0..1 | Hexstring of the encrypted OPC Key.  Presence indicates that the provided value (decrypted) shall be used instead of the value derived from OP and K. |
| encTopcKey | string | O | 0..1 | Hexstring of the encrypted TOPC Key.  Presence indicates that the provided value (decrypted) shall be used instead of the value derived from TOP and K. |

#### 5.4.2.3 Type: OperatorSpecificDataContainer

Table 5.4.2.3-1: Definition of type OperatorSpecificDataContainer

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| dataType | string | M | 1 | This attribute value must be a string equals to the name of the actual data type of the "Value" attribute. |
| value | any type | M | 1 |  |

NOTE: In this release of the specification, if dataType attribute takes value "object", it is not possible to indicate the schema of the JSON object included in the "value" attribute, and therefore the usage of the "object" type is not recommended.

#### 5.4.2.4 Type: SmfRegList

Table 5.4.2.4-1: Definition of type SmfRegList

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| N/A | array(SmfRegistration) | M | 1..N | Each member of the array is an individual SMF registration of the UE. |

#### 5.4.2.5 Type: SubscriptionDataSubscriptions

Table 5.4.2.5-1: Definition of type SubscriptionDataSubscriptions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| callbackReference | Uri | M | 1 | Identifies the UDM/NF pool or an individual UDM/NF which should be used by the UDR to send notification to UDM/NF. |
| originalCallbackReference | Uri | O | 0..1 | URI provided by the NF service consumer to the UDM to receive notifications from the UDR.  If "sdmSubscription" is present, this attribute may be absent (and, if it is also present, it shall take the same value as the attribute "callbackReference" of "sdmSubscription"). |
| ueId | VarUeId | O | 0..1 | User identity if subscription to notifications is related to a user. |
| monitoredResourceUris | array(Uri) | M | 1..N | A set of URIs that identify the resources for which a modification of the representation triggers a notification.  The URI shall take the form of either an absolute URI or an absolute-path reference as defined in IETF RFC 3986 [16]. |
| expiry | DateTime | C | 0..1 | This IE shall be included in a subscription response, if, based on operator policy and taking into account the expiry time included in the request, the UDR needs to include an expiry time.  This IE may be included in a subscription request. When present, this IE shall represent the time after which the subscription becomes invalid.  The absence of this attribute in the subscription response means the subscription to be valid without an expiry time. |
| sdmSubscription | SdmSubscription | O | 0..1 | Data related to the subscription to changes on SDM data, created by the NF Service Consumer of the UDM (see 3GPP TS 29.503 [6], clause 6.1.6.2.3). |
| subscriptionId | string | C | 0..1 | This attribute shall be present if the SubscriptionDataSubscriptions is sent in a GET response message or in a Notification. It identifies the individual SubscriptionDataSubscriptions stored in the UDR and may be used by the UDM to e.g. delete or update a SubscriptionDataSubscriptions.  Read Only: true |
| supportedFeatures | SupportedFeatures | O | 0..1 | Used to negotiate the applicability of optional features |

#### 5.4.2.6 Type: DataChangeNotify

Table 5.4.2.6-1: Definition of type DataChangeNotify

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| originalCallbackReference | array(Uri) | C | 1..N | Original Callback Reference shall be present if a UDM has subscribed to notification due to an request from an NF. If present it is Identifying the NF to which the UDM has to provide the notification of data change. |
| ueId | VarUeId | C | 0..1 | User identity if subscription to notifications is related to a user that may be provided e.g. in case OriginalCallback URI is not included. |
| notifyItems | array(NotifyItem) | O | 1..N | This attribute contains the changes which have been applied on the resources. |
| sdmSubscription | SdmSubscription | O | 0..1 | Data related to the subscription to changes on SDM data created by the NF Service Consumer of the UDM (see 3GPP TS 29.503 [6], clause 6.1.6.2.3).  This attribute should be omitted if the SubscriptionsDataSubscriptions array is included. |
| subscriptionDataSubscriptions | array(SubscriptionDataSubscriptions) | O | 1..N | This attribute contain the Subscription Data Subscriptions (subs-to-notify) associated with the Notification. |

#### 5.4.2.7 Type: IdentityData

Table 5.4.2.7-1: Definition of type IdentityData

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| supiList | array(Supi) | C | 1..N | Supi list corresponding to the provided gpsi ueId. |
| gpsiList | array(Gpsi) | C | 1..N | Gpsi list corresponding to the provided supi ueId.  Zero or one MSISDN and/or zero or more external Identifiers may be included. |

### 5.4.2.8 Type: ProvisionedDataSets

Table 5.4.2.8-1: ProvisionedDataSets

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| amData | AccessAndMobilitySubscriptionData | O | 0..1 | Access and Mobility Subscription Data |
| smfSelData | SmfSelectionSubscriptionData | O | 0..1 | SMF Selection Subscription Data |
| smsSubsData | SmsSubscriptionData | O | 0..1 | SMS Subscription Data |
| smData | array(SessionManagementSubscriptionData) | O | 1..N | Session Management Subscription Data |
| traceData | TraceData | O | 0..1 | Trace Data. The Null value indicates that trace is not active. |
| smsMngData | SmsManagementSubscriptionData | O | 0..1 | SMS Management Subscription Data |

#### 5.4.2.9 Type: SorData

Table 5.4.2.9-1: Definition of type SorData

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| provisioningTime | DateTime | M | 1 | Point in time of provisioning |
| ueUpdateStatus | UeUpdateStatus | M | 1 | status of the SOR data update procedure |
| sorXmacIue | SorMac | C | 0..1 | String containing SoR-XMAC-IUE as specified in 3GPP TS 33.501 [9]. Shall be present if UeUpdateStatus is "WAITING\_FOR\_ACK" or "ACK\_RECEIVED". |
| sorMacIue | SorMac | C | 0..1 | String containing SoR-MAC-IUE as specified in 3GPP TS 33.501 [9]. Shall be preset if UeUpdateStatus is "ACK\_RECEIVED". |

#### 5.4.2.9A Type: UpuData

Table 5.4.2.9A-1: Definition of type UpuData

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| provisioningTime | DateTime | M | 1 | Point in time of provisioning |
| ueUpdateStatus | UeUpdateStatus | M | 1 | status of the UPU data update procedure |
| upuXmacIue | UpuMac | C | 0..1 | String containing UPU-XMAC-IUE as specified in 3GPP TS 33.501 [9]. Shall be present if UeUpdateStatus is "WAITING\_FOR\_ACK" or "ACK\_RECEIVED". |
| upuMacIue | UpuMac | C | 0..1 | String containing UPU-MAC-IUE as specified in 3GPP TS 33.501 [9]. Shall be preset if UeUpdateStatus is "ACK\_RECEIVED". |

#### 5.4.2.10 Void

#### 5.4.2.11 Void

#### 5.4.2.12 Void

#### 5.4.2.13 Void

#### 5.4.2.14 Void

#### 5.4.2.15 Void

#### 5.4.2.16 Void

#### 5.4.2.17 Void

#### 5.4.2.18 Void

#### 5.4.2.19 Type: AmfSubscriptionInfo

Table 5.4.2.19-1: Definition of type AmfSubscriptionInfo

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| amfInstanceId | NfInstanceId | M | 1 | InstanceId of the AMF to which the subscription was sent |
| subscriptionId | Uri | M | 1 | The Subscription Id allocated by the AMF as received by the UDM in the HTTP "Location" header of the Namf\_EventExposure\_Subscribe response |
| subsChangeNotifyCorrelationId | string | O | 1 | The Correlation Id allocated by the UDM and sent to the AMF for correlation of subscriptionId-change-notifications |

#### 5.4.2.20 Type: EeProfileData

Table 5.4.2.20-1: Definition of type EeProfileData

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| restrictedEventTypes | array(EventType) | O | 1..N | List of the event types that are restricted (if any) for the UE.  The absence of this IE indicates that all event types are authorized for the UE. |
| supportedFeatures | SupportedFeatures | O | 0..1 |  |

#### 5.4.2.21 Void

#### 5.4.2.22 Type: ContextDataSets

Table 5.4.2.22-1: ContextDataSets

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| amf3Gpp | Amf3GppAccessRegistration | O | 0..1 | AMF 3GPP Access registration |
| amfNon3Gpp | AmfNon3GppAccessRegistration | O | 0..1 | AMF Non 3GPP Access registration |
| sdmSubscriptions | array(SdmSubscription) | O | 1..N | SDM-Subscriptions |
| eeSubscriptions | array(EeSubscription) | O | 1..N | Event Exposure Subscriptions |
| smsf3GppAccess | SmsfRegistration | O | 0..1 | SMSF 3GPP Access registration |
| smsfNon3GppAccess | SmsfRegistration | O | 0..1 | SMSF Non 3GPP Access registration |
| subscriptionDataSubscriptions | array(SubscriptionDataSubscriptions) | O | 1..N | This attribute contain the Subscription Data Subscriptions (subs-to-notify) associated with the Notification. |

#### 5.4.2.23 Type: SequenceNumber

Table 5.4.2.23-1: Definition of type SequenceNumber

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| sqnScheme | SqnScheme | M | 1 | The scheme used to generate the sequence numbers, as described in 3GPP TS 33.102 [10], clause C.1.1. |
| sqn | string | C | 0..1 | A 48-bit hex string containing the SEQ part of SQN (most significant bits), as specified in 3GPP TS 33.102 [10], and where the IND part (least significant bits) is filled with 0's.  When the sqnScheme is "TIME\_BASED", the SEQ part (most significant bits) of this attribute contains the DIF value.  This IE may be absent, if it does not exist in UDR (e.g. right after the subscriber is provisioned); otherwise, it shall be present.  Pattern: '^[A-Fa-f0-9]{12}$' |
| lastIndexes | map(integer) | C | 1..N | A map of integer values, where the key of the map is the type of node that is requesting the generation of an authentication vector in UDM, and the integer is the last used value of IND for the corresponding type of node.  The types of nodes currently defined are:  - "ausf"  This IE may be absent, if it does not exist in UDR (e.g. right after the subscriber is provisioned); otherwise, it shall be present. |
| indLength | integer | O | 1 | Number of bits of the IND part of SQN. The length of the SEQ part is, therefore, (48 - indLength) bits.  If not present, the default value is 5. |
| difSign | Sign | O | 1 | Sign of the DIF value. It is applicable when the sqnScheme is "TIME\_BASED".  If not present, the default value is "NEGATIVE". |

### 5.4.3 Simple data types and enumerations

#### 5.4.3.1 Introduction

This clause defines simple data types and enumerations that can be referenced from data structures defined in the previous clauses.

#### 5.4.3.2 Simple data types

The simple data types defined in table 5.4.3.2-1 shall be supported.

Table 5.4.3.2-1: Simple data types

|  |  |  |
| --- | --- | --- |
| Type Name | Type Definition | Description |

#### 5.4.3.3 Enumeration: AuthMethod

Table 5.4.3.3-1: Enumeration AuthMethod

|  |  |
| --- | --- |
| Enumeration value | Description |
| "5G\_AKA" | 5G AKA |
| "EAP\_AKA\_PRIME" | EAP AKA' |

#### 5.4.3.4 Enumeration: DataSetName

Table 5.4.3.4-1: Enumeration DataSetName

|  |  |
| --- | --- |
| Enumeration value | Description |
| "AM" | Access and Mobility Subscription Data |
| "SMF\_SEL" | SMF Selection Subscription Data |
| "SMS\_SUB" | SMS Subscription Data |
| "SM" | Session Management Subscription Data |
| "TRACE" | Trace Data |
| "SMS\_MNG" | SMS Management Subscription Data |

#### 5.4.3.5 Void

#### 5.4.3.6 Enumeration: ContextDataSetName

Table 5.4.3.6-1: Enumeration ContextDataSetName

|  |  |
| --- | --- |
| Enumeration value | Description |
| "AMF\_3GPP" | AMF 3GPP Access Registration |
| "AMF\_NON\_3GPP" | SMF Non 3GPP Access Registration |
| "SDM SUBSCRIPTIONS" | SDM Subscriptions |
| "EE\_SUBSCRIPTIONS" | EE Subscriptions |
| "SMSF\_3GPP" | SMSF 3GPP Access Registration |
| "SMSF\_NON3GPP" | SMSF Non 3GPP Access Registration |
| "SUBS\_TO\_NOTIFY" | UDR Subscriptions |

#### 5.4.3.7 Enumeration: SqnScheme

Table 5.4.3.7-1: Enumeration SqnScheme

|  |  |
| --- | --- |
| Enumeration value | Description |
| "GENERAL" | Scheme for generation of Sequence Numbers (partially time-based), as described in 3GPP TS 33.102 [10], clause C.1.1.1 |
| "NON\_TIME\_BASED" | Scheme for generation of Sequence Numbers (non-time-based), as described in 3GPP TS 33.102 [10], clause C.1.1.2 |
| "TIME\_BASED" | Scheme for generation of Sequence Numbers (entirely time-based), as described in 3GPP TS 33.102 [10], clause C.1.1.3 |
| NOTE: These schemes for Sequence Number generation are documented in an informative Annex in 3GPP TS 33.102 [10]; having these different schemes listed in this Enumeration type does not imply that UDM implementations are required to support all of them; the Sequence Number generation schemes that need to be supported by UDM is deployment-specific. | |

#### 5.4.3.8 Enumeration: Sign

Table 5.4.3.8-1: Enumeration Sign

|  |  |
| --- | --- |
| Enumeration value | Description |
| "POSITIVE" |  |
| "NEGATIVE" |  |

#### 5.4.3.9 Enumeration: UeUpdateStatus

Table 5.4.3.9-1: Enumeration UeUpdateStatus

|  |  |
| --- | --- |
| Enumeration value | Description |
| "NOT\_SENT" | SOR data update has not been sent to the AMF e.g. because no AMF was registered at provisioning time |
| "SENT\_NO\_ACK\_REQUIRED" | SOR data update has been sent to the AMF; Acknowledgement was not requested |
| "WAITING\_FOR\_ACK" | SOR data update has been sent to the AMF; Acknowledgement has been requested. In this state sorXmacIue shall be present. |
| "ACK\_RECEIVED" | SOR data update has been acknowledged by the UE. In this state sorXmacIue and sorMacIue shall be present |

### 5.4.4 Binary data

N/A

## 5.5 Error handling

Table 5.5-1 lists common response body data structures used within the Nudr-dr API

Table 5.5-1: Common Response Body Data Structures

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Data type** | **P** | **Cardinality** | **Response**  **codes** | **Description** |
| ProblemDetails | O | 0..1 | 4xx, 5xx responses | For unsuccessful status codes, the UDR may provide detailed information. |
| NOTE: In addition common data structures as defined in 3GPP TS 29.500 [8] are supported. | | | | |

The application layer error handling shall follow 3GPP TS 29.504 [2] clause 6.1.6 unless explicitly specified in this document.

## 5.6 Feature negotiation

The optional features in table 6.1.8-1 of 3GPP TS 29.504 [2] are defined for the Nudr\_DataRepository API. They shall be negotiated using the extensibility mechanism defined in clause 6.6 of 3GPP TS 29.500 [8].

Annex A (normative):  
OpenAPI specification

## A.1 General

This Annex specifies the formal definition of the Nudr\_DataRepository service API for Subscription Data. It consists of OpenAPI 3.0.0 specifications, in YAML format.

This Annex takes precedence when being discrepant to other parts of the specification with respect to the encoding of information elements and methods within the API(s).

NOTE 1: The semantics and procedures, as well as conditions, e.g. for the applicability and allowed combinations of attributes or values, not expressed in the OpenAPI definitions but defined in other parts of the specification also apply.

Informative copies of the OpenAPI specification files contained in this 3GPP Technical Specification are available on the public 3GPP file server in the following locations (see clause 5B of the 3GPP TR 21.900 [14] for further information):

- [https://www.3gpp.org/ftp/Specs/archive/OpenAPI/<Release>/](https://www.3gpp.org/ftp/Specs/archive/OpenAPI/%3cRelease%3e/), and

- [https://www.3gpp.org/ftp/Specs/<Plenary>/<Release>/OpenAPI/](https://www.3gpp.org/ftp/Specs/%3cPlenary%3e/%3cRelease%3e/OpenAPI/).

NOTE 2: To fetch the OpenAPI specification file after CT#83 plenary meeting for Release 15 in the above links <Plenary> must be replaced with the date the CT Plenary occurs, in the form of year-month (yyyy-mm), e.g. for CT#83 meeting <Plenary> must be replaced with value "2019-03" and <Release> must be replaced with value "Rel-15".

## A.2 Nudr\_DataRepository API for Subscription Data

For the purpose of referencing entities in the Open API file defined in this Annex, it shall be assumed that this Open API file is contained in a physical file named "TS29505\_Subscription\_Data.yaml".

openapi: 3.0.0

info:

version: '-'

title: 'Unified Data Repository Service API file for subscription data'

description: |

Unified Data Repository Service (subscription data).

The API version is defined in 3GPP TS 29.504.

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externalDocs:

description: 3GPP TS 29.505 V15.8.0; 5G System; Usage of the Unified Data Repository Service for subscription data; Stage 3

url: 'http://www.3gpp.org/ftp/Specs/archive/29\_series/29.505/'

paths:

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

get:

summary: Retrieves the authentication subscription data of a UE

operationId: QueryAuthSubsData

tags:

- Authentication Data (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/AuthenticationSubscription'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

patch:

summary: modify the authentication subscription data of a UE

operationId: ModifyAuthenticationSubscription

tags:

- Authentication Subscription (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

requestBody:

content:

application/json-patch+json:

schema:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/PatchItem'

required: true

responses:

'204':

description: Expected response to a valid request

'403':

description: modification is rejected

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

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

put:

summary: To store the Authentication Status data of a UE

operationId: CreateAuthenticationStatus

tags:

- Authentication Status (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

requestBody:

content:

application/json:

schema:

$ref: 'TS29503\_Nudm\_UEAU.yaml#/components/schemas/AuthEvent'

responses:

'204':

description: Upon success, an empty response body shall be returned

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

get:

summary: Retrieves the Authentication Status of a UE

operationId: QueryAuthenticationStatus

tags:

- AuthEvent (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: fields

in: query

description: attributes to be retrieved

required: false

schema:

type: array

items:

type: string

minItems: 1

style: form

explode: false

- name: supported-features

description: Supported Features

in: query

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: 'TS29503\_Nudm\_UEAU.yaml#/components/schemas/AuthEvent'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/ue-update-confirmation-data/sor-data:

put:

summary: To store the SoR acknowledgement information of a UE

operationId: CreateAuthenticationSoR

tags:

- Authentication SoR (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

requestBody:

content:

application/json:

schema:

$ref: '#/components/schemas/SorData'

responses:

'204':

description: Expected response to a valid request

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

get:

summary: Retrieves the SoR acknowledgement information of a UE

operationId: QueryAuthSoR

tags:

- Authentication SoR (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/SorData'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/ue-update-confirmation-data/upu-data:

put:

summary: To store the UPU acknowledgement information of a UE

operationId: CreateAuthenticationUPU

tags:

- Authentication UPU (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

requestBody:

content:

application/json:

schema:

$ref: '#/components/schemas/UpuData'

responses:

'204':

description: Expected response to a valid request

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

get:

summary: Retrieves the UPU acknowledgement information of a UE

operationId: QueryAuthUPU

tags:

- Authentication UPU (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/UpuData'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

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

get:

summary: Retrieve multiple provisioned data sets of a UE

operationId: QueryProvisionedData

tags:

- Provisioned Data (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: servingPlmnId

in: path

description: PLMN ID

required: true

schema:

$ref: '#/components/schemas/VarPlmnId'

- name: dataset-names

in: query

description: List of dataset names

style: form

explode: false

schema:

$ref: '#/components/schemas/DatasetNames'

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/ProvisionedDataSets'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/am-data:

get:

summary: Retrieves the access and mobility subscription data of a UE

operationId: QueryAmData

tags:

- Access And Mobility Subscription Data (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: servingPlmnId

in: path

description: PLMN ID

required: true

schema:

$ref: '#/components/schemas/VarPlmnId'

- name: fields

in: query

description: attributes to be retrieved

required: false

schema:

type: array

items:

type: string

minItems: 1

style: form

explode: false

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

- name: If-None-Match

in: header

description: Validator for conditional requests, as described in RFC 7232, 3.2

schema:

type: string

- name: If-Modified-Since

in: header

description: Validator for conditional requests, as described in RFC 7232, 3.3

schema:

type: string

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/AccessAndMobilitySubscriptionData'

headers:

Cache-Control:

description: Cache-Control containing max-age, as described in RFC 7234, 5.2

schema:

type: string

ETag:

description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

schema:

type: string

Last-Modified:

description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

schema:

type: string

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

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

get:

summary: Retrieves the SMF selection subscription data of a UE

operationId: QuerySmfSelectData

tags:

- SMF Selection Subscription Data (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: servingPlmnId

in: path

description: PLMN ID

required: true

schema:

$ref: '#/components/schemas/VarPlmnId'

- name: fields

in: query

description: attributes to be retrieved

required: false

schema:

type: array

items:

type: string

minItems: 1

style: form

explode: false

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

- name: If-None-Match

in: header

description: Validator for conditional requests, as described in RFC 7232, 3.2

schema:

type: string

- name: If-Modified-Since

in: header

description: Validator for conditional requests, as described in RFC 7232, 3.3

schema:

type: string

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/SmfSelectionSubscriptionData'

headers:

Cache-Control:

description: Cache-Control containing max-age, as described in RFC 7234, 5.2

schema:

type: string

ETag:

description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

schema:

type: string

Last-Modified:

description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

schema:

type: string

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sm-data:

get:

summary: Retrieves the Session Management subscription data of a UE

operationId: QuerySmData

tags:

- Session Management Subscription Data

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: servingPlmnId

in: path

description: PLMN ID

required: true

schema:

$ref: '#/components/schemas/VarPlmnId'

- name: single-nssai

in: query

content:

application/json:

schema:

$ref: '#/components/schemas/VarSnssai'

description: single NSSAI

required: false

- name: dnn

in: query

description: DNN

required: false

schema:

$ref: '#/components/schemas/Dnn'

- name: fields

in: query

description: attributes to be retrieved

required: false

schema:

type: array

items:

type: string

minItems: 1

style: form

explode: false

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

- name: If-None-Match

in: header

description: Validator for conditional requests, as described in RFC 7232, 3.2

schema:

type: string

- name: If-Modified-Since

in: header

description: Validator for conditional requests, as described in RFC 7232, 3.3

schema:

type: string

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

type: array

items:

$ref: '#/components/schemas/SessionManagementSubscriptionData'

minItems: 1

headers:

Cache-Control:

description: Cache-Control containing max-age, as described in RFC 7234, 5.2

schema:

type: string

ETag:

description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

schema:

type: string

Last-Modified:

description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

schema:

type: string

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/context-data/amf-3gpp-access:

get:

summary: Retrieves the AMF context data of a UE using 3gpp access

operationId: QueryAmfContext3gpp

tags:

- AMF 3GPP Access Registration (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: fields

in: query

description: attributes to be retrieved

required: false

schema:

type: array

items:

type: string

minItems: 1

style: form

explode: false

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/Amf3GppAccessRegistration'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

put:

summary: To store the AMF context data of a UE using 3gpp access in the UDR

operationId: CreateAmfContext3gpp

tags:

- AMF 3GPP Access Registration (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

requestBody:

content:

application/json:

schema:

$ref: '#/components/schemas/Amf3GppAccessRegistration'

responses:

'204':

description: Upon success, an empty response body shall be returned

'201':

description: Created

content:

application/json:

schema:

$ref: '#/components/schemas/Amf3GppAccessRegistration'

headers:

Location:

description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/amf-3gpp-access'

required: true

schema:

type: string

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

patch:

summary: To modify the AMF context data of a UE using 3gpp access in the UDR

operationId: AmfContext3gpp

tags:

- AMF 3GPP Access Registration (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

requestBody:

content:

application/json-patch+json:

schema:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/PatchItem'

required: true

responses:

'204':

description: Expected response to a valid request

'403':

description: modification is rejected

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/context-data/amf-non-3gpp-access:

get:

summary: Retrieves the AMF context data of a UE using non-3gpp access

operationId: QueryAmfContextNon3gpp

tags:

- AMF Non-3GPP Access Registration (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: fields

in: query

description: attributes to be retrieved

required: false

schema:

type: array

items:

type: string

minItems: 1

style: form

explode: false

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/AmfNon3GppAccessRegistration'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

put:

summary: To store the AMF context data of a UE using non-3gpp access in the UDR

operationId: CreateAmfContextNon3gpp

tags:

- AMF Non-3GPP Access Registration (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

requestBody:

content:

application/json:

schema:

$ref: '#/components/schemas/AmfNon3GppAccessRegistration'

responses:

'204':

description: Upon success, an empty response body shall be returned

'201':

description: Created

content:

application/json:

schema:

$ref: '#/components/schemas/Amf3GppAccessRegistration'

headers:

Location:

description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/amf-non-3gpp-access'

required: true

schema:

type: string

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

patch:

summary: To modify the AMF context data of a UE using non 3gpp access in the UDR

operationId: AmfContextNon3gpp

tags:

- AMF Non-3GPP Access Registration (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

requestBody:

content:

application/json-patch+json:

schema:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/PatchItem'

required: true

responses:

'204':

description: Expected response to a valid request

'403':

description: modification is rejected

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/context-data/smf-registrations:

get:

summary: Retrieves the SMF registration list of a UE

operationId: QuerySmfRegList

tags:

- SMF Registrations (Collection)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/SmfRegList'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/context-data/smf-registrations/{pduSessionId}:

get:

summary: Retrieves the individual SMF registration of a UE

operationId: QuerySmfRegistration

tags:

- SMF Registration (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: pduSessionId

in: path

description: PDU session id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/PduSessionId'

- name: fields

in: query

description: attributes to be retrieved

required: false

schema:

type: array

items:

type: string

minItems: 1

style: form

explode: false

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/SmfRegistration'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

put:

summary: To create an individual SMF context data of a UE in the UDR

operationId: CreateSmfContextNon3gpp

tags:

- SMF Registration (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: pduSessionId

in: path

description: PDU session id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/PduSessionId'

requestBody:

content:

application/json:

schema:

$ref: '#/components/schemas/SmfRegistration'

responses:

'201':

description: Upon success, a response body containing a representation of the created Individual SmfRegistration resource shall be returned

content:

application/json:

schema:

$ref: '#/components/schemas/SmfRegistration'

headers:

Location:

description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/smf-registrations/{pduSessionId}'

required: true

schema:

type: string

'204':

description: No content

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

delete:

summary: To remove an individual SMF context data of a UE the UDR

operationId: DeleteSmfContext

tags:

- SMF Registration (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: pduSessionId

in: path

description: PDU session id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/PduSessionId'

responses:

'204':

description: Upon success, an empty response body shall be returned.

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/operator-specific-data:

get:

summary: Retrieves the operator specific data of a UE

operationId: QueryOperSpecData

tags:

- Operator-Specific Data Container (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: fields

in: query

description: attributes to be retrieved

required: false

schema:

type: array

items:

type: string

minItems: 1

style: form

explode: false

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

- name: If-None-Match

in: header

description: Validator for conditional requests, as described in RFC 7232, 3.2

schema:

type: string

- name: If-Modified-Since

in: header

description: Validator for conditional requests, as described in RFC 7232, 3.3

schema:

type: string

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

type: object

additionalProperties:

$ref: '#/components/schemas/OperatorSpecificDataContainer'

headers:

Cache-Control:

description: Cache-Control containing max-age, as described in RFC 7234, 5.2

schema:

type: string

ETag:

description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

schema:

type: string

Last-Modified:

description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

schema:

type: string

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

patch:

summary: To modify operator specific data of a UE

operationId: ModifyOperSpecData

tags:

- Operator-Specific Data Container (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

requestBody:

content:

application/json-patch+json:

schema:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/PatchItem'

required: true

responses:

'204':

description: Expected response to a valid request

'403':

description: modification is rejected

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/context-data/smsf-3gpp-access:

put:

summary: Create the SMSF context data of a UE via 3GPP access

operationId: CreateSmsfContext3gpp

tags:

- SMSF 3GPP Registration (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

requestBody:

content:

application/json:

schema:

$ref: '#/components/schemas/SmsfRegistration'

responses:

'204':

description: Upon success, an empty response body shall be returned

'201':

description: Created

content:

application/json:

schema:

$ref: '#/components/schemas/SmsfRegistration'

headers:

Location:

description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/smsf-3gpp-access'

required: true

schema:

type: string

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

delete:

summary: To remove the SMSF context data of a UE via 3GPP access

operationId: DeleteSmsfContext3gpp

tags:

- SMSF 3GPP Registration (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

responses:

'204':

description: Upon success, an empty response body shall be returned

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

get:

summary: Retrieves the SMSF context data of a UE using 3gpp access

operationId: QuerySmsfContext3gpp

tags:

- SMSF 3GPP Registration (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: fields

in: query

description: attributes to be retrieved

required: false

schema:

type: array

items:

type: string

minItems: 1

style: form

explode: false

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/SmsfRegistration'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/context-data/smsf-non-3gpp-access:

put:

summary: Create the SMSF context data of a UE via non-3GPP access

operationId: CreateSmsfContextNon3gpp

tags:

- SMSF Non-3GPP Registration (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

requestBody:

content:

application/json:

schema:

$ref: '#/components/schemas/SmsfRegistration'

responses:

'204':

description: Upon success, an empty response body shall be returned

'201':

description: Created

content:

application/json:

schema:

$ref: '#/components/schemas/SmsfRegistration'

headers:

Location:

description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/smsf-non-3gpp-access'

required: true

schema:

type: string

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

delete:

summary: To remove the SMSF context data of a UE via non-3GPP access

operationId: DeleteSmsfContextNon3gpp

tags:

- SMSF Non-3GPP Registration (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

responses:

'204':

description: Upon success, an empty response body shall be returned

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

get:

summary: Retrieves the SMSF context data of a UE using non-3gpp access

operationId: QuerySmsfContextNon3gpp

tags:

- SMSF Non-3GPP Registration (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: fields

in: query

description: attributes to be retrieved

required: false

schema:

type: array

items:

type: string

minItems: 1

style: form

explode: false

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/SmsfRegistration'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sms-mng-data:

get:

summary: Retrieves the SMS management subscription data of a UE

operationId: QuerySmsMngData

tags:

- SMS Management Subscription Data (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: servingPlmnId

in: path

description: PLMN ID

required: true

schema:

$ref: '#/components/schemas/VarPlmnId'

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

- name: If-None-Match

in: header

description: Validator for conditional requests, as described in RFC 7232, 3.2

schema:

type: string

- name: If-Modified-Since

in: header

description: Validator for conditional requests, as described in RFC 7232, 3.3

schema:

type: string

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/SmsManagementSubscriptionData'

headers:

Cache-Control:

description: Cache-Control containing max-age, as described in RFC 7234, 5.2

schema:

type: string

ETag:

description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

schema:

type: string

Last-Modified:

description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

schema:

type: string

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sms-data:

get:

summary: Retrieves the SMS subscription data of a UE

operationId: QuerySmsData

tags:

- SMS Subscription Data (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: servingPlmnId

in: path

description: PLMN ID

required: true

schema:

$ref: '#/components/schemas/VarPlmnId'

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

- name: If-None-Match

in: header

description: Validator for conditional requests, as described in RFC 7232, 3.2

schema:

type: string

- name: If-Modified-Since

in: header

description: Validator for conditional requests, as described in RFC 7232, 3.3

schema:

type: string

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/SmsSubscriptionData'

headers:

Cache-Control:

description: Cache-Control containing max-age, as described in RFC 7234, 5.2

schema:

type: string

ETag:

description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

schema:

type: string

Last-Modified:

description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

schema:

type: string

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/pp-data:

get:

summary: Read the profile of a given UE

operationId: GetppData

tags:

- Parameter Provision (Document)

parameters:

- name: ueId

in: path

description: pp data for a UE

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

- name: If-None-Match

in: header

description: Validator for conditional requests, as described in RFC 7232, 3.2

schema:

type: string

- name: If-Modified-Since

in: header

description: Validator for conditional requests, as described in RFC 7232, 3.3

schema:

type: string

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/PpData'

headers:

Cache-Control:

description: Cache-Control containing max-age, as described in RFC 7234, 5.2

schema:

type: string

ETag:

description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

schema:

type: string

Last-Modified:

description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

schema:

type: string

'403':

description: Forbidden

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

patch:

summary: modify the provisioned parameter data

operationId: ModifyPpData

tags:

- ProvisionedParameterData (Document)

parameters:

- name: ueId

in: path

description: pp data for a UE

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

requestBody:

content:

application/json-patch+json:

schema:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/PatchItem'

required: true

responses:

'204':

description: Expected response to a valid request

'403':

description: modification is rejected

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/context-data/ee-subscriptions:

get:

summary: Retrieves the ee subscriptions of a UE

operationId: Queryeesubscriptions

tags:

- Event Exposure Subscriptions (Collection)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

type: array

items:

$ref: '#/components/schemas/EeSubscription'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

post:

summary: Create individual EE subscription

operationId: CreateEeSubscriptions

tags:

- Event Exposure Subscriptions (Collection)

parameters:

- name: ueId

in: path

description: UE ID

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

requestBody:

content:

application/json:

schema:

$ref: '#/components/schemas/EeSubscription'

required: true

responses:

'201':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/EeSubscription'

headers:

Location:

description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}'

required: true

schema:

type: string

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}:

put:

summary: Update an individual ee subscriptions of a UE

operationId: UpdateEesubscriptions

tags:

- Event Exposure Subscription (Document)

parameters:

- name: ueId

in: path

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: subsId

in: path

required: true

schema:

type: string

requestBody:

content:

application/json:

schema:

$ref: '#/components/schemas/EeSubscription'

responses:

'204':

description: Upon success, an empty response body shall be returned

'404':

description: update of non-existing resource is rejected

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

delete:

summary: Deletes a eeSubscription

operationId: RemoveeeSubscriptions

tags:

- Event Exposure Subscription (Document)

parameters:

- name: ueId

in: path

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: subsId

in: path

required: true

description: Unique ID of the subscription to remove

schema:

type: string

responses:

'204':

description: Expected response to a successful subscription removal

patch:

summary: Modify an individual ee subscription of a UE

operationId: ModifyEesubscription

tags:

- Event Exposure Subscription (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: subsId

in: path

required: true

schema:

type: string

requestBody:

content:

application/json-patch+json:

schema:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/PatchItem'

minItems: 1

required: true

responses:

'204':

description: Successful response

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

default:

description: Unexpected error

/subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}/amf-subscriptions:

put:

summary: Create AmfSubscriptions for an individual ee subscriptions of a UE

operationId: Create AMF Subscriptions

tags:

- AMF Subscription Info (Document)

parameters:

- name: ueId

in: path

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: subsId

in: path

required: true

schema:

type: string

requestBody:

content:

application/json:

schema:

type: array

items:

$ref: '#/components/schemas/AmfSubscriptionInfo'

minItems: 1

required: true

responses:

'204':

description: Upon success, an empty response body shall be returned

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

delete:

summary: Deletes AMF Subscription Info for an eeSubscription

operationId: RemoveAmfSubscriptionsInfo

tags:

- Event AMF Subscription Info (Document)

parameters:

- name: ueId

in: path

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: subsId

in: path

required: true

schema:

type: string

responses:

'204':

description: Expected response to a successful subscription removal

patch:

summary: modify the AMF Subscription Info

operationId: ModifyAmfSubscriptionInfo

tags:

- AmfSubscriptionInfo (Document)

parameters:

- name: ueId

in: path

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: subsId

in: path

required: true

schema:

type: string

requestBody:

content:

application/json-patch+json:

schema:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/PatchItem'

required: true

responses:

'204':

description: Expected response to a valid request

'403':

description: modification is rejected

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

get:

summary: Retrieve AMF subscription Info

operationId: GetAmfSubscriptionInfo

tags:

- Query AMF Subscription Info (Document)

parameters:

- name: ueId

in: path

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: subsId

in: path

required: true

schema:

type: string

responses:

'200':

description: OK

content:

application/json:

schema:

type: array

items:

$ref: '#/components/schemas/AmfSubscriptionInfo'

minItems: 1

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/group-data/{ueGroupId}/ee-subscriptions:

get:

summary: Retrieves the ee subscriptions of a group of UEs or any UE

operationId: QueryEeGroupSubscriptions

tags:

- Event Exposure Group Subscriptions (Collection)

parameters:

- name: ueGroupId

in: path

description: Group of UEs or any UE

required: true

schema:

$ref: '#/components/schemas/VarUeGroupId'

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

type: array

items:

$ref: '#/components/schemas/EeSubscription'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

post:

summary: Create individual EE subscription for a group of UEs or any UE

operationId: CreateEeGroupSubscriptions

tags:

- Event Exposure Group Subscriptions (Collection)

parameters:

- name: ueGroupId

in: path

description: Group of UEs or any UE

required: true

schema:

$ref: '#/components/schemas/VarUeGroupId'

requestBody:

content:

application/json:

schema:

$ref: '#/components/schemas/EeSubscription'

required: true

responses:

'201':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/EeSubscription'

headers:

Location:

description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/group-data/{ueGroupId}/ee-subscriptions '

required: true

schema:

type: string

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subsId}:

put:

summary: Update an individual ee subscription of a group of UEs or any UE

operationId: UpdateEeGroupSubscriptions

tags:

- Event Exposure Subscription (Document)

parameters:

- name: ueGroupId

in: path

required: true

schema:

$ref: '#/components/schemas/VarUeGroupId'

- name: subsId

in: path

required: true

schema:

type: string

requestBody:

content:

application/json:

schema:

$ref: '#/components/schemas/EeSubscription'

responses:

'204':

description: Upon success, an empty response body shall be returned

'404':

description: update of non-existing resource is rejected

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

delete:

summary: Deletes a eeSubscription for a group of UEs or any UE

operationId: RemoveEeGroupSubscriptions

tags:

- Event Exposure Subscription (Document)

parameters:

- name: ueGroupId

in: path

required: true

schema:

$ref: '#/components/schemas/VarUeGroupId'

- name: subsId

in: path

required: true

description: Unique ID of the subscription to remove

schema:

type: string

responses:

'204':

description: Expected response to a successful subscription removal

patch:

summary: Modify an individual ee subscription for a group of a UEs

operationId: ModifyEeGroupSubscription

tags:

- Event Exposure Subscription (Document)

parameters:

- name: ueGroupId

in: path

required: true

schema:

$ref: '#/components/schemas/VarUeGroupId'

- name: subsId

in: path

required: true

schema:

type: string

requestBody:

content:

application/json-patch+json:

schema:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/PatchItem'

minItems: 1

required: true

responses:

'204':

description: Successful response

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

default:

description: Unexpected error

/subscription-data/{ueId}/ee-profile-data:

get:

summary: Retrieves the ee profile data of a UE

operationId: QueryEEData

tags:

- Event Exposure Data (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: fields

in: query

description: attributes to be retrieved

required: false

schema:

type: array

items:

type: string

style: form

explode: false

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/EeProfileData'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/context-data/sdm-subscriptions:

get:

summary: Retrieves the sdm subscriptions of a UE

operationId: Querysdmsubscriptions

tags:

- SDM Subscriptions (Collection)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

type: array

items:

$ref: '#/components/schemas/SdmSubscription'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

post:

summary: Create individual sdm subscription

operationId: CreateSdmSubscriptions

tags:

- SDM Subscriptions (Collection)

parameters:

- name: ueId

in: path

description: UE ID

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

requestBody:

content:

application/json:

schema:

$ref: '#/components/schemas/SdmSubscription'

required: true

responses:

'201':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/SdmSubscription'

headers:

Location:

description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/sdm-subscriptions/{subsId}'

required: true

schema:

type: string

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/context-data/sdm-subscriptions/{subsId}:

put:

summary: Update an individual sdm subscriptions of a UE

operationId: Updatesdmsubscriptions

tags:

- SDM Subscription (Document)

parameters:

- name: ueId

in: path

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: subsId

in: path

required: true

schema:

type: string

requestBody:

content:

application/json:

schema:

$ref: '#/components/schemas/SdmSubscription'

responses:

'204':

description: Upon success, an empty response body shall be returned

'404':

description: update of non-existing resource is rejected

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

delete:

summary: Deletes a sdmsubscriptions

operationId: RemovesdmSubscriptions

tags:

- SDM Subscription (Document)

parameters:

- name: ueId

in: path

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: subsId

in: path

required: true

description: Unique ID of the subscription to remove

schema:

type: string

responses:

'204':

description: Expected response to a successful subscription removal

patch:

summary: Modify an individual sdm subscription

operationId: ModifysdmSubscription

tags:

- SDM Subscription (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: subsId

in: path

required: true

schema:

type: string

requestBody:

content:

application/json-patch+json:

schema:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/PatchItem'

minItems: 1

required: true

responses:

'204':

description: Successful response

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

default:

description: Unexpected error

/subscription-data/shared-data:

get:

summary: retrieve shared data

operationId: GetSharedData

tags:

- Retrieval of shared data

parameters:

- name: shared-data-ids

in: query

description: List of shared data ids

required: true

style: form

explode: false

schema:

$ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/SharedDataIds'

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

type: array

items:

$ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/SharedData'

minItems: 1

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

description: Unexpected error

/subscription-data/subs-to-notify:

post:

summary: Subscription data subscriptions

operationId: SubscriptionDataSubscriptions

tags:

- Subs To Nofify (Collection)

requestBody:

content:

application/json:

schema:

$ref: '#/components/schemas/SubscriptionDataSubscriptions'

required: true

responses:

'201':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/SubscriptionDataSubscriptions'

headers:

Location:

description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/subs-to-notify/{subsId}'

required: true

schema:

type: string

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

callbacks:

onDataChange:

'{request.body#/callbackReference}':

post:

requestBody:

required: true

content:

application/json:

schema:

$ref: '#/components/schemas/DataChangeNotify'

responses:

'204':

description: Expected response to a valid request

get:

summary: Retrieves the list of subscriptions

operationId: QuerySubsToNotify

tags:

- Subs To Nofify (Collection)

parameters:

- name: ue-id

in: query

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

type: array

items:

$ref: '#/components/schemas/SubscriptionDataSubscriptions'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

delete:

summary: Deletes subscriptions identified by a given ue-id parameter

operationId: RemoveMultipleSubscriptionDataSubscriptions

tags:

- Subs To Notify (Collection)

parameters:

- name: ue-id

in: query

required: true

description: UE ID

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: nf-instance-id

in: query

required: false

description: NF Instance ID

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

- name: delete-all-nfs

in: query

required: false

description: Flag to delete subscriptions from all NFs

schema:

type: boolean

- name: implicit-unsubscribe-indication

in: query

required: false

description: Implicit Unsubscribe Indication

schema:

type: boolean

responses:

'204':

description: Expected response to a successful subscription removal

/subscription-data/subs-to-notify/{subsId}:

delete:

summary: Deletes a subscriptionDataSubscriptions

operationId: RemovesubscriptionDataSubscriptions

tags:

- Subs To Notify (Document)

parameters:

- name: subsId

in: path

required: true

description: Unique ID of the subscription to remove

schema:

type: string

responses:

'204':

description: Expected response to a successful subscription removal

patch:

summary: Modify an individual subscriptionDataSubscription

operationId: ModifysubscriptionDataSubscription

tags:

- Subs To Notify (Document)

parameters:

- name: subsId

in: path

required: true

schema:

type: string

requestBody:

content:

application/json-patch+json:

schema:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/PatchItem'

minItems: 1

required: true

responses:

'204':

description: Successful response

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

default:

description: Unexpected error

/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/trace-data:

get:

summary: Retrieves the trace configuration data of a UE

operationId: QueryTraceData

tags:

- Trace Data (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: servingPlmnId

in: path

description: PLMN ID

required: true

schema:

$ref: '#/components/schemas/VarPlmnId'

- name: If-None-Match

in: header

description: Validator for conditional requests, as described in RFC 7232, 3.2

schema:

type: string

- name: If-Modified-Since

in: header

description: Validator for conditional requests, as described in RFC 7232, 3.3

schema:

type: string

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/TraceData'

headers:

Cache-Control:

description: Cache-Control containing max-age, as described in RFC 7234, 5.2

schema:

type: string

ETag:

description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

schema:

type: string

Last-Modified:

description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

schema:

type: string

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/identity-data:

get:

summary: Retrieve identity data by SUPI or GPSI

operationId: GetIdentityData

tags:

- Query Identity Data by SUPI or GPSI (Document)

parameters:

- name: ueId

in: path

description: UE ID

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: If-None-Match

in: header

description: Validator for conditional requests, as described in RFC 7232, 3.2

schema:

type: string

- name: If-Modified-Since

in: header

description: Validator for conditional requests, as described in RFC 7232, 3.3

schema:

type: string

responses:

'200':

description: OK

content:

application/json:

schema:

$ref: '#/components/schemas/IdentityData'

headers:

Cache-Control:

description: Cache-Control containing max-age, as described in RFC 7234, 5.2

schema:

type: string

ETag:

description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

schema:

type: string

Last-Modified:

description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

schema:

type: string

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/operator-determined-barring-data:

get:

summary: Retrieve ODB Data data by SUPI or GPSI

operationId: GetOdbData

tags:

- Query ODB Data by SUPI or GPSI (Document)

parameters:

- name: ueId

in: path

description: UE ID

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

responses:

'200':

description: OK

content:

application/json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/OdbData'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/context-data:

get:

summary: Retrieve multiple context data sets of a UE

operationId: QueryContextData

tags:

- Context Data (Document)

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

- name: context-dataset-names

in: query

description: List of context dataset names

style: form

explode: false

required: true

schema:

$ref: '#/components/schemas/ContextDatasetNames'

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: '#/components/schemas/ContextDataSets'

default:

description: Unexpected error

content:

application/problem+json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/group-data/group-identifiers:

get:

summary: Mapping of Group Identifiers

operationId: GetGroupIdentifiers

tags:

- Group Identifiers

parameters:

- name: ext-group-id

in: query

description: External Group Identifier

required: false

schema:

$ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/ExtGroupId'

- name: int-group-id

in: query

description: Internal Group Identifier

required: false

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/GroupId'

- name: supported-features

in: query

description: Supported Features

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

$ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/GroupIdentifiers'

components:

schemas:

AuthenticationSubscription:

type: object

required:

- authenticationMethod

properties:

authenticationMethod:

$ref: '#/components/schemas/AuthMethod'

encPermanentKey:

type: string

protectionParameterId:

type: string

sequenceNumber:

$ref: '#/components/schemas/SequenceNumber'

authenticationManagementField:

type: string

pattern: '^[A-Fa-f0-9]{4}$'

algorithmId:

type: string

encOpcKey:

type: string

encTopcKey:

type: string

SequenceNumber:

type: object

properties:

sqnScheme:

$ref: '#/components/schemas/SqnScheme'

sqn:

type: string

pattern: '^[A-Fa-f0-9]{12}$'

lastIndexes:

type: object

additionalProperties:

type: integer

minimum: 0

indLength:

type: integer

minimum: 0

difSign:

$ref: '#/components/schemas/Sign'

SqnScheme:

anyOf:

- type: string

enum:

- GENERAL

- NON\_TIME\_BASED

- TIME\_BASED

- type: string

Sign:

type: string

enum:

- POSITIVE

- NEGATIVE

VarPlmnId:

type: string

pattern: '^[0-9]{5,6}$'

DatasetNames:

type: array

items:

$ref: '#/components/schemas/DataSetName'

minItems: 1

uniqueItems: true

DataSetName:

anyOf:

- type: string

enum:

- AM

- SMF\_SEL

- SMS\_SUB

- SM

- TRACE

- SMS\_MNG

- type: string

ProvisionedDataSets:

type: object

properties:

amData:

$ref: '#/components/schemas/AccessAndMobilitySubscriptionData'

smfSelData:

$ref: '#/components/schemas/SmfSelectionSubscriptionData'

smsSubsData:

$ref: '#/components/schemas/SmsSubscriptionData'

smData:

type: array

items:

$ref: '#/components/schemas/SessionManagementSubscriptionData'

traceData:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/TraceData'

smsMngData:

$ref: '#/components/schemas/SmsManagementSubscriptionData'

AccessAndMobilitySubscriptionData:

$ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/AccessAndMobilitySubscriptionData'

SmfSelectionSubscriptionData:

$ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/SmfSelectionSubscriptionData'

VarSnssai:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Snssai'

Dnn:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Dnn'

SessionManagementSubscriptionData:

$ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/SessionManagementSubscriptionData'

Amf3GppAccessRegistration:

$ref: 'TS29503\_Nudm\_UECM.yaml#/components/schemas/Amf3GppAccessRegistration'

AmfNon3GppAccessRegistration:

$ref: 'TS29503\_Nudm\_UECM.yaml#/components/schemas/AmfNon3GppAccessRegistration'

SmfRegistration:

$ref: 'TS29503\_Nudm\_UECM.yaml#/components/schemas/SmfRegistration'

SmsfRegistration:

$ref: 'TS29503\_Nudm\_UECM.yaml#/components/schemas/SmsfRegistration'

SmsManagementSubscriptionData:

$ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/SmsManagementSubscriptionData'

SmsSubscriptionData:

$ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/SmsSubscriptionData'

OperatorSpecificDataContainer:

type: object

required:

- dataType

- value

properties:

dataType:

type: string

enum:

- string

- integer

- number

- boolean

- object

value:

oneOf:

- type: string

- type: integer

- type: number

- type: boolean

- type: object

AuthMethod:

anyOf:

- type: string

enum:

- 5G\_AKA

- EAP\_AKA\_PRIME

- EAP\_TLS

- type: string

PpData:

$ref: 'TS29503\_Nudm\_PP.yaml#/components/schemas/PpData'

EeSubscription:

$ref: 'TS29503\_Nudm\_EE.yaml#/components/schemas/EeSubscription'

VarUeGroupId:

type: string

pattern: '^(extgroupid-[^@]+@[^@]+|anyUE)$'

SdmSubscription:

$ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/SdmSubscription'

SmfRegList:

type: array

items:

$ref: '#/components/schemas/SmfRegistration'

SubscriptionDataSubscriptions:

type: object

required:

- monitoredResourceUris

- callbackReference

properties:

ueId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

callbackReference:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

originalCallbackReference:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

monitoredResourceUris:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

expiry:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/DateTime'

sdmSubscription:

$ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/SdmSubscription'

subscriptionId:

type: string

supportedFeatures:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

DataChangeNotify:

type: object

properties:

originalCallbackReference:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

minItems: 1

ueId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/VarUeId'

notifyItems:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/NotifyItem'

minItems: 1

sdmSubscription:

$ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/SdmSubscription'

subscriptionDataSubscriptions:

type: array

items:

$ref: '#/components/schemas/SubscriptionDataSubscriptions'

IdentityData:

type: object

properties:

supiList:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Supi'

minItems: 1

gpsiList:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Gpsi'

minItems: 1

SorData:

type: object

properties:

provisioningTime:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/DateTime'

ueUpdateStatus:

$ref: '#/components/schemas/UeUpdateStatus'

sorXmacIue:

$ref: 'TS29509\_Nausf\_SoRProtection.yaml#/components/schemas/SorMac'

sorMacIue:

$ref: 'TS29509\_Nausf\_SoRProtection.yaml#/components/schemas/SorMac'

required:

- provisioningTime

- ueUpdateStatus

UpuData:

type: object

properties:

provisioningTime:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/DateTime'

ueUpdateStatus:

$ref: '#/components/schemas/UeUpdateStatus'

upuXmacIue:

$ref: 'TS29509\_Nausf\_UPUProtection.yaml#/components/schemas/UpuMac'

upuMacIue:

$ref: 'TS29509\_Nausf\_UPUProtection.yaml#/components/schemas/UpuMac'

required:

- provisioningTime

- ueUpdateStatus

UeUpdateStatus:

type: string

enum:

- NOT\_SENT

- SENT\_NO\_ACK\_REQUIRED

- WAITING\_FOR\_ACK

- ACK\_RECEIVED

EeProfileData:

type: object

properties:

restrictedEventTypes:

type: array

items:

$ref: 'TS29503\_Nudm\_EE.yaml#/components/schemas/EventType'

supportedFeatures:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

AmfSubscriptionInfo:

type: object

required:

- amfInstanceId

- subscriptionId

properties:

amfInstanceId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

subscriptionId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

subsChangeNotifyCorrelationId:

type: string

ContextDatasetNames:

type: array

items:

$ref: '#/components/schemas/ContextDataSetName'

minItems: 1

uniqueItems: true

ContextDataSetName:

anyOf:

- type: string

enum:

- AMF\_3GPP

- AMF\_NON\_3GPP

- SDM\_SUBSCRIPTIONS

- EE\_SUBSCRIPTIONS

- SMSF\_3GPP

- SMSF\_NON\_3GPP

- SUBS\_TO\_NOTIFY

- type: string

ContextDataSets:

type: object

properties:

amf3Gpp:

$ref: '#/components/schemas/Amf3GppAccessRegistration'

amfNon3Gpp:

$ref: '#/components/schemas/AmfNon3GppAccessRegistration'

sdmSubscriptions:

type: array

items:

$ref: '#/components/schemas/SdmSubscription'

minItems: 1

eeSubscriptions:

type: array

items:

$ref: '#/components/schemas/EeSubscription'

minItems: 1

smsf3GppAccess:

$ref: '#/components/schemas/SmsfRegistration'

smsfNon3GppAccess:

$ref: '#/components/schemas/SmsfRegistration'

subscriptionDataSubscriptions:

type: array

items:

$ref: '#/components/schemas/SubscriptionDataSubscriptions'

minItems: 1

Annex B (informative):  
Change history

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Change history | | | | | | | |
| **Date** | **Meeting** | **TDoc** | **CR** | **Rev** | **Cat** | **Subject/Comment** | **New version** |
| 2018-01 | CT4#82 |  |  |  |  | TS skeleton of Usage of the Unified Data Repository service for Subscription Data | 0.0.0 |
| 2018-01 | CT4#82 | C4-181397 |  |  |  | Version after CT4#82 including agreed pCRs | 0.1.0 |
| 2018-03 | CT4#83 | C4-182442 |  |  |  | Version after CT4#83 including agreed pCRs | 0.2.0 |
| 2018-04 | CT4#84 | C4-183523 |  |  |  | Version after CT4#84 including agreed pCRs | 0.3.0 |
| 2018-05 | CT4#85 | C4-184638 |  |  |  | Version after CT4#85 including agreed pCRs | 0.4.0 |
| 2018-06 | CT#80 | CP-181103 |  |  |  | Presented for information and approval | 1.0.0 |
| 2018-06 | CT#80 |  |  |  |  | Approved in CT#80. | 15.0.0 |
| 2018-09 | CT#81 | CP-182058 | 0004 | - | F | Path Segment Correction | 15.1.0 |
| 2018-09 | CT#81 | CP-182058 | 0005 | - | F | URI variables for the Resource OperatorSpecificData | 15.1.0 |
| 2018-09 | CT#81 | CP-182058 | 0008 | - | F | Formatting of query parameter | 15.1.0 |
| 2018-09 | CT#81 | CP-182212 | 0009 | 2 | B | PATCH method for ProvisionedParamenterData | 15.1.0 |
| 2018-09 | CT#81 | CP-182058 | 0010 | - | F | JSON structure in query and missing data type reference | 15.1.0 |
| 2018-09 | CT#81 | CP-182058 | 0014 | - | F | Description of Structured data types | 15.1.0 |
| 2018-09 | CT#81 | CP-182058 | 0016 | - | F | Implicit Subscriptions | 15.1.0 |
| 2018-09 | CT#81 | CP-182058 | 0011 | 1 | F | Align security and servers clause in openAPI | 15.1.0 |
| 2018-09 | CT#81 | CP-182058 | 0013 | 1 | F | VarUeId used in TS 29.505 | 15.1.0 |
| 2018-09 | CT#81 | CP-182058 | 0012 | 2 | F | OpenAPI schema for SubscriptionData | 15.1.0 |
| 2018-09 | CT#81 | CP-182058 | 0018 | 1 | F | Supported Features Negotiation | 15.1.0 |
| 2018-09 | CT#81 | CP-182041 | 0015 | 1 | B | Nudr Id Translation | 15.1.0 |
| 2018-09 | CT#81 | CP-182043 | 0001 | 2 | B | Add support for 5G Trace to Nudr | 15.1.0 |
| 2018-12 | CT#82 | CP-183016 | 0026 | - | F | Corrections in Query Parameters | 15.2.0 |
| 2018-12 | CT#82 | CP-183016 | 0030 | - | F | 29505 CR data change notification data type | 15.2.0 |
| 2018-12 | CT#82 | CP-183016 | 0021 | 1 | F | Pattern correction | 15.2.0 |
| 2018-12 | CT#82 | CP-183016 | 0022 | 1 | F | Session Management Subscription Data | 15.2.0 |
| 2018-12 | CT#82 | CP-183016 | 0019 | 1 | F | Shared Data | 15.2.0 |
| 2018-12 | CT#82 | CP-183016 | 0029 | 1 | F | 29505 CR cardinality | 15.2.0 |
| 2018-12 | CT#82 | CP-183016 | 0025 | 2 | F | Clarification of contents of SUPI list | 15.2.0 |
| 2018-12 | CT#82 | CP-183016 | 0032 | - | F | Cache control and conditional request header addition | 15.2.0 |
| 2018-12 | CT#82 | CP-183016 | 0024 | 3 | F | Introduction of Barring of Roaming in 5GC | 15.2.0 |
| 2018-12 | CT#82 | CP-183016 | 0037 | 1 | F | Session Management Subscription Data | 15.2.0 |
| 2018-12 | CT#82 | CP-183016 | 0039 | 1 | F | Authorized Event Types | 15.2.0 |
| 2018-12 | CT#82 | CP-183016 | 0040 | 1 | F | Group Subscriptions | 15.2.0 |
| 2018-12 | CT#82 | CP-183016 | 0041 | 1 | F | Location header in 201 response | 15.2.0 |
| 2018-12 | CT#82 | CP-183016 | 0038 | 2 | F | Active AmfSubscriptions storage | 15.2.0 |
| 2018-12 | CT#82 | CP-183016 | 0036 | 2 | F | lifetime of subscription | 15.2.0 |
| 2018-12 | CT#82 | CP-183158 | 0028 | 3 | F | Definition of Authentication Data for steering of roaming | 15.2.0 |
| 2018-12 | CT#82 | CP-183159 | 0027 | 4 | F | Definition of Authentication Status | 15.2.0 |
| 2018-12 | CT#82 | CP-183160 | 0020 | 5 | F | Definition of Authentication data | 15.2.0 |
| 2018-12 | CT#82 | CP-183187 | 0023 | 3 | F | Get multiple datasets for ProvisionedData | 15.2.0 |
| 2018-12 | CT#82 | CP-183249 | 0042 | - | F | Corrections on openAPI | 15.2.0 |
| 2019-03 | CT#83 | CP-190179 | 0043 |  | F | CR 0019r1 was not correctly implemented | 15.3.0 |
| 2019-03 | CT#83 | CP-190179 | 0044 |  | F | CR 0020r5 was not correctly implemented | 15.3.0 |
| 2019-03 | CT#83 | CP-190179 | 0045 |  | F | CR 0021r1 was not correctly implemented | 15.3.0 |
| 2019-03 | CT#83 | CP-190179 | 0046 |  | F | CR 0023r3 was not correctly implemented | 15.3.0 |
| 2019-03 | CT#83 | CP-190179 | 0047 |  | F | CR 0038r2 was not correctly implemented | 15.3.0 |
| 2019-03 | CT#83 | CP-190179 | 0048 |  | F | CR 0039r1 was not correctly implemented | 15.3.0 |
| 2019-03 | CT#83 | CP-190179 | 0049 |  | F | CR 0040r1 was not correctly implemented | 15.3.0 |
| 2019-03 | CT#83 | CP-190179 | 0050 |  | F | Correction of annex B | 15.3.0 |
| 2019-03 | CT#83 | CP-190179 | 0052 | 2 | F | Clarification on use of PUT | 15.3.0 |
| 2019-03 | CT#83 | CP-190179 | 0054 |  | F | Missing Headlines | 15.3.0 |
| 2019-03 | CT#83 | CP-190179 | 0055 | 2 | F | Sequence Number | 15.3.0 |
| 2019-03 | CT#83 | CP-190179 | 0056 | 1 | F | Retrieval of multiple context data sets | 15.3.0 |
| 2019-03 | CT#83 | CP-190179 | 0057 | 3 | F | UDR Subscriptions | 15.3.0 |
| 2019-03 | CT#83 | CP-190179 | 0058 | 1 | F | Data Set Names in URI Query Parameters | 15.3.0 |
| 2019-03 | CT#83 | CP-190179 | 0060 | 2 | F | AuthenticationSubscription correction | 15.3.0 |
| 2019-03 | CT#83 | CP-190179 | 0061 | 2 | F | SOR data update status | 15.3.0 |
| 2019-03 | CT#83 | CP-190168 | 0062 | 1 | F | 3GPP TS 29.505 API version update | 15.3.0 |
| 2019-06 | CT#84 | CP-191032 | 0065 |  | F | CR 0049 was not correctly implemented | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0066 |  | F | CR 0050 was not correctly implemented | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0067 |  | F | CR 0054 was not correctly implemented | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0068 |  | F | CR 0056r1 was not correctly implemented | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0070 |  | F | Update of the SubsToNotify | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0071 |  | F | Update of the EESubscription | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0064 | 1 | F | Update Individual Subscription | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0072 | 1 | F | missing enties of data type summary table | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0073 | 1 | F | correction on operationId | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0074 | 1 | F | 404 error response | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0076 | 1 | F | Correct the GET Request Body of AmfNon3GppAccessRegistration resource | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0077 | 1 | F | Default Notification URI | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0081 | 1 | F | OdbData Correction | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0086 | 2 | F | Storage of OpenAPI specification files | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0075 | 3 | F | CR 0062r1 was not correctly implemented | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0079 | 2 | F | Subscriptions Deletion | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0087 |  | F | PduSessionId | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0063 | 2 | F | UE Parameter Update (UPU) | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0078 | 2 | F | Group Identifier Translation | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0080 | 2 | F | Authentication Subscription | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0069 | 2 | F | CR 0062r1 was not correctly implemented | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0088 | 1 | F | Protection Parameter ID | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0089 | 1 | F | Copyright Note in YAML file | 15.4.0 |
| 2019-06 | CT#84 | CP-191032 | 0083 | 6 | F | SubscriptionDataSubscriptions identification | 15.4.0 |
| 2019-09 | CT#85 | CP-192105 | 0091 | - | F | Extra parameter in OpenAPI specification | 15.5.0 |
| 2019-09 | CT#85 | CP-192228 | 0093 | 1 | F | Definition of OperatorSpecificDataContainer | 15.5.0 |
| 2019-09 | CT#85 | CP-192105 | 0102 | - | F | Error in UpuData | 15.5.0 |
| 2019-09 | CT#85 | CP-192105 | 0092 | 1 | F | Cardinality of SUPI in IdentityData | 15.5.0 |
| 2019-09 | CT#85 | CP-192105 | 0097 | 1 | F | Storage of Authentication Subscription Data | 15.5.0 |
| 2019-09 | CT#85 | CP-192119 | 0103 | - | F | 3GPP TS 29.505 externalDoc correction | 15.5.0 |
| 2019-12 | CT#86 | CP-193029 | 0107 |  | F | Monitored Resurce URI | 15.6.0 |
| 2019-12 | CT#86 | CP-193029 | 0262 |  | F | GroupIdentifier resource URI | 15.6.0 |
| 2019-12 | CT#86 | CP-193132 | 0264 |  | F | externalDocs correction | 15.6.0 |
| 2020-06 | CT#88-e | CP-201072 | 0289 |  | F | 29.505 Rel15 API version and External doc update | 15.7.0 |
| 2020-06 | CT#88-e | CP-201021 | 0278 |  | F | Correction of PUT responses | 15.7.0 |
| 2021-12 | CT#94-e | CP-213147 | 0411 |  | F | 29.505 Rel-15 API version and External doc update | 15.8.0 |
| 2021-12 | CT#94-e | CP-213149 | 0404 | 1 | F | Naming Convention | 15.8.0 |