



**5G ;  
5G System;  
Usage of the Unified Data Repository services  
for Subscription Data;  
Stage 3  
(3GPP TS 29.505 version 17.7.0 Release 17)**



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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:

- |                  |                                                         |
|------------------|---------------------------------------------------------|
| <b>shall</b>     | indicates a mandatory requirement to do something       |
| <b>shall not</b> | 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.

- |                   |                                                |
|-------------------|------------------------------------------------|
| <b>should</b>     | indicates a recommendation to do something     |
| <b>should not</b> | indicates a recommendation not to do something |
| <b>may</b>        | indicates permission to do something           |
| <b>need not</b>   | 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.

- |               |                                        |
|---------------|----------------------------------------|
| <b>can</b>    | indicates that something is possible   |
| <b>cannot</b> | indicates that something is impossible |

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

- |                 |                                                                                                                                                                            |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>will</b>     | 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     |
| <b>will not</b> | 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 |
| <b>might</b>    | 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".
- [17] 3GPP TS 29.519: "5G System; Usage of the Unified Data Repository service for Policy Data, Application Data and Structured Data for Exposure; Stage 3".
- [18] 3GPP TS 23.316: "Wireless and wireline convergence access support for the 5G System (5GS); Stage 2".

- [19] 3GPP TS 29.510: "Network Function Repository Services; Stage 3".
- [20] 3GPP TS 29.563: "Home Subscriber Server (HSS) services for interworking with Unified Data Management (UDM); Stage 3".
- [21] 3GPP TS 29.508: "5G System; Session Management Event Exposure Service; Stage 3".

---

## 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].

---

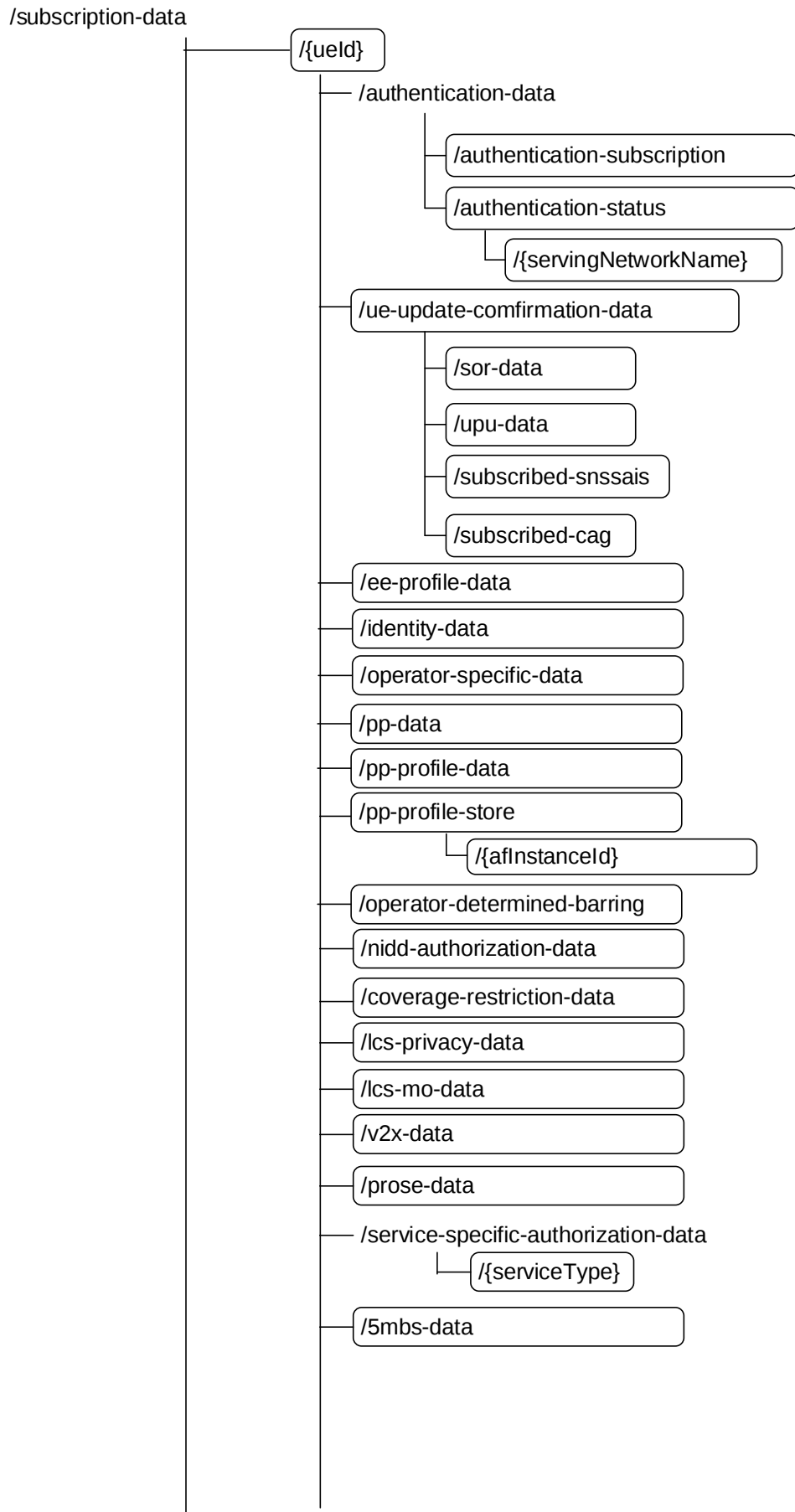
## 5 Usage of Nudr\_DataRepository Service

### 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**

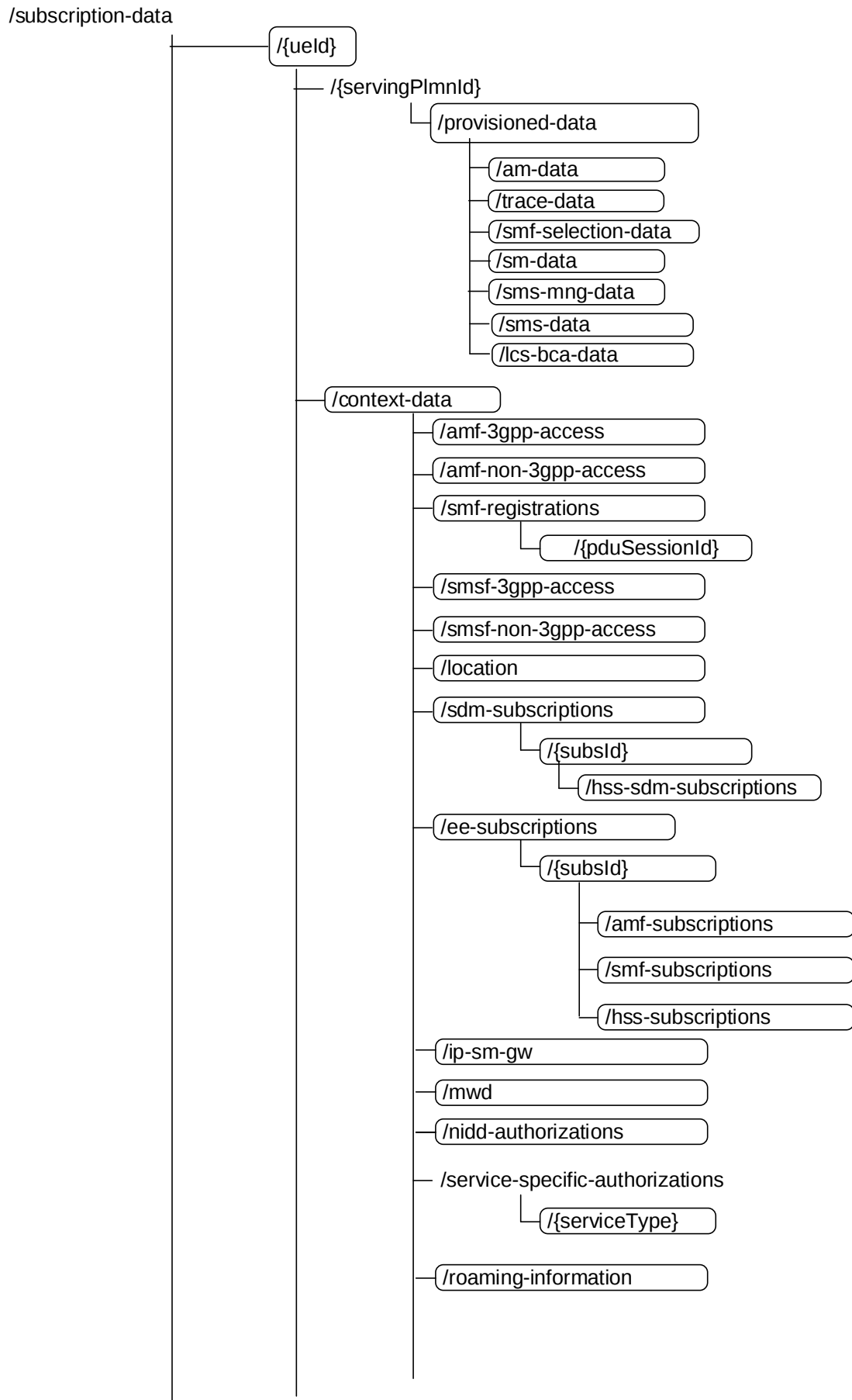


Figure 5.2.1-2: Resource URI sub-level structure for subscription data (cont.)

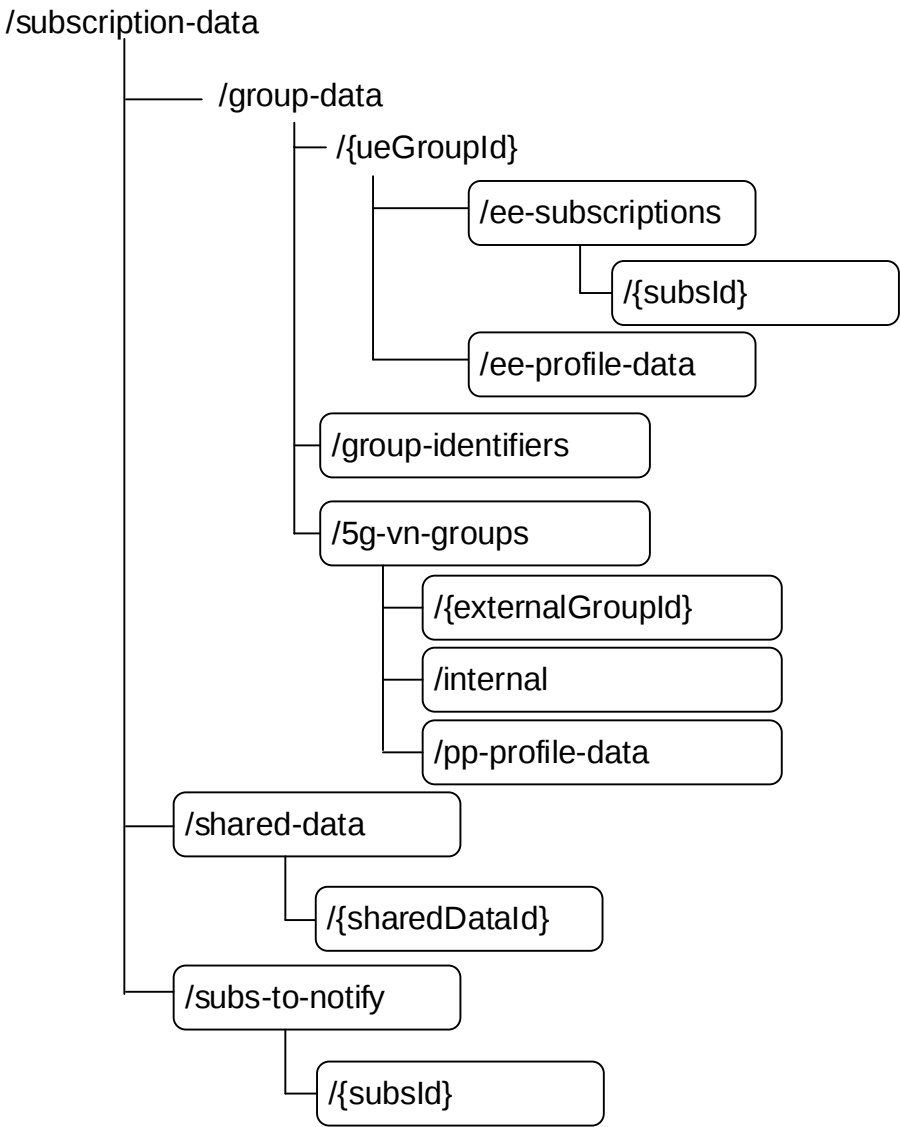


Figure 5.2.1-3: Resource URI sub-level structure for subscription data (cont.)

Table 5.2.1-1 provides an overview of the resources, applicable HTTP methods and whether subscribe (implicit and explicit) to be notified about data change applies.

Table 5.2.1-1: Resources and methods overview

| Resource name                         | Resource URI                                                              | Subscribe to be notified about data change supported | HTTP method | Description                                                                                                                                                                     |
|---------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AuthenticationSubscription (Document) | /subscription-data/{ueId}/authentication-data/authentication-subscription | N                                                    | GET         | Retrieve a UE's authentication subscription data                                                                                                                                |
|                                       |                                                                           |                                                      | PATCH       | Update a UE's authentication subscription data<br>Updates shall be limited to the sequenceNumber attribute. Attempts to patch any other attribute shall be rejected by the UDR. |
| AuthenticationSoR (Document)          | /subscription-data/{ueId}/ue-update-confirmation-data/sor-data            | Y                                                    | PUT         | Store UE's SoR acknowledgement information (SoR-XMAC-IUE) and "ME support of SoR-CMCI"                                                                                          |
|                                       |                                                                           |                                                      | GET         | Retrieve UE's SoR acknowledgement information, "ME support of SoR-CMCI"                                                                                                         |
|                                       |                                                                           |                                                      | PATCH       | Update "ME support of SoR-CMCI"                                                                                                                                                 |
| AuthenticationUPU (Document)          | /subscription-data/{ueId}/ue-update-confirmation-data/upu-data            | Y                                                    | PUT         | Store UE Parameter Update acknowledgement information (UPU-XMAC-IUE)                                                                                                            |
|                                       |                                                                           |                                                      | GET         | Retrieve UE Parameter Update acknowledgement information                                                                                                                        |
| SubscribedSNSSAIs (Document)          | /subscription-data/{ueId}/ue-update-confirmation-data/subscribed-snssais  | Y                                                    | PUT         | Store UE-acknowledgement info for change of subscribed S-NSSAIs                                                                                                                 |
|                                       |                                                                           |                                                      | GET         | Retrieve UE-acknowledgement info for change of subscribed S-NSSAIs                                                                                                              |
| SubscribedCAG (Document)              | /subscription-data/{ueId}/ue-update-confirmation-data/subscribed-cag      | Y                                                    | PUT         | Store UE-acknowledgement info for change of subscribed CAG                                                                                                                      |
|                                       |                                                                           |                                                      | GET         | Retrieve UE-acknowledgement info for change of subscribed CAG                                                                                                                   |
| AuthenticationStatus (Document)       | /subscription-data/{ueId}/authentication-data/authentication-status       | N                                                    | PUT         | Store a UE's authentication status                                                                                                                                              |
|                                       |                                                                           |                                                      | GET         | Retrieve a UE's authentication status                                                                                                                                           |
|                                       |                                                                           |                                                      | DELETE      | Delete a UE's authentication status                                                                                                                                             |

|                                                 |                                                                                             |   |        |                                                                                                        |
|-------------------------------------------------|---------------------------------------------------------------------------------------------|---|--------|--------------------------------------------------------------------------------------------------------|
| IndividualAuthenticationStatus<br>(Document)    | /subscription-data/{uclid}/authentication-data/authentication-status/{servingNetworkName}   | Y | PUT    | When the feature "PerUePerSnAuthStatus" is supported, store a UE's Individual authentication status    |
|                                                 |                                                                                             |   | GET    | When the feature "PerUePerSnAuthStatus" is supported, retrieve a UE's Individual authentication status |
|                                                 |                                                                                             |   | DELETE | When the feature "PerUePerSnAuthStatus" is supported, delete a UE's Individual authentication status   |
| ProvisionedData<br>(Document)                   | /subscription-data/{uclid}/{servingPlmnId}/provisioned-data                                 | N | GET    | Retrieve the UE's subscribed Provisioned Data                                                          |
| AccessAndMobilitySubscriptionData<br>(Document) | /subscription-data/{uclid}/{servingPlmnId}/provisioned-data/am-data                         | Y | GET    | Retrieve the UE's subscribed Access and Mobility Data                                                  |
| SmfSelectionSubscriptionData<br>(Document)      | /subscription-data/{uclid}/{servingPlmnId}/provisioned-data/smf-selection-subscription-data | Y | GET    | Retrieve the UE's subscribed SMF Selection Data                                                        |
| SessionManagementSubscriptionData<br>(Document) | /subscription-data/{uclid}/{servingPlmnId}/provisioned-data/sm-data                         | Y | GET    | Retrieve the UE's subscribed SM Subscription Data                                                      |
| ContextData<br>(Document)                       | /subscription-data/{uclid}/context-data                                                     | N | GET    | Retrieve the UE's context Data                                                                         |
| Amf3GppAccessRegistration<br>(Document)         | /subscription-data/{uclid}/context-data/amf-3gpp-access                                     | Y | 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<br>(Document)      | /subscription-data/{uclid}/context-data/amf-non-3gpp-access                                 | Y | 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<br>(Store)                     | /subscription-data/{uclid}/context-data/smf-registrations                                   | Y | GET    | Retrieve the list of the SMF registrations                                                             |
| IndividualSmfRegistration<br>(Document)         | /subscription-data/{uclid}/context-data/smf-registrations/{pduSessionId}                    | Y | PUT    | Store an individual SMF registration identified by PDU Session Id                                      |
|                                                 |                                                                                             |   | DELETE | Delete an individual SMF registration                                                                  |
|                                                 |                                                                                             |   | GET    | Retrieve individual SMF registration                                                                   |
|                                                 |                                                                                             |   | PATCH  | Modify the individual SMF registration                                                                 |
| OperatorSpecificData<br>(Document)              | /subscription-data/{uclid}/operator-specific-data                                           | Y | GET    | retrieve the operator specific subscription data of a UE                                               |
|                                                 |                                                                                             |   | PATCH  | modify the operator specific subscription data of a UE                                                 |
|                                                 |                                                                                             |   | PUT    | create/update the operator specific subscription data of a UE                                          |

|                                          |                                                                                         |   |        |                                                                |
|------------------------------------------|-----------------------------------------------------------------------------------------|---|--------|----------------------------------------------------------------|
|                                          |                                                                                         |   | DELETE | delete the operator specific subscription data of a UE         |
| OperatorDeterminedBarringData (Document) | /subscription-data/{ueid}/operator-determined-barring-data                              | Y | GET    | Retrieve the UE's Operator Determined Barring                  |
| SMSManagementSubscriptionData (Document) | /subscription-data/{ueid}/{servingPlmnId}/provisioned-data/sms-mng-data                 | Y | GET    | Retrieve the UE's subscribed SMS management subscription data. |
| Smsf3GppAccessRegistration (Document)    | /subscription-data/{ueid}/context-data/smsf-3gpp-access                                 | Y | PUT    | Create or Update the SMSF registration                         |
|                                          |                                                                                         |   | DELETE | Delete the SMSF registration for 3GPP access                   |
|                                          |                                                                                         |   | GET    | Retrieve the SMSF registration information                     |
| SmsfNon3GppAccessRegistration (Document) | /subscription-data/{ueid}/context-data/smsf-non-3gpp-access                             | Y | 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 |
| IpSmGwRegistration (Document)            | /subscription-data/{ueid}/context-data/ip-sm-gw                                         | Y | PUT    | Create or Update the IP-SM-GW registration                     |
|                                          |                                                                                         |   | DELETE | Delete the IP-SM-GW registration                               |
|                                          |                                                                                         |   | PATCH  | Modify the IP-SM-GW registration                               |
|                                          |                                                                                         |   | GET    | Retrieve the IP-SM-GW registration information                 |
| MessageWaitingData (Document)            | /subscription-data/{ueid}/context-data/mwd                                              | Y | PUT    | Create or Update the SMS Message Waiting Data                  |
|                                          |                                                                                         |   | DELETE | Delete the SMS Message Waiting Data                            |
|                                          |                                                                                         |   | PATCH  | Modify the SMS Message Waiting Data                            |
|                                          |                                                                                         |   | GET    | Retrieve the SMS Message Waiting Data                          |
| SdmSubscriptions (Collection)            | /subscription-data/{ueid}/context-data/sdm-subscriptions                                | N | GET    | Retrieve SDM subscriptions                                     |
|                                          |                                                                                         |   | POST   | Create an individual SDM subscription                          |
| IndividualSdmSubscription (Document)     | /subscription-data/{ueid}/context-data/sdm-subscriptions/{subsid}                       | N | PUT    | Update an individual SDM subscription                          |
|                                          |                                                                                         |   | DELETE | Delete an individual SDM subscription                          |
|                                          |                                                                                         |   | PATCH  | Update an individual SDM Subscription                          |
|                                          |                                                                                         |   | GET    | Retrieve an individual SDM subscription                        |
| HssSdmSubscriptionInfo (Document)        | /subscription-data/{ueid}/context-data/sdm-subscriptions/{subsid}/hss-sdm-subscriptions | N | PUT    | Store information related to the Hss-SDM-Subscriptions         |
|                                          |                                                                                         |   | DELETE | Delete the Hss-SDM-subscriptions                               |
|                                          |                                                                                         |   | GET    | Retrieve Hss-SDM-subscriptions                                 |
|                                          |                                                                                         |   | PATCH  | Update Hss-SDM-subscriptions                                   |

|                                               |                                                                                   |   |        |                                                                                         |
|-----------------------------------------------|-----------------------------------------------------------------------------------|---|--------|-----------------------------------------------------------------------------------------|
| EeSubscriptions<br>(Collection)               | /subscription-data/{ueId}/context-data/ee-subscriptions                           | N | GET    | Retrieve EE subscriptions                                                               |
|                                               |                                                                                   |   | POST   | Create an EE subscription                                                               |
| IndividualEeSubscription<br>(Document)        | /subscription-data/{ueId}/context-data/ee-subscriptions/{subId}                   | N | PUT    | Update an individual EE subscription                                                    |
|                                               |                                                                                   |   | DELETE | Delete an individual EE subscription                                                    |
|                                               |                                                                                   |   | PATCH  | Update an individual EE subscription                                                    |
|                                               |                                                                                   |   | GET    | Retrieve an individual EE subscription                                                  |
| AmfSubscriptionInfo<br>(Document)             | /subscription-data/{ueId}/context-data/ee-subscriptions/{subId}/amf-subscriptions | N | PUT    | Store information related to the Amf-EE-Subscription response                           |
|                                               |                                                                                   |   | DELETE | Delete the Amf-EE-subscriptions                                                         |
|                                               |                                                                                   |   | GET    | Retrieve AMF-subscriptions                                                              |
|                                               |                                                                                   |   | PATCH  | Update AMF-subscriptions                                                                |
| SmfSubscriptionInfo<br>(Document)             | /subscription-data/{ueId}/context-data/ee-subscriptions/{subId}/smf-subscriptions | N | PUT    | Store information related to the received Smf-EE-Subscription response                  |
|                                               |                                                                                   |   | DELETE | Delete the Smf-EE-subscriptions                                                         |
|                                               |                                                                                   |   | GET    | Retrieve SMF-subscriptions                                                              |
|                                               |                                                                                   |   | PATCH  | Update SMF-subscriptions                                                                |
| HssSubscriptionInfo<br>(Document)             | /subscription-data/{ueId}/context-data/ee-subscriptions/{subId}/hss-subscriptions | N | PUT    | Store information related to the Hss-EE-Subscriptions                                   |
|                                               |                                                                                   |   | DELETE | Delete the Hss-EE-subscriptions                                                         |
|                                               |                                                                                   |   | GET    | Retrieve Hss-EE-subscriptions                                                           |
|                                               |                                                                                   |   | PATCH  | Update Hss-EE-subscriptions                                                             |
| EeProfileData<br>(Document)                   | /subscription-data/{ueId}/ee-profile-data                                         | Y | GET    | Retrieve the UE's subscribed EE profile data.                                           |
| ProvisionedParameterData<br>(Document)        | /subscription-data/{ueId}/pp-data                                                 | Y | PATCH  | Update of provisioned parameters.                                                       |
|                                               |                                                                                   |   | GET    | Retrieves the UE's provisioned parameters.                                              |
| PpProfileData<br>(Document)                   | /subscription-data/{ueId}/pp-profile-data                                         | Y | GET    | Retrieve the UE's subscribed PP profile data.                                           |
| ProvisionedParameterDataEntries<br>(Store)    | /subscription-data/{ueId}/pp-data-store                                           | Y | GET    | Retrieve a Provisioned Parameter Data of multiple Entries                               |
| ProvisionedParameterDataEntry<br>(Document)   | /subscription-data/{ueId}/pp-data-store/{afInstanceId}                            | Y | PUT    | Create a Provisioned Parameter Data Entry                                               |
|                                               |                                                                                   |   | DELETE | Delete a Provisioned Parameter Data Entry                                               |
|                                               |                                                                                   |   | GET    | Retrieve a Provisioned Parameter Data Entry                                             |
| SMSSubscriptionData<br>(Document)             | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sms-data               | Y | GET    | Retrieve the UE's subscribed SMS subscription data.                                     |
| SubscriptionDataSubscriptions<br>(Collection) | /subscription-data/subs-to-notify                                                 | N | 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 (Document) | /subscription-data/subs-to-notify/{subsid}                          | N | 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                                                                  |
|                                                   |                                                                     |   | GET    | Retrieve an individual Subscription to notification                                                                |
| EeGroupSubscriptions (Collection)                 | /subscription-data/group-data/{ueGroupId}/ee-subscriptions          | N | GET    | Retrieve EE subscriptions for groups of UEs                                                                        |
|                                                   |                                                                     |   | POST   | Create an EE subscription for groups of UEs                                                                        |
| IndividualEeGroupSubscription (Document)          | /subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subsid} | N | 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                                                            |
|                                                   |                                                                     |   | GET    | Retrieve an individual EE subscription for a group of UEs                                                          |

|                                        |                                                                                      |   |        |                                                                                           |
|----------------------------------------|--------------------------------------------------------------------------------------|---|--------|-------------------------------------------------------------------------------------------|
| AmfGroupSubscriptionInfo<br>(Document) | /subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subId}/amf-subscriptions | N | PUT    | Store information related to the Amf-EE-Subscription response for a group of UEs          |
|                                        |                                                                                      |   | DELETE | Delete the Amf-EE-subscriptions for a group of UEs                                        |
|                                        |                                                                                      |   | GET    | Retrieve AMF-subscriptions for a group of UEs                                             |
|                                        |                                                                                      |   | PATCH  | Update AMF-subscriptions for a group of UEs                                               |
| SmfGroupSubscriptionInfo<br>(Document) | /subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subId}/smf-subscriptions | N | PUT    | Store information related to the received Smf-EE-Subscription response for a group of UEs |
|                                        |                                                                                      |   | DELETE | Delete the Smf-EE-subscriptions for a group of UEs                                        |
|                                        |                                                                                      |   | GET    | Retrieve SMF-subscriptions for a group of UEs                                             |
|                                        |                                                                                      |   | PATCH  | Update SMF-subscriptions for a group of UEs                                               |
| HssGroupSubscriptionInfo<br>(Document) | /subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subId}/hss-subscriptions | N | PUT    | Store information related to the Hss-EE-Subscriptions for a group of UEs                  |
|                                        |                                                                                      |   | DELETE | Delete the Hss-EE-subscriptions for a group of UEs                                        |
|                                        |                                                                                      |   | GET    | Retrieve Hss-EE-subscriptions for a group of UEs                                          |
|                                        |                                                                                      |   | PATCH  | Update Hss-EE-subscriptions for a group of UEs                                            |
| EeGroupProfileData<br>(Document)       | /subscription-data/group-data/{ueGroupId}/ee-profile-data                            | Y | GET    | Retrieve the subscribed EE profile data for a group of UEs.                               |
| TraceData<br>(Document)                | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/trace-data                | Y | GET    | Retrieve the UE's trace configuration data                                                |
| IdentityData<br>(Document)             | /subscription-data/{ueId}/identity-data                                              | Y | GET    | Retrieve identity data that corresponds to the provided ueId                              |
| SharedData<br>(Collection)             | /subscription-data/shared-data                                                       | N | GET    | Retrieve shared data                                                                      |
| IndividualSharedData<br>(Document)     | /subscription-data/shared-data/{sharedDataId}                                        | Y | GET    | Retrieve the individual Shared Data                                                       |
| GroupIdentifiers<br>(Document)         | /subscription-data/group-data/group-identifiers                                      | Y | GET    | Retrieve group identifiers and the UE identifiers belong to the group identifiers.        |
| 5GvnGroups<br>(Store)                  | /subscription-data/group-data/5g-vn-groups                                           | Y | GET    | Retrieve 5G VN Groups                                                                     |
| Individual5GvnGroup<br>(Document)      | /subscription-data/group-data/5g-vn-groups/{externalGroupId}                         | Y | PUT    | Create a 5G VN Group                                                                      |
|                                        |                                                                                      |   | PATCH  | Update a 5G VN Group                                                                      |
|                                        |                                                                                      |   | DELETE | Delete a 5G VN Group                                                                      |
| 5GVnGroupsInternal<br>(Document)       | /subscription-data/group-data/5g-vn-groups/internal                                  | Y | GET    | Retrieve 5G VN Group Data based on Internal Group Identifier(s)                           |

|                                                      |                                                                                      |   |        |                                                                                             |
|------------------------------------------------------|--------------------------------------------------------------------------------------|---|--------|---------------------------------------------------------------------------------------------|
| Pp5gVnGroupProfileData<br>(Document)                 | /subscription-data/group-data/5g-vn-groups/pp-profile-data                           | Y | GET    | Retrieve the UE's subscribed PP profile data for accessing 5G VN Groups service operations. |
| LcsPrivacySubscriptionData<br>(Document)             | /subscription-data/{ueId}/lcs-privacy-data                                           | Y | GET    | Retrieve the UE's subscribed LCS privacy Subscription Data                                  |
| LcsMobileOriginatedSubscriptionData<br>(Document)    | /subscription-data/{ueId}/lcs-mo-data                                                | Y | GET    | Retrieve the UE's subscribed LCS Mobile Originated Subscription Data                        |
| NiddAuthorizationData<br>(Document)                  | /subscription-data/{ueId}/nidd-authorization-data                                    | Y | GET    | Retrieve the UE's NIDD Authorization Data                                                   |
| ServiceSpecificAuthorizationData<br>(Document)       | /subscription-data/{ueId}/service-specific-authorization-data/{serviceType}          | Y | GET    | Retrieve the UE's Authorization Data for a specific service                                 |
| CoverageRestrictionData<br>(Document)                | /subscription-data/{ueId}/coverage-restriction-data                                  | Y | GET    | Retrieve the UE's subscribed enhanced Coverage Restriction Data                             |
| Location<br>(Document)                               | /subscription-data/{ueId}/context-data/location                                      | Y | GET    | Retrieve the UE's Location Information                                                      |
| V2xSubscriptionData<br>(Document)                    | /subscription-data/{ueId}/v2x-data                                                   | Y | GET    | Retrieve the UE's subscribed V2X Data                                                       |
| ProseSubscriptionData<br>(Document)                  | /subscription-data/{ueId}/prose-data                                                 | Y | GET    | Retrieve the UE's subscribed ProSe Service Data                                             |
| 5MBSSubscriptionData<br>(Document)                   | /subscription-data/{ueId}/5mbs-data                                                  | Y | GET    | Retrieve the UE's 5MBS Subscription Data                                                    |
| UcSubscriptionData<br>(Document)                     | /subscription-data/{ueId}/uc-data                                                    | Y | GET    | Retrieve the UE's User Consent Data                                                         |
| LcsBroadcastAssistanceSubscriptionData<br>(Document) | /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/lcs-bca-data              | Y | GET    | Retrieve the UE's subscribed LCS Broadcast Assistance subscription data                     |
| NiddAuthorizations<br>(Document)                     | /subscription-data/{ueId}/context-data/nidd-authorizations                           | Y | PUT    | Store information related to the NIDD Authorization                                         |
|                                                      |                                                                                      |   | DELETE | Delete the NIDD Authorizations                                                              |
|                                                      |                                                                                      |   | GET    | Retrieve NIDD Authorizations                                                                |
|                                                      |                                                                                      |   | PATCH  | Update a specific NIDD Authorization                                                        |
| UeSubscriptionData<br>(Document)                     | /subscription-data/{ueId}                                                            | N | GET    | Retrieve data set(s) from the UE's subscription data                                        |
| SpecificServiceAuthorizations<br>(Document)          | /subscription-data/{ueId}/context-data/service-specific-authorizations/{serviceType} | Y | PUT    | Store information related to the service specific Authorization                             |
|                                                      |                                                                                      |   | DELETE | Delete the service specific Authorization                                                   |
|                                                      |                                                                                      |   | GET    | Retrieve service specific Authorizations                                                    |
|                                                      |                                                                                      |   | PATCH  | Update a service specific Authorization                                                     |
| RoamingInfo<br>(Document)                            | /subscription-data/{ueId}/context-data/roaming-information                           | Y | GET    | Retrieve the Roaming information in EPC domain in the AMF 3GPP Registration context         |
|                                                      |                                                                                      |   | POST   | Update or create the Roaming Information in EPC domain in the AMF 3GPP Registration context |

## 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). Read/write access can be authorized by means of OAuth2.

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 of the UE.<br>It may be the SUPI (see 3GPP TS 23.501 [4], clause 5.9.2) of the UE or a pseudonym in SUPI format (e.g. the GLI or GCI of the UE; see 3GPP TS 23.316 [18], clauses 4.7.3 and 4.7.4).<br>Pattern: See pattern of type Supi in 3GPP TS 29.571 [3]. |

### 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                       |
|--------------------|-------------------|---|-------------|-----------------------------------|
| 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 5.2.2.3.2-2 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. (NOTE 2)                                                                                                                                                                                                                                                           |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                  |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                              | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                          |   |             |                |                                                                                                                                                                                                                                                                                                                                           |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                           |

## 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                                                                                                                                                                 |
| ueld          | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)<br>pattern: See pattern of type VarUeld 3GPP TS 29.571 [3]                                                |
| servingPlmnId | Represents the Serving PLMN ID (consisting of MCC, MNC) or SNPN (consisting of MCC, MNC and NID); see clauses 12.1 and 17.2 in 3GPP TS 23.003 [5].<br>pattern: "^([0-9]{5,6})(-[A-Fa-f0-9]{11})?\$" |

### 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.<br>For the roaming and SNPN scenarios, see the description of the 'roamingRestrictions' attribute in the Table 6.1.6.2.4-1 of 3GPP TS 29.503 [6]. |
| 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)<br>pattern: See pattern of type VarUeId 3GPP TS 29.571 [3] |
| servingPlmnId | Represents the Serving PLMN ID (<MCC><MNC>)<br>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)<br>pattern: See pattern of type VarUeId 3GPP TS 29.571 [3] |
| servingPlmnId | Represents the Serving PLMN ID (<MCC><MNC>)<br>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       | Snsai             | O | 0..1        | When present without Slice Differentiator (sd), all slices identified by the given Slice/Service Type (sst) and any sd value (if any) shall be considered matching the query parameter.                   |
| 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                                                                                          |
|----------------------------------------------------------------------------------|---|-------------|----------------|------------------------------------------------------------------------------------------------------|
| SmSubsData                                                                       | M | 1           | 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: See pattern of type VarUeId 3GPP TS 29.571 [3] |

### 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                       |
|--------------------|-------------------|---|-------------|-----------------------------------|
| 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 5.2.6.3.2-2 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. (NOTE 2)                                                                                                                                                                                                                                                           |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                  |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                              | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                          |   |             |                |                                                                                                                                                                                                                                                                                                                                           |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                           |

### 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: See pattern of type VarUeId 3GPP TS 29.571 [3] |

### 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                       |
|--------------------|-------------------|---|-------------|-----------------------------------|
| 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 5.2.7.3.2-2 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. (NOTE 2)                                                                                                                                                                                                                                                            |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                   |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                              | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                          |   |             |                |                                                                                                                                                                                                                                                                                                                                            |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                            |

### 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 [4] clause 5.9.2) pattern: See pattern of type VarUeId 3GPP TS 29.571 [3] |

### 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 [4] clause 5.9.2) pattern: See pattern of type VarUeId 3GPP TS 29.571 [3] |
| 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. |   |             |                |                                              |

#### 5.2.9.3.4 PATCH

This method is used to modify SMF registration data in the UDR.

This method shall support the URI query parameters specified in table 5.2.9.3.4-1.

**Table 5.2.9.3.4-1: URI query parameters supported by the PATCH 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 5.2.9.3.4-2 and the response data structures and response codes specified in table 5.2.9.3.4-3.

**Table 5.2.9.3.4-2: 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 SMF registration data |

**Table 5.2.9.3.4-3: 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. (NOTE 2)                                                                                                                                                                                                                                                            |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                        | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                   |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                     | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                 |   |             |                |                                                                                                                                                                                                                                                                                                                                            |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                            |

## 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: See pattern of type VarUeId 3GPP TS 29.571 [3] |
| 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 | 0..N        | 200 OK         | Upon success, a response body containing a map shall be returned. The key of the map is an operator-specific data element name and the value is the operator-specific data of such data element, for the current UE (identified by the {ueId} variable in the resource path). If the resource does not contain any keys, the response consists of an empty JSON object (empty map). |
| 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                       |
|--------------------|-------------------|---|-------------|-----------------------------------|
| 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 5.2.10.3.2-2 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. (NOTE 2)                                                                                                                                                                                                                                                            |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                   |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                              | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                          |   |             |                |                                                                                                                                                                                                                                                                                                                                            |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                            |

### 5.2.10.3.3 PUT

This method shall support the URI query parameters specified in table 5.2.10.3.3-1.

**Table 5.2.10.3.3-1: URI query parameters supported by the PUT 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 5.2.10.3.3-2 and the response data structure, and response codes specified in table 5.2.10.3.3-3.

**Table 5.2.10.3.3-2: Data structures supported by the PUT Request Body on this resource**

| Data type                          | P | Cardinality | Description |
|------------------------------------|---|-------------|-------------|
| map(OperatorSpecificDataContainer) | M | 1..N        |             |

**Table 5.2.10.3.3-3: Data structures supported by the PUT Response Body on this resource**

| Data type                                                                         | P | Cardinality | Response codes | Description                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------------------------|---|-------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| map(OperatorSpecificDataContainer)                                                | O | 1..N        | 201 Created    | Upon successful creation of this resource, a representation of the created resource containing a map of OperatorSpecificDataContainer 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. |
| n/a                                                                               | O |             | 204 No Content | Upon successful update of this resource, an empty response body shall be returned.                                                                                                                                                                                        |
| NOTE: In addition, common data structures as listed in table 5.5-1 are supported. |   |             |                |                                                                                                                                                                                                                                                                           |

#### 5.2.10.3.4 DELETE

This method shall support the URI query parameters specified in table 5.2.10.3.4-1.

**Table 5.2.10.3.4-1: 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 5.2.10.3.4-2 and the response data structure, and response codes specified in table 5.2.10.3.4-3.

**Table 5.2.10.3.4-2: Data structures supported by the DELETE Request Body on this resource**

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

**Table 5.2.10.3.4-3: 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 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                                                                                                               |
| ueld    | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeld 3GPP TS 29.571 [3] |

### 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. |
| SmsfRegistration | M | 1           | 200 OK         | Upon success, a response body containing a representation of the updated 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: See pattern of type VarUeId 3GPP TS 29.571 [3] |

### 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. |
| SmsfRegistration                                                                 | M | 1           | 200 OK         | Upon success, a response body containing a representation of the updated 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. |   |             |                |                                                                                                            |

## 5.2.12A Resource: IpSmGwRegistration

### 5.2.12A.1 Description

This resource represents the registered IP-SM-GW.

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

### 5.2.12A.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.12A.2-1.

**Table 5.2.12A.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: See pattern of type VarUeId 3GPP TS 29.571 [3] |

### 5.2.12A.3 Resource Standard Methods

#### 5.2.12A.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.12A.3.1-1.

**Table 5.2.12A.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 5.2.12A.3.1-2 and the response data structures and response codes specified in table 5.2.12A.3.1-3.

**Table 5.2.12A.3.1-2: Data structures supported by the PUT Request Body on this resource**

| Data type          | P | Cardinality | Description                                                                    |
|--------------------|---|-------------|--------------------------------------------------------------------------------|
| IpSmGwRegistration | M | 1           | The IP-SM-GW registration is created or updated with the received information. |

**Table 5.2.12A.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. |   |             |                |                                                        |

### 5.2.12A.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.12A.3.2-1.

**Table 5.2.12A.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 5.2.12A.3.2-2 and the response data structures and response codes specified in table 5.2.12A.3.2-3.

**Table 5.2.12A.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 5.2.12A.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. |   |             |                |                                                         |

### 5.2.12A.3.3 PATCH

This method shall support the URI query parameters specified in table 5.2.12A.3.3-1.

**Table 5.2.12A.3.3-1: URI query parameters supported by the PATCH 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 5.2.12A.3.3-2 and the response data structures and response codes specified in table 5.2.12A.3.3-3.

**Table 5.2.12A.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 authentication subscription of a UE |

**Table 5.2.12A.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. (NOTE 2)                                                                                                                                                                                                                                                                                        |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                                               |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                              | O | 0..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 may be used to convey any of the following errors:<br>- "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition, common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                         |   |             |                |                                                                                                                                                                                                                                                                                                                                                                        |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                                                        |

#### 5.2.12A.3.4 GET

This method shall support the URI query parameters specified in table 5.2.12A.3.4-1.

**Table 5.2.12A.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 5.2.12A.3.4-2 and the response data structures and response codes specified in table 5.2.12A.3.4-3.

**Table 5.2.12A.3.4-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.12A.3.4-3: Data structures supported by the GET Response Body on this resource**

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

## 5.2.12B Resource: MessageWaitingData

### 5.2.12B.1 Description

This resource represents the Message Waiting Data list for a given UE.

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

### 5.2.12B.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.12B.2-1.

**Table 5.2.12B.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: See pattern of type VarUeId 3GPP TS 29.571 [3] |

### 5.2.12B.3 Resource Standard Methods

#### 5.2.12B.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.12B.3.1-1.

**Table 5.2.12B.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 5.2.12B.3.1-2 and the response data structures and response codes specified in table 5.2.12B.3.1-3.

**Table 5.2.12B.3.1-2: Data structures supported by the PUT Request Body on this resource**

| Data type          | P | Cardinality | Description                                                                        |
|--------------------|---|-------------|------------------------------------------------------------------------------------|
| MessageWaitingData | M | 1           | The Message Waiting Data list is created or updated with the received information. |

**Table 5.2.12B.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                                                                                                                                      |
| MessageWaitingData | M | 1           | 201 Created    | If the resource did not already exist, and it is successfully created, a response body containing a representation of the created Individual MessageWaitingData resource shall be returned. |

NOTE: In addition, common data structures as listed in table 5.5-1 are supported.

#### 5.2.12B.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.12B.3.2-1.

**Table 5.2.12B.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 5.2.12B.3.2-2 and the response data structures and response codes specified in table 5.2.12B.3.2-3.

**Table 5.2.12B.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 5.2.12B.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. |   |             |                |                                                         |

### 5.2.12B.3.3 PATCH

This method shall support the URI query parameters specified in table 5.2.12B.3.3-1.

**Table 5.2.12B.3.3-1: URI query parameters supported by the PATCH 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 5.2.12B.3.3-2 and the response data structures and response codes specified in table 5.2.12B.3.3-3.

**Table 5.2.12B.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 authentication subscription of a UE |

**Table 5.2.12B.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. (NOTE 2)                                                                                                                                                                                                                                                                                        |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                                               |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                              | O | 0..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 may be used to convey any of the following errors:<br>- "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition, common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                         |   |             |                |                                                                                                                                                                                                                                                                                                                                                                        |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                                                        |

### 5.2.12B.3.4 GET

This method shall support the URI query parameters specified in table 5.2.12B.3.4-1.

**Table 5.2.12B.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 5.2.12B.3.4-2 and the response data structures and response codes specified in table 5.2.12B.3.4-3.

**Table 5.2.12B.3.4-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.12B.3.4-3: Data structures supported by the GET Response Body on this resource**

| Data type                                                                         | P | Cardinality | Response codes | Description                                                                          |
|-----------------------------------------------------------------------------------|---|-------------|----------------|--------------------------------------------------------------------------------------|
| MessageWaitingData                                                                | M | 1           | 200 OK         | Upon success, a response body containing the Message Waiting 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: See pattern of type VarUeId 3GPP TS 29.571 [3] |
| 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: ProvisionedParameterData

### 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)<br>pattern: See pattern of type VarUeId 3GPP TS 29.571 [3] |

### 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                       |
|--------------------|-------------------|---|-------------|-----------------------------------|
| 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 5.2.14.3.2-2 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. (NOTE 2)                                                                                                                                                                                                                                                            |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                   |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                              | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                          |   |             |                |                                                                                                                                                                                                                                                                                                                                            |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                            |

## 5.2.14A Resource: PpProfileData

### 5.2.14A.1 Description

This resource represents the subscribed Parameter Provision Profile Data for a UE. It is queried by the UDM.

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

### 5.2.14A.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.14A.2-1.

**Table 5.2.14A.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: See pattern of type VarUeId in 3GPP TS 29.571 [3] |

### 5.2.14A.3 Resource Standard Methods

#### 5.2.14A.3.1 GET

This method shall support the URI query parameters specified in table 5.2.14A.3.1-1.

**Table 5.2.14A.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 5.2.14A.3.1-2 and the response data structures and response codes specified in table 5.2.14A.3.1-3.

**Table 5.2.14A.3.1-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.14A.3.1-3: Data structures supported by the GET Response Body on this resource**

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

## 5.2.14B Resource: ProvisionedParameterDataEntry

### 5.2.14B.1 Description

This resource represents an Entry under the Provisioned Parameter Data store for a UE. It is triggered by the AF/NEF via the UDM to update or retrieve the 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]).

## 5.2.14B.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.14B.2-1.

**Table 5.2.14B.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, GPSI or Group Id or anyUE (see 3GPP TS 23.501 [4] clause 5.9.2)<br>- If representing a single UE, this parameter shall contain the GPSI or SUPI.<br>pattern: See pattern of type VarUeId 3GPP TS 29.571 [3]<br><br>- If representing a group of UEs, this parameter shall contain the External GroupId.<br>pattern: "^extgroupid-[@]+@[^@]+\$"<br><br>- If representing any UE, this parameter shall contain "anyUE".<br>pattern: "^anyUE\$" |
| afInstanceId | The string identifying the originating AF                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## 5.2.14B.3 Resource Standard Methods

### 5.2.14B.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.14B.3.1-1.

**Table 5.2.14B.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 5.2.14B.3.1-2 and the response data structures and response codes specified in table 5.2.14B.3.1-3.

**Table 5.2.14B.3.1-2: Data structures supported by the PUT Request Body on this resource**

| Data type   | P | Cardinality | Description                                  |
|-------------|---|-------------|----------------------------------------------|
| PpDataEntry | M | 1           | Contains a Parameter Provisioning Data entry |

**Table 5.2.14B.3.1-4: Data structures supported by the PUT Response Body on this resource**

| Data type                                                                                                   | P | Cardinality | Response codes | Description                                                                                                      |
|-------------------------------------------------------------------------------------------------------------|---|-------------|----------------|------------------------------------------------------------------------------------------------------------------|
| PpDataEntry                                                                                                 | M | 1           | 201 Created    | Indicates a successful creation of the resource.                                                                 |
| n/a                                                                                                         |   |             | 204 No Content | Indicates a successful update of the resource. An empty response shall be returned.                              |
| ProblemDetails                                                                                              | O | 0..1        | 403 Forbidden  | The "cause" attribute may be used to indicate one of the following application errors:<br>- CREATION_NOT_ALLOWED |
| ProblemDetails                                                                                              | O | 0..1        | 404 Not Found  | The "cause" attribute may be used to indicate one of the following application errors:<br>- USER_NOT_FOUND       |
| NOTE: In addition, common data structures as listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] are supported. |   |             |                |                                                                                                                  |

## 5.2.14B.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.14B.3.2-1.

**Table 5.2.14B.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 5.2.14B.3.2-2 and the response data structures and response codes specified in table 5.2.14B.3.2-3.

**Table 5.2.14B.3.2-2: Data structures supported by the DELETE Request Body on this resource**

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

**Table 5.2.14B.3.2-2: 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                                                     |
| ProblemDetails                                                                                              | O | 0..1        | 404 Not Found  | The "cause" attribute may be used to indicate one of the following application errors:<br>- USER_NOT_FOUND |
| NOTE: In addition, common data structures as listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] are supported. |   |             |                |                                                                                                            |

## 5.2.14B.3.3 GET

This method retrieves the provisioned data of a given UE.

This method shall support the URI query parameters specified in table 5.2.14B.3.3-1.

**Table 5.2.14B.3.3-1: 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 5.2.14B.4.1-2 and the response data structures and response codes specified in table 5.2.14B.4.1-3.

**Table 5.2.14B.3.3-2: Data structures supported by the GET Request Body on this resource**

| Data type | P | Cardinality | Description |
|-----------|---|-------------|-------------|
| N/A       |   |             |             |

**Table 5.2.14B.3.3-3: Data structures supported by the GET Response Body on this resource**

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

## 5.2.14C Resource: ProvisionedParameterDataEntries

### 5.2.14C.1 Description

This resource represents all the Entries under the Provisioned Parameter Data store for a UE. It is invoked by the UDM to obtain all or multiple Entries under the Provisioned Parameter Data store for a UE.

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

### 5.2.14C.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.14C.2-1.

**Table 5.2.14C.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, GPSI or Group Id or anyUE (see 3GPP TS 23.501 [4] clause 5.9.2)<br>- If representing a single UE, this parameter shall contain the GPSI or SUPI.<br>pattern: See pattern of type VarUeId 3GPP TS 29.571 [3]<br>- If representing a group of UEs, this parameter shall contain the External GroupId.<br>pattern: "^extgroupid-[@]+@[^@]+\$"<br>- If representing any UE, this parameter shall contain "anyUE".<br>pattern: "^anyUE\$" |

### 5.2.14C.3.1 GET

This method retrieves the provisioned data of a given UE.

This method shall support the URI query parameters specified in table 5.2.14C.3.1-1.

**Table 5.2.14C.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 5.2.14C.4.1-2 and the response data structures and response codes specified in table 5.2.14C.4.1-3.

**Table 5.2.14C.3.1-2: Data structures supported by the GET Request Body on this resource**

| Data type | P | Cardinality | Description |
|-----------|---|-------------|-------------|
| N/A       |   |             |             |

**Table 5.2.14C.3.1-3: Data structures supported by the GET Response Body on this resource**

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

## 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)<br>pattern: See pattern of type VarUeId 3GPP TS 29.571 [3] |
| serving-plmn-id | Represents the Serving PLMN ID (<MCC><MNC>)<br>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: See pattern of type VarUeId 3GPP TS 29.571 [3] |

### 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. |

If the uniqueSubscription attribute is set to true in the sdmSubscription object, the UDR shall only allow one UE based sdmSubscription per UE per NF service consumer identified by the ueId in URI and NfInstanceId in SdmSubscription, and if additional filter criteria (e.g. dnn and/or singleNssai) are present in the sdmSubscription, per filter criteria (see 3GPP TS 29.503 [6], clause 5.2.2.3.2).

If the UDR detects that a subscription for the criteria already exist in the UDR, the UDR shall replace the old SdmSubscription with the new one.

**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.<br><br>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: See pattern of type VarUeId 3GPP TS 29.571 [3] |
| 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                                                                   | O | 0..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.                                                                        |
| ProblemDetails                                                                   | O | 0..1        | 404 Not Found  | The "cause" attribute may be used to indicate one of the following application errors:<br>- USER_NOT_FOUND<br>- DATA_NOT_FOUND |
| 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                       |
|--------------------|-------------------|---|-------------|-----------------------------------|
| 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 5.2.17.3.3-2 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. (NOTE 2)                                                                                                                                                                                                                                                           |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                   |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                              | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                          |   |             |                |                                                                                                                                                                                                                                                                                                                                            |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                            |

#### 5.2.17.3.4 GET

This method shall support the URI query parameters specified in table 5.2.17.3.4-1.

**Table 5.2.17.3.4-1: 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 5.2.17.3.4-2 and the response data structures and response codes specified in table 5.2.17.3.4-3.

**Table 5.2.17.3.4-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.17.3.4-3: Data structures supported by the GET Response Body on this resource**

| Data type                                                                        | P | Cardinality | Response codes | Description                                                                                  |
|----------------------------------------------------------------------------------|---|-------------|----------------|----------------------------------------------------------------------------------------------|
| SdmSubscription                                                                  | M | 1           | 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. |   |             |                |                                                                                              |

## 5.2.17A Resource: HssSdmSubscriptionInfo

### 5.2.17A.1 Description

This resource represents information relevant to an individual SDM Subscription for a UE. The UDM may need to consume the Nhss\_SDM\_Subscribe service operation to subscribe at the HSS (see 3GPP TS 29.563 [20]). After successful subscription at the HSS, the UDM needs to store within the UDR related information, e.g. the SubscriptionId allocated by the HSS.

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

### 5.2.17A.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.17A.2-1.

**Table 5.2.17A.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)<br>pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3] |
| subsId  | Identifier of the subscription (allocated by the UDM)                                                                                                   |

### 5.2.17A.3 Resource Standard Methods

#### 5.2.17A.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.17A.3.1-1.

**Table 5.2.17A.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 5.2.17A.3.1-2 and the response data structures, and response codes specified in table 5.2.17A.3.1-3.

**Table 5.2.17A.3.1-2: Data structures supported by the PUT Request Body on this resource**

| Data type           | P | Cardinality | Description               |
|---------------------|---|-------------|---------------------------|
| HssSubscriptionInfo | M | 1           | HSS SDM subscription info |

**Table 5.2.17A.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.

#### 5.2.17A.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.17A.3.2-1.

**Table 5.2.17A.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 5.2.17A.3.2-2 and the response data structures, and response codes specified in table 5.2.17A.3.2-3.

**Table 5.2.17A.3.2-2: Data structures supported by the DELETE Request Body on this resource**

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

**Table 5.2.17A.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. |   |             |                |                                                         |

### 5.2.17A.3.3 GET

This method shall support the URI query parameters specified in table 5.2.17A.3.3-1.

**Table 5.2.17A.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 5.2.17A.3.3-2 and the response data structures and response codes specified in table 5.2.17A.3.3-3.

**Table 5.2.17A.3.3-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.17A.3.3-3: Data structures supported by the GET Response Body on this resource**

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

### 5.2.17A.3.4 PATCH

This method shall support the URI query parameters specified in table 5.2.17A.3.4-1.

**Table 5.2.17A.3.4-1: URI query parameters supported by the PATCH 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 |

This method shall support the request data structures specified in table 5.2.17A.3.2-2 and the response data structures, and response codes specified in table 5.2.17A.3.4-3.

**Table 5.2.17A.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 5.2.17A.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. (NOTE 2)                                                                                                                                                                                                                                                            |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                   |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                              | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                          |   |             |                |                                                                                                                                                                                                                                                                                                                                            |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                            |

## 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: See pattern of type VarUeId 3GPP TS 29.571 [3] |

### 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                                                                                                                                                                                                          |
| event-types        | array(EventType)    | O | 1..N        | Indicates only to return the EE subscription data which contains at least one of the indicated Event Types and returned monitoring configuration data in EE subscription data only contains the data related to the indicated event types. |
| nf-identifiers     | array(NfIdentifier) | O | 1..N        | Indicates to return relevant EE subscription data along with associated Subscription resources created and stored while initiating subscriptions to NFs identified by NfType and NfInstanceId                                              |

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(EeSubscriptionExt)                                                         | 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.<br><br>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: See pattern of type VarUeId 3GPP TS 29.571 [3] |
| 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                                                                   | O | 0..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                       |
|--------------------|-------------------|---|-------------|-----------------------------------|
| 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 5.2.19.3.3-2 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. (NOTE 2)                                                                                                                                                                                                                                                           |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                   |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                              | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                          |   |             |                |                                                                                                                                                                                                                                                                                                                                            |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                            |

#### 5.2.19.3.4 GET

This method shall support the URI query parameters specified in table 5.2.19.3.4-1.

**Table 5.2.19.3.4-1: 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 5.2.19.3.4-2 and the response data structures and response codes specified in table 5.2.19.3.4-3.

**Table 5.2.19.3.4-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.19.3.4-3: Data structures supported by the GET Response Body on this resource**

| Data type                                                                        | P | Cardinality | Response codes | Description                                                                                 |
|----------------------------------------------------------------------------------|---|-------------|----------------|---------------------------------------------------------------------------------------------|
| EeSubscription                                                                   | M | 1           | 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. |   |             |                |                                                                                             |

### 5.2.19A 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.<br>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                                                                    | O | 0..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                       |
|--------------------|-------------------|---|-------------|-----------------------------------|
| 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 5.2.19A.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. (NOTE 2)                                                                                                                                                                                                                                                           |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                   |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                              | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                          |   |             |                |                                                                                                                                                                                                                                                                                                                                            |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                            |

#### 5.2.19A.3.4 GET

This method shall support the URI query parameters specified in table 5.2.19A.3.4-1.

**Table 5.2.19A.3.4-1: 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 5.2.19A.3.4-2 and the response data structures and response codes specified in table 5.2.19A.3.4-3.

**Table 5.2.19A.3.4-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.19A.3.4-3: Data structures supported by the GET Response Body on this resource**

| Data type                                                                         | P | Cardinality | Response codes | Description                                                                                                        |
|-----------------------------------------------------------------------------------|---|-------------|----------------|--------------------------------------------------------------------------------------------------------------------|
| EeSubscription                                                                    | M | 1           | 204 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. |   |             |                |                                                                                                                    |

## 5.2.19B Resource: EeGroupProfileData

### 5.2.19B.1 Description

This resource represents the subscribed Event Exposure Profile Data for a group of UEs or any UE (i.e. all UEs). It is queried by the UDM by either external group identifier or anyUE.

### 5.2.19B.2 Resource Definition

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

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

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

| Name      | Definition                                                                                                                                                                  |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| apiRoot   | See 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.<br>pattern: See pattern of type VarUeGroupId |

### 5.2.19B.3 Resource Standard Methods

#### 5.2.19B.3.1 GET

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

**Table 5.2.19B.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 5.2.19B.3.1-2 and the response data structures and response codes specified in table 5.2.19B.3.1-3.

**Table 5.2.19B.3.1-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.19B.3.1-3: Data structures supported by the GET Response Body on this resource**

| Data type          | P | Cardinality | Response codes | Description                                                                                                                               |
|--------------------|---|-------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| EeGroupProfileData | M | 1           | 200 OK         | Upon success, a response body containing the Event Exposure Profile Data for a group of UEs, which corresponds to the provided ueGroupId. |

NOTE: In addition, common data structures as listed in table 5.5-1 are supported.

## 5.2.19C Resource: AmfGroupSubscriptionInfo

### 5.2.19C.1 Description

This resource represents information relevant to an individual EE Subscription for a group of UE or any 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]).

### 5.2.19C.2 Resource Definition

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

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

**Table 5.2.19C.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.<br>Pattern: '^(\extgroupid-[^\@]+\@[^\@]+\ anyUE)\$' |
| subsid    | Identifier of the subscription (allocated by the UDR)                                                                                                                               |

### 5.2.19C.3 Resource Standard Methods

#### 5.2.19C.3.1 PUT

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

**Table 5.2.19C.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 5.2.19C.3.1-2 and the response data structures, and response codes specified in table 5.2.19C.3.1-3.

**Table 5.2.19C.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 5.2.19C.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 successful update of this resource, an empty response body shall be returned.                                                                                          |
| array(AmfSubscriptionInfo) | M | 1..N        | 201 Created    | Upon successful update of this resource, a representation of the created resource containing an array of the AmfSubscriptionInfo as allocated by the UDR shall be returned. |

NOTE: In addition, common data structures as listed in table 5.5-1 are supported.

#### 5.2.19C.3.2 DELETE

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

**Table 5.2.19C.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 5.2.19C.3.2-2 and the response data structures, and response codes specified in table 5.2.19C.3.2-3.

**Table 5.2.19C.3.2-2: Data structures supported by the DELETE Request Body on this resource**

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

**Table 5.2.19C.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. |   |             |                |                                                         |

### 5.2.19C.3.3 GET

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

**Table 5.2.19C.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 5.2.19C.3.3-2 and the response data structure and response codes specified in table 5.2.31.3.3-3.

**Table 5.2.19C.3.3-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.19C.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 5.2.19C.3.4-1.

**Table 5.2.19C.3.4-1: URI query parameters supported by the PATCH 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 5.2.19C.3.2-2 and the response data structures and response codes specified in table 5.2.19C.3.4-3.

**Table 5.2.19C.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 5.2.19C.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. (NOTE 2)                                                                                                                                                                                                                                                            |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                   |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                              | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                          |   |             |                |                                                                                                                                                                                                                                                                                                                                            |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                            |

## 5.2.19D Resource: SmfGroupSubscriptionInfo

### 5.2.19D.1 Description

This resource represents information relevant to an individual EE Subscription for a group of UE or any UE. Depending on the Event Types of the EeSubscription, the UDM may need to consume the Nsmf\_EventExposure\_Subscribe service operation to subscribe at the SMF (see 3GPP TS 29.508 [21]). After successful subscription at the SMF, the UDM needs to store within the UDR related information, e.g. the SubscriptionId allocated by the SMF.

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

### 5.2.19D.2 Resource Definition

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

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

**Table 5.2.19D.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.<br>Pattern: '^(\extgroupid-[^\@]+\@[^\@]+ anyUE)\$' |
| subId     | Identifier of the subscription (allocated by the UDR)                                                                                                                              |

### 5.2.19D.3 Resource Standard Methods

#### 5.2.19D.3.1 PUT

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

**Table 5.2.31A.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 5.2.19D.3.1-2 and the response data structures, and response codes specified in table 5.2.19D.3.1-3.

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

| Data type           | P | Cardinality | Description           |
|---------------------|---|-------------|-----------------------|
| SmfSubscriptionInfo | M | 1           | SMF subscription info |

**Table 5.2.19D.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 successful update of this resource, an empty response body shall be returned.                                                                                |
| SmfSubscriptionInfo | M | 1           | 201 Created    | Upon successful creation of this resource, a representation of the created resource containing the SmfSubscriptionInfo as allocated by the UDR shall be returned. |

NOTE: In addition, common data structures as listed in table 5.5-1 are supported.

### 5.2.19D.3.2 DELETE

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

**Table 5.2.19D.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 5.2.19D.3.2-2 and the response data structure, and response codes specified in table 5.2.19D.3.2-3.

**Table 5.2.19D.3.2-2: Data structures supported by the DELETE Request Body on this resource**

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

**Table 5.2.19D.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.

### 5.2.19D.3.3 GET

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

**Table 5.2.19D.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 5.2.19D.3.3-2 and the response data structures and response codes specified in table 5.2.19D.3.3-3.

**Table 5.2.19D.3.3-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.19D.3.3-3: Data structures supported by the GET Response Body on this resource**

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

### 5.2.19D.3.4 PATCH

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

This method shall support the URI query parameters specified in table 5.2.19D.3.4-1.

**Table 5.2.19D.3.4-1: URI query parameters supported by the PATCH 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 5.2.19D.3.2-2 and the response data structures, and response codes specified in table 5.2.19D.3.4-3.

**Table 5.2.19D.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 5.2.19D.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. (NOTE 2)                                                                                                                                                                                                                                                            |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                   |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                              | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                          |   |             |                |                                                                                                                                                                                                                                                                                                                                            |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                            |

## 5.2.19E Resource: HssGroupSubscriptionInfo

### 5.2.19E.1 Description

This resource represents information relevant to an individual EE Subscription for a group of UE. Depending on the Event Types of the EeSubscription, the UDM may need to consume the Nhss\_EventExposure\_Subscribe service

operation to subscribe at the HSS (see 3GPP TS 29.562 [20]). After successful subscription at the HSS, the UDM needs to store within the UDR related information, e.g. the SubscriptionId allocated by the HSS.

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

## 5.2.19E.2 Resource Definition

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

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

**Table 5.2.19E.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, an External Group Identifier shall be present.<br>Pattern: '^(extgroupid-[^@]+@[^@])\$' |
| subId     | Identifier of the subscription (allocated by the UDR)                                                                                                     |

## 5.2.19E.3 Resource Standard Methods

### 5.2.19E.3.1 PUT

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

**Table 5.2.19E.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 5.2.19E.3.1-2 and the response data structures, and response codes specified in table 5.2.19E.3.1-3.

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

| Data type           | P | Cardinality | Description           |
|---------------------|---|-------------|-----------------------|
| HssSubscriptionInfo | M | 1           | HSS subscription info |

**Table 5.2.19E.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.                                                                                                           |
| HssSubscriptionInfo | M | 1           | 201 Created    | Upon successful creation of this resource, a representation of the created resource containing the HssSubscriptionInfo as allocated by the UDR shall be returned. |

NOTE: In addition, common data structures as listed in table 5.5-1 are supported.

### 5.2.19E.3.2 DELETE

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

**Table 5.2.19E.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 5.2.19E.3.2-2 and the response data structures, and response codes specified in table 5.2.19E.3.2-3.

**Table 5.2.19E.3.2-2: Data structures supported by the DELETE Request Body on this resource**

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

**Table 5.2.19E.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. |   |             |                |                                                         |

### 5.2.19E.3.3 GET

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

**Table 5.2.19E.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 5.2.19E.3.3-2 and the response data structures and response codes specified in table 5.2.19E.3.3-3.

**Table 5.2.19E.3.3-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.19E.3.3-3: Data structures supported by the GET Response Body on this resource**

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

### 5.2.19E.3.4 PATCH

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

This method shall support the URI query parameters specified in table 5.2.19E.3.4-1.

**Table 5.2.19E.3.4-1: URI query parameters supported by the PATCH 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 5.2.19E.3.2-2 and the response data structures, and response codes specified in table 5.2.19E.3.4-3.

**Table 5.2.19E.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 5.2.19E.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. (NOTE 2)                                                                                                                                                                                                                                                            |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                   |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                              | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                          |   |             |                |                                                                                                                                                                                                                                                                                                                                            |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                            |

## 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. |

The UDR shall limit the number of subscriptions created based on the following criteria:

- For the UE based sdmSubscriptions: if the sdmSubscription object is present with the uniqueSubscription attribute is set to true, the UDR shall only allow one UE based SubscriptionDataSubscriptions per UE per NF service consumer identified by the ueId in the URI and the NfInstanceId in SdmSubscription, and if additional filter criteria (e.g. dnn and/or singleNssai) are present in the sdmSubscription, per filter criteria (see 3GPP TS 29.503 [6], clause 5.2.2.3.2).
- For shared data sdmSubscriptions: if the sdmSubscription object is present with the uniqueSubscription attribute is set to true, there shall be only one SubscriptionDataSubscriptions per NF service consumer identified by nfInstanceId inside sdmSubscription (see 3GPP TS 29.503 [6], clause 5.2.2.3.2).
- For UE based UDM subscriptions: if the uniqueSubscription attribute is set to true in the SubscriptionDataSubscription object, the UDR shall only allow one UE based SubscriptionDataSubscriptions identified by the ueId attribute.

If the UDR detects that a subscription for the criteria already exist in the UDR, the UDR shall replace the old SubscriptionDataSubscriptions with the new one.

**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.<br><br>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.

### 5.2.20.3.2 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)<br>pattern: See pattern of type VarUeId 3GPP TS 29.571 [3] |
| 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.<br><br>Pattern: See pattern of type VarUeId 3GPP TS 29.571 [3]                                                                                                                                                                                                                                         |
| 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.<br><br>If not included, the UDR shall delete all subscriptions matching the rest of query parameters.<br><br>(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.<br><br>(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.<br><br>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.<br><br>If 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" shall 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                       |
|--------------------|-------------------|---|-------------|-----------------------------------|
| 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 5.2.21.3.2-2 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, when all the modification instructions in the PATCH request have been implemented, there is no body in the response message.                                                                                                                                                                                                                                                                                                                                                                                     |
| SubscriptionDataSubscriptions                                                      | C | 0..1        | 200 OK         | Upon partial success, if any of the requested modifications have not been accepted, but the server has set different values than those requested by the client, in any of the attributes of the resource, the modified individual SubscriptionDataSubscriptions is returned with the accepted/confirmed values, e.g. the confirmed expiry time.<br>Also, upon partial success, if the NF service consumer does not support the "PatchReport" feature, the UDR shall return a SubscriptionDataSubscriptions object in the response.<br>(NOTE 2) |
| PatchResult                                                                        | C | 0..1        | 200 OK         | Upon partial success, if the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number and if some of the modification instructions in the PATCH request have been discarded while the rest are accepted, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                          |
| ProblemDetails                                                                     | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1.                                                                                                                                                                                                     |
| ProblemDetails                                                                     | O | 0..1        | 404 Not Found  | The "cause" attribute may be used to indicate one of the following application errors:<br>- SUBSCRIPTION_NOT_FOUND, see 3GPP TS 29.500 [4] table 5.2.7.2-1.                                                                                                                                                                                                                                                                                                                                                                                    |
| NOTE 1: In addition common data structures as listed in table 5.5-1 are supported. |   |             |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| NOTE 2: One of SubscriptionDataSubscriptions or PatchResult shall be returned.     |   |             |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

### 5.2.21.3.3 GET

This method shall support the URI query parameters specified in table 5.2.21.3.3-1.

**Table 5.2.21.3.3-1: 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 5.2.21.3.3-2 and the response data structures and response codes specified in table 5.2.21.3.3-3.

**Table 5.2.21.3.3-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.21.3.3-3: Data structures supported by the GET Response Body on this resource**

| Data type                                                                        | P | Cardinality | Response codes | Description                                                                              |
|----------------------------------------------------------------------------------|---|-------------|----------------|------------------------------------------------------------------------------------------|
| SubscriptionDataSubscriptions                                                    | M | 1           | 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. |   |             |                |                                                                                          |

## 5.2.22 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)<br>pattern: See pattern of type VarUeId 3GPP TS 29.571 [3] |
| servingPlmnId | Represents the Serving PLMN ID (<MCC><MNC>)<br>pattern: "^[0-9]{5,6}\$"                                                                              |

### 5.2.22.3 Resource Standard Methods

#### 5.2.22.3.1 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 5.2.22.3.1-3: 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: See pattern of type VarUeId 3GPP TS 29.571 [3] |

### 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                                                    |
|-------------|-----------|---|-------------|----------------------------------------------------------------|
| app-port-id | AppPortId | O | 0..1        | Application port identity, see 3GPP TS 23.501 [4] clause 4.4.7 |

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 ueld                                                                                                               |
| ProblemDetails                                                                    | O | 0..1        | 404 Not Found  | If the ueld does not exist, a response code of 404 Not Found shall be returned. The "cause" attribute may be used to indicate one of the following application errors:<br>- USER_NOT_FOUND<br>- DATA_NOT_FOUND |
| 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)<br>pattern: See pattern of type Supi in 3GPP TS 29.571 [3] |

### 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. |   |             |                |                                                                           |

### 5.2.24.3.3 DELETE

This method shall support the URI query parameters specified in table 5.2.24.3.3-1.

**Table 5.2.24.3.3-1: 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 5.2.24.3.3-2 and the response data structures and response codes specified in table 5.2.24.3.3-3.

**Table 5.2.24.3.3-2: Data structures supported by the DELETE Request Body on this resource**

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

**Table 5.2.24.3.3-3: 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. |   |             |                |                                                         |

## 5.2.24A Resource: IndividualAuthenticationStatus

### 5.2.24A.1 Description

This resource is used to represent individual Authentication Status 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]).

### 5.2.24A.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.24A.2-1.

**Table 5.2.24A.2-1: Resource URI variables for this resource**

| Name               | Definition                                                                                                                                   |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| apiRoot            | See clause 6.4.1                                                                                                                             |
| ueId               | Represents the Subscription Identifier SUPI (see 3GPP TS 23.501 [4] clause 5.9.2)<br>pattern: See pattern of type Supi in 3GPP TS 29.571 [3] |
| servingNetworkName | Represents the Serving Network Name.<br>pattern: See pattern of type ServingNetworkName in 3GPP TS 29.503 [6]                                |

### 5.2.24A.3 Resource Standard Methods

#### 5.2.24A.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.24A.3.1-1.

**Table 5.2.24A.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 5.2.24A.3.1-2 and the response data structures and response codes specified in table 5.2.24A.3.1-3.

**Table 5.2.24A.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 5.2.24A.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. |   |             |                |                                                        |

### 5.2.24A.3.2 GET

This method shall support the URI query parameters specified in table 5.2.24A.3.2-1.

**Table 5.2.24A.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 5.2.24A.3.2-2 and the response data structures and response codes specified in table 5.2.24A.3.2-3.

**Table 5.2.24A.3.2-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.24A.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. |   |             |                |                                                                           |

### 5.2.24A.3.3 DELETE

This method shall support the URI query parameters specified in table 5.2.24A.3.3-1.

**Table 5.2.24A.3.3-1: 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 5.2.24A.3.3-2 and the response data structures and response codes specified in table 5.2.24A.3.3-3.

**Table 5.2.24A.3.3-2: Data structures supported by the DELETE Request Body on this resource**

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

**Table 5.2.24A.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. |   |             |                |                                                         |

## 5.2.25 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)<br>pattern: See pattern of type Supi in 3GPP TS 29.571 [3] |

### 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. |   |             |                |                                                                         |

### 5.2.25.3.3 PATCH

This method is used to modify the "ME support of SOR-CMCI" stored in the UDR.

This method shall support the URI query parameters specified in table 5.2.25.3.3-1.

**Table 5.2.25.3.3-1: URI query parameters supported by the PATCH 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 5.2.25.3.3-2 and the response data structures, and response codes specified in table 5.2.25.3.3-3.

**Table 5.2.25.3.3-2: 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 contents of SorData |

**Table 5.2.25.3.3-3: 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. (NOTE 2)                                                                                                                                                                                                                                                            |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                   |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                              | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                          |   |             |                |                                                                                                                                                                                                                                                                                                                                            |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                            |

## 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)<br>pattern: See pattern of type Supi in 3GPP TS 29.571 [3] |

### 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. |   |             |                |                                                                         |

## 5.2.25B Resource: SubscribedSNSSAIs

### 5.2.25B.1 Description

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

### 5.2.25B.2 Resource Definition

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

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

**Table 5.2.25B.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)<br>pattern: See pattern of type Supi in 3GPP TS 29.571 [3] |

### 5.2.25B.3 Resource Standard Methods

#### 5.2.25B.3.1 PUT

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

**Table 5.2.25B.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 5.2.25B.3.1-2 and the response data structures and response codes specified in table 5.2.25B.3.1-3.

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

| Data type    | P | Cardinality | Description                                                                  |
|--------------|---|-------------|------------------------------------------------------------------------------|
| NssaiAckData | M | 1           | Contains the provisioning time stamp of the acknowledged subscribed S-NSSAIs |

**Table 5.2.25B.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. |   |             |                |                                                        |

#### 5.2.25B.3.2 GET

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

**Table 5.2.25B.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 5.2.25B.3.2-2 and the response data structures and response codes specified in table 5.2.25B.3.2-3.

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

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

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

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

## 5.2.25C Resource: SubscribedCAG

### 5.2.25C.1 Description

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

### 5.2.25C.2 Resource Definition

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

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

**Table 5.2.25C.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)<br>pattern: See pattern of type Supi in 3GPP TS 29.571 [3] |

### 5.2.25C.3 Resource Standard Methods

#### 5.2.25C.3.1 PUT

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

**Table 5.2.25C.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 5.2.25C.3.1-2 and the response data structures and response codes specified in table 5.2.25C.3.1-3.

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

| Data type  | P | Cardinality | Description                                                  |
|------------|---|-------------|--------------------------------------------------------------|
| CagAckData | M | 1           | Contains the provisioning time stamp of the acknowledged CAG |

**Table 5.2.25C.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. |   |             |                |                                                        |

#### 5.2.25C.3.2 GET

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

**Table 5.2.25C.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 5.2.25C.3.2-2 and the response data structures and response codes specified in table 5.2.25C.3.2-3.

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

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

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

| Data type                                                                        | P | Cardinality | Response codes | Description                                                                |
|----------------------------------------------------------------------------------|---|-------------|----------------|----------------------------------------------------------------------------|
| CagAckData                                                                       | M | 1           | 200 OK         | Upon success, a response body containing the CagAckData 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)<br>pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3] |
| servingPlmnId | Represents the Serving PLMN ID (<MCC><MNC>)<br>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. |

NOTE: To retrieve data sets that are not specific to serving PLMNs (e.g., LCS\_PRIVACY, LCS\_MO, V2X, PROSE, ODB, EE\_PROF, PP\_PROF and NIDD\_AUTH), an NF service consumer should use UE Subscription Data Retrieve operation (see clause 5.2.47).

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)<br>pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3] |

### 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: See pattern of type VarUeId in 3GPP TS 29.571 [3] |

### 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 ueld |
| 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.<br>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.<br><br>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        |                                   |
| 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 5.2.30.3.1-2 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. |   |             |                |                                                                                  |

## 5.2.30A Resource: IndividualSharedData

### 5.2.30A.1 Description

This resource represents the individual shared data.

### 5.2.30A.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.30A.2-1.

**Table 5.2.30A.2-1: Resource URI variables for this resource**

| Name         | Definition                                      |
|--------------|-------------------------------------------------|
| apiRoot      | See 3GPP TS 29.504 [2] clause 6.1.1             |
| sharedDataId | Contains the individual Shared Data Identifier. |

### 5.2.30A.3 Resource Standard Methods

#### 5.2.30A.3.1 GET

This method shall support the URI query parameters specified in table 5.2.30A.3.1-1.

**Table 5.2.30A.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 5.2.30A.3.1-2 and the response data structures and response codes specified in table 5.2.30A.3.1-3.

**Table 5.2.30A.3.1-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.30A.3.1-3: Data structures supported by the GET Response Body on this resource**

| Data type                                                                        | P | Cardinality | Response codes | Description                                                                                                |
|----------------------------------------------------------------------------------|---|-------------|----------------|------------------------------------------------------------------------------------------------------------|
| SharedData                                                                       | M | 1           | 200 OK         | Upon success, a response body containing SharedData shall be returned.                                     |
| ProblemDetails                                                                   | O | 0..1        | 404 Not Found  | The "cause" attribute may be used to indicate one of the following application errors:<br>- DATA_NOT_FOUND |
| 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: 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)<br>pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3] |
| 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 successful update of this resource, an empty response body shall be returned.                                                                                          |
| array(AmfSubscriptionInfo)                                                       | M | 1..N        | 201 Created    | Upon successful update of this resource, a representation of the created resource containing an array of the AmfSubscriptionInfo as allocated by the UDR 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                       |
|--------------------|-------------------|---|-------------|-----------------------------------|
| 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 5.2.31.3.2-2 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. (NOTE 2)                                                                                                                                                                                                                                                            |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                   |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                              | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                          |   |             |                |                                                                                                                                                                                                                                                                                                                                            |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                            |

## 5.2.31A Resource: SmfSubscriptionInfo

### 5.2.31A.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 Nsmf\_EventExposure\_Subscribe service operation to subscribe at the SMF (see 3GPP TS 29.508 [21]). After successful subscription at the SMF, the UDM needs to store within the UDR related information, e.g. the SubscriptionId allocated by the SMF.

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

## 5.2.31A.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.31A.2-1.

**Table 5.2.31A.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: See pattern of type VarUeId in 3GPP TS 29.571 [3] |
| subsId  | Identifier of the subscription (allocated by the UDM)                                                                                                |

## 5.2.31A.3 Resource Standard Methods

### 5.2.31A.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.31A.3.1-1.

**Table 5.2.31A.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 5.2.31A.3.1-2 and the response data structures, and response codes specified in table 5.2.31A.3.1-3.

**Table 5.2.31A.3.1-2: Data structures supported by the PUT Request Body on this resource**

| Data type           | P | Cardinality | Description           |
|---------------------|---|-------------|-----------------------|
| SmfSubscriptionInfo | M | 1           | SMF subscription info |

**Table 5.2.31A.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 successful update of this resource, an empty response body shall be returned.                                                                                |
| SmfSubscriptionInfo | M | 1           | 201 Created    | Upon successful creation of this resource, a representation of the created resource containing the SmfSubscriptionInfo as allocated by the UDR shall be returned. |

NOTE: In addition, common data structures as listed in table 5.5-1 are supported.

### 5.2.31A.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.31A.3.2-1.

**Table 5.2.31A.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 5.2.31A.3.2-2 and the response data structures, and response codes specified in table 5.2.31A.3.2-3.

**Table 5.2.31A.3.2-2: Data structures supported by the DELETE Request Body on this resource**

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

**Table 5.2.31A.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. |   |             |                |                                                         |

### 5.2.31A.3.3 GET

This method shall support the URI query parameters specified in table 5.2.31A.3.3-1.

**Table 5.2.31A.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 5.2.31A.3.3-2 and the response data structures and response codes specified in table 5.2.31A.3.3-3.

**Table 5.2.31A.3.3-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.31A.3.3-3: Data structures supported by the GET Response Body on this resource**

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

### 5.2.31A.3.4 PATCH

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

This method shall support the URI query parameters specified in table 5.2.31A.3.4-1.

**Table 5.2.31A.3.4-1: URI query parameters supported by the PATCH 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 5.2.31A.3.2-2 and the response data structures, and response codes specified in table 5.2.31A.3.4-3.

**Table 5.2.31A.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 5.2.31A.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. (NOTE 2)                                                                                                                                                                                                                                                            |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                   |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                              | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                          |   |             |                |                                                                                                                                                                                                                                                                                                                                            |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                            |

## 5.2.31B Resource: HssSubscriptionInfo

### 5.2.31B.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 Nhss\_EventExposure\_Subscribe service operation to subscribe at the HSS (see 3GPP TS 29.562 [20]). After successful subscription at the HSS, the UDM needs to store within the UDR related information, e.g. the SubscriptionId allocated by the HSS.

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

### 5.2.31B.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.31B.2-1.

**Table 5.2.31B.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: See pattern of type VarUeId in 3GPP TS 29.571 [3] |
| subsId  | Identifier of the subscription (allocated by the UDM)                                                                                                |

### 5.2.31B.3 Resource Standard Methods

#### 5.2.31B.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.31B.3.1-1.

**Table 5.2.31B.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 5.2.31B.3.1-2 and the response data structures, and response codes specified in table 5.2.31B.3.1-3.

**Table 5.2.31B.3.1-2: Data structures supported by the PUT Request Body on this resource**

| Data type           | P | Cardinality | Description           |
|---------------------|---|-------------|-----------------------|
| HssSubscriptionInfo | M | 1           | HSS subscription info |

**Table 5.2.31B.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.                                                                                                           |
| HssSubscriptionInfo | M | 1           | 201 Created    | Upon successful creation of this resource, a representation of the created resource containing the HssSubscriptionInfo as allocated by the UDR shall be returned. |

NOTE: In addition, common data structures as listed in table 5.5-1 are supported.

### 5.2.31B.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.31B.3.2-1.

**Table 5.2.31B.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 5.2.31B.3.2-2 and the response data structures, and response codes specified in table 5.2.31B.3.2-3.

**Table 5.2.31B.3.2-2: Data structures supported by the DELETE Request Body on this resource**

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

**Table 5.2.31B.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.

### 5.2.31B.3.3 GET

This method shall support the URI query parameters specified in table 5.2.31B.3.3-1.

**Table 5.2.31B.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 5.2.31B.3.3-2 and the response data structures and response codes specified in table 5.2.31B.3.3-3.

**Table 5.2.31B.3.3-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.31B.3.3-3: Data structures supported by the GET Response Body on this resource**

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

## 5.2.31B.3.4 PATCH

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

This method shall support the URI query parameters specified in table 5.2.31B.3.4-1.

**Table 5.2.31B.3.4-1: URI query parameters supported by the PATCH 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 5.2.31B.3.2-2 and the response data structures, and response codes specified in table 5.2.31B.3.4-3.

**Table 5.2.31B.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 5.2.31B.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. (NOTE 2)                                                                                                                                                                                                                                                            |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                   |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                              | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                          |   |             |                |                                                                                                                                                                                                                                                                                                                                            |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                            |

## 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: See pattern of type VarUeId in 3GPP TS 29.571 [3] |

### 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. |

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 [8] clause 6.6                                                                                                                                                                      |
| ext-group-id       | ExtGroupId        | C | 0..1        | External Group ID                                                                                                                                                                                      |
| int-group-id       | GroupId           | C | 0..1        | Internal Group ID                                                                                                                                                                                      |
| ue-id-ind          | boolean           | C | 0..1        | Indication whether UE identifiers are required or not.<br><br>When present, it shall be set as following:<br>- true: UE identifiers are required<br>- false (default): UE identifiers are not required |

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.                                                                                                                                        |
| ProblemDetails   | O | 0..1        | 404 Not Found  | If the ueld does not exist, a response code of 404 Not Found shall be returned. The "cause" attribute may be used to indicate one of the following application errors:<br>- GROUP_IDENTIFIER_NOT_FOUND<br>- DATA_NOT_FOUND |

NOTE: In addition, common data structures as listed in table 5.5-1 are supported.

## 5.2.34 Resource: 5GVnGroups

### 5.2.34.1 Description

This resource represents the store of 5G VN Group data.

### 5.2.34.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/group-data/5g-vn-groups

This resource shall support the resource URI variables defined in table 5.2.34.2-1.

**Table 5.2.34.2-1: Resource URI variables for this resource**

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

### 5.2.34.3 Resource Standard Methods

#### 5.2.34.3.1 GET

This method shall support the URI query parameters specified in table 5.2.34.3.1-1.

**Table 5.2.34.3.1-1: URI query parameters supported by the GET method on this resource**

| Name  | Data type   | P | Cardinality | Description                                                                          |
|-------|-------------|---|-------------|--------------------------------------------------------------------------------------|
| gpsis | array(Gpsi) | O | 0..N        | Only those group's data are retrieved of which at least one of the GPSIs is a member |

This method shall support the request data structures specified in table 5.2.34.3.1-2 and the response data structures and response codes specified in table 5.2.34.3.1-3.

**Table 5.2.34.3.1-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.34.3.1-3: Data structures supported by the GET Response Body on this resource**

| Data type                                                                         | P | Cardinality | Response codes | Description                                                                                                                                                                    |
|-----------------------------------------------------------------------------------|---|-------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| map(5GVnGroupConfiguration)                                                       | M | 1           | 200 OK         | Upon success, a response body containing the map (list of key-value pairs where ExtGroupId (see 3GPP TS 29.503 [6] serves as key) of 5GVnGroupConfiguration shall be returned. |
| NOTE: In addition, common data structures as listed in table 5.5-1 are supported. |   |             |                |                                                                                                                                                                                |

## 5.2.35 Resource: Individual5GVnGroup

### 5.2.35.1 Description

This resource represents an individual 5G VN Group.

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

### 5.2.35.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/group-data/5g-vn-groups/{externalGroupId}

This resource shall support the resource URI variables defined in table 5.2.35.2-1.

**Table 5.2.35.2-1: Resource URI variables for this resource**

| Name            | Definition                                      |
|-----------------|-------------------------------------------------|
| apiRoot         | See 3GPP TS 29.504 [2] clause 6.1.1             |
| externalGroupId | Represents the External Identifier of the group |

### 5.2.35.3 Resource Standard Methods

#### 5.2.35.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.35.3.1-1.

**Table 5.2.35.3.1-1: 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 5.2.35.3.1-2 and the response data structures and response codes specified in table 5.2.35.3.1-3.

**Table 5.2.35.3.1-2: Data structures supported by the PUT Request Body on this resource**

| Data type              | P | Cardinality | Description            |
|------------------------|---|-------------|------------------------|
| 5GVnGroupConfiguration | M | 1           | See 3GPP TS 29.503 [6] |

**Table 5.2.35.3.1-3: Data structures supported by the PUT Response Body on this resource**

| Data type                                                                        | P | Cardinality | Response codes | Description                                                                                                                               |
|----------------------------------------------------------------------------------|---|-------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| 5GVnGroupConfiguration                                                           | M | 1           | 201 Created    | Upon success, a representation of the created resource containing an internal group identifier as allocated by the UDR shall be returned. |
| ProblemDetails                                                                   | O | 0..1        | 403 Forbidden  | If the resource already exists, a response code of 403 Forbidden shall be returned.                                                       |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. |   |             |                |                                                                                                                                           |

#### 5.2.35.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.35.3.2-1.

**Table 5.2.35.3.2-1: 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 5.2.35.3.2-2 and the response data structures and response codes specified in table 5.2.19.3.2-3.

**Table 5.2.35.3.2-2: Data structures supported by the DELETE Request Body on this resource**

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

**Table 5.2.35.3.2-3: 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. |   |             |                |                                                         |

## 5.2.35.3.3 PATCH

This method shall support the URI query parameters specified in table 5.2.35.3.3-1.

**Table 5.2.35.3.3-1: URI query parameters supported by the PATCH 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 5.2.35.3.3-2 and the response data structures and response codes specified in table 5.2.35.3.3-3.

**Table 5.2.35.3.3-2: 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 5GNvGroup |

**Table 5.2.35.3.3-3: 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. (NOTE 2)                                                                                                                                                                                                                                                          |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                  |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                              | O | 0..1        | 404 Not Found  | If the resource corresponding to the ExternalGroupId can't be found, the "cause" attribute shall be set to:<br>- GROUP_IDENTIFIER_NOT_FOUND                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                             | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1 |
| NOTE 1: In addition common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                          |   |             |                |                                                                                                                                                                                                                                                                                                                                           |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                           |

## 5.2.35.3.4 GET

This method shall support the URI query parameters specified in table 5.2.35.3.4-1.

**Table 5.2.35.3.4-1: 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 5.2.35.3.4-2 and the response data structures and response codes specified in table 5.2.35.3.4-3.

**Table 5.2.35.3.4-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.35.3.4-3: Data structures supported by the GET Response Body on this resource**

| Data type                                                                         | P | Cardinality | Response codes | Description                                                                                                       |
|-----------------------------------------------------------------------------------|---|-------------|----------------|-------------------------------------------------------------------------------------------------------------------|
| 5GVnGroupConfiguration                                                            | M | 1           | 200 OK         | Upon success, a response body containing the group configuration of the individual 5G VN Group shall be returned. |
| NOTE: In addition, common data structures as listed in table 5.5-1 are supported. |   |             |                |                                                                                                                   |

## 5.2.36 Resource: LcsPrivacySubscriptionData

### 5.2.36.1 Description

This resource represents the subscribed LcsPrivacySubscriptionData for an UE. It is queried by the HGMLC or NEF via the UDM.

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

### 5.2.36.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.36.2-1.

**Table 5.2.36.2-1: 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: See pattern of type VarUeId in 3GPP TS 29.571 [3]. |

### 5.2.36.3 Resource Standard Methods

#### 5.2.36.3.1 GET

This method shall support the URI query parameters specified in table 5.2.36.3.1-1.

**Table 5.2.36.3.1-1: 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 5.2.36.3.1-2 and the response data structures and response codes specified in table 5.2.36.3.1-3.

**Table 5.2.36.3.1-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.36.3.1-3: Data structures supported by the GET Response Body on this resource**

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

## 5.2.37 Resource: LcsMobileOriginatedSubscriptionData

### 5.2.37.1 Description

This resource represents the subscribed LcsMobileOriginatedSubscriptionData for a SUPI. 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]).

### 5.2.37.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.37.2-1.

**Table 5.2.37.2-1: 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)<br>See pattern of type VarUeId in 3GPP TS 29.571 [3] |

### 5.2.37.3 Resource Standard Methods

#### 5.2.37.3.1 GET

This method shall support the URI query parameters specified in table 5.2.37.3.1-1.

**Table 5.2.37.3.1-1: 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 5.2.37.3.1-2 and the response data structures and response codes specified in table 5.2.37.3.1-3.

**Table 5.2.37.3.1-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.37.3.1-3: Data structures supported by the GET Response Body on this resource**

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

## 5.2.38 Resource: NiddAuthorizationData

### 5.2.38.1 Description

This resource represents the subscribed NiddAuthorizationData for a GPSI. It is queried by the UDM during NIDD Authorization Data Retrieval and NIDD Authorization Data Update Notification.

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

### 5.2.38.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.38.2-1.

**Table 5.2.38.2-1: Resource URI variables for this resource**

| Name    | Definition                                                                                                                                                                 |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1                                                                                                                                        |
| ueId    | Represents the Generic Public Subscription Identifier (see 3GPP TS 23.501 [4] clause 5.9.8) pattern: '^(\msisdn-[0-9]{5,15}].[extid-[^@]+@[^@]+ extgroupid-[^@]+@[^@]+)\$' |

### 5.2.38.3 Resource Standard Methods

#### 5.2.38.3.1 GET

This method shall support the URI query parameters specified in table 5.2.38.3.1-1.

**Table 5.2.38.3.1-1: URI query parameters supported by the GET method on this resource**

| Name                                                                                                                          | Data type              | P | Cardinality | Description                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------|------------------------|---|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| single-nssai                                                                                                                  | Snssai                 | M | 1           | When present without Slice Differentiator (sd), all slices identified by the given Slice/Service Type (sst) and any sd value (if any) shall be considered matching the query parameter. |
| dnn                                                                                                                           | Dnn                    | M | 1           |                                                                                                                                                                                         |
| mtc-provider-information                                                                                                      | MtcProviderInformation | M | 1           |                                                                                                                                                                                         |
| af-id                                                                                                                         | string                 | O | 0..1        | When present, indicates the string identifying the originating AF.                                                                                                                      |
| NOTE: This attribute shall contain an empty string when no MTC Provider information is available to the UDR service consumer. |                        |   |             |                                                                                                                                                                                         |

This method shall support the request data structures specified in table 5.2.38.3.1-2 and the response data structures and response codes specified in table 5.2.38.3.1-3.

**Table 5.2.38.3.1-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.38.3.1-3: Data structures supported by the GET Response Body on this resource**

| Data type         | P | Cardinality | Response codes | Description                                                                                                                                                                                    |
|-------------------|---|-------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AuthorizationData | M | 1           | 200 OK         | Upon success, a response body containing the NIDD Authorization Data shall be returned.                                                                                                        |
| ProblemDetails    | O | 1           | 404 Not Found  | The "cause" attribute may be used to indicate one of the following application errors:<br>- USER_NOT_FOUND                                                                                     |
| ProblemDetails    | O | 0..1        | 403 Forbidden  | The "cause" attribute may be used to indicate one of the following application errors:<br>- DNN_NOT_ALLOWED<br>- MTC_PROVIDER_NOT_ALLOWED<br>- AF_INSTANCE_NOT_ALLOWED<br>- SNNSAI_NOT_ALLOWED |

NOTE: In addition, common data structures as listed in table 5.5-1 are supported.

## 5.2.39 Resource: CoverageRestrictionData

### 5.2.39.1 Description

This resource represents UE's subscribed enhanced Coverage Restriction Data for a UE identifier. It is queried by the UDM during Enhanced Coverage Restriction Data Retrieval.

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

### 5.2.39.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.39.2-1.

**Table 5.2.39.2-1: Resource URI variables for this resource**

| Name    | Definition                                                                                                                                               |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1                                                                                                                      |
| ueId    | Represents the Generic Public Subscription Identifier (see 3GPP TS 23.501 [4] clause 5.9.8)<br>pattern: '^(\msisdn-[0-9]{5,15}extid-[^@]+@[^@]+\.[.])\$' |

### 5.2.39.3 Resource Standard Methods

#### 5.2.39.3.1 GET

This method shall support the URI query parameters specified in table 5.2.39.3.1-1.

**Table 5.2.39.3.1-1: 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 5.2.39.3.1-2 and the response data structures and response codes specified in table 5.2.39.3.1-3.

**Table 5.2.39.3.1-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.39.3.1-3: Data structures supported by the GET Response Body on this resource**

| Data type                                                                         | P | Cardinality | Response codes | Description                                                                                  |
|-----------------------------------------------------------------------------------|---|-------------|----------------|----------------------------------------------------------------------------------------------|
| EnhancedCoverageRestrictionData                                                   | M | 1           | 200 OK         | Upon success, a response body containing UE's subscribed enhanced Coverage Restriction Data. |
| NOTE: In addition, common data structures as listed in table 5.5-1 are supported. |   |             |                |                                                                                              |

## 5.2.40 Resource: Location

### 5.2.40.1 Description

This resource represents the UE's Location Information for UE's identity (e.g. SUPI or GPSI).

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

### 5.2.40.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.40.2-1.

**Table 5.2.40.2-1: 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)<br>pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3] |

### 5.2.40.3 Resource Standard Methods

#### 5.2.40.3.1 GET

This method shall support the URI query parameters specified in table 5.2.40.3.1-1.

**Table 5.2.40.3.1-1: 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 5.2.40.3.1-2 and the response data structures and response codes specified in table 5.2.40.3.1-3.

**Table 5.2.40.3.1-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.40.3.1-3: Data structures supported by the GET Response Body on this resource**

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

## 5.2.41 Resource: V2xSubscriptionData

### 5.2.41.1 Description

This resource represents UE's subscribed V2X Data for a UE identifier. It is queried by the UDM during V2X Subscription Data Retrieval.

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

### 5.2.41.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/v2x-data

This resource shall support the resource URI variables defined in table 5.2.41.2-1.

**Table 5.2.41.2-1: Resource URI variables for this resource**

| Name    | Definition                                                                                                                                                                                                                                |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1                                                                                                                                                                                                       |
| ueId    | Represents the Subscription Permanent Identifier (see 3GPP TS 23.501 [4] clause 5.9.2) or the Generic Public Subscription Identifier (see 3GPP TS 23.501 [4] clause 5.9.8).<br>pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3] |

### 5.2.41.3 Resource Standard Methods

#### 5.2.41.3.1 GET

This method shall support the URI query parameters specified in table 5.2.41.3.1-1.

**Table 5.2.41.3.1-1: 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 5.2.41.3.1-2 and the response data structures and response codes specified in table 5.2.41.3.1-3.

**Table 5.2.41.3.1-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.41.3.1-3: Data structures supported by the GET Response Body on this resource**

| Data type                                                                         | P | Cardinality | Response codes | Description                                                        |
|-----------------------------------------------------------------------------------|---|-------------|----------------|--------------------------------------------------------------------|
| V2xSubscriptionData                                                               | M | 1           | 200 OK         | Upon success, a response body containing UE's subscribed V2X Data. |
| NOTE: In addition, common data structures as listed in table 5.5-1 are supported. |   |             |                |                                                                    |

## 5.2.41A Resource: ProSeSubscriptionData

### 5.2.41A.1 Description

This resource represents UE's subscribed ProSe Service Data for a UE identifier. It is queried by the UDM during ProSe Subscription Data Retrieval.

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

## 5.2.41A.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.41A.2-1.

**Table 5.2.41A.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 Permanent Identifier (see 3GPP TS 23.501 [4] clause 5.9.2) or the Generic Public Subscription Identifier (see 3GPP TS 23.501 [4] clause 5.9.8).<br>pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3] |

## 5.2.41A.3 Resource Standard Methods

### 5.2.41A.3.1 GET

This method shall support the URI query parameters specified in table 5.2.41A.3.1-1.

**Table 5.2.41A.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 5.2.41A.3.1-2 and the response data structures and response codes specified in table 5.2.41A.3.1-3.

**Table 5.2.41A.3.1-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.41A.3.1-3: Data structures supported by the GET Response Body on this resource**

| Data type             | P | Cardinality | Response codes | Description                                                                  |
|-----------------------|---|-------------|----------------|------------------------------------------------------------------------------|
| ProseSubscriptionData | M | 1           | 200 OK         | Upon success, a response body containing UE's subscribed ProSe Service Data. |

NOTE: In addition, common data structures as listed in table 5.5-1 are supported.

## 5.2.42 Resource: LcsBroadcastAssistanceSubscriptionData

### 5.2.42.1 Description

This resource represents the subscribed LcsBroadcast Assistance Subscription Data for an UE for use in a serving PLMN. It is queried by the LMF via the UDM.

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

### 5.2.42.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.42.2-1.

**Table 5.2.42.2-1: Resource URI variables for this resource**

| Name          | Definition                                                                                                                                               |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| apiRoot       | See 3GPP TS 29.504 [2] clause 6.1.1                                                                                                                      |
| ueld          | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2 and 5.9.8)<br>See pattern of type VarUeld in 3GPP TS 29.571 [3] |
| servingPlmnId | Represents the Serving PLMN ID (<MCC><MNC>)<br>pattern: "[0-9]{5,6}\$"                                                                                   |

### 5.2.42.3 Resource Standard Methods

#### 5.2.42.3.1 GET

This method shall support the URI query parameters specified in table 5.2.42.3.1-1.

**Table 5.2.42.3.1-1: 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 5.2.42.3.1-2 and the response data structures and response codes specified in table 5.2.42.3.1-3.

**Table 5.2.42.3.1-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.42.3.1-3: Data structures supported by the GET Response Body on this resource**

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

### 5.2.43 Resource: 5GVnGroupsInternal

#### 5.2.43.1 Description

This resource represents a read-only view of the collection resource of 5G VN Group data, so it can be queried based on the Internal Group Id from NF Service Consumers having such Id as the only way to identify a group (e.g. PCF).

#### 5.2.43.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/group-data/5g-vn-groups/internal

This resource shall support the resource URI variables defined in table 5.2.43.2-1.

**Table 5.2.43.2-1: Resource URI variables for this resource**

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

### 5.2.43.3 Resource Standard Methods

#### 5.2.43.3.1 GET

This method shall support the URI query parameters specified in table 5.2.43.3.1-1.

**Table 5.2.43.3.1-1: URI query parameters supported by the GET method on this resource**

| Name               | Data type      | P | Cardinality | Description                                                                                           |
|--------------------|----------------|---|-------------|-------------------------------------------------------------------------------------------------------|
| internal-group-ids | array(GroupId) | M | 1..N        | Return those 5G VN groups whose Internal Group ID corresponds with any of the Group IDs in this list. |

This method shall support the request data structures specified in table 5.2.43.3.1-2 and the response data structures and response codes specified in table 5.2.43.3.1-3.

**Table 5.2.43.3.1-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.43.3.1-3: Data structures supported by the GET Response Body on this resource**

| Data type                   | P | Cardinality | Response codes | Description                                                                                                                                                                    |
|-----------------------------|---|-------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| map(5GVnGroupConfiguration) | M | 0..N        | 200 OK         | Upon success, a response body containing the map (list of key-value pairs where ExtGroupId (see 3GPP TS 29.503 [6] serves as key) of 5GVnGroupConfiguration shall be returned. |

## 5.2.44 Resource: Pp5gVnGroupProfileData

### 5.2.44.1 Description

This resource represents the Parameter Provision Profile Data for the 5G VN Groups. It is queried by the UDM.

### 5.2.44.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/group-data/5g-vn-groups/pp-profile-data

This resource shall support the resource URI variables defined in table 5.2.44.2-1.

**Table 5.2.44.2-1: Resource URI variables for this resource**

| Name    | Definition       |
|---------|------------------|
| apiRoot | See clause 6.1.1 |

### 5.2.44.3 Resource Standard Methods

#### 5.2.44.3.1 GET

This method shall support the URI query parameters specified in table 5.2.44.3.1-1.

**Table 5.2.44.3.1-1: URI query parameters supported by the GET method on this resource**

| Name               | Data type         | P | Cardinality | Description                                                                                                |
|--------------------|-------------------|---|-------------|------------------------------------------------------------------------------------------------------------|
| ext-group-ids      | array(ExtGroupId) | O | 1..N        | If included, this IE Contain a list of external VN group identifiers for which the profiles are 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 5.2.44.3.1-2 and the response data structures and response codes specified in table 5.2.44.3.1-3.

**Table 5.2.44.3.1-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.44.3.1-3: Data structures supported by the GET Response Body on this resource**

| Data type                                                                         | P | Cardinality | Response codes | Description                                                                                |
|-----------------------------------------------------------------------------------|---|-------------|----------------|--------------------------------------------------------------------------------------------|
| Pp5gVnGroupProfileData                                                            | M | 1           | 200 OK         | Upon success, a response body containing the Parameter Provision Profile for 5G VN Groups. |
| NOTE: In addition, common data structures as listed in table 5.5-1 are supported. |   |             |                |                                                                                            |

## 5.2.45 Resource: NiddAuthorizations

### 5.2.45.1 Description

This resource represents information relevant to NIDD authorizations. After successful NIDD authorization, the UDM needs to store within the UDR related information (e.g. authUpdateCallbackUri), so that it is possible to notify the UDM consumer later on if something has changed affecting these authorizations.

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

### 5.2.45.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.45.2-1.

**Table 5.2.45.2-1: 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: See pattern of type VarUeId in 3GPP TS 29.571 [3] |

### 5.2.45.3 Resource Standard Methods

#### 5.2.45.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.45.3.1-1.

**Table 5.2.45.3.1-1: 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 5.2.45.3.1-2 and the response data structure, and response codes specified in table 5.2.45.3.1-3.

**Table 5.2.45.3.1-2: Data structures supported by the PUT Request Body on this resource**

| Data type             | P | Cardinality | Description             |
|-----------------------|---|-------------|-------------------------|
| NiddAuthorizationInfo | M | 1           | NIDD Authorization Data |

**Table 5.2.45.3.1-3: Data structures supported by the PUT Response Body on this resource**

| Data type                                                                         | P | Cardinality | Response codes | Description                                                                                                                                                                     |
|-----------------------------------------------------------------------------------|---|-------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| n/a                                                                               |   |             | 204 No Content | Upon successful update of this resource, an empty response body shall be returned.                                                                                              |
| NiddAuthorizationInfo                                                             | M | 1           | 201 Created    | Upon successful creation of this resource, a representation of the created resource containing an array of the NiddAuthorizationData as allocated by the UDR shall be returned. |
| NOTE: In addition, common data structures as listed in table 5.5-1 are supported. |   |             |                |                                                                                                                                                                                 |

### 5.2.45.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.45.3.2-1.

**Table 5.2.45.3.2-1: 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 5.2.45.3.2-2 and the response data structure, and response codes specified in table 5.2.45.3.2-3.

**Table 5.2.45.3.2-2: Data structures supported by the DELETE Request Body on this resource**

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

**Table 5.2.45.3.2-3: 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. |   |             |                |                                                         |

### 5.2.45.3.3 GET

This method shall support the URI query parameters specified in table 5.2.45.3.3-1.

**Table 5.2.45.3.3-1: 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 5.2.45.3.3-2 and the response data structure and response codes specified in table 5.2.45.3.3-3.

**Table 5.2.45.3.3-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.45.3.3-3: Data structures supported by the GET Response Body on this resource**

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

#### 5.2.45.3.4 PATCH

This method is used to modify the NIDD active authorizations in the UDR.

This method shall support the URI query parameters specified in table 5.2.45.3.4-1.

**Table 5.2.45.3.4-1: URI query parameters supported by the PATCH 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 5.2.45.3.2-2 and the response data structures, and response codes specified in table 5.2.45.3.4-3.

**Table 5.2.45.3.4-2: 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 5.2.45.3.4-3: 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. (NOTE 2)                                                                                                                                                                                                                                                            |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                   |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                              | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition common data structures as listed in table 5.5-1 are supported.                                                                                                                                                                                                                                                                                                          |   |             |                |                                                                                                                                                                                                                                                                                                                                            |
| NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                            |

## 5.2.46 Resource: 5MBSSubscriptionData

### 5.2.46.1 Description

This resource represents the subscribed 5MBS Data for a UE. SMF queries this data from UDM.

## 5.2.46.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/5mbs-data

This resource shall support the resource URI variables defined in table 5.2.46.2-1.

**Table 5.2.46.2-1: Resource URI variables for this resource**

| Name    | Definition                                                                                                                                    |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1                                                                                                           |
| ueId    | Represents the Subscription Identifier SUP-I (see 3GPP TS 23.501 [4] clause 5.9.2)<br>pattern: See pattern of type VarUeId 3GPP TS 29.571 [3] |

## 5.2.46.3 Resource Standard Methods

### 5.2.46.3.1 GET

This method shall support the URI query parameters specified in table 5.2.46.3.1-1.

**Table 5.2.46.3.1-1: 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 5.2.46.3.1-2 and the response data structures and response codes specified in table 5.2.46.3.1-3.

**Table 5.2.46.3.1-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.46.3.1-3: Data structures supported by the POST Response Body on this resource**

| Data type                                                                        | P | Cardinality | Response codes | Description                                                                            |
|----------------------------------------------------------------------------------|---|-------------|----------------|----------------------------------------------------------------------------------------|
| MbsSubscriptionData                                                              | M | 1           | 200 OK         | Upon success, a response body containing the 5MBS Subscription Data shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. |   |             |                |                                                                                        |

## 5.2.47 Resource: UeSubscriptionData

### 5.2.47.1 Description

This resource represents the subscription data for a UE ID.

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

### 5.2.47.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.47.2-1.

**Table 5.2.47.2-1: Resource URI variables for this resource**

| Name    | Definition                                                                                                                                           |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1                                                                                                                  |
| ueld    | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeld in 3GPP TS 29.571 [3] |

## 5.2.47.3 Resource Standard Methods

### 5.2.47.3.1 GET

When the NF service consumer (e.g. UDM) and the UDR both support the UESubDataSetRetrieve feature (see clause 6.1.8 of 3GPP TS 29.504 [2]), then NF service consumer may send a GET method towards the UE subscription data resource URI (.../subscription-data/{ueId}) to retrieve the UE subscription data sets.

This method shall support the URI query parameters specified in table 5.2.47.3.1-1.

**Table 5.2.47.3.1-1: URI query parameters supported by the GET method on this resource**

| Name          | Data type          | P | Cardinality | Description                                                                                                                                                                                                       |
|---------------|--------------------|---|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dataset-names | array(DataSetName) | M | 1..N        | This IE shall contain the names of data sets to the retrieved.                                                                                                                                                    |
| serving-plmn  | PlmnId             | C | 0..1        | This IE shall be present when at least one of the following serving PLMN specific data sets are indicated in the dataset-names IE:<br>- AM<br>- SMF_SEL<br>- SMS_SUB<br>- SM<br>- TRACE<br>- SMS_MNG<br>- LCS_BCA |

This method shall support the request data structures specified in table 5.2.47.3.1-2 and the response data structures and response codes specified in table 5.2.47.3.1-3.

**Table 5.2.47.3.1-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.47.3.1-3: Data structures supported by the GET Response Body on this resource**

| Data type                                                                        | P | Cardinality | Response codes | Description                                                                         |
|----------------------------------------------------------------------------------|---|-------------|----------------|-------------------------------------------------------------------------------------|
| UeSubscribedDataSets                                                             | 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. |   |             |                |                                                                                     |

## 5.2.48 Resource: ServiceSpecificAuthorizationData

### 5.2.48.1 Description

This resource represents a GPSI's subscribed AuthorizationData for a specific service. It is queried by the UDM during Authorization Data Retrieval for a specific service and Service Specific Authorization Data Update Notification.

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

## 5.2.48.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.48.2-1.

**Table 5.2.48.2-1: Resource URI variables for this resource**

| Name        | Definition                                                                                                                                                                     |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| apiRoot     | See 3GPP TS 29.504 [2] clause 6.1.1                                                                                                                                            |
| ueId        | Represents the Generic Public Subscription Identifier (see 3GPP TS 23.501 [4] clause 5.9.8)<br>pattern: '^(\msisdn-[0-9]{5,15}).+ extid-[^@]+@[^@]+ extgroupid-[^@]+@[^@]+)\$' |
| serviceType | In this release the only defined Service Type is "AF_GUIDANCE_FOR_URSP"                                                                                                        |

## 5.2.48.3 Resource Standard Methods

### 5.2.48.3.1 GET

This method shall support the URI query parameters specified in table 5.2.48.3.1-1.

**Table 5.2.48.3.1-1: URI query parameters supported by the GET method on this resource**

| Name                     | Data type              | P | Cardinality | Description                                                                                                                                                                             |
|--------------------------|------------------------|---|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| single-nssai             | Snssai                 | O | 0..1        | When present without Slice Differentiator (sd), all slices identified by the given Slice/Service Type (sst) and any sd value (if any) shall be considered matching the query parameter. |
| dnn                      | Dnn                    | O | 0..1        |                                                                                                                                                                                         |
| mtc-provider-information | MtcProviderInformation | O | 0..1        |                                                                                                                                                                                         |
| af-id                    | string                 | O | 0..1        | When present, indicates the string identifying the originating AF.                                                                                                                      |

This method shall support the request data structures specified in table 5.2.48.3.1-2 and the response data structures and response codes specified in table 5.2.48.3.1-3.

**Table 5.2.48.3.1-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.48.3.1-3: Data structures supported by the GET Response Body on this resource**

| Data type         | P | Cardinality | Response codes | Description                                                                                                                                                                                    |
|-------------------|---|-------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AuthorizationData | M | 1           | 200 OK         | Upon success, a response body containing the Authorization Data shall be returned.                                                                                                             |
| ProblemDetails    | O | 1           | 404 Not Found  | The "cause" attribute may be used to indicate one of the following application errors:<br>- USER_NOT_FOUND<br>- DATA_NOT_FOUND                                                                 |
| ProblemDetails    | O | 0..1        | 403 Forbidden  | The "cause" attribute may be used to indicate one of the following application errors:<br>- DNN_NOT_ALLOWED<br>- MTC_PROVIDER_NOT_ALLOWED<br>- AF_INSTANCE_NOT_ALLOWED<br>- SNSSAI_NOT_ALLOWED |

NOTE: In addition, common data structures as listed in table 5.5-1 are supported.

## 5.2.49 Resource: SpecificServiceAuthorizations

### 5.2.49.1 Description

This resource represents information relevant to authorizations for specific services. After successful authorization, the UDM needs to store within the UDR related information (e.g. authUpdateCallbackUri), so that it is possible to notify the UDM consumer later on if something has changed affecting these authorizations.

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

### 5.2.49.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.49.2-1.

**Table 5.2.49.2-1: 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)<br>pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3] |
| serviceType | In this release the only defined Service Type is "AF_GUIDANCE_FOR_URSP"                                                                                 |

### 5.2.49.3 Resource Standard Methods

#### 5.2.49.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.49.3.1-1.

**Table 5.2.49.3.1-1: 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 5.2.49.3.1-2 and the response data structure, and response codes specified in table 5.2.49.3.1-3.

**Table 5.2.49.3.1-2: Data structures supported by the PUT Request Body on this resource**

| Data type                        | P | Cardinality | Description                         |
|----------------------------------|---|-------------|-------------------------------------|
| ServiceSpecificAuthorizationInfo | M | 1           | Specific Service Authorization Data |

**Table 5.2.49.3.1-3: Data structures supported by the PUT Response Body on this resource**

| Data type                        | P | Cardinality | Response codes | Description                                                                                                                                                                                          |
|----------------------------------|---|-------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| n/a                              |   |             | 204 No Content | Upon successful update of this resource, an empty response body shall be returned.                                                                                                                   |
| ServiceSpecificAuthorizationInfo | M | 1           | 201 Created    | Upon successful creation of this resource, a representation of the created resource containing an array of the AuthorizationData for the specific service as allocated by the UDR shall be returned. |

NOTE: In addition, common data structures as listed in table 5.5-1 are supported.

## 5.2.49.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.49.3.2-1.

**Table 5.2.49.3.2-1: 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 5.2.49.3.2-2 and the response data structure, and response codes specified in table 5.2.49.3.2-3.

**Table 5.2.49.3.2-2: Data structures supported by the DELETE Request Body on this resource**

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

**Table 5.2.49.3.2-3: 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. |   |             |                |                                                         |

## 5.2.49.3.3 GET

This method shall support the URI query parameters specified in table 5.2.49.3.3-1.

**Table 5.2.49.3.3-1: 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 5.2.49.3.3-2 and the response data structure and response codes specified in table 5.2.49.3.3-3.

**Table 5.2.49.3.3-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.49.3.3-3: Data structures supported by the GET Response Body on this resource**

| Data type                                                                                                   | P | Cardinality | Response codes | Description                                                                                                 |
|-------------------------------------------------------------------------------------------------------------|---|-------------|----------------|-------------------------------------------------------------------------------------------------------------|
| ServiceSpecificAuthorizationInfo                                                                            | M | 1           | 200 OK         | Upon success, a response body containing the authorization info for the specific service shall be returned. |
| NOTE: In addition, common data structures as listed in table 5.2.7.1-1 of 3GPP TS 29.500 [8] are supported. |   |             |                |                                                                                                             |

## 5.2.49.3.4 PATCH

This method is used to modify the Service Specific active authorizations in the UDR.

This method shall support the URI query parameters specified in table 5.2.49.3.4-1.

**Table 5.2.49.3.4-1: URI query parameters supported by the PATCH 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 5.2.49.3.2-2 and the response data structures, and response codes specified in table 5.2.49.3.4-3.

**Table 5.2.49.3.4-2: 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 5.2.49.3.4-3: 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. (NOTE 2)                                                                                                                                                                                                                                                            |
| PatchResult                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | M | 1           | 200 OK         | Upon success, the execution report is returned. (NOTE 2)                                                                                                                                                                                                                                                                                   |
| ProblemDetails                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | O | 0..1        | 403 Forbidden  | If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1. |
| NOTE 1: In addition common data structures as listed in table 5.2.7.1-1 of 3GPP TS 29.500 [8] are supported.<br>NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult. |   |             |                |                                                                                                                                                                                                                                                                                                                                            |

## 5.2.50 Resource: RoamingInfo

### 5.2.50.1 Description

This resource is used to represent the Roaming information in the EPC domain 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]).

### 5.2.50.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.50.2-1.

**Table 5.2.50.2-1: 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: See pattern of type VarUeId 3GPP TS 29.571 [3] |

### 5.2.50.3 Resource Standard Methods

#### 5.2.50.3.1 POST

This method shall support the URI query parameters specified in table 5.2.50.3.1-1.

**Table 5.2.50.3.1-1: 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 5.2.50.3.1-2 and the response data structures and response codes specified in table 5.2.50.3.1-3.

**Table 5.2.50.3.1-2: Data structures supported by the POST Request Body on this resource**

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

**Table 5.2.50.3.1-3: Data structures supported by the POST 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                                                                                            |
| RoamingInfo                                                                      | M | 1           | 201 Created    | Upon success, a response body containing a representation of the resource of the created Roaming Information in the EPC domain shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. |   |             |                |                                                                                                                                                   |

### 5.2.50.3.2 GET

This method shall support the URI query parameters specified in table 5.2.50.3.2-1.

**Table 5.2.50.3.2-1: 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 5.2.50.3.2-2 and the response data structures and response codes specified in table 5.2.50.3.2-3.

**Table 5.2.50.3.2-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.50.3.2-3: Data structures supported by the GET Response Body on this resource**

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

## 5.2.51 Resource: UserConsentData

### 5.2.51.1 Description

This resource represents UE's subscribed User Consent Data for a UE identifier. It is queried by the UDM during User Consent Data Retrieval.

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

### 5.2.51.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 5.2.51.2-1.

**Table 5.2.51.2-1: Resource URI variables for this resource**

| Name    | Definition                                                                                                                                            |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1                                                                                                                   |
| ueId    | Represents the Subscription Permanent Identifier (see 3GPP TS 23.501 [4] clause 5.9.2).<br>pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3] |

### 5.2.51.3 Resource Standard Methods

#### 5.2.51.3.1 GET

This method shall support the URI query parameters specified in table 5.2.51.3.1-1.

**Table 5.2.51.3.1-1: 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                                                                    |
| uc-purpose         | UcPurpose         | O | 0..1        | Represents the user consent purpose.<br>pattern: See pattern of type UcPurpose in 3GPP TS 29.503 [6] |

This method shall support the request data structures specified in table 5.2.51.3.1-2 and the response data structures and response codes specified in table 5.2.51.3.1-3.

**Table 5.2.51.3.1-2: Data structures supported by the GET Request Body on this resource**

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

**Table 5.2.51.3.1-3: Data structures supported by the GET Response Body on this resource**

| Data type                                                                         | P | Cardinality | Response codes | Description                                                                 |
|-----------------------------------------------------------------------------------|---|-------------|----------------|-----------------------------------------------------------------------------|
| UcSubscriptionData                                                                | M | 1           | 200 OK         | Upon success, a response body containing UE's subscribed User Consent Data. |
| 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.
- If the UDM uses implicit subscriptions to receive notifications from UDR, the UDM shall register in NRF a default notification URI globally at NF Profile level (see 3GPP TS 29.510 [19], clause 6.1.6.2.2), rather than registering individual default notification URIs per NF Service.

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: 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           |             |

**Table 5.3.2-3: 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. |

The structure of the Notifications from changes on the explicitly subscribed resources (i.e. the resource indicated by the MonitoredResourceUri) or implicitly subscribed resources of type Collection or Store, are described in Table 5.3.2-4.

NOTE: Table 5.3.2-4 follows the considerations for handling JSON arrays described in 3GPP TS 29.501 Annex E.

**Table 5.3.2-4: The structure of the Notifications of type Collection or Store**

| Subscribed Resource name                   | DataChangeNotify Content Type        | Description                                                                                                                   |
|--------------------------------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| SmfRegistrations (Store)                   | SmfRegList                           | The complete replacement array representation of the SmfRegList shall be included in the DataChangeNotify.                    |
| ProvisionedParameterDataEntries (Store)    | PpDataEntryList                      | The complete replacement array representation of the PpDataEntryList shall be included in the DataChangeNotify.               |
| SubscriptionDataSubscriptions (Collection) | array(SubscriptionDataSubscriptions) | The complete replacement array representation of the SubscriptionDataSubscriptions shall be included in the DataChangeNotify. |
| 5GVnGroups (Store)                         | map(5GVnGroupConfiguration)          | The complete map representation shall be included in the DataChangeNotify.                                                    |

### 5.3.3 Data Removal Notification

The POST method shall be used for Data Removal Notifications.

Data Removal Notifications are used for subscription withdraw cases implicitly subscribed by the UDM.

- 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.

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.

Resource URI: {callbackReference}

Support of URI query parameters is specified in table 5.3.3-1.

**Table 5.3.3-1: 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 5.3.3-2 and of response data structures and response codes is specified in table 5.3.3-3.

**Table 5.3.3-2: Data structures supported by the POST Request Body**

| Data type        | P | Cardinality | Description                                                                                                                                         |
|------------------|---|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| DataChangeNotify | M | 1           | notifyItems within the DataChangeNotify type shall indicate deletion of the resources Amf3GppAccessRegistration and/or AmfNon3GppAccessRegistration |

**Table 5.3.3-3: 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 ueld                                             |
| ProvisionedDataSets              | 5.4.2.8        | Contains the provisioned data sets                                                         |
| 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                                     |
| NssaiAckData                     | 5.4.2.9B       | Used to store the status of the latest NSSAI data update                                   |
| CagAckData                       | 5.4.2.9C       | Used to store the status of the latest CAG 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       | Contains the context data sets                                                             |
| SequenceNumber                   | 5.4.2.23       | Contains the SQN                                                                           |
| MessageWaitingData               | 5.4.2.24       | Message Waiting Data list                                                                  |
| SmscData                         | 5.4.2.25       | Addresses of SM-Service Center entities with SMS waiting to be delivered to the UE         |
| SmfSubscriptionInfo              | 5.4.2.26       | Information the UDR stores and retrieves related to active subscriptions at the SMF(s)     |
| SmfSubscriptionItem              | 5.4.2.27       | Contains info about a single SMF event subscription                                        |
| MtcProvider                      | 5.4.2.28       | MTC provider information                                                                   |
| HssSubscriptionInfo              | 5.4.2.29       | Information the UDR stores related to active subscriptions at the HSS(s)                   |
| HssSubscriptionItem              | 5.4.2.30       | Contains info about a single HSS event subscription                                        |
| EeGroupProfileData               | 5.4.2.31       | The Event Exposure Profile Data for a group of UEs                                         |
| Pp5gVnGroupProfileData           | 5.4.2.32       | The Parameter Provision Profile Data for 5G VN groups                                      |
| PpProfileData                    | 5.4.2.33       | The Parameter Provision Profile Data                                                       |
| AllowedMtcProviderInfo           | 5.4.2.34       | Allowed MTC Providers or AFs Information to provision parameters for UE.                   |
| GroupIdentifiers                 | 5.4.2.35       | External or Internal Group Identifier with a list of group members                         |
| AuthorizationData                | 5.4.2.36       | Authorization Information                                                                  |
| NiddAuthorizationInfo            | 5.4.2.37       | Information the UDR stores and retrieves related to active NIDD authorizations             |
| PpDataEntryList                  | 5.4.2.38       | A list of the Provisioned Parameters entries.                                              |
| UeSubscribedDataSets             | 5.4.2.39       | Contains the subscribed data sets of a UE                                                  |
| ServiceSpecificAuthorizationInfo | 5.4.2.40       | Information the UDR stores and retrieves related to active Service Specific authorizations |
| NfIdentifier                     | 5.4.2.41       | Network Function Identifier                                                                |
| EeSubscriptionExt                | 5.4.2.42       | Extended Event Exposure Subscription                                                       |
| AdditionalEeSubsInfo             | 5.4.2.43       | Additional EE-Subscription Information                                                     |
| VarPlmnId                        | 5.4.3.2        | String identifying a PLMN ID or an SNPN ID.                                                |
| AuthMethod                       | 5.4.3.3        | Contains the Authentication Method                                                         |
| DataSetName                      | 5.4.3.4        | The name of data set                                                                       |
| ContextDataSetName               | 5.4.3.6        | The name of context data set                                                               |
| SqnScheme                        | 5.4.3.7        | Scheme for generation of Sequence Numbers                                                  |
| Sign                             | 5.4.3.8        | Sign of the DIF value                                                                      |
| UeUpdateStatus                   | 5.4.3.9        | Status of the procedure                                                                    |
| PpDataType                       | 5.4.3.10       | The data type of the Provisioned Parameters                                                |

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

| Data type                         | Reference           | Comments                                                                                             |
|-----------------------------------|---------------------|------------------------------------------------------------------------------------------------------|
| AccessAndMobilitySubscriptionData | 3GPP TS 29.503 [6]  | Access and Mobility Subscription Data                                                                |
| SmfSelectionSubscriptionData      | 3GPP TS 29.503 [6]  | SMF Selection Subscription Data                                                                      |
| SmSubsData                        | 3GPP TS 29.503 [6]  | Session Management Subscription Data                                                                 |
| Amf3GppAccessRegistration         | 3GPP TS 29.503 [6]  | The complete set of information relevant to the AMF where the UE has registered via 3GPP access.     |
| 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]  | The complete set of information relevant to an SMF serving the UE                                    |
| SmsfRegistration                  | 3GPP TS 29.503 [6]  | The complete set of information relevant to the SMSF serving the UE.                                 |
| SmsManagementSubscriptionData     | 3GPP TS 29.503 [6]  | SMS Management Subscription Data                                                                     |
| SupportedFeatures                 | 3GPP TS 29.571 [3]  | Used to negotiate the applicability of the optional features                                         |
| ProblemDetails                    | 3GPP TS 29.571 [3]  | Detailed information about the status code.                                                          |
| PpData                            | 3GPP TS 29.503 [6]  | Parameter Provision Data                                                                             |
| PpDataEntry                       | 3GPP TS 29.503 [6]  | Provisioned Parameter Data Entry                                                                     |
| SmsSubscriptionData               | 3GPP TS 29.503 [6]  | SMS Subscription Data                                                                                |
| PatchItem                         | 3GPP TS 29.571 [3]  | Data structure used for JSON patch.                                                                  |
| SdmSubscription                   | 3GPP TS 29.503 [6]  | A subscription to notifications                                                                      |
| EeSubscription                    | 3GPP TS 29.503 [6]  | A subscription to Notifications of event exposure                                                    |
| Uri                               | 3GPP TS 29.571 [3]  | URI                                                                                                  |
| TraceData                         | 3GPP TS 29.571 [3]  | Trace Data                                                                                           |
| Dnn                               | 3GPP TS 29.571 [3]  | Data Network Name                                                                                    |
| Snssai                            | 3GPP TS 29.571 [3]  | Single NSSAI                                                                                         |
| VarUeld                           | 3GPP TS 29.571 [3]  | String represents the SUPI or GPSI.                                                                  |
| NfInstanceId                      | 3GPP TS 29.571 [3]  | NF Instance Identifier                                                                               |
| NotifyItem                        | 3GPP TS 29.571 [3]  | Common data type used for data change notification.                                                  |
| OdbData                           | 3GPP TS 29.571 [3]  | Operator Determined Barring Data                                                                     |
| EventType                         | 3GPP TS 29.503 [6]  | Event Type                                                                                           |
| ExtGroupId                        | 3GPP TS 29.503 [6]  | External Group Identifier                                                                            |
| PduSessionId                      | 3GPP TS 29.571 [3]  | PDU Session ID which identifies a PDU session                                                        |
| DateTime                          | 3GPP TS 29.571 [3]  | Date Time                                                                                            |
| UpuMac                            | 3GPP TS 29.509 [15] | MAC value for protecting UPU procedure (UPU-MAC-I <sub>AUSF</sub> and UPU-MAC-I <sub>UE</sub> )      |
| 5GVnGroupConfiguration            | 3GPP TS 29.503 [6]  | 5G VN Group Configuration data                                                                       |
| PatchResult                       | 3GPP TS 29.571 [3]  | Patch Result                                                                                         |
| SupportedFeatures                 | 3GPP TS 29.571 [3]  | Supported Features                                                                                   |
| AppPortId                         | 3GPP TS 29.503 [6]  | Application Port Identifier                                                                          |
| LcsPrivacyData                    | 3GPP TS 29.503 [6]  | LCS Privacy Subscription Data                                                                        |
| LcsMoData                         | 3GPP TS 29.503 [6]  | LCS Mobile Originated Subscription Data                                                              |
| MtcProviderInformation            | 3GPP TS 29.571 [3]  | An ID uniquely identifying MTC provider information                                                  |
| EnhancedCoverageRestrictionData   | 3GPP TS 29.503 [6]  | Enhanced Coverage Restriction Data                                                                   |
| LocationInfo                      | 3GPP TS 29.503 [6]  | Location Information                                                                                 |
| V2xSubscriptionData               | 3GPP TS 29.503 [6]  | V2X Subscription Data                                                                                |
| E164Number                        | 3GPP TS 29.503 [6]  | E164Number                                                                                           |
| NetworkNodeDiameterAddress        | 3GPP TS 29.503 [6]  | Diameter Address of an Network Node                                                                  |

|                                 |                    |                                                                                       |
|---------------------------------|--------------------|---------------------------------------------------------------------------------------|
| IpSmGwRegistration              | 3GPP TS 29.503 [6] | The complete set of information relevant to the IP-SM-GW where the UE has registered. |
| LcsBroadcastAssistanceTypesData | 3GPP TS 29.503 [6] | LCS Broadcast Assistance Data Types                                                   |
| ContextInfo                     | 3GPP TS 29.503 [6] | Contains the headers received by an NF.                                               |
| NfGroupId                       | 3GPP TS 29.571 [3] | NF Group ID                                                                           |
| ProseSubscriptionData           | 3GPP TS 29.503 [6] | ProSe Service Subscription Data                                                       |
| PlmnId                          | 3GPP TS 29.571 [3] | PLMN ID                                                                               |
| AppPortId                       | 3GPP TS 29.503 [6] | Application Port Id                                                                   |
| AuthorizationInfo               | 3GPP TS 29.503 [6] | Contains Authorization Information                                                    |
| MbsSubscriptionData             | 3GPP TS 29.503 [6] | Contains 5MBS Subscription Data                                                       |
| ServiceType                     | 3GPP TS 29.503 [6] | Service Type                                                                          |
| RoamingInfoUpdate               | 3GPP TS 29.503 [6] | Roaming Information in EPC domain                                                     |
| UcSubscriptionData              | 3GPP TS 29.503 [6] | User Consent Data                                                                     |
| UcPurpose                       | 3GPP TS 29.503 [6] | User Consent Purpose                                                                  |

## 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"... ) that shall be used when the UE's device is 5G capable.<br><br>If AV generation for HSS is required in UDM, this attribute shall take any 5G AKA-based value (i.e. "5G_AKA" or "EAP_AKA_PRIME").                                                                  |
| 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" unless vector generation is to be done in the HSS.                                                                                                                    |
| protectionParameterId         | string         | C | 0..1        | Identifies a parameter set securely stored in the UDM (ARPF) that can be used to decrypt the encPermanentKey (and encOpckKey or encTopckKey if present). Values and their meaning are HPLMN-operator specific.<br>It shall be present if the authentication method is "5G_AKA" or "EAP_AKA_PRIME" unless vector generation is to be done in the HSS.    |
| sequenceNumber                | SequenceNumber | C | 0..1        | String containing the SQN as defined in 3GPP TS 33.102 [10].<br>It shall be present if the authentication method is "5G_AKA" or "EAP_AKA_PRIME" unless vector generation is to be done in the HSS.                                                                                                                                                      |
| authenticationManagementField | string         | C | 0..1        | Hexstring containing the Authentication management field as defined in 3GPP TS 33.501 [9].<br>It shall be present if the authentication method is "5G_AKA" or "EAP_AKA_PRIME" unless vector generation is to be done in the HSS.<br>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.<br>It shall be present if the authentication method is "5G_AKA" or "EAP_AKA_PRIME" unless vector generation is to be done in the HSS. |
| encOpckKey                    | string         | O | 0..1        | Hexstring of the encrypted OPC Key.<br>Presence indicates that the provided value (decrypted) shall be used instead of the value derived from OP and K.                                                                                                                                                                                                 |
| encTopckKey                   | string         | O | 0..1        | Hexstring of the encrypted TOPC Key.<br>Presence indicates that the provided value (decrypted) shall be used instead of the value derived from TOP and K.                                                                                                                                                                                               |
| hssGroupId                    | NfGroupId      | O | 0..1        | Identity of the HSS group associated with the subscription that might be used by the UDM to discover the HSS; see 3GPP TS 29.510 [19].<br>This attribute may be present if the vectorGenerationInHss attribute is present and set to True.                                                                                                              |
| vectorGenerationInHss         | boolean        | O | 0..1        | True indicates that the UDM needs to retrieve an Authentication Vector from the HSS;<br>False and absence indicates that vector generation shall be performed in the UDM.                                                                                                                                                                               |
| n5gcDeviceAuthMethod          | AuthMethod     | O | 0..1        | String containing the Authentication Method that shall be used when the UE's device is Non-5G-Capable behind Cable RGs in private networks or in isolated deployment scenarios with wireline access.<br>See NOTE.                                                                                                                                       |
| rgAuthenticationInd           | boolean        | O | 0..1        | true: indicates that authentication by the home network is not required if authentication has been completed by the W-5GAN. See 3GPP TS 33.501 [9] clause 7b.<br>false (default): otherwise.                                                                                                                                                            |

|                                                                                                                                                                    |         |   |      |                                                                                                                                                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| supi                                                                                                                                                               | Supi    | C | 0..1 | If present, this IE shall contain the UE's SUPI which shall contain an IMSI.<br>It shall be present if the subscription is allowed to be identified by a pseudonym of the SUPI e.g. by a GCI or GLI that is not the SUPI. |
| akmaAllowed                                                                                                                                                        | boolean | O | 0..1 | This IE indicates whether or not the subscriber is allowed to use AKMA:<br>- true: subscriber is allowed to use AKMA<br>- absent or false: subscriber is not allowed to use AKMA                                          |
| routingId                                                                                                                                                          | string  | C | 0..1 | This IE shall be present if the akmaAllowed is set to "true".<br>When present, this IE shall include the Routing Indicator contained in the SUCI (see 3GPP TS 23.003 [5], clause 2.2B).                                   |
| NOTE: The attribute n5gcDeviceAuthMethod is used for EAP-TLS, which is described in the informative annex O of 3GPP TS 33.501 [9] and is not mandatory to support. |         |   |      |                                                                                                                                                                                                                           |

### 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           |                                                                                                                                                                                                                                                                                                                                                     |
| dataTypeDefinition | string            | O | 0..1        | If present, this attribute is applicable when "dataType" takes value "object" or "array" and it shall contain a JSON Pointer expression referencing a JSON Schema data type definition (same as how the attribute "\$ref" is used in JSON Schema specifications), which the "value" attribute must conform to.                                      |
| supportedFeatures  | SupportedFeatures | C | 0..1        | Indicates the list of negotiated supported features. This parameter shall be supplied by the UDR in the response to the GET request when the GET request includes the "supported-features" query parameter and the UDR supports feature negotiation for the OperatorSpecificData resource defined in this specification and in 3GPP TS 29.519 [17]. |
| resetIds           | array(string)     | O | 1..N        | This IE uniquely identifies a part of temporary data in UDR that contains the created resource.<br>This attribute may be provided in the response of successful resource creation.                                                                                                                                                                  |

EXAMPLE 1: A JSON object of type "OperatorSpecificDataContainer" can be as follows:

```
{
  "dataType": "object",
  "value": {
    "operatorData1": "foo",
    "operatorData2": 123,
    "operatorData3": false
  },
  "dataTypeDefinition": "https://operator.com/definitions.json#/OpSpecificDataType"
}
```

And where the file "/definitions.json" contains a fragment as follows:

```
{
  "OpSpecificDataType": {
    "type": "object",
    "properties": {
      "operatorData1": {
        "type": "string"
      },
      "operatorData2": {
```

```

    "type": "integer"
  },
  "operatorData3": {
    "type": "boolean"
  }
}
}
}

```

EXAMPLE 2: A JSON object of type "OperatorSpecificDataContainer" can be as follows:

```

{
  "dataType": "array",
  "value": [ "foo", "bar" ],
  "dataTypeDefinition": "https://operator.com/definitions.json#/OpSpecificDataType2"
}

```

And where the file "/definitions.json" contains a fragment as follows:

```

{
  "OpSpecificDataType2": {
    "type": "array",
    "items": {
      "type": "string",
      "minLength": 3
    },
    "minItems": 1
  }
}

```

#### 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.<br><br>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").                                                                                                                                                                                     |
| ueld                      | VarUeld           | 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.<br>The URI shall take the form of either an absolute URI or an absolute-path reference as defined in IETF RFC 3986 [16].<br>See NOTE 1.                                                                                                                                                                                                                |
| 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.<br>This IE may be included in a subscription request. When present, this IE shall represent the time after which the subscription becomes invalid.<br>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.<br><br>Read Only: true                                                                                                                                                    |
| uniqueSubscription        | boolean           | C | 0..1        | This attribute shall be present and set to true if the UDM requests the UDR to maintain a single UDM subscription per UE.<br><br>The attribute shall not be set to true if the sdmSubscription attribute is present.<br><br>The attribute shall not be set to true if the sdmSubscription and Ueld attributes are not present.<br><br>See clause 5.2.20.3.1.                                                                                                             |
| supportedFeatures         | SupportedFeatures | O | 0..1        | Used to negotiate the applicability of optional features                                                                                                                                                                                                                                                                                                                                                                                                                 |

NOTE 1: The UDR should handle only the relative-path part (apiSpecificResourceUriPart, see 3GPP TS 29.501 [7] clause 4.4.1) and ignore possible inconsistencies (caused by e.g. an SCP) in the base URI part.

## 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.                                                                     |
| ueld                          | VarUeld                              | 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.                                                 |
| additionalSdmSubscriptions    | array(SdmSubscription)               | C | 1..N        | Shall be present if more than one subscription to changes on SDM data created by different NF service consumers of the UDM exist. This attribute if present shall convey sdm subscriptions in addition to and different from the sdm subscription present in the sdmSubscription attribute. |
| 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 ueld.                                                                                                                 |
| gpsiList           | array(Gpsi)   | C | 1..N        | Gpsi list corresponding to the provided supi ueld. Zero or one MSISDN and/or zero or more external Identifiers may be included.                                    |
| allowedAfIds       | array(string) | O | 1..N        | A list of Application Function Identifiers authorized to retrieve this Identities lists. The absence of this IE indicates that any AF is allowed to retrieve them. |
| applicationPortIds | map(Gpsi)     | O | 1..N        | A map (list of key-value pairs where AppPortId serves as key) of GPSIs.                                                                                            |

## 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              | SmSubsData                        | O | 0..1        | 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                               |
| lcsPrivacyData      | LcsPrivacyData                    | O | 0..1        | LCS Privacy Subscription Data                                  |
| lcsMoData           | LcsMoData                         | O | 0..1        | LCS Mobile Originated Subscription Data                        |
| lcsBcaData          | LcsBroadcastAssistanceTypesData   | O | 0..1        | LCS Broadcast Assistance Subscription Data                     |
| v2xData             | V2xSubscriptionData               | O | 0..1        | V2X Subscription Data                                          |
| proseData           | ProseSubscriptionData             | O | 0..1        | ProSe service Subscription Data                                |
| odbData             | OdbData                           | O | 0..1        | Operator Determined Barring Subscription Data                  |
| eeProfileData       | EeProfileData                     | O | 0..1        | Event Exposure Profile Data                                    |
| ppProfileData       | PpProfileData                     | O | 0..1        | Parameter Provisioning Profile Data                            |
| niddAuthData        | AuthorizationData                 | O | 0..1        | NIDD Authorization Data                                        |
| mbsSubscriptionData | MbsSubscriptionData               | O | 0..1        | 5MBS 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                                                                                                                                                                                                                                                                                                                                                     |
| sorXmaclue         | 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".                                                                                                                                                                                                                                               |
| sorMaclue          | 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".                                                                                                                                                                                                                                                                      |
| meSupportOfSorCmci | Boolean        | C | 0..1        | When present, indicates "ME support of SOR-CMCI" sent from UE as defined in 3GPP TS 23.122 [14] and 3GPP TS 24.501 [27].<br>As described in 3GPP TS 23.122 [14] Annex C.2 step 3a, this attribute will be deleted (set to False) during UE initiates initial registration or emergency registration.<br><br>- True: ME supports SOR-CMCI<br>- False or absent: ME does not support SOR-CMCI |

## 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                                                                                                       |
| upuXmaclue       | 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". |
| upuMaclue        | 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".                        |

## 5.4.2.9B Type: NssaiAckData

Table 5.4.2.9B-1: Definition of type NssaiAckData

| Attribute name   | Data type      | P | Cardinality | Description                          |
|------------------|----------------|---|-------------|--------------------------------------|
| provisioningTime | DateTime       | M | 1           | Point in time of provisioning        |
| ueUpdateStatus   | UeUpdateStatus | M | 1           | status of the Nssai update procedure |

## 5.4.2.9C Type: CagAckData

Table 5.4.2.9C-1: Definition of type CagAckData

| Attribute name   | Data type      | P | Cardinality | Description                        |
|------------------|----------------|---|-------------|------------------------------------|
| provisioningTime | DateTime       | M | 1           | Point in time of provisioning      |
| ueUpdateStatus   | UeUpdateStatus | M | 1           | status of the Cag update procedure |

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                                                                                                                                |
|-------------------------------|--------------|---|-------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| amfInstanceld                 | NfInstanceld | M | 1           | Instanceld 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                         |
| contextInfo                   | ContextInfo  | O | 0..1        | This IE if present may contain e.g. the headers sent/received by the UDM during AMF Event Exposure subscription.                           |

## 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.<br>The absence of this IE indicates that all event types are authorized for the UE.                                                                                                                                                                                                                                                          |
| supportedFeatures    | SupportedFeatures       | O | 0..1        |                                                                                                                                                                                                                                                                                                                                                                                                               |
| allowedMtcProvider   | map(array(MtcProvider)) | O | 1..N(1..M)  | A map (list of key-value pairs where EventType (see 3GPP TS 29.503 [6] serves as key) of MTC Provider.<br>In addition to defined EventTypes, the key value "ALL" may be used to identify a map entry which contains a list of MtcProviders that are allowed monitoring all Event Types.<br>The absence of this IE indicates that monitoring by any MTC provider is allowed for any non restricted event type. |
| iwkEpcRestricted     | boolean                 | O | 0..1        | If set to True, indicates that interworking with EPC is restricted. Set to False or not present means that the UE is not restricted in the EPC.                                                                                                                                                                                                                                                               |
| imsi                 | string                  | O | 0..1        | This IE contains the IMSI of the UE and should be present if the iwkepcRestricted attribute is not set to True.<br><br>pattern: "^[0-9]{5,15}\$"                                                                                                                                                                                                                                                              |
| hssGroupId           | NfGroupId               | O | 0..1        | Identity of the HSS group associated with the subscription that might be used by the UDM to discover the HSS; see 3GPP TS 29.510 [19]. This attribute may be present if the iwkepcRestricted attribute is not present or present and set to False.                                                                                                                                                            |

## 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. |
| smfRegistrations              | SmfRegList                           | O | 0..1        | SMF Registrations                                                                                             |
| ipSmGw                        | IpSmGwRegistration                   | O | 0..1        | IP-SM-GW Registration                                                                                         |

## 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        | <p>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.</p> <p>When the sqnScheme is "TIME_BASED", the SEQ part (most significant bits) of this attribute contains the DIF value.</p> <p>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.</p> <p>Pattern: <code>^[A-Fa-f0-9]{12}\$</code></p>                                                                                                                               |
| lastIndexes    | map(integer) | C | 1..N        | <p>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.</p> <p>The types of nodes currently defined are:</p> <ul style="list-style-type: none"> <li>- "ausf"</li> <li>- "vlr"</li> <li>- "sgsn"</li> <li>- "s-cscf"</li> <li>- "bsf",</li> <li>- "gan-aaa-server"</li> <li>- "wlan-aaa-server"</li> <li>- "mme"</li> </ul> <p>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.</p> |
| indLength      | integer      | O | 1           | <p>Number of bits of the IND part of SQN. The length of the SEQ part is, therefore, (48 - indLength) bits.</p> <p>If not present, the default value is 5.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| difSign        | Sign         | O | 1           | <p>Sign of the DIF value. It is applicable when the sqnScheme is "TIME_BASED".</p> <p>If not present, the default value is "NEGATIVE".</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## 5.4.2.24 Type: MessageWaitingData

Table 5.4.2.24-1: Definition of type MessageWaitingData

| Attribute name | Data type       | P | Cardinality | Description                                                                                 |
|----------------|-----------------|---|-------------|---------------------------------------------------------------------------------------------|
| mwdList        | array(SmscData) | O | 1..N        | List of addresses of SM-Service Center entities with SMS waiting to be delivered to the UE. |

## 5.4.2.25 Type: SmscData

Table 5.4.2.25-1: Definition of type SmscData

| Attribute name                                                                                 | Data type                  | P | Cardinality | Description                                                                                          |
|------------------------------------------------------------------------------------------------|----------------------------|---|-------------|------------------------------------------------------------------------------------------------------|
| smscMapAddress                                                                                 | E164Number                 | C | 0..1        | International E.164 number of the SM-SC; it shall be present if the SM-SC supports the MAP protocol. |
| smscDiameterAddress                                                                            | NetworkNodeDiameterAddress | C | 0..1        | Diameter Identity of the SM-SC; it shall be present if the SM-SC supports the Diameter protocol.     |
| NOTE: At least one of the properties, smscMapAddress or smscDiameterAddress, shall be present. |                            |   |             |                                                                                                      |

## 5.4.2.26 Type: SmfSubscriptionInfo

Table 5.4.2.26-1: Definition of type SmfSubscriptionInfo

| Attribute name      | Data type                  | P | Cardinality | Description                         |
|---------------------|----------------------------|---|-------------|-------------------------------------|
| smfSubscriptionList | array(SmfSubscriptionItem) | M | 1..N        | List of SmfSubscriptionItem objects |

## 5.4.2.27 Type: SmfSubscriptionItem

Table 5.4.2.27-1: Definition of type SmfSubscriptionItem

| Attribute name | Data type    | P | Cardinality | Description                                                                                                                                |
|----------------|--------------|---|-------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| smfInstanceId  | NfInstanceId | M | 1           | InstanceId of the SMF to which the subscription was sent                                                                                   |
| subscriptionId | Uri          | M | 1           | The Subscription Id allocated by the SMF as received by the UDM in the HTTP "Location" header of the Nsmf_EventExposure_Subscribe response |
| contextInfo    | ContextInfo  | O | 0..1        | This IE if present may contain e.g. the headers received by the UDM along with consuming Nsmf_EventExposure_Subscribe service operation.   |

## 5.4.2.28 Type: MtcProvider

Table 5.4.2.28-1: Definition of type MtcProvider

| Attribute name         | Data type              | P | Cardinality | Description                                                                                                                                              |
|------------------------|------------------------|---|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| mtcProviderInformation | MtcProviderInformation | O | 0..1        | Indicates MTC provider information for Monitoring Configuration authorization.                                                                           |
| afId                   | string                 | O | 0..1        | ID of the AF. The string identifying the originating AF, formatted as described in the definition of type MonitoringConfiguration in 3GPP TS 29.503 [6]. |

## 5.4.2.29 Type: HssSubscriptionInfo

Table 5.4.2.29-1: Definition of type HssSubscriptionInfo

| Attribute name      | Data type                  | P | Cardinality | Description                         |
|---------------------|----------------------------|---|-------------|-------------------------------------|
| hssSubscriptionList | array(HssSubscriptionItem) | M | 1..N        | List of hssSubscriptionItem objects |

## 5.4.2.30 Type: HssSubscriptionItem

Table 5.4.2.30-1: Definition of type HssSubscriptionItem

| Attribute name | Data type    | P | Cardinality | Description                                                                                                                                |
|----------------|--------------|---|-------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| hssInstanceId  | NfInstanceId | M | 1           | InstanceId of the HSS to which the subscription was sent                                                                                   |
| subscriptionId | Uri          | M | 1           | The Subscription Id allocated by the HSS as received by the UDM in the HTTP "Location" header of the Nhss_EventExposure_Subscribe response |
| contextInfo    | ContextInfo  | O | 0..1        | This IE if present may contain e.g. the headers received by the UDM along with consuming Nhss_EventExposure_Subscribe service operation.   |

## 5.4.2.31 Type: EeGroupProfileData

Table 5.4.2.31-1: Definition of type EeGroupProfileData

| 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 group.<br>The absence of this IE indicates that all event types are authorized for the group.                                                                                                                                                                                                                                                    |
| allowedMtcProvider   | map(array(MtcProvider)) | O | 1..N        | A map (list of key-value pairs where EventType (see 3GPP TS 29.503 [6] serves as key) of MTC Provider.<br>In addition to defined EventTypes, the key value "ALL" may be used to identify a map entry which contains a list of MtcProviders that are allowed monitoring all Event Types.<br>The absence of this IE indicates that monitoring by any MTC provider is allowed for any non restricted event type. |
| supportedFeatures    | SupportedFeatures       | O | 0..1        |                                                                                                                                                                                                                                                                                                                                                                                                               |
| iwkEpcRestricted     | boolean                 | O | 0..1        | If set to True, indicates that interworking with EPC is restricted. Set to False or not present means that the UE is not restricted in the EPC.                                                                                                                                                                                                                                                               |
| extGroupId           | string                  | O | 0..1        | This IE contains the External Group Identifier and should be present if the iwkepcRestricted attribute is not set to True.<br><br>pattern: "^extgroupid-[^@]+@[^@]+\$"                                                                                                                                                                                                                                        |
| hssGroupId           | NfGroupId               | O | 0..1        | Identity of the HSS group associated with the subscription that might be used by the UDM to discover the HSS; see 3GPP TS 29.510 [19]. This attribute may be present if the iwkepcRestricted attribute is not present or present and set to False.                                                                                                                                                            |

## 5.4.2.32 Type: Pp5gVnGroupProfileData

Table 5.4.2.32-1: Definition of type Pp5gVnGroupProfileData

| Attribute name      | Data type                          | P | Cardinality | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------|------------------------------------|---|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| allowedMtcProviders | map(array(AllowedMtcProviderInfo)) | O | 1..N        | <p>A map (list of key-value pairs where ExtGroupId (see 3GPP TS 29.503 [6]) serves as key of a list of AllowedMtcProviderInfos which include MTC provider informations or AF IDs that are allowed to create, update and delete a 5G VN Group for the user using UDM ParameterProvision service.</p> <p>In addition to defined external group identifier, the key value "ALL" may be used to identify a map entry which contains a list of AllowedMtcProviderInfos that are allowed operating all the external group identifiers.</p> <p>The absence of this IE indicates that all the MTC Providers and AFs are authorized to create, update and delete any 5G VN Group.</p> |
| supportedFeatures   | SupportedFeatures                  | O | 0..1        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## 5.4.2.33 Type: PpProfileData

Table 5.4.2.33-1: Definition of type PpProfileData

| Attribute name      | Data type                          | P | Cardinality | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------|------------------------------------|---|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| allowedMtcProviders | map(array(AllowedMtcProviderInfo)) | O | 1..N        | <p>A map (list of key-value pairs where PpDataType (see 5.4.3.10) serves as key of a list of AllowedMtcProviderInfos which include MTC provider informations or AF IDs that are allowed to provision the parameters for the user using UDM ParameterProvision service.</p> <p>In addition to defined external group identifier, the key value "ALL" may be used to identify a map entry which contains a list of AllowedMtcProviderInfos that are allowed provisioning all types of PP data.</p> <p>The absence of this IE indicates that all the MTC Providers and AFs are authorized to provision all types of PP data for the UE</p> |
| supportedFeatures   | SupportedFeatures                  | O | 0..1        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

## 5.4.2.34 Type: AllowedMtcProviderInfo

Table 5.4.2.34-1: Definition of type AllowedMtcProviderInfo

| Attribute name         | Data type              | P | Cardinality | Description                                                                                                                                                                                                             |
|------------------------|------------------------|---|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| mtcProviderInformation | MtcProviderInformation | C | 0..1        | Indicates MTC provider information for Parameters Provision authorization.                                                                                                                                              |
| afId                   | string                 | C | 0..1        | <p>Indicates ID of the AF for Parameters Provision authorization.</p> <p>The string identifying the originating AF, formatted as described in the definition of type MonitoringConfiguration in 3GPP TS 29.503 [6].</p> |

## 5.4.2.35 Type: GroupIdentifiers

Table 5.4.2.35-1: Definition of type GroupIdentifiers

| Attribute name | Data type     | P | Cardinality | Description                                                                                                                                                        |
|----------------|---------------|---|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| extGroupId     | ExtGroupId    | C | 0..1        | This IE shall contain the External Group ID associated to the provided Internal Group ID.                                                                          |
| intGroupId     | GroupId       | C | 0..1        | This IE shall contain the Internal Group ID associated to the provided External Group ID..                                                                         |
| ueldList       | array(Ueld)   | C | 1..N        | This IE shall contain a list of the UE identifiers that belong to the provided Internal/External Group ID if they are required.                                    |
| allowedAfIds   | array(string) | O | 1..N        | A list of Application Function Identifiers authorized to retrieve this Identities lists. The absence of this IE indicates that any AF is allowed to retrieve them. |

## 5.4.2.36 Type: AuthorizationData

Table 5.4.2.36-1: Definition of type AuthorizationData

| Attribute name      | Data type                     | P | Cardinality | Description                                                                                                                           |
|---------------------|-------------------------------|---|-------------|---------------------------------------------------------------------------------------------------------------------------------------|
| authorizationData   | array(UserIdentifier)         | M | 1..N        | May contain a single value or list of (SUPI and GPSI). Contains unique items.                                                         |
| allowedDnnList      | array(Dnn)                    | O | 0..N        | List of the allowed DNNs that this user can use for NIDD or other specific service                                                    |
| allowedSnssaiList   | array(Snssai)                 | O | 0..N        | List of the allowed SNSSAIs that this user can use for NIDD or other specific service                                                 |
| allowedMtcProviders | array(AllowedMtcProviderInfo) | O | 0..N        | List of AllowedMtcProviderInfos which include MTC provider informations or AF IDs that are allowed for NIDD or other specific service |

## 5.4.2.37 Type: NiddAuthorizationInfo

Table 5.4.2.37-1: Definition of type NiddAuthorizationInfo

| Attribute name        | Data type                    | P | Cardinality | Description                         |
|-----------------------|------------------------------|---|-------------|-------------------------------------|
| niddAuthorizationList | array(NiddAuthorizationInfo) | M | 1..N        | List of NiddAuthorizationInfo items |

## 5.4.2.38 Type: PpDataEntryList

Table 5.4.2.38-1: Definition of type PpDataEntryList

| Attribute name    | Data type          | P | Cardinality | Description                                                              |
|-------------------|--------------------|---|-------------|--------------------------------------------------------------------------|
| ppDataEntryList   | array(PpDataEntry) | O | 0..N        | List of the Entries under the Provisioned Parameter Data store for a UE. |
| supportedFeatures | SupportedFeatures  | O | 0..1        | Contains SupportedFeatures.                                              |

## 5.4.2.39 Type: UeSubscribedDataSets

Table 5.4.2.39-1: UeSubscribedDataSets

| Attribute name      | Data type                         | P | Cardinality | Description                                                                         |
|---------------------|-----------------------------------|---|-------------|-------------------------------------------------------------------------------------|
| amData              | AccessAndMobilitySubscriptionData | O | 0..1        | Access and Mobility Subscription Data for the serving PLMN                          |
| smfSelData          | SmfSelectionSubscriptionData      | O | 0..1        | SMF Selection Subscription Data for the serving PLMN                                |
| smsSubsData         | SmsSubscriptionData               | O | 0..1        | SMS Subscription Data for the serving PLMN                                          |
| smData              | SmSubsData                        | O | 0..1        | Session Management Subscription Data                                                |
| traceData           | TraceData                         | O | 0..1        | Trace Data for the serving PLMN. The Null value indicates that trace is not active. |
| smsMngData          | SmsManagementSubscriptionData     | O | 0..1        | SMS Management Subscription Data for the serving PLMN                               |
| lcsPrivacyData      | LcsPrivacyData                    | O | 0..1        | LCS Privacy Subscription Data                                                       |
| lcsMoData           | LcsMoData                         | O | 0..1        | LCS Mobile Originated Subscription Data                                             |
| lcsBcaData          | LcsBroadcastAssistanceTypesData   | O | 0..1        | LCS Broadcast Assistance Subscription Data for the serving PLMN                     |
| v2xData             | V2xSubscriptionData               | O | 0..1        | V2X Subscription Data                                                               |
| proseData           | ProseSubscriptionData             | O | 0..1        | ProSe service Subscription Data                                                     |
| odbData             | OdbData                           | O | 0..1        | Operator Determined Barring Subscription Data                                       |
| eeProfileData       | EeProfileData                     | O | 0..1        | Event Exposure Profile Data                                                         |
| ppProfileData       | PpProfileData                     | O | 0..1        | Parameter Provisioning Profile Data                                                 |
| niddAuthData        | AuthorizationData                 | O | 0..1        | NIDD Authorization Data                                                             |
| ucData              | UcSubscriptionData                | O | 0..1        | User Consent Data                                                                   |
| mbsSubscriptionData | MbsSubscriptionData               | O | 0..1        | 5MBS Subscription Data                                                              |

## 5.4.2.40 Type: ServiceSpecificAuthorizationInfo

Table 5.4.2.40-1: Definition of type ServiceSpecificAuthorizationInfo

| Attribute name                   | Data type                | P | Cardinality | Description                                    |
|----------------------------------|--------------------------|---|-------------|------------------------------------------------|
| serviceSpecificAuthorizationList | array(AuthorizationInfo) | M | 1..N        | List of ServiceSpecificAuthorizationInfo items |

## 5.4.2.41 Type: NfIdentifier

Table 5.4.2.41-1: Definition of type NfIdentifier

| Attribute name | Data type    | P | Cardinality | Description                                         |
|----------------|--------------|---|-------------|-----------------------------------------------------|
| nfType         | NFType       | M | 1           | NF Type as defined in 3gpp TS 29.510.               |
| nfInstanceId   | NfInstanceId | O | 0..1        | Instance ID of the NF as defined in 3GPP TS 29.571. |

## 5.4.2.42 Type: EeSubscriptionExt

Table 5.4.2.42-1: Definition of type EeSubscriptionExt as a list of "to be combined data types"

| Data type            | Cardinality | Description            | Applicability     |
|----------------------|-------------|------------------------|-------------------|
| EeSubscription       | 1           | see 3GPP TS 29.503 [6] |                   |
| AdditionalEeSubsInfo | 0..1        |                        | EeSubscriptionExt |

## 5.4.2.43 Type: AdditionalEeSubsInfo

Table 5.4.2.43-1: Definition of type AdditionalEeSubsInfo

| Attribute name          | Data type                  | P | Cardinality | Description                                                                   | Applicability         |
|-------------------------|----------------------------|---|-------------|-------------------------------------------------------------------------------|-----------------------|
| amfSubscriptionInfoList | array(AmfSubscriptionInfo) | O | 1..2        | List AMF subscription info<br>May be present on Nudr in GET response messages | EeSubscription<br>Ext |
| smfSubscriptionInfo     | SmfSubscriptionInfo        | O | 0..1        | SMF subscription info<br>May be present on Nudr in GET response messages      | EeSubscription<br>Ext |
| hssSubscriptionInfo     | HssSubscriptionInfo        | O | 0..1        | HSS subscription info<br>May be present on Nudr in GET response messages      | EeSubscription<br>Ext |

## 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                                                                                                |
|--------------|-----------------|------------------------------------------------------------------------------------------------------------|
| VarUeGroupId | string          | String identifying an external Group of UEs or any UE.<br>Pattern: '^(\extgroupid-[^\@]+\@[^\@]+\anyUE)\$' |
| VarPlmnId    | string          | String identifying a PLMN ID or an SNPN ID.<br>Pattern: '^[0-9]{5,6}(-[A-Fa-f0-9]{11})?\$',                |

## 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'                                  |
| "EAP-TLS"         | EAP TLS                                   |
| "EAP TTLS"        | EAP TTLS                                  |
| "NONE"            | No specific EAP method type is signalled. |

## 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              |
| "LCS_PRIVACY"     | LCS Privacy Subscription Data                 |
| "LCS_MO"          | LCS Mobile Originated Subscription Data       |
| "LCS_BCA"         | LCS Broadcast Assistance Subscription Data    |
| "V2X"             | V2X Subscription Data                         |
| "PROSE"           | ProSe service Subscription Data               |
| "ODB"             | Operator Determined Barring Subscription Data |
| "EE_PROF"         | Event Exposure Profile Data                   |
| "PP_PROF"         | Parameter Provisioning Profile Data           |
| "NIDD_AUTH"       | NIDD Authorization Data                       |
| "USER_CONSENT"    | User Consent Data                             |
| "MBS"             | 5MBS 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_NON_3GPP"     | SMSF Non 3GPP Access Registration |
| "SUBS_TO_NOTIFY"    | UDR Subscriptions                 |
| "SMF_REG"           | SMF Registrations                 |
| "IP_SM_GW"          | IP-SM-GW Registration             |

## 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 / UPU data update / NSSAI update / CAG 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 / UPU data update has been sent to the AMF; Acknowledgement was not requested<br>This state is not applicable for NSSAI update / CAG update                                                                                                                                                                                       |
| "WAITING_FOR_ACK"       | SOR data update has been sent to the AMF; Acknowledgement has been requested. In this state sorXmaclue shall be present;<br>or<br>UPU data update has been sent to the AMF; Acknowledgement has been requested. In this state upuXmaclue shall be present;<br>or<br>NSSAI has been sent to the AMF<br>or<br>CAG has been sent to the AMF.         |
| "ACK_RECEIVED"          | SOR data update has been acknowledged by the UE. In this state sorXmaclue and sorMaclue shall be present;<br>or<br>UPU data update has been acknowledged by the UE. In this state upuXmaclue and upuMaclue shall be present;<br>or<br>NSSAI data update has been acknowledged by the UE<br>or<br>CAG data update has been acknowledged by the UE. |
| "NEGATIVE_ACK_RECEIVED" | SOR data update / UPU data update has been sent to the AMF, but could not be forwarded to the UE due to the UE not being reachable.                                                                                                                                                                                                               |

## 5.4.3.10 Enumeration: PpDataType

Table 5.4.3.10-1: Enumeration PpDataType

| Enumeration value               | Description                                            |
|---------------------------------|--------------------------------------------------------|
| "COMMUNICATION_CHARACTERISTICS" | Communication Characteristics Parameters               |
| "EXPECTED_UE_BEHAVIOUR"         | Expected UE Behaviour Parameters                       |
| "EC_RESTRICTION"                | Enhanced Coverage Restriction Parameters               |
| "ACS_INFO"                      | ACS Information                                        |
| "TRACE"                         | Trace Data                                             |
| "STN_SR"                        | Session Transfer Number for SRVCC                      |
| "LCS_PRIVACY"                   | LCS Privacy Parameters                                 |
| "SOR_INFO"                      | Steering of Roaming information to be conveyed to a UE |

## 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 (Nudr\_DataRepository) 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: 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 a Git-based repository, that uses the GitLab software version control system (see 3GPP TS 29.501 [7] clause 5.3.1 and 3GPP TR 21.900 [14] clause 5B).

---

## 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.
    © 2022, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).
    All rights reserved.
externalDocs:
  description: 3GPP TS 29.505 V17.7.0; 5G System; Usage of the Unified Data Repository Service for
subscription data; Stage 3
  url: 'https://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)
      security:
        - {}
        - OAuth2ClientCredentials:
            - nudr-dr
        - OAuth2ClientCredentials:
            - nudr-dr
        - nudr-dr:subscription-data:authentication-subscription:read
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
        - 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:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: modify the authentication subscription data of a UE
    operationId: ModifyAuthenticationSubscription
    tags:
      - Authentication Subscription (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
      - nudr-dr:subscription-data:authentication-subscription:modify
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      - name: supported-features
        in: query
        description: Features required to be supported by the target NF
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    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'
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/authentication-data/authentication-status:
  put:
    summary: To store the Authentication Status data of a UE
    operationId: CreateAuthenticationStatus
    tags:
      - Authentication Status (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
      - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id

```

```
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    requestBody:
      content:
        application/json:
          schema:
            $ref: 'TS29503_Nudm_UEAU.yaml#/components/schemas/AuthEvent'
      required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

get:
  summary: Retrieves the Authentication Status of a UE
  operationId: QueryAuthenticationStatus
  tags:
    - AuthEvent (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
    - nudr-dr:subscription-data
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    - 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:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

delete:
  summary: To remove the Authentication Status of a UE
  operationId: DeleteAuthenticationStatus
  tags:
    - AuthEvent (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
    - nudr-dr:subscription-data
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
```

```

    $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
  responses:
    '204':
      description: Upon success, an empty response body shall be returned.
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/authentication-data/authentication-status/{servingNetworkName}:
  put:
    summary: To store the individual Authentication Status data of a UE
    operationId: CreateIndividualAuthenticationStatus
    tags:
      - Individual Authentication Status (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      - name: servingNetworkName
        in: path
        description: Serving Network Name
        required: true
        schema:
          $ref: 'TS29503_Nudm_UEAU.yaml#/components/schemas/ServingNetworkName'
    requestBody:
      content:
        application/json:
          schema:
            $ref: 'TS29503_Nudm_UEAU.yaml#/components/schemas/AuthEvent'
      required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  get:
    summary: Retrieves the Individual Authentication Status of a UE
    operationId: QueryIndividualAuthenticationStatus
    tags:
      - Individual AuthEvent (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      - name: servingNetworkName
        in: path
        description: Serving Network Name
        required: true
        schema:
          $ref: 'TS29503_Nudm_UEAU.yaml#/components/schemas/ServingNetworkName'
      - 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:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

delete:
  summary: To remove the Individual Authentication Status of a UE
  operationId: DeleteIndividualAuthenticationStatus
  tags:
    - Individual AuthEvent (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    - name: servingNetworkName
      in: path
      description: Serving Network Name
      required: true
      schema:
        $ref: 'TS29503_Nudm_UEAU.yaml#/components/schemas/ServingNetworkName'
  responses:
    '204':
      description: Upon success, an empty response body shall be returned.
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/ue-update-confirmation-data/sor-data:
  put:
    summary: To store the SoR acknowledgement information of a UE and ME support of SoR CMCI
    operationId: CreateAuthenticationSoR
    tags:
      - Authentication SoR (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      - 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'
      required: true
    responses:
      '204':
        description: Expected response to a valid request
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

get:
  summary: Retrieves the SoR acknowledgement information of a UE and ME support of SOR CMCI
  operationId: QueryAuthSoR
  tags:
    - Authentication SoR (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
        - nudr-dr
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    - 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:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

patch:
  summary: Updates the ME support of SOR CMCI information of a UE
  operationId: UpdateAuthenticationSoR
  tags:
    - Authentication SoR (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
        - nudr-dr
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  parameters:
    - name: ueId
      in: path
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - name: supported-features
      in: query
      description: Features required to be supported by the target NF
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  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
    '200':
      description: Expected response to a valid request

```

```

        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      '403':
        description: modification is rejected
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/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)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      - name: supported-features
        in: query
        description: Supported Features
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    requestBody:
      content:
        application/json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/UpuData'
      required: true
    responses:
      '204':
        description: Expected response to a valid request
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  get:
    summary: Retrieves the UPU acknowledgement information of a UE
    operationId: QueryAuthUPU
    tags:
      - Authentication UPU (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      - 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:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'
/subscription-data/{ueId}/ue-update-confirmation-data/subscribed-snssais:
  put:
    summary: To store the NSSAI update acknowledgement information of a UE
    operationId: CreateOrUpdateNssaiAck
    tags:
      - NSSAI update ack (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
      - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      - name: supported-features
        in: query
        description: Supported Features
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    requestBody:
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/NssaiAckData'
      required: true
    responses:
      '204':
        description: Expected response to a valid request
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  get:
    summary: Retrieves the UPU acknowledgement information of a UE
    operationId: QueryNssaiAck
    tags:
      - NSSAI ACK (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
      - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      - 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/NssaiAckData'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'
/subscription-data/{ueId}/ue-update-confirmation-data/subscribed-cag:

```

```
put:
  summary: To store the CAG update acknowledgement information of a UE
  operationId: CreateCagUpdateAck
  tags:
    - CAG update ack (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
        - nudr-dr
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    - name: supported-features
      in: query
      description: Supported Features
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  requestBody:
    content:
      application/json:
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/CagAckData'
    required: true
  responses:
    '204':
      description: Expected response to a valid request
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'
```

```
get:
  summary: Retrieves the CAG acknowledgement information of a UE
  operationId: QueryCagAck
  tags:
    - CAG ACK (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
        - nudr-dr
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    - 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: 'TS29571_CommonData.yaml#/components/schemas/CagAckData'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'
```

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

```
get:
  summary: Retrieve multiple provisioned data sets of a UE
  operationId: QueryProvisionedData
  tags:
    - Provisioned Data (Document)
  security:
    - {}
```

```

    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr: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: 'TS29571_CommonData.yaml#/components/schemas/VarPlmnId'
    - name: dataset-names
      in: query
      description: List of dataset names
      style: form
      explode: false
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/DatasetNames'
  responses:
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/ProvisionedDataSets'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'
/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)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr: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: 'TS29571_CommonData.yaml#/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:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/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)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr: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: 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:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'
/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
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr: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:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/SmSubsData'
      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}/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)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    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:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  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)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data:registrations:write
    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'
      required: true
    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:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  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)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data:registrations:write
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true

```

```

    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
  - name: supported-features
    in: query
    description: Features required to be supported by the target NF
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
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
  '200':
    description: Expected response to a valid request
    content:
      application/json:
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
  '403':
    description: modification is rejected
    content:
      application/problem+json:
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/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)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  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:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

```

```

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)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data:registrations:write
  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'
    required: true
  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:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

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)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data:registrations:write
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - name: supported-features
      in: query
      description: Features required to be supported by the target NF
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  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
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
    '403':
      description: modification is rejected
      content:
        application/problem+json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/context-data/smf-registrations:
  get:
    summary: Retrieves the SMF registration list of a UE
    operationId: QuerySmfRegList
    tags:
      - SMF Registrations (Collection)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    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:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/context-data/smf-registrations/{pduSessionId}:
  get:
    summary: Retrieves the individual SMF registration of a UE
    operationId: QuerySmfRegistration
    tags:
      - SMF Registration (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    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:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

```

## put:

summary: To create an individual SMF context data of a UE in the UDR

operationId: CreateOrUpdateSmfRegistration

## tags:

- SMF Registration (Document)

## security:

- {}
- oAuth2ClientCredentials:
  - nudr-dr
- oAuth2ClientCredentials:
  - nudr-dr
  - nudr-dr:subscription-data
- oAuth2ClientCredentials:
  - nudr-dr
  - nudr-dr:subscription-data:registrations:write

## 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'
required: true

```

## 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:

\$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

delete:

summary: To remove an individual SMF context data of a UE the UDR

operationId: DeleteSmfRegistration

tags:

- SMF Registration (Document)

security:

- {}

- OAuth2ClientCredentials:

- nudr-dr

- OAuth2ClientCredentials:

- nudr-dr

- nudr-dr:subscription-data

- OAuth2ClientCredentials:

- nudr-dr

- nudr-dr:subscription-data:registrations:write

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:

\$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

patch:

summary: To modify the SMF context data of a UE in the UDR

operationId: UpdateSmfContext

tags:

- SMF Registration (Document)

security:

- {}

- OAuth2ClientCredentials:

- nudr-dr

- OAuth2ClientCredentials:

- nudr-dr

- nudr-dr:subscription-data

- OAuth2ClientCredentials:

- nudr-dr

- nudr-dr:subscription-data:registrations:write

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: supported-features

in: query

description: Features required to be supported by the target NF

schema:

\$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

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
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
    '403':
      description: modification is rejected
      content:
        application/problem+json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/operator-specific-data:
  get:
    summary: Retrieves the operator specific data of a UE
    operationId: QueryOperSpecData
    tags:
      - Operator-Specific Data Container (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    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
```

```

        description: A map(list of key-value pairs) where operator specific data element
name serves as key
        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:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: To modify operator specific data of a UE
    operationId: ModifyOperSpecData
    tags:
      - Operator-Specific Data Container (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: supported-features
        in: query
        description: Features required to be supported by the target NF
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    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
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      '403':
        description: modification is rejected
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  put:
    summary: To create an operator-specific data resource of a UE
    operationId: CreateOperSpecData
    tags:
      - Operator-Specific Data Container (Document)
    security:
      - {}

```

```

    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:subscription-data
  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:
          type: object
          description: A map (list of key-value pairs) where operator specific data element name
serves as key
          additionalProperties:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/OperatorSpecificDataContainer'
          required: true
  responses:
    '201':
      description: Upon success, a response body containing a representation of the created
Operator Specific Data resource shall be returned
      content:
        application/json:
          schema:
            type: object
            description: A map (list of key-value pairs) where operator specific data element
name serves as key
            additionalProperties:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/OperatorSpecificDataContainer'
          headers:
            Location:
              description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/operator-specific-data'
              required: true
              schema:
                type: string
    '204':
      description: No content
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

delete:
  summary: To remove an operator-specific data resource of a UE
  operationId: DeleteOperSpecData
  tags:
    - Operator-Specific Data Container (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:subscription-data
  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.
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  default:

```

```

    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/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)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data:registrations:write
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    requestBody:
      content:
        application/json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/SmsfRegistration'
      required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      '201':
        description: Created
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/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
      '200':
        description: Updated
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/SmsfRegistration'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

delete:
  summary: To remove the SMSF context data of a UE via 3GPP access
  operationId: DeleteSmsfContext3gpp
  tags:
    - SMSF 3GPP Registration (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data:registrations:write
  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:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

get:
  summary: Retrieves the SMSF context data of a UE using 3gpp access
  operationId: QuerySmsfContext3gpp
  tags:
    - SMSF 3GPP Registration (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  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: 'TS29571_CommonData.yaml#/components/schemas/SmsfRegistration'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/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)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data:registrations:write
    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'
      required: true
    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
      '200':
        description: Updated
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/SmsfRegistration'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

delete:
  summary: To remove the SMSF context data of a UE via non-3GPP access
  operationId: DeleteSmsfContextNon3gpp
  tags:
    - SMSF Non-3GPP Registration (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
      - nudr-dr
    - OAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:subscription-data
    - OAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:subscription-data:registrations:write
  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:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

get:
  summary: Retrieves the SMSF context data of a UE using non-3gpp access
  operationId: QuerySmsfContextNon3gpp
  tags:
    - SMSF Non-3GPP Registration (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
      - nudr-dr
    - OAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:subscription-data
  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:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/context-data/ip-sm-gw:
  put:
    summary: Create the IP-SM-GW context data of a UE
    operationId: CreateIpSmGwContext
    tags:
      - IP-SM-GW Registration (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data:registrations:write
    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/IpSmGwRegistration'
      required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  delete:
    summary: To remove the IP-SM-GW context data of a UE
    operationId: DeleteIpSmGwContext
    tags:
      - IP-SM-GW Registration (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data:registrations:write
    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:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

patch:
  summary: Modify the IP-SM-GW context data of a UE
  operationId: ModifyIpSmGwContext
  tags:
    - IP-SM-GW Registration (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data:registrations:write
  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'
          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:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

get:
  summary: Retrieves the IP-SM-GW context data of a UE
  operationId: QueryIpSmGwContext
  tags:
    - IP-SM-GW Registration (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  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: 'TS29571_CommonData.yaml#/components/schemas/IpSmGwRegistration'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/context-data/mwd:
  put:
    summary: Create the Message Waiting Data of the UE
    operationId: CreateMessageWaitingData
    tags:
      - Message Waiting Data (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    requestBody:
      content:
        application/json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/MessageWaitingData'
      required: true
    responses:
      '201':
        description: Created
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/MessageWaitingData'
        headers:
          Location:
            description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/mwd'
            required: true
            schema:
              type: string
      '204':
        description: Upon success, an empty response body shall be returned
    default:
      description: Unexpected error
  delete:
    summary: To remove the Message Waiting Data of the UE
    operationId: DeleteMessageWaitingData
    tags:
      - Message Waiting Data (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    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:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

patch:
  summary: Modify the Message Waiting Data of the UE
  operationId: ModifyMessageWaitingData
  tags:
    - Message Waiting Data (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  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'
          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:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

get:
  summary: Retrieves the Message Waiting Data of the UE
  operationId: QueryMessageWaitingData
  tags:
    - Message Waiting Data (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  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: 'TS29571_CommonData.yaml#/components/schemas/MessageWaitingData'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/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)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr: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: 'TS29571_CommonData.yaml#/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: 'TS29571_CommonData.yaml#/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:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/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)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr: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: 'TS29571_CommonData.yaml#/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: 'TS29571_CommonData.yaml#/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:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/pp-data:
get:
  summary: Read the profile of a given UE
  operationId: GetppData
  tags:
    - Parameter Provision (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  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: 'TS29571_CommonData.yaml#/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:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
patch:
  summary: modify the provisioned parameter data
  operationId: ModifyPpData
  tags:
    - ProvisionedParameterData (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  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: Features required to be supported by the target NF
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  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
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      '403':
        description: modification is rejected
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/pp-profile-data:
  get:
    summary: Retrieves the parameter provision profile data of a UE
    operationId: QueryPPData
    tags:
      - Parameter Provision profile Data (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    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/PpProfileData'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/pp-data-store/{afInstanceId}:
  put:
    summary: create a Provisioning Parameter Data Entry
    operationId: Create PP Data Entry
    tags:
      - ProvisionedParameterDataEntry (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: Identifier of the UE
        required: true
        schema:
          anyOf:

```

```

      - $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
      - type: string
        pattern: '^anyUE$'
    - name: afInstanceId
      in: path
      description: Application Function Instance Identifier
      required: true
      schema:
        type: string
  requestBody:
    content:
      application/json:
        schema:
          $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/PpDataEntry'
        required: true
  responses:
    '201':
      description: Indicating a successful creation of the resource.
      content:
        application/json:
          schema:
            $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/PpDataEntry'
    '204':
      description: Indicating a successful creation of the resource.
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '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

delete:
  summary: Delete a Provisioning Parameter Data Entry
  operationId: Delete PP Data Entry
  tags:
    - ProvisionedParameterDataEntry (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
        - nudr-dr
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  parameters:
    - name: ueId
      in: path
      description: Identifier of the UE
      required: true
      schema:
        anyOf:
          - $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
          - $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
          - type: string
            pattern: '^anyUE$'
    - name: afInstanceId
      in: path
      description: Application Function Instance Identifier
      required: true
      schema:
        type: string
  responses:
    '204':
      description: Expected response to a valid request
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '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

get:
  summary: get a Parameter Provisioning Data Entry
  operationId: Get PP Data Entry
  tags:
    - ProvisionedParameterDataEntry (Document)
  parameters:
    - name: ueId
      in: path
      description: Identifier of the UE
      required: true
      schema:
        anyOf:
          - $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
          - $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
          - type: string
            pattern: '^anyUE$'
    - name: afInstanceId
      in: path
      description: Application Function Instance Identifier
      required: true
      schema:
        type: string
    - name: supported-features
      in: query
      description: Features required to be supported by the target NF
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  responses:
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/PpDataEntry'
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '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/{ueId}/pp-data-store:
get:
  summary: get a list of Parameter Provisioning Data Entries
  operationId: Get Multiple PP Data Entries
  tags:
    - ProvisionedParameterDataEntries (Collection)
  parameters:
    - name: ueId
      in: path
      description: Identifier of the UE
      required: true
      schema:
        anyOf:
          - $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
          - $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
          - type: string
            pattern: '^anyUE$'
    - name: supported-features
      in: query
      description: Features required to be supported by the target NF
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  responses:
    '200':
      description: Expected response to a valid request
      content:

```

```

    application/json:
      schema:
        $ref: '#/components/schemas/PpDataEntryList'
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '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/{ueId}/context-data/ee-subscriptions:
  get:
    summary: Retrieves the ee subscriptions of a UE
    operationId: Queryeesubscriptions
    tags:
      - Event Exposure Subscriptions (Collection)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    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'
      - name: event-types
        in: query
        required: false
        description: Event Types
        schema:
          type: array
          items:
            $ref: 'TS29503_Nudm_EE.yaml#/components/schemas/EventType'
          minItems: 1
          style: form
          explode: false
      - name: nf-identifiers
        in: query
        description: NF Identifiers
        schema:
          type: array
          items:
            $ref: '#/components/schemas/NfIdentifier'
          minItems: 1
          style: form
          explode: false
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              type: array
              items:
                $ref: '#/components/schemas/EeSubscriptionExt'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  post:
    summary: Create individual EE subscription
    operationId: CreateEesubscriptions
    tags:

```

```

    - Event Exposure Subscriptions (Collection)
  security:
    - {}
    - oAuth2ClientCredentials:
        - nudr-dr
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  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:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/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)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    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'
          required: true
    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:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

delete:
  summary: Deletes a eeSubscription
  operationId: RemoveeeSubscriptions
  tags:
    - Event Exposure Subscription (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  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
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

patch:
  summary: Modify an individual ee subscription of a UE
  operationId: ModifyEesubscription
  tags:
    - Event Exposure Subscription (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  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
    - name: supported-features
      in: query
      description: Features required to be supported by the target NF
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  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
    '200':
      description: Expected response to a valid request
      content:
        application/json:
```

```

      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

get:
  summary: Retrieve a eeSubscription
  operationId: QueryeeSubscription
  tags:
    - Event Exposure Subscription (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  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:
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            items:
              $ref: '#/components/schemas/EeSubscription'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/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)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    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
'201':
  description: Upon successful creation, the created resource shall be returned
  content:
    application/json:
      schema:
        type: array
        items:
          $ref: '#/components/schemas/AmfSubscriptionInfo'
        minItems: 1
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

delete:
  summary: Deletes AMF Subscription Info for an eeSubscription
  operationId: RemoveAmfSubscriptionsInfo
  tags:
    - Event AMF Subscription Info (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  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
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

patch:
  summary: modify the AMF Subscription Info
  operationId: ModifyAmfSubscriptionInfo
  tags:
    - AmfSubscriptionInfo (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  parameters:
    - name: ueId
      in: path
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - name: subsId
      in: path
      required: true
      schema:
        type: string
    - name: supported-features
      in: query
      description: Features required to be supported by the target NF
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  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
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
    '403':
      description: modification is rejected
      content:
        application/problem+json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

get:
  summary: Retrieve AMF subscription Info
  operationId: GetAmfSubscriptionInfo
  tags:
    - Query AMF Subscription Info (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
    - nudr-dr:subscription-data
  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: 'TS29571_CommonData.yaml#/components/schemas/AmfSubscriptionInfo'
            minItems: 1
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}/smf-subscriptions:
  put:
    summary: Create SMF Subscription Info
    operationId: Create SMF Subscriptions
    tags:
      - SMF Event Subscription Info (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
      - nudr-dr:subscription-data
    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/SmfSubscriptionInfo'
      required: true
responses:
  '204':
    description: Upon success, an empty response body shall be returned
  '201':
    description: Upon successful creation, the created resource shall be returned
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/SmfSubscriptionInfo'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

delete:
  summary: Delete SMF Subscription Info
  operationId: RemoveSmfSubscriptionsInfo
  tags:
    - SMF Event Subscription Info (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
    - nudr-dr:subscription-data
  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
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

patch:
  summary: Modify SMF Subscription Info
  operationId: ModifySmfSubscriptionInfo
  tags:
    - SMF Event Subscription Info (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
    - nudr-dr:subscription-data
  parameters:
    - name: ueId
      in: path
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - name: subsId
      in: path
      required: true
      schema:
        type: string
    - name: supported-features
      in: query
      description: Features required to be supported by the target NF
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  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
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      '403':
        description: modification is rejected
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

get:
  summary: Retrieve SMF Subscription Info
  operationId: GetSmfSubscriptionInfo
  tags:
    - SMF Event Subscription Info (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  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:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/SmfSubscriptionInfo'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}/hss-subscriptions:
  put:
    summary: Create HSS Subscription Info
    operationId: Create HSS Subscriptions
    tags:
      - HSS Event 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:
```

```
    $ref: '#/components/schemas/HssSubscriptionInfo'
  required: true
  responses:
    '204':
      description: Upon success, an empty response body shall be returned
    '201':
      description: Upon successful creation, the created resource shall be returned
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/HssSubscriptionInfo'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

delete:
  summary: Delete HSS Subscription Info
  operationId: RemoveHssSubscriptionsInfo
  tags:
    - HSS Event 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
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

patch:
  summary: Modify HSS Subscription Info
  operationId: ModifyHssSubscriptionInfo
  tags:
    - HSS Event 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
    - name: supported-features
      in: query
      description: Features required to be supported by the target NF
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  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
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
    '403':
      description: modification is rejected
      content:
        application/problem+json:
```

```
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

get:
  summary: Retrieve HSS Subscription Info
  operationId: GetHssSubscriptionInfo
  tags:
    - HSS Event 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:
            $ref: '#/components/schemas/SmfSubscriptionInfo'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/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)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  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:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

post:
  summary: Create individual EE subscription for a group of UEs or any UE
  operationId: CreateEeGroupSubscriptions
  tags:
    - Event Exposure Group Subscriptions (Collection)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
```

```

    - nudr-dr
    - nudr-dr:subscription-data
  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:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/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 Group Subscription (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
        - nudr-dr
      - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    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'
      required: true
    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:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  delete:
    summary: Deletes a eeSubscription for a group of UEs or any UE
    operationId: RemoveEeGroupSubscriptions
    tags:

```

```

- Event Exposure Group Subscription (Document)
security:
- {}
- oAuth2ClientCredentials:
- nudr-dr
- oAuth2ClientCredentials:
- nudr-dr
- nudr-dr:subscription-data
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
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'

patch:
summary: Modify an individual ee subscription for a group of a UEs
operationId: ModifyEeGroupSubscription
tags:
- Event Exposure Group Subscription (Document)
security:
- {}
- oAuth2ClientCredentials:
- nudr-dr
- oAuth2ClientCredentials:
- nudr-dr
- nudr-dr:subscription-data
parameters:
- name: ueGroupId
  in: path
  required: true
  schema:
    $ref: '#/components/schemas/VarUeGroupId'
- name: subsId
  in: path
  required: true
  schema:
    type: string
- name: supported-features
  in: query
  description: Features required to be supported by the target NF
  schema:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
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
'200':
  description: Expected response to a valid request
  content:
    application/json:
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  $ref: 'TS29571_CommonData.yaml#/components/responses/404'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'

```

```
get:
  summary: Retrieve a individual eeSubscription for a group of UEs or any UE
  operationId: QueryEeGroupSubscription
  tags:
    - Event Exposure Group Subscription (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  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:
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            items:
              $ref: '#/components/schemas/EeSubscription'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'
```

/subscription-data/group-data/{ueGroupId}/ee-profile-data:

```
get:
  summary: Retrieves the ee profile data profile data of a group or anyUE
  operationId: QueryGroupEEData
  tags:
    - Event Exposure Data for a group (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  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:
            $ref: '#/components/schemas/EeGroupProfileData'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'
```

/subscription-data/{ueId}/ee-profile-data:

```
get:
  summary: Retrieves the ee profile data of a UE
  operationId: QueryEEData
  tags:
    - Event Exposure Data (Document)
  security:
```

```

- {}
- oAuth2ClientCredentials:
  - nudr-dr
- oAuth2ClientCredentials:
  - nudr-dr
  - nudr-dr:subscription-data
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: 'TS29571_CommonData.yaml#/components/schemas/EeProfileData'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/context-data/sdm-subscriptions:
get:
  summary: Retrieves the sdm subscriptions of a UE
  operationId: Querysdmsubscriptions
  tags:
    - SDM Subscriptions (Collection)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:subscription-data
  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: 'TS29571_CommonData.yaml#/components/schemas/SdmSubscription'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

post:
  summary: Create individual sdm subscription
  operationId: CreateSdmSubscriptions

```

```

tags:
- SDM Subscriptions (Collection)
security:
- {}
- OAuth2ClientCredentials:
- nudr-dr
- OAuth2ClientCredentials:
- nudr-dr
- nudr-dr:subscription-data
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:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
/subscription-data/{ueId}/context-data/sdm-subscriptions/{subsId}:
put:
  summary: Update an individual sdm subscriptions of a UE
  operationId: Updatesdmsubscriptions
  tags:
  - SDM Subscription (Document)
  security:
  - {}
  - OAuth2ClientCredentials:
  - nudr-dr
  - OAuth2ClientCredentials:
  - nudr-dr
  - nudr-dr:subscription-data
  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'
  required: true
  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:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

delete:
  summary: Deletes a sdmsubscriptions
  operationId: RemovesdmSubscriptions
  tags:
    - SDM Subscription (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
        - nudr-dr
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  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
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

patch:
  summary: Modify an individual sdm subscription
  operationId: ModifysdmSubscription
  tags:
    - SDM Subscription (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
        - nudr-dr
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  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
    - name: supported-features
      in: query
      description: Features required to be supported by the target NF
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  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
    '200':
```

```

    description: Expected response to a valid request
    content:
      application/json:
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

get:
  summary: Retrieves a individual sdmSubscription identified by subsId
  operationId: QuerysdmSubscription
  tags:
    - SDM Subscription (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
        - nudr-dr
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  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 retrieve
      schema:
        type: string
  responses:
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            items:
              $ref: '#/components/schemas/SdmSubscription'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/context-data/sdm-subscriptions/{subsId}/hss-sdm-subscriptions:
  put:
    summary: Create HSS SDM Subscription Info
    operationId: Create HSS SDM Subscriptions
    tags:
      - HSS SDM 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:
            $ref: '#/components/schemas/HssSubscriptionInfo'
          required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

delete:
  summary: Delete HSS SDM Subscription Info
  operationId: RemoveHssSDMSubscriptionsInfo

```

```
tags:
- HSS SDM 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
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
patch:
  summary: Modify HSS SDM Subscription Info
  operationId: ModifyHssSDMSubscriptionInfo
  tags:
  - HSS SDM 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
  - name: supported-features
    in: query
    description: Features required to be supported by the target NF
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  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
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
    '403':
      description: modification is rejected
      content:
        application/problem+json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'
get:
  summary: Retrieve HSS SDM Subscription Info
  operationId: GetHssSDMSubscriptionInfo
  tags:
  - HSS SDM 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:
            $ref: '#/components/schemas/SmfSubscriptionInfo'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/shared-data:
  get:
    summary: retrieve shared data
    operationId: GetSharedData
    tags:
      - Retrieval of shared data
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-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:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/shared-data/{sharedDataId}:
  get:
    summary: retrieve individual shared data
    operationId: GetIndividualSharedData
    tags:
      - Retrieval of individual shared data
    parameters:
      - 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
      - name: sharedDataId
```

```

    in: path
    description: Id of the Shared Data
    required: true
    schema:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SharedDataId'
  responses:
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SharedData'
      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
    '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:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/subs-to-notify:
  post:
    summary: Subscription data subscriptions
    operationId: SubscriptionDataSubscriptions
    tags:
      - Subs To Notify (Collection)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    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:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  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 Notify (Collection)
  security:
    - {}
    - oAuth2ClientCredentials:
        - nudr-dr
    - oAuth2ClientCredentials:
        - nudr-dr
    - nudr-dr:subscription-data
  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:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

delete:
  summary: Deletes subscriptions identified by a given ue-id parameter
  operationId: RemoveMultipleSubscriptionDataSubscriptions
  tags:
    - Subs To Notify (Collection)
  security:
    - {}
    - oAuth2ClientCredentials:
        - nudr-dr
    - oAuth2ClientCredentials:
        - nudr-dr
    - nudr-dr:subscription-data
  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
          default:
            $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/subs-to-notify/{subsId}:
  delete:
    summary: Deletes a subscriptionDataSubscriptions
    operationId: RemovesubscriptionDataSubscriptions
    tags:
      - Subs To Notify (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    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
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: Modify an individual subscriptionDataSubscription
    operationId: ModifysubscriptionDataSubscription
    tags:
      - Subs To Notify (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    parameters:
      - name: subsId
        in: path
        required: true
        schema:
          type: string
      - name: supported-features
        in: query
        description: Features required to be supported by the target NF
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    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
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              oneOf:
                - $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
                - $ref: '#/components/schemas/SubscriptionDataSubscriptions'

```

```
'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  $ref: 'TS29571_CommonData.yaml#/components/responses/404'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'
```

get:

- summary: Retrieves a individual subscriptionDataSubscription identified by subsId
- operationId: QuerySubscriptionDataSubscriptions
- tags:
  - Subs To Notify (Document)
- security:
  - {}
  - OAuth2ClientCredentials:
    - nudr-dr
  - OAuth2ClientCredentials:
    - nudr-dr
  - nudr-dr:subscription-data
- parameters:
  - name: subsId
    - in: path
    - required: true
    - description: Unique ID of the subscription to retrieve
    - schema:
      - type: string
- responses:
  - '200':
    - description: Expected response to a valid request
    - content:
      - application/json:
        - schema:
          - items:
            - \$ref: '##/components/schemas/SubscriptionDataSubscriptions'
  - default:
    - \$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/trace-data:

get:

- summary: Retrieves the trace configuration data of a UE
- operationId: QueryTraceData
- tags:
  - Trace Data (Document)
- security:
  - {}
  - OAuth2ClientCredentials:
    - nudr-dr
  - OAuth2ClientCredentials:
    - nudr-dr
  - nudr-dr: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: 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)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE ID
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: app-port-id
        in: query
        description: Application port identifier
        content:
          application/json:
            schema:
              $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/AppPortId'
      - 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: 'TS29571_CommonData.yaml#/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
      '403':

```

```
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/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)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    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:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/context-data:
  get:
    summary: Retrieve multiple context data sets of a UE
    operationId: QueryContextData
    tags:
      - Context Data (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    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:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/group-data/group-identifiers:
  get:
    summary: Mapping of Group Identifiers
    operationId: GetGroupIdentifiers
    tags:
      - Group Identifiers
```

```

security:
- {}
- OAuth2ClientCredentials:
- nudr-dr
- OAuth2ClientCredentials:
- nudr-dr
- nudr-dr:subscription-data
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: ue-id-ind
  in: query
  description: Indication whether UE identifiers are required or not
  required: false
  schema:
    type: boolean
    default: 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: 'TS29571_CommonData.yaml#/components/schemas/GroupIdentifiers'
'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/group-data/5g-vn-groups:
get:
  summary: Retrieves the data of a 5G VN Group
  operationId: Query5GVnGroup
  tags:
  - 5G-VN-Groups (Store)
  security:
  - {}
  - OAuth2ClientCredentials:
  - nudr-dr
  - OAuth2ClientCredentials:
  - nudr-dr
  - nudr-dr:subscription-data
  parameters:
  - name: gpsis
    in: query
    description: List of GPSIs
    schema:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
    style: form
    explode: false
  responses:
  '200':
    description: Expected response to a valid request
    content:
      application/json:
        schema:
          type: object
          description: A map(list of key-value pairs) where ExtGroupId serves as key
          additionalProperties:
            $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/5GVnGroupConfiguration'
  default:

```

```
$ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/group-data/5g-vn-groups/{externalGroupId}:
  put:
    summary: Create an individual 5G VN Group
    operationId: Create5GVnGroup
    tags:
      - 5GVnGroupConfiguration (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
      - nudr-dr:subscription-data
    parameters:
      - name: externalGroupId
        in: path
        required: true
        schema:
          $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
    requestBody:
      content:
        application/json:
          schema:
            $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/5GVnGroupConfiguration'
      required: true
    responses:
      '201':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/5GVnGroupConfiguration'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  delete:
    summary: Deletes the 5GVnGroup
    operationId: Delete5GVnGroup
    tags:
      - Delete 5GVnGroup
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
      - nudr-dr:subscription-data
    parameters:
      - name: externalGroupId
        in: path
        required: true
        schema:
          $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
    responses:
      '204':
        description: Expected response to a successful group removal
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: modify the 5GVnGroup
    operationId: Modify5GVnGroup
    tags:
      - Modify 5GVnGroup
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
      - nudr-dr:subscription-data
    parameters:
      - name: externalGroupId
        in: path
```

```

      required: true
      schema:
        $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
    - name: supported-features
      in: query
      description: Features required to be supported by the target NF
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  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
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
    '403':
      description: modification is rejected
      content:
        application/problem+json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

get:
  summary: Retrieve a 5GVnGroup configuration
  operationId: Get5GVnGroupConfiguration
  tags:
    - Query 5GVnGroupConfiguration (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
        - nudr-dr
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  parameters:
    - name: externalGroupId
      in: path
      required: true
      schema:
        $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
  responses:
    '200':
      description: OK
      content:
        application/json:
          schema:
            $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/5GVnGroupConfiguration'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/lcs-privacy-data:
  get:
    summary: Retrieves the LCS Privacy subscription data of a UE
    operationId: QueryLcsPrivacyData
    tags:
      - LCS Privacy Subscription Data
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    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:
            $ref: '#/components/schemas/LcsPrivacyData'
      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}/lcs-mo-data:
    get:
      summary: Retrieves the LCS Mobile Originated subscription data of a UE
      operationId: QueryLcsMoData
      tags:
        - LCS Mobile Originated Subscription Data
      security:
        - {}
        - OAuth2ClientCredentials:
            - nudr-dr
        - OAuth2ClientCredentials:
            - nudr-dr
        - nudr-dr:subscription-data
      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:
            $ref: '#/components/schemas/LcsMoData'
      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}/nidd-authorization-data:
  get:
    summary: Retrieve NIDD Authorization Data GPSI or External Group identifier
    operationId: GetNiddAuData
    tags:
      - Query NIDD Authorization Data GPSI or External Group identifier (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE ID
        required: true
        schema:
          type: string
          pattern: '^([msisdn-[0-9]{5,15}]|.|extid-[^@]+@[^@]+|extgroupid-[^@]+@[^@]+)$'
      - name: single-nssai
        in: query
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/VarSnssai'
        description: single NSSAI
        required: true
      - name: dnn
        in: query
        description: DNN

```

```

    required: true
    schema:
      $ref: '#/components/schemas/Dnn'
  - name: mtc-provider-information
    in: query
    description: MTC Provider Information
    required: true
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/MtcProviderInformation'
  - name: af-id
    in: query
    description: Application Function Identifier
    schema:
      type: string
  - 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/AuthorizationData'
    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':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/coverage-restriction-data:
  get:
    summary: Retrieves the subscribed enhanced Coverage Restriction Data of a UE
    operationId: QueryCoverageRestrictionData
    tags:
      - Enhanced Coverage Restriction Data
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    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'
      - 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/EnhancedCoverageRestrictionData'
      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}/context-data/location:
  get:
    summary: Retrieves the UE's Location Information
    operationId: QueryUeLocation
    tags:
      - UE's Location Information (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    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/LocationInfo'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/v2x-data:
  get:
    summary: Retrieves the subscribed V2X Data of a UE
    operationId: QueryV2xData
    tags:
      - V2X Subscription Data
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr

```

```

    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:subscription-data
  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'
    - 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: 'TS29571_CommonData.yaml#/components/schemas/V2xSubscriptionData'
      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}/prose-data:
  get:
    summary: Retrieves the subscribed ProSe service Data of a UE
    operationId: QueryProseData
    tags:
      - ProSe Service Subscription Data
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
      - nudr-dr:subscription-data
    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'
      - 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/ProseSubscriptionData'
      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}/{servingPlmnId}/provisioned-data/lcs-bca-data:
  get:
    summary: Retrieves the LCS Broadcast Assistance subscription data of a UE
    operationId: QueryLcsBcaData
    tags:
      - LCS Broadcast Assistance 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: 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/LcsBroadcastAssistanceTypesData'
        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/group-data/5g-vn-groups/internal:
  get:
    summary: Retrieves the data of 5G VN Group
    operationId: Query5GVnGroupInternal
    tags:
      - 5G-VN-Groups-Internal (Document)
    parameters:
      - name: internal-group-ids
        in: query
        description: List of Internal Group IDs
        required: true
        schema:
          type: array
          items:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
        style: form
        explode: false
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              type: object
              description: A map (list of key-value pairs) where ExtGroupId serves as key
              additionalProperties:
                $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/5GVnGroupConfiguration'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/group-data/5g-vn-groups/pp-profile-data:
  get:
    summary: Retrieves the parameter provision profile data for 5G VN Group
    operationId: Query5GVNGroupPPData
    tags:
      - Parameter Provision profile Data for 5G VN Group(Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    parameters:
      - name: ext-group-ids
        in: query
        description: List of external VN group identifiers
        schema:
          type: array
          items:
            $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
          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/Pp5gVnGroupProfileData'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/context-data/nidd-authorizations:
  put:
    summary: Create NIDD Authorization Info
    operationId: CreateNIDDAuthorizationInfo
    tags:
      - NIDD Authorization Info (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
      - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    requestBody:
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/NiddAuthorizationInfo'
      required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      '201':
        description: Upon successful creation, the created resource shall be returned
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/NiddAuthorizationInfo'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  delete:
    summary: Delete NIDD Authorization Info
    operationId: RemoveNiddAuthorizationInfo
    tags:
      - NIDD Authorization Info (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
      - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    responses:
      '204':
        description: Expected response to a successful subscription removal
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: Modify NIDD Authorization Info
    operationId: ModifyNiddAuthorizationInfo
    tags:
      - NIDD Authorization Info (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
      - nudr-dr:subscription-data
```

```
parameters:
  - name: ueId
    in: path
    required: true
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
  - name: supported-features
    in: query
    description: Features required to be supported by the target NF
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
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
  '200':
    description: Expected response to a valid request
    content:
      application/json:
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
  '403':
    description: modification is rejected
    content:
      application/problem+json:
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'

get:
  summary: Retrieve NIDD Authorization Info
  operationId: GetNiddAuthorizationInfo
  tags:
    - NIDD Authorization Info (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
        - nudr-dr
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  parameters:
    - name: ueId
      in: path
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
  responses:
    '200':
      description: OK
      content:
        application/json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/NiddAuthorizationInfo'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/5mbs-data:
  get:
    summary: Retrieves the 5mbs subscription data of a UE
    operationId: Query5mbsData
    tags:
      - 5MBSSubscriptionData (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
```

```

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'
  - 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: 'TS29503_Nudm_SDM.yaml#/components/schemas/MbsSubscriptionData'
    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}:
  get:
    summary: Retrieve multiple subscribed data sets of a UE
    operationId: QueryUeSubscribedData
    tags:
      - UE Subscribed Data (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
      - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE Id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: dataset-names
        in: query
        description: List of dataset names
        style: form
        explode: false
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/DatasetNames'
      - name: serving-plmn
        in: query
        description: Serving PLMN Id
        schema:

```

```

    $ref: '#/components/schemas/VarPlmnId'
  responses:
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/UeSubscribedDataSets'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'
/subscription-data/{ueId}/service-specific-authorization-data/{serviceType}:
  get:
    summary: Retrieve ServiceSpecific Authorization Data
    operationId: GetSSAuData
    tags:
      - Query Service Specific Authorization Data (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE ID
        required: true
        schema:
          type: string
          pattern: '^(\msisdn-[0-9]{5,15}|.+|extid-[@]+@[^@]+|extgroupid-[@]+@[^@]+)$'
      - name: serviceType
        in: path
        description: Service Type
        required: true
        schema:
          $ref: 'TS29503_Nudm_SSAU.yaml#/components/schemas/ServiceType'
      - name: single-nssai
        in: query
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/VarSnssai'
        description: single NSSAI
        required: true
      - name: dnn
        in: query
        description: DNN
        required: true
        schema:
          $ref: '#/components/schemas/Dnn'
      - name: mtc-provider-information
        in: query
        description: MTC Provider Information
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/MtcProviderInformation'
      - name: af-id
        in: query
        description: Application Function Identifier
        schema:
          type: string
      - 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/AuthorizationData'
  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':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/context-data/service-specific-authorizations/{serviceType}:
  put:
    summary: Create Service Specific Authorization Info
    operationId: CreateServiceSpecificAuthorizationInfo
    tags:
      - Service Specific Authorization Info (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
      - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: serviceType
        in: path
        description: Service Type
        required: true
        schema:
          $ref: 'TS29503_Nudm_SSAU.yaml#/components/schemas/ServiceType'
    requestBody:
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/ServiceSpecificAuthorizationInfo'
      required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      '201':
        description: Upon successful creation, the created resource shall be returned
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/ServiceSpecificAuthorizationInfo'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  delete:
    summary: Delete Service Specific Authorization Info
    operationId: RemoveServiceSpecificAuthorizationInfo
    tags:
      - Service Specific Authorization Info (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
      - nudr-dr:subscription-data
    parameters:
      - name: ueId

```

```

    in: path
    required: true
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
  - name: serviceType
    in: path
    description: Service Type
    required: true
    schema:
      $ref: 'TS29503_Nudm_SSAU.yaml#/components/schemas/ServiceType'
responses:
  '204':
    description: Expected response to a successful subscription removal
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
patch:
  summary: Modify Service Specific Authorization Info
  operationId: ModifyServiceSpecificAuthorizationInfo
  tags:
    - Service Specific Authorization Info (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
    - nudr-dr:subscription-data
  parameters:
    - name: ueId
      in: path
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - name: serviceType
      in: path
      description: Service Type
      required: true
      schema:
        $ref: 'TS29503_Nudm_SSAU.yaml#/components/schemas/ServiceType'
    - name: supported-features
      in: query
      description: Features required to be supported by the target NF
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  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
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
    '403':
      description: modification is rejected
      content:
        application/problem+json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'
get:
  summary: Retrieve Service Specific Authorization Info
  operationId: GetServiceSpecificAuthorizationInfo
  tags:
    - Service Specific Authorization Info (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr

```

```

    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:subscription-data
  parameters:
    - name: ueId
      in: path
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - name: serviceType
      in: path
      description: Service Type
      required: true
      schema:
        $ref: 'TS29503_Nudm_SSAU.yaml#/components/schemas/ServiceType'
  responses:
    '200':
      description: OK
      content:
        application/json:
          schema:
            $ref: 'TS29503_Nudm_SSAU.yaml#/components/schemas/ServiceSpecificAuthorizationInfo'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/context-data/roaming-information:
  put:
    summary: Update the Roaming Information of the EPC domain
    operationId: UpdateRoamingInformation
    tags:
      - Update the Roaming Information of the EPC domain (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    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_UECM.yaml#/components/schemas/RoamingInfoUpdate'
      required: true
    responses:
      '201':
        description: Created
        content:
          application/json:
            schema:
              $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/RoamingInfoUpdate'
        headers:
          Location:
            description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/roaming-information'
            required: true
            schema:
              type: string
      '204':
        description: Upon success, an empty response body shall be returned
      default:
        description: Unexpected error

  get:
    summary: Retrieves the Roaming Information of the EPC domain
    operationId: QueryRoamingInformation
    tags:
      - Retrieve the Roaming Information of the EPC domain (Document)
    security:
      - {}
      - oAuth2ClientCredentials:

```

```

    - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:subscription-data
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
  responses:
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/RoamingInfoUpdate'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subsId}/amf-subscriptions:
  put:
    summary: Create AmfSubscriptions for a group of UEs or any UE
    operationId: CreateAmfGroupSubscriptions
    tags:
      - AMF Group Subscription Info (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueGroupId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeGroupId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    requestBody:
      content:
        application/json:
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/AmfSubscriptionInfo'
            minItems: 1
          required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      '201':
        description: Upon successful creation, the created resource shall be returned
        content:
          application/json:
            schema:
              type: array
              items:
                $ref: 'TS29571_CommonData.yaml#/components/schemas/AmfSubscriptionInfo'
              minItems: 1
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

delete:
  summary: Deletes AMF Subscription Info for an eeSubscription for a group of UEs or any UE
  operationId: RemoveAmfGroupSubscriptions
  tags:
    - Event AMF Subscription Info (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr

```

```

    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:subscription-data
  parameters:
    - name: ueGroupId
      in: path
      required: true
      schema:
        $ref: '#/components/schemas/VarUeGroupId'
    - name: subsId
      in: path
      required: true
      schema:
        type: string
  responses:
    '204':
      description: Expected response to a successful subscription removal
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

patch:
  summary: modify the AMF Subscription Info
  operationId: ModifyAmfGroupSubscriptions
  tags:
    - AmfSubscriptionInfo (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:subscription-data
  parameters:
    - name: ueGroupId
      in: path
      required: true
      schema:
        $ref: '#/components/schemas/VarUeGroupId'
    - name: subsId
      in: path
      required: true
      schema:
        type: string
    - name: supported-features
      in: query
      description: Features required to be supported by the target NF
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  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
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
    '403':
      description: modification is rejected
      content:
        application/problem+json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

get:
  summary: Retrieve AMF subscription Info for a group of UEs or any UE
  operationId: GetAmfGroupSubscriptions
  tags:

```

```

    - Query AMF Subscription Info (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
        - nudr-dr
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  parameters:
    - name: ueGroupId
      in: path
      required: true
      schema:
        $ref: '#/components/schemas/VarUeGroupId'
    - 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:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subsId}/smf-subscriptions:
  put:
    summary: Create SMF Subscription Info for a group of UEs or any YE
    operationId: CreateSmfGroupSubscriptions
    tags:
      - SMF Event Group Subscription Info (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    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/SmfSubscriptionInfo'
      required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      '201':
        description: Upon successful creation, the created resource shall be returned
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/SmfSubscriptionInfo'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

delete:
  summary: Delete SMF Subscription Info for a group of UEs or any UE
  operationId: RemoveSmfGroupSubscriptions
  tags:

```

```

    - SMF Event Subscription Info (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
        - nudr-dr
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  parameters:
    - name: ueGroupId
      in: path
      required: true
      schema:
        $ref: '#/components/schemas/VarUeGroupId'
    - name: subsId
      in: path
      required: true
      schema:
        type: string
  responses:
    '204':
      description: Expected response to a successful subscription removal
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

patch:
  summary: Modify SMF Subscription Info for a group of UEs or any UE
  operationId: ModifySmfGroupSubscriptions
  tags:
    - SMF Event Subscription Info (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
        - nudr-dr
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  parameters:
    - name: ueGroupId
      in: path
      required: true
      schema:
        $ref: '#/components/schemas/VarUeGroupId'
    - name: subsId
      in: path
      required: true
      schema:
        type: string
    - name: supported-features
      in: query
      description: Features required to be supported by the target NF
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  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
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
    '403':
      description: modification is rejected
      content:
        application/problem+json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

```

```
get:
  summary: Retrieve SMF Subscription Info for a group of UEs or any UE
  operationId: GetSmfGroupSubscriptions
  tags:
    - SMF Event Subscription Info (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
        - nudr-dr
    - OAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
  parameters:
    - name: ueGroupId
      in: path
      required: true
      schema:
        $ref: '#/components/schemas/VarUeGroupId'
    - name: subsId
      in: path
      required: true
      schema:
        type: string
  responses:
    '200':
      description: OK
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/SmfSubscriptionInfo'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subsId}/hss-subscriptions:
  put:
    summary: Create HSS Subscription Info for a group of UEs
    operationId: CreateHssGroupSubscriptions
    tags:
      - HSS Event Group Subscription Info (Document)
    parameters:
      - name: externalGroupId
        in: path
        required: true
        schema:
          $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    requestBody:
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/HssSubscriptionInfo'
      required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      '201':
        description: Upon successful creation, the created resource shall be returned
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/HssSubscriptionInfo'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

delete:
  summary: Delete HSS Subscription Info
  operationId: RemoveHssGroupSubscriptions
  tags:
    - HSS Event Subscription Info (Document)
  parameters:
    - name: externalGroupId
      in: path
      required: true
```

```
    schema:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
  - name: subsId
    in: path
    required: true
    schema:
      type: string
responses:
  '204':
    description: Expected response to a successful subscription removal
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
```

patch:

summary: Modify HSS Subscription Info

operationId: ModifyHssGroupSubscriptions

tags:

- HSS Event Subscription Info (Document)

parameters:

- name: externalGroupId
 in: path
 required: true
 schema:
 \$ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/ExtGroupId'
- name: subsId
 in: path
 required: true
 schema:
 type: string
- name: supported-features
 in: query
 description: Features required to be supported by the target NF
 schema:
 \$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

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

'200':

description: Expected response to a valid request

content:

application/json:

schema:

\$ref: 'TS29571\_CommonData.yaml#/components/schemas/PatchResult'

'403':

description: modification is rejected

content:

application/problem+json:

schema:

\$ref: 'TS29571\_CommonData.yaml#/components/schemas/ProblemDetails'

default:

\$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

get:

summary: Retrieve HSS Subscription Info

operationId: GetHssGroupSubscriptions

tags:

- HSS Event Subscription Info (Document)

parameters:

- name: externalGroupId
 in: path
 required: true
 schema:
 \$ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/ExtGroupId'
- name: subsId
 in: path
 required: true
 schema:
 type: string

responses:

'200':

```

        description: OK
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/HssSubscriptionInfo'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/uc-data:
  get:
    summary: Retrieves the subscribed User Consent Data of a UE
    operationId: QueryUserConsentData
    tags:
      - User Consent Data
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
    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'
      - name: ucPurpose
        in: query
        description: User consent purpose
        schema:
          $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/UcPurpose'
      - 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/UcSubscriptionData'
        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'

components:
  schemas:
    AuthenticationSubscription:
      description: A UE's authentication data.
      type: object
      required:

```

```

    - authenticationMethod
  properties:
    authenticationMethod:
      $ref: '#/components/schemas/AuthMethod'
    encPermanentKey:
      type: string
    protectionParameterId:
      type: string
    sequenceNumber:
      $ref: '#/components/schemas/SequenceNumber'
    authenticationManagementField:
      type: string
      pattern: '^[A-Za-f0-9]{4}$'
    algorithmId:
      type: string
    encOpckKey:
      type: string
    encTopckKey:
      type: string
    vectorGenerationInHss:
      type: boolean
      default: false
    hssGroupId:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'
    n5gcAuthMethod:
      $ref: '#/components/schemas/AuthMethod'
    rgAuthenticationInd:
      type: boolean
      default: false
    supi:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    akmaAllowed:
      type: boolean
      default: false
    routingId:
      type: string
      pattern: '^[0-9]{1,4}$'

SequenceNumber:
  description: Contains the SQN.
  type: object
  properties:
    sqnScheme:
      $ref: '#/components/schemas/SqnScheme'
    sqn:
      type: string
      pattern: '^[A-Za-f0-9]{12}$'
    lastIndexes:
      type: object
      additionalProperties:
        type: integer
        minimum: 0
        description: A map(list of key-value pairs) where type of node serves as key
    indLength:
      type: integer
      minimum: 0
    difSign:
      $ref: '#/components/schemas/Sign'

SqnScheme:
  description: Scheme for generation of Sequence Numbers.
  anyOf:
    - type: string
      enum:
        - GENERAL
        - NON_TIME_BASED
        - TIME_BASED
    - type: string

Sign:
  description: Sign of the DIF value.
  type: string
  enum:
    - POSITIVE
    - NEGATIVE

VarPlmnId:
  description: PLMN Id (MCC, MNC) or SNPN Id (MCC, MNC, NID).
  type: string
  pattern: '^[0-9]{5,6}(-[A-Za-f0-9]{11})?$',

```

```

DatasetNames:
  description: The list of names of data sets.
  type: array
  items:
    $ref: '#/components/schemas/DataSetName'
  minItems: 1
  uniqueItems: true
DataSetName:
  description: The name of data set.
  anyOf:
    - type: string
      enum:
        - AM
        - SMF_SEL
        - SMS_SUB
        - SM
        - TRACE
        - SMS_MNG
        - LCS_PRIVACY
        - LCS_MO
        - LCS_BCA
        - V2X
        - PROSE
        - ODB
        - EE_PROF
        - PP_PROF
        - NIDD_AUTH
        - USER_CONSENT
        - MBS
    - type: string
ProvisionedDataSets:
  description: Contains the provisioned data sets.
  type: object
  properties:
    amData:
      $ref: '#/components/schemas/AccessAndMobilitySubscriptionData'
    smfSelData:
      $ref: '#/components/schemas/SmfSelectionSubscriptionData'
    smsSubsData:
      $ref: '#/components/schemas/SmsSubscriptionData'
    smData:
      $ref: '#/components/schemas/SmSubsData'
    traceData:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
    smsMngData:
      $ref: '#/components/schemas/SmsManagementSubscriptionData'
    lcsPrivacyData:
      $ref: '#/components/schemas/LcsPrivacyData'
    lcsMoData:
      $ref: '#/components/schemas/LcsMoData'
    lcsBcaData:
      $ref: '#/components/schemas/LcsBroadcastAssistanceTypesData'
    v2xData:
      $ref: '#/components/schemas/V2xSubscriptionData'
    proseData:
      $ref: '#/components/schemas/ProseSubscriptionData'
    odbData:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/OdbData'
    eeProfileData:
      $ref: '#/components/schemas/EeProfileData'
    ppProfileData:
      $ref: '#/components/schemas/PpProfileData'
    niddAuthData:
      $ref: '#/components/schemas/AuthorizationData'
    mbsSubscriptionData:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/MbsSubscriptionData'

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'
SmSubsData:
  $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SmSubsData'
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'
LocationInfo:
  $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/LocationInfo'
SmsManagementSubscriptionData:
  $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SmsManagementSubscriptionData'
SmsSubscriptionData:
  $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SmsSubscriptionData'
LcsPrivacyData:
  $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/LcsPrivacyData'
LcsMoData:
  $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/LcsMoData'
AuthorizationData:
  description: NIDD Authorization Information
  required:
  - authorizationData
  properties:
    authorizationData:
      type: array
      items:
        $ref: 'TS29503_Nudm_NIDDAU.yaml#/components/schemas/UserIdentifier'
      minItems: 1
      uniqueItems: true
    allowedDnnList:
      type: array
      items:
        anyOf:
          - $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
          - $ref: 'TS29571_CommonData.yaml#/components/schemas/WildcardDnn'
    allowedSnssaiList:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    allowedMtcProviders:
      type: array
      items:
        $ref: '#/components/schemas/MtcProvider'
EnhancedCoverageRestrictionData:
  $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/EnhancedCoverageRestrictionData'
V2xSubscriptionData:
  $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/V2xSubscriptionData'
ProseSubscriptionData:
  $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ProseSubscriptionData'
UcSubscriptionData:
  $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/UcSubscriptionData'
LcsBroadcastAssistanceTypesData:
  $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/LcsBroadcastAssistanceTypesData'
OperatorSpecificDataContainer:
  description: Container for operator specific data.
  type: object
  required:
  - dataType
  - value
  properties:
    dataType:
      type: string
      enum:
        - string
        - integer
        - number
        - boolean
        - object
        - array
    dataTypeDefinition:
      type: string
      value:
        oneOf:
          - type: string
          - type: integer
          - type: number
          - type: boolean
          - type: object
          - type: array
```

```

    supportedFeatures:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    resetIds:
      type: array
      items:
        type: string
      minItems: 1

AuthMethod:
  description: Contains the Authentication Method.
  anyOf:
    - type: string
      enum:
        - 5G_AKA
        - EAP_AKA_PRIME
        - EAP_TLS
        - EAP_TTLS
        - NONE
    - type: string

PpData:
  $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/PpData'
EeSubscription:
  $ref: 'TS29503_Nudm_EE.yaml#/components/schemas/EeSubscription'
VarUeGroupId:
  description: UE group Id or any UE.
  type: string
  pattern: '^(extgroupid-[@]+@[^@]+|anyUE)$'
SdmSubscription:
  $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SdmSubscription'
SmfRegList:
  description: The list of all the SMF registrations of a UE.
  type: array
  items:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/SmfRegistration'
SubscriptionDataSubscriptions:
  description: A subscription to notifications.
  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
    uniqueSubscription:
      type: boolean
    supportedFeatures:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
DataChangeNotify:
  description: Container for data which have changed and notification was requested when
  changed.
  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'
additionalSdmSubscriptions:
  type: array
  items:
    $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SdmSubscription'
  minItems: 1
subscriptionDataSubscriptions:
  type: array
  items:
    $ref: '#/components/schemas/SubscriptionDataSubscriptions'

IdentityData:
  description: Identity data corresponds to the provided ueId.
  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
    allowedAfIds:
      type: array
      items:
        type: string
      minItems: 1
    applicationPortIds:
      description: A map (list of key-value pairs where AppPortId serves as key) of GPSIs.
      type: object
      additionalProperties:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
      minProperties: 1

SorData:
  description: Used to store the status of the latest SOR data update.
  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'
    meSupportOfSorCmci:
      type: boolean
  required:
    - provisioningTime
    - ueUpdateStatus

UpuData:
  description: Used to store the status of the latest UPU data update.
  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

NssaiAckData:
  description: Used to store the status of the latest NSSAI data update.
  type: object
  properties:
    provisioningTime:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
```

```

    ueUpdateStatus:
      $ref: '#/components/schemas/UeUpdateStatus'
    required:
      - provisioningTime
      - ueUpdateStatus

```

```

CagAckData:
  description: Used to store the status of the latest CAG data update.
  type: object
  properties:
    provisioningTime:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    ueUpdateStatus:
      $ref: '#/components/schemas/UeUpdateStatus'
  required:
    - provisioningTime
    - ueUpdateStatus

```

```

UeUpdateStatus:
  description: Status of the procedure.
  type: string
  enum:
    - NOT_SENT
    - SENT_NO_ACK_REQUIRED
    - WAITING_FOR_ACK
    - ACK_RECEIVED
    - NEGATIVE_ACK_RECEIVED

```

```

EeProfileData:
  description: Event Exposure Profile Data.
  type: object
  properties:
    restrictedEventTypes:
      type: array
      items:
        $ref: 'TS29503_Nudm_EE.yaml#/components/schemas/EventType'
    supportedFeatures:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    allowedMtcProvider:
      description: A map (list of key-value pairs where EventType serves as key) of MTC provider
      lists. In addition to defined EventTypes, the key value "ALL" may be used to identify a map entry
      which contains a list of MtcProviders that are allowed monitoring all Event Types.
      type: object
      additionalProperties:
        type: array
        items:
          $ref: '#/components/schemas/MtcProvider'
      minItems: 1
      minProperties: 1
    iwkEpcRestricted:
      type: boolean
      default: false
    imsi:
      type: string
      pattern: '^[0-9]{5,15}$'
    hssGroupId:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'

```

```

AmfSubscriptionInfo:
  description: Information the UDR stores and retrieves related to active subscriptions at the
  AMF(s).
  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
    contextInfo:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ContextInfo'

```

```

ContextDatasetNames:
  description: The name of context data set.
  type: array

```

```

    items:
      $ref: '#/components/schemas/ContextDataSetName'
    minItems: 2
    uniqueItems: true
  ContextDataSetName:
    anyOf:
      - type: string
        enum:
          - AMF_3GPP
          - AMF_NON_3GPP
          - SDM_SUBSCRIPTIONS
          - EE_SUBSCRIPTIONS
          - SMSF_3GPP
          - SMSF_NON_3GPP
          - SUBS_TO_NOTIFY
          - SMF_REG
          - IP_SM_GW
      - type: string
  ContextDataSets:
    description: Contains the context data sets.
    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
      smfRegistrations:
        $ref: '#/components/schemas/SmfRegList'
      ipSmGw:
        $ref: '#/components/schemas/IpSmGwRegistration'
  IpSmGwRegistration:
    $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/IpSmGwRegistration'

```

```

  MessageWaitingData:
    description: Message Waiting Data list.
    type: object
    properties:
      mwdList:
        type: array
        items:
          $ref: '#/components/schemas/SmscData'
        minItems: 1

```

```

  SmscData:
    description: Addresses of SM-Service Center entities with SMS waiting to be delivered to the
    type: object
    anyOf:
      - required: [ smscMapAddress ]
      - required: [ smscDiameterAddress ]
    properties:
      smscMapAddress:
        $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/E164Number'
      smscDiameterAddress:
        $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/NetworkNodeDiameterAddress'

```

```

  SmfSubscriptionInfo:
    description: Information related to active subscriptions at the SMF(s)

```

```

type: object
required:
- smfSubscriptionList
properties:
  smfSubscriptionList:
    type: array
    items:
      $ref: '#/components/schemas/SmfSubscriptionItem'
    minItems: 1

```

```

SmfSubscriptionItem:
description: Contains info about a single SMF event subscription
type: object
required:
- smfInstanceId
- subscriptionId
properties:
  smfInstanceId:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
  subscriptionId:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  contextInfo:
    $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ContextInfo'

```

```

MtcProvider:
description: MTC provider information.
type: object
properties:
  mtcProviderInformation:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/MtcProviderInformation'
  afId:
    type: string

```

```

HssSubscriptionInfo:
description: Information related to active subscriptions at the HSS(s)
type: object
required:
- hssSubscriptionList
properties:
  hssSubscriptionList:
    type: array
    items:
      $ref: '#/components/schemas/HssSubscriptionItem'
    minItems: 1

```

```

HssSubscriptionItem:
description: Contains info about a single HSS event subscription
type: object
required:
- hssInstanceId
- subscriptionId
properties:
  hssInstanceId:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
  subscriptionId:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  contextInfo:
    $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ContextInfo'

```

```

EeGroupProfileData:
type: object
properties:
  restrictedEventTypes:
    type: array
    items:
      $ref: 'TS29503_Nudm_EE.yaml#/components/schemas/EventType'
  allowedMtcProvider:
    description: A map (list of key-value pairs where EventType serves as key) of MTC provider
    lists. In addition to defined EventTypes, the key value "ALL" may be used to identify a map entry
    which contains a list of MtcProviders that are allowed monitoring all Event Types.
    type: object
    additionalProperties:
      type: array
      items:
        $ref: '#/components/schemas/MtcProvider'
      minItems: 1
    minProperties: 1
  supportedFeatures:

```

```

    $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  iwkEpcRestricted:
    type: boolean
    default: false
  extGroupId:
    type: string
    pattern: '^extgroupid-[^@]+@[^@]+$'
  hssGroupId:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'

Pp5gVnGroupProfileData:
  type: object
  properties:
    allowedMtcProviders:
      description: A map (list of key-value pairs where external VN group identifier serves as
key) of AllowedMtcProviderInfo lists. In addition to defined external VN group identifier, the key
value "ALL" may be used to identify a map entry which contains a list of AllowedMtcProviderInfo that
are allowed operating all the external group identifiers.
      type: object
      additionalProperties:
        type: array
        items:
          $ref: '#/components/schemas/AllowedMtcProviderInfo'
        minItems: 1
      minProperties: 1
    supportedFeatures:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

PpProfileData:
  type: object
  properties:
    allowedMtcProviders:
      description: A map (list of key-value pairs where PpDataType serves as key) of
AllowedMtcProviderInfo lists. In addition to defined PpDataType, the key value "ALL" may be used to
identify a map entry which contains a list of AllowedMtcProviderInfo that are allowed to provision
all types of the PP data for the user using UDM ParameterProvision service.
      type: object
      additionalProperties:
        type: array
        items:
          $ref: '#/components/schemas/AllowedMtcProviderInfo'
        minItems: 1
      minProperties: 1
    supportedFeatures:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

AllowedMtcProviderInfo:
  type: object
  properties:
    mtcProviderInformation:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/MtcProviderInformation'
    afId:
      type: string

PpDataType:
  anyOf:
    - type: string
      enum:
        - COMMUNICATION_CHARACTERISTICS
        - EXPECTED_UE_BEHAVIOUR
        - EC_RESTRICTION
        - ACS_INFO
        - TRACE
        - STN_SR
        - LCS_PRIVACY
        - SOR_INFO
    - type: string

GroupIdentifiers:
  description: External or Internal Group Identifier with a list of group members
  type: object
  properties:
    extGroupId:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
    intGroupId:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
    ueIdList:
      type: array

```

```
    items:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/UeId'
    minItems: 1
  allowedAfIds:
    type: array
    items:
      type: string
    minItems: 1

NiddAuthorizationInfo:
  description: Information related to active NIDD Authorizations
  type: object
  required:
    - niddAuthorizationList
  properties:
    niddAuthorizationList:
      type: array
      items:
        $ref: 'TS29503_Nudm_NIDDAU.yaml#/components/schemas/AuthorizationInfo'
      minItems: 1

PpDataEntryList:
  description: Contains a list of the Provisioned Parameters entries
  type: object
  properties:
    ppDataEntryList:
      type: array
      items:
        $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/PpDataEntry'
    supportedFeatures:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

UeSubscribedDataSets:
  description: Contains the subscribed data sets of a UE.
  type: object
  properties:
    amData:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/AccessAndMobilitySubscriptionData'
    smfSelData:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SmfSelectionSubscriptionData'
    smsSubsData:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SmsSubscriptionData'
    smData:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SmSubsData'
    traceData:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
    smsMngData:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SmsManagementSubscriptionData'
    lcsPrivacyData:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/LcsPrivacyData'
    lcsMoData:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/LcsMoData'
    lcsBcaData:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/LcsBroadcastAssistanceTypesData'
    v2xData:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/V2xSubscriptionData'
    proseData:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/ProseSubscriptionData'
    odbData:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/OdbData'
    eeProfileData:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/EeProfileData'
    ppProfileData:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/PpProfileData'
    niddAuthData:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/AuthorizationData'
    ucData:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/UcSubscriptionData'
    mbsSubscriptionData:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/MbsSubscriptionData'

ServiceSpecificAuthorizationInfo:
  description: Information related to active Service Specific Authorizations
  type: object
  required:
    - serviceSpecificAuthorizationList
  properties:
    serviceSpecificAuthorizationList:
```

```
    type: array
    items:
      $ref: 'TS29503_Nudm_NIDDAU.yaml#/components/schemas/AuthorizationInfo'
    minItems: 1

NfIdentifier:
  type: object
  required:
    - nfType
  properties:
    nfType:
      $ref: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/NFType'
    nfInstanceId:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'

EeSubscriptionExt:
  allOf:
    - $ref: 'TS29503_Nudm_EE.yaml#/components/schemas/EeSubscription'
    - $ref: '*/components/schemas/AdditionalEeSubsInfo'

AdditionalEeSubsInfo:
  type: object
  properties:
    amfSubscriptionInfoList:
      type: array
      items:
        $ref: '*/components/schemas/AmfSubscriptionInfo'
      minItems: 1
      maxItems: 2
    smfSubscriptionInfo:
      $ref: '*/components/schemas/SmfSubscriptionInfo'
    hssSubscriptionInfo:
      $ref: '*/components/schemas/HssSubscriptionInfo'
```

---

## 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 ProvisionedParameterData                                         | 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   | VarUeld 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-192229 | 0094 | 1 | B | Definition of OperatorSpecificDataContainer                           | 16.0.0 |
| 2019-09 | CT#85   | CP-192123 | 0100 | - | F | Missing supportedFeatures                                             | 16.0.0 |
| 2019-09 | CT#85   | CP-192123 | 0090 | 1 | B | Network Slicing Subscription Change                                   | 16.0.0 |
| 2019-09 | CT#85   | CP-192123 | 0098 | 1 | F | UDR Application Errors                                                | 16.0.0 |
| 2019-09 | CT#85   | CP-192123 | 0101 | 1 | B | Application errors for DELETE method                                  | 16.0.0 |
| 2019-09 | CT#85   | CP-192133 | 0095 | 1 | B | Closed Access Group                                                   | 16.0.0 |
| 2019-09 | CT#85   | CP-192027 | 0096 | 2 | B | VN-Group parameter provisioning                                       | 16.0.0 |
| 2019-09 | CT#85   | CP-192120 | 0104 | - | F | 3GPP TS 29.505 externalDoc correction                                 | 16.0.0 |
| 2019-10 |         |           |      |   |   | Corrupted references fixed                                            | 16.0.1 |
| 2019-12 | CT#86   | CP-193029 | 0108 |   | A | Monitored Resource URI                                                | 16.1.0 |
| 2019-12 | CT#86   | CP-193029 | 0263 | 1 | A | GroupIdentifier resource URI                                          | 16.1.0 |
| 2019-12 | CT#86   | CP-193049 | 0112 | 1 | B | Id translation for MSISDN-less MO SMS service                         | 16.1.0 |
| 2019-12 | CT#86   | CP-193278 | 0258 | 4 | B | NIDD Authorization Data                                               | 16.1.0 |
| 2019-12 | CT#86   | CP-193131 | 0257 | 1 | B | Authentication Subscription Data                                      | 16.1.0 |
| 2019-12 | CT#86   | CP-193055 | 0109 | 2 | B | LCS Private                                                           | 16.1.0 |
| 2019-12 | CT#86   | CP-193055 | 0110 | 3 | B | Mobile Originated Data                                                | 16.1.0 |
| 2019-12 | CT#86   | CP-193063 | 0105 | 1 | F | DataChangeNotify                                                      | 16.1.0 |
| 2019-12 | CT#86   | CP-193063 | 0106 | 1 | B | Patch Report                                                          | 16.1.0 |
| 2019-12 | CT#86   | CP-193063 | 0259 | 1 | B | Feature Negotiation for OperatorSpecificData resource                 | 16.1.0 |
| 2019-12 | CT#86   | CP-193124 | 0265 | - | F | externalDocs correction                                               | 16.1.0 |
| 2020-03 | CT#87   | CP-200018 | 0269 |   | B | Translation of Group Id to UE identifier list                         | 16.2.0 |
| 2020-03 | CT#87   | CP-200020 | 0271 | 1 | F | GET Method to subscriptions                                           | 16.2.0 |
| 2020-03 | CT#87   | CP-200020 | 0272 |   | F | Add SMFRegistration to ContextDataSet                                 | 16.2.0 |
| 2020-03 | CT#87   | CP-200020 | 0266 | 2 | F | AuthEvent deletion                                                    | 16.2.0 |
| 2020-03 | CT#87   | CP-200033 | 0267 | 1 | B | Retrieve the status of Enhanced Coverage Restriction                  | 16.2.0 |
| 2020-03 | CT#87   | CP-200020 | 0268 | 1 | B | 29505 CR optionality of ProblemDetails                                | 16.2.0 |
| 2020-03 | CT#87   | CP-200052 | 0273 |   | F | 3GPP TS 29.505 Rel16 External doc update                              | 16.2.0 |
| 2020-06 | CT#88-e | CP-201032 | 0275 |   | B | Location information retrieval for GMLC                               | 16.3.0 |
| 2020-06 | CT#88-e | CP-201032 | 0276 | 1 | B | Resource LcsPrivacySubscriptionData                                   | 16.3.0 |
| 2020-06 | CT#88-e | CP-201071 | 0281 |   | F | Storage of YAML files in ETSI Forge                                   | 16.3.0 |
| 2020-06 | CT#88-e | CP-201049 | 0283 |   | B | Correction on V2X Subscription data                                   | 16.3.0 |
| 2020-06 | CT#88-e | CP-201033 | 0285 |   | B | Auth Vector Generation for HSS                                        | 16.3.0 |
| 2020-06 | CT#88-e | CP-201034 | 0286 |   | B | Resource Level Authorization                                          | 16.3.0 |
| 2020-06 | CT#88-e | CP-201034 | 0282 | 1 | F | Authentication results for multiple registrations                     | 16.3.0 |
| 2020-06 | CT#88-e | CP-201032 | 0288 | 1 | F | Mobile Originated Data retrieval                                      | 16.3.0 |
| 2020-06 | CT#88-e | CP-201048 | 0280 | 1 | B | N5GC device Authentication                                            | 16.3.0 |
| 2020-06 | CT#88-e | CP-201033 | 0287 | 1 | B | Support of SMSoIP                                                     | 16.3.0 |
| 2020-06 | CT#88-e | CP-201073 | 0290 |   | F | 29.505 Rel16 External doc update                                      | 16.3.0 |
| 2020-06 | CT#88-e | CP-201021 | 0279 | 1 | A | Correction of PUT responses                                           | 16.3.0 |
| 2020-09 | CT#89-e | CP-202110 | 0291 |   | F | Security for Authentication Subscription Data                         | 16.4.0 |
| 2020-09 | CT#89-e | CP-202110 | 0294 |   | F | Corrections to default responses                                      | 16.4.0 |
| 2020-09 | CT#89-e | CP-202110 | 0295 |   | F | Corrections to the Event Group Subscription                           | 16.4.0 |
| 2020-09 | CT#89-e | CP-202112 | 0297 | 1 | F | Store Broadcast Location Assistance Data                              | 16.4.0 |
| 2020-09 | CT#89-e | CP-202110 | 0298 |   | F | Correct mismatches of definition between table and yaml               | 16.4.0 |
| 2020-09 | CT#89-e | CP-202111 | 0299 |   | F | Incorrect index type                                                  | 16.4.0 |
| 2020-09 | CT#89-e | CP-202096 | 0301 |   | F | API version and External doc update                                   | 16.4.0 |
| 2020-09 | CT#89-e | CP-202123 | 0292 |   | B | Resource Level Authorization for SubscriptionData                     | 17.0.0 |
| 2020-09 | CT#89-e | CP-202123 | 0293 |   | B | Resource Level Authorization for registrations                        | 17.0.0 |
| 2020-09 | CT#89-e | CP-202120 | 0300 |   | F | API version and External doc update                                   | 17.0.0 |
| 2020-12 | CT#90-e | CP-203048 | 0303 |   | A | Data Removal Notification                                             | 17.1.0 |
| 2020-12 | CT#90-e | CP-203039 | 0305 |   | A | Retrieval of SUPI from Authentication Data                            | 17.1.0 |
| 2020-12 | CT#90-e | CP-203048 | 0307 |   | A | Retrieve Context Data                                                 | 17.1.0 |
| 2020-12 | CT#90-e | CP-203042 | 0309 | 1 | A | 5G VN Groups                                                          | 17.1.0 |
| 2020-12 | CT#90-e | CP-203064 | 0310 |   | F | Default Notifications                                                 | 17.1.0 |
| 2020-12 | CT#90-e | CP-203039 | 0312 | 1 | A | Pattern alignment for ueld in resource URIs                           | 17.1.0 |
| 2020-12 | CT#90-e | CP-203035 | 0314 |   | A | Storage of YAML files in 3GPP Forge                                   | 17.1.0 |

|         |         |           |      |   |   |                                                                                |        |
|---------|---------|-----------|------|---|---|--------------------------------------------------------------------------------|--------|
| 2020-12 | CT#90-e | CP-203048 | 0316 |   | A | Subs-To-Notify Tag Description                                                 | 17.1.0 |
| 2020-12 | CT#90-e | CP-203048 | 0318 |   | A | Snssai query parameter                                                         | 17.1.0 |
| 2020-12 | CT#90-e | CP-203055 | 0320 |   | F | External doc update                                                            | 17.1.0 |
| 2021-03 | CT#91-e | CP-210021 | 0321 | 1 | F | ContextInfo in AMF SubscriptionInfo                                            | 17.2.0 |
| 2021-03 | CT#91-e | CP-210021 | 0322 | 1 | F | EE Profile Data                                                                | 17.2.0 |
| 2021-03 | CT#91-e | CP-210043 | 0324 |   | A | Missing requestBody required indication in PUT operations                      | 17.2.0 |
| 2021-03 | CT#91-e | CP-210021 | 0325 | 1 | F | HSS Group Id                                                                   | 17.2.0 |
| 2021-03 | CT#91-e | CP-210034 | 0326 | 1 | F | Description field for map data types                                           | 17.2.0 |
| 2021-03 | CT#91-e | CP-210048 | 0328 | 2 | A | Event Subscription Storage for SMF                                             | 17.2.0 |
| 2021-03 | CT#91-e | CP-210021 | 0329 |   | F | Response 200 OK for SMSF registration                                          | 17.2.0 |
| 2021-03 | CT#91-e | CP-210026 | 0330 | 1 | B | AKMA Subscription Data                                                         | 17.2.0 |
| 2021-03 | CT#91-e | CP-210029 | 0331 |   | F | 29.505 Rel-17 External doc update                                              | 17.2.0 |
| 2021-06 | CT#92-e | CP-211028 | 0339 |   | F | Resource Structure                                                             | 17.3.0 |
| 2021-06 | CT#92-e | CP-211028 | 0345 |   | F | Corrections on reference                                                       | 17.3.0 |
| 2021-06 | CT#92-e | CP-211028 | 0346 | 1 | F | Corrections on Cardinality                                                     | 17.3.0 |
| 2021-06 | CT#92-e | CP-211028 | 0338 | 1 | F | GroupIdentifiers                                                               | 17.3.0 |
| 2021-06 | CT#92-e | CP-211028 | 0340 | 1 | F | Response for MWD resource creation                                             | 17.3.0 |
| 2021-06 | CT#92-e | CP-211028 | 0355 |   | F | Nested cardinality                                                             | 17.3.0 |
| 2021-06 | CT#92-e | CP-211028 | 0358 |   | F | Data Types Descriptions                                                        | 17.3.0 |
| 2021-06 | CT#92-e | CP-211039 | 0344 | 1 | B | Store ProSe Subscription Data                                                  | 17.3.0 |
| 2021-06 | CT#92-e | CP-211045 | 0360 |   | F | AmfSubscriptionInfo and SmfSubscriptionInfo creation providing 201 result code | 17.3.0 |
| 2021-06 | CT#92-e | CP-211050 | 0361 |   | F | 29.505 Rel-17 External doc update                                              | 17.3.0 |
| 2021-06 | CT#92-e | CP-211054 | 0341 | 3 | B | API Extension of PP service for Multiple AFs                                   | 17.3.0 |
| 2021-06 | CT#92-e | CP-211064 | 0334 |   | A | Event subscription Storage for HSS                                             | 17.3.0 |
| 2021-06 | CT#92-e | CP-211065 | 0343 |   | A | UPU and SOR negative ack                                                       | 17.3.0 |
| 2021-06 | CT#92-e | CP-211065 | 0357 | 1 | A | Monitored Resource URI                                                         | 17.3.0 |
| 2021-06 | CT#92-e | CP-211067 | 0337 |   | A | References                                                                     | 17.3.0 |
| 2021-06 | CT#92-e | CP-211079 | 0354 |   | A | Subscribed PP profile data                                                     | 17.3.0 |
| 2021-06 | CT#92-e | CP-211079 | 0350 | 1 | A | Subscribed EE profile data for a group                                         | 17.3.0 |
| 2021-06 | CT#92-e | CP-211079 | 0352 | 1 | A | Subscribed PP profile data for 5g-VN-group                                     | 17.3.0 |
| 2021-09 | CT#93-e | CP-212026 | 0364 |   | F | ContextInfo storage                                                            | 17.4.0 |
| 2021-09 | CT#93-e | CP-212026 | 0368 |   | B | Authorization of Identifier Translation                                        | 17.4.0 |
| 2021-09 | CT#93-e | CP-212026 | 0370 |   | F | MTC Provider and Application ID in NIDD Authorization Data Retrieval           | 17.4.0 |
| 2021-09 | CT#93-e | CP-212026 | 0375 |   | F | ContextInfo in SmfSubscriptionInfo and HssSubscriptionInfo                     | 17.4.0 |
| 2021-09 | CT#93-e | CP-212026 | 0363 | 1 | F | Application Port ID                                                            | 17.4.0 |
| 2021-09 | CT#93-e | CP-212026 | 0367 | 1 | B | Retrieval of odbData as ProvisionedDataSet                                     | 17.4.0 |
| 2021-09 | CT#93-e | CP-212026 | 0369 | 1 | B | Authorization of Group Identifier Translation                                  | 17.4.0 |
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| 2021-09 | CT#93-e | CP-212026 | 0379 | 1 | F | Corrections on ProvisionedParameterDataEntry                                   | 17.4.0 |
| 2021-09 | CT#93-e | CP-212049 | 0380 | 1 | B | Get the PP data of mutiple Afs                                                 | 17.4.0 |
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| 2021-09 | CT#93-e | CP-212063 | 0366 |   | A | SDM subscription Storage for HSS                                               | 17.4.0 |
| 2021-09 | CT#93-e | CP-212064 | 0387 | 1 | A | SharedDataId Resource                                                          | 17.4.0 |
| 2021-12 | CT#94-e | CP-213085 | 0390 |   | F | Error responses to the modification of SubscriptionDataSubscription            | 17.5.0 |
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| 2021-12 | CT#94-e | CP-213107 | 0407 | 1 | B | Routing Indicator                                                              | 17.5.0 |
| 2021-12 | CT#94-e | CP-213121 | 0409 |   | F | 29.505 Rel-17 External doc update                                              | 17.5.0 |
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| 2022-03 | CT#95-e | CP-220023 | 0415 |   | F | Style corrections and missing clauses                                          | 17.6.0 |
| 2022-03 | CT#95-e | CP-220023 | 0417 | 1 | F | Update on missing roaming information                                          | 17.6.0 |
| 2022-03 | CT#95-e | CP-220024 | 0413 | 1 | B | Group Subscription Storage                                                     | 17.6.0 |
| 2022-03 | CT#95-e | CP-220026 | 0419 |   | A | Missing path parameter                                                         | 17.6.0 |

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| 2022-03 | CT#95-e | CP-220026 | 0423 | 1 | A | Chapter and OperationId Updates                                            | 17.6.0 |
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| 2022-03 | CT#95-e | CP-220031 | 0421 |   | F | serviceType naming convention                                              | 17.6.0 |
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| 2022-06 | CT#96-e | CP-221051 | 0436 |   | F | 29.505 Rel-17 External doc update                                          | 17.7.0 |

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# History

| Document history |           |             |
|------------------|-----------|-------------|
| V17.6.0          | May 2022  | Publication |
| V17.7.0          | July 2022 | Publication |
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