

# ETSI TS 129 505 V16.4.0 (2020-11)



**5G;  
5G System;  
Usage of the Unified Data Repository services  
for Subscription Data;  
Stage 3  
(3GPP TS 29.505 version 16.4.0 Release 16)**



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**Reference**RTS/TSGC-0429505vg40

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**Keywords**

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5G

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# Foreword

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Version x.y.z

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- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

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

- shall** indicates a mandatory requirement to do something
- shall not** indicates an interdiction (prohibition) to do something

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

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

- should** indicates a recommendation to do something
- should not** indicates a recommendation not to do something
- may** indicates permission to do something
- need not** indicates permission not to do something

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

- can** indicates that something is possible
- cannot** indicates that something is impossible

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

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

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

In addition:

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

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

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

---

# 1 Scope

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

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

---

# 2 References

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

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

- [1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [2] 3GPP TS 29.504: "5G System; Unified Data Repository Services; Stage 3".
- [3] 3GPP TS 29.571: "5G System; Common Data Types for Service Based Interfaces Stage 3".
- [4] 3GPP TS 23.501: "System Architecture for the 5G System; Stage 2".
- [5] 3GPP TS 23.003: "Numbering, addressing and identification".
- [6] 3GPP TS 29.503: "Unified Data Management Services".
- [7] 3GPP TS 29.501: "5G System; Principles and Guidelines for Services Definition; Stage 3".
- [8] 3GPP TS 29.500: "5G System; Technical Realization of Service Based Architecture; Stage 3".
- [9] 3GPP TS 33.501: "Security architecture and procedures for 5G system".
- [10] 3GPP TS 33.102: "3G Security; Security architecture".
- [11] 3GPP TS 35.206: "An example algorithm set for the 3GPP authentication and key generation functions f1, f1\*, f2, f3, f4, f5 and f5\*; Document 2: Algorithm specification".
- [12] 3GPP TS 35.231: "A second example algorithm set for the 3GPP authentication and key generation functions f1, f1\*, f2, f3, f4, f5 and f5\*; Document 1: Algorithm specification".
- [13] 3GPP TS 29.518: "5G System; Access and Mobility Management Services; Stage 3".
- [14] 3GPP TR 21.900: "Technical Specification Group working methods".
- [15] 3GPP TS 29.509: "Authentication Server Services; Stage 3".
- [16] IETF RFC 3986: "Uniform Resource Identifier (URI): Generic Syntax".
- [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".

---

## 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

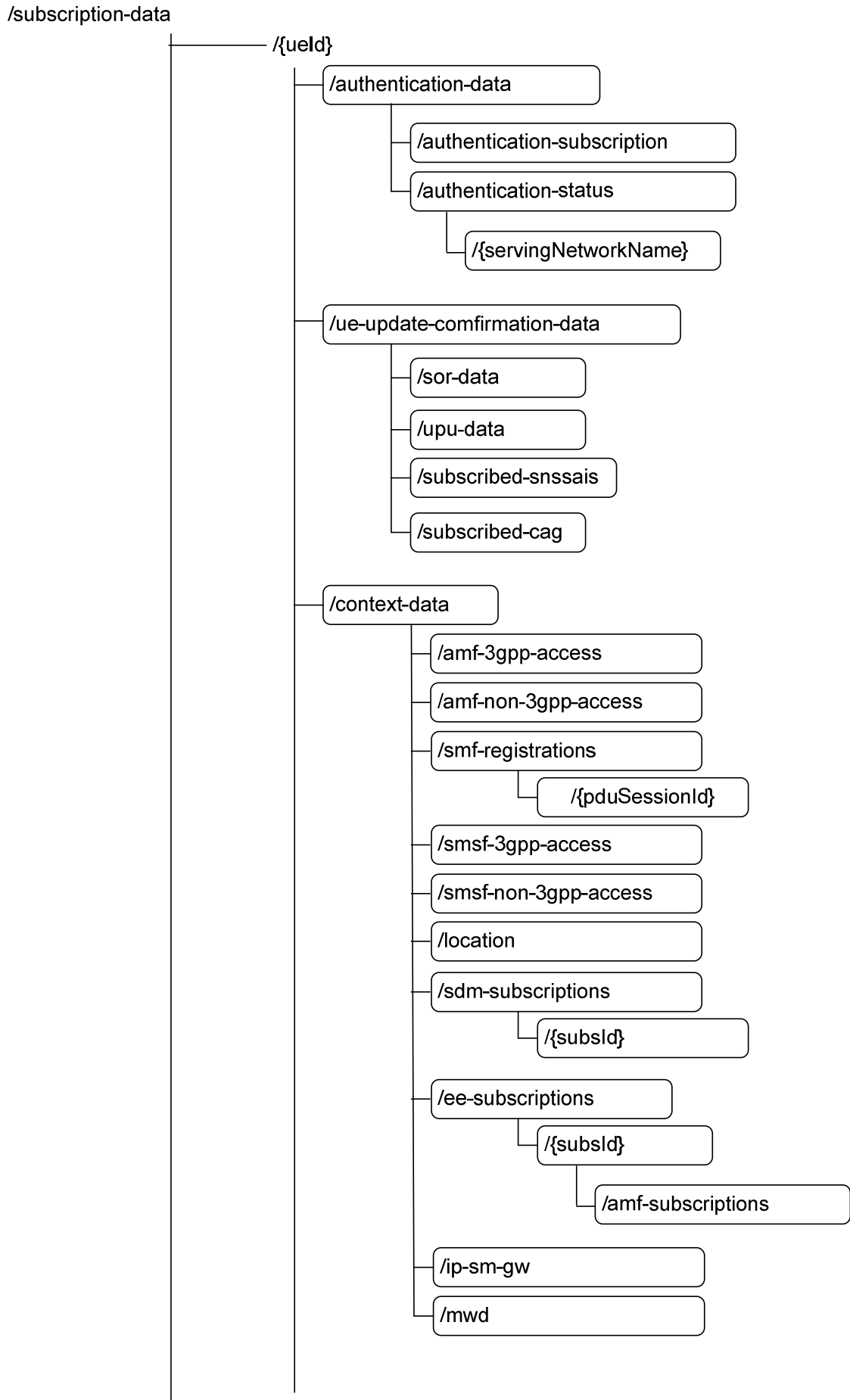


Figure 5.2.1-1: Resource URI sub-level structure for subscription data

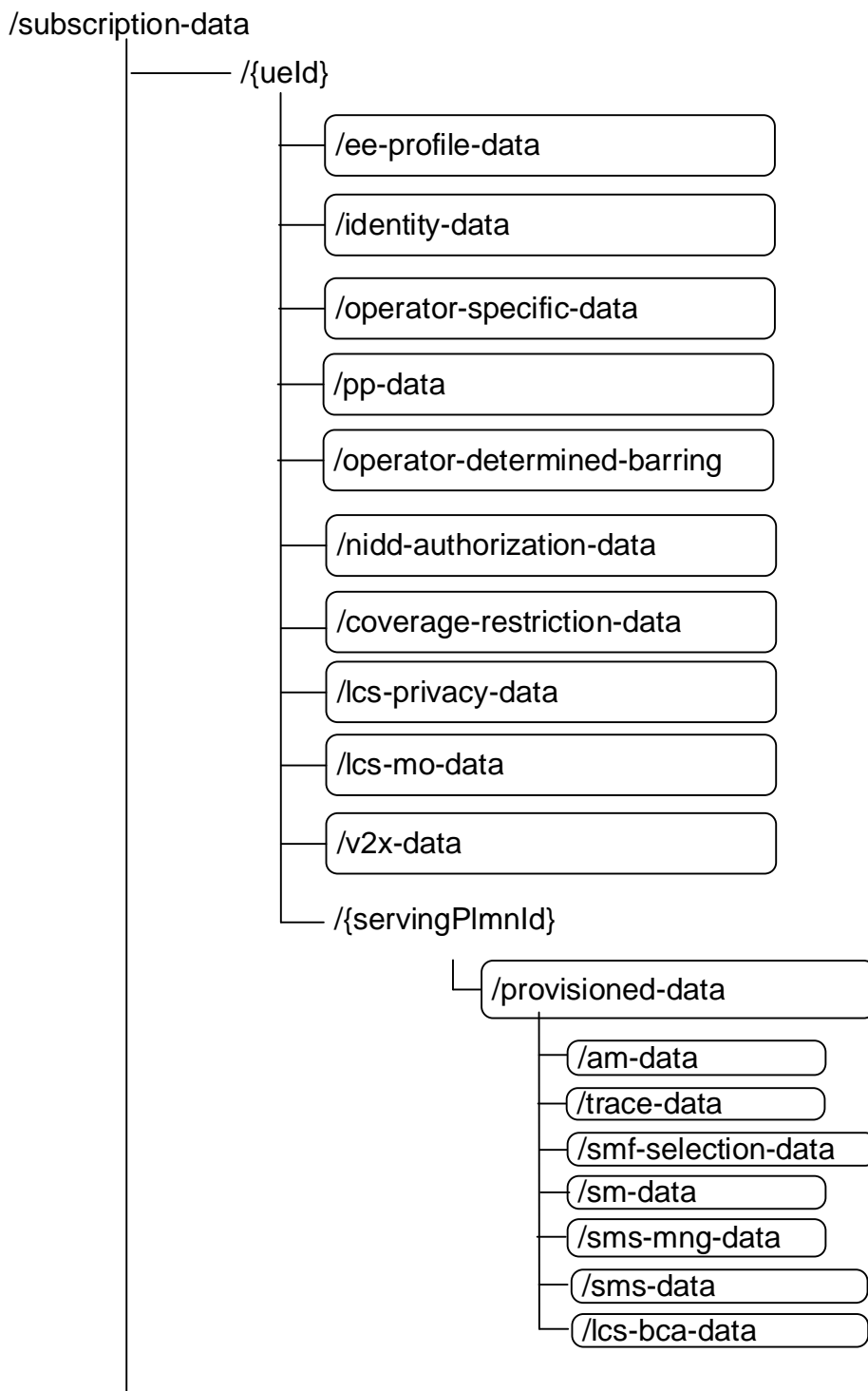
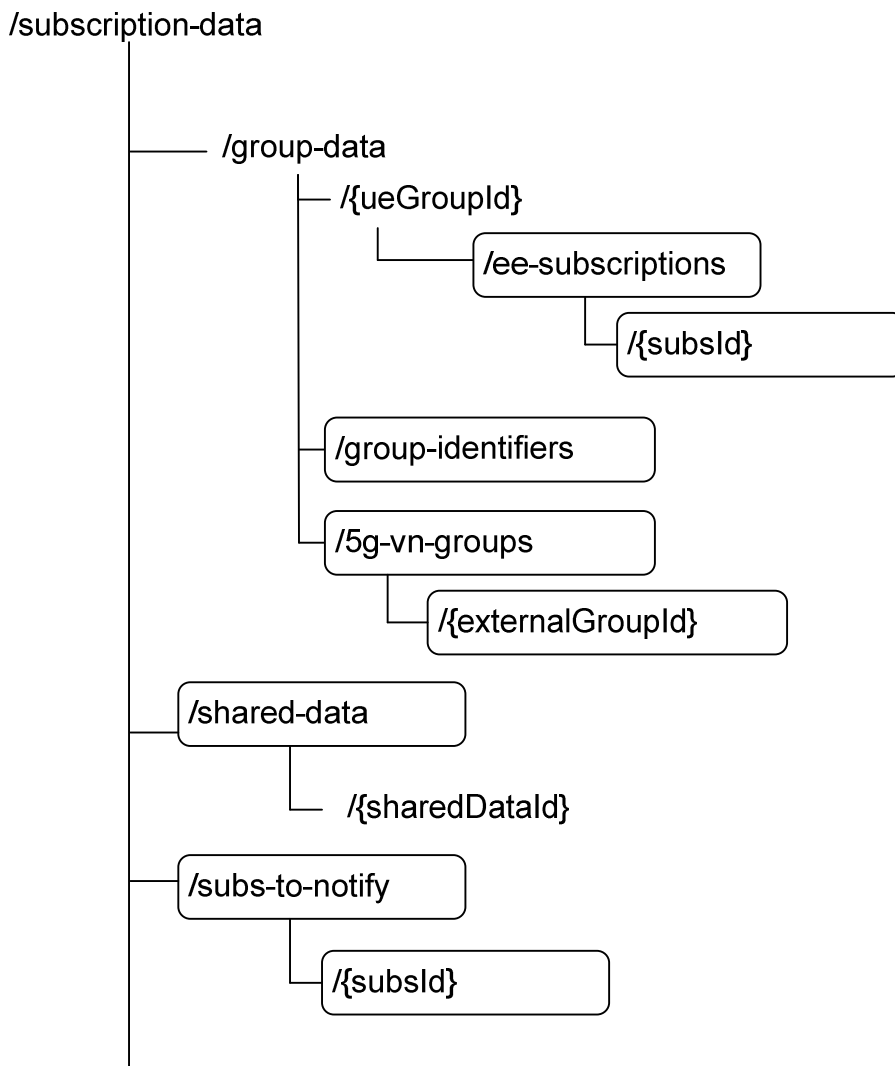


Figure 5.2.1-2: Resource URI sub-level structure for subscription data (cont.)





**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 and applicable HTTP methods.

**Table 5.2.1-1: Resources and methods overview**

Resource name	Resource URI	HTTP method	Description
AuthenticationSubscription	/subscription-data/{ueId}/authentication-data/authentication-subscription	GET	Retrieve a UE's authentication subscription data
		PATCH	Update a UE's authentication subscription data Updates shall be limited to the sequenceNumber attribute. Attempts to patch any other attribute shall be rejected by the UDR.

AuthenticationSoR	/subscription-data/{ueid}/ue-update-confirmation-data/sor-data	PUT	Store UE's SoR acknowledgement information (SoR-XMAC-IUE)
		GET	Retrieve UE's SoR acknowledgement information
AuthenticationUPU	/subscription-data/{ueid}/ue-update-confirmation-data/upu-data	PUT	Store UE Parameter Update acknowledgement information (UPU-XMAC-IUE)
		GET	Retrieve UE Parameter Update acknowledgement information
SubscribedSNSSAIs	/subscription-data/{ueid}/ue-update-confirmation-data/subscribed-snssais	PUT	Store UE-acknowledgement info for change of subscribed S-NSSAIs
		GET	Retrieve UE-acknowledgement info for change of subscribed S-NSSAIs
SubscribedCAG	/subscription-data/{ueid}/ue-update-confirmation-data/subscribed-cag	PUT	Store UE-acknowledgement info for change of subscribed CAG
		GET	Retrieve UE-acknowledgement info for change of subscribed CAG
AuthenticationStatus	/subscription-data/{ueid}/authentication-data/authentication-status	PUT	Store a UE's authentication status
		GET	Retrieve a UE's authentication status
		DELETE	Delete a UE's authentication status
IndividualAuthenticationStatus	/subscription-data/{ueid}/authentication-status/{servingNetworkName}	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	/subscription-data/{ueid}/{servingPlmnId}/provisioned-data	GET	Retrieve the UE's subscribed Provisioned Data
AccessAndMobilitySubscriptionData	/subscription-data/{ueid}/{servingPlmnId}/provisioned-data/am-data	GET	Retrieve the UE's subscribed Access and Mobility Data
SmfSelectionSubscriptionData	/subscription-data/{ueid}/{servingPlmnId}/provisioned-data/smf-selection-subscription-data	GET	Retrieve the UE's subscribed SMF Selection Data
SessionManagementSubscriptionData	/subscription-data/{ueid}/{servingPlmnId}/provisioned-data/sm-data	GET	Retrieve the UE's subscribed SM Subscription Data
ContextData	/subscription-data/{ueid}/context-data	GET	Retrieve the UE's context Data
Amf3GppAccessRegistration	/subscription-data/{ueid}/context-data/amf-3gpp-access	PUT	Create and Update the AMF registration for 3GPP access
		PATCH	Modify the AMF registration for 3GPP access
		GET	Retrieve the AMF registration information for 3GPP access
AmfNon3GppAccessRegistration	/subscription-data/{ueid}/context-data/amf-non-3gpp-access	PUT	Update the AMF registration for non 3GPP access
		PATCH	Modify the AMF registration for non 3GPP access
		GET	Retrieve the AMF registration information for non 3GPP access
SmfRegistrations	/subscription-data/{ueid}/context-data/smf-registrations	GET	Retrieve the list of the SMF registrations
IndividualSmfRegistration	/subscription-data/{ueid}/context-data/smf-registrations/{pduSessionId}	PUT	Store an individual SMF registration identified by PDU Session Id
		DELETE	Delete an individual SMF registration
		GET	Retrieve individual SMF registration
OperatorSpecificData	/subscription-data/{ueid}/operator-specific-data	GET	retrieve the operator specific subscription data of a UE
		PATCH	modify the operator specific subscription data of a UE
OperatorDeterminedBarringData	/subscription-data/{ueid}/operator-determined-barring-data	GET	Retrieve the UE's Operator Determined Barring
SMSManagementSubscriptionData	/subscription-data/{ueid}/{servingPlmnId}/provisioned-data/sms-mng-data	GET	Retrieve the UE's subscribed SMS management subscription data.
Smsf3GppAccessRegistration	/subscription-data/{ueid}/context-data/smsf-3gpp-access	PUT	Create or Update the SMSF registration
		DELETE	Delete the SMSF registration for 3GPP access
		GET	Retrieve the SMSF registration information
SmsfNon3GppAccessRegistration	/subscription-data/{ueid}/context-data/smsf-non-3gpp-access	PUT	Create or Update the SMSF registration for non 3GPP access
		DELETE	Delete the SMSF registration for non 3GPP access

		GET	Retrieve the SMSF registration information for non 3GPP access
IpSmGwRegistration	/subscription-data/{ueld}/context-data/ip-sm-gw	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	/subscription-data/{ueld}/context-data/mwd	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	/subscription-data/{ueld}/context-data/sdm-subscriptions	GET	Retrieve SDM subscriptions
		POST	Create an individual SDM subscription
IndividualSdmSubscription	/subscription-data/{ueld}/context-data/sdm-subscriptions/{subslid}	PUT	Update an individual SDM subscription
		DELETE	Delete an individual SDM subscription
		PATCH	Update an individual SDM Subscription
		GET	Retrieve an individual SDM subscription
EeSubscriptions	/subscription-data/{ueld}/context-data/ee-subscriptions	GET	Retrieve EE subscriptions
		POST	Create an EE subscription
IndividualEeSubscription	/subscription-data/{ueld}/context-data/ee-subscriptions/{subslid}	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	/subscription-data/{ueld}/context-data/ee-subscriptions/{subslid}/amf-subscriptions	PUT	Store information related the a received Amf-EE-Subscription response
		DELETE	Delete the Amf-EE-subscriptions
		GET	Retrieve AMF-subscriptions
		PATCH	Update AMF-subscriptions
EeProfileData	/subscription-data/{ueld}/ee-profile-data	GET	Retrieve the UE's subscribed EE profile data.
ProvisionedParameterData	/subscription-data/{ueld}/pp-data	PATCH	Update of provisioned parameters.
		GET	Retrieves the UE's provisioned parameters.

SMSSubscriptionData	/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sms-data	GET	Retrieve the UE's subscribed SMS subscription data.
SubscriptionDataSubscriptions	/subscription-data/subs-to-notify	GET	Retrieve existing subscriptions
		POST	Create a subscription, i.e. subscribe a node to receive notification for change of data
		DELETE	Deletes multiple subscriptions for a given UE.
IndividualSubscriptionDataSubscription	/subscription-data/subs-to-notify/{subsid}	DELETE	Delete the subscription identified by {subsid}, i.e. unsubscribe a node to receive notification for change of data
		PATCH	Update an individual Subscription to notification
		GET	Retrieve an individual Subscription to notification
EeGroupSubscriptions	/subscription-data/group-data/{ueGroupId}/ee-subscriptions	GET	Retrieve EE subscriptions for groups of UEs
		POST	Create an EE subscription for groups of UEs
IndividualEeGroupSubscription	/subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subsid}	PUT	Update an individual EE subscription for a group of UEs
		DELETE	Delete an individual EE subscription for a group of UEs
		PATCH	Update an individual EE subscription for a group of UEs
		GET	Retrieve an individual EE subscription for a group of UEs

TraceData	/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/trace-data	GET	Retrieve the UE's trace configuration data
IdentityData	/subscription-data/{ueId}/identity-data	GET	Retrieve identity data that corresponds to the provided ueId
SharedData (Collection)	/subscription-data/shared-data	GET	Retrieve shared data
GroupIdentifiers	/subscription-data/group-data/group-identifiers	GET	Retrieve group identifiers and the UE identifiers belong to the group identifiers.
5GVnGroups	/subscription-data/group-data/5g-vn-groups	GET	Retrieve 5G VN Groups
Individual5GVnGroup	/subscription-data/group-data/5g-vn-groups/{externalGroupId}	PUT	Create a 5G VN Group
		PATCH	Update a 5G VN Group
		DELETE	Delete a 5G VN Group
		GET	Retrieve a 5G VN Group
LcsPrivacySubscriptionData	/subscription-data/{ueId}/lcs-privacy-data	GET	Retrieve the UE's subscribed LCS privacy Subscription Data
LcsMobileOriginatedSubscriptionData	/subscription-data/{ueId}/lcs-mo-data	GET	Retrieve the UE's subscribed LCS Mobile Originated Subscription Data
NiddAuthorizationData	/subscription-data/{ueId}/nidd-authorization-data	GET	Retrieve the UE's NIDD Authorization Data
CoverageRestrictionData	/subscription-data/{ueId}/coverage-restriction-data	GET	Retrieve the UE's subscribed enhanced Coverage Restriction Data
Location	/subscription-data/{ueId}/context-data/location	GET	Retrieve the UE's Location Information
V2xSubscriptionData	/subscription-data/{ueId}/v2x-data	GET	Retrieve the UE's subscribed V2X Data
LcsBroadcastAssistanceSubscriptionData	/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/lcs-bca-data	GET	Retrieve the UE's subscribed LCS Broadcast Assistance subscription data

## 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
ueld	Represents the Subscription Identifier SUPI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: "^(\imsi-[0-9]{5,15})nai-.+.\$"

### 5.2.2.3 Resource Standard Methods

#### 5.2.2.3.1 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

#### 5.2.2.3.2 PATCH

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

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

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

Name	Data type	P	Cardinality	Description
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 5.2.2.3.2-2 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
ueId	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: "^(imsi-[0-9]{5,15} nai-.+ msisdn-[0-9]{5,15} extid-[^@]+@[^@]+ .+) \$"
servingPlmnId	Represents the Serving PLMN ID (<MCC><MNC>) pattern: "^[0-9]{5,6} \$"

### 5.2.3.3 Resource Standard Methods

#### 5.2.3.3.1 GET

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

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

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



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

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

Data type	P	Cardinality	Description
n/a			

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

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

## 5.2.4 Resource: SmfSelectionSubscriptionData

### 5.2.4.1 Description

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

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

### 5.2.4.2 Resource Definition

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

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

**Table 5.2.4.2-1: Resource URI variables for this resource**

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

### 5.2.4.3 Resource Standard Methods

#### 5.2.4.3.1 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

## 5.2.5 Resource: SessionManagementSubscriptionData

### 5.2.5.1 Description

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

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

### 5.2.5.2 Resource Definition

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

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

**Table 5.2.5.2-1: Resource URI variables for this resource**

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

### 5.2.5.3 Resource Standard Methods

#### 5.2.5.3.1 GET

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

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

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

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

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

Data type	P	Cardinality	Response codes	Description
array(SessionManagementSubscriptionData)	M	1..N	200 OK	Upon success, a response body containing the Session Management Subscription data shall be returned.

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

## 5.2.6 Resource: Amf3GppAccessRegistration

### 5.2.6.1 Description

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

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

### 5.2.6.2 Resource Definition

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

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

**Table 5.2.6.2-1: Resource URI variables for this resource**

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

### 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 [4] 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: "(imsi-[0-9]{5,15} nai-.+ msisdn-[0-9]{5,15} extid-[^@]+@[^@]+.[+])\$"

### 5.2.7.3 Resource Standard Methods

#### 5.2.7.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned
AmfNon3GppAccessRegistration	M	1	201 Created	Upon success, a response body containing a representation of the created Individual AmfNon3GppAccessRegistration resource shall be returned.

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

#### 5.2.7.3.2 PATCH

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

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

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

Name	Data type	P	Cardinality	Description
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 5.2.7.3.2-2 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: "^(imsi-[0-9]{5,15} nai-.+ msisdn-[0-9]{5,15} extid-[^@]+@[^@]+.[+])\$"

## 5.2.8.3 Resource Standard Methods

### 5.2.8.3.1 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

## 5.2.9 Resource: IndividualSmfRegistration

### 5.2.9.1 Description

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

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

### 5.2.9.2 Resource Definition

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

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



**Table 5.2.9.2-1: Resource URI variables for this resource**

Name	Definition
apiRoot	See clause 6.4.1
ueld	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: "^(imsi-[0-9]{5,15})nai-.- msisdn-[0-9]{5,15} extid-[^@]+@[^@]+.+)\$"
pduSessionId	The pduSessionId identifies an individual SMF registration.

### 5.2.9.3 Resource Standard Methods

#### 5.2.9.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

#### 5.2.9.3.2 DELETE

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
n/a			

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

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

### 5.2.9.3.3 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

## 5.2.10 Resource: OperatorSpecificData

### 5.2.10.1 Description

This resource represents the UE's operator specific data.

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

### 5.2.10.2 Resource Definition

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

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

**Table 5.2.10.2-1: Resource URI variables for this resource**

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

### 5.2.10.3 Resource Standard Methods

#### 5.2.10.3.1 GET

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

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

#### 5.2.10.3.2 PATCH

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

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

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

Name	Data type	P	Cardinality	Description
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 5.2.10.3.2-2 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.				

## 5.2.11 Resource: Smsf3GppAccessRegistration

### 5.2.11.1 Description

This resource represents registered SMSF for 3GPP access.

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

### 5.2.11.2 Resource Definition

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

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

**Table 5.2.11.2-1: Resource URI variables for this resource**

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

### 5.2.11.3 Resource Standard Methods

#### 5.2.11.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned
SmsfRegistration	M	1	201 Created	Upon success, a response body containing a representation of the created Individual SmsfRegistration for 3GPP access resource shall be returned.

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

### 5.2.11.3.2 DELETE

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned.

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

### 5.2.11.3.4 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

## 5.2.12 Resource: SmsfNon3GppAccessRegistration

### 5.2.12.1 Description

This resource represents registered SMSF for Non 3GPP access.

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

### 5.2.12.2 Resource Definition

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

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

**Table 5.2.12.2-1: Resource URI variables for this resource**

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

### 5.2.12.3 Resource Standard Methods

#### 5.2.12.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned
SmsfRegistration	M	1	201 Created	Upon success, a response body containing a representation of the created Individual SmsfRegistration for non 3GPP access resource shall be returned.

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

### 5.2.12.3.2 DELETE

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned.

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

### 5.2.12.3.4 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

## 5.2.12A 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: " <sup>^</sup> (imsi-[0-9]{5,15} nai-.+ msisdn-[0-9]{5,15} extid- <sup>^</sup> @]+@ <sup>^</sup> @+.+)\$"

### 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 [4] 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: - "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: "^(imsi-[0-9]{5,15} nai-.+ msisdn-[0-9]{5,15} extid-[^@]+@[^@]+.[+])\$"

## 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
MessageWaiting Data	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
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 [4] 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: - "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: "^(imsi-[0-9]{5,15} nai-+ msisdn-[0-9]{5,15} extid-[^\@]+@[^\@]+.[^\@]+)\$"
servingPlmnId	Represents the Serving PLMN ID (<MCC><MNC>) pattern: "^[0-9]{5,6}\$"

### 5.2.13.3 Resource Standard Methods

#### 5.2.13.3.1 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

## 5.2.14 Resource: 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) pattern: "^(imsi-[0-9]{5,15} nai-.+ msisdn-[0-9]{5,15} extid-[^\@]+\@[^\@]+\.[^\@]+\.)\$"

### 5.2.14.3 Resource Standard Methods

#### 5.2.14.3.1 GET

This method retrieves the provisioned data of a given UE.

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

### 5.2.14.3.2 PATCH

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

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

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

Name	Data type	P	Cardinality	Description
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 5.2.14.3.2-2 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.

## 5.2.15 Resource: SMSSubscriptionData

### 5.2.15.1 Description

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

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

### 5.2.15.2 Resource Definition

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

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

**Table 5.2.15.2-1: Resource URI variables for this resource**

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

## 5.2.15.3 Resource Standard Methods

### 5.2.15.3.1 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

## 5.2.16 Resource: SdmSubscriptions

### 5.2.16.1 Description

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

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

### 5.2.16.2 Resource Definition

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

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



**Table 5.2.16.2-1: Resource URI variables for this resource**

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

### 5.2.16.3 Resource Standard Methods

#### 5.2.16.3.1 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

Data type	P	Cardinality	Response codes	Description
array(SdmSubscription)	M	1..N	200 OK	Upon success, a response body containing the individual SDM subscriptions shall be returned.

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

#### 5.2.16.3.2 POST

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

## 5.2.17 Resource: IndividualSdmSubscription

### 5.2.17.1 Description

This resource represents an individual SDM Subscription for a UE.

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

### 5.2.17.2 Resource Definition

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

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

**Table 5.2.17.2-1: Resource URI variables for this resource**

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

### 5.2.17.3 Resource Standard Methods

#### 5.2.17.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned.
ProblemDetails	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: - USER_NOT_FOUND - 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 [4] 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.				

## 5.2.18 Resource: EeSubscriptions

### 5.2.18.1 Description

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

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

### 5.2.18.2 Resource Definition

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

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

**Table 5.2.18.2-1: Resource URI variables for this resource**

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

### 5.2.18.3 Resource Standard Methods

#### 5.2.18.3.1 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

#### 5.2.18.3.2 POST

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

Data type	P	Cardinality	Response codes	Description
EeSubscription	M	1	201 Created	Upon success, a response body containing a representation of the UeId's Individual subscription resource shall be returned.  The HTTP response shall include a "Location" HTTP header that contains the resource URI of the created resource.

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

## 5.2.19 Resource: IndividualEeSubscription

### 5.2.19.1 Description

This resource represents an individual EE Subscription for a UE.

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

### 5.2.19.2 Resource Definition

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

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

**Table 5.2.19.2-1: Resource URI variables for this resource**

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

### 5.2.19.3 Resource Standard Methods

#### 5.2.19.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned.
ProblemDetails	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 [4] 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
ueGroupld	Represents the identifier of the Group of UEs. For this resource, either External Group Identifier or any UE shall be present. Pattern: '^(\extgroupid-[^\@]+\@[^\@]+ anyUE)\$'
subslid	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 [4] 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.

## 5.2.20 Resource: SubscriptionDataSubscriptions

### 5.2.20.1 Description

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

### 5.2.20.2 Resource Definition

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

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

**Table 5.2.20.2-1: Resource URI variables for this resource**

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

### 5.2.20.3 Resource Standard Methods

#### 5.2.20.3.1 POST

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

### 5.2.20.3.2 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

### 5.2.20.3.3 DELETE

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

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

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

### 5.2.21.3.3 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
ueld	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: "(imsi-[0-9]{5,15})nai-.+ msisdn-[0-9]{5,15} extid-[^@]+@[^@]+.[+)\$"
servingPlmnId	Represents the Serving PLMN ID (<MCC><MNC>) pattern: "[0-9]{5,6}\$"

### 5.2.22.3 Resource Standard Methods

#### 5.2.3.3.1 GET

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
n/a			

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

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

### 5.2.23 Resource: IdentityData

#### 5.2.23.1 Description

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

#### 5.2.23.2 Resource Definition

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

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

**Table 5.2.23.2-1: Resource URI variables for this resource**

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



### 5.2.23.3 Resource Standard Methods

#### 5.2.23.3.1 GET

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

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

Name	Data type	P	Cardinality	Description
app-port-id	AppPortId	O	0..1	Application port identity, see 3GPP TS 23.501 [2] 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

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

## 5.2.24 Resource: AuthenticationStatus

### 5.2.24.1 Description

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

### 5.2.24.2 Resource Definition

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

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

**Table 5.2.24.2-1: Resource URI variables for this resource**

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

### 5.2.24.3 Resource Standard Methods

#### 5.2.24.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

### 5.2.24.3.2 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

### 5.2.24.3.3 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) pattern: See pattern of type Supi in 3GPP TS 29.571 [3]
servingNetworkName	Represents the Serving Network Name. 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) pattern: "^(imsi-[0-9]{5,15} nai-.+ .+) \$"

### 5.2.25.3 Resource Standard Methods

#### 5.2.25.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

### 5.2.25.3.2 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

## 5.2.25A Resource: AuthenticationUPU

### 5.2.25A.1 Description

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

### 5.2.25A.2 Resource Definition

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

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

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

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

## 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) pattern: "^(\imsi-[0-9]{5,15} nai-.+ .+) \$"

### 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) ..... pattern: " <sup>^(imsi-[0-9]{5,15}nai-.+ .+)\$"</sup>

### 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 GSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: " <sup>^(imsi-[0-9]{5,15} nai-.+ msisdn-[0-9]{5,15} extid-[<sup>^</sup>@]+@[<sup>^</sup>@]+.[.+]\$</sup> "
servingPlmnId	Represents the Serving PLMN ID (<MCC><MNC>) pattern: " <sup>^[0-9]{5,6}\$</sup> "

### 5.2.26.3 Resource Standard Methods

#### 5.2.26.3.1 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

Data type	P	Cardinality	Response codes	Description
ProvisionedDataSets	M	1	200 OK	Upon success, a response body containing the requested data sets shall be returned.

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

## 5.2.27 Resource: OperatorDeterminedBarringData

### 5.2.27.1 Description

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

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

### 5.2.27.2 Resource Definition

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

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

**Table 5.2.27.2-1: Resource URI variables for this resource**

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

### 5.2.27.3 Resource Standard Methods

#### 5.2.27.3.1 GET

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
n/a			

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

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

## 5.2.28 Resource: EeProfileData

### 5.2.28.1 Description

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

### 5.2.28.2 Resource Definition

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

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

**Table 5.2.28.2-1: Resource URI variables for this resource**

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

### 5.2.28.3 Resource Standard Methods

#### 5.2.28.3.1 GET

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

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

Name	Data type	P	Cardinality	Description
fields	array(string)	C	1..N	When the NF consumer only retrieves a subset of the resource, the " fields " query parameter shall be included. The " fields " query parameter contains the pointers of the attribute(s) to be retrieved.
supportedFeatures	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. pattern: '(extgroupid-[^\@]+@[^\@]+ anyUE)\$'

### 5.2.29.3 Resource Standard Methods

#### 5.2.29.3.1 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

### 5.2.29.3.2 POST

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

## 5.2.30 Resource: SharedData

### 5.2.30.1 Description

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

### 5.2.30.2 Resource Definition

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

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

**Table 5.2.30.2-1: Resource URI variables for this resource**

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

### 5.2.30.3 Resource Standard Methods

#### 5.2.30.3.1 GET

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

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

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

## 5.2.31 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) pattern: "(imsi-[0-9]{5,15} nai-.+ msisdn-[0-9]{5,15} extid-[^\@]+@[^\@]+.+)"
subsId	Identifier of the subscription (allocated by the UDM)

### 5.2.31.3 Resource Standard Methods

#### 5.2.31.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

#### 5.2.31.3.2 DELETE

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
n/a			

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

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

#### 5.2.31.3.3 GET

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



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

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
n/a			

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

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

#### 5.2.31.3.4 PATCH

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

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

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

Name	Data type	P	Cardinality	Description
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 5.2.31.3.2-2 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.				

## 5.2.32 Resource: ContextData

### 5.2.32.1 Description

This resource represents the ContextData for a UE ID.

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

### 5.2.32.2 Resource Definition

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

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

**Table 5.2.32.2-1: Resource URI variables for this resource**

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

### 5.2.32.3 Resource Standard Methods

#### 5.2.32.3.1 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

## 5.2.33 Resource: GroupIdentifiers

### 5.2.33.1 Description

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

### 5.2.33.2 Resource Definition

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

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

**Table 5.2.33.2-1: Resource URI variables for this resource**

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

### 5.2.33.3 Resource Standard Methods

#### 5.2.33.3.1 GET

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

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

Name	Data type	P	Cardinality	Description
supported-features	SupportedFeatures	O	0..1	see 3GPP TS 29.500 [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.  When present, it shall be set as following: - true: UE identifiers are required - 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.

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 [4] 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: - 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) 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	Snsai	M	1	
dnn	Dnn	M	1	
mtc-provider-information	MtcProviderInformation	M	1	

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.
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) 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) 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). 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.				

## 5.2.42 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) See pattern of type VarUeld in 3GPP TS 29.571 [3]
servingPlmnId	Represents the Serving PLMN ID (<MCC><MNC>) 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.

## 5.3 Notifications

### 5.3.1 General

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

### 5.3.2 Data Change Notification

The POST method shall be used for Data Change Notifications.

- For explicit subscriptions (i.e., subscriptions created under the "subs-to-notif" collection resource, the URI shall be as provided during the subscription procedure;
- For implicit subscriptions, the UDR shall use either a locally configured callback URI of the UDM, or the UDR may retrieve from NRF a default notification URI stored by UDM in NRF during the NF registration procedure.

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

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

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

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

Resource URI: {callbackReference}

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
DataChangeNotify	M	1	

**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.

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	
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	
SequenceNumber	5.4.2.23	
MessageWaitingData	5.4.2.24	
SmscData	5.4.2.25	
AuthMethod	5.4.3.3	
DataSetName	5.4.3.4	
ContextDataSetName	5.4.3.6	
SqnScheme	5.4.3.7	
Sign	5.4.3.8	
UeUpdateStatus	5.4.3.9	

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

Table 5.4.1-2: Nudr re-used Data Types

	Reference	Comments
AccessAndMobilitySubscriptionData	3GPP TS 29.503 [6]	Access and Mobility Subscription Data
SmfSelectionSubscriptionData	3GPP TS 29.503 [6]	SMF Selection Subscription Data
SessionManagementSubscriptionData	3GPP TS 29.503 [6]	Session Management Subscription Data
Amf3GppAccessRegistration	3GPP TS 29.503 [6]	
AmfNon3GppAccessRegistration	3GPP TS 29.503 [6]	The complete set of information relevant to the AMF where the UE has registered via non 3GPP access.
SmfRegistration	3GPP TS 29.503 [6]	
SmsfRegistration	3GPP TS 29.503 [6]	
SmsManagementSubscriptionData	3GPP TS 29.503 [6]	
SupportedFeatures	3GPP TS 29.571 [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]	
SmsSubscriptionData	3GPP TS 29.503 [6]	
PatchItem	3GPP TS 29.571 [3]	Data structure used for JSON patch.
SdmSubscription	3GPP TS 29.503 [6]	
EeSubscription	3GPP TS 29.503 [6]	
Uri	3GPP TS 29.571 [3]	
TraceData	3GPP TS 29.571 [3]	
Dnn	3GPP TS 29.571 [3]	Data Network Name
Snssai	3GPP TS 29.571 [3]	Single NSSAI
VarUeid	3GPP TS 29.571 [3]	String represents the SUPI or GPSI.
NfInstanceId	3GPP TS 29.571 [3]	
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]	
ExtGroupId	3GPP TS 29.503 [6]	External Group Identifier
PduSessionId	3GPP TS 29.571 [3]	
DateTime	3GPP TS 29.571 [3]	
UpuMac	3GPP TS 29.509 [15]	
5GVnGroupConfiguration	3GPP TS 29.503 [6]	
PatchResult	3GPP TS 29.571 [7]	
SupportedFeatures	3GPP TS 29.571 [7]	
AppPortId	3GPP TS 29.503 [6]	
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]	
AuthorizationData	3GPP TS 29.503 [6]	
EnhancedCoverageRestrictionData	3GPP TS 29.503 [6]	
LocationInfo	3GPP TS 29.503 [6]	
V2xSubscriptionData	3GPP TS 29.503 [6]	V2X Subscription Data
E164Number	3GPP TS 29.503 [6]	
NetworkNodeDiameterAddress	3GPP TS 29.503 [6]	
IpSmGwRegistration	3GPP TS 29.503 [6]	
LcsBroadcastAssistanceTypesData	3GPP TS 29.503 [6]	LCS Broadcast Assistance Data Types

## 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.  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 encOpcKey or encTopcKey if present). Values and their meaning are HPLMN-operator specific. It shall be present if the authentication method is "5G_AKA" or "EAP_AKA_PRIME" 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]. 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]. 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. Pattern: '^([A-Fa-f0-9]{4})\$'
algorithmId	string	C	0..1	Identifies a parameter set securely stored in the UDM (ARPF) that provides details on the algorithm and parameters used to generate authentication vectors. Values and their meaning are HPLMN-operator specific. It shall be present if the authentication method is "5G_AKA" or "EAP_AKA_PRIME" unless vector generation is to be done in the HSS.
encOpcKey	string	O	0..1	Hexstring of the encrypted OPC Key. Presence indicates that the provided value (decrypted) shall be used instead of the value derived from OP and K.
encTopcKey	string	O	0..1	Hexstring of the encrypted TOPC Key. Presence indicates that the provided value (decrypted) shall be used instead of the value derived from TOP and K.
vectorGenerationInHss	boolean	O	0..1	True indicates that the UDM needs to retrieve an Authentication Vector from the HSS; 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. 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. false (default): otherwise.
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" 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].

EXAMPLE: 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"
      }
    }
  }
}
```

## 5.4.2.4 Type: SmfRegList

Table 5.4.2.4-1: Definition of type SmfRegList

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

## 5.4.2.5 Type: SubscriptionDataSubscriptions

Table 5.4.2.5-1: Definition of type SubscriptionDataSubscriptions

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

## 5.4.2.6 Type: DataChangeNotify

Table 5.4.2.6-1: Definition of type DataChangeNotify

Attribute name	Data type	P	Cardinality	Description
originalCallbackReference	array(Uri)	C	1..N	Original Callback Reference shall be present if a UDM has subscribed to notification due to an request from an NF. If present it is Identifying the NF to which the UDM has to provide the notification of data change.
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.

## 5.4.2.8 Type: ProvisionedDataSets

Table 5.4.2.8-1: ProvisionedDataSets

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

## 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 present if UeUpdateStatus is "ACK_RECEIVED".

## 5.4.2.9A Type: UpuData

Table 5.4.2.9A-1: Definition of type UpuData

Attribute name	Data type	P	Cardinality	Description
provisioningTime	DateTime	M	1	Point in time of provisioning
ueUpdateStatus	UeUpdateStatus	M	1	status of the UPU data update procedure
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 present 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

## 5.4.2.20 Type: EeProfileData

Table 5.4.2.20-1: Definition of type EeProfileData

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

## 5.4.2.21 Void

## 5.4.2.22 Type: ContextDataSets

Table 5.4.2.22-1: ContextDataSets

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

## 5.4.3 Simple data types and enumerations

## 5.4.3.1 Introduction

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

## 5.4.3.2 Simple data types

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

Table 5.4.3.2-1: Simple data types

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

## 5.4.3.3 Enumeration: AuthMethod

Table 5.4.3.3-1: Enumeration AuthMethod

Enumeration value	Description
"5G_AKA"	5G AKA
"EAP_AKA_PRIME"	EAP AKA'
"EAP-TLS"	EAP TLS

## 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

## 5.4.3.5 Void

## 5.4.3.6 Enumeration: ContextDataSetName

Table 5.4.3.6-1: Enumeration ContextDataSetName

Enumeration value	Description
"AMF_3GPP"	AMF 3GPP Access Registration
"AMF_NON_3GPP"	SMF Non 3GPP Access Registration
"SDM_SUBSCRIPTIONS"	SDM Subscriptions
"EE_SUBSCRIPTIONS"	EE Subscriptions
"SMSF_3GPP"	SMSF 3GPP Access Registration
"SMSF_NON3GPP"	SMSF Non 3GPP Access Registration
"SUBS_TO_NOTIFY"	UDR Subscriptions
"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 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; or UPU data update has been sent to the AMF; Acknowledgement has been requested. In this state upuXmaclue shall be present; or NSSAI has been sent to the AMF or 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; or UPU data update has been acknowledged by the UE. In this state upuXmaclue and upuMaclue shall be present; or NSSAI data update has been acknowledged by the UE or CAG data update has been acknowledged by the 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 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 hosted in ETSI Forge, 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.
    © 2020, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).
    All rights reserved.

externalDocs:
  description: 3GPP TS 29.505 V16.4.0; 5G System; Usage of the Unified Data Repository Service for
  subscription data; Stage 3
  url: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.505/'

paths:
  /subscription-data/{ueId}/authentication-data/authentication-subscription:
    get:
      summary: Retrieves the authentication subscription data of a UE
      operationId: QueryAuthSubsData
      tags:
        - Authentication Data (Document)
      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/VarUeId'
        - name: supported-features
          in: query
          description: Supported Features
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      responses:

```

```

'200':
  description: Expected response to a valid request
  content:
    application/json:
      schema:
        $ref: '#/components/schemas/AuthenticationSubscription'
  default:
    $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/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
    '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)
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    requestBody:
      content:
        application/json:
          schema:
            $ref: 'TS29503_Nudm_UEAU.yaml#/components/schemas/AuthEvent'
    responses:

```

```

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

  get:
    summary: Retrieves the Authentication Status of a UE
    operationId: QueryAuthenticationStatus
    tags:
      - AuthEvent (Document)
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: fields
        in: query
        description: attributes to be retrieved
        required: false
        schema:
          type: array
          items:
            type: string
          minItems: 1
          style: form
          explode: false
      - name: supported-features
        in: query
        description: Supported Features
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29503_Nudm_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)
    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'

/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)
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - 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'
  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)
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - 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
      in: query
      description: Supported Features
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  responses:
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            $ref: 'TS29503_Nudm_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)
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - 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
      operationId: CreateAuthenticationSoR
      tags:
        - Authentication SoR (Document)
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: supported-features
          in: query
          description: Supported Features
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      requestBody:
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/SorData'
      responses:
        '204':
          description: Expected response to a valid request
          default:
            $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    get:
      summary: Retrieves the SoR acknowledgement information of a UE
      operationId: QueryAuthSoR
      tags:
        - Authentication SoR (Document)
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: supportedFeatures
          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'

  /subscription-data/{ueId}/ue-update-confirmation-data/upu-data:
    put:
      summary: To store the UPU acknowledgement information of a UE
      operationId: CreateAuthenticationUPU
      tags:
        - Authentication UPU (Document)
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: supported-features
          in: query
          description: Supported Features
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      requestBody:

```

```

    content:
      application/json:
        schema:
          $ref: '#/components/schemas/UpuData'
  responses:
    '204':
      description: Expected response to a valid request
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

get:
  summary: Retrieves the UPU acknowledgement information of a UE
  operationId: QueryAuthUPU
  tags:
    - Authentication UPU (Document)
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - name: supportedFeatures
      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-snsais:
put:
  summary: To store the NSSAI update acknowledgement information of a UE
  operationId: Create NSSAI update ack
  tags:
    - NSSAI update ack (Document)
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - name: supported-features
      in: query
      description: Supported Features
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  requestBody:
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/NssaiAckData'
  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)
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'

```

```

- name: supportedFeatures
  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)
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: supported-features
        in: query
        description: Supported Features
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    requestBody:
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/CagAckData'
    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)
    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/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)
    parameters:

```

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- name: ueId
  in: path
  description: UE id
  required: true
  schema:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
- name: servingPlmnId
  in: path
  description: PLMN ID
  required: true
  schema:
    $ref: '#/components/schemas/VarPlmnId'
- name: dataset-names
  in: query
  description: List of dataset names
  style: form
  explode: false
  schema:
    $ref: '#/components/schemas/DatasetNames'
responses:
  '200':
    description: Expected response to a valid request
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/ProvisionedDataSets'
  default:
    $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)
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - name: servingPlmnId
      in: path
      description: PLMN ID
      required: true
      schema:
        $ref: '#/components/schemas/VarPlmnId'
    - name: fields
      in: query
      description: attributes to be retrieved
      required: false
      schema:
        type: array
        items:
          type: string
        minItems: 1
      style: form
      explode: false
    - name: supported-features
      in: query
      description: Supported Features
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    - name: If-None-Match
      in: header
      description: Validator for conditional requests, as described in RFC 7232, 3.2
      schema:
        type: string
    - name: If-Modified-Since
      in: header
      description: Validator for conditional requests, as described in RFC 7232, 3.3
      schema:
        type: string
  responses:
    '200':
      description: Expected response to a valid request
      content:

```

```

    application/json:
      schema:
        $ref: '#/components/schemas/AccessAndMobilitySubscriptionData'
  headers:
    Cache-Control:
      description: Cache-Control containing max-age, as described in RFC 7234, 5.2
      schema:
        type: string
    ETag:
      description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
      schema:
        type: string
    Last-Modified:
      description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
      schema:
        type: string
  default:
    $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)
    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:

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        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
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: servingPlmnId
        in: path
        description: PLMN ID
        required: true
        schema:
          $ref: '#/components/schemas/VarPlmnId'
      - name: single-nssai
        in: query
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/VarSnssai'
            description: single NSSAI
            required: false
      - name: dnn
        in: query
        description: DNN
        required: false
        schema:
          $ref: '#/components/schemas/Dnn'
      - name: fields
        in: query
        description: attributes to be retrieved
        required: false
        schema:
          type: array
          items:
            type: string
          minItems: 1
          style: form
          explode: false
      - name: supported-features
        in: query
        description: Supported Features
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      - name: If-None-Match
        in: header
        description: Validator for conditional requests, as described in RFC 7232, 3.2
        schema:
          type: string
      - name: If-Modified-Since
        in: header
        description: Validator for conditional requests, as described in RFC 7232, 3.3
        schema:
          type: string
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              type: array
              items:

```

```

    $ref: '#/components/schemas/SessionManagementSubscriptionData'
    minItems: 1
  headers:
    Cache-Control:
      description: Cache-Control containing max-age, as described in RFC 7234, 5.2
      schema:
        type: string
    ETag:
      description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
      schema:
        type: string
    Last-Modified:
      description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
      schema:
        type: string
  default:
    $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)
    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)
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    requestBody:
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/Amf3GppAccessRegistration'
    responses:
      '204':
        description: Upon success, an empty response body shall be returned

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'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)
  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)
  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

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        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)
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
  requestBody:
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/AmfNon3GppAccessRegistration'
  responses:
    '204':
      description: Upon success, an empty response body shall be returned
    '201':
      description: Created
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/Amf3GppAccessRegistration'
      headers:
        Location:
          description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/amf-non-3gpp-access'
          required: true
          schema:
            type: string
      default:
        $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)
  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

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      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)
    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)
    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

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    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: CreateSmfContextNon3gpp
  tags:
    - SMF Registration (Document)
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - name: pduSessionId
      in: path
      description: PDU session id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
  requestBody:
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/SmfRegistration'
  responses:
    '201':
      description: Upon success, a response body containing a representation of the created
      Individual SmfRegistration resource shall be returned
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/SmfRegistration'
      headers:
        Location:
          description: 'Contains the URI of the newly created resource, according to the
      structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/smf-
      registrations/{pduSessionId}'
          required: true
          schema:
            type: string
    '204':
      description: No content
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

delete:
  summary: To remove an individual SMF context data of a UE the UDR
  operationId: DeleteSmfContext
  tags:
    - SMF Registration (Document)
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - name: pduSessionId
      in: path
      description: PDU session id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'

```

```

responses:
  '204':
    description: Upon success, an empty response body shall be returned.
    default:
      $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)
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: fields
        in: query
        description: attributes to be retrieved
        required: false
        schema:
          type: array
          items:
            type: string
          minItems: 1
          style: form
          explode: false
      - name: supported-features
        in: query
        description: Supported Features
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      - name: If-None-Match
        in: header
        description: Validator for conditional requests, as described in RFC 7232, 3.2
        schema:
          type: string
      - name: If-Modified-Since
        in: header
        description: Validator for conditional requests, as described in RFC 7232, 3.3
        schema:
          type: string
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              type: object
              additionalProperties:
                $ref: '#/components/schemas/OperatorSpecificDataContainer'
        headers:
          Cache-Control:
            description: Cache-Control containing max-age, as described in RFC 7234, 5.2
            schema:
              type: string
          ETag:
            description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
            schema:
              type: string
          Last-Modified:
            description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
            schema:
              type: string
        default:
          $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)
    parameters:
      - name: ueId

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    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/smsf-3gpp-access:
  put:
    summary: Create the SMSF context data of a UE via 3GPP access
    operationId: CreateSmsfContext3gpp
    tags:
      - SMSF 3GPP Registration (Document)
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    requestBody:
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/SmsfRegistration'
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      '201':
        description: Created
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/SmsfRegistration'
        headers:
          Location:
            description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/smsf-3gpp-access'
            required: true
            schema:
              type: string
        default:
          $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)

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```

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)
  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/smf-non-3gpp-access:
put:
  summary: Create the SMSF context data of a UE via non-3GPP access
  operationId: CreateSmsfContextNon3gpp
  tags:
    - SMSF Non-3GPP Registration (Document)
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
  requestBody:
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/SmsfRegistration'
  responses:
    '204':
      description: Upon success, an empty response body shall be returned
    '201':
      description: Created
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/SmsfRegistration'

```

```

      headers:
        Location:
          description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/smsf-non-3gpp-
access'
          required: true
          schema:
            type: string
      default:
        $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)
  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)
  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/ip-sm-gw:
  put:
    summary: Create the IP-SM-GW context data of a UE
    operationId: CreateIpSmGwContext
    tags:
      - IP-SM-GW Registration (Document)
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true

```

```
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
  requestBody:
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/IpSmGwRegistration'
  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)
  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)
  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)
  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/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)
    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/MessageWaitingData'
    responses:
      '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)
    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)
    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)
  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/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)
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - name: servingPlmnId
      in: path
      description: PLMN ID
      required: true
      schema:
        $ref: '#/components/schemas/VarPlmnId'
    - name: supported-features
      in: query
      description: Supported Features
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

```

```

- name: If-None-Match
  in: header
  description: Validator for conditional requests, as described in RFC 7232, 3.2
  schema:
    type: string
- name: If-Modified-Since
  in: header
  description: Validator for conditional requests, as described in RFC 7232, 3.3
  schema:
    type: string
responses:
  '200':
    description: Expected response to a valid request
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/SmsManagementSubscriptionData'
headers:
  Cache-Control:
    description: Cache-Control containing max-age, as described in RFC 7234, 5.2
    schema:
      type: string
  ETag:
    description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
    schema:
      type: string
  Last-Modified:
    description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
    schema:
      type: string
default:
  $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)
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - name: servingPlmnId
      in: path
      description: PLMN ID
      required: true
      schema:
        $ref: '#/components/schemas/VarPlmnId'
    - name: supported-features
      in: query
      description: Supported Features
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    - name: If-None-Match
      in: header
      description: Validator for conditional requests, as described in RFC 7232, 3.2
      schema:
        type: string
    - name: If-Modified-Since
      in: header
      description: Validator for conditional requests, as described in RFC 7232, 3.3
      schema:
        type: string
  responses:
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/SmsSubscriptionData'
      headers:
        Cache-Control:
          description: Cache-Control containing max-age, as described in RFC 7234, 5.2

```

```

    schema:
      type: string
  ETag:
    description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
    schema:
      type: string
  Last-Modified:
    description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
    schema:
      type: string
  default:
    $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)
    parameters:
      - name: ueId
        in: path
        description: pp data for a UE
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: supported-features
        in: query
        description: Supported Features
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      - name: If-None-Match
        in: header
        description: Validator for conditional requests, as described in RFC 7232, 3.2
        schema:
          type: string
      - name: If-Modified-Since
        in: header
        description: Validator for conditional requests, as described in RFC 7232, 3.3
        schema:
          type: string
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/PpData'
        headers:
          Cache-Control:
            description: Cache-Control containing max-age, as described in RFC 7234, 5.2
            schema:
              type: string
          ETag:
            description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
            schema:
              type: string
          Last-Modified:
            description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
            schema:
              type: string
      '403':
        description: Forbidden
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: modify the provisioned parameter data
    operationId: ModifyPpData
    tags:
      - ProvisionedParameterData (Document)
    parameters:

```

```

- name: ueId
  in: path
  description: pp data for a UE
  required: true
  schema:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
- 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/ee-subscriptions:
get:
  summary: Retrieves the ee subscriptions of a UE
  operationId: Queryeesubscriptions
  tags:
    - Event Exposure Subscriptions (Collection)
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - name: supported-features
      in: query
      description: Supported Features
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  responses:
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            type: array
            items:
              $ref: '#/components/schemas/EeSubscription'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

post:
  summary: Create individual EE subscription
  operationId: CreateEesubscriptions
  tags:
    - Event Exposure Subscriptions (Collection)
  parameters:
    - name: ueId
      in: path
      description: UE ID
      required: true
      schema:

```

```

    $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
  requestBody:
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/EeSubscription'
    required: true
  responses:
    '201':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/EeSubscription'
      headers:
        Location:
          description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/ee-
subscriptions/{subsId}'
          required: true
          schema:
            type: string
      default:
        $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)
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    requestBody:
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/EeSubscription'
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      '404':
        description: update of non-existing resource is rejected
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  delete:
    summary: Deletes a eeSubscription
    operationId: RemoveeeSubscriptions
    tags:
      - Event Exposure Subscription (Document)
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        description: Unique ID of the subscription to remove
        schema:
          type: string
    responses:
      '204':

```

```

    description: Expected response to a successful subscription removal
  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)
    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)
    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: 'TS29571_CommonData.yaml#/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)
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    requestBody:
      content:
        application/json:
          schema:
            type: array
            items:
              $ref: '#/components/schemas/AmfSubscriptionInfo'
            minItems: 1
          required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  delete:
    summary: Deletes AMF Subscription Info for an eeSubscription
    operationId: RemoveAmfSubscriptionsInfo
    tags:
      - Event AMF Subscription Info (Document)
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    responses:
      '204':
        description: Expected response to a successful subscription removal
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: modify the AMF Subscription Info
    operationId: ModifyAmfSubscriptionInfo
    tags:
      - AmfSubscriptionInfo (Document)
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
      - 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)
  parameters:
    - name: ueId
      in: path
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - name: subsId
      in: path
      required: true
      schema:
        type: string
  responses:
    '200':
      description: OK
      content:
        application/json:
          schema:
            type: array
            items:
              $ref: '#/components/schemas/AmfSubscriptionInfo'
            minItems: 1
      default:
        $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)
  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)
  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)
    parameters:
      - name: ueGroupId
        in: path
        required: true
        schema:
          $ref: '#/components/schemas/VarUeGroupId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    requestBody:
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/EeSubscription'
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      '404':
        description: update of non-existing resource is rejected
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      default:
        $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)
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)
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)
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/{ueId}/ee-profile-data:
  get:
    summary: Retrieves the ee profile data of a UE
    operationId: QueryEEData
    tags:
      - Event Exposure Data (Document)
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: fields
        in: query
        description: attributes to be retrieved
        required: false
        schema:
          type: array
          items:
            type: string
        style: form
        explode: false
      - name: supportedFeatures
        in: query
        description: Supported Features
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/EeProfileData'
      default:
        $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)
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: supported-features
        in: query
        description: Supported Features
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              type: array

```

```

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

post:
  summary: Create individual sdm subscription
  operationId: CreateSdmSubscriptions
  tags:
    - SDM Subscriptions (Collection)
  parameters:
    - name: ueId
      in: path
      description: UE ID
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
  requestBody:
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/SdmSubscription'
    required: true
  responses:
    '201':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/SdmSubscription'
      headers:
        Location:
          description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/sdm-
subscriptions/{subsId}'
          required: true
          schema:
            type: string
      default:
        $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)
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    requestBody:
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/SdmSubscription'
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      '404':
        description: update of non-existing resource is rejected
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

delete:
  summary: Deletes a sdmsubscriptions
  operationId: RemovesdmSubscriptions

```

```

tags:
  - SDM Subscription (Document)
parameters:
  - name: ueId
    in: path
    required: true
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
  - name: subsId
    in: path
    required: true
    description: Unique ID of the subscription to remove
    schema:
      type: string
responses:
  '204':
    description: Expected response to a successful subscription removal
  '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)
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)
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/shared-data:
  get:
    summary: retrieve shared data
    operationId: GetSharedData
    tags:
      - Retrieval of shared data
    parameters:
      - name: shared-data-ids
        in: query
        description: List of shared data ids
        required: true
        style: form
        explode: false
        schema:
          $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SharedDataIds'
      - name: supportedFeatures
        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/subs-to-notify:
  post:
    summary: Subscription data subscriptions
    operationId: SubscriptionDataSubscriptions
    tags:
      - Subs To Notify (Collection)
    requestBody:
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/SubscriptionDataSubscriptions'
      required: true
    responses:
      '201':
        description: Expected response to a valid request
        content:
          application/json:
            schema:

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      $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 Nofify (Collection)
  parameters:
    - name: ue-id
      in: query
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - name: supported-features
      in: query
      description: Supported Features
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  responses:
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            type: array
            items:
              $ref: '#/components/schemas/SubscriptionDataSubscriptions'
    default:
      $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)
  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)
    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)
    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:
              $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 subscriptionDataSubscription identified by subsId
    operationId: QuerySubscriptionDataSubscriptions
    tags:
      - Subs To Notify (Document)
    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)
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: servingPlmnId
        in: path
        description: PLMN ID
        required: true
        schema:
          $ref: '#/components/schemas/VarPlmnId'
      - name: If-None-Match
        in: header
        description: Validator for conditional requests, as described in RFC 7232, 3.2
        schema:
          type: string
      - name: If-Modified-Since
        in: header
        description: Validator for conditional requests, as described in RFC 7232, 3.3
        schema:
          type: string
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
        headers:
          Cache-Control:
            description: Cache-Control containing max-age, as described in RFC 7234, 5.2
            schema:
              type: string
          ETag:
            description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
            schema:
              type: string
          Last-Modified:
            description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
            schema:
              type: string
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/identity-data:
  get:
    summary: Retrieve identity data by SUPI or GPSI
    operationId: GetIdentityData
    tags:
      - Query Identity Data by SUPI or GPSI (Document)
    parameters:
      - name: ueId
        in: path

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    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: '#/components/schemas/IdentityData'
    headers:
      Cache-Control:
        description: Cache-Control containing max-age, as described in RFC 7234, 5.2
        schema:
          type: string
      ETag:
        description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
        schema:
          type: string
      Last-Modified:
        description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
        schema:
          type: string
    default:
      $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)
  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)
  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
    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: 'TS29503_Nudm_SDM.yaml#/components/schemas/GroupIdentifiers'
        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)
    parameters:
      - name: gpsi
        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)
    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
    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
    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)
  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
  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
    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)
    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: 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
      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
    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)
    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
    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/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}/{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'

components:
  schemas:
    AuthenticationSubscription:
      type: object
      required:
        - authenticationMethod
      properties:
        authenticationMethod:
          $ref: '#/components/schemas/AuthMethod'
        encPermanentKey:
          type: string
        protectionParameterId:
          type: string
        sequenceNumber:
          $ref: '#/components/schemas/SequenceNumber'
        authenticationManagementField:
          type: string
          pattern: '^[A-Za-f0-9]{4}$'
        algorithmId:
          type: string
        encOpcKey:
          type: string
        encTopcKey:
          type: string
        vectorGenerationInHss:
          type: boolean
          default: false
        n5gcAuthMethod:
          $ref: '#/components/schemas/AuthMethod'
        rgAuthenticationInd:
          type: boolean
          default: false
    SequenceNumber:
      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
    indLength:
      type: integer
      minimum: 0
    difSign:
      $ref: '#/components/schemas/Sign'

SqnScheme:
  anyOf:
    - type: string
      enum:
        - GENERAL
        - NON_TIME_BASED
        - TIME_BASED
    - type: string
Sign:
  type: string
  enum:
    - POSITIVE
    - NEGATIVE
VarPlmnId:
  type: string
  pattern: '^[0-9]{5,6}$'
DatasetNames:
  type: array
  items:
    $ref: '#/components/schemas/DataSetName'
  minItems: 1
  uniqueItems: true
DataSetName:
  anyOf:
    - type: string
      enum:
        - AM
        - SMF_SEL
        - SMS_SUB
        - SM
        - TRACE
        - SMS_MNG
        - LCS_PRIVACY
        - LCS_MO
        - LCS_BCA
        - V2X
    - type: string
ProvisionedDataSets:
  type: object
  properties:
    amData:
      $ref: '#/components/schemas/AccessAndMobilitySubscriptionData'
    smfSelData:
      $ref: '#/components/schemas/SmfSelectionSubscriptionData'
    smsSubsData:
      $ref: '#/components/schemas/SmsSubscriptionData'
    smData:
      type: array
      items:
        $ref: '#/components/schemas/SessionManagementSubscriptionData'
    traceData:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
    smsMngData:
      $ref: '#/components/schemas/SmsManagementSubscriptionData'
    lcsPrivacyData:
      $ref: '#/components/schemas/LcsPrivacyData'
    lcsMoData:
      $ref: '#/components/schemas/LcsMoData'
    lcsBcaData:
      $ref: '#/components/schemas/LcsBroadcastAssistanceTypesData'
    v2xData:
      $ref: '#/components/schemas/V2xSubscriptionData'

```

```

AccessAndMobilitySubscriptionData:
  $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/AccessAndMobilitySubscriptionData'
SmfSelectionSubscriptionData:
  $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SmfSelectionSubscriptionData'
VarSnsai:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/Snsai'
Dnn:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
SessionManagementSubscriptionData:
  $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SessionManagementSubscriptionData'
Amf3GppAccessRegistration:
  $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/Amf3GppAccessRegistration'
AmfNon3GppAccessRegistration:
  $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/AmfNon3GppAccessRegistration'
SmfRegistration:
  $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/SmfRegistration'
SmsfRegistration:
  $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/SmsfRegistration'
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:
  $ref: 'TS29503_Nudm_NIDDAU.yaml#/components/schemas/AuthorizationData'
EnhancedCoverageRestrictionData:
  $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/EnhancedCoverageRestrictionData'
V2xSubscriptionData:
  $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/V2xSubscriptionData'
LcsBroadcastAssistanceTypesData:
  $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/LcsBroadcastAssistanceTypesData'
OperatorSpecificDataContainer:
  type: object
  required:
    - dataType
    - value
  properties:
    dataType:
      type: string
      enum:
        - string
        - integer
        - number
        - boolean
        - object
    dataTypeDefinition:
      type: string
  value:
    oneOf:
      - type: string
      - type: integer
      - type: number
      - type: boolean
      - type: object
    supportedFeatures:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
AuthMethod:
  anyOf:
    - type: string
      enum:
        - 5G_AKA
        - EAP_AKA_PRIME
        - EAP_TLS
    - type: string
PpData:
  $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/PpData'
EeSubscription:
  $ref: 'TS29503_Nudm_EE.yaml#/components/schemas/EeSubscription'
VarUeGroupId:
  type: string
  pattern: '^([extgroupid-|^@]+@[^@]+|anyUE)$'
SdmSubscription:
  $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SdmSubscription'

```

```

SmfRegList:
  type: array
  items:
    $ref: '#/components/schemas/SmfRegistration'
SubscriptionDataSubscriptions:
  type: object
  required:
    - monitoredResourceUris
    - callbackReference
  properties:
    ueId:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    callbackReference:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    originalCallbackReference:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    monitoredResourceUris:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    expiry:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    sdmSubscription:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SdmSubscription'
    subscriptionId:
      type: string

    supported-features:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
DataChangeNotify:
  type: object
  properties:
    originalCallbackReference:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
      minItems: 1
    ueId:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    notifyItems:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/NotifyItem'
      minItems: 1
    sdmSubscription:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SdmSubscription'
    additionalSdmSubscriptions:
      type: array
      items:
        $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SdmSubscription'
      minItems: 1
    subscriptionDataSubscriptions:
      type: array
      items:
        $ref: '#/components/schemas/SubscriptionDataSubscriptions'

IdentityData:
  type: object
  properties:
    supiList:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      minItems: 1
    gpsiList:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
      minItems: 1
SorData:
  type: object
  properties:
    provisioningTime:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    ueUpdateStatus:
      $ref: '#/components/schemas/UeUpdateStatus'
    sorXmacIue:
      $ref: 'TS29509_Nausf_SoRProtection.yaml#/components/schemas/SorMac'

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```
    sorMacIue:
      $ref: 'TS29509_Nausf_SorProtection.yaml#/components/schemas/SorMac'
    required:
      - provisioningTime
      - ueUpdateStatus

UpuData:
  type: object
  properties:
    provisioningTime:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    ueUpdateStatus:
      $ref: '#/components/schemas/UeUpdateStatus'
    upuXmacIue:
      $ref: 'TS29509_Nausf_UPUProtection.yaml#/components/schemas/UpuMac'
    upuMacIue:
      $ref: 'TS29509_Nausf_UPUProtection.yaml#/components/schemas/UpuMac'
  required:
    - provisioningTime
    - ueUpdateStatus

NssaiAckData:
  type: object
  properties:
    provisioningTime:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    ueUpdateStatus:
      $ref: '#/components/schemas/UeUpdateStatus'
  required:
    - provisioningTime
    - ueUpdateStatus

CagAckData:
  type: object
  properties:
    provisioningTime:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    ueUpdateStatus:
      $ref: '#/components/schemas/UeUpdateStatus'
  required:
    - provisioningTime
    - ueUpdateStatus

UeUpdateStatus:
  type: string
  enum:
    - NOT_SENT
    - SENT_NO_ACK_REQUIRED
    - WAITING_FOR_ACK
    - ACK_RECEIVED

EeProfileData:
  type: object
  properties:
    restrictedEventTypes:
      type: array
      items:
        $ref: 'TS29503_Nudm_EE.yaml#/components/schemas/EventType'
    supportedFeatures:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

AmfSubscriptionInfo:
  type: object
  required:
    - amfInstanceId
    - subscriptionId
  properties:
    amfInstanceId:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
    subscriptionId:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    subsChangeNotifyCorrelationId:
      type: string

ContextDatasetNames:
  type: array
  items:
    $ref: '#/components/schemas/ContextDataSetName'
  minItems: 1
  uniqueItems: true
```

```

ContextDataSetName:
  anyOf:
    - type: string
      enum:
        - AMF_3GPP
        - AMF_NON_3GPP
        - SDM_SUBSCRIPTIONS
        - EE_SUBSCRIPTIONS
        - SMSF_3GPP
        - SMSF_NON_3GPP
        - SUBS_TO_NOTIFY
        - SMF_REG
        - IP_SM_GW
    - type: string
ContextDataSets:
  type: object
  properties:
    amf3Gpp:
      $ref: '#/components/schemas/Amf3GppAccessRegistration'
    amfNon3Gpp:
      $ref: '#/components/schemas/AmfNon3GppAccessRegistration'
    sdmSubscriptions:
      type: array
      items:
        $ref: '#/components/schemas/SdmSubscription'
      minItems: 1
    eeSubscriptions:
      type: array
      items:
        $ref: '#/components/schemas/EeSubscription'
      minItems: 1
    smsf3GppAccess:
      $ref: '#/components/schemas/SmsfRegistration'
    smsfNon3GppAccess:
      $ref: '#/components/schemas/SmsfRegistration'
    subscriptionDataSubscriptions:
      type: array
      items:
        $ref: '#/components/schemas/SubscriptionDataSubscriptions'
      minItems: 1
    smfRegistrations:
      $ref: '#/components/schemas/SmfRegList'
    ipSmGw:
      $ref: '#/components/schemas/IpSmGwRegistration'

IpSmGwRegistration:
  $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/IpSmGwRegistration'

MessageWaitingData:
  type: object
  properties:
    mwdList:
      type: array
      items:
        $ref: '#/components/schemas/SmscData'
      minItems: 1

SmscData:
  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'

```



## 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	VarUeId used in TS 29.505	15.1.0
2018-09	CT#81	CP-182058	0012	2	F	OpenAPI schema for SubscriptionData	15.1.0
2018-09	CT#81	CP-182058	0018	1	F	Supported Features Negotiation	15.1.0
2018-09	CT#81	CP-182041	0015	1	B	Nudr Id Translation	15.1.0
2018-09	CT#81	CP-182043	0001	2	B	Add support for 5G Trace to Nudr	15.1.0
2018-12	CT#82	CP-183016	0026	-	F	Corrections in Query Parameters	15.2.0
2018-12	CT#82	CP-183016	0030	-	F	29505 CR data change notification data type	15.2.0
2018-12	CT#82	CP-183016	0021	1	F	Pattern correction	15.2.0
2018-12	CT#82	CP-183016	0022	1	F	Session Management Subscription Data	15.2.0
2018-12	CT#82	CP-183016	0019	1	F	Shared Data	15.2.0
2018-12	CT#82	CP-183016	0029	1	F	29505 CR cardinality	15.2.0
2018-12	CT#82	CP-183016	0025	2	F	Clarification of contents of SUPI list	15.2.0
2018-12	CT#82	CP-183016	0032	-	F	Cache control and conditional request header addition	15.2.0
2018-12	CT#82	CP-183016	0024	3	F	Introduction of Barring of Roaming in 5GC	15.2.0
2018-12	CT#82	CP-183016	0037	1	F	Session Management Subscription Data	15.2.0
2018-12	CT#82	CP-183016	0039	1	F	Authorized Event Types	15.2.0
2018-12	CT#82	CP-183016	0040	1	F	Group Subscriptions	15.2.0
2018-12	CT#82	CP-183016	0041	1	F	Location header in 201 response	15.2.0
2018-12	CT#82	CP-183016	0038	2	F	Active AmfSubscriptions storage	15.2.0
2018-12	CT#82	CP-183016	0036	2	F	lifetime of subscription	15.2.0
2018-12	CT#82	CP-183158	0028	3	F	Definition of Authentication Data for steering of roaming	15.2.0
2018-12	CT#82	CP-183159	0027	4	F	Definition of Authentication Status	15.2.0
2018-12	CT#82	CP-183160	0020	5	F	Definition of Authentication data	15.2.0
2018-12	CT#82	CP-183187	0023	3	F	Get multiple datasets for ProvisionedData	15.2.0
2018-12	CT#82	CP-183249	0042	-	F	Corrections on openAPI	15.2.0
2019-03	CT#83	CP-190179	0043		F	CR 0019r1 was not correctly implemented	15.3.0
2019-03	CT#83	CP-190179	0044		F	CR 0020r5 was not correctly implemented	15.3.0
2019-03	CT#83	CP-190179	0045		F	CR 0021r1 was not correctly implemented	15.3.0
2019-03	CT#83	CP-190179	0046		F	CR 0023r3 was not correctly implemented	15.3.0
2019-03	CT#83	CP-190179	0047		F	CR 0038r2 was not correctly implemented	15.3.0
2019-03	CT#83	CP-190179	0048		F	CR 0039r1 was not correctly implemented	15.3.0
2019-03	CT#83	CP-190179	0049		F	CR 0040r1 was not correctly implemented	15.3.0
2019-03	CT#83	CP-190179	0050		F	Correction of annex B	15.3.0
2019-03	CT#83	CP-190179	0052	2	F	Clarification on use of PUT	15.3.0
2019-03	CT#83	CP-190179	0054		F	Missing Headlines	15.3.0
2019-03	CT#83	CP-190179	0055	2	F	Sequence Number	15.3.0
2019-03	CT#83	CP-190179	0056	1	F	Retrieval of multiple context data sets	15.3.0
2019-03	CT#83	CP-190179	0057	3	F	UDR Subscriptions	15.3.0
2019-03	CT#83	CP-190179	0058	1	F	Data Set Names in URI Query Parameters	15.3.0
2019-03	CT#83	CP-190179	0060	2	F	AuthenticationSubscription correction	15.3.0
2019-03	CT#83	CP-190179	0061	2	F	SOR data update status	15.3.0
2019-03	CT#83	CP-190168	0062	1	F	3GPP TS 29.505 API version update	15.3.0
2019-06	CT#84	CP-191032	0065		F	CR 0049 was not correctly implemented	15.4.0
2019-06	CT#84	CP-191032	0066		F	CR 0050 was not correctly implemented	15.4.0
2019-06	CT#84	CP-191032	0067		F	CR 0054 was not correctly implemented	15.4.0

2019-06	CT#84	CP-191032	0068		F	CR 0056r1 was not correctly implemented	15.4.0
2019-06	CT#84	CP-191032	0070		F	Update of the SubstoNotify	15.4.0
2019-06	CT#84	CP-191032	0071		F	Update of the EESubscription	15.4.0
2019-06	CT#84	CP-191032	0064	1	F	Update Individual Subscription	15.4.0
2019-06	CT#84	CP-191032	0072	1	F	missing enties of data type summary table	15.4.0
2019-06	CT#84	CP-191032	0073	1	F	correction on operationId	15.4.0
2019-06	CT#84	CP-191032	0074	1	F	404 error response	15.4.0
2019-06	CT#84	CP-191032	0076	1	F	Correct the GET Request Body of AmfNon3GppAccessRegistration resource	15.4.0
2019-06	CT#84	CP-191032	0077	1	F	Default Notification URI	15.4.0
2019-06	CT#84	CP-191032	0081	1	F	OdbData Correction	15.4.0
2019-06	CT#84	CP-191032	0086	2	F	Storage of OpenAPI specification files	15.4.0
2019-06	CT#84	CP-191032	0075	3	F	CR 0062r1 was not correctly implemented	15.4.0
2019-06	CT#84	CP-191032	0079	2	F	Subscriptions Deletion	15.4.0
2019-06	CT#84	CP-191032	0087		F	PduSessionId	15.4.0
2019-06	CT#84	CP-191032	0063	2	F	UE Parameter Update (UPU)	15.4.0
2019-06	CT#84	CP-191032	0078	2	F	Group Identifier Translation	15.4.0
2019-06	CT#84	CP-191032	0080	2	F	Authentication Subscription	15.4.0
2019-06	CT#84	CP-191032	0069	2	F	CR 0062r1 was not correctly implemented	15.4.0
2019-06	CT#84	CP-191032	0088	1	F	Protection Parameter ID	15.4.0
2019-06	CT#84	CP-191032	0089	1	F	Copyright Note in YAML file	15.4.0
2019-06	CT#84	CP-191032	0083	6	F	SubscriptionDataSubscriptions identification	15.4.0
2019-09	CT#85	CP-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 Resurce 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

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# History

<b>Document history</b>		
V16.3.0	July 2020	Publication
V16.4.0	November 2020	Publication