ETSI TS 129 505 V17.9.0 (2023-01)

5G;
5G System;
Usage of the Unified Data Repository services for Subscription Data;
Stage 3
(3GPP TS 29.505 version 17.9.0 Release 17)

Reference
RTS/TSGC-0429505vh90

Keywords
5G

ETSI

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Foreword

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

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

Version x.y.z

where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
  - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

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

shall indicates a mandatory requirement to do something

shall not indicates an interdiction (prohibition) to do something

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

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

should indicates a recommendation to do something

should not indicates a recommendation not to do something

may indicates permission to do something

need not indicates permission not to do something

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

can indicates that something is possible

cannot indicates that something is impossible

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

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

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

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

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

In addition:

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

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

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

1 Scope

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

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

2 References

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[17] 3GPP TS 29.519: "5G System; Usage of the Unified Data Repository service for Policy Data, Application Data and Structured Data for Exposure; Stage 3".

[18] 3GPP TS 23.316: "Wireless and wireline convergence access support for the 5G System (5GS); Stage 2".

[19] 3GPP TS 29.510: "Network Function Repository Services; Stage 3".

[20] 3GPP TS 29.563: "Home Subscriber Server (HSS) services for interworking with Unified Data Management (UDM); Stage 3".

[21] 3GPP TS 29.508: "5G System; Session Management Event Exposure Service; Stage 3".

3 Definitions and abbreviations

3.1 Definitions

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

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

3.2 Abbreviations

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

5GC	5G Core
AMF	Access and Mobility Management Function
DNN	Data Network Name
GPSI	Generic Public Subscription Identifier
JSON	Javascript Object Notation
SMF	Session Management Function
SMS	Short Message Service
SMSF	SMS Function
SUPI	Subscription Permanent Identifier
UDM	Unified Data Management
UDR	Unified Data Repository

4 Overview

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

5 Usage of Nudr_DataRepository Service

5.1 Introduction

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

5.2 Resources

5.2.1 Overview

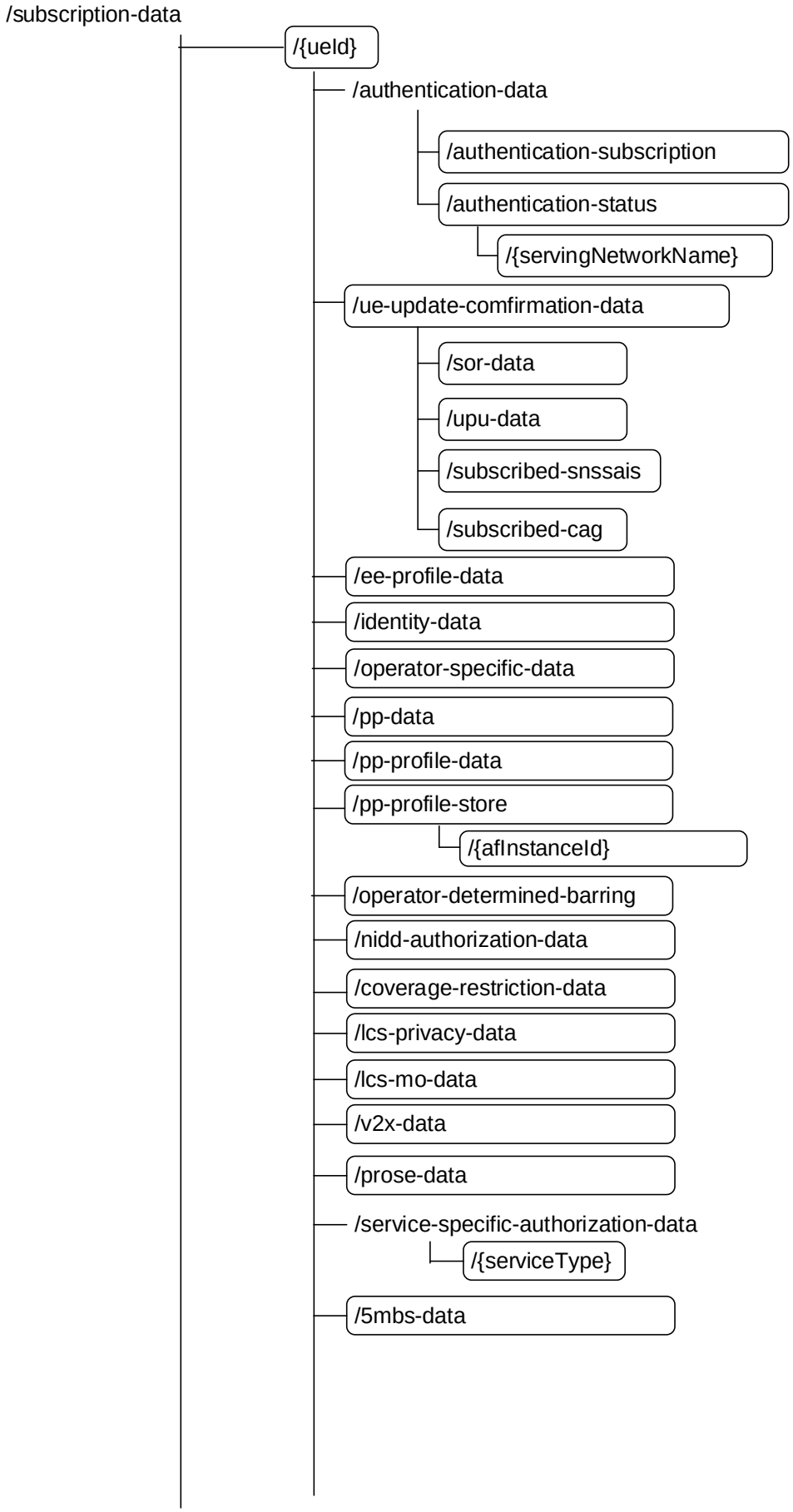
/subscription-data
/{ueId}
/authentication-data
/authentication-subscription
/authentication-status
/{servingNetworkName}
/ue-update-comfirmation-data
/sor-data
/upu-data
/subscribed-snssais
/subscribed-cag
/ee-profile-data
/identity-data
/operator-specific-data
/pp-data
/pp-profile-data
/pp-profile-store
/{afInstanceId}
/operator-determined-barring
/nidd-authorization-data
/coverage-restriction-data
/lcs-privacy-data
/lcs-mo-data
/v2x-data
/prose-data
/service-specific-authorization-data
/{serviceType}
/5mbs-data

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

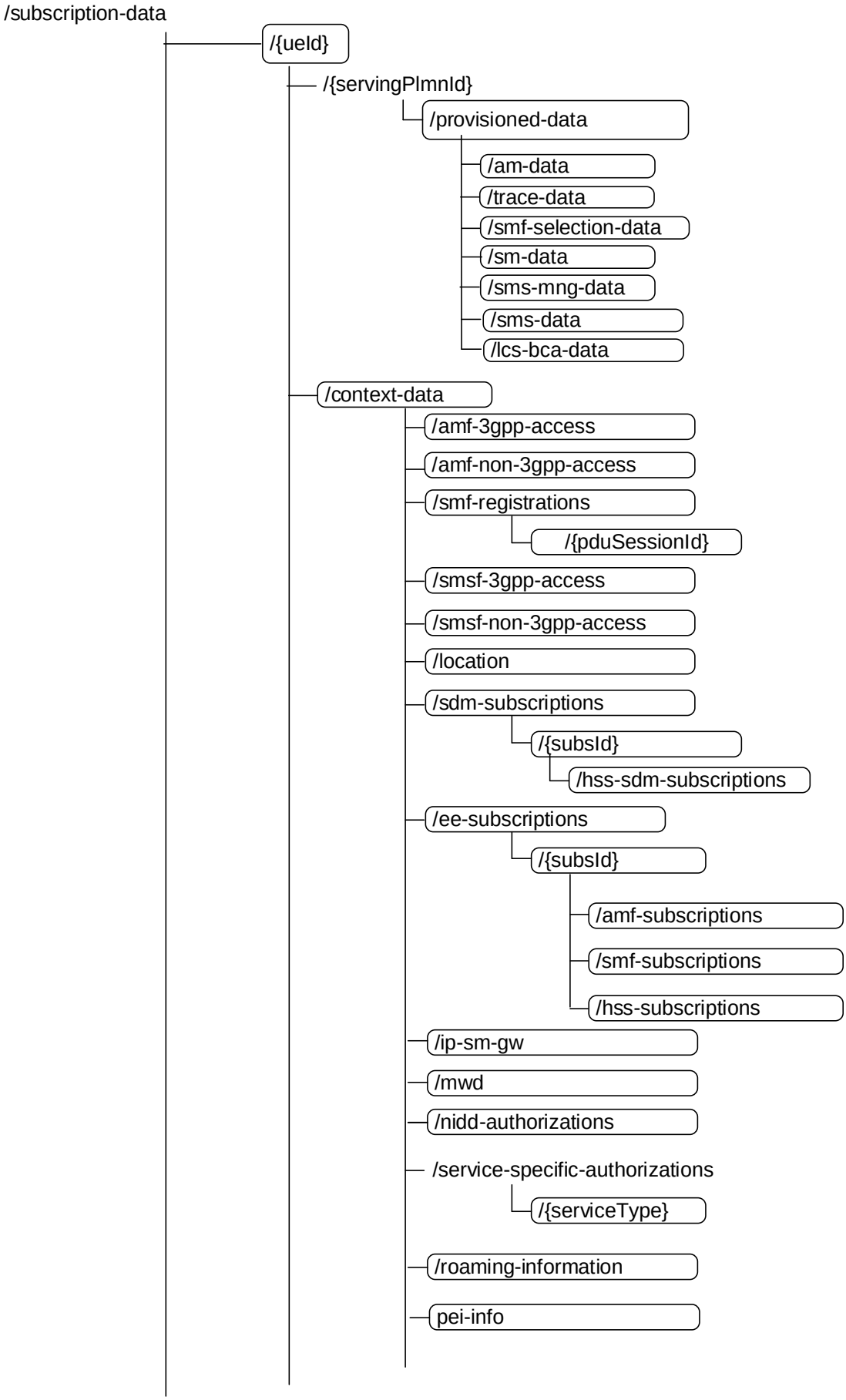
/subscription-data
/{ueId}
/{servingPlmnId}
/provisioned-data
/am-data
/trace-data
/smf-selection-data
/sm-data
/sms-mng-data
/sms-data
/lcs-bca-data
/context-data
/amf-3gpp-access
/amf-non-3gpp-access
/smf-registrations
/{pduSessionId}
/smsf-3gpp-access
/smsf-non-3gpp-access
/location
/sdm-subscriptions
/{subsId}
/hss-sdm-subscriptions
/ee-subscriptions
/{subsId}
/amf-subscriptions
/smf-subscriptions
/hss-subscriptions
/ip-sm-gw
/mwd
/nidd-authorizations
/service-specific-authorizations
/{serviceType}
/roaming-information
pei-info

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

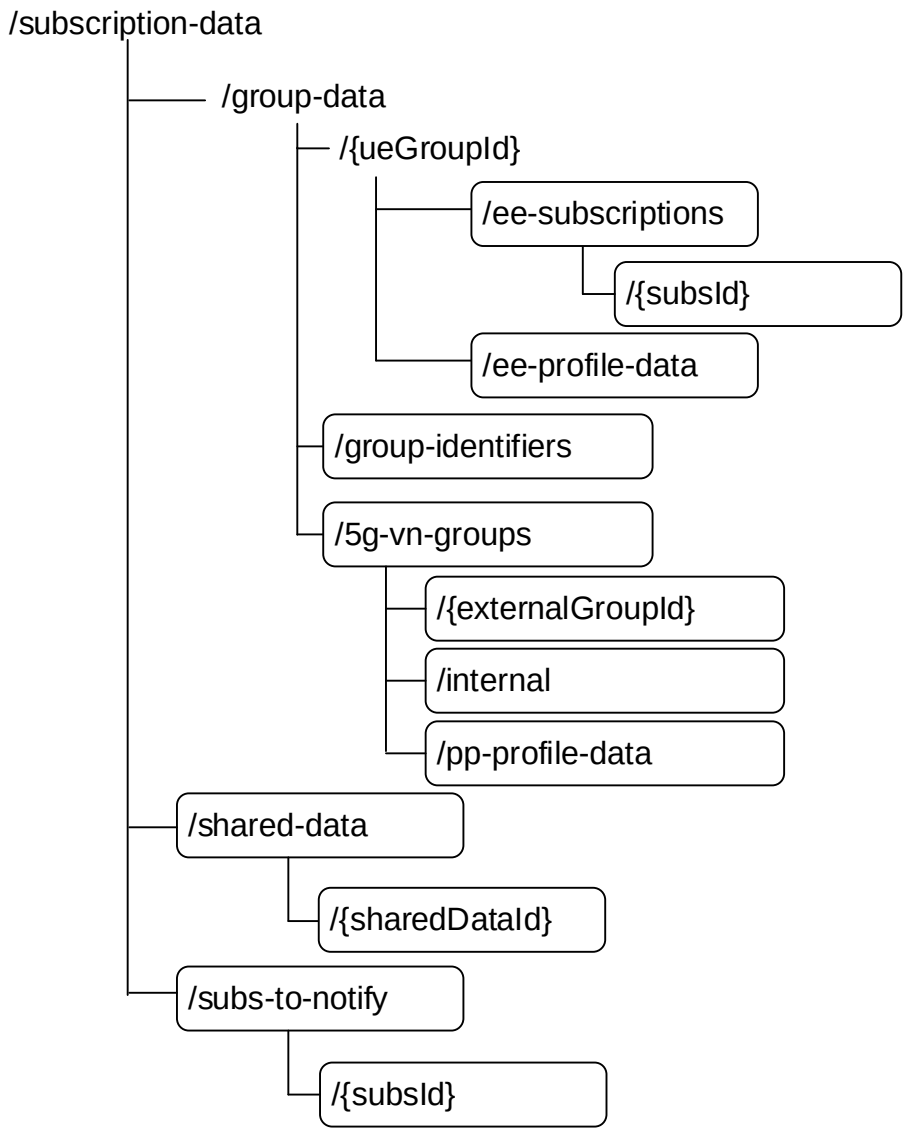

Figure 5.2.1-3: Resource URI sub-level structure for subscription data (cont.)

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

Table 5.2.1-1: Resources and methods overview

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

IndividualAuthenticationStatus (Document)	/subscription-data/{ueId}/authentication-data/authentication-status/{servingNetworkName}	Y	PUT	When the feature "PerUePerSnAuthStatus" is supported, store a UE's Individual authentication status
			GET	When the feature "PerUePerSnAuthStatus" is supported, retrieve a UE's Individual authentication status
			DELETE	When the feature "PerUePerSnAuthStatus" is supported, delete a UE's Individual authentication status
ProvisionedData (Document)	/subscription-data/{ueId}/{servingPlmnId}/provisioned-data	N	GET	Retrieve the UE's subscribed Provisioned Data
AccessAndMobilitySubscriptionData (Document)	/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/am-data	Y	GET	Retrieve the UE's subscribed Access and Mobility Data
SmfSelectionSubscriptionData (Document)	/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/smf-selection-subscription-data	Y	GET	Retrieve the UE's subscribed SMF Selection Data
SessionManagementSubscriptionData (Document)	/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sm-data	Y	GET	Retrieve the UE's subscribed SM Subscription Data
ContextData (Document)	/subscription-data/{ueId}/context-data	N	GET	Retrieve the UE's context Data
Amf3GppAccessRegistration (Document)	/subscription-data/{ueId}/context-data/amf-3gpp-access	Y	PUT	Create and Update the AMF registration for 3GPP access
			PATCH	Modify the AMF registration for 3GPP access
			GET	Retrieve the AMF registration information for 3GPP access
AmfNon3GppAccessRegistration (Document)	/subscription-data/{ueId}/context-data/amf-non-3gpp-access	Y	PUT	Update the AMF registration for non 3GPP access
			PATCH	Modify the AMF registration for non 3GPP access
			GET	Retrieve the AMF registration information for non 3GPP access
SmfRegistrations (Store)	/subscription-data/{ueId}/context-data/smf-registrations	Y	GET	Retrieve the list of the SMF registrations
IndividualSmfRegistration (Document)	/subscription-data/{ueId}/context-data /smf-registrations/{pduSessionId}	Y	PUT	Store an individual SMF registration identified by PDU Session Id
			DELETE	Delete an individual SMF registration
			GET	Retrieve individual SMF registration
			PATCH	Modify the individual SMF registration
OperatorSpecificData (Document)	/subscription-data/{ueId}/operator-specific-data	Y	GET	retrieve the operator specific subscription data of a UE
			PATCH	modify the operator specific subscription data of a UE
			PUT	create/update the operator specific subscription data of a UE

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

EeSubscriptions (Collection)	/subscription-data/{ueId}/context-data/ee-subscriptions	N	GET	Retrieve EE subscriptions
			POST	Create an EE subscription
IndividualEeSubscription (Document)	/subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}	N	PUT	Update an individual EE subscription
			DELETE	Delete an individual EE subscription
			PATCH	Update an individual EE subscription
			GET	Retrieve an individual EE subscription
AmfSubscriptionInfo (Document)	/subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}/amf-subscriptions	N	PUT	Store information related to the Amf-EE-Subscription response
			DELETE	Delete the Amf-EE-subscriptions
			GET	Retrieve AMF-subscriptions
			PATCH	Update AMF-subscriptions
SmfSubscriptionInfo (Document)	/subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}/smf-subscriptions	N	PUT	Store information related to the received Smf-EE-Subscription response
			DELETE	Delete the Smf-EE-subscriptions
			GET	Retrieve SMF-subscriptions
			PATCH	Update SMF-subscriptions
HssSubscriptionInfo (Document)	/subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}/hss-subscriptions	N	PUT	Store information related to the Hss-EE-Subscriptions
			DELETE	Delete the Hss-EE-subscriptions
			GET	Retrieve Hss-EE-subscriptions
			PATCH	Update Hss-EE-subscriptions
EeProfileData (Document)	/subscription-data/{ueId}/ee-profile-data	Y	GET	Retrieve the UE's subscribed EE profile data.
ProvisionedParamenterData (Document)	/subscription-data/{ueId}/pp-data	y	PATCH	Update of provisioned parameters.
			GET	Retrieves the UE's provisioned parameters.
PpProfileData (Document)	/subscription-data/{ueId}/pp-profile-data	Y	GET	Retrieve the UE's subscribed PP profile data.
ProvisionedParameterDataEntries (Store)	/subscription-data/{ueId}/pp-data-store	Y	GET	Retrieve a Provisioned Parameter Data of multiple Entries
ProvisionedParameterDataEntry (Document)	/subscription-data/{ueId}/pp-data-store/{afInstanceId}	Y	PUT	Create a Provisioned Parameter Data Entry
			DELETE	Delete a Provisioned Parameter Data Entry
			GET	Retrieve a Provisioned Parameter Data Entry
SMSSubscriptionData (Document)	/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sms-data	Y	GET	Retrieve the UE's subscribed SMS subscription data.
SubscriptionDataSubscriptions (Collection)	/subscription-data/subs-to-notify	N	GET	Retrieve existing subscriptions
			POST	Create a subscription, i.e. subscribe a node to receive notification for change of data

			DELETE	Deletes multiple subscriptions for a given UE.
IndividualSubscriptionDataSubscription (Document)	/subscription-data/subs-to-notify/{subsId}	N	DELETE	Delete the subscription identified by {subsId}, i.e. unsubscribe a node to receive notification for change of data
			PATCH	Update an individual Subscription to notification
			GET	Retrieve an individual Subscription to notification
EeGroupSubscriptions (Collection)	/subscription-data/group-data/{ueGroupId}/ee-subscriptions	N	GET	Retrieve EE subscriptions for groups of UEs
			POST	Create an EE subscription for groups of UEs
IndividualEeGroupSubscription (Document)	/subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subsId}	N	PUT	Update an individual EE subscription for a group of UEs
			DELETE	Delete an individual EE subscription for a group of UEs
			PATCH	Update an individual EE subscription for a group of UEs
			GET	Retrieve an individual EE subscription for a group of UEs

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

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

			PUT	Update or create the PEI of the 5GC/EPC domains

5.2.2 Resource: AuthenticationSubscription

5.2.2.1 Description

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

NOTE 1: This resource contains security-sensitive attributes, such as the long-term key of the UE (see "encPermanentKey" attribute of the AuthenticationSubscription data type in clause 5.4.2.2). Read/write access can be authorized by means of OAuth2.

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

5.2.2.2 Resource Definition

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

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

Table 5.2.2.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Identifier of the UE. It may be the SUPI (see 3GPP TS 23.501 [4], clause 5.9.2) of the UE or a pseudonym in SUPI format (e.g. the GLI or GCI of the UE; see 3GPP TS 23.316 [18], clauses 4.7.3 and 4.7.4). Pattern: See pattern of type Supi in 3GPP TS 29.571 [3].

5.2.2.3 Resource Standard Methods

5.2.2.3.1 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.2.3.2 PATCH

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

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

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

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

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

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

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

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

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon successful modification there is no body in the response message. (NOTE 2)
PatchResult	M	1	200 OK	Upon success, the execution report is returned. (NOTE 2)
ProblemDetails	O	0..1	403 Forbidden	If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modifiedand 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: See pattern of type VarUeId 3GPP TS 29.571 [3]
servingPlmnId	Represents the Serving PLMN ID (consisting of MCC, MNC) or SNPN (consisting of MCC, MNC and NID); see clauses 12.1 and 17.2 in 3GPP TS 23.003 [5]. pattern: "^[0-9]{5,6}(-[A-Fa-f0-9]{11})?$"

5.2.3.3 Resource Standard Methods

5.2.3.3.1 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

Data type	P	Cardinality	Response codes	Description
AccessAndMobilitySubscriptionData	M	1	200 OK	Upon success, a response body containing the Access and Mobility Subscription Data shall be returned. For the roaming and SNPN scenarios, see the description of the 'roamingRestrictions' attribute in the Table 6.1.6.2.4-1 of 3GPP TS 29.503 [6].
NOTE: In addition common data structures as listed in table 5.5-1 are supported.				

5.2.4 Resource: SmfSelectionSubscriptionData

5.2.4.1 Description

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

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

5.2.4.2 Resource Definition

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

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

Table 5.2.4.2-1: Resource URI variables for this resource

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

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

5.2.5.3 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	When present without Slice Differentiator (sd), all slices identified by the given Slice/Service Type (sst) and any sd value (if any) shall be considered matching the query parameter.
dnn	Dnn	O	0..1	
fields	array(string)	C	1..N	When the NF consumer only retrieves a subset of the resource, the " fields " query parameter shall be included. The " fields " query parameter contains the pointers of the attribute(s) to be retrieved.
supported-features	SupportedFeatures	O	0..1	see 3GPP TS 29.500 [8] clause 6.6

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

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.6 Resource: Amf3GppAccessRegistration

5.2.6.1 Description

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

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

5.2.6.2 Resource Definition

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

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

Table 5.2.6.2-1: Resource URI variables for this resource

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

5.2.6.3 Resource Standard Methods

5.2.6.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
Amf3GppAccess Registration	M	1	The AMF registration for 3GPP access is replaced with the received information.

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

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

5.2.6.3.2 PATCH

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

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

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

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

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

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

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

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

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

5.2.6.3.3 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.7 Resource: AmfNon3GppAccessRegistration

5.2.7.1 Description

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

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

5.2.7.2 Resource Definition

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

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

Table 5.2.7.2-1: Resource URI variables for this resource

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

5.2.7.3 Resource Standard Methods

5.2.7.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

5.2.7.3.2 PATCH

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

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

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

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

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

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

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

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

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

5.2.7.3.3 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.8 Resource: SmfRegistrations

5.2.8.1 Description

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

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

5.2.8.2 Resource Definition

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

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

Table 5.2.8.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See clause 6.4.1
ueId	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeId 3GPP TS 29.571 [3]

5.2.8.3 Resource Standard Methods

5.2.8.3.1 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.9 Resource: IndividualSmfRegistration

5.2.9.1 Description

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

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

5.2.9.2 Resource Definition

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

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

Table 5.2.9.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See clause 6.4.1
ueId	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeId 3GPP TS 29.571 [3]
pduSessionId	The pduSessionId identifies an individual SMF registration.

5.2.9.3 Resource Standard Methods

5.2.9.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

5.2.9.3.2 DELETE

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.9.3.3 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.9.3.4 PATCH

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

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

Table 5.2.9.3.4-1: URI query parameters supported by the PATCH method on this resource

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

This method shall support the request data structures specified in table 5.2.9.3.4-2 and the response data structures and response codes specified in table 5.2.9.3.4-3.

Table 5.2.9.3.4-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
array(PatchItem)	M	1..N	Contains the delta data to the SMF registration data

Table 5.2.9.3.4-3: Data structures supported by the PATCH Response Body on this resource

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

5.2.10 Resource: OperatorSpecificData

5.2.10.1 Description

This resource represents the UE's operator specific data.

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

5.2.10.2 Resource Definition

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

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

Table 5.2.10.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeId 3GPP TS 29.571 [3]
NOTE: The content of ueId SUPI or GPSI depends on the service.	

5.2.10.3 Resource Standard Methods

5.2.10.3.1 GET

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

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

Data type	P	Cardinality	Response codes	Description
map(OperatorSpecificDataContainer)	M	0..N	200 OK	Upon success, a response body containing a map shall be returned. The key of the map is an operator-specific data element name and the value is the operator-specific data of such data element, for the current UE (identified by the {ueId} variable in the resource path). If the resource does not contain any keys, the response consists of an empty JSON object (empty map).
NOTE: In addition common data structures as listed in table 5.5-1 are supported.				

5.2.10.3.2 PATCH

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

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

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

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

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

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

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

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

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

5.2.10.3.3 PUT

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

Table 5.2.10.3.3-1: URI query parameters supported by the PUT method on this resource

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

This method shall support the request data structures specified in table 5.2.10.3.3-2 and the response data structure, and response codes specified in table 5.2.10.3.3-3.

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

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

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

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

5.2.10.3.4 DELETE

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

Table 5.2.10.3.4-1: URI query parameters supported by the DELETE method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.10.3.4-2 and the response data structure, and response codes specified in table 5.2.10.3.4-3.

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

Data type	P	Cardinality	Description
n/a			

Table 5.2.10.3.4-3: Data structures supported by the DELETE Response Body on this resource

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

5.2.11 Resource: Smsf3GppAccessRegistration

5.2.11.1 Description

This resource represents registered SMSF for 3GPP access.

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

5.2.11.2 Resource Definition

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

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

Table 5.2.11.2-1: Resource URI variables for this resource

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

5.2.11.3 Resource Standard Methods

5.2.11.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned
SmsfRegistration	M	1	201 Created	Upon success, a response body containing a representation of the created Individual SmsfRegistration for 3GPP access resource shall be returned.
SmsfRegistration	M	1	200 OK	Upon success, a response body containing a representation of the updated Individual SmsfRegistration for 3GPP access resource shall be returned.
NOTE: In addition common data structures as listed in table 5.5-1 are supported.				

5.2.11.3.2 DELETE

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

5.2.11.3.4 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.12 Resource: SmsfNon3GppAccessRegistration

5.2.12.1 Description

This resource represents registered SMSF for Non 3GPP access.

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

5.2.12.2 Resource Definition

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

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

Table 5.2.12.2-1: Resource URI variables for this resource

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

5.2.12.3 Resource Standard Methods

5.2.12.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned
SmsfRegistration	M	1	201 Created	Upon success, a response body containing a representation of the created Individual SmsfRegistration for non 3GPP access resource shall be returned.
SmsfRegistration	M	1	200 OK	Upon success, a response body containing a representation of the updated Individual SmsfRegistration for non 3GPP access resource shall be returned.
NOTE: In addition common data structures as listed in table 5.5-1 are supported.				

5.2.12.3.2 DELETE

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

5.2.12.3.4 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.12A Resource: IpSmGwRegistration

5.2.12A.1 Description

This resource represents the registered IP-SM-GW.

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

5.2.12A.2 Resource Definition

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

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

Table 5.2.12A.2-1: Resource URI variables for this resource

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

5.2.12A.3 Resource Standard Methods

5.2.12A.3.1 PUT

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

Table 5.2.12A.3.1-1: URI query parameters supported by the PUT method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.12A.3.1-2 and the response data structures and response codes specified in table 5.2.12A.3.1-3.

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

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

Table 5.2.12A.3.1-3: Data structures supported by the PUT Response Body on this resource

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

5.2.12A.3.2 DELETE

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

Table 5.2.12A.3.2-1: URI query parameters supported by the DELETE method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.12A.3.2-2 and the response data structures and response codes specified in table 5.2.12A.3.2-3.

Table 5.2.12A.3.2-2: Data structures supported by the DELETE Request Body on this resource

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

Table 5.2.12A.3.2-3: Data structures supported by the DELETE Response Body on this resource

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

5.2.12A.3.3 PATCH

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

Table 5.2.12A.3.3-1: URI query parameters supported by the PATCH method on this resource

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

This method shall support the request data structures specified in table 5.2.12A.3.3-2 and the response data structures and response codes specified in table 5.2.12A.3.3-3.

Table 5.2.12A.3.3-2: Data structures supported by the PATCH Request Body on this resource

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

Table 5.2.12A.3.3-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon successful modification there is no body in the response message. (NOTE 2)
PatchResult	M	1	200 OK	Upon success, the execution report is returned. (NOTE 2)
ProblemDetails	O	0..1	403 Forbidden	One or more attributes are not allowed to be modified according to e.g. policy or local configuration. The invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified. The cause attribute may be used to convey any of the following errors: - "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1.
NOTE 1: In addition, common data structures as listed in table 5.5-1 are supported. NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult.				

5.2.12A.3.4 GET

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

Table 5.2.12A.3.4-1: URI query parameters supported by the GET method on this resource

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

This method shall support the request data structures specified in table 5.2.12A.3.4-2 and the response data structures and response codes specified in table 5.2.12A.3.4-3.

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.12B Resource: MessageWaitingData

5.2.12B.1 Description

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

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

5.2.12B.2 Resource Definition

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

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

Table 5.2.12B.2-1: Resource URI variables for this resource

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

5.2.12B.3 Resource Standard Methods

5.2.12B.3.1 PUT

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

Table 5.2.12B.3.1-1: URI query parameters supported by the PUT method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.12B.3.1-2 and the response data structures and response codes specified in table 5.2.12B.3.1-3.

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

Data type	P	Cardinality	Description
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
MessageWaitingData	M	1	201 Created	If the resource did not already exist, and it is successfully created, a response body containing a representation of the created Individual MessageWaitingData resource shall be returned.
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.12B.3.2 DELETE

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

Table 5.2.12B.3.2-1: URI query parameters supported by the DELETE method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.12B.3.2-2 and the response data structures and response codes specified in table 5.2.12B.3.2-3.

Table 5.2.12B.3.2-2: Data structures supported by the DELETE Request Body on this resource

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

Table 5.2.12B.3.2-3: Data structures supported by the DELETE Response Body on this resource

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

5.2.12B.3.3 PATCH

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

Table 5.2.12B.3.3-1: URI query parameters supported by the PATCH method on this resource

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

This method shall support the request data structures specified in table 5.2.12B.3.3-2 and the response data structures and response codes specified in table 5.2.12B.3.3-3.

Table 5.2.12B.3.3-2: Data structures supported by the PATCH Request Body on this resource

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

Table 5.2.12B.3.3-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon successful modification there is no body in the response message. (NOTE 2)
PatchResult	M	1	200 OK	Upon success, the execution report is returned. (NOTE 2)
ProblemDetails	O	0..1	403 Forbidden	One or more attributes are not allowed to be modified according to e.g. policy or local configuration. The invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified. The cause attribute may be used to convey any of the following errors: - "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1.
NOTE 1: In addition, common data structures as listed in table 5.5-1 are supported. NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult.				

5.2.12B.3.4 GET

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

Table 5.2.12B.3.4-1: URI query parameters supported by the GET method on this resource

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

This method shall support the request data structures specified in table 5.2.12B.3.4-2 and the response data structures and response codes specified in table 5.2.12B.3.4-3.

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.13 Resource: SMSManagementSubscriptionData

5.2.13.1 Description

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

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

5.2.13.2 Resource Definition

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

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

Table 5.2.13.2-1: Resource URI variables for this resource

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

5.2.13.3 Resource Standard Methods

5.2.13.3.1 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.14 Resource: ProvisionedParamenterData

5.2.14.1 Description

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

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

5.2.14.2 Resource Definition

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

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

Table 5.2.14.2-1: Resource URI variables for this resource

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

5.2.14.3 Resource Standard Methods

5.2.14.3.1 GET

This method retrieves the provisioned data of a given UE.

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.14.3.2 PATCH

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

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

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

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

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

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

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

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

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

5.2.14A Resource: PpProfileData

5.2.14A.1 Description

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

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

5.2.14A.2 Resource Definition

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

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

Table 5.2.14A.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See clause 6.1.1
ueId	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3]

5.2.14A.3 Resource Standard Methods

5.2.14A.3.1 GET

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

Table 5.2.14A.3.1-1: URI query parameters supported by the GET method on this resource

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

This method shall support the request data structures specified in table 5.2.14A.3.1-2 and the response data structures and response codes specified in table 5.2.14A.3.1-3.

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.14B Resource: ProvisionedParameterDataEntry

5.2.14B.1 Description

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

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

5.2.14B.2 Resource Definition

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

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

Table 5.2.14B.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Identifier SUPI, GPSI or Group Id or anyUE (see 3GPP TS 23.501 [4] clause 5.9.2) - If representing a single UE, this parameter shall contain the GPSI or SUPI. pattern: See pattern of type VarUeId 3GPP TS 29.571 [3] - If representing a group of UEs, this parameter shall contain the External GroupId. pattern: "^extgroupid-[^@]+@[^@]+$" - If representing any UE, this parameter shall contain "anyUE". pattern: "^anyUE$"
afInstanceId	The string identifying the originating AF

5.2.14B.3 Resource Standard Methods

5.2.14B.3.1 PUT

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

Table 5.2.14B.3.1-1: URI query parameters supported by the PUT method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.14B.3.1-2 and the response data structures and response codes specified in table 5.2.14B.3.1-3.

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

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

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

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

5.2.14B.3.2 DELETE

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

Table 5.2.14B.3.2-1: URI query parameters supported by the DELETE method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.14B.3.2-2 and the response data structures and response codes specified in table 5.2.14B.3.2-3.

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

Data type	P	Cardinality	Description
n/a			

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

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned
ProblemDetails	O	0..1	404 Not Found	The "cause" attribute may be used to indicate one of the following application errors: - USER_NOT_FOUND
NOTE: In addition, common data structures as listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] are supported.				

5.2.14B.3.3 GET

This method retrieves the provisioned data of a given UE.

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

Table 5.2.14B.3.3-1: URI query parameters supported by the GET method on this resource

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

This method shall support the request data structures specified in table 5.2.14B.4.1-2 and the response data structures and response codes specified in table 5.2.14B.4.1-3.

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

Data type	P	Cardinality	Description
N/A			

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

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

5.2.14C Resource: ProvisionedParameterDataEntries

5.2.14C.1 Description

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

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

5.2.14C.2 Resource Definition

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

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

Table 5.2.14C.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Identifier SUPI, GPSI or Group Id or anyUE (see 3GPP TS 23.501 [4] clause 5.9.2) - If representing a single UE, this parameter shall contain the GPSI or SUPI. pattern: See pattern of type VarUeId 3GPP TS 29.571 [3] - If representing a group of UEs, this parameter shall contain the External GroupId. pattern: "^extgroupid-[^@]+@[^@]+$" - If representing any UE, this parameter shall contain "anyUE". pattern: "^anyUE$"

5.2.14C.3.1 GET

This method retrieves the provisioned data of a given UE.

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

Table 5.2.14C.3.1-1: URI query parameters supported by the GET method on this resource

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

This method shall support the request data structures specified in table 5.2.14C.4.1-2 and the response data structures and response codes specified in table 5.2.14C.4.1-3.

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

Data type	P	Cardinality	Description
N/A			

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

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

5.2.15 Resource: SMSSubscriptionData

5.2.15.1 Description

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

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

5.2.15.2 Resource Definition

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

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

Table 5.2.15.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
Ue-id	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeId 3GPP TS 29.571 [3]
serving-plmn-id	Represents the Serving PLMN ID (<MCC><MNC>) pattern: "^[0-9]{5,6}$"

5.2.15.3 Resource Standard Methods

5.2.15.3.1 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.16 Resource: SdmSubscriptions

5.2.16.1 Description

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

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

5.2.16.2 Resource Definition

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

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

Table 5.2.16.2-1: Resource URI variables for this resource

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

5.2.16.3 Resource Standard Methods

5.2.16.3.1 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.16.3.2 POST

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

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

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

5.2.17 Resource: IndividualSdmSubscription

5.2.17.1 Description

This resource represents an individual SDM Subscription for a UE.

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

5.2.17.2 Resource Definition

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

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

Table 5.2.17.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeId 3GPP TS 29.571 [3]
subsId	Identifier of the subscription (as allocated by the UDR)

5.2.17.3 Resource Standard Methods

5.2.17.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned.
ProblemDetails	O	0..1	404 Not Found	If the resource does not exist, a response code of 404 Not Found shall be returned.
NOTE: In addition common data structures as listed in table 5.5-1 are supported.				

5.2.17.3.2 DELETE

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
n/a			

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

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned.
ProblemDetails	O	0..1	404 Not Found	The "cause" attribute may be used to indicate one of the following application errors: - 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 [8] clause 6.6

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

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

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

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

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

5.2.17.3.4 GET

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

Table 5.2.17.3.4-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.17.3.4-2 and the response data structures and response codes specified in table 5.2.17.3.4-3.

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.17A Resource: HssSdmSubscriptionInfo

5.2.17A.1 Description

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

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

5.2.17A.2 Resource Definition

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

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

Table 5.2.17A.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3]
subsId	Identifier of the subscription (allocated by the UDM)

5.2.17A.3 Resource Standard Methods

5.2.17A.3.1 PUT

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

Table 5.2.17A.3.1-1: URI query parameters supported by the PUT method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.17A.3.1-2 and the response data structures, and response codes specified in table 5.2.17A.3.1-3.

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

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

Table 5.2.17A.3.1-3: Data structures supported by the PUT Response Body on this resource

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

5.2.17A.3.2 DELETE

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

Table 5.2.17A.3.2-1: URI query parameters supported by the DELETE method on this resource

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
n/a			

Table 5.2.17A.3.2-3: Data structures supported by the DELETE Response Body on this resource

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

5.2.17A.3.3 GET

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

Table 5.2.17A.3.3-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.17A.3.3-2 and the response data structures and response codes specified in table 5.2.17A.3.3-3.

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.17A.3.4 PATCH

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

Table 5.2.17A.3.4-1: URI query parameters supported by the PATCH method on this resource

Name	Data type	P	Cardinality	Description
supported-features	SupportedFeatures	O	0..1	see 3GPP TS 29.500 [4] clause 6.6

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

Table 5.2.17A.3.4-2: Data structures supported by the PATCH Request Body on this resource

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

Table 5.2.17A.3.4-3: Data structures supported by the PATCH Response Body on this resource

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

5.2.18 Resource: EeSubscriptions

5.2.18.1 Description

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

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

5.2.18.2 Resource Definition

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

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

Table 5.2.18.2-1: Resource URI variables for this resource

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

5.2.18.3 Resource Standard Methods

5.2.18.3.1 GET

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

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

Name	Data type	P	Cardinality	Description
supported-features	SupportedFeatures	O	0..1	see 3GPP TS 29.500 [8] clause 6.6
event-types	array(EventType)	O	1..N	Indicates only to return the EE subscription data which contains at least one of the indicated Event Types and returned monitoring configuration data in EE subscription data only contains the data related to the indicated event types.
nf-identifiers	array(NfIdentifier)	O	1..N	Indicates to return relevant EE subscription data along with associated Subscription resources created and stored while initiating subscriptions to NFs identified by NfType and NfInstanceId

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.18.3.2 POST

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

5.2.19 Resource: IndividualEeSubscription

5.2.19.1 Description

This resource represents an individual EE Subscription for a UE.

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

5.2.19.2 Resource Definition

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

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

Table 5.2.19.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeId 3GPP TS 29.571 [3]
subsId	Identifier of the subscription (allocated by the UDR)

5.2.19.3 Resource Standard Methods

5.2.19.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned.
ProblemDetails	O	0..1	404 Not Found	If the resource does not exist, a response code of 404 Not Found shall be returned.
NOTE: In addition common data structures as listed in table 5.5-1 are supported.				

5.2.19.3.2 DELETE

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.19.3.3 PATCH

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

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

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

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

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

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

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

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

5.2.19.3.4 GET

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

Table 5.2.19.3.4-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.19.3.4-2 and the response data structures and response codes specified in table 5.2.19.3.4-3.

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.19A Resource: IndividualEeGroupSubscription

5.2.19A.1 Description

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

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

5.2.19A.2 Resource Definition

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

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

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

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

5.2.19A.3 Resource Standard Methods

5.2.19A.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned.
ProblemDetails	O	0..1	404 Not Found	If the resource does not exist, a response code of 404 Not Found shall be returned.
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.19A.3.2 DELETE

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.19A.3.3 PATCH

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

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

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

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

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

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

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

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

5.2.19A.3.4 GET

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

Table 5.2.19A.3.4-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.19A.3.4-2 and the response data structures and response codes specified in table 5.2.19A.3.4-3.

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

Data type	P	Cardinality	Description
n/a			

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

Data type	P	Cardinality	Response codes	Description
EeSubscription	M	1	204 OK	Upon success, a response body containing the individual EE subscriptions for the groups of UEs shall be returned..
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.19B Resource: EeGroupProfileData

5.2.19B.1 Description

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

5.2.19B.2 Resource Definition

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

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

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

Name	Definition
apiRoot	See clause 6.1.1
ueGroupId	Represents the identifier of the Group of UEs. For this resource, either External Group Identifier or any UE shall be present. pattern: See pattern of type VarUeGroupId

5.2.19B.3 Resource Standard Methods

5.2.19B.3.1 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

Data type	P	Cardinality	Response codes	Description
EeGroupProfileData	M	1	200 OK	Upon success, a response body containing the Event Exposure Profile Data for a group of UEs, which corresponds to the provided ueGroupId.
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.19C Resource: AmfGroupSubscriptionInfo

5.2.19C.1 Description

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

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

5.2.19C.2 Resource Definition

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

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

Table 5.2.19C.2-1: Resour ce URI variables for this resource

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

5.2.19C.3 Resource Standard Methods

5.2.19C.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

5.2.19C.3.2 DELETE

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.19C.3.3 GET

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

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

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.19C.3.3-2 and the response data structure and response codes specified in table 5.2.31.3.3-3.

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.31.3.4 PATCH

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

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

Table 5.2.19C.3.4-1: URI query parameters supported by the PATCH method on this resource

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

This method shall support the request data structures specified in table 5.2.19C.3.2-2 and the response data structures and response codes specified in table 5.2.19C.3.4-3.

Table 5.2.19C.3.4-2: Data structures supported by the PATCH Request Body on this resource

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

Table 5.2.19C.3.4-3: Data structures supported by the PATCH Response Body on this resource

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

5.2.19D Resource: SmfGroupSubscriptionInfo

5.2.19D.1 Description

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

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

5.2.19D.2 Resource Definition

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

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

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

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

5.2.19D.3 Resource Standard Methods

5.2.19D.3.1 PUT

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

Table 5.2.31A.3.1-1: URI query parameters supported by the PUT method on this resource

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
SmfSubscriptionInfo	M	1	SMF subscription info

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

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

5.2.19D.3.2 DELETE

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.19D.3.3 GET

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.19D.3.4 PATCH

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

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

Table 5.2.19D.3.4-1: URI query parameters supported by the PATCH method on this resource

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

This method shall support the request data structures specified in table 5.2.19D.3.2-2 and the response data structures, and response codes specified in table 5.2.19D.3.4-3.

Table 5.2.19D.3.4-2: Data structures supported by the PATCH Request Body on this resource

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

Table 5.2.19D.3.4-3: Data structures supported by the PATCH Response Body on this resource

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

5.2.19E Resource: HssGroupSubscriptionInfo

5.2.19E.1 Description

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

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

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

5.2.19E.2 Resource Definition

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

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

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

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

5.2.19E.3 Resource Standard Methods

5.2.19E.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
HssSubscriptionInfo	M	1	HSS subscription info

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

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

5.2.19E.3.2 DELETE

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.19E.3.3 GET

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.19E.3.4 PATCH

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

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

Table 5.2.19E.3.4-1: URI query parameters supported by the PATCH method on this resource

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

This method shall support the request data structures specified in table 5.2.19E.3.2-2 and the response data structures, and response codes specified in table 5.2.19E.3.4-3.

Table 5.2.19E.3.4-2: Data structures supported by the PATCH Request Body on this resource

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

Table 5.2.19E.3.4-3: Data structures supported by the PATCH Response Body on this resource

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

5.2.20 Resource: SubscriptionDataSubscriptions

5.2.20.1 Description

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

5.2.20.2 Resource Definition

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

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

Table 5.2.20.2-1: Resource URI variables for this resource

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

5.2.20.3 Resource Standard Methods

5.2.20.3.1 POST

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

- For shared data sdmSubscriptions: if the sdmSubscription object is present with the uniqueSubscription attribute is set to true, there shall be only one SubscriptionDataSubscriptions per NF service consumer identified by nfInstanceId inside sdmSubscription (see 3GPP TS 29.503 [6], clause 5.2.2.3.2).

- For UE based UDM subscriptions: if the uniqueSubscription attribute is set to true in the SubscriptionDataSubscription object, the UDR shall only allow one UE based SubscriptionDataSubscriptions identified by the ueId attribute.

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

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

Data type	P	Cardinality	Response codes	Description
SubscriptionDataSubscriptions	M	1	201 Created	Upon success, a response body containing a representation of the UeId's Individual subscription resource shall be returned. 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: See pattern of type VarUeId 3GPP TS 29.571 [3]
supported-features	SupportedFeatures	O	0..1	see 3GPP TS 29.500 [8] clause 6.6

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.20.3.3 DELETE

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

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

Name	Data type	P	Cardinality	Description
ue-id	VarUeId	M	1	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) of the UE associated to this subscription. Pattern: See pattern of type VarUeId 3GPP TS 29.571 [3]
nf-instance-id	NfInstanceId	C	0..1	If included, this IE shall contain the Instance ID of the original NF Service Consumer of the UDM that created the subscription, and the UDR shall delete all subscriptions associated to the ue-id that were created by this specific nf-instance-id. If not included, the UDR shall delete all subscriptions matching the rest of query parameters. (See NOTE)
delete-all-nfs	boolean	C	0..1	If included, this IE indicates that the UDR shall delete all subscriptions associated to the ue-id. (See NOTE)
implicit-unsubscribe-indication	boolean	O	0..1	If included, this IE shall contain the content of the "implicitUnsubscribe" attribute sent during the creation of the subscription in UDM. If it is set to true, it means that the UDR shall delete all those subscriptions from NF Service Consumers of UDM, whose implicitUnsubscribe value is set to true. It not included, or set to false, the UDR shall delete all subscriptions matching the rest of query parameters.
NOTE: Either "nf-instance-id" or "delete-all-nfs" shal be included in the request.				

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

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

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

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

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

5.2.21 Resource: IndividualSubscriptionDataSubscription

5.2.21.1 Description

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

5.2.21.2 Resource Definition

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

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

Table 5.2.21.2-1: Resource URI variables for this resource

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

5.2.21.3 Resource Standard Methods

5.2.21.3.1 DELETE

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

5.2.21.3.2 PATCH

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

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

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

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

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

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

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

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon successful modification, when all the modification instructions in the PATCH request have been implemented, there is no body in the response message.
SubscriptionDataSubscriptions	C	0..1	200 OK	Upon partial success, if any of the requested modifications have not been accepted, but the server has set different values than those requested by the client, in any of the attributes of the resource, the modified individual SubscriptionDataSubscriptions is returned with the accepted/confirmed values, e.g. the confirmed expiry time. Also, upon partial success, if the NF service consumer does not support the "PatchReport" feature, the UDR shall return a SubscriptionDataSubscriptions object in the response. (NOTE 2)
PatchResult	C	0..1	200 OK	Upon partial success, if the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number and if some of the modification instructions in the PATCH request have been discarded while the rest are accepted, the execution report is returned. (NOTE 2)
ProblemDetails	O	0..1	403 Forbidden	If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1.
ProblemDetails	O	0..1	404 Not Found	The "cause" attribute may be used to indicate one of the following application errors: - SUBSCRIPTION_NOT_FOUND, see 3GPP TS 29.500 [4] table 5.2.7.2-1.
NOTE 1: In addition common data structures as listed in table 5.5-1 are supported. NOTE 2: One of SubscriptionDataSubscriptions or PatchResult shall be returned.				

5.2.21.3.3 GET

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

Table 5.2.21.3.3-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.21.3.3-2 and the response data structures and response codes specified in table 5.2.21.3.3-3.

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

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

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

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

5.2.22 Resource: TraceData

5.2.22.1 Description

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

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

5.2.22.2 Resource Definition

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

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

Table 5.2.22.2-1: Resource URI variables for this resource

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

5.2.22.3 Resource Standard Methods

5.2.22.3.1 GET

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
n/a			

Table 5.2.22.3.1-3: Data structures supported by the GET Response Body on this resource

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

5.2.23 Resource: IdentityData

5.2.23.1 Description

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

5.2.23.2 Resource Definition

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

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

Table 5.2.23.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See clause 6.1.1
ueId	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeId 3GPP TS 29.571 [3]

5.2.23.3 Resource Standard Methods

5.2.23.3.1 GET

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

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

Name	Data type	P	Cardinality	Description
app-port-id	AppPortId	O	0..1	Application port identity, see 3GPP TS 23.501 [4] clause 4.4.7

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

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

Data type	P	Cardinality	Description
n/a			

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

Data type	P	Cardinality	Response codes	Description
IdentityData	M	1	200 OK	Upon success, a response body containing the identity data that corresponds to the provided ueId
ProblemDetails	O	0..1	404 Not Found	If the ueId does not exist, a response code of 404 Not Found shall be returned. The "cause" attribute may be used to indicate one of the following application errors: - USER_NOT_FOUND - DATA_NOT_FOUND
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.24 Resource: AuthenticationStatus

5.2.24.1 Description

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

5.2.24.2 Resource Definition

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

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

Table 5.2.24.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Identifier SUPI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type Supi in 3GPP TS 29.571 [3]

5.2.24.3 Resource Standard Methods

5.2.24.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

5.2.24.3.2 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.24.3.3 DELETE

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

Table 5.2.24.3.3-1: URI query parameters supported by the DELETE method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.24.3.3-2 and the response data structures and response codes specified in table 5.2.24.3.3-3.

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

Data type	P	Cardinality	Description
n/a			

Table 5.2.24.3.3-3: Data structures supported by the DELETE Response Body on this resource

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

5.2.24A Resource: IndividualAuthenticationStatus

5.2.24A.1 Description

This resource is used to represent individual Authentication Status to be stored in the UDR.

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

5.2.24A.2 Resource Definition

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

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

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

Name	Definition
apiRoot	See clause 6.4.1
ueId	Represents the Subscription Identifier SUPI (see 3GPP TS 23.501 [4] clause 5.9.2) 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: See pattern of type Supi in 3GPP TS 29.571 [3]

5.2.25.3 Resource Standard Methods

5.2.25.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

5.2.25.3.2 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.25.3.3 PATCH

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

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

Table 5.2.25.3.3-1.: URI query parameters supported by the PATCH method on this resource

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

This method shall support the request data structures specified in table 5.2.25.3.3-2 and the response data structures, and response codes specified in table 5.2.25.3.3-3.

Table 5.2.25.3.3-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
array(PatchItem)	M	1..N	Contains the delta data to the contents of SorData

Table 5.2.25.3.3-3: Data structures supported by the PATCH Response Body on this resource

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

5.2.25A Resource: AuthenticationUPU

5.2.25A.1 Description

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

5.2.25A.2 Resource Definition

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

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

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

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Identifier SUPI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type Supi in 3GPP TS 29.571 [3]

5.2.25A.3 Resource Standard Methods

5.2.25A.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

5.2.25A.3.2 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.25B Resource: SubscribedSNSSAIs

5.2.25B.1 Description

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

5.2.25B.2 Resource Definition

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

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

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

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Identifier SUPI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type Supi in 3GPP TS 29.571 [3]

5.2.25B.3 Resource Standard Methods

5.2.25B.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

5.2.25B.3.2 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.25C Resource: SubscribedCAG

5.2.25C.1 Description

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

5.2.25C.2 Resource Definition

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

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

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

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Identifier SUPI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type Supi in 3GPP TS 29.571 [3]

5.2.25C.3 Resource Standard Methods

5.2.25C.3.1 PUT

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

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

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

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

5.2.25C.3.2 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.26 Resource: ProvisionedData

5.2.26.1 Description

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

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

5.2.26.2 Resource Definition

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

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

Table 5.2.26.2-1: Resource URI variables for this resource

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

5.2.26.3 Resource Standard Methods

5.2.26.3.1 GET

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

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

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

NOTE: To retrieve data sets that are not specific to serving PLMNs (e.g., LCS_PRIVACY, LCS_MO, V2X, PROSE, ODB, EE_PROF, PP_PROF and NIDD_AUTH), an NF service consumer should use UE Subscription Data Retrieve operation (see clause 5.2.47).

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.27 Resource: OperatorDeterminedBarringData

5.2.27.1 Description

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

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

5.2.27.2 Resource Definition

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

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

Table 5.2.27.2-1: Resource URI variables for this resource

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

5.2.27.3 Resource Standard Methods

5.2.27.3.1 GET

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

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

Name	Data type	P	Cardinality	Description
n/a				

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.28 Resource: EeProfileData

5.2.28.1 Description

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

5.2.28.2 Resource Definition

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

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

Table 5.2.28.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See clause 6.1.1
ueId	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3]

5.2.28.3 Resource Standard Methods

5.2.28.3.1 GET

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

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

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

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

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

Data type	P	Cardinality	Description
n/a			

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

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

5.2.29 Resource: EeGroupSubscriptions

5.2.29.1 Description

This resource represents the collection of EE Subscriptions for a group of UEs or any UE (i.e. all UEs).

This resource is modelled with the Collection resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

5.2.29.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/group-data/{ueGroupId}/ee-subscriptions

This resource shall support the resource URI variables defined in table 5.2.29.2-1.

Table 5.2.29.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueGroupId	Represents the identifier of the Group of UEs. For this resource, either External Group Identifier or any UE shall be present. pattern: '^(extgroupid-[^@]+@[^@]+|anyUE)$'

5.2.29.3 Resource Standard Methods

5.2.29.3.1 GET

This method shall support the URI query parameters specified in table 5.2.29.3.1-1.

Table 5.2.29.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
supported-features	SupportedFeatures	O	0..1	see 3GPP TS 29.500 [8] clause 6.6

This method shall support the request data structures specified in table 5.2.29.3.1-2 and the response data structures and response codes specified in table 5.2.29.3.1-3.

Table 5.2.29.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.29.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
array(EeSubscription)	M	1..N	200 OK	Upon success, a response body containing the individual EE subscriptions for the groups of UEs shall be returned.
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.29.3.2 POST

This method shall support the URI query parameters specified in table 5.2.29.3.2-1.

Table 5.2.29.3.2-1: URI query parameters supported by the POST method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.19.3.2-2 and the response data structures and response codes specified in table 5.2.29.3.2-3.

Table 5.2.29.3.2-2: Data structures supported by the POST Request Body on this resource

Data type	P	Cardinality	Description
EeSubscription	M	1	Identifies the data subscription to be stored in the UDR.

Table 5.2.29.3.2-3: Data structures supported by the POST Response Body on this resource

Data type	P	Cardinality	Response codes	Description
EeSubscription	M	1	201 Created	Upon success, a response body containing a representation of the Individual subscription resource shall be returned. The HTTP response shall include a "Location" HTTP header that contains the resource URI of the created resource.
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.30 Resource: SharedData

5.2.30.1 Description

This resource represents the collection of data that can be shared by multiple UEs.

5.2.30.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/shared-data

This resource shall support the resource URI variables defined in table 5.2.30.2-1.

Table 5.2.30.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1

5.2.30.3 Resource Standard Methods

5.2.30.3.1 GET

This method shall support the URI query parameters specified in table 5.2.30.3.1-1.

Table 5.2.30.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
shared-data-ids	array(SharedDataId)	M	1..N	
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	0..N	200 OK	Upon success, a response body containing a list of SharedData shall be returned.
NOTE: In addition common data structures as listed in table 5.5-1 are supported.				

5.2.30A Resource: IndividualSharedData

5.2.30A.1 Description

This resource represents the individual shared data.

5.2.30A.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/shared-data/{sharedDataId}

This resource shall support the resource URI variables defined in table 5.2.30A.2-1.

Table 5.2.30A.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
sharedDataId	Contains the individual Shared Data Identifier.

5.2.30A.3 Resource Standard Methods

5.2.30A.3.1 GET

This method shall support the URI query parameters specified in table 5.2.30A.3.1-1.

Table 5.2.30A.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.30A.3.1-2 and the response data structures and response codes specified in table 5.2.30A.3.1-3.

Table 5.2.30A.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.30A.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
SharedData	M	1	200 OK	Upon success, a response body containing SharedData shall be returned.
ProblemDetails	O	0..1	404 Not Found	The "cause" attribute may be used to indicate one of the following application errors: - DATA_NOT_FOUND
NOTE: In addition common data structures as listed in table 5.5-1 are supported.				

5.2.31 Resource: AmfSubscriptionInfo

5.2.31.1 Description

This resource represents information relevant to an individual EE Subscription for a UE. Depending on the Event Types of the EeSubscription, the UDM may need to consume the Namf_EventExposure_Subscribe service operation to subscribe at the AMF (see 3GPP TS 29.518 [13]). After successful subscription at the AMF, the UDM needs to store within the UDR related information, e.g. the SubscriptionId allocated by the AMF.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

5.2.31.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}/amf-subscriptions

This resource shall support the resource URI variables defined in table 5.2.31.2-1.

Table 5.2.31.2-1: Resour ce URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3]
subsId	Identifier of the subscription (allocated by the UDM)

5.2.31.3 Resource Standard Methods

5.2.31.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.31.3.1-1.

Table 5.2.31.3.1-1: URI query parameters supported by the PUT method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.31.3.1-2 and the response data structures and response codes specified in table 5.2.31.3.1-3.

Table 5.2.31.3.1-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
array(AmfSubscriptionInfo)	M	1..N	AMF subscription info for one or two AMFs

Table 5.2.31.3.1-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon successful update of this resource, an empty response body shall be returned.
array(AmfSubscriptionInfo)	M	1..N	201 Created	Upon successful update of this resource, a representation of the created resource containing an array of the AmfSubscriptionInfo as allocated by the UDR shall be returned.
NOTE: In addition common data structures as listed in table 5.5-1 are supported.				

5.2.31.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.31.3.2-1.

Table 5.2.31.3.2-1: URI query parameters supported by the DELETE method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.31.3.2-2 and the response data structures and response codes specified in table 5.2.31.3.2-3.

Table 5.2.31.3.2-2: Data structures supported by the DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.31.3.2-3: Data structures supported by the DELETE Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned.
NOTE: In addition common data structures as listed in table 5.5-1 are supported.				

5.2.31.3.3 GET

This method shall support the URI query parameters specified in table 5.2.31.3.3-1.

Table 5.2.31.3.3-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.31.3.3-2 and the response data structures and response codes specified in table 5.2.31.3.3-3.

Table 5.2.31.3.3-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.31.3.3-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
array(AmfSubscriptionInfo)	M	1..N	200 OK	Upon success, a response body containing AMF Subscription Infos shall be returned.
NOTE: In addition common data structures as listed in table 5.5-1 are supported.				

5.2.31.3.4 PATCH

This method is used to modify the AMF subscription Infos in the UDR.

This method shall support the URI query parameters specified in table 5.2.31.3.4-1.

Table 5.2.31.3.4-1: URI query parameters supported by the PATCH method on this resource

Name	Data type	P	Cardinality	Description
supported-features	SupportedFeatures	O	0..1	see 3GPP TS 29.500 [8] clause 6.6

This method shall support the request data structures specified in table 5.2.31.3.2-2 and the response data structures and response codes specified in table 5.2.31.3.4-3.

Table 5.2.31.3.4-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
array(PatchItem)	M	1..N	Contains the delta data to the provisioned parameter data

Table 5.2.31.3.4-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon successful modification there is no body in the response message. (NOTE 2)
PatchResult	M	1	200 OK	Upon success, the execution report is returned. (NOTE 2)
ProblemDetails	O	0..1	403 Forbidden	If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1.
NOTE 1: In addition common data structures as listed in table 5.5-1 are supported. NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult.				

5.2.31A Resource: SmfSubscriptionInfo

5.2.31A.1 Description

This resource represents information relevant to an individual EE Subscription for a UE. Depending on the Event Types of the EeSubscription, the UDM may need to consume the Nsmf_EventExposure_Subscribe service operation to subscribe at the SMF (see 3GPP TS 29.508 [21]). After successful subscription at the SMF, the UDM needs to store within the UDR related information, e.g. the SubscriptionId allocated by the SMF.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

5.2.31A.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}/smf-subscriptions

This resource shall support the resource URI variables defined in table 5.2.31A.2-1.

Table 5.2.31A.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3]
subsId	Identifier of the subscription (allocated by the UDM)

5.2.31A.3 Resource Standard Methods

5.2.31A.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.31A.3.1-1.

Table 5.2.31A.3.1-1: URI query parameters supported by the PUT method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.31A.3.1-2 and the response data structures, and response codes specified in table 5.2.31A.3.1-3.

Table 5.2.31A.3.1-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
SmfSubscriptionInfo	M	1	SMF subscription info

Table 5.2.31A.3.1-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon successful update of this resource, an empty response body shall be returned.
SmfSubscriptionInfo	M	1	201 Created	Upon successful creation of this resource, a representation of the created resource containing the SmfSubscriptionInfo as allocated by the UDR shall be returned.
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.31A.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.31A.3.2-1.

Table 5.2.31A.3.2-1: URI query parameters supported by the DELETE method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.31A.3.2-2 and the response data structures, and response codes specified in table 5.2.31A.3.2-3.

Table 5.2.31A.3.2-2: Data structures supported by the DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.31A.3.2-3: Data structures supported by the DELETE Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned.
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.31A.3.3 GET

This method shall support the URI query parameters specified in table 5.2.31A.3.3-1.

Table 5.2.31A.3.3-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.31A.3.3-2 and the response data structures and response codes specified in table 5.2.31A.3.3-3.

Table 5.2.31A.3.3-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.31A.3.3-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
SmfSubscriptionInfo	M	1	200 OK	Upon success, a response body containing SMF Subscription Infos shall be returned.
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.31A.3.4 PATCH

This method is used to modify the SMF subscription Infos in the UDR.

This method shall support the URI query parameters specified in table 5.2.31A.3.4-1.

Table 5.2.31A.3.4-1: URI query parameters supported by the PATCH method on this resource

Name	Data type	P	Cardinality	Description
supported-features	SupportedFeatures	O	0..1	see 3GPP TS 29.500 [8] clause 6.6

This method shall support the request data structures specified in table 5.2.31A.3.2-2 and the response data structures, and response codes specified in table 5.2.31A.3.4-3.

Table 5.2.31A.3.4-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
array(PatchItem)	M	1..N	Contains the delta data to the provisioned parameter data

Table 5.2.31A.3.4-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon successful modification there is no body in the response message. (NOTE 2)
PatchResult	M	1	200 OK	Upon success, the execution report is returned. (NOTE 2)
ProblemDetails	O	0..1	403 Forbidden	If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1.
NOTE 1: In addition common data structures as listed in table 5.5-1 are supported. NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult.				

5.2.31B Resource: HssSubscriptionInfo

5.2.31B.1 Description

This resource represents information relevant to an individual EE Subscription for a UE. Depending on the Event Types of the EeSubscription, the UDM may need to consume the Nhss_EventExposure_Subscribe service operation to subscribe at the HSS (see 3GPP TS 29.562 [20]). After successful subscription at the HSS, the UDM needs to store within the UDR related information, e.g. the SubscriptionId allocated by the HSS.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

5.2.31B.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}/hss-subscriptions

This resource shall support the resource URI variables defined in table 5.2.31B.2-1.

Table 5.2.31B.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3]
subsId	Identifier of the subscription (allocated by the UDM)

5.2.31B.3 Resource Standard Methods

5.2.31B.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.31B.3.1-1.

Table 5.2.31B.3.1-1: URI query parameters supported by the PUT method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.31B.3.1-2 and the response data structures, and response codes specified in table 5.2.31B.3.1-3.

Table 5.2.31B.3.1-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
HssSubscriptionInfo	M	1	HSS subscription info

Table 5.2.31B.3.1-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned.
HssSubscriptionInfo	M	1	201 Created	Upon successful creation of this resource, a representation of the created resource containing the HssSubscriptionInfo as allocated by the UDR shall be returned.
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.31B.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.31B.3.2-1.

Table 5.2.31B.3.2-1: URI query parameters supported by the DELETE method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.31B.3.2-2 and the response data structures, and response codes specified in table 5.2.31B.3.2-3.

Table 5.2.31B.3.2-2: Data structures supported by the DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.31B.3.2-3: Data structures supported by the DELETE Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned.
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.31B.3.3 GET

This method shall support the URI query parameters specified in table 5.2.31B.3.3-1.

Table 5.2.31B.3.3-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.31B.3.3-2 and the response data structures and response codes specified in table 5.2.31B.3.3-3.

Table 5.2.31B.3.3-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.31B.3.3-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
HssSubscriptionInfo	M	1	200 OK	Upon success, a response body containing HSS Subscription Infos shall be returned.
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.31B.3.4 PATCH

This method is used to modify the HSS subscription Infos in the UDR.

This method shall support the URI query parameters specified in table 5.2.31B.3.4-1.

Table 5.2.31B.3.4-1: URI query parameters supported by the PATCH method on this resource

Name	Data type	P	Cardinality	Description
supported-features	SupportedFeatures	O	0..1	see 3GPP TS 29.500 [8] clause 6.6

This method shall support the request data structures specified in table 5.2.31B.3.2-2 and the response data structures, and response codes specified in table 5.2.31B.3.4-3.

Table 5.2.31B.3.4-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
array(PatchItem)	M	1..N	Contains the delta data to the provisioned parameter data

Table 5.2.31B.3.4-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon successful modification there is no body in the response message. (NOTE 2)
PatchResult	M	1	200 OK	Upon success, the execution report is returned. (NOTE 2)
ProblemDetails	O	0..1	403 Forbidden	If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1.
NOTE 1: In addition common data structures as listed in table 5.5-1 are supported. NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult.				

5.2.32 Resource: ContextData

5.2.32.1 Description

This resource represents the ContextData for a UE ID.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

5.2.32.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data

This resource shall support the resource URI variables defined in table 5.2.32.2-1.

Table 5.2.32.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3]

5.2.32.3 Resource Standard Methods

5.2.32.3.1 GET

This method shall support the URI query parameters specified in table 5.2.32.3.1-1.

Table 5.2.32.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
context-dataset-names	array(ContextDataSetName)	M	2..N	If included, this IE shall contain the names of context data sets to be retrieved.

This method shall support the request data structures specified in table 5.2.32.3.1-2 and the response data structures and response codes specified in table 5.2.32.3.1-3.

Table 5.2.32.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.32.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
ContextDataSets	M	1	200 OK	Upon success, a response body containing the requested context data sets shall be returned.
NOTE: In addition common data structures as listed in table 5.5-1 are supported.				

5.2.33 Resource: GroupIdentifiers

5.2.33.1 Description

This resource represents the collection of data that can be shared by multiple UEs.

5.2.33.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/group-data/group-identifiers

This resource shall support the resource URI variables defined in table 5.2.33.2-1.

Table 5.2.33.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1

5.2.33.3 Resource Standard Methods

5.2.33.3.1 GET

This method shall support the URI query parameters specified in table 5.2.33.3.1-1.

Table 5.2.33.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
supported-features	SupportedFeatures	O	0..1	see 3GPP TS 29.500 [8] clause 6.6
ext-groud-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.
ProblemDetails	O	0..1	404 Not Found	If the ueId does not exist, a response code of 404 Not Found shall be returned. The "cause" attribute may be used to indicate one of the following application errors: - GROUP_IDENTIFIER_NOT_FOUND - DATA_NOT_FOUND
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.34 Resource: 5GVnGroups

5.2.34.1 Description

This resource represents the store of 5G VN Group data.

5.2.34.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/group-data/5g-vn-groups

This resource shall support the resource URI variables defined in table 5.2.34.2-1.

Table 5.2.34.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1

5.2.34.3 Resource Standard Methods

5.2.34.3.1 GET

This method shall support the URI query parameters specified in table 5.2.34.3.1-1.

Table 5.2.34.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
gpsis	array(Gpsi)	O	0..N	Only those group's data are retrieved of which at least one of the GPSIs is a member

This method shall support the request data structures specified in table 5.2.34.3.1-2 and the response data structures and response codes specified in table 5.2.34.3.1-3.

Table 5.2.34.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.34.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
map(5GVnGroupConfiguration)	M	0..N	200 OK	Upon success, a response body containing the map (list of key-value pairs where ExtGroupId (see 3GPP TS 29.503 [6] serves as key) of 5GVnGroupConfiguration shall be returned. If the resource does not contain any keys, the response consists of an empty JSON object (empty map).
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.35 Resource: Individual5GVnGroup

5.2.35.1 Description

This resource represents an individual 5G VN Group.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

5.2.35.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/group-data/5g-vn-groups/{externalGroupId}

This resource shall support the resource URI variables defined in table 5.2.35.2-1.

Table 5.2.35.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
externalGroupId	Represents the External Identifier of the group

5.2.35.3 Resource Standard Methods

5.2.35.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.35.3.1-1.

Table 5.2.35.3.1-1: URI query parameters supported by the PUT method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.35.3.1-2 and the response data structures and response codes specified in table 5.2.35.3.1-3.

Table 5.2.35.3.1-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
5GVnGroupConfiguration	M	1	See 3GPP TS 29.503 [6]

Table 5.2.35.3.1-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
5GVnGroupConfiguration	M	1	201 Created	Upon success, a representation of the created resource containing an internal group identifier as allocated by the UDR shall be returned.
ProblemDetails	O	0..1	403 Forbidden	If the resource already exists, a response code of 403 Forbidden shall be returned.
NOTE: In addition common data structures as listed in table 5.5-1 are supported.				

5.2.35.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.35.3.2-1.

Table 5.2.35.3.2-1: URI query parameters supported by the DELETE method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.35.3.2-2 and the response data structures and response codes specified in table 5.2.19.3.2-3.

Table 5.2.35.3.2-2: Data structures supported by the DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.35.3.2-3: Data structures supported by the DELETE Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned.
NOTE: In addition common data structures as listed in table 5.5-1 are supported.				

5.2.35.3.3 PATCH

This method shall support the URI query parameters specified in table 5.2.35.3.3-1.

Table 5.2.35.3.3-1: URI query parameters supported by the PATCH method on this resource

Name	Data type	P	Cardinality	Description
supported-features	SupportedFeatures	O	0..1	see 3GPP TS 29.500 [8] clause 6.6

This method shall support the request data structures specified in table 5.2.35.3.3-2 and the response data structures and response codes specified in table 5.2.35.3.3-3.

Table 5.2.35.3.3-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
array(PatchItem)	M	1..N	Contains the delta data to the Individual 5GNvGroup

Table 5.2.35.3.3-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon successful modification, there is no body in the response message. (NOTE 2)
PatchResult	M	1	200 OK	Upon success, the execution report is returned. (NOTE 2)
ProblemDetails	O	0..1	404 Not Found	If the resource corresponding to the ExternalGroupId can't be found, the "cause" attribute shall be set to: - 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	Snssai	M	1	When present without Slice Differentiator (sd), all slices identified by the given Slice/Service Type (sst) and any sd value (if any) shall be considered matching the query parameter.
dnn	Dnn	M	1	
mtc-provider-information	MtcProviderInformation	M	1	
af-id	string	O	0..1	When present, indicates the string identifying the originating AF.
NOTE: This attribute shall contain an empty string when no MTC Provider information is available to the UDR service consumer.				

This method shall support the request data structures specified in table 5.2.38.3.1-2 and the response data structures and response codes specified in table 5.2.38.3.1-3.

Table 5.2.38.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.38.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
AuthorizationData	M	1	200 OK	Upon success, a response body containing the NIDD Authorization Data shall be returned.
ProblemDetails	O	1	404 Not Found	The "cause" attribute may be used to indicate one of the following application errors: - USER_NOT_FOUND
ProblemDetails	O	0..1	403 Forbidden	The "cause" attribute may be used to indicate one of the following application errors: - DNN_NOT_ALLOWED - MTC_PROVIDER_NOT_ALLOWED - AF_INSTANCE_NOT_ALLOWED - SNNSAI_NOT_ALLOWED
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.39 Resource: CoverageRestrictionData

5.2.39.1 Description

This resource represents UE's subscribed enhanced Coverage Restriction Data for a UE identifier. It is queried by the UDM during Enhanced Coverage Restriction Data Retrieval.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

5.2.39.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/coverage-restriction-data

This resource shall support the resource URI variables defined in table 5.2.39.2-1.

Table 5.2.39.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Generic Public Subscription Identifier (see 3GPP TS 23.501 [4] clause 5.9.8) 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.				

5.2.41A Resource: ProseSubscriptionData

5.2.41A.1 Description

This resource represents UE's subscribed ProSe Service Data for a UE identifier. It is queried by the UDM during ProSe Subscription Data Data Retrieval.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

5.2.41A.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/prose-data

This resource shall support the resource URI variables defined in table 5.2.41A.2-1.

Table 5.2.41A.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Permanent Identifier (see 3GPP TS 23.501 [4] clause 5.9.2) or the Generic Public Subscription Identifier (see 3GPP TS 23.501 [4] clause 5.9.8). pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3]

5.2.41A.3 Resource Standard Methods

5.2.41A.3.1 GET

This method shall support the URI query parameters specified in table 5.2.41A.3.1-1.

Table 5.2.41A.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
supported-features	SupportedFeatures	O	0..1	see 3GPP TS 29.500 [8] clause 6.6

This method shall support the request data structures specified in table 5.2.41A.3.1-2 and the response data structures and response codes specified in table 5.2.41A.3.1-3.

Table 5.2.41A.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.41A.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
ProseSubscriptionData	M	1	200 OK	Upon success, a response body containing UE's subscribed ProSe Service Data.
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.42 Resource: LcsBroadcastAssistanceSubscriptionData

5.2.42.1 Description

This resource represents the subscribed LcsBroadcast Assistance Subscription Data for an UE for use in a serving PLMN. It is queried by the LMF via the UDM.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

5.2.42.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/lcs-bca-data

This resource shall support the resource URI variables defined in table 5.2.42.2-1.

Table 5.2.42.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	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 VarUeId 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.				

5.2.43 Resource: 5GVnGroupsInternal

5.2.43.1 Description

This resource represents a read-only view of the collection resource of 5G VN Group data, so it can be queried based on the Internal Group Id from NF Service Consumers having such Id as the ony way to identify a group (e.g. PCF).

5.2.43.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/group-data/5g-vn-groups/internal

This resource shall support the resource URI variables defined in table 5.2.43.2-1.

Table 5.2.43.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1

5.2.43.3 Resource Standard Methods

5.2.43.3.1 GET

This method shall support the URI query parameters specified in table 5.2.43.3.1-1.

Table 5.2.43.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
internal-group-ids	array(GroupId)	M	1..N	Return those 5G VN groups whose Internal Group ID corresponds with any of the Group IDs in this list.

This method shall support the request data structures specified in table 5.2.43.3.1-2 and the response data structures and response codes specified in table 5.2.43.3.1-3.

Table 5.2.43.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.43.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
map(5GVnGroupConfiguration)	M	0..N	200 OK	Upon success, a response body containing the map (list of key-value pairs where ExtGroupId (see 3GPP TS 29.503 [6] serves as key) of 5GVnGroupConfiguration shall be returned. If the resource does not contain any keys, the response consists of an empty JSON object (empty map).

5.2.44 Resource: Pp5gVnGroupProfileData

5.2.44.1 Description

This resource represents the Parameter Provision Profile Data for the 5G VN Groups. It is queried by the UDM.

5.2.44.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/group-data/5g-vn-groups/pp-profile-data

This resource shall support the resource URI variables defined in table 5.2.44.2-1.

Table 5.2.44.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See clause 6.1.1

5.2.44.3 Resource Standard Methods

5.2.44.3.1 GET

This method shall support the URI query parameters specified in table 5.2.44.3.1-1.

Table 5.2.44.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
ext-group-ids	array(ExtGroupId)	O	1..N	If included, this IE Contain a list of external VN group identifiers for which the profiles are retrieved.
supported-features	SupportedFeatures	O	0..1	see 3GPP TS 29.500 [8] clause 6.6

This method shall support the request data structures specified in table 5.2.44.3.1-2 and the response data structures and response codes specified in table 5.2.44.3.1-3.

Table 5.2.44.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.44.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
Pp5gVnGroupProfileData	M	1	200 OK	Upon success, a response body containing the Parameter Provision Profile for 5G VN Groups.
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.45 Resource: NiddAuthorizations

5.2.45.1 Description

This resource represents information relevant to NIDD authorizations. After successful NIDD authorization, the UDM needs to store within the UDR related information (e.g. authUpdateCallbackUri), so that it is possible to notify the UDM consumer later on if something has changed affecting these authorizations.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

5.2.45.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/nidd-authorizations

This resource shall support the resource URI variables defined in table 5.2.45.2-1.

Table 5.2.45.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3]

5.2.45.3 Resource Standard Methods

5.2.45.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.45.3.1-1.

Table 5.2.45.3.1-1: URI query parameters supported by the PUT method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.45.3.1-2 and the response data structure, and response codes specified in table 5.2.45.3.1-3.

Table 5.2.45.3.1-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
NiddAuthorization Info	M	1	NIDD Authorization Data

Table 5.2.45.3.1-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon successful update of this resource, an empty response body shall be returned.
NiddAuthorizationInfo	M	1	201 Created	Upon successful creation of this resource, a representation of the created resource containing an array of the NiddAuthorizationData as allocated by the UDR shall be returned.
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.45.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.45.3.2-1.

Table 5.2.45.3.2-1: URI query parameters supported by the DELETE method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.45.3.2-2 and the response data structure, and response codes specified in table 5.2.45.3.2-3.

Table 5.2.45.3.2-2: Data structures supported by the DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.45.3.2-3: Data structures supported by the DELETE Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned.
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.45.3.3 GET

This method shall support the URI query parameters specified in table 5.2.45.3.3-1.

Table 5.2.45.3.3-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.45.3.3-2 and the response data structure and response codes specified in table 5.2.45.3.3-3.

Table 5.2.45.3.3-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.45.3.3-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
NiddAuthorizationInfo	M	1	200 OK	Upon success, a response body containing NIDD Authorization Info shall be returned.
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.45.3.4 PATCH

This method is used to modify the NIDD active authorizations in the UDR.

This method shall support the URI query parameters specified in table 5.2.45.3.4-1.

Table 5.2.45.3.4-1: URI query parameters supported by the PATCH method on this resource

Name	Data type	P	Cardinality	Description
supported-features	SupportedFeatures	O	0..1	see 3GPP TS 29.500 [8] clause 6.6

This method shall support the request data structures specified in table 5.2.45.3.2-2 and the response data structures, and response codes specified in table 5.2.45.3.4-3.

Table 5.2.45.3.4-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
array(PatchItem)	M	1..N	Contains the delta data to the provisioned parameter data

Table 5.2.45.3.4-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon successful modification there is no body in the response message. (NOTE 2)
PatchResult	M	1	200 OK	Upon success, the execution report is returned. (NOTE 2)
ProblemDetails	O	0..1	403 Forbidden	If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1.
NOTE 1: In addition common data structures as listed in table 5.5-1 are supported. NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult.				

5.2.46 Resource: 5MBSSubscriptionData

5.2.46.1 Description

This resource represents the subscribed 5MBS Data for a UE. SMF queries this data from UDM.

5.2.46.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/5mbs-data

This resource shall support the resource URI variables defined in table 5.2.46.2-1.

Table 5.2.46.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Identifier SUPI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeId 3GPP TS 29.571 [3]

5.2.46.3 Resource Standard Methods

5.2.46.3.1 GET

This method shall support the URI query parameters specified in table 5.2.46.3.1-1.

Table 5.2.46.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
supported-features	SupportedFeatures	O	0..1	see 3GPP TS 29.500 [8] clause 6.6

This method shall support the request data structures specified in table 5.2.46.3.1-2 and the response data structures and response codes specified in table 5.2.46.3.1-3.

Table 5.2.46.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.46.3.1-3: Data structures supported by the POST Response Body on this resource

Data type	P	Cardinality	Response codes	Description
MbsSubscriptionData	M	1	200 OK	Upon success, a response body containing the 5MBS Subscription Data shall be returned.
NOTE: In addition common data structures as listed in table 5.5-1 are supported.				

5.2.47 Resource: UeSubscriptionData

5.2.47.1 Description

This resource represents the subscription data for a UE ID.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

5.2.47.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}

This resource shall support the resource URI variables defined in table 5.2.47.2-1.

Table 5.2.47.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
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]

5.2.47.3 Resource Standard Methods

5.2.47.3.1 GET

When the NF service consumer (e.g. UDM) and the UDR both support the UESubDataSetRetrieve feature (see clause 6.1.8 of 3GPP TS 29.504 [2]), then NF service consumer may send a GET method towards the UE subscription data resource URI (…/subscription-data/{ueId}) to retrieve the UE subscription data sets.

This method shall support the URI query parameters specified in table 5.2.47.3.1-1.

Table 5.2.47.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
dataset-names	array(DataSetName)	M	1..N	This IE shall contain the names of data sets to the retrieved.
serving-plmn	PlmnId	C	0..1	This IE shall be present when at least one of the following serving PLMN specific data sets are indicated in the dataset-names IE: - AM - SMF_SEL - SMS_SUB - SM - TRACE - SMS_MNG - LCS_BCA

This method shall support the request data structures specified in table 5.2.47.3.1-2 and the response data structures and response codes specified in table 5.2.47.3.1-3.

Table 5.2.47.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.47.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
UeSubscribedDataSets	M	1	200 OK	Upon success, a response body containing the requested data sets shall be returned.
NOTE: In addition common data structures as listed in table 5.5-1 are supported.				

5.2.48 Resource: ServiceSpecificAuthorizationData

5.2.48.1 Description

This resource represents a GPSI's subscribed AuthorizationData for a specific service. It is queried by the UDM during Authorization Data Retrieval for a specific service and Service Specific Authorization Data Update Notification.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

5.2.48.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/service-specific-authorization-data/{serviceType}

This resource shall support the resource URI variables defined in table 5.2.48.2-1.

Table 5.2.48.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Generic Public Subscription Identifier (see 3GPP TS 23.501 [4] clause 5.9.8) pattern: '^(msisdn-[0-9]{5,15}|.+|extid-[^@]+@[^@]+|extgroupid-[^@]+@[^@]+)$'
serviceType	In this release the only defined Service Type is "AF_GUIDANCE_FOR_URSP"

5.2.48.3 Resource Standard Methods

5.2.48.3.1 GET

This method shall support the URI query parameters specified in table 5.2.48.3.1-1.

Table 5.2.48.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
single-nssai	Snssai	O	0..1	When present without Slice Differentiator (sd), all slices identified by the given Slice/Service Type (sst) and any sd value (if any) shall be considered matching the query parameter.
dnn	Dnn	O	0..1	
mtc-provider-information	MtcProviderInformation	O	0..1	
af-id	string	O	0..1	When present, indicates the string identifying the originating AF.

This method shall support the request data structures specified in table 5.2.48.3.1-2 and the response data structures and response codes specified in table 5.2.48.3.1-3.

Table 5.2.48.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.48.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
AuthorizationData	M	1	200 OK	Upon success, a response body containing the Authorization Data shall be returned.
ProblemDetails	O	1	404 Not Found	The "cause" attribute may be used to indicate one of the following application errors: - USER_NOT_FOUND - DATA_NOT_FOUND
ProblemDetails	O	0..1	403 Forbidden	The "cause" attribute may be used to indicate one of the following application errors: - DNN_NOT_ALLOWED - MTC_PROVIDER_NOT_ALLOWED - AF_INSTANCE_NOT_ALLOWED - SNSSAI_NOT_ALLOWED
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.49 Resource: SpecificServiceAuthorizations

5.2.49.1 Description

This resource represents information relevant to authorizations for specific services. After successful authorization, the UDM needs to store within the UDR related information (e.g. authUpdateCallbackUri), so that it is possible to notify the UDM consumer later on if something has changed affecting these authorizations.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

5.2.49.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/service-specific-authorizations/{serviceType}

This resource shall support the resource URI variables defined in table 5.2.49.2-1.

Table 5.2.49.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3]
serviceType	In this release the only defined Service Type is "AF_GUIDANCE_FOR_URSP"

5.2.49.3 Resource Standard Methods

5.2.49.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.49.3.1-1.

Table 5.2.49.3.1-1: URI query parameters supported by the PUT method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.49.3.1-2 and the response data structure, and response codes specified in table 5.2.49.3.1-3.

Table 5.2.49.3.1-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
ServiceSpecificAuthorizationInfo	M	1	Specific Service Authorization Data

Table 5.2.49.3.1-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon successful update of this resource, an empty response body shall be returned.
ServiceSpecificAuthorizationInfo	M	1	201 Created	Upon successful creation of this resource, a representation of the created resource containing an array of the AuthorizationData for the specific service as allocated by the UDR shall be returned.
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.49.3.2 DELETE

This method shall support the URI query parameters specified in table 5.2.49.3.2-1.

Table 5.2.49.3.2-1: URI query parameters supported by the DELETE method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.49.3.2-2 and the response data structure, and response codes specified in table 5.2.49.3.2-3.

Table 5.2.49.3.2-2: Data structures supported by the DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.49.3.2-3: Data structures supported by the DELETE Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned.
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.49.3.3 GET

This method shall support the URI query parameters specified in table 5.2.49.3.3-1.

Table 5.2.49.3.3-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.49.3.3-2 and the response data structure and response codes specified in table 5.2.49.3.3-3.

Table 5.2.49.3.3-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.49.3.3-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
ServiceSpecificAuthorizationInfo	M	1	200 OK	Upon success, a response body containing the authorization info for the specific service shall be returned.
NOTE: In addition, common data structures as listed in table 5.2.7.1-1 of 3GPP TS 29.500 [8] are supported.				

5.2.49.3.4 PATCH

This method is used to modify the Service Specific active authorizations in the UDR.

This method shall support the URI query parameters specified in table 5.2.49.3.4-1.

Table 5.2.49.3.4-1: URI query parameters supported by the PATCH method on this resource

Name	Data type	P	Cardinality	Description
supported-features	SupportedFeatures	O	0..1	see 3GPP TS 29.500 [8] clause 6.6

This method shall support the request data structures specified in table 5.2.49.3.2-2 and the response data structures, and response codes specified in table 5.2.49.3.4-3.

Table 5.2.49.3.4-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
array(PatchItem)	M	1..N	Contains the delta data to the provisioned parameter data

Table 5.2.49.3.4-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon successful modification there is no body in the response message. (NOTE 2)
PatchResult	M	1	200 OK	Upon success, the execution report is returned. (NOTE 2)
ProblemDetails	O	0..1	403 Forbidden	If one or more attributes are not allowed to be modified according to e.g. policy or local configuration, then the invalidParams attribute shall contain the JSON pointers of attributes which are not allowed to be modified, and the cause attribute shall be set to "MODIFICATION_NOT_ALLOWED", see 3GPP TS 29.500 [8] table 5.2.7.2-1.
NOTE 1: In addition common data structures as listed in table 5.2.7.1-1 of 3GPP TS 29.500 [8] are supported. NOTE 2: If all the modification instructions in the PATCH request have been implemented, the UDR shall respond with 204 No Content response; if some of the modification instructions in the PATCH request have been discarded, and the NF service consumer has included in the supported-feature query parameter the "PatchReport" feature number, the UDR shall respond with PatchResult.				

5.2.50 Resource: RoamingInfo

5.2.50.1 Description

This resource is used to represent the last 5GC/EPC common Roaming Information in the 3GPP access to be stored in the UDR by the UDM.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

5.2.50.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/roaming-information

This resource shall support the resource URI variables defined in table 5.2.50.2-1.

Table 5.2.50.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeId 3GPP TS 29.571 [3]

5.2.50.3 Resource Standard Methods

5.2.50.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.50.3.1-1.

Table 5.2.50.3.1-1: URI query parameters supported by the PUT method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.50.3.1-2 and the response data structures and response codes specified in table 5.2.50.3.1-3.

Table 5.2.50.3.1-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
RoamingInfoUpdate	M	1	Contains the last 5GC/EPC common Roaming Information in the 3GPP access.

Table 5.2.50.3.1-3: 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
RoamingInfoUpdate	M	1	201 Created	Upon success, a response body containing a representation of the created Roaming Information resource shall be returned.
NOTE: In addition common data structures as listed in table 5.5-1 are supported.				

5.2.50.3.2 GET

This method shall support the URI query parameters specified in table 5.2.50.3.2-1.

Table 5.2.50.3.2-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.50.3.2-2 and the response data structures and response codes specified in table 5.2.50.3.2-3.

Table 5.2.50.3.2-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.50.3.2-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
RoamingInfoUpdate	M	1	200 OK	Upon success, a response body containing the last 5GC/EPC common Roaming Information in the 3GPP access shall be returned.
NOTE: In addition common data structures as listed in table 5.5-1 are supported.				

5.2.51 Resource: UserConsentData

5.2.51.1 Description

This resource represents UE's subscribed User Consent Data for a UE identifier. It is queried by the UDM during User Consent Data Retrieval.

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [7]).

5.2.51.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/uc-data

This resource shall support the resource URI variables defined in table 5.2.51.2-1.

Table 5.2.51.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Permanent Identifier (see 3GPP TS 23.501 [4] clause 5.9.2). pattern: See pattern of type VarUeId in 3GPP TS 29.571 [3]

5.2.51.3 Resource Standard Methods

5.2.51.3.1 GET

This method shall support the URI query parameters specified in table 5.2.51.3.1-1.

Table 5.2.51.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
supported-features	SupportedFeatures	O	0..1	see 3GPP TS 29.500 [8] clause 6.6
uc-purpose	UcPurpose	O	0..1	Represents the user consent purpose. pattern: See pattern of type UcPurpose in 3GPP TS 29.503 [6]

This method shall support the request data structures specified in table 5.2.51.3.1-2 and the response data structures and response codes specified in table 5.2.51.3.1-3.

Table 5.2.51.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.51.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
UcSubscriptionData	M	1	200 OK	Upon success, a response body containing UE's subscribed User Consent Data.
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.52 Resource: PeiInfo

5.2.52.1 Description

This resource is used to represent the PEI Update Information of the 5GC/EPC domains 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]).

5.2.52.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/pei-info

This resource shall support the resource URI variables defined in table 5.2.52.2-1.

Table 5.2.52.2-1: Resource URI variables for this resource

Name	Definition
apiRoot	See 3GPP TS 29.504 [2] clause 6.1.1
ueId	Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2) pattern: See pattern of type VarUeId 3GPP TS 29.571 [3]

5.2.52.3 Resource Standard Methods

5.2.52.3.1 PUT

This method shall support the URI query parameters specified in table 5.2.52.3.1-1.

Table 5.2.52.3.1-1: 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 5.2.52.3.1-2 and the response data structures and response codes specified in table 5.2.52.3.1-3.

Table 5.2.52.3.1-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
PeiUpdateInfo	M	1	The PEI Update Information.

The UDM shall create or update this resource when the PEI is received from the AMF (3gpp access or non-3gpp access) or from the HSS.

Table 5.2.52.3.1-3: 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
PeiUpdateInfo	M	1	201 Created	Upon success, a response body containing a representation of the resource of the created PEI Update Information shall be returned.
NOTE: In addition, common data structures as listed in table 5.5-1 are supported.				

5.2.52.3.2 GET

This method shall support the URI query parameters specified in table 5.2.52.3.2-1.

Table 5.2.52.3.2-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.52.3.2-2 and the response data structures and response codes specified in table 5.2.52.3.2-3.

Table 5.2.52.3.2-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.52.3.2-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
PeiUpdateInfo	M	1	200 OK	Upon success, a response body containing the PEI Update Information 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.
- If the UDM uses implicit subscriptions to receive notifications from UDR, the UDM shall register in NRF a default notification URI globally at NF Profile level (see 3GPP TS 29.510 [19], clause 6.1.6.2.2), rather than registering individual default notification URIs per NF Service.

The "callback" clause of the OpenAPI specification found in Annex A.2 associated to the POST method of the "subs-to-notif" resource shall be used as the notification request for both explicit and implicit subscriptions.

NOTE: For explicit subscriptions, a stateless UDM/NF provides a URI which identifies a set of UDMs/NFs; a stateful UDM/NF provides a specific URI identifying a node.

Resource URI: {callbackReference}

Support of URI query parameters is specified in table 5.3.2-1.

Table 5.3.2-1: URI query parameters supported by the POST method

Name	Data type	P	Cardinality	Description
n/a				

Support of request data structures is specified in table 5.3.2-2 and of response data structures and response codes is specified in table 5.3.2-3.

Table 5.3.2-2: Data structures supported by the POST Request Body

Data type	P	Cardinality	Description
DataChangeNotify	M	1	

Table5.3.2-3: Data structures supported by the POST Response Body

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned.

The structure of the Notifications from changes on the explicitly subscribed resources (i.e. the resource indicated by the MonitoriedResourceUri) or implicitly subscribed resources of type Collection or Store, are described in Table 5.3.2-4.

NOTE: Table 5.3.2-4 follows the considerations for handling JSON arrays described in 3GPP TS 29.501 Annex E.

Table 5.3.2-4: The structure of the Notifications of type Collection or Store

Subscribed Resource name	DataChangeNotify Content Type	Description
SmfRegistrations (Store)	SmfRegList	The complete replacement array representation of the SmfRegList shall be included in the DataChangeNotify.
ProvisionedParameterDataEntries (Store)	PpDataEntryList	The complete replacement array representation of the PpDataEntryList shall be included in the DataChangeNotify.
SubscriptionDataSubscriptions (Collection)	array(SubscriptionDataSubscriptions)	The complete replacement array representation of the SubscriptionDataSubscriptions shall be included in the DataChangeNotify.
5GVnGroups (Store)	map(5GVnGroupConfiguration)	The complete map respresenation shall be included in the DataChangeNotify.

5.3.3 Data Removal Notification

The POST method shall be used for Data Removal Notifications.

Data Removal Notifications are used for subscription withdraw cases implicitly subscribed by the UDM.

- The UDR shall use either a locally configured callback URI of the UDM, or the UDR may retrieve from NRF a default notification URI stored by UDM in NRF during the NF registration procedure.
- The UDM should register in NRF a default notification URI globally at NF Profile level, rather than registering individual default notification URIs per NF Service.

The "callback" clause of the OpenAPI specification found in Annex A.2 associated to the POST method of the "subs-to-notif" resource shall be used as the notification request.

Resource URI: {callbackReference}

Support of URI query parameters is specified in table 5.3.3-1.

Table 5.3.3-1: URI query parameters supported by the POST method

Name	Data type	P	Cardinality	Description
n/a				

Support of request data structures is specified in table 5.3.3-2 and of response data structures and response codes is specified in table 5.3.3-3.

Table 5.3.3-2: Data structures supported by the POST Request Body

Data type	P	Cardinality	Description
DataChangeNotify	M	1	notifyItems within the DataChangeNotify type shall indicate deletion of the resources Amf3GppAccessRegistration and/or AmfNon3GppAccessRegistration

Table5.3.3-3: Data structures supported by the POST Response Body

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned.
NOTE: In addition common data structures as listed in table 5.5-1 are supported.				

5.4 Data Model

5.4.1 General

This clause specifies the application data model supported by the API.

Table 5.4.1-1 specifies the data types defined for the Nudr service based interface protocol.

Table 5.4.1-1: Nudr Subscriber Data specific Data Types

Data type	Clause defined	Description
AuthenticationSubscription	5.4.2.2	A UE's authentication data
OperatorSpecificDataContainer	5.4.2.3	Container for operator specific data
SmfRegList	5.4.2.4	The list of all the SMF registrations of a UE
SubscriptionDataSubscriptions	5.4.2.5	A subscription to notifications.
DataChangeNotify	5.4.2.6	Container for data which have changed and notification was requested when changed.
IdentityData	5.4.2.7	Identity data corresponds to the provided ueId
ProvisionedDataSets	5.4.2.8	Contains the provisioned data sets
SorData	5.4.2.9	Used to store the status of the latest SOR data update
UpuData	5.4.2.9A	Used to store the status of the latest UPU data update
NssaiAckData	5.4.2.9B	Used to store the status of the latest NSSAI data update
CagAckData	5.4.2.9C	Used to store the status of the latest CAG data update
AmfSubscriptionInfo	5.4.2.19	Information the UDR stores and retrieves related to active subscriptions at the AMF(s)
EeProfileData	5.4.2.20	Event Exposure Profile Data
ContextDataSets	5.4.2.22	Contains the context data sets
SequenceNumber	5.4.2.23	Contains the SQN
MessageWaitingData	5.4.2.24	Message Waiting Data list
SmscData	5.4.2.25	Addresses of SM-Service Center entities with SMS waiting to be delivered to the UE
SmfSubscriptionInfo	5.4.2.26	Information the UDR stores and retrieves related to active subscriptions at the SMF(s)
SmfSubscriptionItem	5.4.2.27	Contains info about a single SMF event subscription
MtcProvider	5.4.2.28	MTC provider information
HssSubscriptionInfo	5.4.2.29	Information the UDR stores related to active subscriptions at the HSS(s)
HssSubscriptionItem	5.4.2.30	Contains info about a single HSS event subscription
EeGroupProfileData	5.4.2.31	The Event Exposure Profile Data for a group of UEs
Pp5gVnGroupProfileData	5.4.2.32	The Parameter Provision Profile Data for 5G VN groups
PpProfileData	5.4.2.33	The Parameter Provision Profile Data
AllowedMtcProviderInfo	5.4.2.34	Allowed MTC Providers or AFs Information to provision parameters for UE.
GroupIdentifiers	5.4.2.35	External or Internal Group Identifier with a list of group members
AuthorizationData	5.4.2.36	Authorization Information
NiddAuthorizationInfo	5.4.2.37	Information the UDR stores and retrieves related to active NIDD authorizations
PpDataEntryList	5.4.2.38	A list of the Provisioned Parameters entries.
UeSubscribedDataSets	5.4.2.39	Contains the subscribed data sets of a UE
ServiceSpecificAuthorizationInfo	5.4.2.40	Information the UDR stores and retrieves related to active Service Specific authorizations
NfIdentifier	5.4.2.41	Network Function Identifier
EeSubscriptionExt	5.4.2.42	Extended Event Exposure Subscription
AdditionalEeSubsInfo	5.4.2.43	Additional EE-Subscription Information
VarPlmnId	5.4.3.2	String identifying a PLMN ID or an SNPN ID.
AuthMethod	5.4.3.3	Contains the Authentication Method
DataSetName	5.4.3.4	The name of data set
ContextDataSetName	5.4.3.6	The name of context data set
SqnScheme	5.4.3.7	Scheme for generation of Sequence Numbers
Sign	5.4.3.8	Sign of the DIF value
UeUpdateStatus	5.4.3.9	Status of the procedure
PpDataType	5.4.3.10	The data type of the Provisioned Parameters

Table 5.4.1-2 specifies data types re-used by the Nudr service based interface protocol from other specifications, including a reference to their respective specifications and when needed, a short description of their use within the Nudr service based interface.

Table 5.4.1-2: Nudr re-used Data Types

Data type	Reference	Comments
AccessAndMobilitySubscriptionData	3GPP TS 29.503 [6]	Access and Mobility Subscription Data
SmfSelectionSubscriptionData	3GPP TS 29.503 [6]	SMF Selection Subscription Data
SmSubsData	3GPP TS 29.503 [6]	Session Management Subscription Data
Amf3GppAccessRegistration	3GPP TS 29.503 [6]	The complete set of information relevant to the AMF where the UE has registered via 3GPP access.
AmfNon3GppAccessRegistration	3GPP TS 29.503 [6]	The complete set of information relevant to the AMF where the UE has registered via non 3GPP access.
SmfRegistration	3GPP TS 29.503 [6]	The complete set of information relevant to an SMF serving the UE
SmsfRegistration	3GPP TS 29.503 [6]	The complete set of information relevant to the SMSF serving the UE.
SmsManagementSubscriptionData	3GPP TS 29.503 [6]	SMS Management Subscription Data
SupportedFeatures	3GPP TS 29.571 [3]	Used to negotiate the applicability of the optional features
ProblemDetails	3GPP TS 29.571 [3]	Detailed information about the status code.
PpData	3GPP TS 29.503 [6]	Parameter Provision Data
PpDataEntry	3GPP TS 29.503 [6]	Provisioned Parameter Data Entry
SmsSubscriptionData	3GPP TS 29.503 [6]	SMS Subscription Data
PatchItem	3GPP TS 29.571 [3]	Data structure used for JSON patch.
SdmSubscription	3GPP TS 29.503 [6]	A subscription to notifications
EeSubscription	3GPP TS 29.503 [6]	A subscription to Notifications of event exposure
Uri	3GPP TS 29.571 [3]	URI
TraceData	3GPP TS 29.571 [3]	Trace Data
Dnn	3GPP TS 29.571 [3]	Data Network Name
Snssai	3GPP TS 29.571 [3]	Single NSSAI
VarUeId	3GPP TS 29.571 [3]	String represents the SUPI or GPSI.
NfInstanceId	3GPP TS 29.571 [3]	NF Instance Identifier
NotifyItem	3GPP TS 29.571 [3]	Common data type used for data change notification.
OdbData	3GPP TS 29.571 [3]	Operator Determined Barring Data
EventType	3GPP TS 29.503 [6]	Event Type
ExtGroupId	3GPP TS 29.503 [6]	External Group Identifier
PduSessionId	3GPP TS 29.571 [3]	PDU Session ID which identifies a PDU session
DateTime	3GPP TS 29.571 [3]	Date Time
UpuMac	3GPP TS 29.509 [15]	MAC value for protecting UPU procedure (UPU-MAC-I_{AUSF} and UPU-MAC-I_{UE})
5GVnGroupConfiguration	3GPP TS 29.503 [6]	5G VN Group Configuration data
PatchResult	3GPP TS 29.571 [3]	Patch Result
SupportedFeatures	3GPP TS 29.571 [3]	Supported Features
AppPortId	3GPP TS 29.503 [6]	Application Port Identifier
LcsPrivacyData	3GPP TS 29.503 [6]	LCS Privacy Subscription Data
LcsMoData	3GPP TS 29.503 [6]	LCS Mobile Originated Subscription Data
MtcProviderInformation	3GPP TS 29.571 [3]	An ID uniquely identifying MTC provider information
EnhancedCoverageRestrictionData	3GPP TS 29.503 [6]	Enhanced Coverage Restriction Data
LocationInfo	3GPP TS 29.503 [6]	Location Information
V2xSubscriptionData	3GPP TS 29.503 [6]	V2X Subscription Data
E164Number	3GPP TS 29.503 [6]	E164Number
NetworkNodeDiameterAddress	3GPP TS 29.503 [6]	Diameter Address of an Network Node

IpSmGwRegistration	3GPP TS 29.503 [6]	The complete set of information relevant to the IP-SM-GW where the UE has registered.
LcsBroadcastAssistanceTypesData	3GPP TS 29.503 [6]	LCS Broadcast Assistance Data Types
ContextInfo	3GPP TS 29.503 [6]	Contains the headers received by an NF.
NfGroupId	3GPP TS 29.571 [3]	NF Group ID
ProseSubscriptionData	3GPP TS 29.503 [6]	ProSe Service Subscription Data
PlmnId	3GPP TS 29.571 [3]	PLMN ID
AppPortId	3GPP TS 29.503 [6]	Application Port Id
AuthorizationInfo	3GPP TS 29.503 [6]	Contains Authorization Information
MbsSubscriptionData	3GPP TS 29.503 [6]	Contains 5MBS Subscription Data
ServiceType	3GPP TS 29.503 [6]	Service Type
RoamingInfoUpdate	3GPP TS 29.503 [6]	Roaming Information in EPC domain
UcSubscriptionData	3GPP TS 29.503 [6]	User Consent Data
UcPurpose	3GPP TS 29.503 [6]	User Consent Purpose
PeiUpdateInfo	3GPP TS 29.503 [6]	PEI Update Information

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.
hssGroupId	NfGroupId	O	0..1	Identity of the HSS group associated with the subscription that might be used by the UDM to discover the HSS; see 3GPP TS 29.510 [19]. This attribute may be present if the vectorGenerationInHss attribute is present and set to True.
vectorGenerationInHss	boolean	O	0..1	True indicates that the UDM needs to retrieve an Authentication Vector from the HSS; 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.

supi	Supi	C	0..1	If present, this IE shall contain the UE's SUPI which shall contain an IMSI. It shall be present if the subscription is allowed to be identified by a pseudonym of the SUPI e.g. by a GCI or GLI that is not the SUPI.
akmaAllowed	boolean	O	0..1	This IE indicates whether or not the subscriber is allowed to use AKMA: - true: subscriber is allowed to use AKMA - absent or false: subscriber is not allowed to use AKMA
routingId	string	C	0..1	This IE shall be present if the akmaAllowed is set to "true". When present, this IE shall include the Routing Indicator contained in the SUCI (see 3GPP TS 23.003 [5], clause 2.2B).
NOTE: The attribute n5gcDeviceAuthMethod is used for EAP-TLS, which is described in the informative annex O of 3GPP TS 33.501 [9] and is not mandatory to support.				

5.4.2.3 Type: OperatorSpecificDataContainer

Table 5.4.2.3-1: Definition of type OperatorSpecificDataContainer

Attribute name	Data type	P	Cardinality	Description
dataType	string	M	1	This attribute value must be a string equals to the name of the actual data type of the "Value" attribute.
value	any type	M	1	
dataTypeDefinition	string	O	0..1	If present, this attribute is applicable when "dataType" takes value "object" or "array" and it shall contain a JSON Pointer expression referencing a JSON Schema data type definition (same as how the attribute "$ref" is used in JSON Schema specifications), which the "value" attribute must conform to.
supportedFeatures	SupportedFeatures	C	0..1	Indicates the list of negotiated supported features. This parameter shall be supplied by the UDR in the response to the GET request when the GET request includes the "supported-features" query parameter and the UDR supports feature negotiation for the OperatorSpecificData resource defined in this specification and in 3GPP TS 29.519 [17].
resetIds	array(string)	O	1..N	This IE uniquely identifies a part of temporary data in UDR that contains the created resource. This attribute may be provided in the response of successful resource creation.

EXAMPLE 1: A JSON object of type "OperatorSpecificDataContainer" can be as follows:

```
{
  "dataType": "object",
  "value": {
    "operatorData1": "foo",
    "operatorData2": 123,
    "operatorData3": false
  },
  "dataTypeDefinition": "https://operator.com/definitions.json#/OpSpecificDataType"
}
```

And where the file "/definitions.json" contains a fragment as follows:

```
{
  "OpSpecificDataType": {
    "type": "object",
    "properties": {
      "operatorData1": {
        "type": "string"
      },
      "operatorData2": {
```

```
        "type": "integer"
      },
      "operatorData3": {
        "type": "boolean"
      }
    }
  }
}
```

EXAMPLE 2: A JSON object of type "OperatorSpecificDataContainer" can be as follows:

```
{
  "dataType": "array",
  "value": [ "foo", "bar" ],
  "dataTypeDefinition": "https://operator.com/definitions.json#/OpSpecificDataType2"
}
```

And where the file "/definitions.json" contains a fragment as follows:

```
{
  "OpSpecificDataType2": {
    "type": "array",
    "items": {
      "type": "string",
      "minLength": 3
    },
    "minItems": 1
  }
}
```

5.4.2.4 Type: SmfRegList

Table 5.4.2.4-1: Definition of type SmfRegList

Attribute name	Data type	P	Cardinality	Description
N/A	array(SmfRegistration)	M	1..N	Each member of the array is an individual SMF registration of the UE.

5.4.2.5 Type: SubscriptionDataSubscriptions

Table 5.4.2.5-1: Definition of type SubscriptionDataSubscriptions

Attribute name	Data type	P	Cardinality	Description
callbackReference	Uri	M	1	Identifies the UDM/NF pool or an individual UDM/NF which should be used by the UDR to send notification to UDM/NF.
originalCallbackReference	Uri	O	0..1	URI provided by the NF service consumer to the UDM to receive notifications from the UDR. If "sdmSubscription" is present, this attribute may be absent (and, if it is also present, it shall take the same value as the attribute "callbackReference" of "sdmSubscription").
ueId	VarUeId	O	0..1	User identity if subscription to notifications is related to a user.
monitoredResourceUris	array(Uri)	M	1..N	A set of URIs that identify the resources for which a modification of the representation triggers a notification. The URI shall take the form of either an absolute URI or an absolute-path reference as defined in IETF RFC 3986 [16]. See NOTE 1.
expiry	DateTime	C	0..1	This IE shall be included in a subscription response, if, based on operator policy and taking into account the expiry time included in the request, the UDR needs to include an expiry time. 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).
hssSubscriptionInfo	HssSubscriptionInfo	O	0..1	HSS Subscription Info associated with the sdmSubscription.
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
uniqueSubscription	boolean	C	0..1	This attribute shall be present and set to true if the UDM requests the UDR to maintain a single UDM subscription per UE. The attribute shall not be set to true if the sdmSubscription attribute is present. The attribute shall not be set to true if the sdmSubscription and UeId attributes are not present. See clause 5.2.20.3.1.
supportedFeatures	SupportedFeatures	O	0..1	Used to negotiate the applicability of optional features
NOTE 1: The UDR should handle only the relative-path part (apiSpecificResourceUriPart, see 3GPP TS 29.501 [7] clause 4.4.1) and ignore possible inconsistencies (caused by e.g. an SCP) in the base URI part.				

5.4.2.6 Type: DataChangeNotify

Table 5.4.2.6-1: Definition of type DataChangeNotify

Attribute name	Data type	P	Cardinality	Description
originalCallbackReference	array(Uri)	C	1..N	Original Callback Reference shall be present if a UDM has subscribed to notification due to an request from an NF. If present it is Identifying the NF to which the UDM has to provide the notification of data change.
ueId	VarUeId	C	0..1	User identity if subscription to notifications is related to a user that may be provided e.g. in case OriginalCallback URI is not included.
notifyItems	array(NotifyItem)	O	1..N	This attribute contains the changes which have been applied on the resources.
sdmSubscription	SdmSubscription	O	0..1	Data related to the subscription to changes on SDM data created by the NF Service Consumer of the UDM (see 3GPP TS 29.503 [6], clause 6.1.6.2.3). This attribute should be omitted if the SubscriptionsDataSubscriptions array is included.
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 ueId.
gpsiList	array(Gpsi)	C	1..N	Gpsi list corresponding to the provided supi ueId. Zero or one MSISDN and/or zero or more external Identifiers may be included.
allowedAfIds	array(string)	O	1..N	A list of Application Function Identifiers authorized to retrieve this Identities lists. The absence of this IE indicates that any AF is allowed to retrieve them.
applicationPortIds	map(Gpsi)	O	1..N	A map (list of key-value pairs where AppPortId serves as key) of GPSIs.

5.4.2.8 Type: ProvisionedDataSets

Table 5.4.2.8-1: ProvisionedDataSets

Attribute name	Data type	P	Cardinality	Description
amData	AccessAndMobilitySubscriptionData	O	0..1	Access and Mobility Subscription Data
smfSelData	SmfSelectionSubscriptionData	O	0..1	SMF Selection Subscription Data
smsSubsData	SmsSubscriptionData	O	0..1	SMS Subscription Data
smData	SmSubsData	O	0..1	Session Management Subscription Data
traceData	TraceData	O	0..1	Trace Data. The Null value indicates that trace is not active.
smsMngData	SmsManagementSubscriptionData	O	0..1	SMS Management Subscription Data
lcsPrivacyData	LcsPrivacyData	O	0..1	LCS Privacy Subscription Data
lcsMoData	LcsMoData	O	0..1	LCS Mobile Originated Subscription Data
lcsBcaData	LcsBroadcastAssistanceTypesData	O	0..1	LCS Broadcast Assistance Subscription Data
v2xData	V2xSubscriptionData	O	0..1	V2X Subscription Data
proseData	ProseSubscriptionData	O	0..1	ProSe service Subscription Data
odbData	OdbData	O	0..1	Operator Determined Barring Subscription Data
eeProfileData	EeProfileData	O	0..1	Event Exposure Profile Data
ppProfileData	PpProfileData	O	0..1	Parameter Provisioning Profile Data
niddAuthData	AuthorizationData	O	0..1	NIDD Authorization Data
mbsSubscriptionData	MbsSubscriptionData	O	0..1	5MBS Subscription Data

5.4.2.9 Type: SorData

Table 5.4.2.9-1: Definition of type SorData

Attribute name	Data type	P	Cardinality	Description
provisioningTime	DateTime	M	1	Point in time of provisioning
ueUpdateStatus	UeUpdateStatus	M	1	status of the SOR data update procedure
sorXmacIue	SorMac	C	0..1	String containing SoR-XMAC-IUE as specified in 3GPP TS 33.501 [9]. Shall be present if UeUpdateStatus is "WAITING_FOR_ACK" or "ACK_RECEIVED".
sorMacIue	SorMac	C	0..1	String containing SoR-MAC-IUE as specified in 3GPP TS 33.501 [9]. Shall be preset if UeUpdateStatus is "ACK_RECEIVED".
meSupportOfSorCmci	Boolean	C	0..1	When present, indicates "ME support of SOR-CMCI" sent from UE as defined in 3GPP TS 23.122 [14] and 3GPP TS 24.501 [27]. As described in 3GPP TS 23.122 [14] Annex C.2 step 3a, this attribute will be deleted (set to False) during UE initiates initial registration or emergency registration. - True: ME supports SOR-CMCI - False or absent: ME does not support SOR-CMCI

5.4.2.9A Type: UpuData

Table 5.4.2.9A-1: Definition of type UpuData

Attribute name	Data type	P	Cardinality	Description
provisioningTime	DateTime	M	1	Point in time of provisioning
ueUpdateStatus	UeUpdateStatus	M	1	status of the UPU data update procedure
upuXmacIue	UpuMac	C	0..1	String containing UPU-XMAC-IUE as specified in 3GPP TS 33.501 [9]. Shall be present if UeUpdateStatus is "WAITING_FOR_ACK" or "ACK_RECEIVED".
upuMacIue	UpuMac	C	0..1	String containing UPU-MAC-IUE as specified in 3GPP TS 33.501 [9]. Shall be preset if UeUpdateStatus is "ACK_RECEIVED".

5.4.2.9B 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
amfInstanceId	NfInstanceId	M	1	InstanceId of the AMF to which the subscription was sent
subscriptionId	Uri	M	1	The Subscription Id allocated by the AMF as received by the UDM in the HTTP "Location" header of the Namf_EventExposure_Subscribe response
subsChangeNotifyCorrelationId	string	O	1	The Correlation Id allocated by the UDM and sent to the AMF for correlation of subscriptionId-change-notifications
contextInfo	ContextInfo	O	0..1	This IE if present may contain e.g. the headers sent/received by the UDM during AMF Event Exposure subscription.

5.4.2.20 Type: EeProfileData

Table 5.4.2.20-1: Definition of type EeProfileData

Attribute name	Data type	P	Cardinality	Description
restrictedEventTypes	array(EventType)	O	1..N	List of the event types that are restricted (if any) for the UE. The absence of this IE indicates that all event types are authorized for the UE.
supportedFeatures	SupportedFeatures	O	0..1	
allowedMtcProvider	map(array(MtcProvider))	O	1..N(1..M)	A map (list of key-value pairs where EventType (see 3GPP TS 29.503 [6] serves as key) of MTC Provider. In addition to defined EventTypes, the key value "ALL" may be used to identify a map entry which contains a list of MtcProviders that are allowed monitoring all Event Types. The absence of this IE indicates that monitoring by any MTC provider is allowed for any non restricted event type.
iwkEpcRestricted	boolean	O	0..1	If set to True, indicates that interworking with EPC is restricted. Set to False or not present means that the UE is not restriceted in the EPC.
imsi	string	O	0..1	This IE contains the IMSI of the UE and should be present if the iwkEpcRestricted attribute is not set to True. pattern: "^[0-9]{5,15}$"
hssGroupId	NfGroupId	O	0..1	Identity of the HSS group associated with the subscription that might be used by the UDM to discover the HSS; see 3GPP TS 29.510 [19]. This attribute may be present if the iwkEpcRestricted attribute is not present or present and set to False.

5.4.2.21 Void

5.4.2.22 Type: ContextDataSets

Table 5.4.2.22-1: ContextDataSets

Attribute name	Data type	P	Cardinality	Description
amf3Gpp	Amf3GppAccessRegistration	O	0..1	AMF 3GPP Access registration
amfNon3Gpp	AmfNon3GppAccessRegistration	O	0..1	AMF Non 3GPP Access registration
sdmSubscriptions	array(SdmSubscription)	O	1..N	SDM-Subscriptions
eeSubscriptions	array(EeSubscription)	O	1..N	Event Exposure Subscriptions
smsf3GppAccess	SmsfRegistration	O	0..1	SMSF 3GPP Access registration
smsfNon3GppAccess	SmsfRegistration	O	0..1	SMSF Non 3GPP Access registration
subscriptionDataSubscriptions	array(SubscriptionDataSubscriptions)	O	1..N	This attribute contain the Subscription Data Subscriptions (subs-to-notify) associated with the Notification.
smfRegistrations	SmfRegList	O	0..1	SMF Registrations
ipSmGw	IpSmGwRegistration	O	0..1	IP-SM-GW Registration
roamingInfo	RoamingInfoUpdate	O	0..1	Roaming Information
peiInfo	PeiUpdateInfo	O	0..1	PEI Information

5.4.2.23 Type: SequenceNumber

Table 5.4.2.23-1: Definition of type SequenceNumber

Attribute name	Data type	P	Cardinality	Description
sqnScheme	SqnScheme	M	1	The scheme used to generate the sequence numbers, as described in 3GPP TS 33.102 [10], clause C.1.1.
sqn	string	C	0..1	A 48-bit hex string containing the SEQ part of SQN (most significant bits), as specified in 3GPP TS 33.102 [10], and where the IND part (least significant bits) is filled with 0's. When the sqnScheme is "TIME_BASED", the SEQ part (most significant bits) of this attribute contains the DIF value. This IE may be absent, if it does not exist in UDR (e.g. right after the subscriber is provisioned); otherwise, it shall be present. Pattern: '^[A-Fa-f0-9]{12}$'
lastIndexes	map(integer)	C	1..N	A map of integer values, where the key of the map is the type of node that is requesting the generation of an authentication vector in UDM, and the integer is the last used value of IND for the corresponding type of node. The types of nodes currently defined are: - "ausf" - "vlr" - "sgsn" - "s-cscf" - "bsf", - "gan-aaa-server" - "wlan-aaa-server" - "mme" This IE may be absent, if it does not exist in UDR (e.g. right after the subscriber is provisioned); otherwise, it shall be present.
indLength	integer	O	1	Number of bits of the IND part of SQN. The length of the SEQ part is, therefore, (48 - indLength) bits. If not present, the default value is 5.
difSign	Sign	O	1	Sign of the DIF value. It is applicable when the sqnScheme is "TIME_BASED". If not present, the default value is "NEGATIVE".

5.4.2.24 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 wating to be delivered to the UE.

5.4.2.25 Type: SmscData

Table 5.4.2.25-1: Definition of type SmscData

Attribute name	Data type	P	Cardinality	Description
smscMapAddress	E164Number	C	0..1	International E.164 number of the SM-SC; it shall be present if the SM-SC supports the MAP protocol.
smscDiameterAddress	NetworkNodeDiameterAddress	C	0..1	Diameter Identity of the SM-SC; it shall be present if the SM-SC supports the Diameter protocol.
NOTE: At least one of the properties, smscMapAddress or smscDiameterAddress, shall be present.				

5.4.2.26 Type: SmfSubscriptionInfo

Table 5.4.2.26-1: Definition of type SmfSubscriptionInfo

Attribute name	Data type	P	Cardinality	Description
smfSubscriptionList	array(SmfSubscriptionItem)	M	1..N	List of SmfSubscriptionItem objects

5.4.2.27 Type: SmfSubscriptionItem

Table 5.4.2.27-1: Definition of type SmfSubscriptionItem

Attribute name	Data type	P	Cardinality	Description
smfInstanceId	NfInstanceId	M	1	InstanceId of the SMF to which the subscription was sent
subscriptionId	Uri	M	1	The Subscription Id allocated by the SMF as received by the UDM in the HTTP "Location" header of the Nsmf_EventExposure_Subscribe response
contextInfo	ContextInfo	O	0..1	This IE if present may contain e.g. the headers received by the UDM along with consuming Nsmf_EventExposure_Subscribe service operation.

5.4.2.28 Type: MtcProvider

Table 5.4.2.28-1: Definition of type MtcProvider

Attribute name	Data type	P	Cardinality	Description
mtcProviderInformation	MtcProviderInformation	O	0..1	Indicates MTC provider information for Monitoring Configuration authorization.
afId	string	O	0..1	ID of the AF. The string identifying the originating AF, formatted as described in the definition of type MonitoringConfiguration in 3GPP TS 29.503 [6].

5.4.2.29 Type: HssSubscriptionInfo

Table 5.4.2.29-1: Definition of type HssSubscriptionInfo

Attribute name	Data type	P	Cardinality	Description
hssSubscriptionList	array(HssSubscriptionItem)	M	1..N	List of hssSubscriptionItem objects

5.4.2.30 Type: HssSubscriptionItem

Table 5.4.2.30-1: Definition of type HssSubscriptionItem

Attribute name	Data type	P	Cardinality	Description
hssInstanceId	NfInstanceId	M	1	InstanceId of the HSS to which the subscription was sent.
subscriptionId	Uri	M	1	The Subscription Id allocated by the HSS as received by the UDM in the HTTP "Location" header of the Nhss_EventExposure_Subscribe response or the Nhss_SDM_Subscribe response.
contextInfo	ContextInfo	O	0..1	This IE if present may contain e.g. the headers received by the UDM along with consuming Nhss_EventExposure_Subscribe service operation or the Nhss_SDM_Subscribe response.

5.4.2.31 Type: EeGroupProfileData

Table 5.4.2.31-1: Definition of type EeGroupProfileData

Attribute name	Data type	P	Cardinality	Description
restrictedEventTypes	array(EventType)	O	1..N	List of the event types that are restricted (if any) for the group. The absence of this IE indicates that all event types are authorized for the group.
allowedMtcProvider	map(array(MtcProvider))	O	1..N	A map (list of key-value pairs where EventType (see 3GPP TS 29.503 [6] serves as key) of MTC Provider. In addition to defined EventTypes, the key value "ALL" may be used to identify a map entry which contains a list of MtcProviders that are allowed monitoring all Event Types. The absence of this IE indicates that monitoring by any MTC provider is allowed for any non restricted event type.
supportedFeatures	SupportedFeatures	O	0..1	
iwkEpcRestricted	boolean	O	0..1	If set to True, indicates that interworking with EPC is restricted. Set to False or not present means that the UE is not restricted in the EPC.
extGroupId	string	O	0..1	This IE contains the External Group Identifier and should be present if the iwkEpcRestricted attribute is not set to True. pattern: "^extgroupid-[^@]+@[^@]+$"
hssGroupId	NfGroupId	O	0..1	Identity of the HSS group associated with the subscription that might be used by the UDM to discover the HSS; see 3GPP TS 29.510 [19]. This attribute may be present if the iwkEpcRestricted attribute is not present or present and set to False.

5.4.2.32 Type: Pp5gVnGroupProfileData

Table 5.4.2.32-1: Definition of type Pp5gVnGroupProfileData

Attribute name	Data type	P	Cardinality	Description
allowedMtcProviders	map(array(AllowedMtcProviderInfo))	O	1..N	A map (list of key-value pairs where ExtGroupId (see 3GPP TS 29.503 [6]) serves as key of a list of AllowedMtcProviderInfos which include MTC provider informations or AF IDs that are allowed to create, update and delete a 5G VN Group for the user using UDM ParameterProvision service. In addition to defined external group identifier, the key value "ALL" may be used to identify a map entry which contains a list of AllowedMtcProviderInfos that are allowed operating all the external group identifiers. The absence of this IE indicates that all the MTC Providers and AFs are authorized to create, update and delete any 5G VN Group.
supportedFeatures	SupportedFeatures	O	0..1	

5.4.2.33 Type: PpProfileData

Table 5.4.2.33-1: Definition of type PpProfileData

Attribute name	Data type	P	Cardinality	Description
allowedMtcProviders	map(array(AllowedMtcProviderInfo))	O	1..N	A map (list of key-value pairs where PpDataType (see 5.4.3.10) serves as key of a list of AllowedMtcProviderInfos which include MTC provider informations or AF IDs that are allowed to provision the parameters for the user using UDM ParameterProvision service. In addition to defined external group identifier, the key value "ALL" may be used to identify a map entry which contains a list of AllowedMtcProviderInfos that are allowed provisioning all types of PP data. The absence of this IE indicates that all the MTC Providers and AFs are authorized to provision all types of PP data for the UE
supportedFeatures	SupportedFeatures	O	0..1	

5.4.2.34 Type: AllowedMtcProviderInfo

Table 5.4.2.34-1: Definition of type AllowedMtcProviderInfo

Attribute name	Data type	P	Cardinality	Description
mtcProviderInformation	MtcProviderInformation	C	0..1	Indicates MTC provider information for Parameters Provision authorization.
afId	string	C	0..1	Indicates ID of the AF for Parameters Provision authorization. The string identifying the originating AF, formatted as described in the definition of type MonitoringConfiguration in 3GPP TS 29.503 [6].

5.4.2.35 Type: GroupIdentifiers

Table 5.4.2.35-1: Definition of type GroupIdentifiers

Attribute name	Data type	P	Cardinality	Description
extGroupId	ExtGroupId	C	0..1	This IE shall contain the External Group ID associated to the provided Internal Group ID.
intGroupId	GroupId	C	0..1	This IE shall contain the Internal Group ID associated to the provided External Group ID..
ueIdList	array(UeId)	C	1..N	This IE shall contain a list of the UE identifiers that belong to the provided Internal/External Group ID if they are required.
allowedAfIds	array(string)	O	1..N	A list of Application Function Identifiers authorized to retrieve this Identities lists. The absence of this IE indicates that any AF is allowed to retrieve them.

5.4.2.36 Type: AuthorizationData

Table 5.4.2.36-1: Definition of type AuthorizationData

Attribute name	Data type	P	Cardinality	Description
authorizationData	array(UserIdentifier)	M	1..N	May contain a single value or list of (SUPI and GPSI). Contains unique items.
allowedDnnList	array(Dnn)	O	0..N	List of the allowed DNNs that this user can use for NIDD or other specific service
allowedSnssaiList	array(Snssai)	O	0..N	List of the allowed SNSSAIs that this user can use for NIDD or other specific service
allowedMtcProviders	array(AllowedMtcProviderInfo)	O	0..N	List of AllowedMtcProviderInfos which include MTC provider informations or AF IDs that are allowed for NIDD or other specific service
validityTime	DateTime	O	0..1	Indicates the granted validity time of the AuthorizationData. Absence indicates permanent validity.

5.4.2.37 Type: NiddAuthorizationInfo

Table 5.4.2.37-1: Definition of type NiddAuthorizationInfo

Attribute name	Data type	P	Cardinality	Description
niddAuthorizationList	array(AuthorizationInfo)	M	1..N	List of NiddAuthorizationInfo items

5.4.2.38 Type: PpDataEntryList

Table 5.4.2.38-1: Definition of type PpDataEntryList

Attribute name	Data type	P	Cardinality	Description
ppDataEntryList	array(PpDataEntry)	O	0..N	List of the Entries under the Provisioned Parameter Data store for a UE.
supportedFeatures	SupportedFeatures	O	0..1	Contains SupportedFeatures.

5.4.2.39 Type: UeSubscribedDataSets

Table 5.4.2.39-1: UeSubscribedDataSets

Attribute name	Data type	P	Cardinality	Description
amData	AccessAndMobilitySubscriptionData	O	0..1	Access and Mobility Subscription Data for the serving PLMN
smfSelData	SmfSelectionSubscriptionData	O	0..1	SMF Selection Subscription Data for the serving PLMN
smsSubsData	SmsSubscriptionData	O	0..1	SMS Subscription Data for the serving PLMN
smData	SmSubsData	O	0..1	Session Management Subscription Data
traceData	TraceData	O	0..1	Trace Data for the serving PLMN. The Null value indicates that trace is not active.
smsMngData	SmsManagementSubscriptionData	O	0..1	SMS Management Subscription Data for the serving PLMN
lcsPrivacyData	LcsPrivacyData	O	0..1	LCS Privacy Subscription Data
lcsMoData	LcsMoData	O	0..1	LCS Mobile Originated Subscription Data
lcsBcaData	LcsBroadcastAssistanceTypesData	O	0..1	LCS Broadcast Assistance Subscription Data for the serving PLMN
v2xData	V2xSubscriptionData	O	0..1	V2X Subscription Data
proseData	ProseSubscriptionData	O	0..1	ProSe service Subscription Data
odbData	OdbData	O	0..1	Operator Determined Barring Subscription Data
eeProfileData	EeProfileData	O	0..1	Event Exposure Profile Data
ppProfileData	PpProfileData	O	0..1	Parameter Provisioning Profile Data
niddAuthData	AuthorizationData	O	0..1	NIDD Authorization Data
ucData	UcSubscriptionData	O	0..1	User Consent Data
mbsSubscriptionData	MbsSubscriptionData	O	0..1	5MBS Subscription Data

5.4.2.40 Type: ServiceSpecificAuthorizationInfo

Table 5.4.2.40-1: Definition of type ServiceSpecificAuthorizationInfo

Attribute name	Data type	P	Cardinality	Description
serviceSpecificAuthorizationList	array(AuthorizationInfo)	M	1..N	List of ServiceSpecificAuthorizationInfo items

5.4.2.41 Type: NfIdentifier

Table 5.4.2.41-1: Definition of type NfIdentifier

Attribute name	Data type	P	Cardinality	Description
nfType	NFType	M	1	NF Type as defined in 3gpp TS 29.510.
nfInstanceId	NfInstanceId	O	0..1	Instance ID of the NF as defined in 3GPP TS 29.571.

5.4.2.42 Type: EeSubscriptionExt

Table 5.4.2.42-1: Definition of type EeSubscriptionExt as a list of "to be combined data types"

Data type	Cardinality	Description	Applicability
EeSubscription	1	see 3GPP TS 29.503 [6]	
AdditionalEeSubsInfo	0..1		EeSubscriptionExt

5.4.2.43 Type: AdditionalEeSubsInfo

Table 5.4.2.43-1: Definition of type AdditionalEeSubsInfo

Attribute name	Data type	P	Cardinality	Description	Applicability
amfSubscriptionInfoList	array(AmfSubscriptionInfo)	O	1..2	List AMF subscription info May be present on Nudr in GET response messages	EeSubscriptionExt
smfSubscriptionInfo	SmfSubscriptionInfo	O	0..1	SMF subscription info May be present on Nudr in GET response messages	EeSubscriptionExt
hssSubscriptionInfo	HssSubscriptionInfo	O	0..1	HSS subscription info May be present on Nudr in GET response messages	EeSubscriptionExt

5.4.3 Simple data types and enumerations

5.4.3.1 Introduction

This clause defines simple data types and enumerations that can be referenced from data structures defined in the previous clauses.

5.4.3.2 Simple data types

The simple data types defined in table 5.4.3.2-1 shall be supported.

Table 5.4.3.2-1: Simple data types

Type Name	Type Definition	Description
VarUeGroupId	string	String identifying an external Group of UEs or any UE. Pattern: '^(extgroupid-[^@]+@[^@]+|anyUE)$'
VarPlmnId	string	String identifying a PLMN ID or an SNPN ID. Pattern: '^[0-9]{5,6}(-[A-Fa-f0-9]{11})?$'

5.4.3.3 Enumeration: AuthMethod

Table 5.4.3.3-1: Enumeration AuthMethod

Enumeration value	Description
"5G_AKA"	5G AKA
"EAP_AKA_PRIME"	EAP AKA'
"EAP-TLS"	EAP TLS
"EAP_TTLS"	EAP TTLS
"NONE"	No specific EAP method type is signalled.

5.4.3.4 Enumeration: DataSetName

Table 5.4.3.4-1: Enumeration DataSetName

Enumeration value	Description
"AM"	Access and Mobility Subscription Data
"SMF_SEL"	SMF Selection Subscription Data
"SMS_SUB"	SMS Subscription Data
"SM"	Session Management Subscription Data
"TRACE"	Trace Data
"SMS_MNG"	SMS Management Subscription Data
"LCS_PRIVACY"	LCS Privacy Subscription Data
"LCS_MO"	LCS Mobile Originated Subscription Data
"LCS_BCA"	LCS Broadcast Assistance Subscription Data
"V2X"	V2X Subscription Data
"PROSE"	ProSe service Subscription Data
"ODB"	Operator Determined Barring Subscription Data
"EE_PROF"	Event Exposure Profile Data
"PP_PROF"	Parameter Provisioning Profile Data
"NIDD_AUTH"	NIDD Authorization Data
"USER_CONSENT"	User Consent Data
"MBS"	5MBS Subscription Data

5.4.3.5 Void

5.4.3.6 Enumeration: ContextDataSetName

Table 5.4.3.6-1: Enumeration ContextDataSetName

Enumeration value	Description
"AMF_3GPP"	AMF 3GPP Access Registration
"AMF_NON_3GPP"	SMF Non 3GPP Access Registration
"SDM SUBSCRIPTIONS"	SDM Subscriptions
"EE_SUBSCRIPTIONS"	EE Subscriptions
"SMSF_3GPP"	SMSF 3GPP Access Registration
"SMSF_NON_3GPP"	SMSF Non 3GPP Access Registration
"SUBS_TO_NOTIFY"	UDR Subscriptions
"SMF_REG"	SMF Registrations
"IP_SM_GW"	IP-SM-GW Registration
“ROAMING_INFO”	Roaming Information
“PEI_INFO”	PEI information

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 sorXmacIue shall be present; or UPU data update has been sent to the AMF; Acknowledgement has been requested. In this state upuXmacIue 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 sorXmacIue and sorMacIue shall be present; or UPU data update has been acknowledged by the UE. In this state upuXmacIue and upuMacIue shall be present; or NSSAI data update has been acknowledged by the UE or CAG data update has been acknowledged by the UE.
"NEGATIVE_ACK_RECEIVED"	SOR data update / UPU data update has been sent to the AMF, but could not be forwarded to the UE due to the UE not being reachable.

5.4.3.10 Enumeration: PpDataType

Table 5.4.3.10-1: Enumeration PpDataType

Enumeration value	Description
"COMMUNICATION_CHARACTERISTICS"	Communication Characteristics Parameters
"EXPECTED_UE_BEHAVIOUR"	Expected UE Behaviour Parameters
"EC_RESTRICTION"	Enhanced Coverage Restriction Parameters
"ACS_INFO"	ACS Information
"TRACE"	Trace Data
"STN_SR"	Session Transfer Number for SRVCC
"LCS_PRIVACY"	LCS Privacy Parameters
"SOR_INFO"	Steering of Roaming information to be conveyed to a UE

5.4.4 Binary data

N/A

5.5 Error handling

Table 5.5-1 lists common response body data structures used within the nudr-dr (Nudr_DataRepository) API

Table 5.5-1: Common Response Body Data Structures

Data type	P	Cardinality	Response codes	Description
ProblemDetails	O	0..1	4xx, 5xx responses	For unsuccessful status codes, the UDR may provide detailed information.
NOTE: In addition common data structures as defined in 3GPP TS 29.500 [8] are supported.				

The application layer error handling shall follow 3GPP TS 29.504 [2] clause 6.1.6 unless explicitly specified in this document.

5.6 Feature negotiation

The optional features in table 6.1.8-1 of 3GPP TS 29.504 [2] are defined for the Nudr_DataRepository API. They shall be negotiated using the extensibility mechanism defined in clause 6.6 of 3GPP TS 29.500 [8].

Annex A (normative): OpenAPI specification

A.1 General

This Annex specifies the formal definition of the Nudr_DataRepository service API for Subscription Data. It consists of OpenAPI 3.0.0 specifications, in YAML format.

This Annex takes precedence when being discrepant to other parts of the specification with respect to the encoding of information elements and methods within the API(s).

NOTE: The semantics and procedures, as well as conditions, e.g. for the applicability and allowed combinations of attributes or values, not expressed in the OpenAPI definitions but defined in other parts of the specification also apply.

Informative copies of the OpenAPI specification files contained in this 3GPP Technical Specification are available on a Git-based repository, that uses the GitLab software version control system (see 3GPP TS 29.501 [7] clause 5.3.1 and 3GPP TR 21.900 [14] clause 5B).

A.2 Nudr_DataRepository API for Subscription Data

For the purpose of referencing entities in the Open API file defined in this Annex, it shall be assumed that this Open API file is contained in a physical file named "TS29505_Subscription_Data.yaml".

```
openapi: 3.0.0
info:
  version: '-'
  title: 'Unified Data Repository Service API file for subscription data'
  description: |
    Unified Data Repository Service (subscription data).
    The API version is defined in 3GPP TS 29.504.
    © 2022, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).
    All rights reserved.

externalDocs:
  description: 3GPP TS 29.505 V17.9.0; 5G System; Usage of the Unified Data Repository Service for
subscription data; Stage 3
  url: 'https://www.3gpp.org/ftp/Specs/archive/29_series/29.505/'

paths:

  /subscription-data/{ueId}/authentication-data/authentication-subscription:
    get:
      summary: Retrieves the authentication subscription data of a UE
      operationId: QueryAuthSubsData
      tags:
        - Authentication Data (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data:authentication-subscription:read
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
        - name: supported-features
          in: query
          description: Supported Features
          schema:
```

```
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/AuthenticationSubscription'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: modify the authentication subscription data of a UE
    operationId: ModifyAuthenticationSubscription
    tags:
      - Authentication Subscription (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data:authentication-subscription:modify
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      - name: supported-features
        in: query
        description: Features required to be supported by the target NF
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    requestBody:
      content:
        application/json-patch+json:
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
      required: true
    responses:
      '204':
        description: Expected response to a valid request
      '403':
        description: modification is rejected
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/authentication-data/authentication-status:
  put:
    summary: To store the Authentication Status data of a UE
    operationId: CreateAuthenticationStatus
    tags:
      - Authentication Status (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
```

```
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    requestBody:
      content:
        application/json:
          schema:
            $ref: 'TS29503_Nudm_UEAU.yaml#/components/schemas/AuthEvent'
      required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  get:
    summary: Retrieves the Authentication Status of a UE
    operationId: QueryAuthenticationStatus
    tags:
      - AuthEvent (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      - name: fields
        in: query
        description: attributes to be retrieved
        required: false
        schema:
          type: array
          items:
            type: string
          minItems: 1
        style: form
        explode: false
      - name: supported-features
        description: Supported Features
        in: query
        schema:
           $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29503_Nudm_UEAU.yaml#/components/schemas/AuthEvent'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  delete:
    summary: To remove the Authentication Status of a UE
    operationId: DeleteAuthenticationStatus
    tags:
      - AuthEvent (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
```

```
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    responses:
      '204':
        description: Upon success, an empty response body shall be returned.
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/authentication-data/authentication-status/{servingNetworkName}:
  put:
    summary: To store the individual Authentication Status data of a UE
    operationId: CreateIndividualAuthenticationStatus
    tags:
      - Individual Authentication Status (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      - name: servingNetworkName
        in: path
        description: Serving Network Name
        required: true
        schema:
          $ref: 'TS29503_Nudm_UEAU.yaml#/components/schemas/ServingNetworkName'
    requestBody:
      content:
        application/json:
          schema:
            $ref: 'TS29503_Nudm_UEAU.yaml#/components/schemas/AuthEvent'
      required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  get:
    summary: Retrieves the Individual Authentication Status of a UE
    operationId: QueryIndividualAuthenticationStatus
    tags:
      - Individual AuthEvent (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      - name: servingNetworkName
        in: path
        description: Serving Network Name
        required: true
        schema:
          $ref: 'TS29503_Nudm_UEAU.yaml#/components/schemas/ServingNetworkName'
      - name: fields
        in: query
        description: attributes to be retrieved
        required: false
        schema:
          type: array
          items:
            type: string
```

```
          minItems: 1
        style: form
        explode: false
      - name: supported-features
        description: Supported Features
        in: query
        schema:
           $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29503_Nudm_UEAU.yaml#/components/schemas/AuthEvent'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  delete:
    summary: To remove the Individual Authentication Status of a UE
    operationId: DeleteIndividualAuthenticationStatus
    tags:
      - Individual AuthEvent (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      - name: servingNetworkName
        in: path
        description: Serving Network Name
        required: true
        schema:
          $ref: 'TS29503_Nudm_UEAU.yaml#/components/schemas/ServingNetworkName'
    responses:
      '204':
        description: Upon success, an empty response body shall be returned.
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/ue-update-confirmation-data/sor-data:
  put:
    summary: To store the SoR acknowledgement information of a UE and ME support of SOR CMCI
    operationId: CreateAuthenticationSoR
    tags:
      - Authentication SoR (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      - name: supported-features
        in: query
        description: Supported Features
        schema:
           $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    requestBody:
      content:
        application/json:
          schema:
```

```
            $ref: '#/components/schemas/SorData'
      required: true
    responses:
      '204':
        description: Expected response to a valid request
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  get:
    summary: Retrieves the SoR acknowledgement information of a UE and ME support of SOR CMCI
    operationId: QueryAuthSoR
    tags:
      - Authentication SoR (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      - name: supported-features
        in: query
        description: Supported Features
        schema:
           $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/SorData'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: Updates the ME support of SOR CMCI information of a UE
    operationId: UpdateAuthenticationSoR
    tags:
      - Authentication SoR (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: supported-features
        in: query
        description: Features required to be supported by the target NF
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    requestBody:
      content:
        application/json-patch+json:
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
      required: true
    responses:
      '204':
        description: Expected response to a valid request
      '200':
        description: Expected response to a valid request
```

```
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      '403':
        description: modification is rejected
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/ue-update-confirmation-data/upu-data:
    put:
      summary: To store the UPU acknowledgement information of a UE
      operationId: CreateAuthenticationUPU
      tags:
        - Authentication UPU (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      requestBody:
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/UpuData'
        required: true
      responses:
        '204':
          description: Expected response to a valid request
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    get:
      summary: Retrieves the UPU acknowledgement information of a UE
      operationId: QueryAuthUPU
      tags:
        - Authentication UPU (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      responses:
        '200':
          description: Expected response to a valid request
          content:
```

```
          application/json:
            schema:
              $ref: '#/components/schemas/UpuData'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/ue-update-confirmation-data/subscribed-snssais:
  put:
    summary: To store the NSSAI update acknowledgement information of a UE
    operationId: CreateOrUpdateNssaiAck
    tags:
      - NSSAI update ack (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      - name: supported-features
        in: query
        description: Supported Features
        schema:
           $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    requestBody:
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/NssaiAckData'
      required: true
    responses:
      '204':
        description: Expected response to a valid request
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  get:
    summary: Retrieves the UPU acknowledgement information of a UE
    operationId: QueryNssaiAck
    tags:
      - NSSAI ACK (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      - name: supported-features
        in: query
        description: Supported Features
        schema:
           $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/NssaiAckData'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/ue-update-confirmation-data/subscribed-cag:
```

```
    put:
      summary: To store the CAG update acknowledgement information of a UE
      operationId: CreateCagUpdateAck
      tags:
        - CAG update ack (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      requestBody:
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/CagAckData'
        required: true
      responses:
        '204':
          description: Expected response to a valid request
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    get:
      summary: Retrieves the CAG acknowledgement information of a UE
      operationId: QueryCagAck
      tags:
        - CAG ACK (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/CagAckData'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/{servingPlmnId}/provisioned-data:
    get:
      summary: Retrieve multiple provisioned data sets of a UE
      operationId: QueryProvisionedData
      tags:
        - Provisioned Data (Document)
      security:
        - {}
```

```
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: servingPlmnId
        in: path
        description: PLMN ID
        required: true
        schema:
          $ref: '#/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)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: servingPlmnId
        in: path
        description: PLMN ID
        required: true
        schema:
          $ref: '#/components/schemas/VarPlmnId'
      - name: fields
        in: query
        description: attributes to be retrieved
        required: false
        schema:
          type: array
          items:
            type: string
          minItems: 1
        style: form
        explode: false
      - name: supported-features
        in: query
        description: Supported Features
        schema:
           $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      - name: If-None-Match
```

```
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.2
          schema:
            type: string
        - name: If-Modified-Since
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.3
          schema:
            type: string
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/AccessAndMobilitySubscriptionData'
          headers:
            Cache-Control:
              description: Cache-Control containing max-age, as described in RFC 7234, 5.2
              schema:
                type: string
            ETag:
              description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
              schema:
                type: string
            Last-Modified:
              description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
              schema:
                type: string
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/smf-selection-subscription-data:
    get:
      summary: Retrieves the SMF selection subscription data of a UE
      operationId: QuerySmfSelectData
      tags:
        - SMF Selection Subscription Data (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: servingPlmnId
          in: path
          description: PLMN ID
          required: true
          schema:
            $ref: '#/components/schemas/VarPlmnId'
        - name: fields
          in: query
          description: attributes to be retrieved
          required: false
          schema:
            type: array
            items:
              type: string
            minItems: 1
          style: form
          explode: false
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
        - name: If-None-Match
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.2
```

```
          schema:
            type: string
        - name: If-Modified-Since
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.3
          schema:
            type: string
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/SmfSelectionSubscriptionData'
          headers:
            Cache-Control:
              description: Cache-Control containing max-age, as described in RFC 7234, 5.2
              schema:
                type: string
            ETag:
              description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
              schema:
                type: string
            Last-Modified:
              description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
              schema:
                type: string
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sm-data:
    get:
      summary: Retrieves the Session Management subscription data of a UE
      operationId: QuerySmData
      tags:
        - Session Management Subscription Data
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: servingPlmnId
          in: path
          description: PLMN ID
          required: true
          schema:
            $ref: '#/components/schemas/VarPlmnId'
        - name: single-nssai
          in: query
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/VarSnssai'
          description: single NSSAI
          required: false
        - name: dnn
          in: query
          description: DNN
          required: false
          schema:
            $ref: '#/components/schemas/Dnn'
        - name: fields
          in: query
          description: attributes to be retrieved
          required: false
          schema:
            type: array
            items:
```

```
              type: string
            minItems: 1
          style: form
          explode: false
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
        - name: If-None-Match
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.2
          schema:
            type: string
        - name: If-Modified-Since
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.3
          schema:
            type: string
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/SmSubsData'
          headers:
            Cache-Control:
              description: Cache-Control containing max-age, as described in RFC 7234, 5.2
              schema:
                type: string
            ETag:
              description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
              schema:
                type: string
            Last-Modified:
              description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
              schema:
                type: string
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/context-data/amf-3gpp-access:
    get:
      summary: Retrieves the AMF context data of a UE using 3gpp access
      operationId: QueryAmfContext3gpp
      tags:
        - AMF 3GPP Access Registration (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: fields
          in: query
          description: attributes to be retrieved
          required: false
          schema:
            type: array
            items:
              type: string
            minItems: 1
          style: form
          explode: false
        - name: supported-features
          in: query
          description: Supported Features
          schema:
```

```
            $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/Amf3GppAccessRegistration'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    put:
      summary: To store the AMF context data of a UE using 3gpp access in the UDR
      operationId: CreateAmfContext3gpp
      tags:
        - AMF 3GPP Access Registration (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data:registrations:write
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      requestBody:
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/Amf3GppAccessRegistration'
        required: true
      responses:
        '204':
          description: Upon success, an empty response body shall be returned
        '201':
          description: Created
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/Amf3GppAccessRegistration'
          headers:
            Location:
              description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/amf-3gpp-access'
              required: true
              schema:
                type: string
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    patch:
      summary: To modify the AMF context data of a UE using 3gpp access in the UDR
      operationId: AmfContext3gpp
      tags:
        - AMF 3GPP Access Registration (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data:registrations:write
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
```

```
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: supported-features
        in: query
        description: Features required to be supported by the target NF
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    requestBody:
      content:
        application/json-patch+json:
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
      required: true
    responses:
      '204':
        description: Expected response to a valid request
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      '403':
        description: modification is rejected
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/context-data/amf-non-3gpp-access:
    get:
      summary: Retrieves the AMF context data of a UE using non-3gpp access
      operationId: QueryAmfContextNon3gpp
      tags:
        - AMF Non-3GPP Access Registration (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: fields
          in: query
          description: attributes to be retrieved
          required: false
          schema:
            type: array
            items:
              type: string
            minItems: 1
          style: form
          explode: false
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/AmfNon3GppAccessRegistration'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'
```

```
    put:
      summary: To store the AMF context data of a UE using non-3gpp access in the UDR
      operationId: CreateAmfContextNon3gpp
      tags:
        - AMF Non-3GPP Access Registration (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data:registrations:write
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      requestBody:
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/AmfNon3GppAccessRegistration'
        required: true
      responses:
        '204':
          description: Upon success, an empty response body shall be returned
        '201':
          description: Created
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/Amf3GppAccessRegistration'
          headers:
            Location:
              description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/amf-non-3gpp-access'
              required: true
              schema:
                type: string
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    patch:
      summary: To modify the AMF context data of a UE using non 3gpp access in the UDR
      operationId: AmfContextNon3gpp
      tags:
        - AMF Non-3GPP Access Registration (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data:registrations:write
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: supported-features
          in: query
          description: Features required to be supported by the target NF
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      requestBody:
        content:
          application/json-patch+json:
```

```
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
      required: true
    responses:
      '204':
        description: Expected response to a valid request
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      '403':
        description: modification is rejected
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/context-data/smf-registrations:
  get:
    summary: Retrieves the SMF registration list of a UE
    operationId: QuerySmfRegList
    tags:
      - SMF Registrations (Collection)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: supported-features
        in: query
        description: Supported Features
        schema:
           $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/SmfRegList'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/context-data/smf-registrations/{pduSessionId}:
  get:
    summary: Retrieves the individual SMF registration of a UE
    operationId: QuerySmfRegistration
    tags:
      - SMF Registration (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
```

```
        - name: pduSessionId
          in: path
          description: PDU session id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
        - name: fields
          in: query
          description: attributes to be retrieved
          required: false
          schema:
            type: array
            items:
              type: string
            minItems: 1
          style: form
          explode: false
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/SmfRegistration'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    put:
      summary: To create an individual SMF context data of a UE in the UDR
      operationId: CreateOrUpdateSmfRegistration
      tags:
        - SMF Registration (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data:registrations:write
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: pduSessionId
          in: path
          description: PDU session id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
      requestBody:
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/SmfRegistration'
        required: true
      responses:
        '201':
          description: Upon success, a response body containing a representation of the created
Individual SmfRegistration resource shall be returned
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/SmfRegistration'
          headers:
            Location:
```

```
              description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/smf-
registrations/{pduSessionId}'
              required: true
              schema:
                type: string
        '204':
          description: No content
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    delete:
      summary: To remove an individual SMF context data of a UE the UDR
      operationId: DeleteSmfRegistration
      tags:
        - SMF Registration (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data:registrations:write
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: pduSessionId
          in: path
          description: PDU session id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
      responses:
        '204':
          description: Upon success, an empty response body shall be returned.
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'
    patch:
      summary: To modify the SMF context data of a UE in the UDR
      operationId: UpdateSmfContext
      tags:
        - SMF Registration (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data:registrations:write
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: pduSessionId
          in: path
          description: PDU session id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
        - name: supported-features
          in: query
          description: Features required to be supported by the target NF
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      requestBody:
```

```
      content:
        application/json-patch+json:
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
      required: true
    responses:
      '204':
        description: Expected response to a valid request
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      '403':
        description: modification is rejected
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/operator-specific-data:
  get:
    summary: Retrieves the operator specific data of a UE
    operationId: QueryOperSpecData
    tags:
      - Operator-Specific Data Container (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: fields
        in: query
        description: attributes to be retrieved
        required: false
        schema:
          type: array
          items:
            type: string
          minItems: 1
        style: form
        explode: false
      - name: supported-features
        in: query
        description: Supported Features
        schema:
           $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      - name: If-None-Match
        in: header
        description: Validator for conditional requests, as described in RFC 7232, 3.2
        schema:
          type: string
      - name: If-Modified-Since
        in: header
        description: Validator for conditional requests, as described in RFC 7232, 3.3
        schema:
          type: string
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              type: object
```

```
                description: A map(list of key-value pairs) where operator specific data element
name serves as key
                additionalProperties:
                  $ref: '#/components/schemas/OperatorSpecificDataContainer'
          headers:
            Cache-Control:
              description: Cache-Control containing max-age, as described in RFC 7234, 5.2
              schema:
                type: string
            ETag:
              description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
              schema:
                type: string
            Last-Modified:
              description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
              schema:
                type: string
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    patch:
      summary: To modify operator specific data of a UE
      operationId: ModifyOperSpecData
      tags:
        - Operator-Specific Data Container (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: supported-features
          in: query
          description: Features required to be supported by the target NF
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      requestBody:
        content:
          application/json-patch+json:
            schema:
              type: array
              items:
                $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
        required: true
      responses:
        '204':
          description: Expected response to a valid request
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
        '403':
          description: modification is rejected
          content:
            application/problem+json:
              schema:
                $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    put:
      summary: To create an operator-specific data resource of a UE
      operationId: CreateOperSpecData
      tags:
        - Operator-Specific Data Container (Document)
      security:
        - {}
```

```
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      requestBody:
        content:
          application/json:
            schema:
              type: object
              description: A map (list of key-value pairs) where operator specific data element name
serves as key
              additionalProperties:
                $ref: '#/components/schemas/OperatorSpecificDataContainer'
        required: true
      responses:
        '201':
          description: Upon success, a response body containing a representation of the created
Operator Specific Data resource shall be returned
          content:
            application/json:
              schema:
                type: object
                description: A map (list of key-value pairs) where operator specific data element
name serves as key
                additionalProperties:
                  $ref: '#/components/schemas/OperatorSpecificDataContainer'
          headers:
            Location:
              description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/operator-specific-data'
              required: true
              schema:
                type: string
        '204':
          description: No content
        '403':
          $ref: 'TS29571_CommonData.yaml#/components/responses/403'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    delete:
      summary: To remove an operator-specific data resource of a UE
      operationId: DeleteOperSpecData
      tags:
        - Operator-Specific Data Container (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      responses:
        '204':
          description: Upon success, an empty response body shall be returned.
        '403':
          $ref: 'TS29571_CommonData.yaml#/components/responses/403'
        default:
```

```
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/context-data/smsf-3gpp-access:
    put:
      summary: Create the SMSF context data of a UE via 3GPP access
      operationId: CreateSmsfContext3gpp
      tags:
        - SMSF 3GPP Registration (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data:registrations:write
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      requestBody:
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/SmsfRegistration'
        required: true
      responses:
        '204':
          description: Upon success, an empty response body shall be returned
        '201':
          description: Created
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/SmsfRegistration'
          headers:
            Location:
              description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/smsf-3gpp-access'
              required: true
              schema:
                type: string
        '200':
          description: Updated
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/SmsfRegistration'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    delete:
      summary: To remove the SMSF context data of a UE via 3GPP access
      operationId: DeleteSmsfContext3gpp
      tags:
        - SMSF 3GPP Registration (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data:registrations:write
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
```

```
      responses:
        '204':
          description: Upon success, an empty response body shall be returned
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    get:
      summary: Retrieves the SMSF context data of a UE using 3gpp access
      operationId: QuerySmsfContext3gpp
      tags:
        - SMSF 3GPP Registration (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: fields
          in: query
          description: attributes to be retrieved
          required: false
          schema:
            type: array
            items:
              type: string
            minItems: 1
          style: form
          explode: false
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/SmsfRegistration'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/context-data/smsf-non-3gpp-access:
    put:
      summary: Create the SMSF context data of a UE via non-3GPP access
      operationId: CreateSmsfContextNon3gpp
      tags:
        - SMSF Non-3GPP Registration (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data:registrations:write
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      requestBody:
        content:
          application/json:
            schema:
```

```
              $ref: '#/components/schemas/SmsfRegistration'
        required: true
      responses:
        '204':
          description: Upon success, an empty response body shall be returned
        '201':
          description: Created
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/SmsfRegistration'
          headers:
            Location:
              description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/smsf-non-3gpp-
access'
              required: true
              schema:
                type: string
        '200':
          description: Updated
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/SmsfRegistration'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    delete:
      summary: To remove the SMSF context data of a UE via non-3GPP access
      operationId: DeleteSmsfContextNon3gpp
      tags:
        - SMSF Non-3GPP Registration (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data:registrations:write
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      responses:
        '204':
          description: Upon success, an empty response body shall be returned
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    get:
      summary: Retrieves the SMSF context data of a UE using non-3gpp access
      operationId: QuerySmsfContextNon3gpp
      tags:
        - SMSF Non-3GPP Registration (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: fields
          in: query
          description: attributes to be retrieved
```

```
        required: false
        schema:
          type: array
          items:
            type: string
          minItems: 1
        style: form
        explode: false
      - name: supported-features
        in: query
        description: Supported Features
        schema:
           $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/SmsfRegistration'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/context-data/ip-sm-gw:
  put:
    summary: Create the IP-SM-GW context data of a UE
    operationId: CreateIpSmGwContext
    tags:
      - IP-SM-GW Registration (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data:registrations:write
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    requestBody:
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/IpSmGwRegistration'
      required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  delete:
    summary: To remove the IP-SM-GW context data of a UE
    operationId: DeleteIpSmGwContext
    tags:
      - IP-SM-GW Registration (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data:registrations:write
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
```

```
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: Modify the IP-SM-GW context data of a UE
    operationId: ModifyIpSmGwContext
    tags:
      - IP-SM-GW Registration (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data:registrations:write
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    requestBody:
      content:
        application/json-patch+json:
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
            minItems: 1
      required: true
    responses:
      '204':
        description: Successful response
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  get:
    summary: Retrieves the IP-SM-GW context data of a UE
    operationId: QueryIpSmGwContext
    tags:
      - IP-SM-GW Registration (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: fields
        in: query
        description: attributes to be retrieved
        required: false
        schema:
          type: array
          items:
            type: string
          minItems: 1
        style: form
```

```
          explode: false
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/IpSmGwRegistration'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/context-data/mwd:
    put:
      summary: Create the Message Waiting Data of the UE
      operationId: CreateMessageWaitingData
      tags:
        - Message Waiting Data (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      requestBody:
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/MessageWaitingData'
        required: true
      responses:
        '201':
          description: Created
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/MessageWaitingData'
          headers:
            Location:
              description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/mwd'
              required: true
              schema:
                type: string
        '204':
          description: Upon success, an empty response body shall be returned
        default:
          description: Unexpected error
    delete:
      summary: To remove the Message Waiting Data of the UE
      operationId: DeleteMessageWaitingData
      tags:
        - Message Waiting Data (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
```

```
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: Modify the Message Waiting Data of the UE
    operationId: ModifyMessageWaitingData
    tags:
      - Message Waiting Data (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    requestBody:
      content:
        application/json-patch+json:
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
            minItems: 1
      required: true
    responses:
      '204':
        description: Successful response
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  get:
    summary: Retrieves the Message Waiting Data of the UE
    operationId: QueryMessageWaitingData
    tags:
      - Message Waiting Data (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: fields
        in: query
        description: attributes to be retrieved
        required: false
        schema:
          type: array
          items:
            type: string
          minItems: 1
        style: form
        explode: false
      - name: supported-features
        in: query
        description: Supported Features
```

```
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/MessageWaitingData'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sms-mng-data:
    get:
      summary: Retrieves the SMS management subscription data of a UE
      operationId: QuerySmsMngData
      tags:
        - SMS Management Subscription Data (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: servingPlmnId
          in: path
          description: PLMN ID
          required: true
          schema:
            $ref: '#/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)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: servingPlmnId
          in: path
          description: PLMN ID
          required: true
          schema:
            $ref: '#/components/schemas/VarPlmnId'
        - name: 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)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
```

```
        - name: ueId
          in: path
          description: pp data for a UE
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
        - name: If-None-Match
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.2
          schema:
            type: string
        - name: If-Modified-Since
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.3
          schema:
            type: string
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/PpData'
          headers:
            Cache-Control:
              description: Cache-Control containing max-age, as described in RFC 7234, 5.2
              schema:
                type: string
            ETag:
              description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
              schema:
                type: string
            Last-Modified:
              description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
              schema:
                type: string
        '403':
          description: Forbidden
          content:
            application/problem+json:
              schema:
                $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    patch:
      summary: modify the provisioned parameter data
      operationId: ModifyPpData
      tags:
        - ProvisionedParameterData (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: pp data for a UE
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: supported-features
          in: query
          description: Features required to be supported by the target NF
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      requestBody:
        content:
          application/json-patch+json:
```

```
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
      required: true
    responses:
      '204':
        description: Expected response to a valid request
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      '403':
        description: modification is rejected
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/pp-profile-data:
  get:
    summary: Retrieves the parameter provision profile data of a UE
    operationId: QueryPPData
    tags:
      - Parameter Provision profile Data (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: supported-features
        in: query
        description: Supported Features
        schema:
           $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/PpProfileData'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/pp-data-store/{afInstanceId}:
  put:
    summary: create a Provisioning Parameter Data Entry
    operationId: Create PP Data Entry
    tags:
      - ProvisionedParameterDataEntry (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: Identifier of the UE
        required: true
        schema:
          anyOf:
```

```
            - $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
            - $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
            - type: string
              pattern: '^anyUE$'
      - name: afInstanceId
        in: path
        description: Application Function Instance Identifier
        required: true
        schema:
          type: string
    requestBody:
      content:
        application/json:
          schema:
            $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/PpDataEntry'
      required: true
    responses:
      '201':
        description: Indicating a successful creation of the resource.
        content:
          application/json:
            schema:
              $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/PpDataEntry'
      '204':
        description: Indicating a successful creation of the resource.
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '500':
        $ref: 'TS29571_CommonData.yaml#/components/responses/500'
      '503':
        $ref: 'TS29571_CommonData.yaml#/components/responses/503'
      default:
        description: Unexpected error

  delete:
    summary: Delete a Provisioning Parameter Data Entry
    operationId: Delete PP Data Entry
    tags:
      - ProvisionedParameterDataEntry (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: Identifier of the UE
        required: true
        schema:
          anyOf:
            - $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
            - $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
            - type: string
              pattern: '^anyUE$'
      - name: afInstanceId
        in: path
        description: Application Function Instance Identifier
        required: true
        schema:
          type: string
    responses:
      '204':
        description: Expected response to a valid request
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '500':
        $ref: 'TS29571_CommonData.yaml#/components/responses/500'
```

```
        '503':
          $ref: 'TS29571_CommonData.yaml#/components/responses/503'
        default:
          description: Unexpected error

    get:
      summary: get a Parameter Provisioning Data Entry
      operationId: Get PP Data Entry
      tags:
        - ProvisionedParameterDataEntry (Document)
      parameters:
        - name: ueId
          in: path
          description: Identifier of the UE
          required: true
          schema:
            anyOf:
              - $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
              - $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
              - type: string
                pattern: '^anyUE$'
        - name: afInstanceId
          in: path
          description: Application Function Instance Identifier
          required: true
          schema:
            type: string
        - name: supported-features
          in: query
          description: Features required to be supported by the target NF
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/PpDataEntry'
        '400':
          $ref: 'TS29571_CommonData.yaml#/components/responses/400'
        '403':
          $ref: 'TS29571_CommonData.yaml#/components/responses/403'
        '404':
          $ref: 'TS29571_CommonData.yaml#/components/responses/404'
        '500':
          $ref: 'TS29571_CommonData.yaml#/components/responses/500'
        '503':
          $ref: 'TS29571_CommonData.yaml#/components/responses/503'
        default:
          description: Unexpected error

  /subscription-data/{ueId}/pp-data-store:
    get:
      summary: get a list of Parameter Provisioning Data Entries
      operationId: Get Multiple PP Data Entries
      tags:
        - ProvisionedParameterDataEntries (Collection)
      parameters:
        - name: ueId
          in: path
          description: Identifier of the UE
          required: true
          schema:
            anyOf:
              - $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
              - $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
              - type: string
                pattern: '^anyUE$'
        - name: supported-features
          in: query
          description: Features required to be supported by the target NF
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      responses:
        '200':
          description: Expected response to a valid request
          content:
```

```
          application/json:
            schema:
              $ref: '#/components/schemas/PpDataEntryList'
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '500':
        $ref: 'TS29571_CommonData.yaml#/components/responses/500'
      '503':
        $ref: 'TS29571_CommonData.yaml#/components/responses/503'
      default:
        description: Unexpected error

  /subscription-data/{ueId}/context-data/ee-subscriptions:
    get:
      summary: Retrieves the ee subscriptions of a UE
      operationId: Queryeesubscriptions
      tags:
        - Event Exposure Subscriptions (Collection)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
        - name: event-types
          in: query
          required: false
          description: Event Types
          schema:
            type: array
            items:
              $ref: 'TS29503_Nudm_EE.yaml#/components/schemas/EventType'
            minItems: 1
          style: form
          explode: false
        - name: nf-identifiers
          in: query
          description: NF Identifiers
          schema:
            type: array
            items:
              $ref: '#/components/schemas/NfIdentifier'
            minItems: 1
          style: form
          explode: false
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
               type: array
               items:
                $ref: '#/components/schemas/EeSubscriptionExt'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    post:
      summary: Create individual EE subscription
      operationId: CreateEeSubscriptions
      tags:
```

```
        - Event Exposure Subscriptions (Collection)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE ID
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      requestBody:
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/EeSubscription'
        required: true
      responses:
        '201':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/EeSubscription'
          headers:
            Location:
              description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/ee-
subscriptions/{subsId}'
              required: true
              schema:
                type: string
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}:
    put:
      summary: Update an individual ee subscriptions of a UE
      operationId: UpdateEesubscriptions
      tags:
        - Event Exposure Subscription (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: subsId
          in: path
          required: true
          schema:
            type: string
      requestBody:
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/EeSubscription'
        required: true
      responses:
        '204':
          description: Upon success, an empty response body shall be returned
        '404':
          description: update of non-existing resource is rejected
          content:
            application/problem+json:
              schema:
                $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
```

```
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  delete:
    summary: Deletes a eeSubscription
    operationId: RemoveeeSubscriptions
    tags:
      - Event Exposure Subscription (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        description: Unique ID of the subscription to remove
        schema:
          type: string
    responses:
      '204':
        description: Expected response to a successful subscription removal
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: Modify an individual ee subscription of a UE
    operationId: ModifyEesubscription
    tags:
      - Event Exposure Subscription (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
      - name: supported-features
        in: query
        description: Features required to be supported by the target NF
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    requestBody:
      content:
        application/json-patch+json:
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
            minItems: 1
      required: true
    responses:
      '204':
        description: Successful response
      '200':
        description: Expected response to a valid request
        content:
          application/json:
```

```
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  get:
    summary: Retrieve a eeSubscription
    operationId: QueryeeSubscription
    tags:
      - Event Exposure Subscription (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        description: Unique ID of the subscription to remove
        schema:
          type: string
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
             items:
              $ref: '#/components/schemas/EeSubscription'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}/amf-subscriptions:
  put:
    summary: Create AmfSubscriptions for an individual ee subscriptions of a UE
    operationId: Create AMF Subscriptions
    tags:
      - AMF Subscription Info (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    requestBody:
      content:
        application/json:
          schema:
            type: array
            items:
              $ref: '#/components/schemas/AmfSubscriptionInfo'
            minItems: 1
      required: true
    responses:
```

```
      '204':
        description: Upon success, an empty response body shall be returned
      '201':
        description: Upon successful creation, the created resource shall be returned
        content:
          application/json:
            schema:
              type: array
              items:
                $ref: '#/components/schemas/AmfSubscriptionInfo'
              minItems: 1
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  delete:
    summary: Deletes AMF Subscription Info for an eeSubscription
    operationId: RemoveAmfSubscriptionsInfo
    tags:
      - Event AMF Subscription Info (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    responses:
      '204':
        description: Expected response to a successful subscription removal
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: modify the AMF Subscription Info
    operationId: ModifyAmfSubscriptionInfo
    tags:
      - AmfSubscriptionInfo (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
      - name: supported-features
        in: query
        description: Features required to be supported by the target NF
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    requestBody:
      content:
        application/json-patch+json:
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
```

```
        required: true
      responses:
        '204':
          description: Expected response to a valid request
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
        '403':
          description: modification is rejected
          content:
            application/problem+json:
              schema:
                $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    get:
      summary: Retrieve AMF subscription Info
      operationId: GetAmfSubscriptionInfo
      tags:
        - Query AMF Subscription Info (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: subsId
          in: path
          required: true
          schema:
            type: string
      responses:
        '200':
          description: OK
          content:
            application/json:
              schema:
                type: array
                items:
                  $ref: '#/components/schemas/AmfSubscriptionInfo'
                minItems: 1
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}/smf-subscriptions:
    put:
      summary: Create SMF Subscription Info
      operationId: Create SMF Subscriptions
      tags:
        - SMF Event Subscription Info (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: subsId
          in: path
          required: true
          schema:
```

```
        type: string
    requestBody:
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/SmfSubscriptionInfo'
      required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      '201':
        description: Upon successful creation, the created resource shall be returned
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/SmfSubscriptionInfo'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  delete:
    summary: Delete SMF Subscription Info
    operationId: RemoveSmfSubscriptionsInfo
    tags:
      - SMF Event Subscription Info (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    responses:
      '204':
        description: Expected response to a successful subscription removal
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: Modify SMF Subscription Info
    operationId: ModifySmfSubscriptionInfo
    tags:
      - SMF Event Subscription Info (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
      - name: supported-features
        in: query
        description: Features required to be supported by the target NF
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    requestBody:
      content:
```

```
        application/json-patch+json:
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
      required: true
    responses:
      '204':
        description: Expected response to a valid request
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      '403':
        description: modification is rejected
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  get:
    summary: Retrieve SMF Subscription Info
    operationId: GetSmfSubscriptionInfo
    tags:
      - SMF Event Subscription Info (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    responses:
      '200':
        description: OK
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/SmfSubscriptionInfo'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}/hss-subscriptions:
  put:
    summary: Create HSS Subscription Info
    operationId: Create HSS Subscriptions
    tags:
      - HSS Event Subscription Info (Document)
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    requestBody:
      content:
        application/json:
          schema:
```

```
            $ref: '#/components/schemas/HssSubscriptionInfo'
      required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      '201':
        description: Upon successful creation, the created resource shall be returned
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/HssSubscriptionInfo'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  delete:
    summary: Delete HSS Subscription Info
    operationId: RemoveHssSubscriptionsInfo
    tags:
      - HSS Event Subscription Info (Document)
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    responses:
      '204':
        description: Expected response to a successful subscription removal
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: Modify HSS Subscription Info
    operationId: ModifyHssSubscriptionInfo
    tags:
      - HSS Event Subscription Info (Document)
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
      - name: supported-features
        in: query
        description: Features required to be supported by the target NF
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    requestBody:
      content:
        application/json-patch+json:
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
      required: true
    responses:
      '204':
        description: Expected response to a valid request
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      '403':
        description: modification is rejected
        content:
          application/problem+json:
```

```
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  get:
    summary: Retrieve HSS Subscription Info
    operationId: GetHssSubscriptionInfo
    tags:
      - HSS Event Subscription Info (Document)
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    responses:
      '200':
        description: OK
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/SmfSubscriptionInfo'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/group-data/{ueGroupId}/ee-subscriptions:
  get:
    summary: Retrieves the ee subscriptions of a group of UEs or any UE
    operationId: QueryEeGroupSubscriptions
    tags:
      - Event Exposure Group Subscriptions (Collection)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueGroupId
        in: path
        description: Group of UEs or any UE
        required: true
        schema:
            $ref: '#/components/schemas/VarUeGroupId'
      - name: supported-features
        in: query
        description: Supported Features
        schema:
           $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
             type: array
             items:
              $ref: '#/components/schemas/EeSubscription'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  post:
    summary: Create individual EE subscription for a group of UEs or any UE
    operationId: CreateEeGroupSubscriptions
    tags:
      - Event Exposure Group Subscriptions (Collection)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
```

```
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueGroupId
          in: path
          description: Group of UEs or any UE
          required: true
          schema:
              $ref: '#/components/schemas/VarUeGroupId'
      requestBody:
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/EeSubscription'
        required: true
      responses:
        '201':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/EeSubscription'
          headers:
            Location:
              description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/group-data/{ueGroupId}/ee-subscriptions'
              required: true
              schema:
                type: string
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subsId}:
    put:
      summary: Update an individual ee subscription of a group of UEs or any UE
      operationId: UpdateEeGroupSubscriptions
      tags:
        - Event Exposure Group Subscription (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueGroupId
          in: path
          required: true
          schema:
              $ref: '#/components/schemas/VarUeGroupId'
        - name: subsId
          in: path
          required: true
          schema:
            type: string
      requestBody:
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/EeSubscription'
        required: true
      responses:
        '204':
          description: Upon success, an empty response body shall be returned
        '404':
          description: update of non-existing resource is rejected
          content:
            application/problem+json:
              schema:
                $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    delete:
      summary: Deletes a eeSubscription for a group of UEs or any UE
      operationId: RemoveEeGroupSubscriptions
      tags:
```

```
    - Event Exposure Group Subscription (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:subscription-data
  parameters:
    - name: ueGroupId
      in: path
      required: true
      schema:
          $ref: '#/components/schemas/VarUeGroupId'
    - name: subsId
      in: path
      required: true
      description: Unique ID of the subscription to remove
      schema:
        type: string
  responses:
    '204':
      description: Expected response to a successful subscription removal
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

patch:
  summary: Modify an individual ee subscription for a group of a UEs
  operationId: ModifyEeGroupSubscription
  tags:
    - Event Exposure Group Subscription (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:subscription-data
  parameters:
    - name: ueGroupId
      in: path
      required: true
      schema:
          $ref: '#/components/schemas/VarUeGroupId'
    - name: subsId
      in: path
      required: true
      schema:
        type: string
    - name: supported-features
      in: query
      description: Features required to be supported by the target NF
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  requestBody:
    content:
      application/json-patch+json:
        schema:
          type: array
          items:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
          minItems: 1
    required: true
  responses:
    '204':
      description: Successful response
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'
```

```
    get:
      summary: Retrieve a individual eeSubscription for a group of UEs or any UE
      operationId: QueryEeGroupSubscription
      tags:
        - Event Exposure Group Subscription (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueGroupId
          in: path
          required: true
          schema:
              $ref: '#/components/schemas/VarUeGroupId'
        - name: subsId
          in: path
          required: true
          description: Unique ID of the subscription to remove
          schema:
            type: string
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
               items:
                $ref: '#/components/schemas/EeSubscription'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/group-data/{ueGroupId}/ee-profile-data:
    get:
      summary: Retrieves the ee profile data profile data of a group or anyUE
      operationId: QueryGroupEEData
      tags:
        - Event Exposure Data for a group (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueGroupId
          in: path
          description: Group of UEs or any UE
          required: true
          schema:
            $ref: '#/components/schemas/VarUeGroupId'
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/EeGroupProfileData'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/ee-profile-data:
    get:
      summary: Retrieves the ee profile data of a UE
      operationId: QueryEEData
      tags:
        - Event Exposure Data (Document)
      security:
```

```
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: fields
        in: query
        description: attributes to be retrieved
        required: false
        schema:
          type: array
          items:
            type: string
        style: form
        explode: false
      - name: supported-features
        in: query
        description: Supported Features
        schema:
           $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/EeProfileData'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/context-data/sdm-subscriptions:
  get:
    summary: Retrieves the sdm subscriptions of a UE
    operationId: Querysdmsubscriptions
    tags:
      - SDM Subscriptions (Collection)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: supported-features
        in: query
        description: Supported Features
        schema:
           $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
             type: array
             items:
              $ref: '#/components/schemas/SdmSubscription'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  post:
    summary: Create individual sdm subscription
    operationId: CreateSdmSubscriptions
```

```
      tags:
        - SDM Subscriptions (Collection)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE ID
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      requestBody:
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/SdmSubscription'
        required: true
      responses:
        '201':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/SdmSubscription'
          headers:
            Location:
              description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/sdm-
subscriptions/{subsId}'
              required: true
              schema:
                type: string
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/context-data/sdm-subscriptions/{subsId}:
    put:
      summary: Update an individual sdm subscriptions of a UE
      operationId: Updatesdmsubscriptions
      tags:
        - SDM Subscription (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: subsId
          in: path
          required: true
          schema:
            type: string
      requestBody:
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/SdmSubscription'
        required: true
      responses:
        '204':
          description: Upon success, an empty response body shall be returned
        '404':
          description: update of non-existing resource is rejected
          content:
            application/problem+json:
              schema:
```

```
            $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  delete:
    summary: Deletes a sdmsubscriptions
    operationId: RemovesdmSubscriptions
    tags:
      - SDM Subscription (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        description: Unique ID of the subscription to remove
        schema:
          type: string
    responses:
      '204':
        description: Expected response to a successful subscription removal
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: Modify an individual sdm subscription
    operationId: ModifysdmSubscription
    tags:
      - SDM Subscription (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
      - name: supported-features
        in: query
        description: Features required to be supported by the target NF
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    requestBody:
      content:
        application/json-patch+json:
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
            minItems: 1
      required: true
    responses:
      '204':
        description: Successful response
      '200':
```

```
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  get:
    summary: Retrieves a individual sdmSubscription identified by subsId
    operationId: QuerysdmSubscription
    tags:
      - SDM Subscription (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        description: Unique ID of the subscription to retrieve
        schema:
          type: string
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              items:
                $ref: '#/components/schemas/SdmSubscription'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/context-data/sdm-subscriptions/{subsId}/hss-sdm-subscriptions:
  put:
    summary: Create HSS SDM Subscription Info
    operationId: Create HSS SDM Subscriptions
    tags:
      - HSS SDM Subscription Info (Document)
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    requestBody:
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/HssSubscriptionInfo'
      required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  delete:
    summary: Delete HSS SDM Subscription Info
    operationId: RemoveHssSDMSubscriptionsInfo
```

```
    tags:
      - HSS SDM Subscription Info (Document)
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    responses:
      '204':
        description: Expected response to a successful subscription removal
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  patch:
    summary: Modify HSS SDM Subscription Info
    operationId: ModifyHssSDMSubscriptionInfo
    tags:
      - HSS SDM Subscription Info (Document)
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
      - name: supported-features
        in: query
        description: Features required to be supported by the target NF
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    requestBody:
      content:
        application/json-patch+json:
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
      required: true
    responses:
      '204':
        description: Expected response to a valid request
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      '403':
        description: modification is rejected
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  get:
    summary: Retrieve HSS SDM Subscription Info
    operationId: GetHssSDMSubscriptionInfo
    tags:
      - HSS SDM Subscription Info (Document)
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: subsId
        in: path
        required: true
```

```
        schema:
          type: string
    responses:
      '200':
        description: OK
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/SmfSubscriptionInfo'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/shared-data:
  get:
    summary: retrieve shared data
    operationId: GetSharedData
    tags:
      - Retrieval of shared data
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: shared-data-ids
        in: query
        description: List of shared data ids
        required: true
        style: form
        explode: false
        schema:
           $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SharedDataIds'
      - name: supported-features
        in: query
        description: Supported Features
        schema:
           $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              type: array
              items:
                $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SharedData'
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '500':
        $ref: 'TS29571_CommonData.yaml#/components/responses/500'
      '503':
        $ref: 'TS29571_CommonData.yaml#/components/responses/503'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/shared-data/{sharedDataId}:
  get:
    summary: retrieve individual shared data
    operationId: GetIndividualSharedData
    tags:
      - Retrieval of individual shared data
    parameters:
      - name: If-None-Match
        in: header
        description: Validator for conditional requests, as described in RFC 7232, 3.2
        schema:
          type: string
      - name: If-Modified-Since
        in: header
        description: Validator for conditional requests, as described in RFC 7232, 3.3
        schema:
          type: string
      - name: sharedDataId
        in: path
```

```
          description: Id of the Shared Data
          required: true
          schema:
            $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SharedDataId'
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SharedData'
          headers:
            Cache-Control:
              description: Cache-Control containing max-age, as described in RFC 7234, 5.2
              schema:
                type: string
            ETag:
              description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
              schema:
                type: string
            Last-Modified:
              description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
              schema:
                type: string
        '400':
          $ref: 'TS29571_CommonData.yaml#/components/responses/400'
        '404':
          $ref: 'TS29571_CommonData.yaml#/components/responses/404'
        '500':
          $ref: 'TS29571_CommonData.yaml#/components/responses/500'
        '503':
          $ref: 'TS29571_CommonData.yaml#/components/responses/503'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/subs-to-notify:
    post:
      summary: Subscription data subscriptions
      operationId: SubscriptionDataSubscriptions
      tags:
        - Subs To Notify (Collection)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      requestBody:
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/SubscriptionDataSubscriptions'
        required: true
      responses:
        '201':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/SubscriptionDataSubscriptions'
          headers:
            Location:
              description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/subs-to-notify/{subsId}'
              required: true
              schema:
                type: string
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'
      callbacks:
        onDataChange:
          '{request.body#/callbackReference}':
            post:
              requestBody:
                required: true
                content:
```

```
              application/json:
                schema:
                  $ref: '#/components/schemas/DataChangeNotify'
          responses:
            '204':
              description: Expected response to a valid request

  get:
    summary: Retrieves the list of subscriptions
    operationId: QuerySubsToNotify
    tags:
      - Subs To Notify (Collection)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ue-id
        in: query
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: supported-features
        in: query
        description: Supported Features
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              type: array
              items:
                $ref: '#/components/schemas/SubscriptionDataSubscriptions'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  delete:
    summary: Deletes subscriptions identified by a given ue-id parameter
    operationId: RemoveMultipleSubscriptionDataSubscriptions
    tags:
      - Subs To Notify (Collection)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ue-id
        in: query
        required: true
        description: UE ID
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: nf-instance-id
        in: query
        required: false
        description: NF Instance ID
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
      - name: delete-all-nfs
        in: query
        required: false
        description: Flag to delete subscriptions from all NFs
        schema:
          type: boolean
      - name: implicit-unsubscribe-indication
        in: query
        required: false
        description: Implicit Unsubscribe Indication
```

```
        schema:
          type: boolean
    responses:
      '204':
        description: Expected response to a successful subscription removal
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/subs-to-notify/{subsId}:
  delete:
    summary: Deletes a subscriptionDataSubscriptions
    operationId: RemovesubscriptionDataSubscriptions
    tags:
      - Subs To Notify (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: subsId
        in: path
        required: true
        description: Unique ID of the subscription to remove
        schema:
          type: string
    responses:
      '204':
        description: Expected response to a successful subscription removal
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: Modify an individual subscriptionDataSubscription
    operationId: ModifysubscriptionDataSubscription
    tags:
      - Subs To Notify (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: subsId
        in: path
        required: true
        schema:
          type: string
      - name: supported-features
        in: query
        description: Features required to be supported by the target NF
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    requestBody:
      content:
        application/json-patch+json:
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
            minItems: 1
      required: true
    responses:
      '204':
        description: Successful response
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              oneOf:
                - $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
                - $ref: '#/components/schemas/SubscriptionDataSubscriptions'
      '403':
```

```
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  get:
    summary: Retrieves a individual subscriptionDataSubscription identified by subsId
    operationId: QuerySubscriptionDataSubscriptions
    tags:
      - Subs To Notify (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: subsId
        in: path
        required: true
        description: Unique ID of the subscription to retrieve
        schema:
          type: string
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              items:
                $ref: '#/components/schemas/SubscriptionDataSubscriptions'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/trace-data:
  get:
    summary: Retrieves the trace configuration data of a UE
    operationId: QueryTraceData
    tags:
      - Trace Data (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: servingPlmnId
        in: path
        description: PLMN ID
        required: true
        schema:
          $ref: '#/components/schemas/VarPlmnId'
      - name: If-None-Match
        in: header
        description: Validator for conditional requests, as described in RFC 7232, 3.2
        schema:
          type: string
      - name: If-Modified-Since
        in: header
        description: Validator for conditional requests, as described in RFC 7232, 3.3
        schema:
          type: string
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
```

```
              $ref: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
          headers:
            Cache-Control:
              description: Cache-Control containing max-age, as described in RFC 7234, 5.2
              schema:
                type: string
            ETag:
              description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
              schema:
                type: string
            Last-Modified:
              description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
              schema:
                type: string
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/identity-data:
    get:
      summary: Retrieve identity data by SUPI or GPSI
      operationId: GetIdentityData
      tags:
        - Query Identity Data by SUPI or GPSI (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE ID
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: app-port-id
          in: query
          description: Application port identifier
          content:
            application/json:
              schema:
                $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/AppPortId'
        - name: If-None-Match
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.2
          schema:
            type: string
        - name: If-Modified-Since
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.3
          schema:
            type: string
      responses:
        '200':
          description: OK
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/IdentityData'
          headers:
            Cache-Control:
              description: Cache-Control containing max-age, as described in RFC 7234, 5.2
              schema:
                type: string
            ETag:
              description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
              schema:
                type: string
            Last-Modified:
              description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
              schema:
                type: string
        '403':
          $ref: 'TS29571_CommonData.yaml#/components/responses/403'
```

```
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/operator-determined-barring-data:
    get:
      summary: Retrieve ODB Data data by SUPI or GPSI
      operationId: GetOdbData
      tags:
        - Query ODB Data by SUPI or GPSI (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE ID
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      responses:
        '200':
          description: OK
          content:
            application/json:
              schema:
                $ref: 'TS29571_CommonData.yaml#/components/schemas/OdbData'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/context-data:
    get:
      summary: Retrieve multiple context data sets of a UE
      operationId: QueryContextData
      tags:
        - Context Data (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: context-dataset-names
          in: query
          description: List of context dataset names
          style: form
          explode: false
          required: true
          schema:
            $ref: '#/components/schemas/ContextDatasetNames'
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/ContextDataSets'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/group-data/group-identifiers:
    get:
      summary: Mapping of Group Identifiers
      operationId: GetGroupIdentifiers
      tags:
        - Group Identifiers
      security:
```

```
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ext-group-id
        in: query
        description: External Group Identifier
        required: false
        schema:
          $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
      - name: int-group-id
        in: query
        description: Internal Group Identifier
        required: false
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
      - name: ue-id-ind
        in: query
        description: Indication whether UE identifiers are required or not
        required: false
        schema:
          type: boolean
          default: false
      - name: supported-features
        in: query
        description: Supported Features
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/GroupIdentifiers'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/group-data/5g-vn-groups:
  get:
    summary: Retrieves the data of a 5G VN Group
    operationId: Query5GVnGroup
    tags:
      - 5G-VN-Groups (Store)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: gpsis
        in: query
        description: List of GPSIs
        schema:
          type: array
          items:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
        style: form
        explode: false
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
             type: object
             description: A map(list of key-value pairs) where ExtGroupId serves as key
             additionalProperties:
               $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/5GVnGroupConfiguration'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'
```

```
  /subscription-data/group-data/5g-vn-groups/{externalGroupId}:
    put:
      summary: Create an individual 5G VN Grouop
      operationId: Create5GVnGroup
      tags:
        - 5GVnGroupConfiguration (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: externalGroupId
          in: path
          required: true
          schema:
            $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
      requestBody:
        content:
          application/json:
            schema:
              $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/5GVnGroupConfiguration'
        required: true
      responses:
        '201':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/5GVnGroupConfiguration'
        '403':
          $ref: 'TS29571_CommonData.yaml#/components/responses/403'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    delete:
      summary: Deletes the 5GVnGroup
      operationId: Delete5GVnGroup
      tags:
        - Delete 5GVnGroup
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: externalGroupId
          in: path
          required: true
          schema:
            $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
      responses:
        '204':
          description: Expected response to a successful group removal
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    patch:
      summary: modify the 5GVnGroup
      operationId: Modify5GVnGroup
      tags:
        - Modify 5GVnGroup
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: externalGroupId
          in: path
          required: true
```

```
          schema:
            $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
        - name: supported-features
          in: query
          description: Features required to be supported by the target NF
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      requestBody:
        content:
          application/json-patch+json:
            schema:
              type: array
              items:
                $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
        required: true
      responses:
        '204':
          description: Expected response to a valid request
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
        '403':
          description: modification is rejected
          content:
            application/problem+json:
              schema:
                $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

    get:
      summary: Retrieve a 5GVnGroup configuration
      operationId: Get5GVnGroupConfiguration
      tags:
        - Query 5GVnGroupConfiguration (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: externalGroupId
          in: path
          required: true
          schema:
            $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
      responses:
        '200':
          description: OK
          content:
            application/json:
              schema:
                $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/5GVnGroupConfiguration'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/lcs-privacy-data:
    get:
      summary: Retrieves the LCS Privacy subscription data of a UE
      operationId: QueryLcsPrivacyData
      tags:
        - LCS Privacy Subscription Data
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
```

```
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: fields
          in: query
          description: attributes to be retrieved
          required: false
          schema:
            type: array
            items:
              type: string
            minItems: 1
          style: form
          explode: false
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
        - name: If-None-Match
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.2
          schema:
            type: string
        - name: If-Modified-Since
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.3
          schema:
            type: string
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/LcsPrivacyData'
          headers:
            Cache-Control:
              description: Cache-Control containing max-age, as described in RFC 7234, 5.2
              schema:
                type: string
            ETag:
              description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
              schema:
                type: string
            Last-Modified:
              description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
              schema:
                type: string
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/lcs-mo-data:
    get:
      summary: Retrieves the LCS Mobile Originated subscription data of a UE
      operationId: QueryLcsMoData
      tags:
        - LCS Mobile Originated Subscription Data
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: fields
          in: query
          description: attributes to be retrieved
          required: false
          schema:
```

```
            type: array
            items:
              type: string
            minItems: 1
          style: form
          explode: false
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
        - name: If-None-Match
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.2
          schema:
            type: string
        - name: If-Modified-Since
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.3
          schema:
            type: string
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/LcsMoData'
          headers:
            Cache-Control:
              description: Cache-Control containing max-age, as described in RFC 7234, 5.2
              schema:
                type: string
            ETag:
              description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
              schema:
                type: string
            Last-Modified:
              description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
              schema:
                type: string
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/nidd-authorization-data:
    get:
      summary: Retrieve NIDD Authorization Data GPSI or External Group identifier
      operationId: GetNiddAuData
      tags:
        - Query NIDD Authorization Data GPSI or External Group identifier (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE ID
          required: true
          schema:
            type: string
            pattern: '^(msisdn-[0-9]{5,15}|.+|extid-[^@]+@[^@]+|extgroupid-[^@]+@[^@]+)$'
        - name: single-nssai
          in: query
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/VarSnssai'
          description: single NSSAI
          required: true
        - name: dnn
          in: query
          description: DNN
          required: true
```

```
          schema:
            $ref: '#/components/schemas/Dnn'
        - name: mtc-provider-information
          in: query
          description: MTC Provider Information
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/MtcProviderInformation'
        - name: af-id
          in: query
          description: Application Function Identifier
          schema:
            type: string
        - name: If-None-Match
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.2
          schema:
            type: string
        - name: If-Modified-Since
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.3
          schema:
            type: string
      responses:
        '200':
          description: OK
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/AuthorizationData'
          headers:
            Cache-Control:
              description: Cache-Control containing max-age, as described in RFC 7234, 5.2
              schema:
                type: string
            ETag:
              description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
              schema:
                type: string
            Last-Modified:
              description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
              schema:
                type: string
        '403':
          $ref: 'TS29571_CommonData.yaml#/components/responses/403'
        '404':
          $ref: 'TS29571_CommonData.yaml#/components/responses/404'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/coverage-restriction-data:
    get:
      summary: Retrieves the subscribed enhanced Coverage Restriction Data of a UE
      operationId: QueryCoverageRestrictionData
      tags:
        - Enhanced Coverage Restriction Data
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
        - name: If-None-Match
          in: header
```

```
          description: Validator for conditional requests, as described in RFC 7232, 3.2
          schema:
            type: string
        - name: If-Modified-Since
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.3
          schema:
            type: string
      responses:
        '200':
          description: OK
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/EnhancedCoverageRestrictionData'
          headers:
            Cache-Control:
              description: Cache-Control containing max-age, as described in RFC 7234, 5.2
              schema:
                type: string
            ETag:
              description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
              schema:
                type: string
            Last-Modified:
              description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
              schema:
                type: string
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/context-data/location:
    get:
      summary: Retrieves the UE's Location Information
      operationId: QueryUeLocation
      tags:
        - UE's Location Information (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/LocationInfo'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/v2x-data:
    get:
      summary: Retrieves the subscribed V2X Data of a UE
      operationId: QueryV2xData
      tags:
        - V2X Subscription Data
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
```

```
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
        - name: If-None-Match
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.2
          schema:
            type: string
        - name: If-Modified-Since
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.3
          schema:
            type: string
      responses:
        '200':
          description: OK
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/V2xSubscriptionData'
          headers:
            Cache-Control:
              description: Cache-Control containing max-age, as described in RFC 7234, 5.2
              schema:
                type: string
            ETag:
              description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
              schema:
                type: string
            Last-Modified:
              description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
              schema:
                type: string
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/prose-data:
    get:
      summary: Retrieves the subscribed ProSe service Data of a UE
      operationId: QueryPorseData
      tags:
        - ProSe Service Subscription Data
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
        - name: If-None-Match
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.2
          schema:
            type: string
```

```
        - name: If-Modified-Since
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.3
          schema:
            type: string
      responses:
        '200':
          description: OK
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/ProseSubscriptionData'
          headers:
            Cache-Control:
              description: Cache-Control containing max-age, as described in RFC 7234, 5.2
              schema:
                type: string
            ETag:
              description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
              schema:
                type: string
            Last-Modified:
              description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
              schema:
                type: string
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/{servingPlmnId}/provisioned-data/lcs-bca-data:
    get:
      summary: Retrieves the LCS Broadcast Assistance subscription data of a UE
      operationId: QueryLcsBcaData
      tags:
        - LCS Broadcast Assistance Subscription Data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: servingPlmnId
          in: path
          description: PLMN ID
          required: true
          schema:
            $ref: '#/components/schemas/VarPlmnId'
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
        - name: If-None-Match
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.2
          schema:
            type: string
        - name: If-Modified-Since
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.3
          schema:
            type: string
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/LcsBroadcastAssistanceTypesData'
          headers:
            Cache-Control:
              description: Cache-Control containing max-age, as described in RFC 7234, 5.2
              schema:
                type: string
            ETag:
              description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
              schema:
```

```
              type: string
          Last-Modified:
            description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
            schema:
              type: string
      default:
        description: Unexpected error
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

  /subscription-data/group-data/5g-vn-groups/internal:
    get:
      summary: Retrieves the data of 5G VN Group
      operationId: Query5GVnGroupInternal
      tags:
        - 5G-VN-Groups-Internal (Document)
      parameters:
        - name: internal-group-ids
          in: query
          description: List of Internal Group IDs
          required: true
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
          style: form
          explode: false
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
               type: object
               description: A map (list of key-value pairs) where ExtGroupId serves as key
               additionalProperties:
                 $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/5GVnGroupConfiguration'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/group-data/5g-vn-groups/pp-profile-data:
    get:
      summary: Retrieves the parameter provision profile data for 5G VN Group
      operationId: Query5GVNGroupPPData
      tags:
        - Parameter Provision profile Data for 5G VN Group(Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ext-group-ids
          in: query
          description: List of external VN group identifiers
          schema:
            type: array
            items:
              $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
            minItems: 1
          style: form
          explode: false
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
```

```
              $ref: '#/components/schemas/Pp5gVnGroupProfileData'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/context-data/nidd-authorizations:
  put:
    summary: Create NIDD Authorization Info
    operationId: CreateNIDDAuthorizationInfo
    tags:
      - NIDD Authorization Info (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    requestBody:
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/NiddAuthorizationInfo'
      required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      '201':
        description: Upon successful creation, the created resource shall be returned
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/NiddAuthorizationInfo'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  delete:
    summary: Delete NIDD Authorization Info
    operationId: RemoveNiddAuthorizationInfo
    tags:
      - NIDD Authorization Info (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    responses:
      '204':
        description: Expected response to a successful subscription removal
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: Modify NIDD Authorization Info
    operationId: ModifyNiddAuthorizationInfo
    tags:
      - NIDD Authorization Info (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
```

```
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: supported-features
        in: query
        description: Features required to be supported by the target NF
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    requestBody:
      content:
        application/json-patch+json:
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
      required: true
    responses:
      '204':
        description: Expected response to a valid request
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      '403':
        description: modification is rejected
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  get:
    summary: Retrieve NIDD Authorization Info
    operationId: GetNiddAuthorizationInfo
    tags:
      - NIDD Authorization Info (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    responses:
      '200':
        description: OK
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/NiddAuthorizationInfo'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/5mbs-data:
  get:
    summary: Retrieves the 5mbs subscription data of a UE
    operationId: Query5mbsData
    tags:
      - 5MBSSubscriptionData (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
```

```
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
        - name: If-None-Match
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.2
          schema:
            type: string
        - name: If-Modified-Since
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.3
          schema:
            type: string
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/MbsSubscriptionData'
          headers:
            Cache-Control:
              description: Cache-Control containing max-age, as described in RFC 7234, 5.2
              schema:
                type: string
            ETag:
              description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
              schema:
                type: string
            Last-Modified:
              description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
              schema:
                type: string
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'


  /subscription-data/{ueId}:
    get:
      summary: Retrieve multiple subscribed data sets of a UE
      operationId: QueryUeSubscribedData
      tags:
        - UE Subscribed Data (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE Id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: dataset-names
          in: query
          description: List of dataset names
          style: form
          explode: false
          schema:
            $ref: '#/components/schemas/DatasetNames'
        - name: serving-plmn
          in: query
          description: Serving PLMN Id
          schema:
            $ref: '#/components/schemas/VarPlmnId'
```

```
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/UeSubscribedDataSets'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/service-specific-authorization-data/{serviceType}:
    get:
      summary: Retrieve ServiceSpecific Authorization Data
      operationId: GetSSAuData
      tags:
        - Query Service Specific Authorization Data (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE ID
          required: true
          schema:
            type: string
            pattern: '^(msisdn-[0-9]{5,15}|.+|extid-[^@]+@[^@]+|extgroupid-[^@]+@[^@]+)$'
        - name: serviceType
          in: path
          description: Service Type
          required: true
          schema:
            $ref: 'TS29503_Nudm_SSAU.yaml#/components/schemas/ServiceType'
        - name: single-nssai
          in: query
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/VarSnssai'
          description: single NSSAI
          required: true
        - name: dnn
          in: query
          description: DNN
          required: true
          schema:
            $ref: '#/components/schemas/Dnn'
        - name: mtc-provider-information
          in: query
          description: MTC Provider Information
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/MtcProviderInformation'
        - name: af-id
          in: query
          description: Application Function Identifier
          schema:
            type: string
        - name: If-None-Match
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.2
          schema:
            type: string
        - name: If-Modified-Since
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.3
          schema:
            type: string
      responses:
        '200':
          description: OK
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/AuthorizationData'
```

```
          headers:
            Cache-Control:
              description: Cache-Control containing max-age, as described in RFC 7234, 5.2
              schema:
                type: string
            ETag:
              description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
              schema:
                type: string
            Last-Modified:
              description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
              schema:
                type: string
        '403':
          $ref: 'TS29571_CommonData.yaml#/components/responses/403'
        '404':
          $ref: 'TS29571_CommonData.yaml#/components/responses/404'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/context-data/service-specific-authorizations/{serviceType}:
    put:
      summary: Create Service Specific Authorization Info
      operationId: CreateServiceSpecificAuthorizationInfo
      tags:
        - Service Specific Authorization Info (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: serviceType
          in: path
          description: Service Type
          required: true
          schema:
            $ref: 'TS29503_Nudm_SSAU.yaml#/components/schemas/ServiceType'
      requestBody:
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/ServiceSpecificAuthorizationInfo'
        required: true
      responses:
        '204':
          description: Upon success, an empty response body shall be returned
        '201':
          description: Upon successful creation, the created resource shall be returned
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/ServiceSpecificAuthorizationInfo'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'
    delete:
      summary: Delete Service Specific Authorization Info
      operationId: RemoveServiceSpecificAuthorizationInfo
      tags:
        - Service Specific Authorization Info (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
```

```
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: serviceType
        in: path
        description: Service Type
        required: true
        schema:
          $ref: 'TS29503_Nudm_SSAU.yaml#/components/schemas/ServiceType'
    responses:
      '204':
        description: Expected response to a successful subscription removal
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  patch:
    summary: Modify Service Specific Authorization Info
    operationId: ModifyServiceSpecificAuthorizationInfo
    tags:
      - Service Specific Authorization Info (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: serviceType
        in: path
        description: Service Type
        required: true
        schema:
          $ref: 'TS29503_Nudm_SSAU.yaml#/components/schemas/ServiceType'
      - name: supported-features
        in: query
        description: Features required to be supported by the target NF
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    requestBody:
      content:
        application/json-patch+json:
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
      required: true
    responses:
      '204':
        description: Expected response to a valid request
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      '403':
        description: modification is rejected
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  get:
    summary: Retrieve Service Specific Authorization Info
    operationId: GetServiceSpecificAuthorizationInfo
    tags:
      - Service Specific Authorization Info (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
```

```
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: serviceType
          in: path
          description: Service Type
          required: true
          schema:
            $ref: 'TS29503_Nudm_SSAU.yaml#/components/schemas/ServiceType'
      responses:
        '200':
          description: OK
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/ServiceSpecificAuthorizationInfo'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/context-data/roaming-information:
    put:
      summary: Update the Roaming Information of the EPC domain
      operationId: UpdateRoamingInformation
      tags:
        - Update the Roaming Information of the EPC domain (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      requestBody:
        content:
          application/json:
            schema:
              $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/RoamingInfoUpdate'
        required: true
      responses:
        '201':
          description: Created
          content:
            application/json:
              schema:
                $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/RoamingInfoUpdate'
          headers:
            Location:
              description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/roaming-information'
              required: true
              schema:
                type: string
        '204':
          description: Upon success, an empty response body shall be returned
        default:
          description: Unexpected error

    get:
      summary: Retrieves the Roaming Information of the EPC domain
      operationId: QueryRoamingInformation
      tags:
        - Retrieve the Roaming Information of the EPC domain (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
```

```
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      responses:
        '200':
          description: Expected response to a valid request
          content:
            application/json:
              schema:
                $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/RoamingInfoUpdate'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/context-data/pei-info:
    put:
      summary: Update the PEI Information of the 5GC/EPC domains
      operationId: CreateOrUpdatePeiInformation
      tags:
        - Update the PEI Information of the 5GC/EPC domains (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      requestBody:
        content:
          application/json:
            schema:
              $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/PeiUpdateInfo'
        required: true
      responses:
        '201':
          description: Created
          content:
            application/json:
              schema:
                $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/PeiUpdateInfo'
          headers:
            Location:
              description: 'Contains the URI of the newly created resource, according to the
structure: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/pei-info'
              required: true
              schema:
                type: string
        '204':
          description: Upon success, an empty response body shall be returned
        default:
          description: Unexpected error

    get:
      summary: Retrieves the PEI Information of the 5GC/EPC domains
      operationId: QueryPeiInformation
      tags:
        - Retrieve the Roaming Information of the 5GC/EPC domains (Document)
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
```

```
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/PeiUpdateInfo'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subsId}/amf-subscriptions:
  put:
    summary: Create AmfSubscriptions for a group of UEs or any UE
    operationId: CreateAmfGroupSubscriptions
    tags:
      - AMF Group Subscription Info (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueGroupId
        in: path
        required: true
        schema:
            $ref: '#/components/schemas/VarUeGroupId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    requestBody:
      content:
        application/json:
          schema:
            type: array
            items:
              $ref: '#/components/schemas/AmfSubscriptionInfo'
            minItems: 1
      required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      '201':
        description: Upon successful creation, the created resource shall be returned
        content:
          application/json:
            schema:
              type: array
              items:
                $ref: '#/components/schemas/AmfSubscriptionInfo'
              minItems: 1
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  delete:
    summary: Deletes AMF Subscription Info for an eeSubscription for a group of UEs or any UE
    operationId: RemoveAmfGroupSubscriptions
    tags:
      - Event AMF Subscription Info (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueGroupId
```

```
        in: path
        required: true
        schema:
            $ref: '#/components/schemas/VarUeGroupId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    responses:
      '204':
        description: Expected response to a successful subscription removal
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: modify the AMF Subscription Info
    operationId: ModifyAmfGroupSubscriptions
    tags:
      - AmfSubscriptionInfo (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueGroupId
        in: path
        required: true
        schema:
            $ref: '#/components/schemas/VarUeGroupId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
      - name: supported-features
        in: query
        description: Features required to be supported by the target NF
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    requestBody:
      content:
        application/json-patch+json:
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
      required: true
    responses:
      '204':
        description: Expected response to a valid request
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      '403':
        description: modification is rejected
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  get:
    summary: Retrieve AMF subscription Info for a group of UEs or any UE
    operationId: GetAmfGroupSubscriptions
    tags:
      - Query AMF Subscription Info (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
```

```
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueGroupId
        in: path
        required: true
        schema:
            $ref: '#/components/schemas/VarUeGroupId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    responses:
      '200':
        description: OK
        content:
          application/json:
            schema:
              type: array
              items:
                $ref: '#/components/schemas/AmfSubscriptionInfo'
              minItems: 1
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subsId}/smf-subscriptions:
  put:
    summary: Create SMF Subscription Info for a group of UEs or any YE
    operationId: CreateSmfGroupSubscriptions
    tags:
      - SMF Event Group Subscription Info (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueGroupId
        in: path
        required: true
        schema:
            $ref: '#/components/schemas/VarUeGroupId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    requestBody:
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/SmfSubscriptionInfo'
      required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      '201':
        description: Upon successful creation, the created resource shall be returned
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/SmfSubscriptionInfo'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  delete:
    summary: Delete SMF Subscription Info for a group of UEs or any UE
    operationId: RemoveSmfGroupSubscriptions
    tags:
      - SMF Event Subscription Info (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
```

```
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueGroupId
        in: path
        required: true
        schema:
            $ref: '#/components/schemas/VarUeGroupId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    responses:
      '204':
        description: Expected response to a successful subscription removal
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: Modify SMF Subscription Info for a group of UEs or any UE
    operationId: ModifySmfGroupSubscriptions
    tags:
      - SMF Event Subscription Info (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueGroupId
        in: path
        required: true
        schema:
            $ref: '#/components/schemas/VarUeGroupId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
      - name: supported-features
        in: query
        description: Features required to be supported by the target NF
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    requestBody:
      content:
        application/json-patch+json:
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
      required: true
    responses:
      '204':
        description: Expected response to a valid request
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      '403':
        description: modification is rejected
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  get:
    summary: Retrieve SMF Subscription Info for a group of UEs or any UE
    operationId: GetSmfGroupSubscriptions
    tags:
```

```
      - SMF Event Subscription Info (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:subscription-data
    parameters:
      - name: ueGroupId
        in: path
        required: true
        schema:
            $ref: '#/components/schemas/VarUeGroupId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    responses:
      '200':
        description: OK
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/SmfSubscriptionInfo'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subsId}/hss-subscriptions:
  put:
    summary: Create HSS Subscription Info for a group of UEs
    operationId: CreateHssGroupSubscriptions
    tags:
      - HSS Event Group Subscription Info (Document)
    parameters:
      - name: externalGroupId
        in: path
        required: true
        schema:
          $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    requestBody:
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/HssSubscriptionInfo'
      required: true
    responses:
      '204':
        description: Upon success, an empty response body shall be returned
      '201':
        description: Upon successful creation, the created resource shall be returned
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/HssSubscriptionInfo'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  delete:
    summary: Delete HSS Subscription Info
    operationId: RemoveHssGroupSubscriptions
    tags:
      - HSS Event Subscription Info (Document)
    parameters:
      - name: externalGroupId
        in: path
        required: true
        schema:
          $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
      - name: subsId
        in: path
        required: true
```

```
        schema:
          type: string
    responses:
      '204':
        description: Expected response to a successful subscription removal
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: Modify HSS Subscription Info
    operationId: ModifyHssGroupSubscriptions
    tags:
      - HSS Event Subscription Info (Document)
    parameters:
      - name: externalGroupId
        in: path
        required: true
        schema:
          $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
      - name: supported-features
        in: query
        description: Features required to be supported by the target NF
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    requestBody:
      content:
        application/json-patch+json:
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
      required: true
    responses:
      '204':
        description: Expected response to a valid request
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
      '403':
        description: modification is rejected
        content:
          application/problem+json:
            schema:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  get:
    summary: Retrieve HSS Subscription Info
    operationId: GetHssGroupSubscriptions
    tags:
      - HSS Event Subscription Info (Document)
    parameters:
      - name: externalGroupId
        in: path
        required: true
        schema:
          $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
      - name: subsId
        in: path
        required: true
        schema:
          type: string
    responses:
      '200':
        description: OK
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/HssSubscriptionInfo'
```

```
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  /subscription-data/{ueId}/uc-data:
    get:
      summary: Retrieves the subscribed User Consent Data of a UE
      operationId: QueryUserConsentData
      tags:
        - User Consent Data
      security:
        - {}
        - oAuth2ClientCredentials:
          - nudr-dr
        - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:subscription-data
      parameters:
        - name: ueId
          in: path
          description: UE id
          required: true
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        - name: supported-features
          in: query
          description: Supported Features
          schema:
             $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
        - name: ucPurpose
          in: query
          description: User consent purpose
          schema:
             $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/UcPurpose'
        - name: If-None-Match
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.2
          schema:
            type: string
        - name: If-Modified-Since
          in: header
          description: Validator for conditional requests, as described in RFC 7232, 3.3
          schema:
            type: string
      responses:
        '200':
          description: OK
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/UcSubscriptionData'
          headers:
            Cache-Control:
              description: Cache-Control containing max-age, as described in RFC 7234, 5.2
              schema:
                type: string
            ETag:
              description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
              schema:
                type: string
            Last-Modified:
              description: Timestamp for last modification of the resource, as described in RFC
7232, 2.2
              schema:
                type: string
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'

components:
  schemas:
    AuthenticationSubscription:
      description: A UE's authentication data.
      type: object
      required:
        - authenticationMethod
      properties:
        authenticationMethod:
          $ref: '#/components/schemas/AuthMethod'
        encPermanentKey:
```

```
        type: string
      protectionParameterId:
        type: string
      sequenceNumber:
        $ref: '#/components/schemas/SequenceNumber'
      authenticationManagementField:
        type: string
        pattern: '^[A-Fa-f0-9]{4}$'
      algorithmId:
        type: string
      encOpcKey:
        type: string
      encTopcKey:
        type: string
      vectorGenerationInHss:
        type: boolean
        default: false
      hssGroupId:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'
      n5gcAuthMethod:
        $ref: '#/components/schemas/AuthMethod'
      rgAuthenticationInd:
        type: boolean
        default: false
      supi:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      akmaAllowed:
        type: boolean
        default: false
      routingId:
        type: string
        pattern: '^[0-9]{1,4}$'

  SequenceNumber:
    description: Contains the SQN.
    type: object
    properties:
      sqnScheme:
        $ref: '#/components/schemas/SqnScheme'
      sqn:
        type: string
        pattern: '^[A-Fa-f0-9]{12}$'
      lastIndexes:
        type: object
        additionalProperties:
          type: integer
          minimum: 0
          description: A map(list of key-value pairs) where type of node serves as key
      indLength:
        type: integer
        minimum: 0
      difSign:
        $ref: '#/components/schemas/Sign'

  SqnScheme:
    description: Scheme for generation of Sequence Numbers.
    anyOf:
      - type: string
        enum:
          - GENERAL
          - NON_TIME_BASED
          - TIME_BASED
      - type: string
  Sign:
    description: Sign of the DIF value.
    type: string
    enum:
      - POSITIVE
      - NEGATIVE
  VarPlmnId:
    description: PLMN Id (MCC, MNC) or SNPN Id (MCC, MNC, NID).
    type: string
    pattern: '^[0-9]{5,6}(-[A-Fa-f0-9]{11})?$'
  DatasetNames:
    description: The list of names of data sets.
    type: array
    items:
      $ref: '#/components/schemas/DataSetName'
```

```
      minItems: 1
      uniqueItems: true
    DataSetName:
      description: The name of data set.
      anyOf:
      - type: string
        enum:
        - AM
        - SMF_SEL
        - SMS_SUB
        - SM
        - TRACE
        - SMS_MNG
        - LCS_PRIVACY
        - LCS_MO
        - LCS_BCA
        - V2X
        - PROSE
        - ODB
        - EE_PROF
        - PP_PROF
        - NIDD_AUTH
        - USER_CONSENT
        - MBS
      - type: string
    ProvisionedDataSets:
      description: Contains the provisioned data sets.
      type: object
      properties:
        amData:
          $ref: '#/components/schemas/AccessAndMobilitySubscriptionData'
        smfSelData:
          $ref: '#/components/schemas/SmfSelectionSubscriptionData'
        smsSubsData:
          $ref: '#/components/schemas/SmsSubscriptionData'
        smData:
          $ref: '#/components/schemas/SmSubsData'
        traceData:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
        smsMngData:
          $ref: '#/components/schemas/SmsManagementSubscriptionData'
        lcsPrivacyData:
          $ref: '#/components/schemas/LcsPrivacyData'
        lcsMoData:
          $ref: '#/components/schemas/LcsMoData'
        lcsBcaData:
          $ref: '#/components/schemas/LcsBroadcastAssistanceTypesData'
        v2xData:
          $ref: '#/components/schemas/V2xSubscriptionData'
        proseData:
          $ref: '#/components/schemas/ProseSubscriptionData'
        odbData:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/OdbData'
        eeProfileData:
          $ref: '#/components/schemas/EeProfileData'
        ppProfileData:
          $ref: '#/components/schemas/PpProfileData'
        niddAuthData:
          $ref: '#/components/schemas/AuthorizationData'
        mbsSubscriptionData:
          $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/MbsSubscriptionData'

    AccessAndMobilitySubscriptionData:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/AccessAndMobilitySubscriptionData'
    SmfSelectionSubscriptionData:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SmfSelectionSubscriptionData'
    VarSnssai:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    Dnn:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
    SmSubsData:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SmSubsData'
    Amf3GppAccessRegistration:
      $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/Amf3GppAccessRegistration'
    AmfNon3GppAccessRegistration:
      $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/AmfNon3GppAccessRegistration'
    SmfRegistration:
      $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/SmfRegistration'
```

```
    SmsfRegistration:
      $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/SmsfRegistration'
    LocationInfo:
      $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/LocationInfo'
    SmsManagementSubscriptionData:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SmsManagementSubscriptionData'
    SmsSubscriptionData:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SmsSubscriptionData'
    LcsPrivacyData:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/LcsPrivacyData'
    LcsMoData:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/LcsMoData'
    AuthorizationData:
      description: NIDD Authorization Information
      required:
       - authorizationData
      properties:
        authorizationData:
          type: array
          items:
            $ref: 'TS29503_Nudm_NIDDAU.yaml#/components/schemas/UserIdentifier'
          minItems: 1
          uniqueItems: true
        allowedDnnList:
          type: array
          items:
            anyOf:
              - $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
              - $ref: 'TS29571_CommonData.yaml#/components/schemas/WildcardDnn'
        allowedSnssaiList:
          type: array
          items:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
        allowedMtcProviders:
          type: array
          items:
            $ref: '#/components/schemas/MtcProvider'
        validityTime:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    EnhancedCoverageRestrictionData:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/EnhancedCoverageRestrictionData'
    V2xSubscriptionData:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/V2xSubscriptionData'
    ProseSubscriptionData:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ProseSubscriptionData'
    UcSubscriptionData:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/UcSubscriptionData'
    LcsBroadcastAssistanceTypesData:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/LcsBroadcastAssistanceTypesData'
    OperatorSpecificDataContainer:
      description: Container for operator specific data.
      type: object
      required:
        - dataType
        - value
      properties:
        dataType:
          type: string
          enum:
            - string
            - integer
            - number
            - boolean
            - object
            - array
        dataTypeDefinition:
          type: string
        value:
          oneOf:
            - type: string
            - type: integer
            - type: number
            - type: boolean
            - type: object
            - type: array
        supportedFeatures:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
        resetIds:
```

```
          type: array
          items:
            type: string
          minItems: 1

    AuthMethod:
      description: Contains the Authentication Method.
      anyOf:
        - type: string
          enum:
            - 5G_AKA
            - EAP_AKA_PRIME
            - EAP_TLS
            - EAP_TTLS
            - NONE
        - type: string
    PpData:
      $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/PpData'
    EeSubscription:
      $ref: 'TS29503_Nudm_EE.yaml#/components/schemas/EeSubscription'
    VarUeGroupId:
      description: UE group Id or any UE.
      type: string
      pattern: '^(extgroupid-[^@]+@[^@]+|anyUE)$'
    SdmSubscription:
      $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SdmSubscription'
    SmfRegList:
      description: The list of all the SMF registrations of a UE.
      type: array
      items:
        $ref: '#/components/schemas/SmfRegistration'
    SubscriptionDataSubscriptions:
      description: A subscription to notifications.
      type: object
      required:
        - monitoredResourceUris
        - callbackReference
      properties:
        ueId:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        callbackReference:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
        originalCallbackReference:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
        monitoredResourceUris:
          type: array
          items:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
        expiry:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
        sdmSubscription:
          $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SdmSubscription'
        hssSubscriptionInfo:
          $ref: '#/components/schemas/HssSubscriptionInfo'
        subscriptionId:
          type: string
        uniqueSubscription:
          type: boolean
        supportedFeatures:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    DataChangeNotify:
      description: Container for data which have changed and notification was requested when
changed.
      type: object
      properties:
        originalCallbackReference:
          type: array
          items:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
          minItems: 1
        ueId:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
        notifyItems:
          type: array
          items:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/NotifyItem'
          minItems: 1
        sdmSubscription:
```

```
        $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SdmSubscription'
      additionalSdmSubscriptions:
        type: array
        items:
          $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/SdmSubscription'
        minItems: 1
      subscriptionDataSubscriptions:
        type: array
        items:
          $ref: '#/components/schemas/SubscriptionDataSubscriptions'

  IdentityData:
    description: Identity data corresponds to the provided ueId.
    type: object
    properties:
      supiList:
        type: array
        items:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
        minItems: 1
      gpsiList:
        type: array
        items:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
        minItems: 1
      allowedAfIds:
        type: array
        items:
          type: string
        minItems: 1
      applicationPortIds:
        description: A map (list of key-value pairs where AppPortId serves as key) of GPSIs.
        type: object
        additionalProperties:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
        minProperties: 1

  SorData:
    description: Used to store the status of the latest SOR data update.
    type: object
    properties:
      provisioningTime:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
      ueUpdateStatus:
        $ref: '#/components/schemas/UeUpdateStatus'
      sorXmacIue:
        $ref: 'TS29509_Nausf_SoRProtection.yaml#/components/schemas/SorMac'
      sorMacIue:
        $ref: 'TS29509_Nausf_SoRProtection.yaml#/components/schemas/SorMac'
      meSupportOfSorCmci:
        type: boolean
    required:
      - provisioningTime
      - ueUpdateStatus

  UpuData:
    description: Used to store the status of the latest UPU data update.
    type: object
    properties:
      provisioningTime:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
      ueUpdateStatus:
        $ref: '#/components/schemas/UeUpdateStatus'
      upuXmacIue:
        $ref: 'TS29509_Nausf_UPUProtection.yaml#/components/schemas/UpuMac'
      upuMacIue:
        $ref: 'TS29509_Nausf_UPUProtection.yaml#/components/schemas/UpuMac'
    required:
      - provisioningTime
      - ueUpdateStatus

  NssaiAckData:
    description: Used to store the status of the latest NSSAI data update.
    type: object
    properties:
      provisioningTime:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
      ueUpdateStatus:
```

```
          $ref: '#/components/schemas/UeUpdateStatus'
      required:
        - provisioningTime
        - ueUpdateStatus

    CagAckData:
      description: Used to store the status of the latest CAG data update.
      type: object
      properties:
        provisioningTime:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
        ueUpdateStatus:
          $ref: '#/components/schemas/UeUpdateStatus'
      required:
        - provisioningTime
        - ueUpdateStatus

    UeUpdateStatus:
      description: Status of the procedure.
      type: string
      enum:
        - NOT_SENT
        - SENT_NO_ACK_REQUIRED
        - WAITING_FOR_ACK
        - ACK_RECEIVED
        - NEGATIVE_ACK_RECEIVED

    EeProfileData:
      description: Event Exposure Profile Data.
      type: object
      properties:
        restrictedEventTypes:
          type: array
          items:
            $ref: 'TS29503_Nudm_EE.yaml#/components/schemas/EventType'
        supportedFeatures:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
        allowedMtcProvider:
          description: A map (list of key-value pairs where EventType serves as key) of MTC provider
lists. In addition to defined EventTypes, the key value "ALL" may be used to identify a map entry
which contains a list of MtcProviders that are allowed monitoring all Event Types.
          type: object
          additionalProperties:
            type: array
            items:
              $ref: '#/components/schemas/MtcProvider'
            minItems: 1
          minProperties: 1
        iwkEpcRestricted:
          type: boolean
          default: false
        imsi:
          type: string
          pattern: '^[0-9]{5,15}$'
        hssGroupId:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'

    AmfSubscriptionInfo:
      description: Information the UDR stores and retrieves related to active subscriptions at the
AMF(s).
      type: object
      required:
        - amfInstanceId
        - subscriptionId
      properties:
        amfInstanceId:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
        subscriptionId:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
        subsChangeNotifyCorrelationId:
          type: string
        contextInfo:
          $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ContextInfo'

    ContextDatasetNames:
      description: The name of context data set.
      type: array
      items:
```

```
        $ref: '#/components/schemas/ContextDataSetName'
      minItems: 2
      uniqueItems: true
    ContextDataSetName:
      anyOf:
      - type: string
        enum:
        - AMF_3GPP
        - AMF_NON_3GPP
        - SDM_SUBSCRIPTIONS
        - EE_SUBSCRIPTIONS
        - SMSF_3GPP
        - SMSF_NON_3GPP
        - SUBS_TO_NOTIFY
        - SMF_REG
        - IP_SM_GW
        - ROAMING_INFO
        - PEI_INFO
      - type: string
    ContextDataSets:
      description: Contains the context data sets.
      type: object
      properties:
        amf3Gpp:
          $ref: '#/components/schemas/Amf3GppAccessRegistration'
        amfNon3Gpp:
          $ref: '#/components/schemas/AmfNon3GppAccessRegistration'
        sdmSubscriptions:
          type: array
          items:
            $ref: '#/components/schemas/SdmSubscription'
          minItems: 1
        eeSubscriptions:
          type: array
          items:
            $ref: '#/components/schemas/EeSubscription'
          minItems: 1
        smsf3GppAccess:
          $ref: '#/components/schemas/SmsfRegistration'
        smsfNon3GppAccess:
          $ref: '#/components/schemas/SmsfRegistration'
        subscriptionDataSubscriptions:
          type: array
          items:
            $ref: '#/components/schemas/SubscriptionDataSubscriptions'
          minItems: 1
        smfRegistrations:
          $ref: '#/components/schemas/SmfRegList'
        ipSmGw:
          $ref: '#/components/schemas/IpSmGwRegistration'
        roamingInfo:
          $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/RoamingInfoUpdate'
        peiInfo:
          $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/PeiUpdateInfo'

    IpSmGwRegistration:
      $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/IpSmGwRegistration'

    MessageWaitingData:
      description: Message Waiting Data list.
      type: object
      properties:
        mwdList:
          type: array
          items:
            $ref: '#/components/schemas/SmscData'
          minItems: 1

    SmscData:
      description: Addresses of SM-Service Center entities with SMS wating to be delivered to the
UE.
      type: object
      anyOf:
        - required: [ smscMapAddress ]
        - required: [ smscDiameterAddress ]
      properties:
        smscMapAddress:
          $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/E164Number'
```

```
        smscDiameterAddress:
          $ref: 'TS29503_Nudm_UECM.yaml#/components/schemas/NetworkNodeDiameterAddress'

    SmfSubscriptionInfo:
      description: Information related to active subscriptions at the SMF(s)
      type: object
      required:
        - smfSubscriptionList
      properties:
        smfSubscriptionList:
          type: array
          items:
            $ref: '#/components/schemas/SmfSubscriptionItem'
          minItems: 1

    SmfSubscriptionItem:
      description: Contains info about a single SMF event subscription
      type: object
      required:
        - smfInstanceId
        - subscriptionId
      properties:
        smfInstanceId:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
        subscriptionId:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
        contextInfo:
          $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ContextInfo'

    MtcProvider:
      description: MTC provider information.
      type: object
      properties:
        mtcProviderInformation:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/MtcProviderInformation'
        afId:
          type: string

    HssSubscriptionInfo:
      description: Information related to active subscriptions at the HSS(s)
      type: object
      required:
        - hssSubscriptionList
      properties:
        hssSubscriptionList:
          type: array
          items:
            $ref: '#/components/schemas/HssSubscriptionItem'
          minItems: 1

    HssSubscriptionItem:
      description: Contains info about a single HSS event subscription
      type: object
      required:
        - hssInstanceId
        - subscriptionId
      properties:
        hssInstanceId:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
        subscriptionId:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
        contextInfo:
          $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ContextInfo'

    EeGroupProfileData:
      type: object
      properties:
        restrictedEventTypes:
          type: array
          items:
            $ref: 'TS29503_Nudm_EE.yaml#/components/schemas/EventType'
        allowedMtcProvider:
          description: A map (list of key-value pairs where EventType serves as key) of MTC provider
lists. In addition to defined EventTypes, the key value "ALL" may be used to identify a map entry
which contains a list of MtcProviders that are allowed monitoring all Event Types.
          type: object
          additionalProperties:
            type: array
```

```
            items:
              $ref: '#/components/schemas/MtcProvider'
            minItems: 1
          minProperties: 1
        supportedFeatures:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
        iwkEpcRestricted:
          type: boolean
          default: false
        extGroupId:
          type: string
          pattern: '^extgroupid-[^@]+@[^@]+$'
        hssGroupId:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'

    Pp5gVnGroupProfileData:
      type: object
      properties:
        allowedMtcProviders:
          description: A map (list of key-value pairs where external VN group identifier serves as
key) of AllowedMtcProviderInfo lists. In addition to defined external VN group identifier, the key
value "ALL" may be used to identify a map entry which contains a list of AllowedMtcProviderInfo that
are allowed operating all the external group identifiers.
          type: object
          additionalProperties:
            type: array
            items:
              $ref: '#/components/schemas/AllowedMtcProviderInfo'
            minItems: 1
          minProperties: 1
        supportedFeatures:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

    PpProfileData:
      type: object
      properties:
        allowedMtcProviders:
          description: A map (list of key-value pairs where PpDataType serves as key) of
AllowedMtcProviderInfo lists. In addition to defined PpDataType, the key value "ALL" may be used to
identify a map entry which contains a list of AllowedMtcProviderInfo that are allowed to provision
all types of the PP data for the user using UDM ParameterProvision service.
          type: object
          additionalProperties:
            type: array
            items:
              $ref: '#/components/schemas/AllowedMtcProviderInfo'
            minItems: 1
          minProperties: 1
        supportedFeatures:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

    AllowedMtcProviderInfo:
      type: object
      properties:
        mtcProviderInformation:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/MtcProviderInformation'
        afId:
          type: string

    PpDataType:
      anyOf:
      - type: string
        enum:
        - COMMUNICATION_CHARACTERISTICS
        - EXPECTED_UE_BEHAVIOUR
        - EC_RESTRICTION
        - ACS_INFO
        - TRACE
        - STN_SR
        - LCS_PRIVACY
        - SOR_INFO
      - type: string

    GroupIdentifiers:
      description: External or Internal Group Identifier with a list of group members
      type: object
      properties:
        extGroupId:
```

```
        $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/ExtGroupId'
      intGroupId:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
      ueIdList:
        type: array
        items:
          $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/UeId'
        minItems: 1
      allowedAfIds:
        type: array
        items:
          type: string
        minItems: 1

  NiddAuthorizationInfo:
    description: Information related to active NIDD Authorizations
    type: object
    required:
      - niddAuthorizationList
    properties:
      niddAuthorizationList:
        type: array
        items:
          $ref: 'TS29503_Nudm_NIDDAU.yaml#/components/schemas/AuthorizationInfo'
        minItems: 1

  PpDataEntryList:
    description: Contains a list of the Provisioned Parameters entries
    type: object
    properties:
      ppDataEntryList:
        type: array
        items:
          $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/PpDataEntry'
      supportedFeatures:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

  UeSubscribedDataSets:
    description: Contains the subscribed data sets of a UE.
    type: object
    properties:
      amData:
        $ref: '#/components/schemas/AccessAndMobilitySubscriptionData'
      smfSelData:
        $ref: '#/components/schemas/SmfSelectionSubscriptionData'
      smsSubsData:
        $ref: '#/components/schemas/SmsSubscriptionData'
      smData:
        $ref: '#/components/schemas/SmSubsData'
      traceData:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
      smsMngData:
        $ref: '#/components/schemas/SmsManagementSubscriptionData'
      lcsPrivacyData:
        $ref: '#/components/schemas/LcsPrivacyData'
      lcsMoData:
        $ref: '#/components/schemas/LcsMoData'
      lcsBcaData:
        $ref: '#/components/schemas/LcsBroadcastAssistanceTypesData'
      v2xData:
        $ref: '#/components/schemas/V2xSubscriptionData'
      proseData:
        $ref: '#/components/schemas/ProseSubscriptionData'
      odbData:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/OdbData'
      eeProfileData:
        $ref: '#/components/schemas/EeProfileData'
      ppProfileData:
        $ref: '#/components/schemas/PpProfileData'
      niddAuthData:
        $ref: '#/components/schemas/AuthorizationData'
      ucData:
        $ref: '#/components/schemas/UcSubscriptionData'
      mbsSubscriptionData:
        $ref: 'TS29503_Nudm_SDM.yaml#/components/schemas/MbsSubscriptionData'

  ServiceSpecificAuthorizationInfo:
    description: Information related to active Service Specific Authorizations
```

```
      type: object
      required:
        - serviceSpecificAuthorizationList
      properties:
        serviceSpecificAuthorizationList:
          type: array
          items:
            $ref: 'TS29503_Nudm_NIDDAU.yaml#/components/schemas/AuthorizationInfo'
          minItems: 1

    NfIdentifier:
      type: object
      required:
        - nfType
      properties:
        nfType:
          $ref: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/NFType'
        nfInstanceId:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'

    EeSubscriptionExt:
      allOf:
        - $ref: 'TS29503_Nudm_EE.yaml#/components/schemas/EeSubscription'
        - $ref: '#/components/schemas/AdditionalEeSubsInfo'

    AdditionalEeSubsInfo:
      type: object
      properties:
        amfSubscriptionInfoList:
          type: array
          items:
            $ref: '#/components/schemas/AmfSubscriptionInfo'
          minItems: 1
          maxItems: 2
        smfSubscriptionInfo:
          $ref: '#/components/schemas/SmfSubscriptionInfo'
        hssSubscriptionInfo:
          $ref: '#/components/schemas/HssSubscriptionInfo'
```

Annex B (informative): Change history

Change history							
Date	**Meeting**	**TDoc**	**CR**	**Rev**	**Cat**	**Subject/Comment**	**New version**
2018-01	CT4#82					TS skeleton of Usage of the Unified Data Repository service for Subscription Data	0.0.0
2018-01	CT4#82	C4-181397				Version after CT4#82 including agreed pCRs	0.1.0
2018-03	CT4#83	C4-182442				Version after CT4#83 including agreed pCRs	0.2.0
2018-04	CT4#84	C4-183523				Version after CT4#84 including agreed pCRs	0.3.0
2018-05	CT4#85	C4-184638				Version after CT4#85 including agreed pCRs	0.4.0
2018-06	CT#80	CP-181103				Presented for information and approval	1.0.0
2018-06	CT#80					Approved in CT#80.	15.0.0
2018-09	CT#81	CP-182058	0004	-	F	Path Segment Correction	15.1.0
2018-09	CT#81	CP-182058	0005	-	F	URI variables for the Resource OperatorSpecificData	15.1.0
2018-09	CT#81	CP-182058	0008	-	F	Formatting of query parameter	15.1.0
2018-09	CT#81	CP-182212	0009	2	B	PATCH method for ProvisionedParamenterData	15.1.0
2018-09	CT#81	CP-182058	0010	-	F	JSON structure in query and missing data type reference	15.1.0
2018-09	CT#81	CP-182058	0014	-	F	Description of Structured data types	15.1.0
2018-09	CT#81	CP-182058	0016	-	F	Implicit Subscriptions	15.1.0
2018-09	CT#81	CP-182058	0011	1	F	Align security and servers clause in openAPI	15.1.0
2018-09	CT#81	CP-182058	0013	1	F	VarUeId used in TS 29.505	15.1.0
2018-09	CT#81	CP-182058	0012	2	F	OpenAPI schema for SubscriptionData	15.1.0
2018-09	CT#81	CP-182058	0018	1	F	Supported Features Negotiation	15.1.0
2018-09	CT#81	CP-182041	0015	1	B	Nudr Id Translation	15.1.0
2018-09	CT#81	CP-182043	0001	2	B	Add support for 5G Trace to Nudr	15.1.0
2018-12	CT#82	CP-183016	0026	-	F	Corrections in Query Parameters	15.2.0
2018-12	CT#82	CP-183016	0030	-	F	29505 CR data change notification data type	15.2.0
2018-12	CT#82	CP-183016	0021	1	F	Pattern correction	15.2.0
2018-12	CT#82	CP-183016	0022	1	F	Session Management Subscription Data	15.2.0
2018-12	CT#82	CP-183016	0019	1	F	Shared Data	15.2.0
2018-12	CT#82	CP-183016	0029	1	F	29505 CR cardinality	15.2.0
2018-12	CT#82	CP-183016	0025	2	F	Clarification of contents of SUPI list	15.2.0
2018-12	CT#82	CP-183016	0032	-	F	Cache control and conditional request header addition	15.2.0
2018-12	CT#82	CP-183016	0024	3	F	Introduction of Barring of Roaming in 5GC	15.2.0
2018-12	CT#82	CP-183016	0037	1	F	Session Management Subscription Data	15.2.0
2018-12	CT#82	CP-183016	0039	1	F	Authorized Event Types	15.2.0
2018-12	CT#82	CP-183016	0040	1	F	Group Subscriptions	15.2.0
2018-12	CT#82	CP-183016	0041	1	F	Location header in 201 response	15.2.0
2018-12	CT#82	CP-183016	0038	2	F	Active AmfSubscriptions storage	15.2.0
2018-12	CT#82	CP-183016	0036	2	F	lifetime of subscription	15.2.0
2018-12	CT#82	CP-183158	0028	3	F	Definition of Authentication Data for steering of roaming	15.2.0
2018-12	CT#82	CP-183159	0027	4	F	Definition of Authentication Status	15.2.0
2018-12	CT#82	CP-183160	0020	5	F	Definition of Authentication data	15.2.0
2018-12	CT#82	CP-183187	0023	3	F	Get multiple datasets for ProvisionedData	15.2.0
2018-12	CT#82	CP-183249	0042	-	F	Corrections on openAPI	15.2.0
2019-03	CT#83	CP-190179	0043		F	CR 0019r1 was not correctly implemented	15.3.0
2019-03	CT#83	CP-190179	0044		F	CR 0020r5 was not correctly implemented	15.3.0
2019-03	CT#83	CP-190179	0045		F	CR 0021r1 was not correctly implemented	15.3.0
2019-03	CT#83	CP-190179	0046		F	CR 0023r3 was not correctly implemented	15.3.0
2019-03	CT#83	CP-190179	0047		F	CR 0038r2 was not correctly implemented	15.3.0
2019-03	CT#83	CP-190179	0048		F	CR 0039r1 was not correctly implemented	15.3.0
2019-03	CT#83	CP-190179	0049		F	CR 0040r1 was not correctly implemented	15.3.0
2019-03	CT#83	CP-190179	0050		F	Correction of annex B	15.3.0
2019-03	CT#83	CP-190179	0052	2	F	Clarification on use of PUT	15.3.0
2019-03	CT#83	CP-190179	0054		F	Missing Headlines	15.3.0
2019-03	CT#83	CP-190179	0055	2	F	Sequence Number	15.3.0
2019-03	CT#83	CP-190179	0056	1	F	Retrieval of multiple context data sets	15.3.0
2019-03	CT#83	CP-190179	0057	3	F	UDR Subscriptions	15.3.0
2019-03	CT#83	CP-190179	0058	1	F	Data Set Names in URI Query Parameters	15.3.0
2019-03	CT#83	CP-190179	0060	2	F	AuthenticationSubscription correction	15.3.0
2019-03	CT#83	CP-190179	0061	2	F	SOR data update status	15.3.0
2019-03	CT#83	CP-190168	0062	1	F	3GPP TS 29.505 API version update	15.3.0
2019-06	CT#84	CP-191032	0065		F	CR 0049 was not correctly implemented	15.4.0
2019-06	CT#84	CP-191032	0066		F	CR 0050 was not correctly implemented	15.4.0
2019-06	CT#84	CP-191032	0067		F	CR 0054 was not correctly implemented	15.4.0
2019-06	CT#84	CP-191032	0068		F	CR 0056r1 was not correctly implemented	15.4.0
2019-06	CT#84	CP-191032	0070		F	Update of the SubsToNotify	15.4.0
2019-06	CT#84	CP-191032	0071		F	Update of the EESubscription	15.4.0
2019-06	CT#84	CP-191032	0064	1	F	Update Individual Subscription	15.4.0
2019-06	CT#84	CP-191032	0072	1	F	missing enties of data type summary table	15.4.0
2019-06	CT#84	CP-191032	0073	1	F	correction on operationId	15.4.0
2019-06	CT#84	CP-191032	0074	1	F	404 error response	15.4.0

2019-06	CT#84	CP-191032	0076	1	F	Correct the GET Request Body of AmfNon3GppAccessRegistration resource	15.4.0
2019-06	CT#84	CP-191032	0077	1	F	Default Notification URI	15.4.0
2019-06	CT#84	CP-191032	0081	1	F	OdbData Correction	15.4.0
2019-06	CT#84	CP-191032	0086	2	F	Storage of OpenAPI specification files	15.4.0
2019-06	CT#84	CP-191032	0075	3	F	CR 0062r1 was not correctly implemented	15.4.0
2019-06	CT#84	CP-191032	0079	2	F	Subscriptions Deletion	15.4.0
2019-06	CT#84	CP-191032	0087		F	PduSessionId	15.4.0
2019-06	CT#84	CP-191032	0063	2	F	UE Parameter Update (UPU)	15.4.0
2019-06	CT#84	CP-191032	0078	2	F	Group Identifier Translation	15.4.0
2019-06	CT#84	CP-191032	0080	2	F	Authentication Subscription	15.4.0
2019-06	CT#84	CP-191032	0069	2	F	CR 0062r1 was not correctly implemented	15.4.0
2019-06	CT#84	CP-191032	0088	1	F	Protection Parameter ID	15.4.0
2019-06	CT#84	CP-191032	0089	1	F	Copyright Note in YAML file	15.4.0
2019-06	CT#84	CP-191032	0083	6	F	SubscriptionDataSubscriptions identification	15.4.0
2019-09	CT#85	CP-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
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History

Document history		
V17.6.0	May 2022	Publication
V17.7.0	July 2022	Publication
V17.8.0	October 2022	Publication
V17.9.0	January 2023	Publication