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5G System;
Usage of the Unified Data Repository Service for Policy Data,
Application Data and Structured Data for Exposure;
Stage 3
(3GPP TS 29.519 version 19.7.0 Release 19)**



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Contents

Intellectual Property Rights	2
Legal Notice	2
Modal verbs terminology.....	2
Foreword.....	11
1 Scope	12
2 References	12
3 Definitions and abbreviations.....	13
3.1 Definitions	13
3.2 Abbreviations	13
4 Overview	14
5 Usage of Nudr_DataRepository Service API for Policy Data.....	14
5.1 Introduction	14
5.2 Resources	14
5.2.1 Overview	14
5.2.2 Resource Structure.....	14
5.2.3 Resource: AccessAndMobilityPolicyData.....	20
5.2.3.1 Description	20
5.2.3.2 Resource definition	20
5.2.3.3 Resource Standard Methods.....	21
5.2.3.3.1 GET	21
5.2.3.3.2 PATCH.....	21
5.2.4 Resource: UEPolicySet.....	22
5.2.4.1 Description	22
5.2.4.2 Resource definition	22
5.2.4.3 Resource Standard Methods.....	22
5.2.4.3.1 PUT	22
5.2.4.3.2 PATCH.....	23
5.2.4.3.3 GET	23
5.2.5 Resource: SessionManagementPolicyData.....	24
5.2.5.1 Description	24
5.2.5.2 Resource definition	24
5.2.5.3 Resource Standard Methods.....	24
5.2.5.3.1 GET	24
5.2.5.3.2 PATCH.....	25
5.2.6 Resource: UsageMonitoringInformation	26
5.2.6.1 Description	26
5.2.6.2 Resource definition	26
5.2.6.3 Resource Standard Methods.....	26
5.2.6.3.1 PUT	26
5.2.6.3.2 DELETE.....	27
5.2.6.3.3 GET	28
5.2.7 Resource: SponsorConnectivityData	28
5.2.7.1 Description	28
5.2.7.2 Resource definition	28
5.2.7.3 Resource Standard Methods.....	29
5.2.7.3.1 GET	29
5.2.8 Resource: BdtData	29
5.2.8.1 Description	29
5.2.8.2 Resource definition	29
5.2.8.3 Resource Standard Methods.....	29
5.2.8.3.1 GET	29
5.2.9 Resource: IndividualBdtData.....	30
5.2.9.1 Description	30

5.2.9.2	Resource definition	30
5.2.9.3	Resource Standard Methods.....	30
5.2.9.3.1	GET	30
5.2.9.3.2	PUT	31
5.2.9.3.3	DELETE.....	31
5.2.9.3.4	PATCH.....	32
5.2.10	Resource: PolicyDataSubscriptions	32
5.2.10.1	Description	32
5.2.10.2	Resource definition	33
5.2.10.3	Resource Standard Methods.....	33
5.2.10.3.1	POST	33
5.2.10.3.2	GET	33
5.2.11	Resource: IndividualPolicyDataSubscription	34
5.2.11.1	Description	34
5.2.11.2	Resource definition	34
5.2.11.3	Resource Standard Methods.....	35
5.2.11.3.1	PUT	35
5.2.11.3.2	DELETE.....	35
5.2.11.3.3	GET	36
5.2.12	Resource: OperatorSpecificData.....	36
5.2.12.1	Description	36
5.2.12.2	Resource Definition	36
5.2.12.3	Resource Standard Methods.....	37
5.2.12.3.1	GET	37
5.2.12.3.2	PATCH.....	37
5.2.12.3.3	PUT	38
5.2.12.3.4	DELETE.....	39
5.2.13	Resource: PlmnUePolicySet	39
5.2.13.1	Description	39
5.2.13.2	Resource definition	39
5.2.13.3	Resource Standard Methods.....	40
5.2.13.3.1	GET	40
5.2.14	Resource: PolicyDataForIndividualUe	40
5.2.14.1	Description	40
5.2.14.2	Resource definition	40
5.2.14.3	Resource Standard Methods.....	40
5.2.14.3.1	GET	40
5.2.15	Resource: SlicePolicyControlData.....	41
5.2.15.1	Description	41
5.2.15.2	Resource definition	41
5.2.15.3	Resource Standard Methods.....	41
5.2.15.3.1	GET	41
5.2.15.3.2	PATCH.....	42
5.2.16	Resource: MBSSessionPolicyControlData	43
5.2.16.1	Description	43
5.2.16.2	Resource definition	43
5.2.16.3	Resource Standard Methods.....	43
5.2.16.3.1	GET	43
5.2.17	Resource: PdtqData.....	43
5.2.17.1	Description	43
5.2.17.2	Resource definition	43
5.2.17.3	Resource Standard Methods.....	44
5.2.17.3.1	GET	44
5.2.18	Resource: IndividualPdtqData	44
5.2.18.1	Description	44
5.2.18.2	Resource definition	44
5.2.18.3	Resource Standard Methods.....	45
5.2.18.3.1	GET	45
5.2.18.3.2	PUT	45
5.2.18.3.3	DELETE.....	46
5.2.18.3.4	PATCH.....	46
5.2.19	Resource: GroupPolicyControlData	47

5.2.19.1	Description	47
5.2.19.2	Resource definition	47
5.2.19.3	Resource Standard Methods.....	47
5.2.19.3.1	GET	47
5.2.19.3.2	PATCH.....	48
5.3	Notifications	48
5.3.1	General.....	48
5.3.2	Policy Data Change Notification	49
5.4	Data Model.....	49
5.4.1	General.....	49
5.4.2	Structured data types.....	55
5.4.2.1	Introduction.....	55
5.4.2.2	Type AmPolicyData	55
5.4.2.2A	Type AmPolicyDataPatch	56
5.4.2.3	Type UePolicySection.....	56
5.4.2.4	Type UePolicySet	57
5.4.2.5	Type SmPolicyData	59
5.4.2.6	Type UsageMonDataLimit.....	60
5.4.2.7	Type UsageMonData	61
5.4.2.8	Type SponsorConnectivityData	61
5.4.2.9	Type BdtData	62
5.4.2.10	Type PolicyDataSubscription.....	63
5.4.2.11	Type PolicyDataChangeNotification	67
5.4.2.12	Type TimePeriod.....	70
5.4.2.13	Type UsageMonDataScope.....	70
5.4.2.14	Type SmPolicySnsaiData	70
5.4.2.15	Type SmPolicyDnnData.....	71
5.4.2.16	Type LimitIdToMonitoringKey	74
5.4.2.17	Type UePolicySetPatch.....	74
5.4.2.18	Type PlmnRouteSelectionDescriptor	75
5.4.2.19	Type SnsaiRouteSelectionDescriptor	75
5.4.2.20	Type DnnRouteSelectionDescriptor.....	75
5.4.2.21	Type SmPolicyDataPatch.....	76
5.4.2.22	Type SmPolicySnsaiDataPatch	76
5.4.2.23	Type SmPolicyDnnDataPatch.....	76
5.4.2.24	Type ResourceItem	77
5.4.2.25	Type NotificationItem.....	77
5.4.2.26	Type UpdatedItem.....	77
5.4.2.27	Type BdtDataPatch	78
5.4.2.28	Type PolicyDataForIndividualUe	78
5.4.2.29	Type SlicePolicyData	79
5.4.2.31	Type MbsSessPolCtrlData	80
5.4.2.32	Type MbsSessPolDataId	80
5.4.2.33	Type PdtqData.....	81
5.4.2.34	Type PdtqDataPatch.....	82
5.4.2.35	Type GroupPolicyData.....	82
5.4.2.37	Type RestrictedStatus.....	83
5.4.3	Simple data types and enumerations	84
5.4.3.1	Introduction.....	84
5.4.3.2	Simple data types	84
5.4.3.3	Enumeration: UsageMonLevel	84
5.4.3.4	Enumeration: Periodicity	85
5.4.3.5	Enumeration: BdtPolicyStatus	85
5.4.3.7	void	85
5.5	Error handling	85
5.5.1	General.....	85
5.5.2	Protocol Errors.....	85
5.5.3	Application Errors	86
5.6	Feature negotiation.....	86
6	Usage of Nudr_DataRepository Service API for Application Data	86
6.1	Introduction	86

6.2	Resources	86
6.2.1	Overview	86
6.2.2	Resource Structure	86
6.2.3	Resource: PFD Data	92
6.2.3.1	Description	92
6.2.3.2	Resource definition	93
6.2.3.3	Resource Standard Methods	93
6.2.3.3.1	GET	93
6.2.4	Resource: Individual PFD Data	93
6.2.4.1	Description	93
6.2.4.2	Resource definition	93
6.2.4.3	Resource Standard Methods	94
6.2.4.3.1	GET	94
6.2.4.3.2	DELETE	94
6.2.4.3.3	PUT	95
6.2.5	Resource: Influence Data	95
6.2.5.1	Description	95
6.2.5.2	Resource definition	95
6.2.5.3	Resource Standard Methods	96
6.2.5.3.1	GET	96
6.2.6	Resource: Individual Influence Data	97
6.2.6.1	Description	97
6.2.6.2	Resource definition	97
6.2.6.3	Resource Standard Methods	97
6.2.6.3.1	PUT	97
6.2.6.3.2	PATCH	98
6.2.6.3.3	DELETE	99
6.2.7	Resource: Influence Data Subscription	99
6.2.7.1	Description	99
6.2.7.2	Resource definition	99
6.2.7.3	Resource Standard Methods	100
6.2.7.3.1	POST	100
6.2.7.3.2	GET	100
6.2.8	Resource: Individual Influence Data Subscription	101
6.2.8.1	Description	101
6.2.8.2	Resource definition	102
6.2.8.3	Resource Standard Methods	102
6.2.8.3.1	GET	102
6.2.8.3.2	PUT	102
6.2.8.3.3	DELETE	103
6.2.9	Resource: Applied BDT Policy Data	103
6.2.9.1	Description	103
6.2.9.2	Resource definition	103
6.2.9.3	Resource Standard Methods	104
6.2.9.3.1	GET	104
6.2.10	Resource: Individual Applied BDT Policy Data	104
6.2.10.1	Description	104
6.2.10.2	Resource definition	105
6.2.10.3	Resource Standard Methods	105
6.2.10.3.1	PUT	105
6.2.10.3.2	PATCH	105
6.2.10.3.3	DELETE	106
6.2.11	Resource: IPTV Configurations	106
6.2.11.1	Description	106
6.2.11.2	Resource definition	107
6.2.11.3	Resource Standard Methods	107
6.2.11.3.1	GET	107
6.2.12	Resource: Individual IPTV Configuration	108
6.2.12.1	Description	108
6.2.12.2	Resource definition	108
6.2.12.3	Resource Standard Methods	108
6.2.12.3.1	PUT	108

6.2.12.3.2	DELETE	109
6.2.12.3.3	PATCH	109
6.2.13	Resource: ApplicationDataSubscriptions	110
6.2.13.1	Description	110
6.2.13.2	Resource definition	110
6.2.13.3	Resource Standard Methods	110
6.2.13.3.1	POST	110
6.2.13.3.2	GET	111
6.2.14	Resource: IndividualApplicationDataSubscription	112
6.2.14.1	Description	112
6.2.14.2	Resource definition	112
6.2.14.3	Resource Standard Methods	112
6.2.14.3.1	PUT	112
6.2.14.3.2	DELETE	112
6.2.14.3.3	GET	113
6.2.15	Resource: Service Parameter Data	113
6.2.15.1	Description	113
6.2.15.2	Resource definition	113
6.2.15.3	Resource Standard Methods	114
6.2.15.3.1	GET	114
6.2.16	Resource: Individual Service Parameter Data	117
6.2.16.1	Description	117
6.2.16.2	Resource definition	117
6.2.16.3	Resource Standard Methods	118
6.2.16.3.1	PUT	118
6.2.16.3.2	PATCH	118
6.2.16.3.3	DELETE	119
6.2.17	Resource: AM Influence Data	119
6.2.17.1	Description	119
6.2.17.2	Resource definition	119
6.2.17.3	Resource Standard Methods	120
6.2.17.3.1	GET	120
6.2.18	Resource: Individual AM Influence Data	122
6.2.18.1	Description	122
6.2.18.2	Resource definition	122
6.2.18.3	Resource Standard Methods	123
6.2.18.3.1	PUT	123
6.2.18.3.2	PATCH	123
6.2.18.3.3	DELETE	124
6.2.19	Resource: EAS Deployment Information Data	124
6.2.19.1	Description	124
6.2.19.2	Resource definition	124
6.2.19.3	Resource Standard Methods	125
6.2.19.3.1	GET	125
6.2.20	Resource: Individual EAS Deployment Information Data	125
6.2.20.1	Description	125
6.2.20.2	Resource definition	125
6.2.20.3	Resource Standard Methods	126
6.2.20.3.1	GET	126
6.2.20.3.2	PUT	126
6.2.20.3.3	DELETE	127
6.2.21	Resource: AF Requested QoS Data Sets	127
6.2.21.1	Description	127
6.2.21.2	Resource definition	127
6.2.21.3	Resource Standard Methods	127
6.2.21.3.1	GET	127
6.2.22	Resource: Individual AF Requested QoS Data Set	129
6.2.22.1	Description	129
6.2.22.2	Resource definition	129
6.2.22.3	Resource Standard Methods	129
6.2.22.3.1	PUT	129
6.2.22.3.2	PATCH	130

6.2.22.3.3	DELETE	131
6.2.23	Resource: Individual DNAI EAS Mapping	131
6.2.23.1	Description	131
6.2.23.2	Resource definition	131
6.2.23.3	Resource Standard Methods	131
6.2.23.3.1	GET	131
6.2.24	Resource: ECS Address Roaming Data	132
6.2.24.1	Description	132
6.2.24.2	Resource definition	132
6.2.24.3	Resource Standard Methods	132
6.2.24.3.1	GET	132
6.2.25	Resource: Individual ECS Address Roaming Data	133
6.2.25.1	Description	133
6.2.25.2	Resource definition	133
6.2.25.3	Resource Standard Methods	133
6.2.25.3.1	GET	133
6.2.25.3.2	PUT	134
6.2.25.3.3	DELETE	135
6.2.26	Resource: UE ID Mappings	135
6.2.26.1	Description	135
6.2.26.2	Resource definition	135
6.2.26.3	Resource Standard Methods	136
6.2.26.3.1	GET	136
6.2.27	Resource: Individual UE ID Mapping	136
6.2.27.1	Description	136
6.2.27.2	Resource definition	136
6.2.27.3	Resource Standard Methods	137
6.2.27.3.1	GET	137
6.2.27.3.2	PUT	137
6.2.27.3.3	DELETE	138
6.2.28	Resource: Non-3GPP Device Identifier Information	138
6.2.28.1	Description	138
6.2.28.2	Resource definition	139
6.2.28.3	Resource Standard Methods	139
6.2.28.3.1	GET	139
6.2.29	Resource: Individual Non-3GPP Device Identifier Information	140
6.2.29.1	Description	140
6.2.29.2	Resource definition	140
6.2.29.3	Resource Standard Methods	140
6.2.29.3.1	GET	140
6.2.29.3.2	PUT	141
6.2.29.3.3	PATCH	141
6.2.29.3.4	DELETE	142
6.3	Notifications	143
6.3.1	General	143
6.3.2	Void	143
6.3.3	Influence Data Update Notification	143
6.3.3.1	Description	143
6.3.3.2	Operation Definition	143
6.3.4	Application Data Change Notification	144
6.4	Data Model	144
6.4.1	General	144
6.4.2	Structured data types	151
6.4.2.1	Introduction	151
6.4.2.2	Type TrafficInfluData	152
6.4.2.5	Void	162
6.4.2.6	Type: PfdDataForAppExt	162
6.4.2.7	Type BdtPolicyData	163
6.4.2.9	Type IptvConfigData	163
6.4.2.10	Type ApplicationDataSubs	165
6.4.2.11	Type ApplicationDataChangeNotif	167
6.4.2.12	Type DataFilter	168

6.4.2.13	Void.....	173
6.4.2.14	Type TrafficInfluDataNotif.....	173
6.4.2.15	Type ServiceParameterData.....	174
6.4.2.15A	Type ServiceParameterDataPatch.....	178
6.4.2.16	Type AmInfluData.....	182
6.4.2.17	Type AmInfluDataPatch.....	184
6.4.2.18	Type AfRequestedQosData.....	185
6.4.2.19	Type AfRequestedQosDataPatch.....	188
6.4.2.20	Type TrafficCorrelationInfo.....	189
6.4.2.21	Type DnaiEasMapping.....	189
6.4.2.22	Type DnaiEasInfo.....	190
6.4.2.23	Type EcsAddrData.....	190
6.4.2.24	Type QosRequirements.....	191
6.4.2.25	Type QosRequirementsRm.....	191
6.4.2.26	Type Non3gppDevInfo.....	192
6.4.2.27	Type Non3gppDevInfoPatch.....	192
6.4.2.28	Type: SliceReplReqInfoRm.....	192
6.4.3	Simple data types and enumerations.....	192
6.4.3.1	Introduction.....	192
6.4.3.2	Simple data types.....	192
6.4.3.3	Enumeration: DataInd.....	193
6.4.3.4	Enumeration: CorrelationType.....	193
6.5	Error handling.....	193
6.5.1	General.....	193
6.5.2	Protocol Errors.....	193
6.5.3	Application Errors.....	193
6.6	Feature negotiation.....	194
7	Usage of Nudr_DataRepository Service API for Structured Data for Exposure.....	194
7.1	Introduction.....	194
7.2	Resources.....	194
7.2.1	Overview.....	194
7.2.2	Resource Structure.....	194
7.2.3	Resource: AccessAndMobilityData.....	196
7.2.3.1	Description.....	196
7.2.3.2	Resource definition.....	196
7.2.3.3	Resource Standard Methods.....	196
7.2.3.3.1	PUT.....	196
7.2.3.3.2	GET.....	197
7.2.3.3.3	DELETE.....	197
7.2.3.3.4	PATCH.....	198
7.2.4	Resource: PduSessionManagementData.....	198
7.2.4.1	Description.....	198
7.2.4.2	Resource definition.....	198
7.2.4.3	Resource Standard Methods.....	199
7.2.4.3.1	PUT.....	199
7.2.4.3.2	GET.....	199
7.2.4.3.3	DELETE.....	200
7.2.5	Resource: ExposureDataSubscriptions.....	201
7.2.5.1	Description.....	201
7.2.5.2	Resource Definition.....	201
7.2.5.3	Resource Standard Methods.....	201
7.2.5.3.1	POST.....	201
7.2.6	Resource: IndividualExposureDataSubscription.....	202
7.2.6.1	Description.....	202
7.2.6.2	Resource Definition.....	202
7.2.6.3	Resource Standard Methods.....	202
7.2.6.3.1	PUT.....	202
7.2.6.3.2	DELETE.....	202
7.3	Data Model.....	203
7.3.1	General.....	203
7.3.2	Structured data types.....	204

7.3.2.1	Introduction	204
7.3.2.2	Type AccessAndMobilityData	205
7.3.2.3	Type PduSessionManagementData	206
7.3.2.4	Type ExposureDataSubscription	207
7.3.2.5	Type ExposureDataChangeNotification	209
7.3.3	Simple data types and enumerations	209
7.3.3.1	Introduction	209
7.3.3.2	Simple data types	209
7.3.3.3	Enumeration: PduSessionStatus	209
7.3.3.4	Enumeration: SmsSupport	210
7.4	Error handling	210
7.4.1	General	210
7.4.2	Protocol Errors	210
7.4.3	Application Errors	210
7.5	Feature negotiation	210
7.6	Notifications	210
7.6.1	General	210
7.6.2	Exposure Data Change Notification	211
Annex A (normative): OpenAPI specification		212
A.1	General	212
A.2	Nudr_DataRepository API for Policy Data	212
A.3	Nudr_DataRepository API for Application Data	256
A.4	Nudr_DataRepository API for Exposure Data	326
Annex B (informative): Change history		339
History		348

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.

1 Scope

The present specification provides the stage 3 definition for the usage of the Unified Data Repository service (Nudr_DataRepository) of 5G System for Policy Data, Application Data and Structured Data for Exposure.

The Unified Data Repository (UDR) provides the Unified Data Repository service. This service provides a repository for policy data, application data and exposure data.

The stage 3 protocol definition for Nudr Service Based Interface which is common for subscription data, policy data, application data and exposure data is specified in 3GPP TS 29.504 [6].

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] Void.
- [3] OpenAPI: "OpenAPI Specification Version 3.0.0", <https://spec.openapis.org/oas/v3.0.0>.
- [4] 3GPP TS 29.500: "5G System; Technical Realization of Service Based Architecture; Stage 3".
- [5] 3GPP TS 29.501: "5G System; Principles and Guidelines for Services Definition; Stage 3".
- [6] 3GPP TS 29.504: "5G System; Unified Data Repository Services; Stage 3".
- [7] 3GPP TS 29.571: "5G System; Common Data Types for Service Based Interfaces Stage 3".
- [8] 3GPP TS 29.551: "5G System; Packet Flow Description Management Service; Stage 3".
- [9] 3GPP TS 29.122: "T8 reference point for Northbound APIs".
- [10] 3GPP TS 29.518: "5G System; Access and Mobility Management Services; Stage 3".
- [11] 3GPP TS 24.501: "Non-Access-Stratum (NAS) protocol for 5G System (5GS); Stage 3".
- [12] 3GPP TS 29.512: "5G System; Session Management Policy Control Service; Stage 3".
- [13] 3GPP TS 29.554: "5G System; Background Data Transfer Policy Control Service; Stage 3".
- [14] Void.
- [15] 3GPP TS 29.505: "5G System; Usage of the Unified Data Repository services for Subscription Data; Stage 3".
- [16] 3GPP TS 29.514: "5G System; Policy Authorization Service; Stage 3".
- [17] IETF RFC 9562: "A Universally Unique Identifier (UUID) URN Namespace".
- [18] 3GPP TR 21.900: "Technical Specification Group working methods".
- [19] 3GPP TS 29.522: "5G System; Network Exposure Function Northbound APIs; Stage 3".

- [20] IETF RFC 6901: "JavaScript Object Notation (JSON) Pointer".
- [21] IETF RFC 9110: "HTTP Semantics".
- [22] 3GPP TS 29.534: "5G System; Access and Mobility Policy Authorization Service; Stage 3".
- [23] 3GPP TS 29.591: "5G System; Network Exposure Function Southbound Services; Stage 3".
- [24] 3GPP TS 29.510: "Network Function Repository Services; Stage 3".
- [25] 3GPP TS 29.543: "5G System; Data Transfer Policy Control Services; Stage 3".
- [26] 3GPP TS 32.421: "Telecommunication management; Subscriber and equipment trace; Trace concepts and requirements".
- [27] 3GPP TS 29.565: "5G System; Time Sensitive Communication and Time Synchronization Function Services; Stage 3".
- [28] 3GPP TS 29.594: "5G System; Spending Limit Control Service; Stage 3".
- [29] 3GPP TS 29.520: "5G System; Network Data Analytics Services; Stage 3".
- [30] 3GPP TS 29.503: "5G System; Unified Data Management Services; 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].

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].

A2X	Aircraft-to-Everything
AM	Access and Mobility Management
ATSSS	Access Traffic Steering, Switching, Splitting
BDT	Background Data Transfer
DNAI	DN Access Identifier
DNN	Data Network Name
EAS	Edge Application Server
ECS	Edge Configuration Server
GPSI	Generic Public Subscription Identifier
JSON	JavaScript Object Notation
MA	Multi Access
NEF	Network Exposure Function
NR	New Radio
NRF	Network Repository Function
PCF	Policy Control Function
PDTQ	Planned Data Transfer with QoS requirements
PFD	Packet Flow Description
PSA	PDU Session Anchor
SFC	Service Function Chain
SM	Session Management
S-NSSAI	Single Network Slice Selection Assistance Information
SUPI	Subscription Permanent Identifier

TNAP	Trusted Network Access Point
UDR	Unified Data Repository
UPF	User Plane Function
UPSI	UE Policy Section Identifier
URSP	UE Route Selection Policy

4 Overview

The resources, data model and usage defined in the present document are used by the 5GC NFs (e.g. PCF, NEF) to access the policy data, application data or exposure data via the Unified Data Repository services as specified in 3GPP TS 29.504 [6].

5 Usage of Nudr_DataRepository Service API for Policy Data

5.1 Introduction

The following clauses specify the usage of Nudr_DataRepository service for policy data. The principles specified in 3GPP TS 29.504 [6] are followed unless explicitly specified otherwise in the following clauses.

5.2 Resources

5.2.1 Overview

This clause specifies the resources for the usage of the Unified Data Repository service for Policy Data.

5.2.2 Resource Structure

This clause describes the structure for the Resource URIs and the resources and methods used for the service.

Figure 5.2.2-1 depicts the resource URIs structure for the Nudr_DataRepository API for policy data.

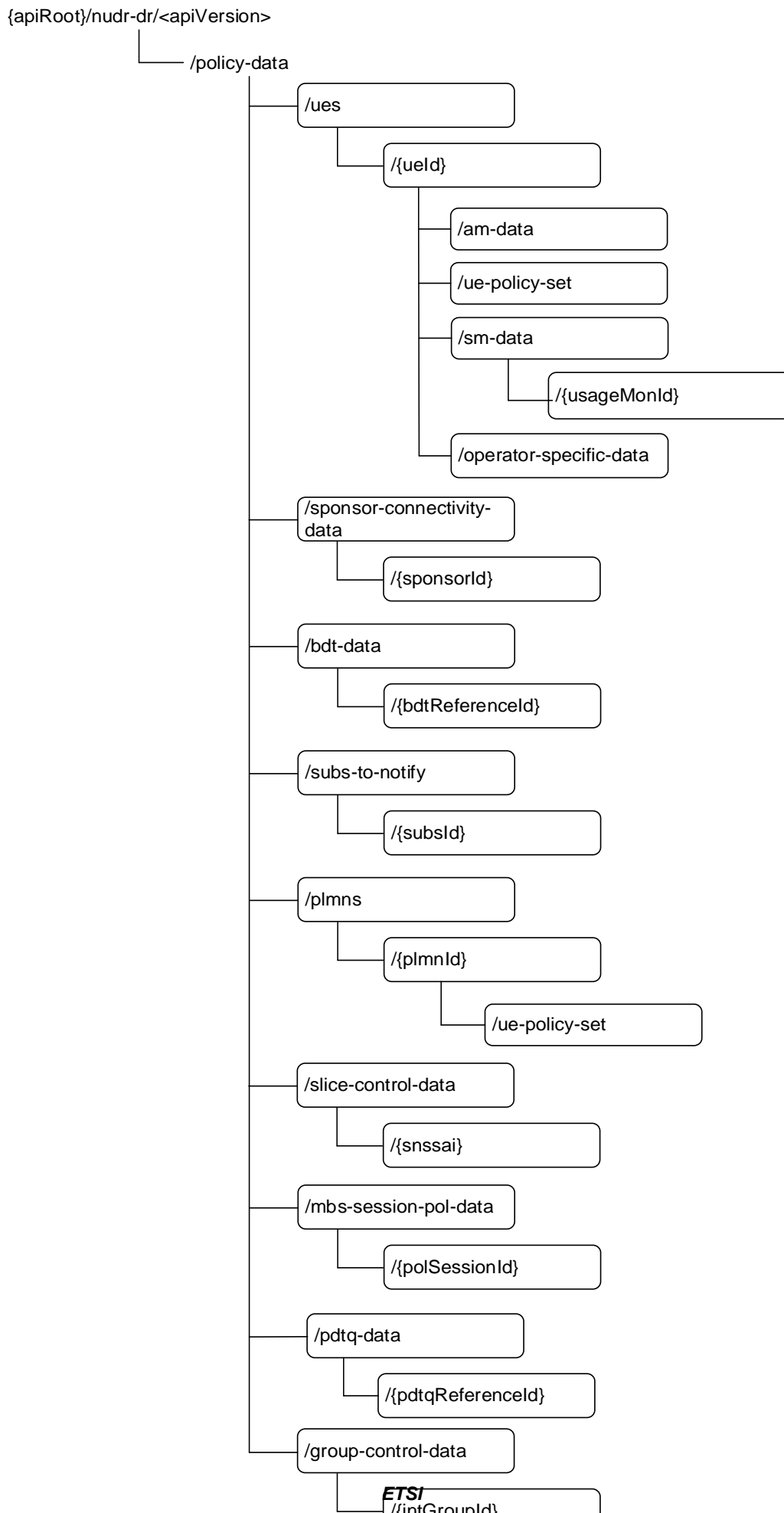


Figure 5.2.2-1: Resource URI structure of the Nudr_DataRepository API for policy data

Table 5.2.2-1 provides an overview of the resources and applicable HTTP methods.

Table 5.2.2-1: Resources and methods overview

Resource name	Resource URI	HTTP method or custom operation	Description
PolicyDataForIndividualUe	/policy-data/ues/{ueId}	GET	Retrieve multiple policy data sets (access and mobility policy data, UE policy set data, session management policy data, usage monitoring data, operator specific policy data) for a subscriber.
AccessAndMobilityPolicyData	/policy-data/ues/{ueId}/am-data	GET	Retrieve the access and mobility policy data for a subscriber.
		PATCH	When the feature "AccessAndMobilityPolicyDataModify" is supported, modify the access and mobility policy data for a subscriber.
UEPolicySet	/policy-data/ues/{ueId}/ue-policy-set	GET	Retrieve the UE policy set data for a subscriber.
		PUT	Create or modify the UE policy set data for a subscriber.
		PATCH	Modify the UE policy set data for a subscriber.
SessionManagementPolicyData	/policy-data/ues/{ueId}/sm-data	GET	Retrieve the session management policy data for a subscriber.
		PATCH	When the feature "SessionManagementPolicyDataPatch" is supported, modify the session management policy data for a subscriber.
UsageMonitoringInformation	/policy-data/ues/{ueId}/sm-data/{usageMonId}	GET	Retrieve a usage monitoring resource.
		PUT	Create a usage monitoring resource.
		DELETE	Delete a usage monitoring resource.
OperatorSpecificData	/policy-data/ues/{ueId}/operator-specific-data	GET	Retrieve the operator specific policy data of a UE.
		PATCH	Modify the operator specific policy data of a UE.
		PUT	Create or modify the operator specific policy data of a UE.
		DELETE	Delete the operator specific policy data for a UE.
SponsorConnectivityData	/policy-data/sponsor-connectivity-data/{sponsorId}	GET	Retrieve the sponsored connectivity information for a given sponsorId.
BdtData	/policy-data/bdt-data	GET	Retrieve the BDT data collection.
IndividualBdtData	/policy-data/bdt-data/{bdtReferenceId}	GET	Retrieve the BDT data information associated with a BDT reference Id.
		PUT	Create a BDT data resource associated with a BDT reference Id.
		PATCH	Modifies an BDT data resource associated with an BDT reference Id.
		DELETE	Delete a BDT data resource associated with a BDT reference Id.
PolicyDataSubscriptions	/policy-data/subs-to-notify	GET	Retrieve Individual Policy Data Subscriptions from the Policy Data Subscriptions collection.

		POST	Create a subscription to receive notifications of policy data changes.
IndividualPolicyDataSubscription	/policy-data/subs-to-notify/{subsid}	GET	Retrieve a subscription identified by {subsid}.
		PUT	Modify a subscription to receive notifications of policy data changes.
		DELETE	Delete a subscription identified by {subsid}.
PlmnUePolicySet	/policy-data/plmns/{plmnid}/ue-policy-set	GET	Retrieve the UE policy set data for an H-PLMN.
SlicePolicyControlData	/policy-data/slice-control-data/{snssai}	GET	Retrieve network slice specific policy control data for a given S-NSSAI.
		PATCH	Modify network slice specific policy control data for a given S-NSSAI.
MBSSessionPolicyControlData	/policy-data/mbs-session-policy-data/{polSessionId}	GET	Retrieve MBS Session Policy Control Data for an MBS Session based on the MBS Session Identifier or an AF Application Identifier.
PdtqData	/policy-data/pdtq-data	GET	Retrieve the PDTQ data collection.
IndividualPdtqData	/policy-data/pdtq-data/{pdtqReferenceId}	GET	Retrieve the PDTQ data information associated with a PDTQ reference Id.
		PUT	Create a PDTQ data resource associated with a PDTQ reference Id.
		PATCH	Modifies a PDTQ data resource associated with an PDTQ reference Id.
		DELETE	Delete a PDTQ data resource associated with a PDTQ reference Id.
GroupPolicyControlData	/policy-data/group-control-data/{intGroupId}	GET	Retrieve group specific policy control data for a 5G VN group.
		PATCH	Modify group specific policy control data for a 5G VN group.

5.2.3 Resource: AccessAndMobilityPolicyData

5.2.3.1 Description

The resource represents all UE related mobility and access policies attributes in the UDR for a given "ueId".

5.2.3.2 Resource definition

Resource URI: **{apiRoot}/nudr-dr/<apiVersion>/policy-data/ues/{ueId}/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	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1
ueId	VarUeId	Represents the Subscription Identifier SUPI or GPSI. Data type VarUeId is defined in 3GPP TS 29.571 [7].

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
supp-feat	SupportedFeatures	O	0..1	The features supported by the NF service consumer.

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
AmPolicyData	M	1	200 OK	Upon success, a response body containing access and mobility policies shall be returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.3.3.2 PATCH

This method shall support the URI query parameters specified in table 5.2.3.3.2-1.

Table 5.2.3.3.2-1: URI query parameters supported by the PATCH method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.3.3.2-2 and the response data structures and response codes specified in table 5.2.3.3.2-3.

Table 5.2.3.3.2-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
AmPolicyDataPatch	M	1	When the "AccessAndMobilityPolicyDataModify" feature is supported, it requests the modification of the access and mobility policy data resource for a given subscriber.

Table 5.2.3.3.2-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Successful case. The resource has been successfully updated and no additional content is to be sent in the response message.
AmPolicyData	M	1	200 OK	When the "AccessAndMobilityPolicyDataModify" feature is supported, upon success, the execution report is returned. (NOTE 1) (NOTE 2)
NOTE 1: The mandatory HTTP error status codes for the PATCH method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				
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 supported the "PatchReport" feature, the UDR shall respond with AmPolicyData.				

5.2.4 Resource: UEPolicySet

5.2.4.1 Description

The resource represents UE policy set for a given "ueId" stored in the UDR of the H-PLMN.

5.2.4.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/policy-data/ues/{ueId}/ue-policy-set

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	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1
ueId	VarUeId	Represents the Subscription Identifier SUPI or GPSI. Data type VarUeId is defined in 3GPP TS 29.571 [7].

5.2.4.3 Resource Standard Methods

5.2.4.3.1 PUT

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 PUT method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.4.3.1-2 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 PUT Request Body on this resource

Data type	P	Cardinality	Description
UePolicySet	M	1	Create or modify the UE policy set resource for a given subscriber.

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

Data type	P	Cardinality	Response codes	Description
UePolicySet	M	1	201 Created	Successful case. The resource has been successfully created and a response body containing a representation of the created UePolicySet resource shall be returned.
UePolicySet	M	1	200 OK	Successful case. The resource has been successfully updated and a response body containing UE policies shall be returned.
n/a			204 No Content	Successful case. The resource has been successfully updated and no additional content is to be sent in the response message.
NOTE: The mandatory HTTP error status codes for the PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

Table 5.2.4.3.1-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/policy-data/ues/{ueId}/ue-policy-set

5.2.4.3.2 PATCH

This method shall support the URI query parameters specified in table 5.2.4.3.2-1.

Table 5.2.4.3.2-1: URI query parameters supported by the PATCH method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.4.3.2-2 and the response data structures and response codes specified in table 5.2.4.3.2-3.

Table 5.2.4.3.2-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
UePolicySetPatch	M	1	Modify the UE policy set resource for a given subscriber.

Table 5.2.4.3.2-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Successful case. The resource has been successfully updated and no additional content is to be sent in the response message.
NOTE: The mandatory HTTP error status codes for the PATCH method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.4.3.3 GET

This method shall support the URI query parameters specified in table 5.2.4.3.3-1.

Table 5.2.4.3.3-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
supp-feat	SupportedFeatures	O	0..1	The features supported by the NF service consumer.

This method shall support the request data structures specified in table 5.2.4.3.3-2 and the response data structures and response codes specified in table 5.2.4.3.3-3.

Table 5.2.4.3.3-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.4.3.3-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
UePolicySet	M	1	200 OK	Upon success, a response body containing the UE policies shall be returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.5 Resource: SessionManagementPolicyData

5.2.5.1 Description

The resource represents all PDU session related subscription attributes in the UDR for a given ueId.

5.2.5.2 Resource definition

Resource URI: **{apiRoot}/nudr-dr/<apiVersion>/policy-data/ues/{ueId}/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	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
ueId	VarUeId	Represents the Subscription Identifier SUPI or GPSI. Data type VarUeId is defined in 3GPP TS 29.571 [7].

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	
snsai	Snsai	O	0..1	Identifies a Single Network Slice Selection Assistance Information. (NOTE)	
multi-pdu-sess-info	array(PduSessionInfo)	O	2..N	Identifies a list of S-NSSAI and DNN combination(s). (NOTE)	MultiPduSessionInfo
dnn	Dnn	O	0..1	Identifies a Data Network Name. (NOTE)	
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.	
supp-feat	SupportedFeatures	O	0..1	Identifies the features supported by the NF service consumer.	
NOTE: When "MultiPduSessionInfo" feature is supported and the "multi-pdu-sess-info" query parameter is present, then both the "snsai" and the "dnn" query parameters shall not be present.					

NOTE: The URI query parameters of the GET method on this resource contain filters such as the SNSSAI and the DNN although the resource is an individual resource. This means that if the provided URI query parameters do not match the targeted resource, the UDR will return an error response as specified in 3GPP TS 29.504 [6].

When an optional query parameter is not included, the UDR shall return session management policy data per DNN matching the value of the included query parameter(s) for all the possible values of the omitted query parameter. E.g. if "snsai" is not included, and "dnn" is included, UDR shall return the session management policy data per DNN for the DNN identified by "dnn" for all network slices where such DNN is available.

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
SmPolicyData	M	1	200 OK	Upon success, a response body containing SmPolicyData shall be returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.5.3.2 PATCH

This method shall support the URI query parameters specified in table 5.2.5.3.2-1.

Table 5.2.5.3.2-1: URI query parameters supported by the PATCH method on this resource

Name	Data type	P	Cardinality	Description

This method shall support the request data structures specified in table 5.2.5.3.2-2 and the response data structures and response codes specified in table 5.2.5.3.2-3.

Table 5.2.5.3.2-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
SmPolicyDataPatch	M	1	When the "SessionManagementPolicyDataPatch" feature is supported, it requests the modification of the session management policy data for a subscriber.

Table 5.2.5.3.2-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Successful case. The resource has been successfully updated and no additional content is to be sent in the response message. (NOTE 2)(NOTE 3)
SmPolicyData	M	1	200 OK	Upon success, the execution report is returned. (NOTE 2)(NOTE 3)
NOTE 1: The mandatory HTTP error status codes for the PATCH method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				
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 supported the "PatchReport" feature, the UDR shall respond with SmPolicyData.				
NOTE 3: When the resource is successfully updated, if the SmPolicyDataPatch in the request requires the creation, removal, or update of an entry of the "umData" attribute, the UDR shall create, remove or update the corresponding UsageMonitoringInformation resource for the indicated limit identifier.				

5.2.6 Resource: UsageMonitoringInformation

5.2.6.1 Description

The resource represents an individual usage monitoring resource created in the UDR and associated with a ueId and a usageMonId.

5.2.6.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/policy-data/ues/{ueId}/sm-data/{usageMonId}

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	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
ueId	VarUeId	Represents the Subscription Identifier SUPI or GPSI. Data type VarUeId is defined in 3GPP TS 29.571 [7].
usageMonId	string	Unique identifier of the individual SM Policy usage monitoring resource. It contains the identity of the corresponding limit as defined in the "limitId" attribute of the UsageMonDataLimit data type (see clause 5.4.2.6).

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
UsageMonData	M	1	Create the usage monitoring resource.

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
UsageMonData	M	1	201 Created	Successful case. The resource has been successfully created and a response body is returned containing a representation of the resource. (NOTE 2)
NOTE 1: The mandatory HTTP error status codes for the PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				
NOTE 2: When the resource is successfully created, the UDR shall create a new entry within the "umData" attribute of the SessionManagementPolicyData resource for the corresponding "limitId" accordingly.				

Table 5.2.6.3.1-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/policy-data/ues/{ueId}/sm-data/{usageMonId}

5.2.6.3.2 DELETE

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 DELETE method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.6.3.2-2 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 DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

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

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Successful case. The resource has been successfully deleted. (NOTE 2)
NOTE 1: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				
NOTE 2: When the resource is successfully deleted, the UDR shall delete within the "umData" attribute of the SessionManagementPolicyData resource the corresponding "limitId" entry accordingly.				

5.2.6.3.3 GET

This method shall support the URI query parameters specified in table 5.2.6.3.3-1.

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

Name	Data type	P	Cardinality	Description
supp-feat	SupportedFeatures	O	0..1	The features supported by the NF service consumer.

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
UsageMonData	M	1	200 OK	Successful case. The usage monitoring data is returned.
n/a			204 No Content	The resource was found but no usage monitoring data is available.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.7 Resource: SponsorConnectivityData

5.2.7.1 Description

The resource represents sponsored data connectivity related information stored in the UDR for a given sponsorId.

5.2.7.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/policy-data/sponsor-connectivity-data/{sponsorId}

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	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
sponsorId	string	Represents the sponsor identity.

5.2.7.3 Resource Standard Methods

5.2.7.3.1 GET

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 GET method on this resource

Name	Data type	P	Cardinality	Description
supp-feat	SupportedFeatures	O	0..1	The features supported by the NF service consumer.

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 GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

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

Data type	P	Cardinality	Response codes	Description
SponsorConnectivityData	M	1	200 OK	Upon success, a response body containing Sponsor Connectivity Data shall be returned.
n/a			204 No Content	The resource was found but no Sponsor Connectivity Data is available.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.8 Resource: BdtData

5.2.8.1 Description

The resource represents background data transfer data stored in the UDR.

5.2.8.2 Resource definition

Resource URI: **{apiRoot}/nudr-dr/<apiVersion>/policy-data/bdt-data**

This resource shall support the resource URI variables defined in table 5.2.8.2-1.

Table 5.2.8.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.

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
bdt-ref-ids	array(BdtReferenceId)	O	1..N	If included, this IE shall contain a list of the BDT reference identifiers. Each member of the array is an individual BDT reference identifier.
supp-feat	SupportedFeatures	O	0..1	The features supported by the NF service consumer.

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
array(BdtData)	M	0..N	200 OK	Upon success, a response body containing the BDT data shall be returned. Each member of the array is an individual BDT data.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.9 Resource: IndividualBdtData

5.2.9.1 Description

The resource represents individual background data transfer data stored in the UDR for a given "bdtReferenceId".

5.2.9.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/policy-data/bdt-data/{bdtReferenceId}

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	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
bdtReferenceId	BdtReferenceId	Represents the transfer policy of background data transfer for provided ASP. Data type BdtReferenceId is defined in 3GPP TS 29.122 [9].

5.2.9.3 Resource Standard Methods

5.2.9.3.1 GET

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 GET method on this resource

Name	Data type	P	Cardinality	Description
supp-feat	SupportedFeatures	O	0..1	The features supported by the NF service consumer.

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 GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

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

Data type	P	Cardinality	Response codes	Description
BdtData	M	1	200 OK	Upon success, a response body containing the BDT data shall be returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.9.3.2 PUT

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 PUT method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.9.3.2-2 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 PUT Request Body on this resource

Data type	P	Cardinality	Description
BdtData	M	1	Create the BDT data for a given bdtReferenceld.

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

Data type	P	Cardinality	Response codes	Description
BdtData	M	1	201 Created	Successful case. The resource has been successfully created.
ProblemDetails	O	0..1	403 Forbidden	The resource is not allowed to be updated. (NOTE 2)
NOTE 1: The mandatory HTTP error status codes for the PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				
NOTE 2: The "cause" attribute within the "ProblemDetails" data structure may be set to "MODIFICATION_NOT_ALLOWED" as defined in table 5.2.7.2-1 of 3GPP TS 29.500 [4].				

Table 5.2.9.3.2-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/policy-data/bdt-data/{bdtReferenceld}

5.2.9.3.3 DELETE

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 DELETE method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.9.3.3-2 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 DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

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

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Successful case. The resource has been successfully deleted.
NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.9.3.4 PATCH

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
n/a				

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
BdtDataPatch	M	1	Modify the BDT data for a given bdtReferenceId.

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
BdtData	M	1	200 OK	The resource has been successfully updated and a response body containing BDT data shall be returned.
n/a			204 No Content	Successful case. The resource has been successfully updated and no additional content is to be sent in the response message.
NOTE: The mandatory HTTP error status codes for the PATCH method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.10 Resource: PolicyDataSubscriptions

5.2.10.1 Description

This resource is used to represent subscriptions to notification of policy data modification.

5.2.10.2 Resource definition

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

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	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.

5.2.10.3 Resource Standard Methods

5.2.10.3.1 POST

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 POST method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.10.3.1-2 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 POST Request Body on this resource

Data type	P	Cardinality	Description
PolicyDataSubscription	M	1	Identifies the subscription to notification of policy data modification.

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

Data type	P	Cardinality	Response codes	Description
PolicyDataSubscription	M	1	201 Created	Upon success, a response body containing a representation of each 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: The mandatory HTTP error status codes for the POST method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

Table 5.2.10.3.1-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/policy-data/subs-to-notify/{subsid}

5.2.10.3.2 GET

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 GET method on this resource

Name	Data type	P	Cardinality	Description
mon-resources	array(string)	C	1..N	Indicate the resources for which it is requested to return the existing subscriptions to notifications on data changes. It contains the <apiSpecificResourceUriPart> of a monitored resource. When present, the UDR shall return the IndividualPolicyDataSubscription resource(s) for which one or more of the indicated resources in the "mon-resources" query parameter matches with the <apiSpecificResourceUriPart> of one or more entries of the "monitoredResourceUris" property of the resource (i.e. within the resource representation in the PolicyDataSubscription data structure).
ue-id	VarUeId	C	0..1	Represents the Subscription Identifier SUPI or GPSI. Data type VarUeId is defined in 3GPP TS 29.571 [7]. When present, the UDR shall return the IndividualPolicyDataSubscription resource(s) for the indicated UE.
supp-feat	SupportedFeatures	O	0..1	The features supported by the NF service consumer, as per clause 6.6 of 3GPP TS 29.500 [4].
NOTE: Either the "mon-resources" or "ue-id" query parameters shall be present in the request.				

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 GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

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

Data type	P	Cardinality	Response codes	Description
array(PolicyDataSubscription)	M	0..N	200 OK	Upon success, a response body containing the the requested Individual Policy Data Subscription(s) shall be returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.11 Resource: IndividualPolicyDataSubscription

5.2.11.1 Description

This resource is used to represent an individual subscription to notification of policy data modification.

5.2.11.2 Resource definition

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

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	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
subslid	string	The subslid identifies an individual policy data subscription to notifications. The value is allocated by the UDR during creation of the PolicyDataSubscriptions resource.

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
PolicyDataSubscription	M	1	Updates the subscription to notification of policy data modification.

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
PolicyDataSubscription	M	1	200 OK	The individual subscription resource was updated successfully.
n/a			204 No Content	The individual subscription resource was updated successfully and no additional content is to be sent in the response message.
NOTE: The mandatory HTTP error status codes for the PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

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: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.11.3.3 GET

This method shall support the URI query parameters specified in table 5.2.11.3.3-1.

Table 5.2.11.3.3-1: 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 5.2.11.3.3-2 and the response data structures and response codes specified in table 5.2.11.3.3-3.

Table 5.2.11.3.3-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.11.3.3-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
PolicyDataSubscription	M	1	200 OK	Upon success, a response body containing the resource representation of the requested Individual Policy Data Subscription.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.12 Resource: OperatorSpecificData

5.2.12.1 Description

This resource represents the UE's operator specific data.

NOTE: This resource can be used for operator specific data that is related to any policy data (e.g., AM policy data).

This resource is modelled with the Document resource archetype (see clause C.1 of 3GPP TS 29.501 [5]).

5.2.12.2 Resource Definition

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

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	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
ueId	VarUeId	Represents the Subscription Identifier SUPI or GPSI. Data type VarUeId is defined in 3GPP TS 29.571 [7].

5.2.12.3 Resource Standard Methods

5.2.12.3.1 GET

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

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

Table 5.2.12.3.1-1: 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.
supp-feat	SupportedFeatures	O	0..1	Identifies the features supported by the NF service consumer.

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 GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 5.2.12.3.1-3: 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 {ueld} variable in the resource path). If the resource does not contain any keys, the response consists of an empty JSON object (empty map).
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.12.3.2 PATCH

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

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

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

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.12.3.2-2 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 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 5.2.12.3.2-3: 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	The resource is not allowed to be updated. (NOTE 3)
NOTE 1: The mandatory HTTP error status codes for the PATCH method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				
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 supported the "PatchReport" feature, the UDR shall respond with PatchResult.				
NOTE 3: The "cause" attribute within the "ProblemDetails" data structure may be set to "MODIFICATION_NOT_ALLOWED" as defined in table 5.2.7.2-1 of 3GPP TS 29.500 [4].				

5.2.12.3.3 PUT

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

This method shall support the URI query parameters specified in table 5.2.12.3.3-1.

Table 5.2.12.3.3-1: 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 5.2.12.3.3-2 and the response data structures and response codes specified in table 5.2.12.3.3-3.

Table 5.2.12.3.3-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
map(OperatorSpecificData Container)	M	1..N	A map containing the new representation of the operator specific data. The key of the map is operator specific data element name and the value is the operator specific data of the UE.

Table 5.2.12.3.3-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
map(OperatorSpecificDataContainer)	M	1	200 OK	Upon successful modification a response body containing a map shall be returned. The key of the map is operator specific data element name and the value is the operator specific data of the UE.
map(OperatorSpecificDataContainer)	M	1	201 Created	If the "OSDResource_Create_Delete" feature is supported and the resource has been successfully created, a response body is 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			204 No Content	The resource has been successfully updated.
ProblemDetails	O	0..1	403 Forbidden	The resource is not allowed to be updated. (NOTE 2)
NOTE 1: The mandatory HTTP error status codes for the HTTP PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] shall also apply.				
NOTE 2: The "cause" attribute within the "ProblemDetails" data structure may be set to "MODIFICATION_NOT_ALLOWED" as defined in table 5.2.7.2-1 of 3GPP TS 29.500 [4].				

Table 5.2.12.3.3-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/policy-data/ues/{ueId}/operator-specific-data

5.2.12.3.4 DELETE

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 DELETE method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.12.3.4-2 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 DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

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

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Successful case, applicable when the "OSDResource_Create_Delete" feature is supported. The resource has been successfully deleted.
NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.13 Resource: PlmnUePolicySet

5.2.13.1 Description

The resource represents the UE policy set for a given "plmnId" representing an H-PLMN stored in the UDR of a V-PLMN.

5.2.13.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/policy-data/plmns/{plmnId}/ue-policy-set

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	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
plmnId	string	Concatenating a Mcc and Mnc as defined in 3GPP TS 29.505 [15].

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
supp-feat	SupportedFeatures	O	0..1	The features supported by the NF service consumer.

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
UePolicySet	M	1	200 OK	Upon success, a response body containing the UE policies shall be returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.14 Resource: PolicyDataForIndividualUe

5.2.14.1 Description

The resource represents all UE related policy data sets in the UDR for a given "ueId".

5.2.14.2 Resource definition

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

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	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1
ueId	VarUeId	Represents the Subscription Identifier SUPI or GPSI. Data type VarUeId is defined in 3GPP TS 29.571 [7].

5.2.14.3 Resource Standard Methods

5.2.14.3.1 GET

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
supp-feat	SupportedFeatures	O	0..1	The features supported by the NF service consumer, as per clause 6.6 of 3GPP TS 29.500 [4].
data-subset-names	array(PolicyDataSubset)	O	2..N	The policy data subsets (e.g. AM policies, SM policies, etc.) requested by the NF service consumer. If this query parameter is not provided by the NF service consumer, this means that all the available policy data subsets shall be returned.
NOTE: When two or more policy data subsets sets shall be retrieved, it is recommended to use a single GET request with query parameters.				

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
PolicyDataForIndividualUE	M	1	200 OK	Upon success, a response body containing the policy data subsets requested by the NF service consumer or all the policy data subsets shall be returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.15 Resource: SlicePolicyControlData

5.2.15.1 Description

The resource represents the network slice specific policy control subscription data stored in the UDR for a given S-NSSAI.

5.2.15.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/policy-data/slice-control-data/{snssai}

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	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
snssai	Snssai	The S-NSSAI value used in the last segment of the resource URI is encoded as a string as defined in 3GPP TS 29.571 [7], clause 5.4.4.2.

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
supp-feat	SupportedFeatures	O	0..1	The features supported by the NF service consumer.

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
SlicePolicyData	M	1	200 OK	Upon success, a response body containing network slice specific policy control data shall be returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.15.3.2 PATCH

This method shall support the URI query parameters specified in table 5.2.15.3.2-1.

Table 5.2.15.3.2-1: URI query parameters supported by the PATCH method on this resource

Name	Data type	P	Cardinality	Description

This method shall support the request data structures specified in table 5.2.15.3.2-2 and the response data structures and response codes specified in table 5.2.15.3.2-3.

Table 5.2.15.3.2-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
SlicePolicyDataPatch	M	1	Modify a network slice specific policy control data resource for a given S-NSSAI.

Table 5.2.15.3.2-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
SlicePolicyData	M	1	200 OK	The resource has been successfully updated and a response body containing network slice specific policy control data shall be returned.
n/a			204 No Content	The resource has been successfully updated and no additional content is to be sent in the response message.
NOTE: The mandatory HTTP error status codes for the PATCH method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.16 Resource: MBSSessionPolicyControlData

5.2.16.1 Description

The resource represents the MBS Session Policy Control Data for an MBS Session.

5.2.16.2 Resource definition

Resource URI: **{apiRoot}/nudr-dr/<apiVersion>/policy-data/mbs-session-pol-data/{polSessionId}**

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	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
polSessionId	MbsSessPolDataId	Represents the identifier of the MBS Session Policy Control Data.

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
supp-feat	SupportedFeatures	O	0..1	The features supported by the NF service consumer.

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
MbsSessPolCtrlData	M	1	200 OK	Successful case. The requested MBS Session Policy Control Data is successfully returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.17 Resource: PdtqData

5.2.17.1 Description

The resource represents planned data transfer with QoS requirements data stored in the UDR.

5.2.17.2 Resource definition

Resource URI: **{apiRoot}/nudr-dr/<apiVersion>/policy-data/pdtq-data**

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	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.

5.2.17.3 Resource Standard Methods

5.2.17.3.1 GET

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

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

Name	Data type	P	Cardinality	Description
pdtq-ref-ids	array(PdtqReferenceId)	O	1..N	If included, this IE shall contain a list of the PDTQ reference identifiers. Each member of the array is an individual PDTQ reference identifier.
supp-feat	SupportedFeatures	O	0..1	The features supported by the NF service consumer.

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 GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

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

Data type	P	Cardinality	Response codes	Description
array(PdtqData)	M	0..N	200 OK	Upon success, a response body containing the PDTQ data shall be returned. Each member of the array is an individual PDTQ data.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.18 Resource: IndividualPdtqData

5.2.18.1 Description

The resource represents individual planned data transfer with QoS requirements data stored in the UDR for a given "pdtqReferenceId".

5.2.18.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/policy-data/pdtq-data/{pdtqReferenceId}

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	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
pdqtqReferenceld	PdtqReferenceld	Represents the PDTQ policy of planned data transfer with QoS requirements for provided ASP. Data type PdtqReferenceld is defined in 3GPP TS 29.543 [25].

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
supp-feat	SupportedFeatures	O	0..1	The features supported by the NF service consumer.

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 5.2.9.3.1-3.

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
PdtqData	M	1	200 OK	Upon success, a response body containing the PDTQ data shall be returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.18.3.2 PUT

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 PUT method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.18.3.2-2 and the response data structures and response codes specified in table 5.2.18.3.2-3.

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

Data type	P	Cardinality	Description
PdtqData	M	1	Create the PDTQ data for a given pdqtqReferenceld.

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

Data type	P	Cardinality	Response codes	Description
PdtqData	M	1	201 Created	Successful case. The resource has been successfully created.
ProblemDetails	O	0..1	403 Forbidden	The resource is not allowed to be updated. (NOTE 2)

NOTE 1: The mandatory HTTP error status codes for the PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.

NOTE 2: The "cause" attribute within the "ProblemDetails" data structure may be set to "MODIFICATION_NOT_ALLOWED" as defined in table 5.2.7.2-1 of 3GPP TS 29.500 [4].

Table 5.2.18.3.2-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/policy-data/pdtq-data/{pdtqReferenceId}

5.2.18.3.3 DELETE

This method shall support the URI query parameters specified in table 5.2.18.3.3-1.

Table 5.2.18.3.3-1: 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 5.2.18.3.3-2 and the response data structures and response codes specified in table 5.2.18.3.3-3.

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

Data type	P	Cardinality	Description
n/a			

Table 5.2.18.3.3-3: Data structures supported by the DELETE Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Successful case. The resource has been successfully deleted.

NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.

5.2.18.3.4 PATCH

This method shall support the URI query parameters specified in table 5.2.18.3.4-1.

Table 5.2.18.3.4-1: URI query parameters supported by the PATCH method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 5.2.18.3.4-2 and the response data structures and response codes specified in table 5.2.18.3.4-3.

Table 5.2.18.3.4-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
PdtqDataPatch	M	1	Modify the PDTQ data for a given pdtqReferenceld.

Table 5.2.18.3.4-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
PdtqData	M	1	200 OK	The resource has been successfully updated and a response body containing PDTQ data shall be returned.
n/a			204 No Content	Successful case. The resource has been successfully updated and no additional content is to be sent in the response message.
NOTE: The mandatory HTTP error status codes for the PATCH method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

5.2.19 Resource: GroupPolicyControlData

5.2.19.1 Description

The resource represents the group specific policy control data for a 5G VN group stored at the UDR.

5.2.19.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/policy-data/group-control-data/{intGroupId}

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	Data type	Definition
apiRoot	string	See clause 6.1.1 of 3GPP TS 29.504 [6].
intGroupId	GroupId	Identifies a 5G VN group as defined in clause 5.3.2 of 3GPP TS 29.571 [7].

5.2.19.3 Resource Standard Methods

5.2.19.3.1 GET

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 GET method on this resource

Name	Data type	P	Cardinality	Description
supp-feat	SupportedFeatures	O	0..1	Contains the features supported by the NF service consumer. This query parameter shall be present when feature negotiation needs to take place.

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 GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

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

Data type	P	Cardinality	Response codes	Description
GroupPolicyData	M	1	200 OK	Successful case. The requested group specific policy control data for the targeted 5G VN group shall be returned.
NOTE: The mandatory HTTP error status codes for the HTTP GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] shall also apply.				

5.2.19.3.2 PATCH

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 PATCH method on this resource

Name	Data type	P	Cardinality	Description

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 PATCH Request Body on this resource

Data type	P	Cardinality	Description
GroupPolicyDataPatch	M	1	Modify a group specific policy control data resource for a 5G VN group.

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

Data type	P	Cardinality	Response codes	Description
GroupPolicyData	M	1	200 OK	Successful case. The resource is successfully modified and a representation of the updated resource (i.e., updated group specific policy control data) is returned in the response body.
n/a			204 No Content	Successful case. The resource is successfully modified and no content is returned in the response body.
NOTE: The mandatory HTTP error status codes for the HTTP PATCH method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] shall also apply.				

5.3 Notifications

5.3.1 General

Notifications shall comply with clause 6.2 of 3GPP TS 29.500 [4] and clause 4.6.2.3 of 3GPP TS 29.501 [5].

This clause describes the resources to provide notification to NF service consumers which have subscribed to be notified when policy data is changed.

Table 5.3.1-1: Notifications overview

Notification	Callback URI	HTTP method or custom operation	Description (service operation)
Policy Data Change Notification	{notificationUri}	POST	Used for policy data change notification

5.3.2 Policy Data Change Notification

The POST method shall be used for policy data change notification and the URI shall be provided during the subscription procedure.

Callback URI: {**notificationUri**}

This method shall support the URI query parameters 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				

This method shall support the request data structures specified in table 5.3.2-2 and the response data structures and response codes 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
array(PolicyDataChangeNotification)	M	1..N	Notification of policy data changes.

Table 5.3.2-3: Data structures supported by the POST Response Body

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	The reception of the notification is acknowledged.
NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

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_DataRepository for Policy Data service-based interface protocol.

Table 5.4.1-1: Nudr_DataRepository specific Data Types for Policy Data

Data type	Section defined	Description	Applicability
AmPolicyData	5.4.2.2	Contains the AM policy data for a given subscriber.	
AmPolicyDataPatch	5.4.2.2A	Contains the modifiable AM policy data for a subscriber.	AccessAndMobilityPolicyDataModify
BdtData	5.4.2.9	Contains the background data transfer data.	
BdtDataPatch	5.4.2.27	Contains the modifiable background data transfer data	
BdtPolicyStatus	5.4.3.5	Contains the validation status for a negotiated BDT policy.	
DnnRouteSelectionDescriptor	5.4.2.20	Contains the route selector parameters per DNN.	
ItemPath	5.4.3.2	Represents a fragment of a resource, i.e. a subset of resource data.	ConditionalSubscriptionwithPartialNotification
LimitIdToMonitoringKey	5.4.2.16	Contains the limit identifier and the corresponding monitoring key for a given S-NSSAI and DNN.	
MbsSessPolCtrlData	5.4.2.31	Contains MBS Session Policy Control Data.	
MbsSessPolDataId	5.4.2.32	Represents the identifier used to access the MBS Session Policy Control Data.	
NotificationItem	5.4.2.25	Contains the list of resource fragments included in the notification triggered by the modification of a given resource fragment.	ConditionalSubscriptionwithPartialNotification
OsId	5.4.3.2	Operating System supported by the UE.	
PdtqData	5.4.2.33	Contains the planned data transfer with QoS requirements data.	
PdtqDataPatch	5.4.2.34	Contains the modifiable planned data transfer with QoS requirements data	
Periodicity	5.4.3.4	Indicates a type of time period.	
PlmnRouteSelectionDescriptor	5.4.2.18	Contains the route selectors for a serving PLMN.	
PolicyCounterInfoRm	5.4.2.38	Identifies the policy counter status.	SLAMUP
PolicyDataChangeNotification	5.4.2.11	Contains changed policy data for which notification was requested.	
PolicyDataForIndividualUe	5.4.2.28	Contains policy data sets for a given subscriber.	
PolicyDataSubscription	5.4.2.10	Identifies a subscription to policy data change notification.	
PolicyDataSubset	5.4.3.6	Indicates a policy data subset (e.g. AM policy data, SM policy data).	
ResourceItem	5.4.2.24	Represents list of fragments of a resource, i.e. a list of subsets of resource data monitored for notification of data changes.	ConditionalSubscriptionwithPartialNotification
RestrictedStatus	5.4.2.37	Contains reason for restricted status and the time stamp of when the status was stored.	AbnormalBehaviour
SlicePolicyData	5.4.2.29	Contains network slice specific policy control information for an S-NSSAI.	
SlicePolicyDataPatch	5.4.2.30	Contains modifiable network slice specific policy control information for an S-NSSAI.	
SmPolicyData	5.4.2.5	Contains SM policy data for a subscriber.	
SmPolicyDataPatch	5.4.2.21	Contains modifiable SM policy data for a subscriber.	SessionManagementPolicyDataPatch
SmPolicyDnnData	5.4.2.15	Contains SM policy data for a DNN and S-NSSAI.	
SmPolicyDnnDataPatch	5.4.2.23	Contains modifiable SM policy data for a DNN and S-NSSAI.	SessionManagementPolicyDataPatch
SmPolicySnsaiData	5.4.2.14	Contains SM policy data for an S-NSSAI.	
SmPolicySnsaiDataPatch	5.4.2.22	Contains modifiable SM policy data for an S-NSSAI.	SessionManagementPolicyDataPatch
SnsaiRouteSelectionDescriptor	5.4.2.19	Contains the route selector parameters per SNSSAI.	

SponsorConnectivityData	5.4.2.8	Contains the sponsored data connectivity related information for a sponsor identifier.	
TimePeriod	5.4.2.12	Contains the periodicity for the defined usage monitoring data limits.	
UePolicySetPatch	5.4.2.17	Contains the UE policy data that can be modified by the PCF.	
UePolicySection	5.4.2.3	Contains the UE policy section.	
UePolicySet	5.4.2.4	Contains the UE policy set for a given subscriber.	
UpdatedItem	5.4.2.26	An updated resource fragment, represented by its location in a resource and its data type.	ConditionalSubscriptionwithPartialNotification
UsageMonLevel	5.4.3.3	Indicates the level of the usage monitoring instance (PDU Session level or per Service)	
UsageMonData	5.4.2.7	Contains remain allowed usage data for a subscriber.	
UsageMonDataLimit	5.4.2.6	Contains usage monitoring control data for a subscriber.	
UsageMonDataScope	5.4.2.13	Contains SNSSAI and DNN combinations to which the UsageMonData instance belongs to.	

Table 5.4.1-2 specifies data types re-used by the Nudr_DataRepository for Policy Data 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_DataRepository for Policy Data service based interface.

Table 5.4.1-2: Nudr_DataRepository re-used Data Types for Policy Data

Data type	Reference	Comments	Applicability
5Qi	3GPP TS 29.571 [7]	Indicates the 5G QoS Identifier.	
AltQosParamSet	3GPP TS 29.543 [25]	Represents the alternative QoS parameters set.	
ApplicationId	3GPP TS 29.571 [7]	Contains the application identifier.	
ArpPriorityLevel	3GPP TS 29.571 [7]	Indicates the allocation and retention priority level.	
BdtReferenceld	3GPP TS 29.122 [9]	Indicates the background data transfer reference ID for the transfer policy.	
BitRate	3GPP TS 29.571 [7]	String representing a bit rate that shall be formatted as follows: pattern: "^d+(\.d+)?(bps Kbps Mbps Gbps Tbps)\$" Examples: "125 Mbps", "0.125 Gbps", "125000 Kbps".	
Bytes	3GPP TS 29.571 [7]	String with format "byte" as defined in OpenAPI Specification [3], i.e., base64-encoded characters.	
ChargingInformation	3GPP TS 29.512 [12]	Represents the address(es), and if available, the instance ID and the set ID of the Charging Function.	
DateTime	3GPP TS 29.571 [7]	String with format "date-time" as defined in OpenAPI Specification [3].	
Dnn	3GPP TS 29.571 [7]	Data Network Name. (NOTE)	
ExceptionId	3GPP TS 29.520 [29]	Describes the Exception Id.	AbnormalBehaviour
MbsSessionId	3GPP TS 29.571 [7]	Contains the MBS Session Identifier.	
Metadata	3GPP TS 29.571 [7]	Contains opaque information for the service functions in the N6-LAN that is provided by AF and transparently sent to UPF.	SFC
NetworkAreaInfo	3GPP TS 29.554 [13]	Represents a network area information.	
NfGroupId	3GPP TS 29.571 [7]	The NF group identifier.	CHFGroup
OperatorSpecificDataContainer	3GPP TS 29.505 [15]	Container for operator specific data	
PatchResult	3GPP TS 29.571 [7]		
PatchItem	3GPP TS 29.571 [7]	Data structure used for JSON patch.	
PdtqPolicy	3GPP TS 29.543 [25]	Represents a PDTQ policy.	
PdtqReferenceld	3GPP TS 29.543 [25]	Indicates the planned data transfer with QoS requirements reference ID for the PDTQ policy.	
PduSessionType	3GPP TS 29.571 [7]	PDU Session Type.	
PduSessionInfo	3GPP TS 29.571 [7]	Represents the S-NSSAI and DNN combination for a PDU Session.	MultiPduSessInfo
Pei	3GPP TS 29.571 [7]	Personal Equipment Identifier.	
PendingPolicyCounterStatus	3GPP TS 29.594 [28]	Indicates the pending policy counter status.	SLAMUP
PlmnId	3GPP TS 29.571 [7]	PLMN Identity.	
PresenceInfo	3GPP TS 29.571 [7]	Presence Reporting Area Information.	
PolicyCounterInfo	3GPP TS 29.594 [28]	Identifies the policy counter status.	SLAMUP
ProblemDetails	3GPP TS 29.571 [7]	Used in error responses to provide more detailed information about an error.	
QosParameterSet	3GPP TS 29.543 [25]	Represents the QoS parameters set.	
SliceMbr	3GPP TS 29.571 [7]	Contains the slice Maximum Bit Rate including UL and DL.	NSAC
Snsai	3GPP TS 29.571 [7]	Identifies the S-NSSAI.	
SscMode	3GPP TS 29.571 [7]	SSC mode.	
SupportedFeatures	3GPP TS 29.571 [7]	Used to negotiate the applicability of the optional features	
TimeWindow	3GPP TS 29.122 [9]	Represents a time window	
TraceData	3GPP TS 29.571 [7]	Identifies the trace requirements.	EnhancedUePolicy
TnapId	3GPP TS 29.571 [7]	Trusted Network Access Point identifier.	AfGuideTNAPs
TrafficDescriptor	3GPP TS 29.122 [9]	Identifies the traffic descriptor of the background data.	
TransferPolicy	3GPP TS 29.554 [13]	Represents a transfer policy.	
UInteger	3GPP TS 29.571 [7]	Unsigned Integer, i.e. only value 0 and integers greater than 0 are allowed.	

Uri	3GPP TS 29.571 [7]	String providing an URI.	
UsageThreshold	3GPP TS 29.122 [9]	Usage Thresholds (a data volume expected to be transferred per UE and/or time duration in seconds).	
VarUeld	3GPP TS 29.571 [7]	String represents the SUPI or GPSI.	
NOTE: The UDR uses the DNN as received from the NF service consumer without applying any transformation. To successfully perform DNN matching, in a specific deployment a DNN shall always be encoded either with the full DNN (e.g., because there are multiple Operator Identifiers for a Network Identifier) or the DNN Network Identifier only.			

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 AmPolicyData

Table 5.4.2.2-1: Definition of type AmPolicyData

Attribute name	Data type	P	Cardinality	Description	Applicability
pralnfos	map(PresenceInfo)	O	1..N	Presence reporting area information. Each PresenceInfo element shall include the Presence Reporting Area Identifier within the "prald" attribute and, for a UE-dedicated presence reporting area, shall also include the list of elements composing the presence reporting area. A "prald" may indicate a Presence Reporting Area Set. The "prald" attribute within the PresenceInfo data type shall also be the key of the map. The attribute "presenceState" shall not be present.	
subscCats	array(string)	O	1..N	List of categories associated with the subscriber	
chfInfo	ChargingInformation	O	0..1	Contains the charging address information to support CHF discovery. (NOTE)	CHFInformation
chfGroupId	NfGroupId	O	0..1	Contains the identity of the CHF Group to support CHF discovery.	CHFGroup
subscSpendingLimits	boolean	O	0..1	Indicates whether the PCF must enforce Access and Mobility management related policies based on subscriber spending limits. True: Spending limit control is enabled; False: Spending limit control is not enabled. The absence of this attribute means that spending limit control is not provisioned for the UE.	SLAMUP
spendLimInfo	map(PolicyCounterInfo)	O	1..N	Contains the status of the requested policy counters for UE. The key of the map is the attribute "policyCounterId".	SLAMUP
restrStatus	array(RestrictedStatus)	O	1..N	List of restricted status that contains the reason for the status and the time stamp of when the status was stored.	AbnormalBehaviour
suppFeat	SupportedFeatures	C	0..1	Indicates the list of negotiated supported features. This parameter shall be provided if the NF service consumer has provided a list of supported features in its request.	
NOTE: When the feature "CHFInformation" is supported, the "secondaryChfAddress" may be omitted.					

5.4.2.2A Type AmPolicyDataPatch

Table 5.4.2.2A-1: Definition of type AmPolicyDataPatch

Attribute name	Data type	P	Cardinality	Description	Applicability
restriStatus	array(RestrictedStatus)	O	1..N	List of restricted status that contains the reason for the status and the time stamp of when the status was stored.	AbnormalBehaviour
spendLimInfo	map(PolicyCounterInfoRm)	O	1..N	Contains the updated status of the requested policy counters for UE. The key of the map is the attribute "policyCounterId".	SLAMUP

5.4.2.3 Type UePolicySection

Table 5.4.2.3-1: Definition of type UePolicySection

Attribute name	Data type	P	Cardinality	Description
uePolicySectionInfo	Bytes	M	1	Base64-encoded characters, containing the UE Policy Section Contents for the given UPSI as specified in Figure D.6.2.5 of 3GPP TS 24.501 [11] (see octets d+9 until k of that Figure, i.e. the first character of this attribute represents the first six bits of octet d+9, and so on).
upsi	Upsi	M	1	Identifier for UE Policy Section (UPSI).

5.4.2.4 Type UePolicySet

Table 5.4.2.4-1: Definition of type UePolicySet

Attribute name	Data type	P	Cardinality	Description	Applicability
pralnfos	map(PresencelInfo)	O	1..N	Presence reporting area information. Each PresenceInfo element shall include the Presence Reporting Area Identifier within the "prald" attribute and, for a UE-dedicated presence reporting area, shall also include the list of elements composing the presence reporting area. A "prald" may indicate a Presence Reporting Area Set. The "prald" attribute within the PresenceInfo data type shall also be the key of the map. The attribute "presenceState" shall not be present.	
subscCats	array(string)	O	1..N	List of categories associated with the subscriber	
uePolicySections	map(UePolicySection)	O	1..N	Contains the UE Policy Sections. The UPSI (UE Policy Section Identifier) is used as the key in the map.	
upsis	array(Upsi)	O	1..N	List of identifiers for the "uePolicySections" (list of UPSI(s)).	
allowedRouteSelDescs	map(PlmnRouteSelectionDescriptor)	O	1..N	Contains allowed route selection descriptors per serving PLMN for a UE. The serving PLMN identifier is the key of the map.	
andsplnd	boolean	O	0..1	Indication of UE supporting ANDSP. True: The UE supports ANDSP; False: The UE does not support ANDSP.	
epsUrspInd	boolean	O	0..1	Indication of UE supporting URSP provisioning in EPS. True: The UE supports URSP provisioning in EPS; False: The UE does not support URSP provisioning in EPS.	EpsUrsp
vpsUrspInd	boolean	O	0..1	Indication of UE supporting VPLMN-specific URSP. True: The UE supports VPLMN-specific URSP; False: The UE does not support VPLMN-specific URSP.	VPLMNSpecificURSP
urspEnfInd	boolean	O	0..1	Indication of UE supporting URSP enforcement report. True: The UE supports URSP enforcement report; False: The UE does not support URSP enforcement report.	URSPEnforcement
pei	Pei	O	0..1	Personal Equipment Identifier.	
oslds	array(Osld)	O	1..N	Identification of the UE Operating System(s).	
chfInfo	ChargingInformation	O	0..1	Contains the charging address information to support CHF discovery. (NOTE 2)	CHFInformation
chfGroupId	NfGroupId	O	0..1	Contains the identity of the CHF Group to support CHF discovery.	CHFGroup
subscSpendingLimits	boolean	O	0..1	Indicates whether the PCF must enforce UE policies based on subscriber spending limits. True: Spending limit control is enabled; False: Spending limit control is not enabled. The absence of this attribute means that spending limit control is not provisioned for the UE.	SLAMUP
spendLimInfo	map(PolicyCounterInfo)	O	1..N	Contains the status of the requested policy counters for UE. The key of the map is the attribute "policyCounterId".	SLAMUP
tracingReq	TraceData	O	0..1	Tracing requirements as defined in TS 32.421 [26]	EnhancedUEPolicy

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.	
restrStatus	array(RestrictedStatus)	O	1..N	List of restricted status that contains the reason for the status and the time stamp of when the status was stored.	AbnormalBehaviour
suppFeat	SupportedFeatures	C	0..1	This IE contains a list of supported feature(s) among the ones defined in clause 5.6. This attribute shall be present only when feature negotiation needs to take place. (NOTE 1).	
NOTE 1: In the HTTP request, it represents the set of features supported by the NF service consumer. In the HTTP response, it represents the set of features supported by both the NF service consumer and the UDR.					
NOTE 2: When the feature "CHFInformation" is supported, the "secondaryChfAddress" may be omitted.					

5.4.2.5 Type SmPolicyData

Table 5.4.2.5-1: Definition of type SmPolicyData

Attribute name	Data type	P	Cardinality	Description	Applicability
smPolicySnssaiData	map(SmPolicySnssaiData)	M	1..N	Session Management Policy data per S-NSSAI for all the SNSSAIs of the subscriber. The key of the map is the S-NSSAI. (NOTE 2)	
umDataLimits	map(UsageMonitoringDataLimit)	O	1..N	Contains a list of usage monitoring profiles associated with the subscriber. The limit identifier is used as the key of the map.	
umData	map(UsageMonitoringData)	O	1..N	Contains the remaining allowed usage data associated with the subscriber. The limit identifier is used as the key in the map.	
suppFeat	SupportedFeatures	C	0..1	Indicates the list of negotiated supported features. This parameter shall be supplied by the UDR in the response to the PATCH/GET request when the PATCH/GET request includes the "supp-feat" query parameter and the UDR supports feature negotiation for Session Management Policy Data.	
NOTE 1: In this Release of the specification the "limitId" corresponds to the Monitoring Key.					
NOTE 2: The S-NSSAI value used as key of the map is encoded as a string as defined in 3GPP TS 29.571[7], clause 5.4.4.2.					

5.4.2.6 Type UsageMonDataLimit

Table 5.4.2.6-1: Definition of type UsageMonDataLimit

Attribute name	Data type	P	Cardinality	Description
limitId	string	M	1	Identifies the limit, i.e. the usage monitoring control instance
scopes	map(UsageMonDataScope)	O	1..N	Identifies the SNSSAI and DNN combinations to which the usage monitoring data limit applies. The S-NSSAI is the key of the map. (NOTE 2) If the "scopes" attribute is omitted, the limit applies to every S-NSSAI and DNN.
umLevel	UsageMonLevel	O	0..1	Indicates the level of the usage monitoring instance (PDU Session level or per Service).
startDate	DateTime	C	0..1	Start date and time when the usage monitoring instance applies. It shall be provided when the resetPeriod attribute is provided.
endDate	DateTime	O	0..1	End date and time when the usage monitoring instance applies.
usageLimit	UsageThreshold	O	0..1	Maximum allowed traffic volume/time usage for a usage monitoring instance. If a resetPeriod is specified, this limit applies to every period separately and not for the entire time between the start and end dates. So for example, if the resetPeriod is daily, the usageLimit is applicable for each day until the end date is specified.
resetPeriod	TimePeriod	O	0..1	Time period to reset the remaining allowed usage for a periodic usage monitoring instance (postpaid subscriptions). This attribute along with the startDate determine the actual absolute time at which usage needs to be reset.
NOTE 1: In this Release of the specification the "limitId" attribute is the Monitoring Key, and the "scopes" attribute shall always be present including one distinct SNSSAI and DNN pair.				
NOTE 2: The S-NSSAI value used as key of the map is encoded as a string as defined in 3GPP TS 29.571[7], clause 5.4.4.2.				

5.4.2.7 Type UsageMonData

Table 5.4.2.7-1: Definition of type UsageMonData

Attribute name	Data type	P	Cardinality	Description	Applicability
limitId	string	M	1	Identifies the limit as defined in the "limitId" attribute of the UsageMonDataLimit data type (see clause 5.4.2.6).	
scopes	map(UsageMonDataScope)	O	1..N	Identifies the SNSSAI and DNN combinations to which the remaining usage monitoring data applies. The S-NSSAI is the key of the map. (NOTE 3)	
umLevel	UsageMonLevel	O	0..1	Indicates the level of the usage monitoring instance (PDU Session level or per Service).	
allowedUsage	UsageThreshold	O	0..1	Remaining allowed traffic volume usage and/or resource time usage.	
resetTime	DateTime	O	0..1	Time to reset the allowed usage back to the usageLimit of the corresponding UsageMonDataLimit. This is computed based on the corresponding startDate, resetPeriod and endDate of the corresponding UsageMonDataLimit. The allowedUsage is only applicable if the resetTime is in the future relative to the current time.	
suppFeat	SupportedFeatures	C	0..1	This IE contains a list of supported feature(s) among the ones defined in clause 5.6. This attribute shall be present only when feature negotiation needs to take place. (NOTE 2).	
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.	
NOTE 1: In this Release of the specification the "limitId" attribute is the Monitoring Key, and the "scopes" attribute shall always be present including one distinct SNSSAI and DNN pair.					
NOTE 2: In the HTTP request, it represents the set of features supported by the NF service consumer. In the HTTP response, it represents the set of features supported by both the NF service consumer and the UDR.					
NOTE 3: The S-NSSAI value used as key of the map is encoded as a string as defined in 3GPP TS 29.571 [7], clause 5.4.4.2.					

5.4.2.8 Type SponsorConnectivityData

Table 5.4.2.8-1: Definition of type SponsorConnectivityData

Attribute name	Data type	P	Cardinality	Description
aspIds	array(string)	M	1..N	Identifies a list of Application Service Provider Identifiers associated with the sponsor identity.
suppFeat	SupportedFeatures	C	0..1	Indicates the list of negotiated supported features. This parameter shall be provided if the NF service consumer has provided a list of supported features in its request.

5.4.2.9 Type BdtData

Table 5.4.2.9-1: Definition of type BdtData

Attribute name	Data type	P	Cardinality	Description	Applicability
aspId	string	M	1	This IE contains an identity of an application service provider.	
transPolicy	TransferPolicy	M	1	This IE contains the transfer policy.	
bdtRefId	BdtReferenceld	O	0..1	This IE indicates the background data transfer reference ID for the transfer policy.	
nwAreaInfo	NetworkAreaInfo	O	0..1	This IE represents a network area information.	
numOfUes	UInteger	O	0..1	This IE contains the number of UEs using the indicated transfer policy. It shall be present when available.	
volPerUe	UsageThreshold	O	0..1	This IE contains a data volume expected to be transferred per UE for the indicated transfer policy. It shall be present when available.	
dnn	Dnn	O	0..1	This IE identifies a DNN.	
snssai	Snssai	O	0..1	This IE identifies a slice.	
trafficDes	TrafficDescriptor	O	0..1	Contains the traffic descriptor of the background data.	
bdtPStatus	BdtPolicyStatus	O	0..1	Contains the validation status for a negotiated BDT policy. It shall be included when available. Default value is "VALID" if omitted.	
warnNotifEnabled	boolean	O	0..1	This IE indicates whether the BDT warning notification is enabled or disabled. - "true" indicates that the BDT warning notification is enabled; - "false" (default) indicates that the BDT warning notification is disabled.	
energyInd	boolean	O	0..1	Contains the Energy Indicator that indicates whether the AF is interested in transferring data in time windows that consume lower energy: - "true" indicates the AF is interested in transferring data in time windows that consume lower energy. - "false" (default) indicates the AF is not interested in transferring data in time windows that consume lower energy.	Energy
notifUri	Uri	O	0..1	This IE contains an URI of the recipient of the BDT warning notification.	
supFeat	SupportedFeatures	C	0..1	This IE contains a list of supported feature(s) among the ones defined in clause 5.6. This attribute shall be present only when feature negotiation needs to take place. (NOTE).	
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.	
NOTE: In the HTTP request, it represents the set of features supported by the NF service consumer. In the HTTP response, it represents the set of features supported by both the NF service consumer and the UDR.					

5.4.2.10 Type PolicyDataSubscription

Table 5.4.2.10-1: Definition of type PolicyDataSubscription

Attribute name	Data type	P	Cardinality	Description	Applicability
notificationUri	Uri	M	1	URI provided by the NF service consumer indicating where to receive the subscribed notifications from the UDR.	
notifId	string	C	0..1	Notification Correlation ID assigned by the NF service consumer. It shall be included when the "ConditionalSubscriptionwithPartialNotification" or the "ConditionalSubscriptionWithExcludeNotification" feature is supported.	ConditionalSubscriptionwithPartialNotification ConditionalSubscriptionWithExcludeNotification
monitoredResourceUris	array(Uri)	M	1..N	A set of URIs provided by the NF service consumer that identify the resources as defined in table 5.2.2-1 for which a modification triggers a notification. (NOTE 1)	
monResItems	array(ResourceItem)	O	1..N	A set of monitored resource fragments provided by the NF service consumer. When present, this IE indicates the trigger of the notification is conditioned to the data change occurs in one or more of the attributes contained in a resource fragment as defined by the ResourceItem data type, and that the triggered notification shall only include the resource fragment as defined by the ResourceItem data type. (NOTE 2)	ConditionalSubscriptionwithPartialNotification
excludedResItems	array(ResourceItem)	O	1..N	A set of resource fragments provided by the NF service consumer that are excluded from data change monitoring. When present, this IE indicates the trigger of the notification is conditioned to the data change occurs in any attribute contained in the resource(s) identified by "monitoredResourceUris", except when the changed data is in one or more of the attributes contained in a resource fragment as defined by the ResourceItem data type. (NOTE 2) (NOTE 3) (NOTE 4)	ConditionalSubscriptionWithExcludeNotification
immRep	boolean	O	0..1	If provided by the NF service consumer and set to "true", it indicates to the UDR that existing entries that match this subscription shall be immediately reported within the "immReports" attribute in the response. The default value is false.	ImmediateReportPcc

immReports	array(PolicyDataChangeNotification)	C	1..N	<p>Contains entries stored in the UDR that match this subscription.</p> <p>It shall be included in the POST response body of a subscription creation if the request included the "immRep" attribute set to true and the UDR needs to include an immediate report in the response.</p> <p>It shall be included in the PUT response body of a subscription modification if the UDR needs to include an immediate report in the response and:</p> <ul style="list-style-type: none"> - if the modification request included the "immRep" attribute set to true and it was previously set to false or not provided; - if the modification request added the monitoring of new resources within the "monitoredResourceUris" attribute and/or new monitored resource fragments within the "monResItems" attribute, and the "immRep" attribute was previously set to true; and/or - if the modification request updated the set of excluded resources within the "excludedResItems" attribute and the "immRep" attribute was previously set to true. 	ImmediateReportPcc
expiry	DateTime	C	0..1	<p>This attribute indicates the expiry time of the subscription.</p> <p>In Subscribe request messages this attribute may be included to suggest a time after which the subscription becomes invalid. Absence of this attribute from subscribe request messages indicates that the requested subscription is suggested to be unlimited in time until explicitly terminated by the service consumer.</p> <p>In Subscribe response messages this attribute may be included to confirm a time after which the subscription becomes invalid.</p> <p>The confirmed expiry time should be less than or equal to the suggested expiry time. If the suggested expiry time is present in the request, the confirmed expiry time should not be absent from the response..</p>	
subsid	string	C	0..1	<p>It represents the variable part of the IndividualPolicyDataSubscription resource URI, as specified in clause 5.2.11.2-1. This attribute shall be present if the PolicyDataSubscription is sent in a GET response message to the PolicyDataSubscriptions collection resource.</p> <p>This is a Read Only attribute and shall not be provided by the NF service consumer in any request.</p>	PolSubsRetrieval
supportedFeatures	SupportedFeatures	C	0..1	<p>Used to negotiate the applicability of the optional features.</p> <p>This attribute shall be provided in the POST request and in the response of successful resource creation.</p>	
resetIds	array(string)	O	1..N	<p>This IE uniquely identifies a part of temporary data in UDR that contains the created resource.</p> <p>This attribute may be provided by the UDR in the response of successful resource creation.</p>	

- NOTE 1: Neither the resource URI of the IndividualPolicyDataSubscription resource nor the resource URI of the PolicyDataSubscriptions resource shall be included in the "monitoredResourceUris" attribute.
- NOTE 2: If both ConditionalSubscriptionwithPartialNotification and ConditionalSubscriptionWithExcludeNotification are supported, the fragments defined in "monResItems" attribute and in "excludedResItems" attribute shall refer to different resources defined in "monitoredResourceUris".
- NOTE 3: When "excludedResItems" attribute is included, and a change is detected in the monitored part of a resource (i.e., in those properties not included in the "excludedResItems" attribute), the triggered notification shall include the complete resource representation.
- NOTE 4: The "excludedResItems" attribute may only be used with the OperatorSpecificData resource. E.g. if the OperatorSpecificData resource contains a map with two elements, one with key "operatorSpecificData1" and the other one with key "operatorSpecificData2", to exclude the notification of changes in the "operatorSpecificData1" element the "excludedResItems" attribute will contain the value "/operatorSpecificData1" within the "items" array.

5.4.2.11 Type PolicyDataChangeNotification

Table 5.4.2.11-1: Definition of type PolicyDataChangeNotification

Attribute name	Data type	P	Cardinality	Description	Applicability
amPolicyData	AmPolicyData	O	0..1	Access and Mobility Policy Data, if changed and notification was requested, or if it existed and immediate reporting was requested.	
uePolicySet	UePolicySet	O	0..1	UE Policy Set, if changed and notification was requested, or if it existed and immediate reporting was requested.	
plmnUePolicySet	UePolicySet	O	0..1	PLMN UE Policy Set, if changed and notification was requested, or if it existed and immediate reporting was requested.	
smPolicyData	SmPolicyData	O	0..1	Session Management Policy Data, if changed and notification was requested, or if it existed and immediate reporting was requested.	
usageMonData	UsageMonData	O	0..1	Usage Monitoring Data, if changed and notification was requested, or if it existed and immediate reporting was requested.	
SponsorConnectivityData (NOTE 4)	SponsorConnectivityData	O	0..1	Sponsor data connectivity profile information, if changed and notification was requested, or if it existed and immediate reporting was requested.	
bdtData	BdtData	O	0..1	Background Data Transfer Data, if changed and notification was requested, or if it existed and immediate reporting was requested.	
opSpecData	OperatorSpecificDataContainer	O	0..1	Operator Specific Data, if changed and notification was requested, or if it existed and immediate reporting was requested. It may only be used when the receiver of the notification is able to univocally identify the changed operator specific data. (NOTE 3)	
opSpecDataMap	map(OperatorSpecificDataContainer)	O	1..N	Operator Specific Data resource data, if changed and notification was requested, or if it existed and immediate reporting was requested. The key of the map is operator specific data element name and the value is the operator specific data of the UE.	OpSpecDataMap Notification
ueld	VarUeld	C	0..1	Represents the UE subscription identifier SUPI or GPSI. It shall only be present when the "amPolicyData", "uePolicySet", "smPolicyData", "opSpecData" and/or "usageMonData" attribute is present.	
sponsorId	string	C	0..1	Represents the sponsor identity. It shall only be present when the "sponsorConnectivityData" attribute is present.	
bdtRefId	BdtReferenceId	C	0..1	Represents the BDT reference identifier. It shall only be present when the "bdtData" attribute is present.	
usageMonId	string	C	0..1	Represents the unique identifier of the individual SM Policy usage monitoring resource. It shall only be present when the "usageMonData" attribute is present.	

plmnId	PlmnId	C	0..1	Represents the PLMN identifier. It shall only be present when the "plmnUePolicySet" attribute is present.	
delResources	array(Uri)	O	1..N	The resources, as defined in table 5.2.2-1, if removed from UDR and notification on resource data change was requested. Not applicable for immediate reports. (NOTE 2)	ResourceRemovalNotificationPolicyData
notifId	string	C	0..1	Notification Correlation ID assigned by the NF service consumer. (NOTE 5)	ConditionalSubscriptionwithPartialNotification
reportedFragments	array(NotificationItem)	C	1..N	This attribute contains the resource fragments indicated in the "monResItems" attribute of the PolicyDataSubscription data type. (NOTE 5)	ConditionalSubscriptionwithPartialNotification
slicePolicyData	SlicePolicyData	O	0..1	Network slice specific policy control data for an S-NSSAI, if changed and notification was requested, or if it existed and immediate reporting was requested.	
snsai	Snsai	C	0..1	Represents the S-NSSAI identifier, the unique identifier of the SlicePolicyControlData resource. It shall only be present when the "slicePolicyData" attribute is present.	
pdqtData	PdqtData	O	0..1	Planned Data Transfer with QoS requirements Data, if changed and notification was requested, or if it existed and immediate reporting was requested.	PDTQ
pdqtRefId	PdqtReferenceId	C	0..1	Represents the PDTQ reference identifier. It shall only be present when the "pdqtData" attribute is present.	PDTQ
groupPolicyData	GroupPolicyData	O	0..1	Contains group specific policy control data for a 5G VN group, if changed and notifications were requested, or if it existed and immediate reporting was requested.	GMEC
intGroupId	GroupId	C	0..1	Represents the identifier for the 5G VN group, and the unique identifier of the corresponding GroupPolicyControlData resource. It shall be present only when the "groupPolicyData" attribute is present.	GMEC

NOTE 1: When the "ResourceRemovalNotificationPolicyData" feature and/or "ConditionalSubscriptionwithPartialNotification" feature is not supported or supported but the applicable attribute(s) are not provided, at least one of the "amPolicyData", "uePolicySet", "smPolicyData", "usageMonData", "SponsorConnectivityData", "bdtData", "opSpecData", "plmnUePolicySet" or "slicePolicyData" or "groupPolicyData" shall be present.

NOTE 2: When the "ResourceRemovalNotificationPolicyData" feature is supported, and the "delResources" attribute is present, the attributes that correspond with the values included in the "delResources" attribute shall be omitted. E.g., when the "delResources" attribute includes the value "../policy-data/ues/{ueId}/am-data" the attribute "amPolicyData" shall be omitted.

NOTE 3: This attribute should not be used if the receiver of the notification is not able to univocally identify the changed operator specific data, and "opSpecDataMap" should be used instead.

NOTE 4: The attribute does not follow the related naming convention (i.e. "lowerCamel") defined in clause 5.1.4 of 3GPP TS 29.501 [7]. This attribute is however kept as currently defined in this specification for backward compatibility considerations.

NOTE 5: When the "ConditionalSubscriptionwithPartialNotification" feature is supported, the "notifId" and "reportedFragments" attributes shall be included in notification requests when a data change occurred in the resource fragments indicated in the "monResItems" attribute of the PolicyDataSubscription data type. When the feature "ImmediateReportPcc" is also supported, the "notifId" and "reportedFragments" attributes shall be included in subscription responses when the resource fragments existed when the immediate reporting was requested.

5.4.2.12 Type TimePeriod

Table 5.4.2.12-1: Definition of type TimePeriod

Attribute name	Data type	P	Cardinality	Description	Applicability
period	Periodicity	M	1	Indicates whether the periodicity is "YEARLY", "MONTHLY", "WEEKLY", "DAILY" or "HOURLY".	
maxNumPeriod	UInteger	O	0..1	Indicates the maximum number of periods after which the usage monitoring instance does not apply. If omitted, there is no limit in the number of periods.	

5.4.2.13 Type UsageMonDataScope

Table 5.4.2.13-1: Definition of type UsageMonDataScope

Attribute name	Data type	P	Cardinality	Description	Applicability
snssai	Snssai	M	1	Represents the SNSSAI.	
dnn	array(Dnn)	O	1..N	Represents the Dnn. If omitted, the usage monitoring scope applies to all the DNNs.	

NOTE: In this Release of the specification the "dnn" attribute shall always be present with one and only one entry.

5.4.2.14 Type SmPolicySnssaiData

Table 5.4.2.14-1: Definition of type SmPolicySnssaiData

Attribute name	Data type	P	Cardinality	Description	Applicability
snssai	Snssai	M	1	S-NSSAI associated with the data.	
smPolicyDnnData	map(SmPolicyDnnData)	O	1..N	Session Management Policy data per DNN for all the DNNs of the indicated S-NSSAI. The key of the map is the DNN.	
ueSliceMbr	SliceMbr	O	0..1	Subscribed UE-Slice-MBR for the indicated S-NSSAI.	NSAC

5.4.2.15 Type SmPolicyDnnData

Table 5.4.2.15-1: Definition of type SmPolicyDnnData

Attribute name	Data type	P	Cardinality	Description	Applicability
dnn	Dnn	M	1	DNN associated with the data	
allowedServices	array(string)	O	1..N	List of subscriber's allowed service identifiers	
subscCats	array(string)	O	1..N	List of categories associated with the subscriber	
gbrUl	BitRate	O	0..1	Maximum aggregate UL bitrate that can be provided across all GBR QoS Flows in the DNN	
gbrDl	BitRate	O	0..1	Maximum aggregate DL bitrate that can be provided across all GBR QoS Flows in the DNN	
adcSupport	boolean	O	0..1	Indicates whether application detection and control is enabled for the PDU session. True: Application detection and control is enabled for the PDU session; False: Application detection and control is not enabled for the PDU session. The absence of this attribute means that ADC support is not provisioned for the UE and PDU session.	
subscSpendingLimits	boolean	O	0..1	Indicates whether the PCF must enforce session management related policies based on subscriber spending limits. True: Spending limit control is enabled; False: Spending limit control is not enabled. The absence of this attribute means that spending limit control is not provisioned for the UE and PDU session.	
spendLimInfo	map(PolicyCounterInfo)	O	1..N	Contains the status of the requested policy counters for the PDU session. The key of the map is the attribute "policyCounterId".	SLAMUP
ipv4Index	IpIndex	O	0..1	Information that identifies which IP pool or external server is used to allocate the IPv4 address.	
ipv6Index	IpIndex	O	0..1	Information that identifies which IP pool or external server is used to allocate the IPv6 address.	
offline	boolean	O	0..1	Indicates whether the offline charging is applicable to the PDU session. True: Offline charging is applicable to the PDU session; False: Offline charging is not applicable to the PDU session. The absence of this attribute means that the charging method is not provisioned for the UE and PDU session.	
online	boolean	O	0..1	Indicates whether the online charging is applicable to the PDU session. True: Online charging is applicable to the PDU session; False: Online charging is not applicable to the PDU session. The absence of this attribute means that the charging method is not provisioned for the UE and PDU session.	
chfInfo	ChargingInformation	O	0..1	Contains the charging address information to support CHF discovery. (NOTE)	
chfGroupId	NfGroupId	O	0..1	Contains the identity of the CHF Group to support CHF discovery.	CHFGroup
refUmDataLimitIds	map(LimitIdToMonitoringKey)	O	1..N	A reference to the "UsageMonDataLimit" or "UsageMonData" instances for this DNN and SNSSAI that may also include the related monitoring key(s). The key of the map is the limit identifier.	

mpsPriority	boolean	O	0..1	True: Indicates subscription to the MPS priority service; priority applies to all traffic on the PDU Session. False: MPS priority service is not subscribed. The absence of this attribute means that MPS priority is not provisioned for the UE and PDU session.	
mcsPriority	boolean	O	0..1	True: Indicates subscription to the MCS priority service; priority applies to all traffic on the PDU Session. False: IMS signalling priority service is not subscribed. The absence of this attribute means that IMS signalling priority is not provisioned for the UE and PDU session.	
imsSignallingPrio	boolean	O	0..1	True: Indicates subscription to the IMS signalling priority service; priority only applies to IMS signalling traffic. False: IMS signalling priority service is not subscribed. The absence of this attribute means that IMS signalling priority is not provisioned for the UE and PDU session.	
mpsPriorityLevel	integer	O	0..1	Relative priority level for the multimedia priority services	
mcsPriorityLevel	integer	O	0..1	Relative priority level for the mission critical services	
pralnfos	map(PresenceInfo)	O	1..N	Presence reporting area information. Each PresenceInfo element shall include the Presence Reporting Area Identifier within the "prald" attribute and, for a UE-dedicated presence reporting area, shall also include the list of elements composing the presence reporting area. A "prald" may indicate a Presence Reporting Area Set. The "prald" attribute within the PresenceInfo data type shall also be the key of the map. The attribute "presenceState" shall not be present.	
bdtRefIds	map(BdtReferenceIdRm)	O	1..N	Identifies transfer policies of background data transfer. Any string value can be used as a key of the map.	EnhancedBackgroundData Transfer
locRoutNotAllowed	boolean	O	0..1	Identifies whether AF influence on traffic routing is allowed or not. True: if no local routing is allowed; False: local routing is allowed. The absence of this attribute means that AF influence on traffic routing is not provisioned for the UE and PDU session.	
sfcNotAllowed	boolean	O	0..1	Identifies whether AF influence on Service Function Chaining is allowed or not. True: if no AF influence on Service Function Chaining is allowed; False: AF influence on Service Function Chaining allowed. The absence of this attribute means that AF influence on Service Function Chaining is not provisioned for the UE and PDU session.	SFC
tnaps	array(TnapId)	O	1..N	Contains the TNAP ID(s) collocated with the 5G-RG(s) of a specific user.	AfGuideTNAPs
restrStatus	array(RestrictedStatus)	O	1..N	List of restricted status that contains the reason for the status and the time stamp of when the status was stored.	AbnormalBehaviour

headerNotAllowed	boolean	O	0..1	Identifies whether AF influence on handling of payload headers is allowed or not. True: if no AF influence on handling of payload header is allowed; False: AF influence handling of payload header is allowed. The absence of this attribute means that AF influence on handling on payload headers is not provisioned for the UE and PDU session.	HeaderHandling
NOTE: When the feature "CHFsetSupport" is supported, the "secondaryChfAddress" may be omitted (see 3GPP TS 29.512 [12], clause 4.2.2.3.1).					

5.4.2.16 Type LimitIdToMonitoringKey

Table 5.4.2.16-1: Definition of type LimitIdToMonitoringKey

Attribute name	Data type	P	Cardinality	Description	Applicability
limitId	string	M	1	Limit Identifier.	
monkey	array(string)	O	1..N	Monitoring Keys.	
NOTE: In this Release of the specification there is only one Monitoring Key per Limit Identifier					

5.4.2.17 Type UePolicySetPatch

Table 5.4.2.17-1: Definiton of type UePolicySetPatch

Attribute name	Data type	P	Cardinality	Description	Applicability
uePolicySections	map(UePolicySection)	O	1..N	Contains the updated UE Policy Sections. The UPSI (UE Policy Section Identifier) is used as the key in the map.	
upsis	array(Upsi)	O	1..N	List of identifiers for the "uePolicySections" (list of UPSI(s)).	
andspInd	boolean	O	0..1	Indication of UE supporting ANDSP.	
epsUrspInd	boolean	O	0..1	Indication of UE supporting URSP provisioning in EPS. True: The UE supports URSP provisioning in EPS; False: The UE does not support URSP provisioning in EPS.	EpsUrsp
vpsUrspInd	boolean	O	0..1	Indication of UE supporting VPLMN-specific URSP. True: The UE supports VPLMN-specific URSP; False: The UE does not support VPLMN-specific URSP.	VPLMNSpecificURSP
urspEnfInd	boolean	O	0..1	Indication of UE supporting URSP enforcement report. True: The UE supports URSP enforcement report; False: The UE does not support URSP enforcement report.	URSPEnforcement
pei	Pei	O	0..1	Personal Equipment Identifier.	
oslds	array(Osld)	O	1..N	Identification of the UE Operating System(s).	
restriStatus	array(RestrictedStatus)	O	1..N	List of restricted status that contains the reason for the status and the time stamp of when the status was stored.	AbnormalBehaviour
spendLimInfo	map(PolicyCounterInfoRm)	O	1..N	Contains the updated status of the requested policy counters for UE. The key of the map is the attribute "policyCounterId".	SLAMUP

5.4.2.18 Type PlmnRouteSelectionDescriptor

Table 5.4.2.18-1: Definition of type PlmnRouteSelectionDescriptor

Attribute name	Data type	P	Cardinality	Description
servingPlmn	PlmnId	M	1	Identity of the serving PLMN.
snssaiRouteSelDescs	array(SnssaiRouteSelectionDescriptor)	O	1..N	Contains the route selection descriptor parameters per SNSSAI.

5.4.2.19 Type SnssaiRouteSelectionDescriptor

Table 5.4.2.19-1: Definition of type SnssaiRouteSelectionDescriptor

Attribute name	Data type	P	Cardinality	Description
snssai	Snssai	M	1	SNSSAI.
dnnRouteSelDescs	array(DnnRouteSelectionDescriptor)	O	1..N	Contains the route selection descriptor parameters per DNN.

5.4.2.20 Type DnnRouteSelectionDescriptor

Table 5.4.2.20-1: Definition of type DnnRouteSelectionDescriptor

Attribute name	Data type	P	Cardinality	Description	Applicability
dnn	Dnn	M	1	DNN.	
sscModes	array(SscMode)	O	1..N	Contains the allowed SSC modes for the traffic to this DNN.	
pduSessTypes	array(PduSessionType)	O	1..N	Contains the allowed PDU Session types for the traffic to this DNN.	
atsssInfo	boolean	O	0..1	Indicates whether MA PDU session establishment is allowed for this DNN. True: MA PDU session establishment is allowed for this DNN. False: MA PDU session establishment is not allowed for this DNN. The absence of this attribute means that the ATSSS information is not provisioned for the UE and PDU session.	
lboRoamAllowed	boolean	O	0..1	Indicates whether local breakout for the DNN and S-NSSAI is allowed when roaming. true: allowed false: not allowed. If the attribute is absent it means not allowed.	VPLMNSpecificURSP

5.4.2.21 Type SmPolicyDataPatch

Table 5.4.2.21-1: Definition of type SmPolicyDataPatch

Attribute name	Data type	P	Cardinality	Description	Applicability
umData	map(UsageMonData)	O	1..N	Contains the remaining allowed usage data associated with the subscriber. The value of the limit identifier is used as the key in the map.	
smPolicySnssaiData	map(SmPolicySnssaiDataPatch)	O	1..N	Modifiable Session Management Policy data per S-NSSAI for all the SNSSAIs of the subscriber. The key of the map is the S-NSSAI. (NOTE 2)	
NOTE 1: In this Release of the specification the "limitId" corresponds to the Monitoring Key.					
NOTE 2: The S-NSSAI value used as key of the map is encoded as a string as defined in 3GPP TS 29.571[7], clause 5.4.4.2.					

5.4.2.22 Type SmPolicySnssaiDataPatch

Table 5.4.2.22-1: Definition of type SmPolicySnssaiDataPatch

Attribute name	Data type	P	Cardinality	Description	Applicability
snssai	Snssai	M	1	S-NSSAI associated with the data.	
smPolicyDnnData	map(SmPolicyDnnDataPatch)	O	1..N	Modifiable Session Management Policy data per DNN for all the DNNs of the indicated S-NSSAI. The key of the map is the DNN.	

5.4.2.23 Type SmPolicyDnnDataPatch

Table 5.4.2.23-1: Definition of type SmPolicyDnnDataPatch

Attribute name	Data type	P	Cardinality	Description	Applicability
dnn	Dnn	M	1	DNN associated with the data	
bdtRefIds	map(BdtReferenceIdRm)	O	1..N	Updated transfer policies of background data transfer. Any string value can be used as a key of the map.	EnhancedBackgroundDataTransfer
restrlStatus	array(RestrictedStatus)	O	1..N	List of restricted status that contains the reason for the status and the time stamp of when the status was stored.	AbnormalBehaviour
spendLimInfo	map(PolicyCounterInfoRm)	O	1..N	Updated the status of the requested policy counters for the PDU session. The key of the map is the attribute "policyCounterId"	SLAMUP

5.4.2.24 Type ResourceItem

Table 5.4.2.24-1: Definition of type ResourceItem

Attribute name	Data type	P	Cardinality	Description	Applicability
monResourceUri	Uri	M	1	Represents the URI that identifies the monitored resource as defined in table 5.2.2-1. (NOTE)	
items	array(ItemPath)	M	1..N	Represents fragments of the resource identified by the "monResourceUri" attribute, i.e. a subset of resource data, for which a modification triggers a notification.	
NOTE: The resource URI included in the "monResourceUri" attribute shall be one of the resource URIs included in the "monitoredResourceUris" attribute of the PolicyDataSubscription data type.					

5.4.2.25 Type NotificationItem

Table 5.4.2.25-1: Definition of type NotificationItem

Attribute name	Data type	P	Cardinality	Description	Applicability
resourceId	Uri	M	1	This IE contains the URI of the resource which has been changed.	
notificationItems	array(UpdatedItem)	M	1..N	This IE contains the fragments of the resource identified by the "resourceId" attribute which have been updated or requested to be notified.	

5.4.2.26 Type UpdatedItem

Table 5.4.2.26-1: Definition of type UpdatedItem

Attribute name	Data type	P	Cardinality	Description	Applicability
item	ItemPath	M	1	This IE contains a JSON pointer value (as defined in IETF RFC 6901 [20]) that references a target location within the resource that identifies the resource fragment.	
value	Any type	M	1	This IE indicates the value of the resource fragment located at the target location within the resource specified in the "item" attribute. The data type of this attribute shall be the same as the type of the attribute or element located in the path. The null value shall be allowed.	

5.4.2.27 Type BdtDataPatch

Table 5.4.2.27-1: Definition of type BdtDataPatch

Attribute name	Data type	P	Cardinality	Description	Applicability
bdtStatus	BdtPolicyStatus	O	0..1	Contains the validation status for a negotiated BDT policy. It shall be included when the BDT policy is re-negotiated.	
transPolicy	TransferPolicy	O	0..1	This attribute contains the transfer policy.	
warnNotifEnabled	boolean	O	0..1	This attribute indicates whether the BDT warning notification is enabled or disabled. - "true" indicates that the BDT warning notification is enabled. - "false" indicates that the BDT warning notification is disabled.	
notifUri	Uri	O	0..1	Contains the notification URI for BDT.	BdtNotifUriPatch
energyInd	boolean	O	0..1	Contains the Energy Indicator that indicates whether the AF is interested in transferring data in time windows that consume lower energy: - "true" indicates that the AF is interested in transferring data in time windows that consume lower energy. - "false" indicates that the AF is not interested in transferring data in time windows that consume lower energy.	Energy

5.4.2.28 Type PolicyDataForIndividualUe

Table 5.4.2.28-1: Definition of type PolicyDataForIndividualUe

Attribute name	Data type	P	Cardinality	Description	Applicability
uePolicyDataSet	UePolicySet	O	0..1	The IE contains UE policies.	
smPolicyDataSet	SmPolicyData	O	0..1	The IE contains SM policies.	
amPolicyDataSet	AmPolicyData	O	0..1	The IE contains AM policies.	
umData	map(UsageMonData)	C	1..N	The IE contains UM policies. The value of the limit identifier is used as the key of the map. (NOTE)	
operatorSpecificDataSet	map(OperatorSpecificDataContainer)	O	1..N	The IE contains operator specific data. The key of the map is operator specific data element name and the value is the operator specific data of the UE.	
suppFeat	SupportedFeatures	C	0..1	Indicates the list of negotiated supported features. This parameter shall be provided if the NF service consumer has provided a list of supported features in its request.	
NOTE: The "umData" attribute shall be absent when the smPolicyDataSet attribute is present and includes the "umData" attribute.					

5.4.2.29 Type SlicePolicyData

Table 5.4.2.29-1: Definition of type SlicePolicyData

Attribute name	Data type	P	Cardinality	Description	Applicability
mbrUI	BitRate	O	0..1	Maximum aggregate UL data rate that can be provided across all GBR and Non-GBR QoS Flows in the S-NSSAI. (NOTE 1)	
mbrDI	BitRate	O	0..1	Maximum aggregate DL data rate that can be provided across all GBR and Non-GBR QoS Flows in the S-NSSAI. (NOTE 1)	
remainMbrUI	BitRate	O	0..1	The remaining maximum aggregate UL data rate that can be provided across all GBR and Non-GBR QoS Flows in the S-NSSAI. (NOTE 2) It is set to the maximum allowed aggregate UL data rate across all GBR and Non-GBR QoS Flows in the S-NSSAI when the system is initially configured based on operator policies.	
remainMbrDI	BitRate	O	0..1	The remaining maximum aggregate DL data rate that can be provided across all GBR and Non-GBR QoS Flows in the S-NSSAI. (NOTE 2) It is set to the maximum allowed aggregate DL data rate across all GBR and Non-GBR QoS Flows in the S-NSSAI when the system is initially configured based on operator policies.	
suppFeat	SupportedFeatures	C	0..1	Indicates the list of negotiated supported features. It shall be provided in the HTTP GET response if the "supp-feat" attribute query parameter is included in the HTTP GET request.	
NOTE 1: The "mbrUI" and "mbrDI" attributes are only used for limiting data rate per network slice with assistance of the NWDAF.					
NOTE 2: The "remainMbrUI" and "remainMbrDI" attributes are only used for limiting data rate per network slice with PCF based monitoring.					

5.4.2.30 Type SlicePolicyDataPatch

Table 5.4.2.30-1: Definition of type SlicePolicyDataPatch

Attribute name	Data type	P	Cardinality	Description	Applicability
remainMbrUI	BitRate	O	0..1	The remaining maximum aggregate UL bitrate that can be provided across all GBR and Non-GBR QoS Flows in the S-NSSAI.	
remainMbrDI	BitRate	O	0..1	The remaining maximum aggregate DL bitrate that can be provided across all GBR and Non-GBR QoS Flows in the S-NSSAI.	
NOTE: At least one of the attributes shall be included.					

5.4.2.31 Type MbsSessPolCtrlData

Table 5.4.2.31-1: Definition of type MbsSessPolCtrlData

Attribute name	Data type	P	Cardinality	Description	Applicability
5qis	array(5Qi)	O	1..N	Contains the list of allowed 5QI(s) for an MBS PCC rule of the MBS Session.	
maxMbsArpLevel	ArpPriorityLevel	O	0..1	Contains the highest ARP level value allowed for any MBS PCC rule of the MBS Session.	
maxMbsSessionAmbr	BitRate	O	0..1	Contains the maximum MBS Session-AMBR for all non-GBR QoS flows of an MBS session in the downlink.	
maxGbr	BitRate	O	0..1	Contains the maximum aggregated bitrate that can be provided across all the GBR QoS Flows for an MBS session in the downlink.	
suppFeat	SupportedFeatures	C	0..1	Indicates the list of negotiated supported features. This parameter shall be provided if feature negotiation needs to take place.	

5.4.2.32 Type MbsSessPolDataId

Table 5.4.2.32-1: Definition of type MbsSessPolDataId

Attribute name	Data type	P	Cardinality	Description	Applicability
mbsSessionId	MbsSessionId	C	0..1	Contains the source specific multicast address used as MBS session identifier. (NOTE)	
afAppld	string	C	0..1	Contains the AF application identifier. (NOTE)	
NOTE: Either the "mbsSessionId" attribute or the "afAppld" attribute shall be provided.					

5.4.2.33 Type PdtqData

Table 5.4.2.33-1: Definition of type PdtqData

Attribute name	Data type	P	Cardinality	Description
aspld	string	M	1	This IE contains an identity of an application service provider.
pdqtPolicy	PdtqPolicy	M	1	This IE contains the PDTQ policy.
appld	ApplicationId	O	0..1	This IE contains an application identifier.
pdqtRefId	PdtqReferenceld	O	0..1	This IE indicates the PDTQ reference ID for the PDTQ policy.
nwAreaInfo	NetworkAreaInfo	O	0..1	This IE represents a network area information.
numOfUes	UInteger	O	0..1	This IE contains the number of UEs using the indicated PDTQ policy. It shall be present when available.
desTimeInts	array(TimeWindow)	O	1..N	This IE contains a list of desired time windows for PDTQ.
dnn	Dnn	O	0..1	This IE identifies a DNN.
snssai	Snssai	O	0..1	This IE identifies a slice.
qosParamSet	QosParameterSet	C	0..1	Contains the requested QoS requirements expressed as one or more individual QoS parameters. (NOTE 3, NOTE 4)
qosReference	string	C	0..1	Contains the requested QoS requirements expressed as the QoS Reference which represents a pre-defined QoS information. (NOTE 2, NOTE 4)
altQosParamSets	array(AltQosParameterSet)	O	1..N	Contains the alternative QoS requirements expressed as the list of individual QoS parameter sets in a prioritized order. The lower the index of the array for a given entry, the higher the priority. (NOTE 3)
altQosRefs	array(string)	O	1..N	Contains the alternative QoS requirements expressed as the list of QoS References in a prioritized order. The lower the index of the array for a given entry, the higher the priority. (NOTE 2)
notifUri	Uri	O	0..1	This IE contains an URI of the recipient of the PDTQ warning notification.
warnNotifEnabled	boolean	O	0..1	This IE indicates whether the PDTQ warning notification is enabled or disabled. true: enabled; false: disabled (default).
supFeat	SupportedFeatures	C	0..1	This IE contains a list of supported feature(s) among the ones defined in clause 5.6. This attribute shall be present only when feature negotiation needs to take place. (NOTE 1).
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.

NOTE 1: In the HTTP request, it represents the set of features supported by the NF service consumer. In the HTTP response, it represents the set of features supported by both the NF service consumer and the UDR.

NOTE 2: The "altQosRefs" attribute may be included only if the "qosReference" attribute is included.

NOTE 3: The "altQosParamSets" attribute may be included only if the "qosParamSet" attribute is included.

NOTE 4: Either the "qosReference" attribute or the "qosParamSet" attribute shall be included.

5.4.2.34 Type PdtqDataPatch

Table 5.4.2.34-1: Definition of type PdtqDataPatch

Attribute name	Data type	P	Cardinality	Description
pdqPolicy	PdtqPolicy	O	0..1	This IE contains the PDTQ policy.
warnNotifEnabled	boolean	O	0..1	This IE indicates whether the PDTQ warning notification is enabled or disabled. true: enabled; false: disabled
notifUri	Uri	O	0..1	This IE contains an URI of the recipient of the PDTQ warning notification.

5.4.2.35 Type GroupPolicyData

Table 5.4.2.35-1: Definition of type GroupPolicyData

Attribute name	Data type	P	Cardinality	Description	Applicability
maxGroupMbrUL	BitRate	O	0..1	Contains the maximum aggregate UL data rate that can be provided across all GBR and Non-GBR QoS Flows in the 5G VN group. (NOTE)	
maxGroupMbrDL	BitRate	O	0..1	Contains the maximum aggregate DL data rate that can be provided across all GBR and Non-GBR QoS Flows in the 5G VN group. (NOTE)	
remainGroupMbrUL	BitRate	O	0..1	Contains the remaining maximum aggregate UL data rate that can be provided across all GBR and Non-GBR QoS Flows in the 5G VN group. (NOTE)	
remainGroupMbrDL	BitRate	O	0..1	Contains the remaining maximum aggregate DL data rate that can be provided across all GBR and Non-GBR QoS Flows in the 5G VN group. (NOTE)	
supFeat	SupportedFeatures	C	0..1	Contains the list of negotiated supported features. This attribute shall be present only when feature negotiation needs to take place.	
NOTE: The initial value of these attributes shall be set based on the Maximum Group Data Rate information and/or operator policies.					

5.4.2.36 Type GroupPolicyDataPatch

Table 5.4.2.36-1: Definition of type GroupPolicyDataPatch

Attribute name	Data type	P	Cardinality	Description	Applicability
maxGroupMbrUl	BitRate	O	0..1	Contains the updated maximum aggregate UL data rate that can be provided across all GBR and Non-GBR QoS Flows in the 5G VN group. (NOTE)	
maxGroupMbrDl	BitRate	O	0..1	Contains the updated maximum aggregate DL data rate that can be provided across all GBR and Non-GBR QoS Flows in the 5G VN group. (NOTE)	
remainGroupMbrUl	BitRate	O	0..1	Contains the updated remaining maximum aggregate UL data rate that can be provided across all GBR and Non-GBR QoS Flows of the 5G VN group. (NOTE)	
remainGroupMbrDl	BitRate	O	0..1	Contains the updated remaining maximum aggregate DL data rate that can be provided across all GBR and Non-GBR QoS Flows of the 5G VN group. (NOTE)	

NOTE: At least one of these attributes shall be present.

5.4.2.37 Type RestrictedStatus

Table 5.4.2.37-1: Definiton of type RestrictedStatus

Attribute name	Data type	P	Cardinality	Description	Applicability
exceptionId	ExceptionId	M	1	Indicating the Exception ID.	
timeStamp	DateTime	M	1	Time stamp when the status was stored.	

5.4.2.38 Type PolicyCounterInfoRm

Table 5.4.2.38-1: Definition of type PolicyCounterInfoRm

Attribute name	Data type	P	Cardinality	Description	Applicability
currentStatus	string	O	0..1	Identifies the policy counter status applicable for a specific policy counter identified by the policyCounterId. The values (e.g. valid, invalid or any other status) are not specified. The interpretation and actions related to the defined values are out of scope of 3GPP.	
penPolCounterStatuses	array(PendingPolicyCounterStatus)	O	1..N	Provides the pending policy counter status.	

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	Applicability
BdtReferenceIdRm	string	This data type is defined in the same way as the "BdtReferenceId" data type defined in 3GPP TS 29.122 [9], but with the "nullable: true" property.	EnhancedBackgroundDataTransfer
IpIndex	integer	Information that identifies which IP pool or external server is used to allocate the IP address.	
ItemPath	string	It contains one JSON pointer value (as defined in IETF RFC 6901 [20]) that references a target location within the resource. E.g. "/smPolicySnssaiData/<snssai>" represents the subscription to data changes in the SmPolicyData data document, in particular to the element of the "smPolicySnssaiData" map whose key is identified by the <snssai> value. E.g. 2 "/smPolicySnssaiData/<snssai>/smPolicyDnnData/<dnn>" represents the subscription to data changes in the SmPolicyData data document, in particular to the element of the "smPolicySnssaiData" map whose key is identified by the <snssai> value and, within this one, to the element of the "smPolicyDnnData" map whose key is identified by the <dnn> value. (NOTE)	ConditionalSubscriptionwithPartialNotification
OsId	string	Operating System of the served UE. It contains a Universally Unique Identifier (UUID) as specified in IETF RFC 9562 [17]. The format of the OS Id is represented in 3GPP TS 24.501 [11].	
Upsi	Bytes	Base64-encoded characters, containing an identifier of a UE Policy Section (UPSI) as defined in clause D.1.1 of 3GPP TS 24.501 [11], i.e. a Base64 representation of the 3 octets that contain the MCC and MNC as defined in Figure D.6.2.3 of 3GPP TS 24.501 [11] followed by the UPSC as defined in Figure D.6.2.5 of 3GPP TS 24.501 [11].	
NOTE: The S-NSSAI value used as key of the map is encoded as a string as defined in 3GPP TS 29.571[7], clause 5.4.4.2.			

5.4.3.3 Enumeration: UsageMonLevel

The enumeration represents the usage monitoring level. It shall comply with the provisions defined in table 5.4.3.3-1.

Table 5.4.3.3-1: Enumeration UsageMonLevel

Enumeration value	Description
SESSION_LEVEL	The usage monitoring is applicable for PDU session level.
SERVICE_LEVEL	The usage monitoring is applicable for service level.

5.4.3.4 Enumeration: Periodicity

The enumeration represents the time period. It shall comply with the provisions defined in table 5.4.3.4-1.

Table 5.4.3.4-1: Enumeration Periodicity

Enumeration value	Description
YEARLY	Time period is yearly
MONTHLY	Time period is monthly
WEEKLY	Time period is weekly
DAILY	Time period is daily
HOURLY	Time period is hourly

5.4.3.5 Enumeration: BdtPolicyStatus

The enumeration represents the validation status of the BDT policy. It shall comply with the provisions defined in table 5.4.3.5-1.

Table 5.4.3.5-1: Enumeration BdtPolicyStatus

Enumeration value	Description
INVALID	This value is used to indicate that the BDT policy is invalid while the BDT policy re-negotiation is ongoing because the network performance has degraded.
VALID	This value is used to indicate that the BDT policy is valid.

5.4.3.6 Enumeration: PolicyDataSubset

This enumeration indicates the policy data subsets (e.g. AM policy data, SM policy data, etc.). It shall comply with the provisions of table 5.4.3.6-1.

Table 5.4.3.6-1: Enumeration PolicyDataSubset

Enumeration value	Description
AM_POLICY_DATA	AM policy data.
SM_POLICY_DATA	SM policy data.
UE_POLICY_DATA	UE policy data.
UM_DATA	Usage Monitoring data.
OPERATOR_SPECIFIC_DATA	Operator specific data.

5.4.3.7 void

5.5 Error handling

5.5.1 General

For the Nudr_DataRepository service API for Policy Data, HTTP error responses shall be supported as specified in clause 4.8 of 3GPP TS 29.501 [5]. Protocol errors and application errors specified in table 5.2.7.2-1 of 3GPP TS 29.500 [4] shall be supported for an HTTP method if the corresponding HTTP status codes are specified as mandatory for that HTTP method in table 5.2.7.1-1 of 3GPP TS 29.500 [4].

In addition, the requirements in the following clauses are applicable for the Nudr_DataRepository service API for Policy Data.

5.5.2 Protocol Errors

No specific procedures for the Nudr_DataRepository service API for Policy Data are specified.

5.5.3 Application Errors

The application errors defined for the Nudr_DataRepository service API for Policy Data are listed in table 5.5.3-1.

Table 5.5.3-1: Application errors

Application Error	HTTP status code	Description
NOTE: Including a "ProblemDetails" data structure with the "cause" attribute in the HTTP response is optional unless explicitly mandated by other clauses in this document.		

The application error handling shall follow 3GPP TS 29.504 [6] 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 [6] 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 [4].

6 Usage of Nudr_DataRepository Service API for Application Data

6.1 Introduction

The following clauses specify the usage of Nudr_DataRepository service for application data. The principles specified in 3GPP TS 29.504 [6] are followed unless explicitly specified otherwise in the following clauses.

6.2 Resources

6.2.1 Overview

This clause specifies the resources for the usage of the Unified Data Repository service for Application Data.

6.2.2 Resource Structure

This clause describes the structure for the Resource URIs and the resources and methods used for the service.

Figure 6.2.2-1 depicts the resource URIs structure for the Nudr_DataRepository API for application data

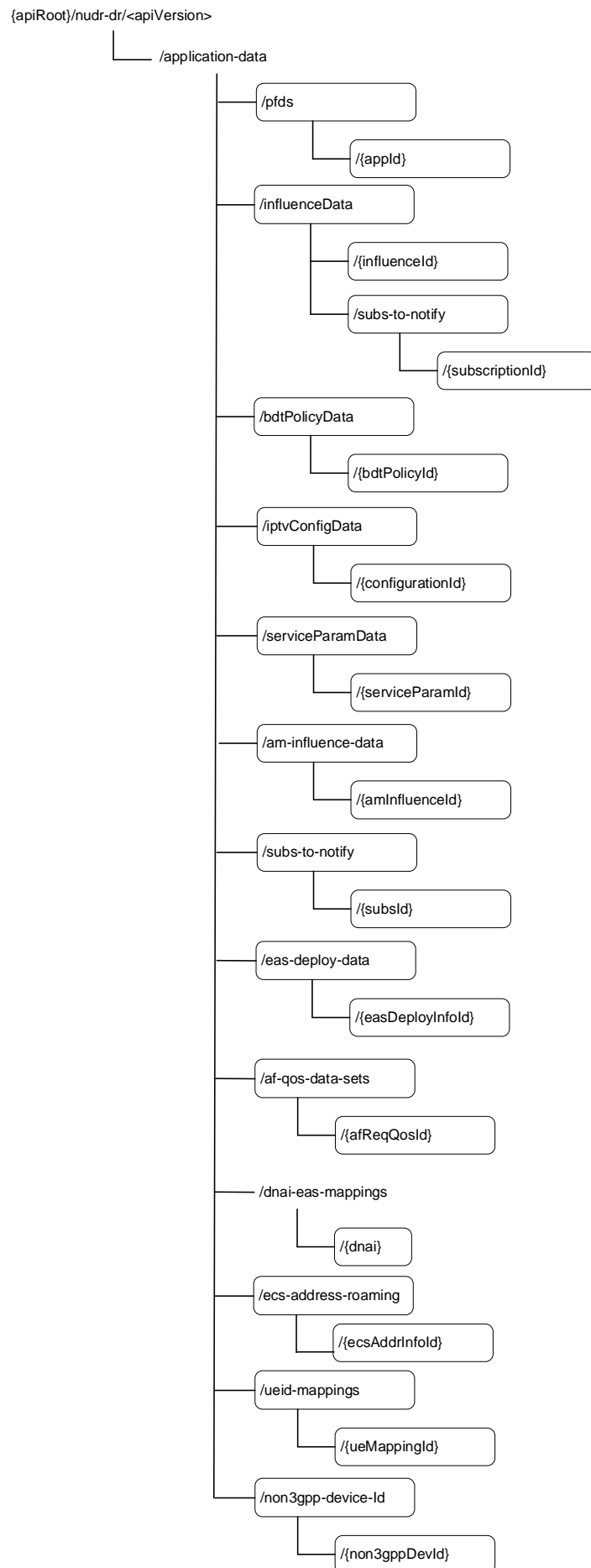


Figure 6.2.2-1: Resource URI structure of the Nudr_DataRepository API for application data

Table 6.2.2-1 provides an overview of the resources and applicable HTTP methods.

Table 6.2.2-1: Resources and methods overview

Resource name	Resource URI	HTTP method or custom operation	Description
PFD Data	/application-data/pfds	GET	Retrieve PFDs for application identifier(s) identified by query parameter(s). Retrieve PFDs for all application identifier(s) if no query parameter is included in the Request URI.
Individual PFD Data	/application-data/pfds/{appld}	GET	Retrieve the corresponding PFDs of the specified application identifier.
		DELETE	Delete the corresponding PFDs of the specified application identifier.
		PUT	Create or update the corresponding PFDs for the specified application identifier.
Influence Data	/application-data/influenceData (NOTE 1)	GET	Retrieve the Session Influence Data of given services, S-NSSAIs and DNNs or Internal Group Identifier(s) or Subscriber Category(ies) or SUPIs.
Individual Influence Data	/application-data/influenceData/{influenceld} (NOTE 1)	PUT	Create an individual Influence Data resource identified by {influenceld}, or modify all of the properties of an individual Influence Data resource identified by {influenceld}.
		PATCH	Modify part of the properties of an individual Influence Data resource identified by {influenceld}.
		DELETE	Delete an individual Influence Data resource identified by {influenceld}.
Influence Data Subscription	/application-data/influenceData/subs-to-notify (NOTE 1)	POST	Create a new Individual Influence Data Subscription resource.
		GET	Read subscriptions for a given S-NSSAI and DNN or Internal Group Identifier(s) or Subscriber Category(ies) or SUPI.
Individual Influence Data Subscription	/application-data/influenceData/subs-to-notify/{subscriptionId} (NOTE 1)	GET	Get an existing individual Influence Data Subscription resource identified by {subscriptionId}.
		PUT	Modify an existing individual Influence Data Subscription resource identified by {subscriptionId}.
		DELETE	Delete an individual Influence Data Subscription resource identified by {subscriptionId}.
Applied BDT Policy Data	/application-data/bdtPolicyData (NOTE 1)	GET	Retrieve the applied BDT policy data.
Individual Applied BDT Policy Data	/application-data/bdtPolicyData/{bdtPolicyId} (NOTE 1)	PUT	Create an individual applied BDT Policy Data resource identified by {bdtPolicyId}.
		PATCH	Modify BDT Reference Id of an individual applied BDT Policy Data resource identified by {bdtPolicyId}.
		DELETE	Delete an individual applied BDT Policy Data resource identified by {bdtPolicyId}.
IPTV Configurations	/application-data/iptvConfigData (NOTE 1)	GET	Retrieve IPTV configurations for configuration identifier(s), given S-NSSAI(s) and DNN(s), or SUPIs or Internal Group Identifiers
Individual IPTV Configuration	/application-data/iptvConfigData/{configurationId} (NOTE 1)	PUT	Create an Individual IPTV Configuration resource identified by {configurationId}, or modify all the properties of an Individual IPTV Configuration resource identified by {configurationId}.

		PATCH	Modify some properties of an Individual IPTV Configuration resource identified by {configurationId}.
		DELETE	Delete an Individual IPTV Configuration resource identified by {configurationId}
Service Parameter Data	/application-data/serviceParamData (NOTE 1)	GET	Retrieve the Service Parameter Data of given services, S-NSSAIs and DNNs or Internal Group Identifiers or SUPIs.
Individual Service Parameter Data	/application-data/serviceParamData/{serviceParamId} (NOTE 1)	PUT	Create an individual Service Parameter Data resource identified by {serviceParamId}, or modify all of the properties of an individual Service Parameter Data resource identified by {serviceParamId}.
		PATCH	Modify part of the properties of an individual Service Parameter Data resource identified by {serviceParamId}.
		DELETE	Delete an individual Service Parameter Data resource identified by {serviceParamId}.
AM Influence Data	/application-data/am-influence-data	GET	Retrieve the AM Influence Data of given S-NSSAIs and DNNs and/or Internal Group Identifiers or SUPIs or for LBO roaming scenarios, any inbound roaming UEs identified by their home PLMN ID(s).
Individual AM Influence Data	/application-data/am-influence-data/{amInfluenceld}	PUT	Create an individual AM Influence Data resource identified by {amInfluenceld}, or modify all of the properties of an individual AM Influence Data resource identified by {amInfluenceld}.
		PATCH	Modify part of the properties of an individual AM Influence Data resource identified by {amInfluenceld}.
		DELETE	Delete an individual AM Influence Data resource identified by {amInfluenceld}.
ApplicationDataSubscriptions	/application-data/subs-to-notify	POST	Create a subscription to receive notification of application data changes.
		GET	Read all the subscriptions, or subscriptions for a given data filter, e.g. S-NSSAI and DNN or Internal Group Identifier or SUPI.
IndividualApplicationDataSubscription	/application-data/subs-to-notify/{subsid}	PUT	Modify a subscription to receive notification of application data changes identified by {subsid}.
		DELETE	Delete a subscription identified by {subsid}.
		GET	Read an existing individual Subscription resource identified by {subsid}.
EAS Deployment Information Data	/application-data/eas-deploy-data	GET	Retrieve the EAS Deployment Information Data, given DNN(s), S-NSSAI(s), Application ID or Internal Group Identifiers.
Individual EAS Deployment Information Data	/application-data/eas-deploy-data/{easDeployInfold}	GET	Read an existing individual EAS Deployment Data identified by {easDeployInfold}.

		PUT	Create an individual EAS deployment information Data resource identified by {easDeployInfold} or Update an individual EAS Deployment Data resource identified by {easDeployInfold}.
		DELETE	Delete an individual EAS Deployment Data resource identified by {easDeployInfold}.
AF Requested QoS Data Sets	/application-data/af-qos-data-sets	GET	Retrieve one or several existing AF Requested QoS Data Set(s).
Individual AF Requested QoS Data Set	/application-data/af-qos-data-sets/{afReqQoSId}	PUT	Create an "Individual AF Requested QoS Data Set" resource or update an existing "Individual AF Requested QoS Data Set" resource.
		PATCH	Modify an existing "Individual AF Requested QoS Data Set" resource.
		DELETE	Delete an existing "Individual AF Requested QoS Data Set" resource.
Individual DNAI EAS Mapping	/application-data/dnai-eas-mappings/{dnai}	GET	Retrieve the EAS address information for a DNAI.
ECS Address Roaming Data	/application-data/ecs-address-roaming	GET	Retrieve all existing ECS Address Configuration Information for roaming UEs.
Individual ECS Address Roaming Data	/application-data/ecs-address-roaming/{ecsAddrInfold}	GET	Retrieve an existing ECS Address Configuration Information entry for roaming UEs.
		PUT	Create or Update an ECS Address Configuration Information entry for roaming UEs.
		PATCH	Update an ECS Address Configuration Information entry for roaming UEs.
		DELETE	Delete an existing ECS Address Configuration Information entry for roaming UEs.
UE ID Mappings	/application-data/ueid-mappings	GET	Retrieve one or several existing UE ID Mapping(s).
Individual UE ID Mapping	/application-data/ueid-mappings/{ueMappingId}	GET	Retrieve an existing "Individual UE ID Mapping" resource.
		PUT	Create or Update a UE ID Mapping. (NOTE 2)
		DELETE	Delete an existing "Individual UE ID Mapping" resource.
Non-3GPP Device Identifier Information	/application-data/non3gpp-device-Id	GET	Retrieve all existing Non-3GPP Device Identifier Information.
Individual Non-3GPP Device Identifier Information	/application-data/non3gpp-device-Id/{non3gppDevId}	GET	Retrieve an existing Non-3GPP Device Identifier Information.
		PUT	Create or update the Non-3GPP Device Identifier Information.
		PATCH	Update the Non-3GPP Device Identifier Information.
		DELETE	Delete an existing Non-3GPP Device Identifier Information.
NOTE 1: The path segment does not follow the related naming convention defined in 3GPP TS 29.501 [5]. The path segment is kept though as defined in the current specification for backward compatibility considerations.			
NOTE 2: Ranging/Sidelink UE ID Mapping information between Application Layer ID and GPSI may also be pre-provisioned by the operator.			

6.2.3 Resource: PFD Data

6.2.3.1 Description

The PFD Data resource represents all the PFD Datas to the Nudr_DataRepository Service at a given UDR.

6.2.3.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/application-data/pfds

Table 6.2.3.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.

6.2.3.3 Resource Standard Methods

6.2.3.3.1 GET

This method shall support the URI query parameters specified in table 6.2.3.3.1-1.

Table 6.2.3.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
appld (NOTE)	array(ApplicationId)	O	1..N	Contains the information of the application identifier(s) for the querying PFD Data resource. If the appld query parameter is not included in the URI, the query applies to all application identifier(s) for the querying PFD Data resource. If the appld array contains one or more ApplicationId entries, the UDR returns an Individual PFD Data resource representation for each matched ApplicationId.
supp-feat	SupportedFeatures	O	0..1	The features supported by the NF service consumer.
NOTE: The query parameter does not follow the related naming convention (i.e. "lower-with-hyphen") defined in clause 5.1.3.3 of 3GPP TS 29.501 [7]. This query parameter is however kept as currently defined in this specification for backward compatibility considerations.				

This method shall support the request data structures specified in table 6.2.3.3.1-2 and the response data structures and response codes specified in table 6.2.3.3.1-3.

Table 6.2.3.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.3.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
array(PfdDataForAppE xt)	M	0..N	200 OK	A representation of PFDs for request applications is returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.4 Resource: Individual PFD Data

6.2.4.1 Description

The Individual PFD Data resource represents Individual PFD Datas to the Nudr_DataRepository Service at a given UDR.

6.2.4.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/application-data/pfds/{appId}

This resource shall support the resource URI variables defined in table 6.2.4.2-1.

Table 6.2.4.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
appld	ApplicationId	Indicates the application identifier for the request pfd(s). Data type ApplicationId is defined in 3GPP TS 29.571 [7].

6.2.4.3 Resource Standard Methods

6.2.4.3.1 GET

This method shall support the URI query parameters specified in table 6.2.4.3.1-1.

Table 6.2.4.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
supp-feat	SupportedFeatures	O	0..1	The features supported by the NF service consumer.

This method shall support the request data structures specified in table 6.2.4.3.1-2 and the response data structures and response codes specified in table 6.2.4.3.1-3.

Table 6.2.4.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.4.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
PfdDataForAppExt	M	1	200 OK	A representation of PFDs for the request application identified by the application identifier is returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.4.3.2 DELETE

This method shall support the URI query parameters specified in table 6.2.4.3.2-1.

Table 6.2.4.3.2-1: 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 6.2.4.3.2-2 and the response data structures and response codes specified in table 6.2.4.3.2-3.

Table 6.2.4.3.2-2: Data structures supported by the DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.4.3.2-3: Data structures supported by the DELETE Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No content	Successful case. The Individual PFD Data resource related to the application identifier was deleted.
NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.4.3.3 PUT

This method shall support the URI query parameters specified in table 6.2.4.3.3-1.

Table 6.2.4.3.3-1: 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 6.2.4.3.3-2 and the response data structures and response codes specified in table 6.2.4.3.3-3.

Table 6.2.4.3.3-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
PfdDataForAppExt	M	1	Contains the information for the creation or modification of an individual PFD Data resource.

Table 6.2.4.3.3-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
PfdDataForAppExt	M	1	201 Created	The resource has been successfully created and a response body is returned containing a representation of the resource.
PfdDataForAppExt	M	1	200 OK	The resource has been successfully updated and a response body is returned containing a representation of the resource.
n/a			204 No Content	The resource has been successfully updated.
NOTE: The mandatory HTTP error status codes for the PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

Table 6.2.4.3.3-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/application-data/pfds/{appld}

6.2.5 Resource: Influence Data

6.2.5.1 Description

The Influence Data resource represents a Traffic Influence Data to the Nudr_DataRepository Service at a given UDR.

6.2.5.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/application-data/influenceData

This resource shall support the resource URI variables defined in table 6.2.5.2-1.

Table 6.2.5.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.

6.2.5.3 Resource Standard Methods

6.2.5.3.1 GET

This method shall support the URI query parameters specified in table 6.2.5.3.1-1.

Table 6.2.5.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
influence-Ids (NOTE 2)	array(string)	O	1..N	Each element identifies a influenceId, i.e. an Individual Influence Data resource. (NOTE 1)
dnns	array(Dnn)	O	1..N	Each element identifies a DNN. The UDR shall return only Individual Influence Data resource(s) that match one of the provided DNNs. (NOTE 1)
snssais	array(Snssai)	O	1..N	Each element identifies a slice. The UDR shall return only Individual Influence Data resource(s) that match one of the provided S-NSSAIs. (NOTE 1)
internal-Group-Ids (NOTE 2)	array(GroupId)	O	1..N	Each element identifies a group of users. The UDR shall return only Individual Influence Data resource(s) that match one of the provided internal group IDs within the "interGroupId" attribute. (NOTE 1)
internal-group-ids-Add (NOTE 2)	array(GroupId)	O	1..N	Each element identifies an internal group id. The UDR shall return only Individual Influence Data resource(s) that match all the provided internal group IDs within the "interGroupIdList" attribute. (NOTE 1)
subscriber-categories	array(string)	O	1..N	Each element identifies a subscriber category. The UDR shall return only Individual Influence Data resource(s) that match all the provided subscriber category(ies).
supis	array(Supi)	O	1..N	Each element identifies a user. The UDR shall return only Individual Influence Data resource(s) that match one of the provided SUPIs. (NOTE 1)
supp-feat	SupportedFeatures	O	0..1	Identifies the features supported by the NF service consumer.
NOTE 1: At least one of the "influence-Ids", "dnns", "snssais", "internal-Group-Ids", "internal-group-ids-Add" (may be included when the <i>FinerGranUEs</i> feature is supported) or "supis" query parameters shall be provided.				
NOTE 2: The query parameter does not follow the related naming convention (i.e. "lower-with-hyphen") defined in clause 5.1.3.3 of 3GPP TS 29.501 [7]. This query parameter is however kept as currently defined in this specification for backward compatibility considerations.				

NOTE 1: The combination of a."internal-Goup-Ids" and the "supis", b."internal-group-ids-Add" and the "supis", c."subscriber-categories" and the "supis" and d. "internal-Group-Ids" and the "internal-group-ids-Add" query parameter represent mutually exclusive resource properties, i.e., if both query parameters are simultaneously present in the same request, the search will not match any resource.

NOTE 2: When the "FinerGranUEs" feature is supported and the "internal-group-ids-Add" query parameter is provided, it is not appropriate for it to contain a single array element as the corresponding "interGroupIdList" attribute within the targeted resource representation is defined to have at least two array elements (see clause 6.4.2.2).

When the request query contains more than one optional query parameters defined as an array, the UDR shall return the Individual Influence Data resources for each matching combination of the values of the elements of the array of the provided query parameters.

EXAMPLE: If "snssais" query parameter is included with two S-NSSAI entries (SNSSAI_1 and SNSSAI_2) and "dnns" is included with two DNN entries (e.g. DNN_A and DNN_B), and the other optional query parameters are not included, the UDR shall return the Individual Influence Data resources for each matching S-NSSAI and DNN combination (for all the possible values for the SUPI and the Group Id), i.e., the resource(s) matching SNSSAI_1 and DNN_A, the resource(s) matching SNSSAI_1 and DNN_B, the resource(s) matching SNSSAI_2 and DNN_A, and the resource(s) matching SNSSAI_2 and DNN_B.

To query for the Individual Influence Data resource(s) that apply to any UE, an entry of the "internal-Group-Ids" shall be set to "AnyUE".

This method shall support the request data structures specified in table 6.2.5.3.1-2 and the response data structures and response codes specified in table 6.2.5.3.1-3.

Table 6.2.5.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.5.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
array(TrafficInfluData)	M	0..N	200 OK	The Traffic Influence Data stored in the UDR are returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.6 Resource: Individual Influence Data

6.2.6.1 Description

The Individual Influence Data resource represents an Individual Traffic Influence Data to the Nudr_DataRepository Service at a given UDR.

6.2.6.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/application-data/influenceData/{influenceId}

This resource shall support the resource URI variables defined in table 6.2.6.2-1.

Table 6.2.6.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
influenceId	string	The Identifier of an Individual Influence Data to be created or updated. To enable the value to be used as part of a URI, the string shall only contain allowed characters according to the "lower-with-hyphen" naming convention defined in clause 5.1.3 of 3GPP TS 29.501 [5].

6.2.6.3 Resource Standard Methods

6.2.6.3.1 PUT

This method shall support the URI query parameters specified in table 6.2.6.3.1-1.

Table 6.2.6.3.1-1: URI query parameters supported by the PUT method on this resource

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

This method shall support the request data structures specified in table 6.2.6.3.1-2 and the response data structures and response codes specified in table 6.2.6.3.1-3.

Table 6.2.6.3.1-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
TrafficInfluData	M	1	The Traffic Influence Data to be stored in the UDR.

Table 6.2.6.3.1-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
TrafficInfluData	M	1	201 Created	The resource has been successfully created and a response body is returned containing a representation of the resource.
TrafficInfluData	M	1	200 OK	The resource has been successfully updated and a response body is returned containing a representation of the resource.
n/a			204 No Content	The resource has been successfully updated.
NOTE: The mandatory HTTP error status codes for the PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

Table 6.2.6.3.1-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/application-data/influenceData/{influenceId}

6.2.6.3.2 PATCH

This method shall support the URI query parameters specified in table 6.2.6.3.2-1.

Table 6.2.6.3.2-1: URI query parameters supported by the PATCH method on this resource

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

This method shall support the request data structures specified in table 6.2.6.3.2-2 and the response data structures and response codes specified in table 6.2.6.3.2-3.

Table 6.2.6.3.2-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
TrafficInfluDataPatch	M	1	The Traffic Influence Data to be updated in the UDR.

Table 6.2.6.3.2-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
TrafficInfluData	M	1	200 OK	The update of an Individual Traffic Influence Data resource is confirmed and a response body containing Traffic Influence Data shall be returned.
n/a			204 No Content	The Individual Traffic Influence Data resource has been successfully updated.
NOTE: The mandatory HTTP error status codes for the PATCH method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.6.3.3 DELETE

This method shall support the URI query parameters specified in table 6.2.6.3.3-1.

Table 6.2.6.3.3-1: URI query parameters supported by the DELETE method on this resource

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

This method shall support the request data structures specified in table 6.2.6.3.3-2 and the response data structures and response codes specified in table 6.2.6.3.3-3.

Table 6.2.6.3.3-2: Data structures supported by the DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.6.3.3-3: Data structures supported by the DELETE Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	The Individual Influence Data was deleted successfully.
NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.7 Resource: Influence Data Subscription

6.2.7.1 Description

The Influence Data Subscription resource represents all Influence Data subscriptions to the Nudr_DataRepository Service at a given UDR.

6.2.7.2 Resource definition

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

This resource shall support the resource URI variables defined in table 6.2.7.2-1.

Table 6.2.7.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.

6.2.7.3 Resource Standard Methods

6.2.7.3.1 POST

This method shall support the URI query parameters specified in table 6.2.7.3.1-1.

Table 6.2.7.3.1-1: 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 6.2.7.3.1-2 and the response data structures and response codes specified in table 6.2.7.3.1-3.

Table 6.2.7.3.1-2: Data structures supported by the POST Request Body on this resource

Data type	P	Cardinality	Description
TrafficInfluSub	M	1	Parameters to register a subscription to Traffic Influence Data.

Table 6.2.7.3.1-3: Data structures supported by the POST Response Body on this resource

Data type	P	Cardinality	Response codes	Description
TrafficInfluSub	M	1	201 Created	The subscription was created successfully.
NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

Table 6.2.7.3.1-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/application-data/influenceData/subs-to-notify/{subscriptionId}

6.2.7.3.2 GET

This method shall support the URI query parameters specified in table 6.2.7.3.2-1.

Table 6.2.7.3.2-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
dnn	Dnn	O	0..1	Identifies a DNN. (NOTE 1)
snsai	Snssai	O	0..1	Identifies a slice. (NOTE 1)
internal-Group-Id (NOTE 3)	GroupId	O	0..1	Identifies a group of users. The UDR shall return Individual Influence Data Subscription resource(s) which contain the provided internal group identifier within the "internalGroupIds" attribute. (NOTE 1) (NOTE 2) (NOTE 4)
internal-group-ids	array(GroupId)	O	1..N	Identifies a group of users that belong to all the listed internal groups. The UDR shall return Individual Influence Data Subscription resource(s) for which the provided array is an exact match of either the "internalGroupIds" attribute or the "internalGroupIdsAdd" attribute, i.e. the compared arrays contain exactly the same elements, even if the elements are not in the same order. (NOTE 1) (NOTE 4)
subscriber-categories	array(string)	O	1..N	Identifies a list of subscriber category. The UDR shall return Individual Influence Data Subscription resource(s) for which the provided array is an exact match of the "subscriberCatList" attribute, i.e. the compared arrays contain exactly the same elements, even if the elements are not in the same order.
supi	Supi	O	0..1	Identifies a user.
NOTE 1: At least one of "dnn", "snssai" or "internal-Group-Id" or "internal-group-ids"(may be included when the FinerGranUEs feature is supported) shall be provided.				
NOTE 2: For the Traffic Influence Data applies to any UE, the "internal-Group-Id" shall set to "AnyUE".				
NOTE 3: The query parameter does not follow the related naming convention (i.e. "lower-with-hyphen") defined in clause 5.1.3.3 of 3GPP TS 29.501 [7]. This query parameter is however kept as currently defined in this specification for backward compatibility considerations.				
NOTE 4: Attributes "internal-Group-Id" and "internal-group-ids" are mutually exclusive attributes.				

This method shall support the request data structures specified in table 6.2.7.3.2-2 and the response data structures and response codes specified in table 6.2.7.3.2-3.

Table 6.2.7.3.2-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.7.3.2-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
array(TrafficInfluSub)	M	0..N	200 OK	The subscription information as request in the request URI query parameter(s) are returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.8 Resource: Individual Influence Data Subscription

6.2.8.1 Description

The Individual Influence Data Subscription resource represents a single Influence Data subscription to the Nudr_DataRepository Service at a given UDR.

6.2.8.2 Resource definition

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

This resource shall support the resource URI variables defined in table 6.2.8.2-1.

Table 6.2.8.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
subscriptionId	string	Identifies an Individual Influence Data Subscription resource. To enable the value to be used as part of a URI, the string shall only contain allowed characters according to the "lower-with-hyphen" naming convention defined in clause 5.1.3 of 3GPP TS 29.501 [5].

6.2.8.3 Resource Standard Methods

6.2.8.3.1 GET

This method shall support the URI query parameters specified in table 6.2.8.3.1-1.

Table 6.2.8.3.1-1: 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 6.2.8.3.1-2 and the response data structures and response codes specified in table 6.2.8.3.1-3.

Table 6.2.8.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.8.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
TrafficInfluSub	M	1	200 OK	The subscription information is returned.

6.2.8.3.2 PUT

This method shall support the URI query parameters specified in table 6.2.8.3.2-1.

Table 6.2.8.3.2-1: 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 6.2.8.3.2-2 and the response data structures and response codes specified in table 6.2.8.3.2-3.

Table 6.2.8.3.2-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
TrafficInfluSub	M	1	Modify an existing subscription to Traffic Influence Data.

Table 6.2.8.3.2-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
TrafficInfluSub	M	1	200 OK	The subscription was updated successfully.
n/a			204 No Content	The subscription has been successfully updated.
NOTE: The mandatory HTTP error status codes for the PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.8.3.3 DELETE

This method shall support the URI query parameters specified in table 6.2.8.3.3-1.

Table 6.2.8.3.3-1: 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 6.2.8.3.3-2 and the response data structures and response codes specified in table 6.2.8.3.3-3.

Table 6.2.8.3.3-2: Data structures supported by the DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.8.3.3-3: Data structures supported by the DELETE Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	The subscription was terminated successfully.
NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.9 Resource: Applied BDT Policy Data

6.2.9.1 Description

The Applied BDT Policy Data resource represents an applied BDT Policy Data to the Nudr_DataRepository Service at a given UDR.

6.2.9.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/application-data/bdtPolicyData

This resource shall support the resource URI variables defined in table 6.2.9.2-1.

Table 6.2.9.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.

6.2.9.3 Resource Standard Methods

6.2.9.3.1 GET

This method shall support the URI query parameters specified in table 6.2.9.3.1-1.

Table 6.2.9.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
bdt-policy-ids	array(string)	O	1..N	Each element identifies a bdtPolicyId, i.e., an identifier of an Individual BDT Policy Data resource. The UDR shall return an Individual Applied BDT Policy Data resource for each matched bdtPolicyId.
internal-group-ids	array(GroupId)	O	1..N	Each element identifies a group of users. The UDR shall return only Individual Applied BDT Policy Data resource(s) that match one of the provided internal group ID(s).
supis	array(Supi)	O	1..N	Each element identifies a user. The UDR shall return only Individual Applied BDT Policy Data resource(s) that match one of the provided SUPI(s).

NOTE: The "internal-group-ids" and the "supis" query parameters represent mutually exclusive resource properties, i.e., if both query parameters are simultaneously present in the same request, the search will not match any resource.

When the request contains the "bdt-policy-ids" and the "internal-group-ids" or "supis" query parameters, the UDR shall return the resource(s) that match any combination of the values of the "bdt-policy-ids" and the "internal-group-ids" or "supis" arrays.

EXAMPLE: If "bdt-policy-ids" query parameter is included with two bdtPolicyId entries (bdtPolicyId_1 and bdtPolicyId_2) and "supis" is included with two SUPI entries (e.g. SUPI_A and SUPI_B), the UDR shall return the Individual BDT Policy Data resource(s) for each matching bdtPolicyId and SUPI combination i.e., the resource(s) matching bdtPolicyId_1 and SUPI_A or SUPI_B, and the resource(s) matching bdtPolicyId_2 and SUPI A or SUPI_B (note that other combinations are not possible).

This method shall support the request data structures specified in table 6.2.9.3.1-2 and the response data structures and response codes specified in table 6.2.9.3.1-3.

Table 6.2.9.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.9.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
array(BdtPolicyData)	M	0..N	200 OK	The applied BDT Policy Data stored in the UDR are returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.10 Resource: Individual Applied BDT Policy Data

6.2.10.1 Description

The Individual Applied BDT Policy Data resource represents an Individual Applied BDT Policy Data to the Nudr_DataRepository Service at a given UDR.

6.2.10.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/application-data/bdtPolicyData/{bdtPolicyId}

This resource shall support the resource URI variables defined in table 6.2.10.2-1.

Table 6.2.10.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
bdtPolicyId	string	The Identifier of an Individual BDT Policy Data to be created or updated. To enable the value to be used as part of a URI, the string shall only contain allowed characters according to the "lower-with-hyphen" naming convention defined in clause 5.1.3 of 3GPP TS 29.501 [5].

6.2.10.3 Resource Standard Methods

6.2.10.3.1 PUT

This method shall support the URI query parameters specified in table 6.2.10.3.1-1.

Table 6.2.10.3.1-1: URI query parameters supported by the PUT method on this resource

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

This method shall support the request data structures specified in table 6.2.10.3.1-2 and the response data structures and response codes specified in table 6.2.10.3.1-3.

Table 6.2.10.3.1-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
BdtPolicyData	M	1	The applied BDT Policy Data to be stored in the UDR.

Table 6.2.10.3.1-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
BdtPolicyData	M	1	201 Created	The resource has been successfully created and a response body is returned containing a representation of the resource.
NOTE: The mandatory HTTP error status codes for the PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

Table 6.2.10.3.1-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/application-data/bdtPolicyData/{bdtPolicyId}

6.2.10.3.2 PATCH

This method shall support the URI query parameters specified in table 6.2.10.3.2-1.

Table 6.2.10.3.2-1: URI query parameters supported by the PATCH method on this resource

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

This method shall support the request data structures specified in table 6.2.10.3.2-2 and the response data structures and response codes specified in table 6.2.10.3.2-3.

Table 6.2.10.3.2-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
BdtPolicyDataPatch	M	1	The applied BDT Policy Data to be updated in the UDR.

Table 6.2.10.3.2-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
BdtPolicyData	M	1	200 OK	The update of an applied BDT Policy Data resource is confirmed and a response body containing applied BDT Policy Data shall be returned.
n/a			204 No Content	The update of an applied BDT Policy Data resource is confirmed.
NOTE: The mandatory HTTP error status codes for the PATCH method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.10.3.3 DELETE

This method shall support the URI query parameters specified in table 6.2.10.3.3-1.

Table 6.2.10.3.3-1: URI query parameters supported by the DELETE method on this resource

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

This method shall support the request data structures specified in table 6.2.10.3.3-2 and the response data structures and response codes specified in table 6.2.10.3.3-3.

Table 6.2.10.3.3-2: Data structures supported by the DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.10.3.3-3: Data structures supported by the DELETE Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	The Individual Applied BDT Policy Data was deleted successfully.
NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.11 Resource: IPTV Configurations

6.2.11.1 Description

This resource allows the NF service consumer to read all active IPTV Configurations applicable for given configuration identifier(s), DNN(s) and/or S-NSSAI(s), SUPI(s) or Internal Group Identifier(s) stored at the UDR.

6.2.11.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/application-data/iptvConfigData

This resource shall support the resource URI variables defined in table 6.2.11.2-1.

Table 6.2.11.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.

6.2.11.3 Resource Standard Methods

6.2.11.3.1 GET

This method shall support the URI query parameters specified in table 6.2.11.3.1-1.

Table 6.2.11.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
config-ids	array(string)	O	1..N	Each element identifies a configurationId, i.e. an Individual IPTV Configuration resource. The UDR shall return an Individual IPTV Configuration resource for each matched configurationId.
dnns	array(Dnn)	O	1..N	Each element identifies a DNN. The UDR shall return only Individual IPTV Configuration resource(s) that match one of the provided DNN(s).
snssais	array(Snssai)	O	1..N	Each element identifies a slice. The UDR shall return only Individual IPTV Configuration resource(s) that match one of the provided S-NSSAI(s).
supis	array(Supi)	O	1..N	Each element identifies a SUPI. The UDR shall return only Individual IPTV Configuration resource(s) that match one of the provided SUPI(s).
inter-group-ids	array(GroupId)	O	1..N	Each element identifies a group of users. The UDR shall return only Individual IPTV Configuration resource(s) that match one of the provided internal group ID(s).
supp-feat	SupportedFeatures	C	0..1	Contains the list of supported feature(s) among the ones defined in clause 6.6. This query parameter shall be present only when feature negotiation needs to take place.

NOTE: At least one of the above attributes shall be provided.

NOTE: The "inter-group-ids" and the "supis" query parameters represent mutually exclusive resource properties, i.e., if both query parameters are simultaneously present in the same request, the search will not match any resource.

When the request query contains more than one optional query parameters defined as an array, the UDR shall return the Individual IPTV Configuration resources for each matching combination of the values of the provided query parameters.

EXAMPLE: If "snssais" query parameter is included with two S-NSSAI entries (SNSSAI_1 and SNSSAI_2) and "dnns" is included with two DNN entries (e.g. DNN_A and DNN_B), and the other optional query parameters are not included, the UDR shall return IPTV Configuration resources for each matching (for all the possible values for the SUPI and the Group Id), i.e. the resource(s) matching SNSSAI_1 and DNN_A, the resource(s) matching SNSSAI_1 and DNN_B, the resource(s) matching SNSSAI_2 and DNN_A, and the resources matching SNSSAI_2 and DNN_B.

This method shall support the request data structures specified in table 6.2.11.3.1-2 and the response data structures and response codes specified in table 6.2.11.3.1-3.

Table 6.2.11.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.11.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
array(IptvConfigData)	M	0..N	200 OK	The IPTV configuration data stored in the UDR are returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.12 Resource: Individual IPTV Configuration

6.2.12.1 Description

The resource allows the NF service consumer to create an Individual IPTV configuration Data, modify or delete an existing Individual IPTV configuration Data.

6.2.12.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/application-data/iptvConfigData/{configurationId}

This resource shall support the resource URI variables defined in table 6.2.12.2-1.

Table 6.2.12.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
configurationId	string	The Identifier of an Individual IPTV Configuration to be created or updated. To enable the value to be used as part of a URI, the string shall only contain allowed characters according to the "lower-with-hyphen" naming convention defined in clause 5.1.3 of 3GPP TS 29.501 [5].

6.2.12.3 Resource Standard Methods

6.2.12.3.1 PUT

This method shall support the URI query parameters specified in table 6.2.12.3.1-1.

Table 6.2.12.3.1-1: URI query parameters supported by the PUT method on this resource

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

This method shall support the request data structures specified in table 6.2.12.3.1-2 and the response data structures and response codes specified in table 6.2.12.3.1-3.

Table 6.2.12.3.1-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
IptvConfigData	M	1	The IPTV configuration data to be stored in the UDR.

Table 6.2.12.3.1-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
IptvConfigData	M	1	201 Created	The resource has been successfully created and a response body is returned containing a representation of the resource.
IptvConfigData	M	1	200 OK	The resource has been successfully updated and a response body is returned containing a representation of the resource.
n/a			204 No Content	The resource has been successfully updated.
NOTE: The mandatory HTTP error status codes for the PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

Table 6.2.12.3.1-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/application-data/iptvConfigData/{configurationId}

6.2.12.3.2 DELETE

This method shall support the URI query parameters specified in table 6.2.12.3.2-1.

Table 6.2.12.3.2-1: URI query parameters supported by the DELETE method on this resource

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

This method shall support the request data structures specified in table 6.2.12.3.2-2 and the response data structures and response codes specified in table 6.2.12.3.2-3.

Table 6.2.12.3.2-2: Data structures supported by the DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.12.3.2-3: Data structures supported by the DELETE Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	The resource was deleted successfully.
NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.12.3.3 PATCH

This method shall support the URI query parameters specified in table 6.2.12.3.3-1.

Table 6.2.12.3.3-1: URI query parameters supported by the PATCH method on this resource

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

This method shall support the request data structures specified in table 6.2.12.3.3-2 and the response data structures and response codes specified in table 6.2.12.3.3-3.

Table 6.2.12.3.3-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
IptvConfigDataPatch	M	1	The IPTV configuration related data to be updated in the UDR.

Table 6.2.12.3.3-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
IptvConfigData	M	1	200 OK	The resource has been successfully updated.
n/a			204 No Content	The resource has been successfully updated.
NOTE: The mandatory HTTP error status codes for the PATCH method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.13 Resource: ApplicationDataSubscriptions

6.2.13.1 Description

This resource is used to represent subscriptions to notification of application data modification, e.g. PFD data change, IPTV configuration data change, BDT policy data change, but not for Traffic Influence Data.

6.2.13.2 Resource definition

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

This resource shall support the resource URI variables defined in table 6.2.13.2-1.

Table 6.2.13.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.

6.2.13.3 Resource Standard Methods

6.2.13.3.1 POST

This method shall support the URI query parameters specified in table 6.2.13.3.1-1.

Table 6.2.13.3.1-1: 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 6.2.13.3.1-2 and the response data structures and response codes specified in table 6.2.13.3.1-3.

Table 6.2.13.3.1-2: Data structures supported by the POST Request Body on this resource

Data type	P	Cardinality	Description
ApplicationDataSubs	M	1	Identifies the subscription to notification of application data modification.

Table 6.2.13.3.1-3: Data structures supported by the POST Response Body on this resource

Data type	P	Cardinality	Response codes	Description
ApplicationDataSubs	M	1	201 Created	Upon success, a response body containing a representation of each 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: The mandatory HTTP error status codes for the POST method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

Table 6.2.13.3.1-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/application-data/subs-to-notify/{subsid}

6.2.13.3.2 GET

This method shall support the URI query parameters specified in table 6.2.13.3.2-1.

Table 6.2.13.3.2-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
data-filter	DataFilter	O	0..1	Indicate the data filter (e.g. dnn) for the query. When present, the UDR shall return the IndividualApplicationDataSubscription resource(s) for which the indicated information in the "data-filter" query parameter matches an entry of the "dataFilters" property of the resource (i.e. within the resource representation in the ApplicationDataSubs data structure). If the values of the "dataFilters" entry match the values provided in the "data-filter" query parameter, then the entry is considered to be a match even if it contains further attributes, for which no value was provided in the "data-filter" query parameter.

This method shall support the request data structures specified in table 6.2.13.3.2-2 and the response data structures and response codes specified in table 6.2.13.3.2-3.

Table 6.2.13.3.2-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.13.3.2-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
array(ApplicationDataSubs)	M	0..N	200 OK	The subscription information as request in the request URI query parameter(s) are returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.14 Resource: IndividualApplicationDataSubscription

6.2.14.1 Description

This resource is used to represent an individual subscription to notification of application data modification.

6.2.14.2 Resource definition

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

This resource shall support the resource URI variables defined in table 6.2.14.2-1.

Table 6.2.14.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
subsId	string	The subsId identifies an individual application data subscription to notifications. The value is allocated by the UDR during creation of the ApplicationDataSubscriptions resource.

6.2.14.3 Resource Standard Methods

6.2.14.3.1 PUT

This method shall support the URI query parameters specified in table 6.2.14.3.1-1.

Table 6.2.14.3.1-1: 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 6.2.14.3.1-2 and the response data structures and response codes specified in table 6.2.14.3.1-3.

Table 6.2.14.3.1-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
ApplicationDataSubs	M	1	Updates the subscription to notification of application data modification.

Table 6.2.14.3.1-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
ApplicationDataSubs	M	1	200 OK	The individual subscription resource was updated successfully.
n/a			204 No Content	The individual subscription resource was updated successfully and no additional content is to be sent in the response message.
NOTE: The mandatory HTTP error status codes for the PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.14.3.2 DELETE

This method shall support the URI query parameters specified in table 6.2.14.3.2-1.

Table 6.2.14.3.2-1: 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 6.2.14.3.2-2 and the response data structures and response codes specified in table 6.2.14.3.2-3.

Table 6.2.14.3.2-2: 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 6.2.14.3.2-3: 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: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.14.3.3 GET

This method shall support the URI query parameters specified in table 6.2.14.3.3-1.

Table 6.2.14.3.3-1: 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 6.2.14.3.3-2 and the response data structures and response codes specified in table 6.2.14.3.3-3.

Table 6.2.14.3.3-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.14.3.3-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
ApplicationDataSubs	M	1	200 OK	The subscription information is returned.
NOTE: The mandatory HTTP error status codes for the HTTP GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] shall also apply.				

6.2.15 Resource: Service Parameter Data

6.2.15.1 Description

The Service Parameter Data resource represents a Service Parameter Data to the Nudr_DataRepository Service at a given UDR.

6.2.15.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/application-data/serviceParamData

This resource shall support the resource URI variables defined in table 6.2.15.2-1.

Table 6.2.15.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.

6.2.15.3 Resource Standard Methods

6.2.15.3.1 GET

This method shall support the URI query parameters specified in table 6.2.15.3.1-1.

Table 6.2.15.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description	Applicability
service-param-ids	array(string)	O	1..N	Each element identifies a serviceParamId, i.e., an Individual Service Parameter Data. The UDR shall return an Individual Service Parameter Data resource for each matched serviceParamId. (NOTE)	
dnns	array(Dnn)	O	1..N	Each element identifies a DNN. The UDR shall return only Individual Service Parameter Data resource(s) that match one of the provided DNNs. (NOTE)	
snssais	array(Snssai)	O	1..N	Each element identifies a slice. The UDR shall return only Individual Service Parameter Data resource(s) that match one of the provided S-NSSAIs. (NOTE)	
internal-group-ids	array(GroupId)	O	1..N	Each element identifies a group of users. The UDR shall return only Individual Service Parameter Data resource(s) that match one of the provided internal group IDs. (NOTE)	
supis	array(Supi)	O	1..N	Each element identifies a user. The UDR shall return only Individual Service Parameter Data resource(s) that match one of the provided SUPIs. (NOTE)	
ue-ipv4s	array(Ipv4Addr)	O	1..N	Each element identifies a user. The UDR shall return only Individual Service Parameter Data resource(s) that match one of the provided IPv4 addresses. (NOTE)	
ue-ipv6s	array(Ipv6Addr)	O	1..N	Each element identifies a user. The UDR shall return only Individual Service Parameter Data resource(s) that match one of the provided IPv6 addresses. (NOTE)	
ue-macs	array(MacAddr48)	O	1..N	Each element identifies a user. The UDR shall return only Individual Service Parameter Data resource(s) that match one of the provided UE MAC addresses. (NOTE)	
any-ue	boolean	O	0..1	Indicates whether the result shall be filtered based on any UE:- "true": the request shall be filtered based on the value "true"; - "false": the result shall be filtered based on the value "false". The UDR shall return only Individual Service Parameter Data resource(s) that match the provided any UE indication (if provided). Absence means no filtering based on this parameter. (NOTE)	FilterAnyUE
roam-ue-net-descs	array(NetworkDescription)	O	1..N	Each element identifies one or more PLMNs for the roaming UE. The UDR shall return only Service Parameter Data resource(s) that match at least one of the provided PLMN as described in the NetworkDescription data type. (NOTE)	VPLMNSpecificURSP
supp-feat	SupportedFeatures	O	0..1	Identifies the features supported by the NF service consumer.	

NOTE: At least one of the "service-param-ids", "dnns", "snssais", "internal-group-ids", "supis", "ue-ipv4s", "ue-ipv6s", "ue-macs", and if the feature FilterAnyUE is supported, or "any-ue", and if the feature VPLMNSpecificURSP is supported, or "roam-ue-net-descs" query parameters shall be provided.

NOTE: The "any-ue" query parameter is commonly related to the search of the service parameter data resource(s) that relate to any UE using the service identified by a combination of DNN and S-NSSAI, and thus, it is commonly present together with the "dnns" and "snssais" query parameters. Note that, if the "any-ue" query parameter is present together with the "internal-group-ids", "supis", "ue-ipv4s", "ue-ipv6s", "ue-macs" and/or "roam-ue-net-descs" query parameters the search will not match any resource, since according to clause 6.4.2.15 only one of the the "supi", "anyUeInd", "interGroupId", "ueIpv4", "ueIpv6", "ueMac" or "roam-ue-net-descs" properties are simultaneously present in the resource.

When the request query contains more than one optional query parameters defined as an array, the UDR shall return the Service Parameter Data resources for each matching combination of the values of the elements of the array of the provided query parameters.

EXAMPLE: If "snssais" query parameter is included with two S-NSSAI entries (SNSSAI_1 and SNSSAI_2) and "dnns" is included with two DNN entries (e.g. DNN_A and DNN_B), and the other optional query parameters are not included, the UDR shall return the Individual Service Parameter Data resources for each matching S-NSSAI and DNN, i.e., the resource(s) matching SNSSAI_1 and DNN_A, the resource(s) matching SNSSAI_1 and DNN_B, the resource(s) matching SNSSAI_2 and DNN_A, and the resources matching SNSSAI_2 and DNN_B.

This method shall support the request data structures specified in table 6.2.15.3.1-2 and the response data structures and response codes specified in table 6.2.15.3.1-3.

Table 6.2.15.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.15.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
array(ServiceParameterData)	M	0..N	200 OK	The Service Parameter Data stored in the UDR are returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.16 Resource: Individual Service Parameter Data

6.2.16.1 Description

The Individual Service Parameter Data resource represents an Individual Service Parameter Data to the Nudr_DataRepository Service at a given UDR.

6.2.16.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/application-data/serviceParamData/{serviceParamId}

This resource shall support the resource URI variables defined in table 6.2.16.2-1.

Table 6.2.16.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
serviceParamId	string	The Identifier of an Individual Service Parameter Data to be created or updated. To enable the value to be used as part of a URI, the string shall only contain allowed characters according to the "lower-with-hyphen" naming convention defined in clause 5.1.3 of 3GPP TS 29.501 [5].

6.2.16.3 Resource Standard Methods

6.2.16.3.1 PUT

This method shall support the URI query parameters specified in table 6.2.16.3.1-1.

Table 6.2.16.3.1-1: URI query parameters supported by the PUT method on this resource

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

This method shall support the request data structures specified in table 6.2.16.3.1-2 and the response data structures and response codes specified in table 6.2.16.3.1-3.

Table 6.2.16.3.1-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
ServiceParameterData	M	1	The Service Parameter Data to be stored in the UDR.

Table 6.2.16.3.1-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
ServiceParameterData	M	1	201 Created	The resource has been successfully created and a response body is returned containing a representation of the resource.
ServiceParameterData	M	1	200 OK	The resource has been successfully updated and a response body is returned containing a representation of the resource.
n/a			204 No Content	The resource has been successfully updated.
NOTE: The mandatory HTTP error status codes for the PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

Table 6.2.16.3.1-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/application-data/serviceParamData/{serviceParamId}

6.2.16.3.2 PATCH

This method shall support the URI query parameters specified in table 6.2.16.3.2-1.

Table 6.2.16.3.2-1: URI query parameters supported by the PATCH method on this resource

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

This method shall support the request data structures specified in table 6.2.6.3.2-2 and the response data structures and response codes specified in table 6.2.6.3.2-3.

Table 6.2.16.3.2-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
ServiceParameterData Patch	M	1	The Service Parameter Data to be updated in the UDR.

Table 6.2.16.3.2-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
ServiceParameterData	M	1	200 OK	The update of an Individual Service Parameter Data resource is confirmed and a response body containing Service Parameter Data shall be returned.
n/a			204 No Content	The Individual Service Parameter Data resource has been successfully updated.
NOTE: The mandatory HTTP error status codes for the PATCH method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.16.3.3 DELETE

This method shall support the URI query parameters specified in table 6.2.16.3.3-1.

Table 6.2.16.3.3-1: URI query parameters supported by the DELETE method on this resource

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

This method shall support the request data structures specified in table 6.2.16.3.3-2 and the response data structures and response codes specified in table 6.2.16.3.3-3.

Table 6.2.16.3.3-2: Data structures supported by the DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.16.3.3-3: Data structures supported by the DELETE Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	The Individual Service Parameter Data was deleted successfully.
NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.17 Resource: AM Influence Data

6.2.17.1 Description

The AM Influence Data resource represents an AM Influence Data to the Nudr_DataRepository Service at a given UDR.

6.2.17.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/application-data/am-influence-data

This resource shall support the resource URI variables defined in table 6.2.17.2-1.

Table 6.2.17.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.

6.2.17.3 Resource Standard Methods

6.2.17.3.1 GET

This method shall support the URI query parameters specified in table 6.2.17.3.1-1.

Table 6.2.17.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description	Applicability
am-influence-ids	array(string)	O	1..N	Each element identifies a amInfluenceId, i.e., an identifier of an Individual AM Influence Data resource. The UDR shall return an Individual AM Influence Data resource that matches one of provided amInfluenceId(s).	
dnn	array(Dnn)	O	1..N	Each element identifies a DNN. The UDR shall return only AM Influence Data resource(s) that match at least one of the DNN(s) of the array. (NOTE 2)	
snssais	array(Snssai)	O	1..N	Each element identifies a slice. The UDR shall return only AM Influence Data resource(s) that match at least one of the S-NSSAI(s) of the array. (NOTE 2)	
dnn-snssai-infos	array(DnnSnssaiInformation)	O	1..N	Each element identifies a combination of (DNN, S-NSSAI). The UDR shall return only AM Influence Data resource(s) that match at least one of the SNSSAI and DNN combination(s) of the array. (NOTE 2)	
internal-group-ids	array(GroupId)	O	1..N	Each element identifies a group of users. The UDR shall return only AM Influence Data resource(s) that match one of the provided GroupId(s).	
supis	array(Supi)	O	1..N	Each element identifies a user. The UDR shall return only AM Influence Data resource(s) that match one of the provided SUPI(s).	
any-ue	boolean	O	0..1	Indicates whether the request is for any non-roaming UE: - "true": the request is for any non-roaming UE; - "false"(default): the request is not for any non-roaming UE. The UDR shall return only AM Influence Data resource(s) that contain the Any UE indication.	
roam-ue-plmn-ids	array(PlmnId)	O	1..N	Each element identifies a PLMN ID for the roaming UE in LBO roaming scenario. The UDR shall return only AM Influence Data resource(s) that match at least one of the provided PLMN ID.	DCAMP_Roaming_LBO
supp-feat	SupportedFeatures	O	0..1	Identifies the features supported by the NF service consumer.	
NOTE 1: At least one of the query parameters other than the "supp-feat" query parameter shall be provided.					
NOTE 2: Only one of the "dnn", "snssais" or "dnn-snssai-infos" attributes may be simultaneously provided.					

NOTE: The "any-ue" query parameter is commonly related to the search of the AM influence data resource(s) that relate to any non-roaming UE using the service(s) identified by a combination of DNN and S-NSSAI, and thus, it is commonly present together with the "dnn-snssai-infos" query parameters. Note also that, if the "any-ue" query parameter is present together with the "internal-group-ids", and/or "supis" query parameters the search will not match any resource, since according to clause 6.4.2.16 only one of the the "supi", "anyUeInd" and "interGroupId" properties are simultaneously present in the resource.

When the request query contains more than one optional query parameters defined as an array, the UDR shall return the Individual AM Influence Data resources for each matching combination of the values of the elements of the array of the provided query parameters.

EXAMPLE 1: If the "dnn-snsai-infos" query parameter is included with two DNN and S-NSSAI combinations (comb_1 and comb_2) and the "supis" query parameter is included with two SUPI entries (e.g. SUPI_A and SUPI_B), and all of them are matching entries, the UDR shall return the Individual AM Influence Data resources for each matching S-NSSAI and DNN and SUPI combination, i.e. the resource(s) matching comb_1 and SUPI_A, comb_2 and SUPI_A, comb_1 and SUPI_B, and comb2 and SUPI_B.

EXAMPLE 2: If the "dnn-snsai-infos" query parameter is included with two DNN and S-NSSAI combination (comb_1 and comb_2) and the "supis" query parameter is included with two SUPI entries (e.g. SUPI_A and SUPI_B), and there are no matching entries for comb_1, the UDR shall return the Individual AM Influence Data resources for the matching S-NSSAI and DNN and SUPI combination, i.e., the resource(s) matching comb_2 and SUPI_A, and comb2 and SUPI_B.

This method shall support the request data structures specified in table 6.2.17.3.1-2 and the response data structures and response codes specified in table 6.2.17.3.1-3.

Table 6.2.17.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.17.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
array(AmInfluData)	M	0..N	200 OK	The AM Influence Data stored in the UDR are returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.18 Resource: Individual AM Influence Data

6.2.18.1 Description

The Individual AM Influence Data resource represents an Individual AM Influence Data to the Nudr_DataRepository Service at a given UDR.

6.2.18.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/application-data/am-influence-data/{amInfluenceId}

This resource shall support the resource URI variables defined in table 6.2.18.2-1.

Table 6.2.18.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
amInfluenceId	string	The identifier of an Individual AM Influence Data to be created or updated. To enable the value to be used as part of a URI, the string shall only contain allowed characters according to the "lower-with-hyphen" naming convention defined in clause 5.1.3 of 3GPP TS 29.501 [5].

6.2.18.3 Resource Standard Methods

6.2.18.3.1 PUT

This method shall support the URI query parameters specified in table 6.2.18.3.1-1.

Table 6.2.18.3.1-1: URI query parameters supported by the PUT method on this resource

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

This method shall support the request data structures specified in table 6.2.18.3.1-2 and the response data structures and response codes specified in table 6.2.18.3.1-3.

Table 6.2.18.3.1-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
AmInfluData	M	1	The AM Influence Data to be stored in the UDR.

Table 6.2.18.3.1-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
AmInfluData	M	1	201 Created	The resource has been successfully created and a response body is returned containing a representation of the resource.
AmInfluData	M	1	200 OK	The resource has been successfully updated and a response body is returned containing a representation of the resource.
n/a			204 No Content	The resource has been successfully updated.
NOTE: The mandatory HTTP error status codes for the PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

Table 6.2.18.3.1-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/application-data/am-influence-data/{amInfluenceld}

6.2.18.3.2 PATCH

This method shall support the URI query parameters specified in table 6.2.18.3.2-1.

Table 6.2.18.3.2-1: URI query parameters supported by the PATCH method on this resource

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

This method shall support the request data structures specified in table 6.2.18.3.2-2 and the response data structures and response codes specified in table 6.2.18.3.2-3.

Table 6.2.18.3.2-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
AmInfluDataPatch	M	1	The AM Influence Data to be updated in the UDR.

Table 6.2.18.3.2-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
AmInfluData	M	1	200 OK	The update of an Individual AM Influence Data resource is confirmed and a response body containing the AM Influence Data shall be returned.
n/a			204 No Content	The Individual AM Influence Data resource has been successfully updated.
NOTE: The mandatory HTTP error status codes for the PATCH method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.18.3.3 DELETE

This method shall support the URI query parameters specified in table 6.2.18.3.3-1.

Table 6.2.18.3.3-1: URI query parameters supported by the DELETE method on this resource

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

This method shall support the request data structures specified in table 6.2.18.3.3-2 and the response data structures and response codes specified in table 6.2.18.3.3-3.

Table 6.2.18.3.3-2: Data structures supported by the DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.18.3.3-3: Data structures supported by the DELETE Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	The Individual AM Influence Data was deleted successfully.
NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.19 Resource: EAS Deployment Information Data

6.2.19.1 Description

The EAS Deployment Information Data resource represents all EAS Deployment Information Data to the Nudr_DataRepository Service at a given UDR.

6.2.19.2 Resource definition

Resource URI: **{apiRoot}/nudr-dr/<apiVersion>/application-data/eas-deploy-data**

This resource shall support the resource URI variables defined in table 6.2.19.2-1.

Table 6.2.19.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.

6.2.19.3 Resource Standard Methods

6.2.19.3.1 GET

This method shall support the URI query parameters specified in table 6.2.19.3.1-1.

Table 6.2.19.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
dnn	Dnn	O	0..1	Identifies a DNN.
snssai	Snssai	O	0..1	Identifies a slice.
internal-group-id	GroupId	O	0..1	Identifies a group of users.
appld (NOTE 2)	string	O	0..1	Identifies an application.
NOTE 1: At least one of the above attributes shall be provided.				
NOTE 2: The query parameter does not follow the related naming convention (i.e. "lower-with-hyphen") defined in clause 5.1.3.3 of 3GPP TS 29.501 [7]. This query parameter is however kept as currently defined in this specification for backward compatibility considerations.				

This method shall support the request data structures specified in table 6.2.19.3.1-2 and the response data structures and response codes specified in table 6.2.19.3.1-3.

Table 6.2.19.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.19.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
array(EasDeployInfoData)	M	1..N	200 OK	The subscribed EAS Deployment information as request in the request URI query parameter(s) are returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.20 Resource: Individual EAS Deployment Information Data

6.2.20.1 Description

The Individual EAS Deployment Information Data resource represents a single EAS Deployment Information data resource in the Nudr_DataRepository Service at a given UDR.

6.2.20.2 Resource definition

Resource URI: **{apiRoot}/nudr-dr/<apiVersion>/application-data/eas-deploy-data/{easDeployInfoId}**

This resource shall support the resource URI variables defined in table 6.2.20.2-1.

Table 6.2.20.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
easDeployInfoId	string	Identifies an Individual EAS Deployment Information Data resource.

6.2.20.3 Resource Standard Methods

6.2.20.3.1 GET

This method shall support the URI query parameters specified in table 6.2.20.3.1-1.

Table 6.2.20.3.1-1: 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 6.2.20.3.1-2 and the response data structures and response codes specified in table 6.2.20.3.1-3.

Table 6.2.20.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.20.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
EasDeployInfoData	M	1	200 OK	The EAS Deployment Data is returned.
NOTE: The mandatory HTTP error status codes for the HTTP GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] shall also apply.				

6.2.20.3.2 PUT

This method shall support the URI query parameters specified in table 6.2.20.3.1-1.

Table 6.2.20.3.1-1: URI query parameters supported by the PUT method on this resource

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

This method shall support the request data structures specified in table 6.2.20.3.1-2 and the response data structures and response codes specified in table 6.2.20.3.1-3.

Table 6.2.20.3.1-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
EasDeployInfoData	M	1	The EAS Deployment Information Data to be stored in the UDR.

Table 6.2.20.3.1-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
EasDeployInfoData	M	1	201 Created	The resource has been successfully created and a response body is returned containing a representation of the resource.
EasDeployInfoData	M	1	200 OK	The resource has been successfully updated and a response body is returned containing a representation of the resource.
n/a			204 No Content	The resource has been successfully updated.
NOTE: The mandatory HTTP error status codes for the PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

Table 6.2.20.3.1-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/application-data/eas-deploy-data/{easDeployInfold}

6.2.20.3.3 DELETE

This method shall support the URI query parameters specified in table 6.2.20.3.3-1.

Table 6.2.20.3.3-1: 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 6.2.20.3.3-2 and the response data structures and response codes specified in table 6.2.20.3.3-3.

Table 6.2.20.3.3-2: Data structures supported by the DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.20.3.3-3: Data structures supported by the DELETE Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	The EAS Deployment Data was successfully deleted.
NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.21 Resource: AF Requested QoS Data Sets

6.2.21.1 Description

The "AF Requested QoS Data Sets" collection resource represents all the AF Requested QoS Data Set(s) managed by the UDR.

6.2.21.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/application-data/af-qos-data-sets

This resource shall support the resource URI variables defined in table 6.2.21.2-1.

Table 6.2.21.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See clause 6.1.1 of 3GPP TS 29.504 [6].

6.2.21.3 Resource Standard Methods

6.2.21.3.1 GET

This method shall support the URI query parameters specified in table 6.2.21.3.1-1.

Table 6.2.21.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
dnns	array(Dnn)	O	1..N	Identifies the targeted DNN(s). When this query parameter is provided, the UDR shall return only the resource(s) that match at least one of the provided DNN(s). (NOTE 1, NOTE 2)
snssais	array(Snssai)	O	1..N	Identifies the targeted network slice(s). When this query parameter is provided, the UDR shall return only the resource(s) that match at least one of the provided network slice(s). (NOTE 1, NOTE 2)
int-group-ids	array(Groupid)	O	1..N	Contains the targeted group(s) of UE(s). When this query parameter is provided, the UDR shall return only the resource(s) that match at least one of the provided internal group ID(s). (NOTE 1, NOTE 3)
supis	array(Supi)	O	1..N	Contains the identifier(s) of the targeted UE(s). When this query parameter is provided, the UDR shall return only the resource(s) that match at least one of the provided SUPI(s). (NOTE 1, NOTE 3)
data-set-ids	array(string)	O	1..N	Contains the identifier(s) of the requested "Individual AF Requested QoS Data Set" resource(s). (NOTE 1, NOTE 4)
supp-feat	SupportedFeatures	O	0..1	Contains the features supported by the NF service consumer. This query parameter shall be present when feature negotiation needs to take place.
NOTE 1: At least one of these query parameters shall be present.				
NOTE 2: These query parameters are mutually exclusive. Either one of them may be present.				
NOTE 3: These query parameters are mutually exclusive. Either one of them may be present.				
NOTE 4: When this query parameter is present, all the other query parameters shall not be present, except the "supp-feat" query parameter that may be present when needed.				

This method shall support the request data structures specified in table 6.2.21.3.1-2 and the response data structures and response codes specified in table 6.2.21.3.1-3.

Table 6.2.21.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.21.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
array(AfRequestedQos Data)	M	0..N	200 OK	Successful case. The requested "Individual AF Requested QoS Data Set" resource(s) matching the provided query parameter(s) shall be returned. If there are no "Individual AF Requested QoS Data Set" resource(s) matching the provided query parameter(s), an empty array shall be returned.
NOTE: The mandatory HTTP error status codes for the HTTP GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] shall also apply.				

6.2.22 Resource: Individual AF Requested QoS Data Set

6.2.22.1 Description

The "Individual AF Requested QoS Data Set" resource represents a single AF Requested QoS data Set managed by the UDR.

6.2.22.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/application-data/af-qos-data-sets/{afReqQosId}

This resource shall support the resource URI variables defined in table 6.2.22.2-1.

Table 6.2.22.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See clause 6.1.1 of 3GPP TS 29.504 [6].
afReqQosId	string	Represents the identifier of the "Individual AF Requested QoS Data Set" resource.

6.2.22.3 Resource Standard Methods

6.2.22.3.1 PUT

This method shall support the URI query parameters specified in table 6.2.22.3.1-1.

Table 6.2.22.3.1-1: URI query parameters supported by the PUT method on this resource

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

This method shall support the request data structures specified in table 6.2.22.3.1-2 and the response data structures and response codes specified in table 6.2.22.3.1-3.

Table 6.2.22.3.1-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
AfRequestedQosData	M	1	Represents the parameters to request the creation/update of an AF Requested QoS Data.

Table 6.2.22.3.1-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
AfRequestedQos Data	M	1	201 Created	Successful case. The "Individual AF Requested QoS Data Set" resource is successfully created and a representation of the created resource shall be returned in the response body. An HTTP "Location" header that contains the URI of the created resource shall also be included.
AfRequestedQos Data	M	1	200 OK	Successful case. The "Individual AF Requested QoS Data Set" resource is successfully updated and a representation of the updated resource shall be returned in the response body.
n/a			204 No Content	Successful case. The resource is successfully updated and no content is returned in the response body.
NOTE: The mandatory HTTP error status codes for the HTTP PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] shall also apply.				

Table 6.2.22.3.1-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/application-data/af-qos-data-sets/{afReqQosId}

6.2.22.3.2 PATCH

This method shall support the URI query parameters specified in table 6.2.22.3.2-1.

Table 6.2.22.3.2-1: URI query parameters supported by the PATCH method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 6.2.22.3.2-2 and the response data structures and response codes specified in table 6.2.22.3.2-3.

Table 6.2.22.3.2-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
AfRequestedQos DataPatch	M	1	Represents the requested modifications to the "Individual AF Requested QoS Data Set" resource.

Table 6.2.22.3.2-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
AfRequestedQos Data	M	1	200 OK	Successful case. The "Individual AF Requested QoS Data Set" resource is successfully modified and a representation of the updated resource shall be returned in the response body.
n/a			204 No Content	Successful case. The "Individual AF Requested QoS Data" resource is successfully modified and no content is returned in the response body.
NOTE: The mandatory HTTP error status codes for the HTTP PATCH method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] shall also apply.				

6.2.22.3.3 DELETE

This method shall support the URI query parameters specified in table 6.2.22.3.3-1.

Table 6.2.22.3.3-1: 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 6.2.22.3.3-2 and the response data structures and response codes specified in table 6.2.22.3.3-3.

Table 6.2.22.3.3-2: Data structures supported by the DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.22.3.3-3: Data structures supported by the DELETE Response Body on this resource

Data type	P	Cardinality	Response Codes	Description
n/a			204 No Content	Successful case. The "Individual AF Requested QoS Data Set" resource is successfully deleted.
NOTE: The mandatory HTTP error status codes for the HTTP DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] shall also apply.				

6.2.23 Resource: Individual DNAI EAS Mapping

6.2.23.1 Description

The resource represents the EAS address information for a DNAI.

NOTE: This information is configured by the OAM.

6.2.23.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/application-data/dnai-eas-mappings/{dnai}

This resource shall support the resource URI variables defined in table 6.2.23.2-1.

Table 6.2.23.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1
dnai	Dnai	The DNAI.

6.2.23.3 Resource Standard Methods

6.2.23.3.1 GET

This method shall support the URI query parameters specified in table 6.2.23.3.1-1.

Table 6.2.23.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
supp-feat	SupportedFeatures	O	0..1	The features supported by the NF service consumer.

This method shall support the request data structures specified in table 6.2.23.3.1-2 and the response data structures and response codes specified in table 6.2.23.3.1-3.

Table 6.2.23.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.23.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
DnaiEasMapping	M	1	200 OK	Upon success, a response body containing the EAS information for the DNAI shall be returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.24 Resource: ECS Address Roaming Data

6.2.24.1 Description

The ECS Address Roaming Data resource represents all ECS Address Roaming Data in the Nudr_DataRepository Service at a given UDR.

6.2.24.2 Resource definition

Resource URI: `{apiRoot}/nudr-dr/<apiVersion>/application-data/ecs-address-roaming`

This resource shall support the resource URI variables defined in table 6.2.24.2-1.

Table 6.2.24.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.

6.2.24.3 Resource Standard Methods

6.2.24.3.1 GET

This method shall support the URI query parameters specified in table 6.2.24.3.1-1.

Table 6.2.24.3.1-1: 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 6.2.24.3.1-2 and the response data structures and response codes specified in table 6.2.24.3.1-3.

Table 6.2.24.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.24.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
array(EcsAddrData)	M	1..N	200 OK	The ECS Address Data requested in the request URI query parameter(s) are returned.
NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.25 Resource: Individual ECS Address Roaming Data

6.2.25.1 Description

The Individual ECS Address Roaming Data resource represents a single ECS Address Roaming Data entry at the Nudr_DataRepository Service at a given UDR.

6.2.25.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/application-data/ecs-address-roaming/{ecsAddrInfoId}

This resource shall support the resource URI variables defined in table 6.2.25.2-1.

Table 6.2.25.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
ecsAddrInfoId	string	Identifies an Individual ECS Address Roaming Data resource.

6.2.25.3 Resource Standard Methods

6.2.25.3.1 GET

This method shall support the URI query parameters specified in table 6.2.25.3.1-1.

Table 6.2.25.3.1-1: 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 6.2.25.3.1-2 and the response data structures and response codes specified in table 6.2.25.3.1-3.

Table 6.2.25.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.25.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
EcsAddrData	M	1	200 OK	The requested information is returned.
NOTE: The mandatory HTTP error status codes for the HTTP GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] shall also apply.				

6.2.25.3.2 PUT

This method shall support the URI query parameters specified in table 6.2.25.3.1-1.

Table 6.2.25.3.2-1: URI query parameters supported by the PUT method on this resource

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

This method shall support the request data structures specified in table 6.2.25.3.2-2 and the response data structures and response codes specified in table 6.2.25.3.2-3.

Table 6.2.25.3.2-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
EcsAddrData	M	1	The ECS Address Roaming Data to be stored in the UDR.

Table 6.2.25.3.2-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
EcsAddrData	M	1	201 Created	The resource has been successfully created and a response body is returned containing a representation of the resource.
EcsAddrData	M	1	200 OK	The resource has been successfully updated and a response body is returned containing a representation of the resource.
n/a			204 No Content	The resource has been successfully updated.
NOTE: The mandatory HTTP error status codes for the PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

Table 6.2.25.3.2-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/application-data/ecs-address-roaming/{ecsAddrInfold}

6.2.25.3.2A PATCH

This method shall support the URI query parameters specified in table 6.2.25.3.2A-1.

Table 6.2.25.3.2A-1: URI query parameters supported by the PATCH method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 6.2.25.3.2A-2 and the response data structures and response codes specified in table 6.2.25.3.2A-3.

Table 6.2.25.3.2A-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
EcsAddrDataPatch	M	1	Represents the requested ECS Address Roaming Data to be updated.

Table 6.2.25.3.2A-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
EcsAddrData	M	1	200 OK	Successful case. The resource has been successfully updated and a response body is returned containing a representation of the resource.
n/a			204 No Content	Successful case. The resource has been successfully updated and no content is returned in the response body.
NOTE: The mandatory HTTP error status codes for the HTTP PATCH method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] shall also apply.				

6.2.25.3.3 DELETE

This method shall support the URI query parameters specified in table 6.2.25.3.3-1.

Table 6.2.25.3.3-1: 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 6.2.25.3.3-2 and the response data structures and response codes specified in table 6.2.25.3.3-3.

Table 6.2.25.3.3-2: Data structures supported by the DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.25.3.3-3: Data structures supported by the DELETE Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	The data was successfully deleted.
NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.26 Resource: UE ID Mappings

6.2.26.1 Description

This resource represents all the active UE ID Mappings at the UDR.

6.2.26.2 Resource definition

Resource URI: **{apiRoot}/nudr-dr/<apiVersion>/application-data/ueid-mappings**

This resource shall support the resource URI variables defined in table 6.2.26.2-1.

Table 6.2.26.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.

6.2.26.3 Resource Standard Methods

6.2.26.3.1 GET

This method shall support the URI query parameters specified in table 6.2.26.3.1-1.

Table 6.2.26.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
app-layer-ids	array(ApplicationlayerId)	O	1..N	Contains the requested Application Layer ID(s). (NOTE)
gpsis	array(Gpsi)	O	1..N	Contains the requested GPSI(s). (NOTE)
supp-feat	SupportedFeatures	O	0..1	Contains the list of supported features.

NOTE: These query parameters are mutually exclusive. Either one of them may be present.

This method shall support the request data structures specified in table 6.2.26.3.1-2 and the response data structures and response codes specified in table 6.2.26.3.1-3.

Table 6.2.26.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.26.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
array(UeIdMappingInfo)	M	0..N	200 OK	Successful case. The requested UE ID mapping information is returned. If there are no UE ID Mapping(s) corresponding to the received query parameter(s), if any, an empty array shall be returned.

NOTE: The mandatory HTTP error status codes for the HTTP GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] shall also apply.

6.2.27 Resource: Individual UE ID Mapping

6.2.27.1 Description

This resource represents a UE ID Mapping at the UDR.

6.2.27.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/application-data/ueid-mappings/{ueMappingId}

This resource shall support the resource URI variables defined in table 6.2.27.2-1.

Table 6.2.27.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
ueMappingId	string	Identifies an "Individual UE ID Mapping" resource.

6.2.27.3 Resource Standard Methods

6.2.27.3.1 GET

This method shall support the URI query parameters specified in table 6.2.27.3.1-1.

Table 6.2.27.3.1-1: 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 6.2.27.3.1-2 and the response data structures and response codes specified in table 6.2.27.3.1-3.

Table 6.2.27.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.27.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
UeldMappingInfo	M	1	200 OK	Successful case. The requested "UE ID Mapping" resource is returned.
NOTE: The mandatory HTTP error status codes for the HTTP GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.27.3.2 PUT

This method shall support the URI query parameters specified in table 6.2.27.3.2-1.

Table 6.2.27.3.2-1: URI query parameters supported by the PUT method on this resource

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

This method shall support the request data structures specified in table 6.2.27.3.2-2 and the response data structures and response codes specified in table 6.2.27.3.2-3.

Table 6.2.27.3.2-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
UeldMappingInfo	M	1	Contains the parameters to request the creation/update of a UE ID Mapping.

Table 6.2.27.3.2-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
UeIdMappingInfo	M	1	201 Created	Successful case. The "UE ID Mapping" resource is successfully created and a representation of the created resource is returned in the response body. An HTTP "Location" header containing the URI of the created resource shall be returned.
UeIdMappingInfo	M	1	200 OK	Successful case. The "UE ID Mapping" resource is successfully updated and a representation of the updated resource is returned in the response body.
n/a			204 No Content	Successful case. The "UE ID Mapping" resource is successfully updated and no content is returned in the response body.
NOTE: The mandatory HTTP error status codes for the HTTP PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

Table 6.2.27.3.2-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/application-data/ueid-mappings/{ueMappingId}

6.2.27.3.3 DELETE

This method shall support the URI query parameters specified in table 6.2.27.3.3-1.

Table 6.2.27.3.3-1: 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 6.2.27.3.3-2 and the response data structures and response codes specified in table 6.2.27.3.3-3.

Table 6.2.27.3.3-2: Data structures supported by the DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.27.3.3-3: Data structures supported by the DELETE Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Successful case. The "UE ID Mapping" resource is successfully deleted.
NOTE: The mandatory HTTP error status codes for the HTTP DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.28 Resource: Non-3GPP Device Identifier Information

6.2.28.1 Description

This resource represents all the Non-3GPP device identifier information at the UDR.

6.2.28.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/application-data/non3gpp-device-Id

This resource shall support the resource URI variables defined in table 6.2.28.2-1.

Table 6.2.28.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.

6.2.28.3 Resource Standard Methods

6.2.28.3.1 GET

This method shall support the URI query parameters specified in table 6.2.28.3.1-1.

Table 6.2.28.3.1-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
dnns	array(Dnn)	O	1..N	Each element identifies a DNN. The UDR shall return only Individual Non-3GPP Device Identifier Information resource(s) that match one of the provided DNNs.
snssais	array(Snssai)	O	1..N	Each element identifies a slice. The UDR shall return only Individual Non-3GPP Device Identifier Information resource(s) that match one of the provided S-NSSAIs.
supis	array(Supi)	O	1..N	Each element identifies a user. The UDR shall return only Individual Non-3GPP Device Identifier Information resource(s) that match one of the provided SUPIs.

When the request query contains more than one optional query parameters defined as an array, the UDR shall return the Individual Non-3GPP Device Identifier Information resources for each matching combination of the values of the elements of the array of the provided query parameters.

EXAMPLE: If "snssais" query parameter is included with two S-NSSAI entries (SNSSAI_1 and SNSSAI_2) and "dnns" is included with two DNN entries (e.g. DNN_A and DNN_B), and the other optional query parameters are not included, the UDR shall return the Individual Non-3GPP Device Identifier Information resources for each matching S-NSSAI and DNN combination (for all the possible values for the SUPI), i.e., the resource(s) matching SNSSAI_1 and DNN_A, the resource(s) matching SNSSAI_1 and DNN_B, the resource(s) matching SNSSAI_2 and DNN_A, and the resource(s) matching SNSSAI_2 and DNN_B.

This method shall support the request data structures specified in table 6.2.28.3.1-2 and the response data structures and response codes specified in table 6.2.28.3.1-3.

Table 6.2.28.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.28.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
array(Non3gppDevInfo)	M	0..N	200 OK	Successful case. The requested Non-3GPP device identifier information is returned. If there are no Non-3GPP device identifier information that match the request, an empty array shall be returned.
NOTE: The mandatory HTTP error status codes for the HTTP GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] shall also apply.				

6.2.29 Resource: Individual Non-3GPP Device Identifier Information

6.2.29.1 Description

This resource represents a Non-3GPP Device Identifier Information at the UDR.

6.2.29.2 Resource definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/application-data/non3gpp-device-Id/{non3gppDevId}

This resource shall support the resource URI variables defined in table 6.2.29.2-1.

Table 6.2.29.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
non3gppDevId	string	Identifies an "Individual Non-3GPP Device Identifier Information" resource.

6.2.29.3 Resource Standard Methods

6.2.29.3.1 GET

This method shall support the URI query parameters specified in table 6.2.29.3.1-1.

Table 6.2.29.3.1-1: 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 6.2.29.3.1-2 and the response data structures and response codes specified in table 6.2.29.3.1-3.

Table 6.2.29.3.1-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.29.3.1-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
Non3gppDevInfo	M	1	200 OK	Successful case. The requested "Individual Non-3GPP Device Identifier Information" resource is returned.
NOTE: The mandatory HTTP error status codes for the HTTP GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.2.29.3.2 PUT

This method shall support the URI query parameters specified in table 6.2.29.3.2-1.

Table 6.2.29.3.2-1: URI query parameters supported by the PUT method on this resource

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

This method shall support the request data structures specified in table 6.2.29.3.2-2 and the response data structures and response codes specified in table 6.2.29.3.2-3.

Table 6.2.29.3.2-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
Non3gppDevInfo	M	1	The Non-3GPP Device Identifier Information to be stored in the UDR.

Table 6.2.29.3.2-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
Non3gppDevInfo	M	1	201 Created	Successful case. The "Individual Non-3GPP Device Identifier Information" resource is successfully created and a representation of the created resource is returned in the response body. An HTTP "Location" header containing the URI of the created resource shall be returned.
Non3gppDevInfo	M	1	200 OK	Successful case. The "Individual Non-3GPP Device Identifier Information" resource is successfully updated and a representation of the updated resource is returned in the response body.
n/a			204 No Content	Successful case. The "Individual Non-3GPP Device Identifier Information" resource is successfully updated and no content is returned in the response body.
NOTE: The mandatory HTTP error status codes for the HTTP PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

Table 6.2.29.3.2-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/application-data/non3gpp-device-ld/{non3gppDevId}

6.2.29.3.3 PATCH

This method shall support the URI query parameters specified in table 6.2.29.3.3-1.

Table 6.2.29.3.3-1: URI query parameters supported by the PATCH method on this resource

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

This method shall support the request data structures specified in table 6.2.29.3.3-2 and the response data structures and response codes specified in table 6.2.29.3.3-3.

Table 6.2.29.3.3-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
Non3gppDevInfoPatch	M	1	The Non-3GPP Device Identifier Information to be updated in the UDR.

Table 6.2.29.3.3-3: Data structures supported by the PATCH Response Body on this resource

Data type	P	Cardinality	Response codes	Description
Non3gppDevInfo	M	1	200 OK	Successful case. The "Individual Non-3GPP Device Identifier Information" resource is successfully updated and a representation of the updated resource is returned in the response body.
n/a			204 No Content	Successful case. The "Individual Non-3GPP Device Identifier Information" resource is successfully updated and no content is returned in the response body.
NOTE: The mandatory HTTP error status codes for the HTTP PATCH method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

Table 6.2.29.3.3-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/application-data/non3gpp-device-Id/{non3gppDevId}

6.2.29.3.4 DELETE

This method shall support the URI query parameters specified in table 6.2.29.3.4-1.

Table 6.2.29.3.4-1: 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 6.2.29.3.4-2 and the response data structures and response codes specified in table 6.2.29.3.4-3.

Table 6.2.29.3.4-2: Data structures supported by the DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 6.2.29.3.4-3: Data structures supported by the DELETE Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Successful case. The "Individual Non-3GPP Device Identifier Information" resource is successfully deleted.
NOTE: The mandatory HTTP error status codes for the HTTP DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.3 Notifications

6.3.1 General

Notifications shall comply with clause 6.2 of 3GPP TS 29.500 [4] and clause 4.6.2.3 of 3GPP TS 29.501 [5].

Table 6.3.1-1: Notifications overview

Notification	Callback URI	HTTP method or custom operation	Description (service operation)
Influence Data Update Notification	{notificationUri}	POST	One of notification reference provided by the service consumer during the subscription of the AF Influence Data.
Application Data Change Notification	{notificationUri}	POST	Application Data Change Notification

6.3.2 Void

6.3.3 Influence Data Update Notification

6.3.3.1 Description

The Influence Update Notification is used by the UDR to report one or several observed Influence Data(s) to a NF service consumer that has subscribed to such Notifications.

6.3.3.2 Operation Definition

The POST method shall be used for traffic influence data change notification and the URI shall be provided during the subscription procedure.

Callback URI: {notificationUri}

This method shall support the URI query parameters specified in table 6.3.3.2-1.

Table 6.3.3.2-1: URI query parameters supported by the POST method

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 6.3.3.2-2 and the response data structures and response codes specified in table 6.3.3.2-3.

Table 6.3.3.2-2: Data structures supported by the POST Request Body on this resource

Data type	P	Cardinality	Description
array(TrafficInfluData or TrafficInfluDataNotif)	M	1..N	Provides Information about observed Influence Data. If the EnhancedInfluDataNotification feature is supported, the TrafficInfluDataNotif data type shall be sent.

Table 6.3.3.2-3: Data structures supported by the POST Response Body on this resource

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	The receipt of the Notification is acknowledged.
NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.3.4 Application Data Change Notification

The POST method shall be used for application data change notification and the URI shall be provided during the subscription procedure.

Callback URI: {notificationUri}

This method shall support the URI query parameters specified in table 6.3.4-1.

Table 6.3.4-1: URI query parameters supported by the POST method

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 6.3.4-2 and the response data structures and response codes specified in table 6.3.4-3.

Table 6.3.4-2: Data structures supported by the POST Request Body

Data type	P	Cardinality	Description
array(ApplicationDataChangeNotification)	M	1..N	Notification of application data changes.

Table 6.3.4-3: Data structures supported by the POST Response Body

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	The reception of the notification is acknowledged.
NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

6.4 Data Model

6.4.1 General

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

Table 6.4.1-1 specifies the data types defined for the Nudr_DataRepository Service API for Application Data service-based interface protocol.

Table 6.4.1-1: Nudr_DataRepository specific Data Types for Application Data

Data type	Section defined	Description	Applicability
AfRequestedQoSData	6.4.2.18	Represents an AF Requested QoS Data Set.	GMEC
AfRequestedQoSDataPatch	6.4.2.19	Represents the requested modifications to an AF Requested QoS Data Set.	GMEC
AmInfluData	6.4.2.16	Contains AM influence data.	DCAMP
AmInfluDataPatch	6.4.2.17	Contains AM influence data that can be updated.	DCAMP
ApplicationDataSubs	6.4.2.10	Contains application data subscription data.	
ApplicationDataChangeNotif	6.4.2.11	Contains the new or updated application data or removed indication.	
BdtPolicyData	6.4.2.7	Contains applied BDT policy data.	EnhancedBackgroundDataTransfer
BdtPolicyDataPatch	6.4.2.8	Contains modification instructions to be performed on the applied BDT policy data.	EnhancedBackgroundDataTransfer
CorrelationType	6.4.3.4	Indicates that the EAS(es) corresponding to a common DNAI or common EAS should be selected	CommonEASDNAI
DataInd	6.4.3.3	Indicates the type of data.	
DataFilter	6.4.2.12	Indicates an application data filter.	
DnaiEasInfo	6.4.2.22	Contains EAS information for a DNAI.	DnaiEasMappings
DnaiEasMapping	6.4.2.21	Contains DNAI(s) to EAS mapping.	DnaiEasMappings
EcsAddrData	6.4.2.23	Represents ECS Address Configuration Data.	HR-SBO
EcsAddrDataPatch	6.4.2.23A	Represents the requested modifications to ECS Address Configuration Data.	HR-SBO
IptvConfigData	6.4.2.9	Represents IPTV configuration data information.	
Non3gppDevInfo	6.4.2.26	Represents the Non-3GPP Device Identifier Information.	Non3gppDevice
Non3gppDevInfoPatch	6.4.2.27	Contains modification instructions to be performed on the Non-3GPP Device Identifier Information	Non3gppDevice
PfdDataForAppExt	6.4.2.6	The PFDs and related data for the application	
QoSRequirements	6.4.6.24	Represents QoS requirements.	GMEC
QoSRequirementsRm	6.4.6.25	Represents the same as the QoSRequirements data type but: - with the OpenAPI "nullable: true" property; and - with the individual attributes defined with the corresponding nullable data types.	GMEC
ServiceParameterData	6.4.2.15	Contains the service parameter data.	
SliceReplReqInfoRm	6.4.2.28	Represents the same as the SliceReplReqInfo data type defined in clause 5.6.2.12 of 3GPP TS 29.534 [22] but with the OpenAPI "nullable" property set to "true".	AfNetSliceRepl
TrafficCorrelationInfo	6.4.2.18	Contains the information for traffic correlation.	CommonEASDNAI
ServiceParameterDataPatch	6.4.2.15A	Contains the service parameter data that can be updated.	
TrafficInfluData	6.4.2.2	Contains traffic influence data.	
TrafficInfluDataPatch	6.4.2.3	Contains modification instructions to be performed on the traffic influence data.	
TrafficInfluDataNotif	6.4.2.14	Contains traffic influence data for notification.	EnhancedInfluDataNotification
TrafficInfluSub	6.4.2.4	Contains traffic influence subscription data.	

Table 6.4.1-2 specifies data types re-used by the Nudr_DataRepository Service API for Application Data 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_DataRepository Service API for Application Data service based interface.

Table 6.4.1-2: Nudr_DataRepository re-used Data Types for Application Data

Data type	Reference	Comments	Applicability
5QiPriorityLevel	3GPP TS 29.571 [7]	Represents the 5QI Priority Level	GMEC
5QiPriorityLevelRm	3GPP TS 29.571 [7]	Represents the 5QI Priority Level. This data type is defined in the same way as the "5QiPriorityLevel" data type, but with the OpenAPI "nullable: true" property.	GMEC
A2xParamsPc5	3GPP TS 29.522 [19]	Contains the A2X service parameters data provisioned over PC5 reference point.	A2X
A2xParamsPc5Rm	3GPP TS 29.522 [19]	This data type is defined in the same way as the A2xParamsPc5 data type, but with the OpenAPI nullable property set to true.	A2X
A2xParamsUu	3GPP TS 29.522 [19]	Contains the A2X service parameters data provisioned over Uu reference point.	A2X
A2xParamsUuRm	3GPP TS 29.522 [19]	This data type is defined in the same way as the A2xParamsUu data type, but with the OpenAPI nullable property set to true.	A2X
AfHeaderHandlingControlInfo	3GPP TS 29.514 [52]	Represents the header handling control information.	HeaderHandling
AmlInfluEvent	3GPP TS 29.522 [19]	Identifies the type of AM related events of which the AF requests to be notified.	
AlternativeServiceRequirementsData	3GPP TS 29.514 [52]	Contains alternative QoS related parameters and a reference to them.	GMEC
ApplicationId	3GPP TS 29.571 [7]	Indicates an application identifier.	
ApplicationlayerId	3GPP TS 29.571 [7]	Represents an application layer identifier.	Ranging_SL
BdtReferenceId	3GPP TS 29.122 [9]	Identifies a selected policy of background data transfer.	EnhancedBackgroundDataTransfer
BitRate	3GPP TS 29.571 [7]	Represent a bitrate.	GMEC
BitRateRm	3GPP TS 29.571 [7]	Represent a bitrate. This data type is defined in the same way as the "BitRate" data type, but with the OpenAPI nullable property set to true.	GMEC
DateTime	3GPP TS 29.571 [7]	Indicates a date and time.	
DateTimeRm	3GPP TS 29.571 [7]	Indicates a date and time that can be updated.	
Dnai	3GPP TS 29.571 [7]	Represents a DNAI.	DnaiEasMappings
DnaiChangeType	3GPP TS 29.571 [7]	Describes the types of DNAI change.	
Dnn	3GPP TS 29.571 [7]	Identifies a Data Network Name. (NOTE 2)	
DnnSnssaiInformation	3GPP TS 29.522 [19]	Represents a DNN, S-NSSAI combination.	DCAMP
DurationSec	3GPP TS 29.571 [7]	Represents a duration in seconds.	DCAMP CachingTimer
DurationSecRm	3GPP TS 29.571 [7]	Represents a removable duration in seconds.	DCAMP
EcsAuthMethod	3GPP TS 29.503 [30]	Represents the ECS Authentication Methods.	HR-SBO
EasDeployInfoData	3GPP TS 29.591 [23]	Represents the EAS Deployment Information.	EasDeployment
EcsServerAddr	3GPP TS 29.571 [7]	Represents the Edge Configuration Server (ECS) address configuration information.	HR-SBO
EthFlowDescription	3GPP TS 29.514 [16]	Contains the definition of the packet filter for an Ethernet data flow.(NOTE 1).	
EthFlowInfo	3GPP TS 29.122 [9]	Represents Ethernet service data flow information.	GMEC
Event	3GPP TS 29.522 [19]	Contains the outcome of the UE Policy Delivery related to the invocation of AF provisioned service parameters.	DeliveryOutcome
EventsSubscReqData	3GPP TS 29.514 [16]	Represents the events that the application subscribes to.	GMEC
EventsSubscReqDataRm	3GPP TS 29.514 [16]	This data type is defined in the same way as the EventsSubsReqData data type, but with the OpenAPI "nullable: true" property.	GMEC
ExtMaxDataBurstVol	3GPP TS 29.571 [7]	Represents the Maximum Data Burst Volume, expressed in Bytes. Minimum = 4096. Maximum = 2000000.	GMEC
ExtMaxDataBurstVolRm	3GPP TS 29.571 [7]	Represents the Maximum Data Burst Volume, expressed in Bytes. Minimum = 4096. Maximum = 2000000. This data type is defined in the same way as the "ExtMaxDataBurstVol" data type, but with the OpenAPI "nullable: true" property.	GMEC

FlowInfo	3GPP TS 29.122 [9]	Contains the flow information.	
FqdnPatternMatchingRule	3GPP TS 29.571 [7]	Identifies an FQDN pattern matching rule.	DnaiEasMappings
GroupId	3GPP TS 29.571 [7]	Identifies a group of users.	EasDeployment
IpAddr	3GPP TS 29.571 [7]	IP address and/or prefix.	DnaiEasMappings
IptvConfigDataPatch	3GPP TS 29.522 [19]	Contains the IPTV configuration data used for PATCH.	
Ipv4Addr	3GPP TS 29.571 [7]	Identifies an IPv4 address.	
Ipv4AddrRm	3GPP TS 29.571 [7]	Identifies an IPv4 address. This data type is defined in the same way as the "Ipv4Addr" data type, but with the OpenAPI "nullable: true" property.	CommonEASDNAI
Ipv6Addr	3GPP TS 29.571 [7]	Identifies an IPv6 address.	
Ipv6AddrRm	3GPP TS 29.571 [7]	Identifies an IPv6 address. This data type is defined in the same way as the "Ipv6Addr" data type, but with the OpenAPI "nullable: true" property.	CommonEASDNAI
Link	3GPP TS 29.122 [9]	Identifies a referenced resource.	HR-SBO
MacAddr48	3GPP TS 29.571 [7]	MAC Address.	
MaxDataBurstVol	3GPP TS 29.571 [7]	Represents Maximum Data Burst Volume expressed in Bytes. Minimum = 1. Maximum = 4095.	GMEC
MaxDataBurstVolRm	3GPP TS 29.571 [7]	Represents Maximum Data Burst Volume expressed in Bytes. Minimum = 1. Maximum = 4095. This data type is defined in the same way as the "MaxDataBurstVol" data type, but with the OpenAPI "nullable: true" property.	GMEC
MulticastAccessControl	3GPP TS 29.522 [19]	Represents the multicast access control information.	
NetworkAreaInfo	3GPP TS 29.554 [13]	Describes a network area information.	
NetworkDescription	3GPP TS 29.522 [19]	Represents the description of a PLMN in terms of the PLMN ID, the MCC (and optionally, applicable MNCs) or the indication of any PLMN	VPLMNSpecificURSP
Non3gppDeviceInformation	3GPP TS 29.522 [19]	Represents the Non-3GPP device information.	Non3gppDevice
PacketDelBudget	3GPP TS 29.571 [7]	Represents the Packet Delay Budget expressed in milliseconds. Minimum = 1	GMEC
PacketDelBudgetRm	3GPP TS 29.571 [7]	Represents the Packet Delay Budget expressed in milliseconds. This data type is defined in the same way as the "PacketDelBudget" data type, but with the OpenAPI "nullable: true" property.	GMEC
PacketErrRate	3GPP TS 29.571 [7]	Represents the Packet Error Rate (GMEC
PacketErrRateRm	3GPP TS 29.571 [7]	Represents the Packet Error Rate. This data type is defined in the same way as the "PacketErrRate" data type, but with the OpenAPI "nullable: true" property.	GMEC
ParameterOverPc5	3GPP TS 29.522 [19]	Contains the V2X service parameters data provisioned over PC5.	
ParameterOverPc5Rm	3GPP TS 29.522 [19]	This data type is defined in the same way as the ParameterOverPc5 data type, but with the OpenAPI nullable property set to true.	
ParameterOverUu	3GPP TS 29.522 [19]	Contains the V2X service parameters data provisioned over Uu.	
ParameterOverUuRm	3GPP TS 29.522 [19]	This data type is defined in the same way as the ParameterOverUu data type, but with the OpenAPI nullable property set to true.	
ParamForProSeDc	3GPP TS 29.522 [19]	Contains the service parameters for 5G ProSe direct communications.	ProSe
ParamForProSeDcRm	3GPP TS 29.522 [19]	This data type is defined in the same way as the ParamForProSeDc data type, but with the OpenAPI nullable property set to true.	ProSe

ParamForProSeDd	3GPP TS 29.522 [19]	Contains the service parameters for 5G ProSe direct discovery.	ProSe
ParamForProSeDdRm	3GPP TS 29.522 [19]	This data type is defined in the same way as the ParamForProSeDd data type, but with the OpenAPI nullable property set to true.	ProSe
ParamForProSeEndUe	3GPP TS 29.522 [19]	Contains the service parameters for 5G ProSe End UE supporting 5G ProSe Layer-2 and/or Layer-3 UE-to-UE Relay.	ProSe_Ph2
ParamForProSeEndUeRm	3GPP TS 29.522 [19]	This data type is defined in the same way as the ParamForProSeEndUe data type, but with the OpenAPI nullable property set to true.	ProSe_Ph2
ParamForProSeRemUe	3GPP TS 29.522 [19]	Contains the service parameters for 5G ProSe remote UE supporting 5G ProSe Layer-2 and/or Layer-3 UE-to-Network Relay.	ProSe
ParamForProSeRemUeRm	3GPP TS 29.522 [19]	This data type is defined in the same way as the ParamForProSeRemUe data type, but with the OpenAPI nullable property set to true.	ProSe
ParamForProSeU2NRelUe	3GPP TS 29.522 [19]	Contains the service parameters for 5G ProSe UE-to-network relay UE supporting 5G ProSe Layer-2 and/or Layer-3 UE-to-Network Relay.	ProSe
ParamForProSeU2NRelUeRm	3GPP TS 29.522 [19]	This data type is defined in the same way as the ParamForProSeU2NRelUe data type, but with the OpenAPI nullable property set to true.	ProSe
ParamForProSeU2URelUe	3GPP TS 29.522 [19]	Contains the service parameters for 5G ProSe UE-to-UE Relay UE supporting 5G ProSe Layer-2 and/or Layer-3 UE-to-UE Relay.	ProSe_Ph2
ParamForProSeU2URelUeRm	3GPP TS 29.522 [19]	This data type is defined in the same way as the ParamForProSeU2URelUe data type, but with the OpenAPI nullable property set to true.	ProSe_Ph2
ParamProSeMultiHopEndUe	3GPP TS 29.522 [19]	Represents the service parameters for 5G ProSe End UE supporting 5G ProSe Layer-3 multi-hop UE-to-UE Relay.	ProSe_Ph3
ParamProSeMultiHopEndUeRm	3GPP TS 29.522 [19]	This data type is defined in the same way as the ParamProSeMultiHopEndUe data type, but with the OpenAPI nullable property set to "true".	ProSe_Ph3
ParamProSeMultiHopU2NRelUe	3GPP TS 29.522 [19]	Contains the service parameters for 5G ProSe UE-to-Network Relay UE supporting 5G ProSe Layer-2 and/or Layer-3 multi-hop UE-to-Network Relay.	ProSe_Ph3
ParamProSeMultiHopU2NRelUeRm	3GPP TS 29.522 [19]	This data type is defined in the same way as the ParamProSeMultiHopU2NRelUe data type, but with the OpenAPI nullable property set to "true".	ProSe_Ph3
ParamProSeMultiHopU2URelUe	3GPP TS 29.522 [19]	Represents the service parameters for 5G ProSe UE-to-UE Relay UE supporting 5G ProSe Layer-3 multi-hop UE-to-UE Relay.	ProSe_Ph3
ParamProSeMultiHopU2URelUeRm	3GPP TS 29.522 [19]	This data type is defined in the same way as the ParamProSeMultiHopU2URelUe data type, but with the OpenAPI nullable property set to "true".	ProSe_Ph3
ParamProSeMultiHopRemUe	3GPP TS 29.522 [19]	Contains the service parameters for 5G ProSe Remote UE supporting 5G ProSe Layer-2 and/or Layer-3 multi-hop UE-to-Network Relay.	ProSe_Ph3
ParamProSeMultiHopRemUeRm	3GPP TS 29.522 [19]	This data type is defined in the same way as the ParamProSeMultiHopRemUe data type, but with the OpenAPI nullable property set to "true".	ProSe_Ph3

ParamProSeMultiHopInter mUe	3GPP TS 29.522 [19]	Contains the service parameters for 5G ProSe Intermediate UE-to-Network Relay supporting 5G ProSe Layer-2 and/or Layer-3 multi-hop UE-to-Network Relay.	ProSe_Ph3
ParamProSeMultiHopInter mUeRm	3GPP TS 29.522 [19]	This data type is defined in the same way as the ParamProSeMultiHopInterUe data type, but with the OpenAPI nullable property set to "true".	ProSe_Ph3
ParamForRangingSIPos	3GPP TS 29.522 [19]	Contains the service parameters for ranging and sidelink positioning.	Ranging_SL
ParamForRangingSIPosR m	3GPP TS 29.522 [19]	This data type is defined in the same way as the "ParamForRangingSIPos" data type, but with the OpenAPI "nullable: true" property.	Ranging_SL
PfdChangeNotification	3GPP TS 29.551 [8]	Describes the PFD change.	
PfdContent	3GPP TS 29.551 [8]	Represents the content of a PFD for an application identifier.	
PlmnId	3GPP TS 29.571 [7]	Identifies a PLMN.	DCAMP_Roaming_ LBO HR-SBO
RouteToLocation	3GPP TS 29.571 [7]	Identifies the N6 traffic routing requirement.	
ServiceAreaCoverageInfo	3GPP TS 29.534 [22]	Contains service area coverage information.	DCAMP
SliceReplReqInfo	3GPP TS 29.534 [22]	Represents the requested Network Slice Replacement requirements.	AfNetSliceRepl
Snsai	3GPP TS 29.571 [7]	Identifies a Single Network Slice Selection Assistance Information.	
SpatialValidityCond	3GPP TS 29.571 [7]	Indicates the spatial validity condition.	HR-SBO
SubscribedEvent	3GPP TS 29.522 [19]	Identified the type of UP path management events of which the AF requests to be notified.	
Supi	3GPP TS 29.571 [7]	Identifies a SUPI that shall contain either an IMSI or an NAI.	
SupportedFeatures	3GPP TS 29.571 [7]	Used to negotiate the applicability of the optional features.	
TemporalInvalidity	3GPP TS 29.565 [27]	Represents the temporal invalidity conditions.	GMEC
TemporalValidity	3GPP TS 29.514 [16]	Indicates the time interval during which the AF request is to be applied.	MultiTemporalCond ition
TnapId	3GPP TS 29.571 [7]	Trusted Network Access Point identifier.	AfGuideTNAPs
TrafficDataSet	3GPP TS 29.522 [19]	Represents a set of traffic filters and the corresponding N6 traffic routing requirements.	MultiTrafficInflu_Ext 1
TrafficDataSetRm	3GPP TS 29.522 [19]	Represents the same as TrafficDataSet data type, but with the OpenAPI "nullable: true" property.	MultiTrafficInflu_Ext 1
TscailInputContainer	3GPP TS 29.514 [16]	Represents the TSCAI Input information container.	GMEC
UeIdMappingInfo	3GPP TS 29.522 [19]	Contains the UE ID mapping information.	Ranging_SL
UInteger	3GPP TS 29.571 [7]	Unsigned Integer, i.e. only value 0 and integers greater than 0 are allowed.	
UIntegerRm	3GPP TS 29.571 [7]	This data type is defined in the same way as the "UInteger" data type, but with the OpenAPI "nullable: true" property.	
Uri	3GPP TS 29.571 [7]	Identifies a URI.	
UriRm	3GPP TS 29.571 [7]	Identifies a removable URI.	DCAMP
UrspRuleRequest	3GPP TS 29.522 [19]	Contains service parameter data used to guide the URSP.	AfGuideURSP
NOTE 1: In order to support a set of MAC addresses with a specific range in the traffic filter, feature MacAddressRange as specified in clause 6.1.8 of TS 29.504 [6] shall be supported.			
NOTE 2: The UDR uses the DNN as received from the NF service consumer without applying any transformation. To successfully perform DNN matching, in a specific deployment a DNN shall always be encoded either with the full DNN (e.g., because there are multiple Operator Identifiers for a Network Identifier) or the DNN Network Identifier only.			

6.4.2 Structured data types

6.4.2.1 Introduction

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

6.4.2.2 Type TrafficInfluData

Table 6.4.2.2-1: Definition of type TrafficInfluData

Attribute name	Data type	P	Cardinality	Description	Applicability
upPathChgNotifCorrelId	string	C	0..1	Contains the Notification Correlation Id allocated by the NEF for the UP path change notification. It shall be included when the NEF requests the UP path change notification.	
appReloInd	boolean	O	0..1	Identifies whether an application can be relocated once a location of the application has been selected. True: the application cannot be relocated; False (default): the application can be relocated.	
afAppId	string	C	0..1	Identifies an application. (NOTE 1) (NOTE 3)	
dnn	Dnn	O	0..1	Identifies a DNN	
ethTrafficFilters	array(EthFlowDescription)	C	1..N	Identifies Ethernet packet filters. (NOTE 1) (NOTE 3)	
snssai	Snssai	O	0..1	The identification of slice.	
interGroupId	GroupId	C	0..1	Identifies a group of users. (NOTE 2) (NOTE 3)(NOTE 5)	
interGroupIdList	array(GroupId)	C	2..N	Identifies the list of Internal Groups. (NOTE 2) (NOTE 8) (NOTE 9) (NOTE 10)	FinerGranUEs
subscriberCatList	array(string)	O	1..N	Identifies the list of subscriber category(ies). (NOTE 10)	FinerGranUEs
plmnId	PlmnId	O	0..1	Identifies the PLMN of the UE.	HR-SBO
ipv4Addr	Ipv4Addr	O	0..1	Identifies the UE IPv4 address. (NOTE 2)	HR-SBO
ipv6Addr	Ipv6Addr	O	0..1	Identifies the UE IPv6 address. (NOTE 2)	HR-SBO
supi	Supi	C	0..1	Identifies a user. (NOTE 2) (NOTE 3)	
trafficDataSets	map(TrafficDataSet)	C	2..N	Contains multiple sets of traffic filters with the corresponding N6 traffic routing requirements. The key of the map shall be the value of the "setId" attribute of the TrafficDataSet data type. (NOTE 1, NOTE 3, NOTE 12, NOTE 13)	MultiTrafficInflu_Ext1
trafficFilters	array(FlowInfo)	C	1..N	Identifies IP packet filters. (NOTE 1) (NOTE 3)	
trafficRoutes	array(RouteToLocation)	O	1..N	Identifies the N6 traffic routing requirement. (NOTE 12)	
sfcdDI	string	O	0..1	Reference to a pre-configured service function chain for downlink traffic. (NOTE 11)	SFC
sfcdUI	string	O	0..1	Reference to a pre-configured service function chain for uplink traffic. (NOTE 11)	SFC
metadata	Metadata	O	0..1	Contains opaque information for the service functions in the N6-LAN that is provided by AF and transparently sent to UPF. It may only be provided when sfcdDI and/or sfcdUI are provided.	SFC

traffCorreInd	boolean	C	0..1	Indication of traffic correlation. May only be included when "interGroupId" attribute is included and not set to "AnyUE". It is used to indicate that for the group of UEs, the targeted PDU sessions should be correlated by a common DNAI. Set to "true" if it should be correlated; otherwise set to "false". Default value is "false" if omitted. (NOTE 7, NOTE 13)	
tfCorreInfo	TrafficCorrelationInfo	O	0..1	Contains the information for traffic correlation. (NOTE 13)	CommonEASDNAI
candDnaiInd	boolean	O	0..1	Indication of whether the candidate DNAI(s) are requested to be reported or not. - "true": the candidate DNAI(s) for the PDU session are requested to be reported. - "false": the candidate DNAI(s) for the PDU session are not requested to be reported. The default value is "false" if omitted.	EnCommonDnai
validStartTime	DateTime	O	0..1	Identifies when the traffic routings start to be applicable. (NOTE 4)	
validEndTime	DateTime	O	0..1	Identifies when the traffic routings are not applicable. (NOTE 4)	
tempValidities	array(TemporalValidity)	O	1..N	Indicates the time interval(s) during which the AF request is to be applied. (NOTE 4)	MultiTemporalCondition
nwAreaInfo	NetworkAreaInfo	O	0..1	Identifies a network area information that the request applies only to the traffic of UE(s) located in this specific zone.	
upPathChgNotifUri	Uri	C	0..1	Contains the URI where the NEF receives the UP path change notification. It shall be included when the NEF requests the UP path change notification.	
headers	array(string)	O	1..N	Headers provisioned by the NEF to be used by other NFs to interact with the NEF. E.g. 3gpp-Sbi-Binding header with the binding indication for the URI where the NEF receives UP path change notification and whose information is used by the SMF. The encoding of the header shall comply with clause 6.3 of IETF RFC 9110 [21]. (NOTE 6)	
subscribedEvents	array(SubscribedEvent)	O	1..N	Identifies the requirement to be notified of the event(s). (NOTE 14)	
notifUri	Uri	O	0..1	Contains the URI via which the NEF desires to receive the event(s) related notifications.	TrafficRouteReqOutcomeSimConnFailure
notifCorreId	string	O	0..1	Contains the Notification Correlation Id allocated by the NEF.	TrafficRouteReqOutcomeSimConnFailure
dnaiChgType	DnaiChangeType	O	0..1	Identifies a type of notification regarding UP path management event.	

afAckInd	boolean	O	0..1	Identifies whether the AF acknowledgement of UP path event notification is expected. Set to "true" if the AF acknowledgement is expected; otherwise set to "false". Default value is "false" if omitted.	URLLC
addrPreserInd	boolean	O	0..1	Indicates whether UE IP address should be preserved. This attribute shall set to "true" if preserved, otherwise, set to "false". Default value is false if omitted.	URLLC
maxAllowedUpLat	UInteger	O	0..1	Indicates the target user plane latency in units of milliseconds. The SMF may use this value to decide whether edge relocation is needed to ensure that the user plane latency does not exceed the value.	AF_latency
simConnInd	boolean	O	0..1	Indication of simultaneous connectivity temporarily maintained for the source and target PSA. It is used to indicate whether the simultaneous connectivity should be temporarily maintained for the source and target PSA. It is set to "true" if the temporary simultaneous connectivity should be temporarily maintained; otherwise, it is set to "false". Default value is "false" if omitted. (NOTE 14)	SimultConnectivity
simConnTerm	DurationSec	C	0..1	Indication of the minimum time interval to be considered for inactivity of the traffic routed via the source PSA during the edge re-location procedure before removing the source PSA. It may be included when the "simConnInd" attribute is set to true.	SimultConnectivity
n6DelayInd	boolean	O	0..1	Indicates whether the AF requests the N6 delay to be considered or not. - "true" indicates that the AF requests the N6 delay to be considered. - "false" indicates that the AF does not request the N6 delay to be considered. - If omitted, "false" is the default value.	N6DelayMeasurement
resUri	Uri	C	0..1	Represents the URI of Individual Influence Data. It shall only be included in the HTTP GET response.	EnhancedInfluenceDataNotification
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.	
afHdrReq	AfHeaderHandlingControllInfo	O	0..1	Contains the AF traffic influence request information for handling of payload headers.	HeaderHandling
nscSuppFeats	map(SupportedFeatures)	O	1..N	A map of Network Function Service Consumer features supported per service. The key used in this map for each entry is the ServiceName value as defined in 3GPP TS 29.510[24] (e.g. for Nsmf_EventExposure API, the key shall be set to nsmf-event-exposure).	NscSupportedFeatures

supportedFeatures	SupportedFeatures	C	0..1	<p>Indicates the list of negotiated supported features.</p> <p>This attribute shall be supplied by the UDR in the response to the PUT request when it was present in the PUT request and the UDR supports feature negotiation for Influence Data.</p> <p>This attribute shall be supplied by the UDR in the response to the GET request when the GET request includes the "supp-feat" query parameter and the UDR supports feature negotiation for Influence Data.</p>	
<p>NOTE 1: Only one of "afAppld", "trafficFilters", "ethTrafficFilters" or "trafficDataSets" shall be included.</p> <p>NOTE 2: If "HR-SBO" feature is not supported, only one of "supi" or "interGroupld" or "interGroupldList" shall be included. If "HR-SBO" feature is supported and the AF request to influence traffic routing is working in HR-SBO sessions in the VPLMN, only one of "supi", "interGroupld" set to "AnyUE", "ipv4Addr" or "ipv6Addr" shall be included.</p> <p>NOTE 3: If the EnhancedInfluDataNotification feature is not supported, to indicate the deletion of a Traffic Individual Influence Data resource, only the appropriate combination of "supi" or "interGroupld", and "afAppld", "trafficFilters", "ethTrafficFilters" or "trafficDataSets" that identify the resource shall be included. The rest of attributes shall be omitted.</p> <p>NOTE 4: Properties "validStartTime" and "validEndTime" shall only be included for single temporal validity condition. Property "tempValidities" shall only be included for multiple temporal validity conditions when the feature MultiTemporalCondition is supported.</p> <p>NOTE 5: If the Traffic Influence Data applies to any UE, then the "interGroupld" shall set to "AnyUE".</p> <p>NOTE 6: In this release of the specification, the property "headers" only includes the 3gpp-Sbi-Binding header with the binding indication for the URI included in the property "upPathChgNotifUri".</p> <p>NOTE 7: The indication of traffic correlation shall be provided only when the AF indicated that all the PDU sessions related to the 5G VN group member UEs should be correlated by a common DNAI in the user plane for the traffic as described in 3GPP TS 29.522 [19].</p> <p>NOTE 8: When the FinerGranUEs feature is supported, the Traffic Influence Data applies to the UE(s) that belong to all the Internal Group Identifiers included within the attribute "interGroupldList", if present.</p> <p>NOTE 9: When the FinerGranUEs feature is supported, the Traffic Influence Data applies to the UE(s) that belong to all the subscriber categories included within the attribute "subscriberCatList", which is included only if either "interGroupldList" is included or "interGroupld" is included.</p> <p>NOTE 10: Attributes "interGroupld" and "interGroupldList" are mutually exclusive attributes.</p> <p>NOTE 11: When the SFC feature is supported, for the purpose of influencing Service Function Chaining, at least one of the "sfclDI" and "sfclDI" attribute shall be present.</p> <p>NOTE 12: When the "MultiTrafficInflu_Ext1" feature is supported, the "trafficDataSets" and "trafficRoutes" attributes are mutually exclusive. Either one of them may be present.</p> <p>NOTE 13: When the "MultiTrafficInflu_Ext1" feature is supported, if "trafficDataSets" attribute is present, then the "traffCorrelnd" and "tfcCorreInfo" attributes shall not be present.</p> <p>NOTE 14: The event "SIM_CONN_FAIL" may be contained in the "subscribedEvents" attribute only when the "SimConnFailure" feature is supported and the "simConnInd" attribute is provided and set to "true". The event "TRAFF_ROUTE_REQ_OUTCOME" may be contained in the "subscribedEvents" attribute only if the "TraffRoutReqOutcome" feature is supported.</p>					

6.4.2.3 Type TrafficInfluDataPatch

Table 6.4.2.3-1: Definition of type TrafficInfluDataPatch

Attribute name	Data type	P	Cardinality	Description	Applicability
upPathChgNotifCorrelId	string	O	0..1	Contains the Notification Correlation Id allocated by the NEF for the UP path change notification.	
appReloInd	boolean	O	0..1	Identifies whether an application can be relocated once a location of the application has been selected.	
ethTrafficFilters	array(EthFlowDescription)	O	1..N	Identifies Ethernet packet filters.	
trafficDataSets	map(TrafficDataSetRm)	O	1..N	Contains one or several set(s) of traffic filters with the corresponding N6 traffic routing requirements. The key of the map shall be the value of the "setId" attribute of the TrafficDataSetRm data type.	MultiTrafficInflu_Ext1
trafficFilters	array(FlowInfo)	O	1..N	Identifies IP packet filters	
trafficRoutes	array(RouteToLocation)	O	1..N	Identifies the N6 traffic routing requirement.	
sfcdDI	string	O	0..1	Reference to a pre-configured service function chain for downlink traffic.	SFC
sfcdUI	string	O	0..1	Reference to a pre-configured service function chain for uplink traffic.	SFC
metadata	Metadata	O	0..1	Contains opaque information for the service functions in the N6-LAN that is provided by AF and transparently sent to UPF.	SFC
traffCorreInd	boolean	O	0..1	Indication of traffic correlation. May only be included when "interGroupId" attribute was previously included in the "TrafficInfluData" data type and not set to "AnyUE". It is used to indicate that for the group of UEs, the targeted PDU sessions should be correlated by a common DNAI.	
tfcCorreInfo	TrafficCorrelationInfo	O	0..1	Contains the information for traffic correlation.	CommonEASDNAI
candDnaiInd	boolean	O	0..1	Indication of whether the candidate DNAI(s) are requested to be reported or not. - "true": the candidate DNAI(s) for the PDU session are requested to be reported. - "false": the candidate DNAI(s) for the PDU session are not requested to be reported.	EnCommonDnai
validStartTime	DateTime	O	0..1	Identifies when the traffic routings start to be applicable.	
validEndTime	DateTime	O	0..1	Identifies when the traffic routings are not applicable.	
tempValidities	array(TemporalValidity)	O	1..N	Indicates the time interval(s) during which the AF request is to be applied.	MultiTemporalCondition
nwAreaInfo	NetworkAreaInfo	O	0..1	Identifies a network area information that the request applies only to the traffic of UE(s) located in this specific zone.	
upPathChgNotifUri	Uri	O	0..1	Contains the URI where the NEF receives the UP path change notification.	

headers	array(string)	O	1..N	Headers provisioned by the NEF. E.g. 3gpp-Sbi-Binding header with the binding indication for the URI where the NEF receives UP path change notification. The encoding of the header shall comply with clause 6.3 of IETF RFC 9110 [21].	
afAckInd	boolean	O	0..1	Identifies whether the AF acknowledgement of UP path event notification is expected.	URLLC
addrPreserInd	boolean	O	0..1	Indicates UE IP address should be preserved.	URLLC
maxAllowedUpLat	UIntegerRm	O	0..1	Indicates the target user plane latency in units of milliseconds. The SMF may use this value to decide whether edge relocation is needed to ensure that the user plane latency does not exceed the value.	AF_latency
simConnInd	boolean	O	0..1	Indication of simultaneous connectivity temporarily maintained for the source and target PSA. It is set to "true" if the temporary connectivity should be temporarily maintained; otherwise, it is set to "false".	SimultConnectivity
simConnTerm	DurationSecRm	C	0..1	Indication of the minimum time interval to be considered for inactivity of the traffic routed via the source PSA during the edge re-location procedure before removing the source PSA.	SimultConnectivity
n6DelayInd	boolean	O	0..1	Indicates whether the AF requests the N6 delay to be considered or not. - "true" indicates that the AF requests the N6 delay to be considered. - "false" indicates that the AF does not request the N6 delay to be considered.	N6DelayMeasurement
afHdrReq	AfHeaderHandlingControllInfo	O	0..1	Contains the AF traffic influence request information for handling of payload headers.	HeaderHandling

6.4.2.4 Type TrafficInfluSub

Table 6.4.2.4-1: Definition of type TrafficInfluSub

Attribute name	Data type	P	Cardinality	Description	Applicability
dnns	array(Dnn)	O	1..N	Each element identifies a DNN. (NOTE 1)	
snssais	array(Snssai)	O	1..N	Each element identifies an internal slice. (NOTE 1)	
internalGroupIds	array(GroupId)	O	1..N	Each element identifies a group of users. (NOTE 1) (NOTE 2) (NOTE 3) (NOTE 5)	
internalGroupIdsAd	array(GroupId)	O	1..N	Each element identifies an internal group of users. (NOTE 1) (NOTE 4) (NOTE 5)	FinerGranUEs
subscriberCatList	array(string)	O	1..N	Each element identifies a subscriber category. (NOTE 6)	FinerGranUEs
supis	array(Supi)	O	1..N	Each element identifies the user. (NOTE 1)	
plmnId	PlmnId	O	0..1	Identifies the PLMN of the UE.	HR-SBO
ipv4Addr	Ipv4Addr	O	0..1	Identifies the UE IPv4 address.	HR-SBO
ipv6Addr	Ipv6Addr	O	0..1	Identifies the UE IPv6 address.	HR-SBO
notificationUri	Uri	M	1	URI provided by the NF service consumer indicating where to receive the subscribed notifications from the UDR.	
notifId	string	O	0..1	Contains the notification correlation identifier.	NotifCorrelIds Support
expiry	DateTime	C	0..1	This attribute indicates the expiry time of the subscription. In Subscribe request messages this attribute may be included to suggest a time after which the subscription becomes invalid. Absence of this attribute from subscribe request messages indicates that the requested subscription is suggested to be unlimited in time until explicitly terminated by the service consumer. In Subscribe response messages this attribute may be included to confirm a time after which the subscription becomes invalid. The confirmed expiry time should be less than or equal to the suggested expiry time. If the suggested expiry time is present in the request, the confirmed expiry time should not be absent from the response..	
supportedFeatures	SupportedFeatures	C	0..1	Used to negotiate the applicability of the optional features. This attribute shall be provided in the POST request and in the response of successful resource creation.	
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.	
immRep	boolean	O	0..1	If provided and set to "true", it indicates that existing entries that match this subscription shall be immediately reported within the "immReports" attribute in the response. The default value is false.	ImmediateReportPcc

immReports	array(TrafficInfluDataNotif)	O	1..N	Contains entries stored in the UDR that match this subscription. It may be included only in the POST (or PUT) response body of a subscription creation (or modification), and only if the request included the "immRep" attribute set to true.	ImmediateReportPcc
<p>NOTE 1: If the TrafficInfluSubExt feature is not supported, either the "dnns", "snssais", "internalGroupIds", "internalGroupIdsAdd" or "supis" attribute shall be provided. If the TrafficInfluSubExt feature is supported, any of these attributes may be provided.</p> <p>NOTE 2: For the Traffic Influence Data applies to any UE, the "internalGroupIds" attribute shall have only one entry set to "AnyUE".</p> <p>NOTE 3: The "internalGroupIds" attribute shall be compared only with the "interGroupId" of the TrafficInfluData data type and there is a match only if they both exist and "interGroupId" is contained in "internalGroupIds".</p> <p>NOTE 4: When the FinerGranUEs feature is supported, the "internalGroupIdsAdd" attribute shall be compared only with the "interGroupIdList" of the TrafficInfluData data type and there is a match only if they both exist and are identical.</p> <p>NOTE 5: The attributes "internalGroupIds" and "internalGroupIdsAdd" are mutually exclusive attributes.</p> <p>NOTE 6: When the FinerGranUEs feature is supported, the "subscriberCatList" attribute of the TrafficInfluSub data type shall be compared with the "subscriberCatList" attribute of the TrafficInfluData data type and there is a match only if they both exist and are identical.</p>					

6.4.2.5 Void

6.4.2.6 Type: PfdDataForAppExt

Table 6.4.2.6-1: Definition of type PfdDataForAppExt

Attribute name	Data type	P	Cardinality	Description	Applicability
suppFeat	SupportedFeatures	O	0..1	Contains the list of supported feature(s) among the ones defined in clause 6.6. This attribute shall be present only when feature negotiation needs to take place.	
applicationId	ApplicationId	M	1	Identifier of an application.	
pfd	array(PfdContent)	M	1..N	PFDs for the application identifier. (NOTE 2) (NOTE 3) (NOTE 4)	
cachingTime	DateTime	O	0..1	Caching time for an application identifier. (NOTE 1)	
cachingTimer	DurationSec	O	0..1	Caching timer for an application identifier expressed as duration with unit of second. (NOTE 1)	CachingTimer
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.	
allowedDelay	DurationSec	O	0..1	Indicates that the list of PFDs in this request should be deployed within the time interval indicated by the Allowed Delay.	
<p>NOTE 1: When the feature "CachingTimer" is supported, the "cachingTime" attribute and the "cachingTimer" attribute are mutually exclusive.</p> <p>NOTE 2: The "sourceNfType" attribute within the PfdContent data type is applicable only if the "PfdDetermination" feature is supported.</p> <p>NOTE 3: The "pfdId" attribute within the PfdContent data type shall be present if available.</p> <p>NOTE 4: The "dnProtocol" attribute within the PfdContent data type is applicable only if the "DomainNameProtocol" feature is supported.</p>					

6.4.2.7 Type BdtPolicyData

Table 6.4.2.7-1: Definition of type BdtPolicyData

Attribute name	Data type	P	Cardinality	Description	Applicability
interGroupld	Groupld	C	0..1	Identifies a group of users. (NOTE)	
supi	Supi	C	0..1	Identifies a user. (NOTE)	
bdtRefld	BdtReferenceld	M	1	Identifies a selected policy of background data transfer.	
dnn	Dnn	O	0..1	Identifies a DNN	
snssai	Snssai	O	0..1	The identification of slice.	
resUri	Uri	C	0..1	Represents the URI of Individual Applied BDT Policy Data. It shall only be included in the HTTP GET response.	
resetlds	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.	

NOTE: Either "supi" or "interGroupld" shall be included.

6.4.2.8 Type BdtPolicyDataPatch

Table 6.4.2.8-1: Definition of type BdtPolicyDataPatch

Attribute name	Data type	P	Cardinality	Description	Applicability
bdtRefld	BdtReferenceld	M	1	Identifies a selected policy of background data transfer.	

6.4.2.9 Type IptvConfigData

Table 6.4.2.9-1: Definition of type IptvConfigData

Attribute name	Data type	P	Cardinality	Description	Applicability
supi	Supi	C	0..1	Identifies a user. (NOTE)	
interGroupld	Groupld	C	0..1	Identifies a group of users. (NOTE)	
dnn	Dnn	O	0..1	Identifies a DNN	
snssai	Snssai	O	0..1	The identification of slice.	
afAppld	string	M	1	Identifies an application.	
multiAccCtrls	map(MulticastAccessControl)	M	1..N	Identifies a list of multicast address access control information. Any string value can be used as a key of the map.	
supFeat	SupportedFeatures	C	0..1	Contains the list of supported feature(s) among the ones defined in clause 6.6. This attribute shall be present only when feature negotiation needs to take place.	
resUri	Uri	C	0..1	Represents the URI of Individual IPTV Configuration. It shall only be included in the HTTP GET response.	
resetlds	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.	

NOTE: Either "supi" or "interGroupld" shall be included.

6.4.2.10 Type ApplicationDataSubs

Table 6.4.2.10-1: Definition of type ApplicationDataSubs

Attribute name	Data type	P	Cardinality	Description	Applicability
notificationUri	Uri	M	1	URI provided by the NF service consumer indicating where to receive the subscribed notifications from the UDR.	
notifId	string	O	0..1	Contains the notification correlation identifier.	NotifCorrelIdsSupport
dataFilters	array(DataFilter)	O	1..N	Each element identifies a data filter for subscription to data change.notification. If absent, the subscription applies to all data change notification except Traffic Influence data and UE Id Mapping Info data.	
expiry	DateTime	C	0..1	This attribute indicates the expiry time of the subscription. In Subscribe request messages this attribute may be included to suggest a time after which the subscription becomes invalid. Absence of this attribute from subscribe request messages indicates that the requested subscription is suggested to be unlimited in time until explicitly terminated by the service consumer. In Subscribe response messages this attribute may be included to confirm a time after which the subscription becomes invalid. The confirmed expiry time should be less than or equal to the suggested expiry time. If the suggested expiry time is present in the request, the confirmed expiry time should not be absent from the response..	
immRep	boolean	O	0..1	If the feature "ImmediateReportPcc" is not supported, this attribute is applicable only if the "dataFilters" attribute of the request includes an element with the "dataInd" attribute set to "AM". If provided and set to "true", it indicates that existing matching entries shall be immediately reported within the "amInfluEntries" attribute, or, if the feature "ImmediateReportPcc" is supported, within the "immReports" attribute in the response. The default value is "false"	DCAMP ImmediateReportPcc
amInfluEntries	array(AmInfluData)	O	1..N	The AM Influence Data stored in the UDR that match this subscription. It may be included only in the POST response body of a subscription creation or modification, and only if the request included the "immRep" attribute set to true and a "dataFilters" attribute that contained an element with the "dataInd" attribute set to "AM".	DCAMP
supportedFeatures	SupportedFeatures	C	0..1	Used to negotiate the applicability of the optional features. This attribute shall be provided in the POST request and in the response of successful resource creation.	
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.	
immReports	array(ApplicationDataChangeNotif)	O	1..N	Contains entries stored in the UDR that match this subscription. It may be included only in the POST (or PUT) response body of a subscription creation (or modification), and only if the request included the "immRep" attribute set to true.	ImmediateReportPcc

When multiple attributes defined as an array are included within an entry of the "dataFilters" attribute, the UDR shall determine that the subscription is for all application data of type "dataInd" that contain a matching combination of the values of the elements of the array of the provided attributes.

EXAMPLE: For a subscription to notification on changes of Service Parameter Data resources ("dataInd" is set to "SVC_PARAM"), if "snssais" attribute is included with two S-NSSAI entries (S-NSSAI_1 and S-NSSAI_2) and "dnns" is included with two DNN entries (e.g. DNN_A and DNN_B), and the other optional attributes are not included, the UDR shall notify about changes of Service Parameter Data resources that contain a matching S-NSSAI and DNN combination, i.e. the resource(s) matching SNSSAI_1 and DNN_A, the resource(s) matching SNSSAI_1 and DNN_B, the resource(s) matching SNSSAI_2 and DNN_A, and the resources matching SNSSAI_2 and DNN_B.

6.4.2.11 Type ApplicationDataChangeNotif

Table 6.4.2.11-1: Definition of type ApplicationDataChangeNotif

Attribute name	Data type	P	Cardinality	Description	Applicability
iptvConfigData	IptvConfigData	O	0..1	IPTV Configuration Data. (NOTE)	
pfData	PfdChangeNotificatio n	O	0..1	PFD Data. (NOTE)	
bdtPolicyData	BdtPolicyData	O	0..1	BDT Policy Data. (NOTE)	
serParamData	ServiceParameterDa ta	O	0..1	Service Parameter Data, if changed and notification was requested. (NOTE)	
amInfluData	AmInfluData	O	0..1	AM Influence Data. (NOTE)	DCAMP
dnaiEasData	DnaiEasMapping	O	0..1	DNAI EAS Mapping. (NOTE)	DnaiEasMapping s
afReqQosData	AfRequestedQosDat a	O	0..1	Contains the AF requested QoS data for a UE or Group of UE(s) not identified by UE address(es). (NOTE)	GMEC
ecsAddrData	EcsAddrData	O	0..1	ECS Address Roaming Data. (NOTE)	HR-SBO
n3gDevData	Non3gppDevInfo	O	0..1	Non-3GPP device identifier information Data if changed and notification was requested. (NOTE)	Non3gppDevice
resUri	Uri	M	1	Identifies the resource in the corresponding data change. For notifying deletion, only resUri shall be provided in the ApplicationDataChangeNotif data type.	
notifId	string	O	0..1	Contains the notification correlation identifier.	NotifCorrelIdsSup port
NOTE: Only one among those attributes shall be provided in notifying data creation or update and in immediate reports.					

6.4.2.12 Type DataFilter

Table 6.4.2.12-1: Definition of type DataFilter

Attribute name	Data type	P	Cardinality	Description	Applicability
dataInd	DataInd	M	1	Indicate the type of application data. When used in subscription procedures, the UDR shall notify only about changes of application data of type "dataInd", and match also the filters indicated in the rest of the attributes of DataFilter (if any).	
dnns	array(Dnn)	O	1..N	Each element identifies a DNN. When used in subscription procedures, the UDR shall notify only about changes of application data of type "dataInd" that contain at least one of the DNNs included in the array, and match also the filters indicated in the rest of the attributes of DataFilter (if any). (NOTE 3)	
snssais	array(Snssai)	O	1..N	Each element identifies a slice. When used in subscription procedures, the UDR shall notify only about changes of application data of type "dataInd" that contain at least one of the S-NSSAIs included in the array, and match also the filters indicated in the rest of the attributes of DataFilter (if any). (NOTE 3)	
internalGroupIds	array(GroupId)	O	1..N	Each element identifies a group of users. When used in subscription procedures, the UDR shall notify only about changes of application data of type "dataInd" that contain at least one of the Group IDs included in the array, and match also the filters indicated in the rest of the attributes of DataFilter (if any).	
supis	array(Supi)	O	1..N	Each element identifies the user. When used in subscription procedures, the UDR shall notify only about changes of application data of type "dataInd" that contain at least one of the SUPIs included in the array, and match also the filters indicated in the rest of the attributes of DataFilter (if any).	

appIds	array(ApplicationId)	O	1..N	Each element identifies an application. When used in subscription procedures, the UDR shall notify only about changes of application data of type "dataInd" that contain at least one of the ApplicationIds included in the array, and match also the filters indicated in the rest of the attributes of DataFilter (if any).	
ueIpv4s	array(Ipv4Addr)	O	1..N	Each element identifies the user. When used in subscription procedures, the UDR shall notify only about changes of application data of type "dataInd" that contain at least one of the IPv4 address(es) included in the array, and match also the filters indicated in the rest of the attributes of DataFilter (if any).	
ueIpv6s	array(Ipv6Addr)	O	1..N	Each element identifies the user. When used in subscription procedures, the UDR shall notify only about changes of application data of type "dataInd" that contain at least one of the IPv6 addresses included in the array, and match also the filters indicated in the rest of the attributes of DataFilter (if any).	
ueMacs	array(MacAddr48)	O	1..N	Each element identifies the user. When used in subscription procedures, the UDR shall notify only about changes of application data of type "dataInd" that contain at least one of the UE MAC address(es) included in the array, and match also the filters indicated in the rest of the attributes of DataFilter (if any).	

anyUeInd	boolean	O	0..1	<p>Indicates how to filter based on the any UE indication- "true": the request is filtered based on the value "true"; - "false": the request is not filtered based on the value "false".</p> <p>When used in subscription procedures, the UDR shall notify only about changes of application data of type "dataInd" that contain an any UE indication that matches the value of this attribute, and match also the filters indicated in the rest of the attributes of DataFilter (if any). Absence means no filtering based on this attribute.</p>	FilterAnyUE
dnnSnssaiInfos	array(DnnSnssaiInformation)	O	1..N	<p>Each element identifies a combination of (DNN, S-NSSAI). When used in subscription procedures, the UDR shall only notify about changes in resource(s) with "dataInd" value AM that contain at least one DNN and S-NSSAI combination indicated in the array, and match also the rest of the filters (if any). (NOTE 3)</p>	DCAMP
dnais	array(Dnai)	O	1..N	<p>Each element identifies a DNAI. When used in subscription procedures, the UDR shall only notify about changes of application data of type "dataInd" that contain at least one of the DNAIs included in the array, and match also the rest of the filters (if any).</p>	DnaiEasMappings
roamUePlmnIds	array(PlmnId)	O	1..N	<p>Each element identifies the HPLMN ID for the in bound roaming UE in LBO roaming scenario. The UDR shall return only AM Influence Data resource(s) that match at least one of the provided PLMN ID.</p>	DCAMP_HPLMNFilter

roamUeNetDescs	array(NetworkDescription)	C	1..N	Each element identifies one or more PLMNs for the roaming UE. It may only be provided when the "dataInd" value is set to "SVC_PARAM". The UDR shall only notify about changes of Service Parameter Data resource(s) that match at least one of the provided PLMN identifier(s) as described in the NetworkDescription data type.	VPSUrsp_HPLMNFilter
<p>NOTE 1: The "dnns" and "snssais" attributes are applicable to the BDT Policy Data, IPTV Configuration Data, Service Parameter Data, AM Influence Data, DNAI EAS Mappings, ECS Address Roaming Data, and Non-3GPP Device Identifier Information. The "internalGroupIds" attribute is applicable to the BDT Policy Data, IPTV Configuration Data, Service Parameter Data, and AM Influence Data. The "supis" attribute is applicable to the BDT Policy Data, IPTV Configuration Data, Service Parameter Data, AM Influence Data, and Non-3GPP Device Identifier Information. The "uelpv4s" "uelpv6s" and "ueMacs" attributes are applicable to the Service Parameter Data. The "applds" attribute is applicable to the PFD Data, Service Parameter Data, IPTV Configuration Data, and Non-3GPP Device Identifier Information. The "anyUeInd" attribute is applicable to Service Parameter Data, AM Influence Data. The "dnnSnssaiInfos" is applicable to AM Influence Data. The "dnais" attribute is applicable to DNAI EAS Mappings. The "roamUePlmnIds" attribute is applicable to the AM Influence Data. The "roamUeNetDescs" attributes is applicable to the Service Parameter Data.</p> <p>NOTE 2: At application data changes, subscriptions to changes based on attributes of this table are considered to be matched, and the corresponding notifications are sent, no matter if the matching application data matches the provided values before the change, after the change, or both before and after the change.</p> <p>NOTE 3: For AM Influence Data, only one of the "dnns", "snssais", or "dnnSnssaiInfos" attributes may be simultaneously provided.</p>					

NOTE: When the "anyUeInd" attribute is related to the subscription to notification of changes of the service parameter data resource(s), and it refers to any UE using the service identified by a combination of DNN and S-NSSAI, the "anyUeInd" attribute is present together with the "dnns" and "snssais" attributes. Note also that, if the "anyUeInd" attribute is present together with the "internalGroupIds", "supis", "ueIpv4s", "ueIpv6s", "ueMacs", and/or when the "VPSUrsp_HPLMNFilter" feature is supported, "roamUeNetDescs" attributes, the subscription will not match any resource, since according to clause 6.4.2.15 only one of the the "supi", "anyUeInd", "interGroupId", "ueIpv4", "ueIpv6", "ueMac", or when the "VPSUrsp_HPLMNFilter" feature is supported, "roamUeNetDescs" attributes are simultaneously present in the resource.

When the "anyUeInd" attribute is related to the subscription to notification of changes of the AM Influence data resource(s), and it refers to any UE using the service(s) identified by the corresponding DNN and/or S-NSSAI, the "anyUeInd" attribute is present together with the "dnnSnssaiInfos" property. Note also that, if the "anyUeInd" attribute is present together with the "internalGroupIds", "supis", and/or when the "DCAMP_HPLMNFilter" feature is supported, "roamUePlmnIds" attributes, the subscription will not match any resource, since according to clause 6.4.2.16 only one of the the "supi", "anyUeInd", "interGroupId", or when the "DCAMP_HPLMNFilter" feature is supported, "roamUePlmnIds" attributes are simultaneously present in the resource.

6.4.2.13 Void

6.4.2.14 Type TrafficInfluDataNotif

Table 6.4.2.14-1: Definition of type TrafficInfluDataNotif

Attribute name	Data type	P	Cardinality	Description	Applicability
resUri	Uri	M	1	Represents the URI of Individual Influence Data. For notifying deletion, only resUri shall be provided in the TrafficInfluDataNotif data type.	
trafficInfluData	TrafficInfluData	C	0..1	Traffic Influence Data. It shall be present for notifying Individual Influence Data creation or update and, if the feature "ImmediateReportPcc" is supported, also for providing immediate reports.	
notifId	string	O	0..1	Contains the notification correlation identifier.	NotifCorrelds Support

6.4.2.15 Type ServiceParameterData

Table 6.4.2.15-1: Definition of type ServiceParameterData

Attribute name	Data type	P	Cardinality	Description	Applicability
dnn	Dnn	O	0..1	Identifies a DNN. (NOTE 2) (NOTE 3)	
snssai	Snssai	O	0..1	Identifies an S-NSSAI. (NOTE 2) (NOTE 3)	
appld	string	O	0..1	Identifies an application identifier. (NOTE 2) (NOTE 3)	
supi	Supi	C	0..1	Identifies a user. (NOTE 1)	
uelpv4	Ipv4Addr	C	0..1	The IPv4 address of the served UE. (NOTE 1)	
uelpv6	Ipv6Addr	C	0..1	The IPv6 address of the served UE. (NOTE 1)	
ueMac	MacAddr48	C	0..1	The MAC address of the served UE. (NOTE 1)	
interGroupld	Groupld	C	0..1	Identifies a group of users. (NOTE 1)	
anyUeInd	boolean	C	0..1	Identifies whether the service parameters applies to any non-roaming UE. - "true": the request is applied for any UE; - "false"(default): the request is not applied for any UE. (NOTE 1)	
roamUeNetDescs	array(NetworkDescription)	C	1..N	Each element identifies one (e.g., combination of MCC and MNC) or more (e.g. a MCC only) PLMN ID(s). It indicates the PLMN(s) of inbound roamers to which the provided AF guidance on VPLMN-specific URSP rules apply. (NOTE 1)	VPLMNSpecificURSP
paramOverPc5	ParameterOverPc5	O	0..1	Contains the V2X service parameters used over PC5.	
paramOverUu	ParameterOverUu	O	0..1	Contains the V2X service parameters used over Uu.	
a2xParamsPc5	A2xParamsPc5	O	0..1	Contains the A2X service parameters used over PC5 reference point.	A2X
a2xParamsUu	A2xParamsUu	O	0..1	Contains the A2X service parameters used over Uu reference point.	A2X
urspGuidance	array(UrspRuleRequest)	O	1..N	Contains the service parameters used to guide the URSP rule(s). (NOTE 3) (NOTE 1)	AfGuideURSP
vpsUrspGuidance	array(UrspRuleRequest)	O	1..N	Contains the service parameters provided by an AF to guide the VPLMN-specific URSP rule(s). (NOTE 4) (NOTE 5)	VPLMNSpecificURSP
paramForProSeDd	ParamForProSeDd	O	0..1	Contains the service parameters for 5G ProSe direct discovery.	ProSe
paramForProSeDc	ParamForProSeDc	O	0..1	Contains the service parameters for 5G ProSe direct communications.	ProSe
paramForProSeU2NRelUe	ParamForProSeU2NRelUe	O	0..1	Contains the service parameters for 5G ProSe UE-to-network relay UE supporting 5G ProSe Layer-2 and/or Layer-3 UE-to-Network Relay.	ProSe

paramForProSeRemUe	ParamForProSeRemUe	O	0..1	Contains the service parameters for 5G ProSe remote UE supporting 5G ProSe Layer-2 and/or Layer-3 UE-to-Network Relay.	ProSe
paramForProSeU2URelUe	ParamForProSeU2URelUe	O	0..1	Contains the service parameters for 5G ProSe UE-to-UE Relay UE supporting 5G ProSe Layer-2 and/or Layer-3 UE-to-UE Relay.	ProSe_Ph2
paramForProSeEndUe	ParamForProSeEndUe	O	0..1	Contains the service parameters for 5G ProSe End UE supporting 5G ProSe Layer-2 and/or Layer-3 UE-to-UE Relay.	ProSe_Ph2
multiHopU2URelUe	ParamProSeMultiHopU2URelUe	O	0..1	Contains the service parameters for 5G ProSe UE-to-UE Relay UE supporting 5G ProSe Layer-3 multi-hop UE-to-UE Relay.	ProSe_Ph3
multiHopU2UEndUe	ParamProSeMultiHopEndUe	O	0..1	Contains the service parameters for 5G ProSe End UE supporting 5G ProSe Layer-3 multi-hop UE-to-UE Relay.	ProSe_Ph3
multiHopU2NRelUe	ParamProSeMultiHopU2NRelUe	O	0..1	Contains the service parameters for 5G ProSe UE-to-Network Relay UE supporting 5G ProSe Layer-2 and/or Layer-3 multi-hop UE-to-Network Relay.	ProSe_Ph3
multiHopU2NRemUe	ParamProSeMultiHopRemUe	O	0..1	Contains the service parameters for 5G ProSe Remote UE supporting 5G ProSe Layer-2 and/or Layer-3 multi-hop UE-to-Network Relay.	ProSe_Ph3
multiHopU2NIntermUe	ParamProSeMultiHopIntermUe	O	0..1	Contains the service parameters for 5G ProSe Intermediate UE-to-Network Relay supporting 5G ProSe Layer-2 and/or Layer-3 multi-hop UE-to-Network Relay.	ProSe_Ph3
tnaps	array(TnapId)	O	1..N	Contains the TNAP ID(s) collocated with the 5G-RG(s) of a specific user.	AfGuideTNAPs
deliveryEvents	array(Event)	O	1..N	Contains the events related to the outcome of UE policy delivery and/or related to service parameters not authorized by the PCF. (NOTE 6)	DeliveryOutcome
policDelivNotifCorrelId	string	C	0..1	Contains the Notification Correlation Id allocated by the NEF for the notification of UE Policy delivery outcome and/or the notification of service parameters not authorized by the PCF. It shall be included when the NEF requests the notification of UE Policy delivery outcome and/or the notification of service parameters not authorized by the PCF..	DeliveryOutcome

policDelivNotifUri	Uri	C	0..1	Contains the URI where the NEF receives the notification of UE Policy delivery outcome. It shall be included when the NEF requests the notification of UE policy delivery outcome.	DeliveryOutcome
headers	array(string)	O	1..N	Headers provisioned by the NEF. E.g. 3gpp-Sbi-Binding header (as specified in 3GPP TS 29.500 [4]) with the binding indication for the URI included in the policDelivNotifUri attribute. The encoding of the header shall comply with clause 6.3 of IETF RFC 9110 [21].	DeliveryOutcome
supFeat	SupportedFeatures	C	0..1	Contains the list of supported feature(s) among the ones defined in clause 6.6. This attribute shall be present only when feature negotiation needs to take place.	
resUri	Uri	C	0..1	Represents the URI of Individual Service Parameter Data. It shall only be included in the HTTP GET response.	
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.	
paramForRangingSIPoS	ParamForRangingSIPoS	O	0..1	Contains the service parameters for ranging and sidelink positioning.	Ranging_SL
<p>NOTE 1: Only one of the "supi", "anyUeInd", "interGroupId", "uelpv4", "uelpv6" or "ueMac" attribute, and when the feature "VPLMNSpecificURSP" is supported, or "roamUeNetDescs" attribute, shall be provided. When the "AfGuideTNAPs" feature is supported, and the attribute "tnaps" is included, only the "supi" attribute shall be provided. For V2X, Prose (when the "ProSe" and/or "ProSe_Ph2" feature is supported), A2X (when the "A2X" feature is supported) and URSP service parameter provisioning for the HPLMN (i.e. via the "urspGuidance" attribute), only "anyUeInd", "gpsi" and "externalGroupId" attributes are applicable. For VPLMN-specific URSP service parameter provisioning (i.e. via the "vpsUrspGuidance" attribute, see also clause 4.4.20), when the "VPLMNSpecificURSP" feature is supported, only "supi" and "roamUeNetDescs" attributes are applicable. The "roamUeNetDescs" attribute only applies to URSP service parameter provisioning and may be included only when the "vpsUrspGuidance" attribute is provided.</p> <p>NOTE 2: Only the combination of "dnn" and "snssai" or "appld" attribute shall be provided. When the "AfGuideTNAPs" feature is supported and the attribute "tnaps" is included, only the combination of "dnn" and "snssai" attributes shall be provided.</p> <p>NOTE 3: When the "AfGuideURSP" feature is supported and the attribute "urspGuidance" is included, the provided URSP guidance may apply to DNN and S-NSSAI combination(s) and/or application(s) different to the ones provided within the "dnn" and "snssai" or "appld" attributes.</p> <p>NOTE 4: When the "VPLMNSpecificURSP" feature is supported and the attribute "vpsUrspGuidance" is included, the provided URSP guidance may apply to DNN and S-NSSAI combination(s) and/or application(s) different to the ones provided within the "dnn" and "snssai" or "appld" attributes.</p> <p>NOTE 5: The attribute "afReqUrspld" within the entries of the "vpsUrspGuidance" and "urspGuidance" attributes is applicable only when the "ExtDeliveryOutcome" feature is supported. The attribute "visitedNetDescs" within the entries of the "vpsUrspGuidance" attribute is applicable only when the "VPLMNSpecificURSP" feature is supported.</p> <p>NOTE 6: The value "UNSUCCESS_PCF_SERVICE_AUTHORIZATION" within the entries of the "deliveryEvents" attribute is applicable only when the "PCFSerParAuth" feature is supported. The value "PARTLY_UNSUCC_UE_POL_DEL_SP" within the entries of the "deliveryEvents" attribute is applicable only when the "ExtDeliveryOutcome" feature is supported.</p>					

6.4.2.15A Type ServiceParameterDataPatch

Table 6.4.2.15A-1: Definition of type ServiceParameterDataPatch

Attribute name	Data type	P	Cardinality	Description	Applicability
paramOverPc5	ParameterOverPc5Rm	O	0..1	Contains the V2X service parameters used over PC5. When the "NullableSupport" feature is supported, this attribute is nullable. When the "NullableSupport" feature is not supported, this attribute is not nullable.	
paramOverUu	ParameterOverUuRm	O	0..1	Contains the V2X service parameters used over Uu. When the "NullableSupport" feature is supported, this attribute is nullable. When the "NullableSupport" feature is not supported, this attribute is not nullable.	
a2xParamsPc5	A2xParamsPc5Rm	O	0..1	Contains the A2X service parameters used over PC5 reference point.	A2X
a2xParamsUu	A2xParamsUuRm	O	0..1	Contains the A2X service parameters used over Uu reference point.	A2X
ursplInfluence	array(UrspRuleRequest)	O	1..N	Contains the service parameter used to influence the URSP. This attribute is deprecated by the "urspGuidance" attribute that should be used instead.	AfGuideURSP
urspGuidance	array(UrspRuleRequest)	O	1..N	Contains the service parameters used to guide the URSP rule(s).	AfGuideURSP PatchCorrection
vpsUrspGuidance	array(UrspRuleRequest)	O	1..N	Contains the service parameters provided by an AF to guide the VPLMN-specific URSP rule(s). (NOTE 1)	VPLMNSpecificURSP
paramForProSeDd	ParamForProSeDdRm	O	0..1	Contains the service parameters for 5G ProSe direct discovery. When the "NullableSupport" feature is supported, this attribute is nullable. When the "NullableSupport" feature is not supported, this attribute is not nullable.	ProSe
paramForProSeDc	ParamForProSeDcRm	O	0..1	Contains the service parameters for 5G ProSe direct communications. When the "NullableSupport" feature is supported, this attribute is nullable. When the "NullableSupport" feature is not supported, this attribute is not nullable.	ProSe
paramForProSeU2NRelUe	ParamForProSeU2NRelUeRm	O	0..1	Contains the service parameters for 5G ProSe UE-to-network relay UE supporting 5G ProSe Layer-2 and/or Layer-3 UE-to-Network Relay. When the "NullableSupport" feature is supported, this attribute is nullable. When the "NullableSupport" feature is not supported, this attribute is not nullable.	ProSe

paramForProSeRemUe	ParamForProSeRemUeRm	O	0..1	Contains the service parameters for 5G ProSe remote UE supporting 5G ProSe Layer-2 and/or Layer-3 UE-to-Network Relay. When the "NullableSupport" feature is supported, this attribute is nullable. When the "NullableSupport" feature is not supported, this attribute is not nullable.	ProSe
paramForProSeU2URelUE	ParamForProSeU2URelUeRm	O	0..1	Contains the service parameters for 5G ProSe UE-to-UE Relay UE supporting 5G ProSe Layer-2 and/or Layer-3 UE-to-UE Relay.	ProSe_Ph2
paramForProSeEndUe	ParamForProSeEndUeRm	O	0..1	Contains the service parameters for 5G ProSe End UE supporting 5G ProSe Layer-2 and/or Layer-3 UE-to-UE Relay.	ProSe_Ph2
multiHopU2URelUe	ParamProSeMultiHopU2URelUeRm	O	0..1	Contains the service parameters for 5G ProSe UE-to-UE Relay UE supporting 5G ProSe Layer-3 multi-hop UE-to-UE Relay.	ProSe_Ph3
multiHopU2UEndUe	ParamProSeMultiHopEndUeRm	O	0..1	Contains the service parameters for 5G ProSe End UE supporting 5G ProSe Layer-3 multi-hop UE-to-UE Relay.	ProSe_Ph3
multiHopU2NRelUe	ParamProSeMultiHopU2NRelUeRm	O	0..1	Contains the service parameters for 5G ProSe UE-to-Network Relay UE supporting 5G ProSe Layer-2 and/or Layer-3 multi-hop UE-to-Network Relay.	ProSe_Ph3
multiHopU2NRemUe	ParamProSeMultiHopRemUeRm	O	0..1	Contains the service parameters for 5G ProSe Remote UE supporting 5G ProSe Layer-2 and/or Layer-3 multi-hop UE-to-Network Relay.	ProSe_Ph3
multiHopU2NIntermUe	ParamProSeMultiHopIntermUeRm	O	0..1	Contains the service parameters for 5G ProSe Intermediate UE-to-Network Relay supporting 5G ProSe Layer-2 and/or Layer-3 multi-hop UE-to-Network Relay.	ProSe_Ph3
tnaps	array(TnapId)	O	1..N	Contains the TNAP ID(s) collocated with the 5G-RG(s) of a specific user.	AfGuideTNAPs
deliveryEvents	array(Event)	O	1..N	Contains the events related to the outcome of UE policy delivery and/or related to service parameters not authorized by the PCF. When the "NullableSupport" feature is supported, this attribute is nullable. When the "NullableSupport" feature is not supported, this attribute is not nullable. (NOTE 2)	DeliveryOutcome

policDelivNotifUri	Uri	C	0..1	Contains the URI where the NEF receives the notification of UE Policy delivery outcome and/or the notification of service parameters not authorized by the PCF. It shall be included when the NEF requests the notification of UE policy delivery outcome and/or notification of service parameters not authorized by the PCF.	DeliveryOutcome
headers	array(string)	O	1..N	Headers provisioned by the NEF. E.g. 3gpp-Sbi-Binding header (as specified in 3GPP TS 29.500 [4]) with the binding indication for the URI included in the policDelivNotifUri IE. The encoding of the header shall comply with clause 6.3 of IETF RFC 9110 [21].	DeliveryOutcome
paramForRangingSIPoS	ParamForRangingSIPoSRm	O	0..1	Contains the service parameters for ranging and sidelink positioning.	Ranging_SL
<p>NOTE 1: The attribute "afReqUrspld" within the entries of the "vpsUrspld" and "urspld" attributes is applicable only when the "ExtDeliveryOutcome" feature is supported. The attribute "visitedNetDescs" within the entries of the "vpsUrspld" attribute is applicable only when the "VPLMNSpecificURSP" feature is supported.</p> <p>NOTE 2: The value "UNSUCCESS_PCF_SERVICE_AUTHORIZATION" within the entries of the "deliveryEvents" attribute is applicable only when the "PCFSerParAuth" feature is supported. The value "PARTLY_UNSUCC_UE_POL_DEL_SP" within the entries of the "deliveryEvents" attribute is applicable only when the "ExtDeliveryOutcome" feature is supported.</p>					

6.4.2.16 Type AmInfluData

Table 6.4.2.16-1: Definition of type AmInfluData

Attribute name	Data type	P	Cardinality	Description	Applicability
applds	array(string)	O	1..N	Identifies one or more applications. (NOTE 3)	
dnnSnssaiInfos	array(DnnSnssaiInformation)	O	1..N	Each element identifies a combination of (DNN, S-NSSAI). (NOTE 3)	
interGroupId	GroupId	C	0..1	Identifies a group of users. (NOTE 1)	
supi	Supi	C	0..1	Identifies a user. (NOTE 1)	
anyUeInd	boolean	C	0..1	Indicates whether the data applies to any non-roaming UE. If present and set to "true" the data is applicable for any non-roaming UE. Otherwise set to "false". Default value is "false" if omitted. (NOTE 1)	
roamUePlmnIds	array(PlmnId)	C	1..N	Each element identifies a home PLMN Id for the inbound roaming UEs in LBO roaming scenario. (NOTE 1) (NOTE 3)	DCAMP_Roaming_LBO
policyDuration	DurationSec	O	0..1	Indicates the time duration that the policy shall last.	
evSubs	array(AMInfluEvent)	O	1..N	List of AM related events for which a subscription is required.	
headers	array(string)	O	1..N	Headers provisioned by the NEF. E.g. 3gpp-Sbi-Binding header (as specified in 3GPP TS 29.500 [4]) with the binding indication for the URI included in the notifUri IE. The encoding of the header shall comply with clause 6.3 of IETF RFC 9110 [21].	
notifUri	Uri	C	0..1	Contains the Callback URI to receive notifications. It shall be present if the "evSubs" attribute is present.	
notifCorrId	string	O	0..1	Notification correlation identifier.	
thruReq	boolean	C	0..1	If present and set to "true", it indicates that high throughput is desired for the indicated UE traffic. Otherwise set to "false". Default value is "false" if omitted. (NOTE 2)	
covReq	array(ServiceAreaCoverageInfo)	C	1..N	Identifies service area coverage requirements. (NOTE 2)	
afSliceReplReqInfo	SliceReplReqInfo	C	0..1	Represents the AF requested Network Slice Replacement Requirements. (NOTE 2)	AfNetSliceRepl
supportedFeatures	SupportedFeatures	C	0..1	Indicates the list of negotiated supported features. This attribute shall be supplied by the UDR in the response to the PUT request when it was present in the PUT request and the UDR supports feature negotiation for AM Influence Data. This attribute shall be supplied by the UDR in the response to the GET request when the GET request includes the "supp-feat" query parameter and the UDR supports feature negotiation for AM Influence Data.	
resUri	Uri	C	0..1	Represents the URI of Individual AM Influence Data. It shall only be included in the HTTP GET response.	

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.	
<p>NOTE 1: One of the "supi", "interGroupld", "anyUeInd" and "roamUePlmnIds" attributes shall be included. When the "AfNetSliceRepl" feature is supported and the "afSliceReplReqInfo" attribute is present, then it is the "supi" attribute that shall be present.</p> <p>NOTE 2: At least one of these attributes shall be present.</p> <p>NOTE 3: "roamUePlmnIds" attribute applies only to LBO roaming scenarios and is associated with the inbound roaming UEs and applicable when "applds" attribute or "dnnSnssailInfos" attribute is provided.</p>					

6.4.2.17 Type AmInfluDataPatch

Table 6.4.2.17-1: Definition of type AmInfluDataPatch

Attribute name	Data type	P	Cardinality	Description	Applicability
applds	array(string)	O	1..N	Identifies one or more applications.	
dnnSnssailInfos	array(DnnSnssailInformation)	O	1..N	Each element identifies a combination of (DNN, S-NSSAI).	
policyDuration	DurationSecRm	O	0..1	Indicates the time duration that the policy shall last.	
evSubs	array(AmInfluEvent)	O	1..N	List of AM related events for which a subscription is required.	
headers	array(string)	O	1..N	Headers provisioned by the NEF. E.g. 3gpp-Sbi-Binding header (as specified in 3GPP TS 29.500 [4]) with the binding indication for the URI included in the notifUri IE. The encoding of the header shall comply with clause 6.3 of IETF RFC 9110 [21].	
notifUri	UriRm	C	0..1	Contains the Callback URL to receive notifications.	
notifCorrld	string	O	0..1	Notification correlation identifier.	
thruReq	boolean	O	0..1	Indicates whether high throughput is desired for the indicated UE traffic: - "true": high throughput is desired for the indicated UE traffic; - "false": high throughput is not desired for the indicated UE traffic.	
covReq	array(ServiceAreaCoverageInfo)	O	1..N	Identifies service area coverage requirements.	
afSliceReplReqInfo	SliceReplReqInfoRm	O	0..1	Represents the AF requested Network Slice Replacement requirements.	AfNetSliceRepl

6.4.2.18 Type AfRequestedQosData

Table 6.4.2.18-1: Definition of type AfRequestedQosData

Attribute name	Data type	P	Cardinality	Description	Applicability
supi	Supi	C	0..1	Identifies a UE. (NOTE 1)	
interGroupId	GroupId	C	0..1	Identifies a group of UE(s). (NOTE 1)	
afAppld	string	O	0..1	Contains the identifier of the AF Application.	
dnn	Dnn	O	0..1	Represents a DNN. (NOTE 2)	
sliceInfo	Snsai	O	0..1	Represents the identifier of a network slice.	
flowInfo	array(FlowInfo)	C	1..N	Contains the IP data flow(s) for which the AF requested QoS applies. Each IP data flow consists of a flow identifier and the corresponding UL and/or DL flow description. (NOTE 3)	
ethFlowInfo	array(EthFlowDescription)	C	1..N	Contains the Ethernet packet filters of one or more Ethernet flow(s) for which the AF requested QoS applies. (NOTE 3)	
enEthFlowInfo	array(EthFlowInfo)	C	1..N	Contains the Ethernet flow(s) for which the AF requested QoS applies. Each Ethernet data flow consists of a flow identifier and the corresponding UL and/or DL flow(s) description. (NOTE 3)	
evSubsc	EventsSubscReqData	O	0..1	Contains the requested event(s) subscription related information.	
qosReference	string	C	0..1	Contains a pre-defined QoS reference. (NOTE 4)	
qosReqs	QosRequirements	C	0..1	Contains the requested QoS parameters related information. (NOTE 4)	
altSerReqs	array(string)	O	1..N	Contains an ordered list of alternative service requirements that include a set of QoS reference(s). The lower the index of the array for a given entry, the higher the priority. (NOTE 4)	
altSerReqsData	array(AlternativeServiceRequirementsData)	O	1..N	Contains an ordered list of alternative service requirements that include individual QoS parameter set(s). The lower the index of the array for a given entry, the higher the priority. (NOTE 4)	
disUeNotif	boolean	O	0..1	Indicates whether to disable QoS flow parameters signalling to the UE. <ul style="list-style-type: none"> - "true" indicates to disable QoS flow parameters signalling to the UE. - "false" indicates not to disable QoS flow parameters signalling to the UE. - The default value is "false" if this attribute is absent and has not been previously provisioned. 	

templnValidity	TemporalInValidity	O	0..1	Indicates the temporal invalidity conditions, i.e., the time interval during which the AF requested QoS is not to be applied.	
headers	array(string)	O	1..N	Contains the headers provisioned by the NEF, e.g., the "3gpp-Sbi-Binding" header (specified in 3GPP TS 29.500 [4]) containing the binding indication information applicable to the URI included in the "notifUri" attribute provided within the "evSubsc" attribute. The encoding of the header shall comply with clause 6.3 of IETF RFC 9110 [21].	
suppFeat	SupportedFeatures	C	0..1	Contains the list of supported features among the ones defined in clause 6.1.8 of 3GPP TS 29.504 [6]. This attribute shall be present only when feature negotiation needs to take place.	
<p>NOTE 1: These attributes are mutually exclusive. Either one of them shall be present.</p> <p>NOTE 2: This attribute contains the Data Network Name, i.e., a full DNN with both the Network Identifier and Operator Identifier, or a DNN with the Network Identifier only. The PCF uses the DNN as obtained from the UDR without applying any transformation (e.g., during SM Policy Association matching). To successfully perform DNN matching in a specific deployment, a DNN shall always be encoded either as a full DNN (e.g., because there are multiple Operator Identifiers for a Network Identifier) or the DNN Network Identifier only.</p> <p>NOTE 3: These attributes are mutually exclusive. Either one of them shall be present.</p> <p>NOTE 4: The "qosReqs" attribute and the "qosReference" attribute are mutually exclusive and either one of them shall be present. The "altSerReqs" attribute and the "altSerReqsData" attribute are mutually exclusive. If the "qosReference" attribute is present, then the "altSerReqsData" attribute shall not be present.</p>					

6.4.2.19 Type AfRequestedQoSDataPatch

Table 6.4.2.19-1: Definition of type AfRequestedQoSDataPatch

Attribute name	Data type	P	Cardinality	Description	Applicability
afAppId	string	O	0..1	Contains the identifier of the AF application.	
evSubsc	EventsSubscReqDataRm	O	0..1	Contains the requested event(s) subscription related information.	
flowInfo	array(FlowInfo)	O	1..N	Contains the updated IP data flow(s) for which the AF requested QoS applies. Each IP data flow consists of a flow identifier and the corresponding UL and/or DL flow description.	
ethFlowInfo	array(EthFlowDescription)	O	1..N	Contains the updated Ethernet packet filters of one or more Ethernet flow(s) for which the AF requested QoS applies.	
enEthFlowInfo	array(EthFlowInfo)	O	1..N	Contains the updated Ethernet flow(s) for which the AF requested QoS applies. Each Ethernet data flow consists of a flow identifier and the corresponding UL and/or DL flow(s) description.	
qosReference	string	O	0..1	Contains the updated pre-defined QoS reference.	
qosReqs	QosRequirementsRm	O	0..1	Contains the updated requested QoS parameters related information.	
altSerReqs	array(string)	O	0..N	Contains the updated ordered list of alternative service requirements that include a set of QoS reference(s). The lower the index of the array for a given entry, the higher the priority.	
altSerReqsData	array(AlternativeServiceRequirementsData)	O	1..N	Contains the updated ordered list of alternative service requirements that include individual QoS parameter set(s). The lower the index of the array for a given entry, the higher the priority.	
disUeNotif	boolean	O	0..1	Contains the updated indication on whether to disable QoS flow parameters signalling to the UE. - "true" indicates to disable QoS flow parameters signalling to the UE. - "false" indicates not to disable QoS flow parameters signalling to the UE.	
templnValidity	TemporalInValidity	O	0..1	Indicates the updated temporal invalidity conditions, i.e., the time interval during which the AF requested QoS is not to be applied.	
headers	array(string)	O	1..N	Contains the updated headers provisioned by the NEF, e.g., the "3gpp-Sbi-Binding" header (specified in 3GPP TS 29.500 [4]) containing the binding indication information applicable to the URI included in the "notifUri" attribute provided within the "evSubsc" attribute. The encoding of the header shall comply with clause 6.3 of IETF RFC 9110 [21].	

6.4.2.20 Type TrafficCorrelationInfo

Table 6.4.2.20-1: Definition of type TrafficCorrelationInfo

Attribute name	Data type	P	Cardinality	Description	Applicability
corrType	CorrelationType	C	0..1	Indicates selecting a common DNAI or EAS for the application identified by the Application Identifier or traffic filtering information. It shall be provided when the traffic correlation information is provisioned for the first time.	
tcCorrId	string	C	0..1	Identification of a set of UEs accessing the application identified by the Application Identifier or traffic filtering information. It shall be provided when the traffic correlation information is provisioned for the first time.	
comEasIpv4Addr	Ipv4AddrRm	C	0..1	IPv4 address of common EAS for the application identified by the Application Identifier or traffic filtering information for the UEs the AF request aims at. It may be provided when the "corrType" attribute includes "COMMON_EAS".	
comEasIpv6Addr	Ipv6AddrRm	C	0..1	IPv6 address of common EAS for the application identified by the Application Identifier or traffic filtering information for the UEs the AF request aims at. It may be provided when the "corrType" attribute includes "COMMON_EAS".	
fqdnRange	array(FqdnPatternMatchingRule)	C	1..N	FQDN(s) used for influencing EASDF-based DNS query procedure. It may be provided when the "corrType" attribute includes "COMMON_EAS".	
notifUri	UriRm	O	0..1	Contains the Callback URL to receive notifications.	
notifCorrId	string	O	0..1	Notification correlation identifier.	

6.4.2.21 Type DnaiEasMapping

Table 6.4.2.21-1: Definition of type DnaiEasMapping

Attribute name	Data type	P	Cardinality	Description	Applicability
dnaiEasInfos	array(DnaiEasInfo)	M	1..N	Each element contains EAS information for the DNAI(s) of a DNN/S-NSSAI.	

6.4.2.22 Type DnaiEasInfo

Table 6.4.2.22-1: Definition of type DnaiEasInfo

Attribute name	Data type	P	Cardinality	Description	Applicability
dnn	Dnn	C	0..1	DNN. (NOTE 1)	
snssai	Snssai	C	0..1	S-NSSAI. (NOTE 1)	
dnais	array(Dnai)	M	1..N	DNAI(s) for the EAS deployment information.	
easIpAddrs	array(IpAddr)	C	1..N	IP address(es) or IP address ranges (IPv4 subnetwork(s) and/or Ipv6 prefix(es)) of the EAS(s) of the DNAI(s). (NOTE 2)	
fqdns	array(FqdnPatternMatchingRule)	C	1..N	FQDN(s) where the EAS(s) is/are deployed for the DNAI(s). (NOTE 2)	
NOTE 1: At least one of "dnn" and "snssai" shall be provided.					
NOTE 2: Exactly one of "easIpAddrs" and "fqdns" shall be provided.					

6.4.2.23 Type EcsAddrData

Table 6.4.2.23-1: Definition of type EcsAddrData

Attribute name	Data type	P	Cardinality	Description	Applicability
self	Link	C	0..1	Identifies the individual resource. It shall be present in the HTTP GET response when reading multiples entries.	
ecsServerAddr	EcsServerAddr	M	1	Represents the ECS address(es).	
spatialValidityCond	SpatialValidityCondition	O	0..1	Indicates the spatial validity condition.	
ecsAuthMethods	array(EcsAuthMethod)	O	1..N	Indicates the Supported ECS Authentication Method(s).	
dnn	Dnn	O	0..1	Indicates the HPLMN DNN for this ECS Address Roaming Data.	
snssai	Snssai	O	0..1	Indicates the HPLMN S-NSSAI for this ECS Address Roaming Data.	
suppFeat	SupportedFeatures	C	0..1	Indicates the negotiated supported features. It shall be provided in an HTTP POST response if it was provided in the HTTP POST request.	

6.4.2.23A Type EcsAddrDataPatch

Table 6.4.2.23A-1: Definition of type EcsAddrDataPatch

Attribute name	Data type	P	Cardinality	Description	Applicability
ecsServerAddr	EcsServerAddr	O	0..1	Represents the ECS address(es).	
spatialValidityCond	SpatialValidityCondition	O	0..1	Indicates the spatial validity condition.	
ecsAuthMethods	array(EcsAuthMethod)	O	1..N	Contains the Supported ECS Authentication Method(s).	

6.4.2.24 Type QosRequirements

Table 6.4.2.24-1: Definition of type QosRequirements

Attribute name	Data type	P	Cardinality	Description	Applicability
marBwUI	BitRate	O	0..1	Contains the maximum requested bandwidth for the Uplink.	
marBwDI	BitRate	O	0..1	Contains the maximum requested bandwidth for the Downlink.	
mirBwUI	BitRate	O	0..1	Contains the minimum requested bandwidth for the Uplink.	
mirBwDI	BitRate	O	0..1	Contains the minimum requested bandwidth for the Downlink.	
maxBurstSize	MaxDataBurstVol	O	0..1	Represents the Maximum Burst Size for values lower than or equal to 4095 Bytes. (NOTE)	
extMaxBurstSize	ExtMaxDataBurstVol	O	0..1	Represents the Maximum Burst Size for values greater than 4095 Bytes. (NOTE)	
pdb	PacketDelBudget	O	0..1	Represents the 5GS Packet Delay Budget.	
per	PacketErrRate	O	0..1	Represents the Packet Error Rate.	
priorLevel	5QIPriorityLevel	O	0..1	Represents the Priority Level.	
NOTE: The attributes are mutually exclusive.					

6.4.2.25 Type QosRequirementsRm

This data type is defined in the same way as the QosRequirements data type but with the OpenAPI "nullable: true" property and with the individual attributes defined with the corresponding removable data type.

Table 6.4.2.25-1: Definition of type QosRequirementsRm

Attribute name	Data type	P	Cardinality	Description	Applicability
marBwUI	BitRateRm	O	0..1	Contains the maximum requested bandwidth for the Uplink.	
marBwDI	BitRateRm	O	0..1	Contains the maximum requested bandwidth for the Downlink.	
mirBwUI	BitRateRm	O	0..1	Contains the minimum requested bandwidth for the Uplink.	
mirBwDI	BitRateRm	O	0..1	Contains the minimum requested bandwidth for the Downlink.	
maxBurstSize	MaxDataBurstVolRm	O	0..1	Represents the Maximum Burst Size for values lower than or equal to 4095 Bytes.	
extMaxBurstSize	ExtMaxDataBurstVolRm	O	0..1	Represents the Maximum Burst Size for values greater than 4095 Bytes.	
pdb	PacketDelBudgetRm	O	0..1	Represents the 5GS Packet Delay Budget.	
per	PacketErrRateRm	O	0..1	Represents the Packet Error Rate.	
priorLevel	5QIPriorityLevelRm	O	0..1	Represents the Priority Level.	

6.4.2.26 Type Non3gppDevInfo

Table 6.4.2.26-1: Definition of type Non3gppDevInfo

Attribute name	Data type	P	Cardinality	Description	Applicability
supi	Supi	M	0..1	Identifies a UE.	
non3gppDevInfos	array(Non3gppDevInfor- celInformation)	M	1..N	Contains the Non-3GPP device information.	
suppFeat	SupportedFeatures	C	0..1	Contains the list of supported features among the ones defined in clause 6.1.8 of 3GPP TS 29.504 [6]. This attribute shall be present only when feature negotiation needs to take place.	

6.4.2.27 Type Non3gppDevInfoPatch

Table 6.4.2.27-1: Definition of type Non3gppDevInfoPatch

Attribute name	Data type	P	Cardinality	Description	Applicability
non3gppDevInfos	array(Non3gppDevInfor- celInformation)	O	1..N	Contains the updated Non-3GPP device information.	

6.4.2.28 Type: SliceReplReqInfoRm

This data type is defined in the same way as the SliceReplReqInfo data type defined in clause 5.6.2.12 of 3GPP TS 29.534 [22] but with the OpenAPI "nullable" property set to "true".

6.4.3 Simple data types and enumerations

6.4.3.1 Introduction

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

6.4.3.2 Simple data types

The simple data types defined in table 6.4.3.2-1 shall be supported.

Table 6.4.3.2-1: Simple data types

Type Name	Type Definition	Description	Applicability

6.4.3.3 Enumeration: DataInd

Table 6.4.3.3-1: Enumeration DataInd

Enumeration value	Description	Applicability
PFD	PFD data	
IPTV	IPTV configuration data	
BDT	BDT data	
SVC_PARAM	Service parameter data	
AM	AM influence data	DCAMP
DNAI_EAS	DNAI EAS mapping data	DnaiEasMappings
REQ_QOS	Indicates the AF Requested QoS data for a UE or group of UE(s) not identified by UE address(es).	GMEC
ECS	ECS Address Roaming data.	HR-SBO
N3GDEV	Non-3gpp Device Identifier Information	Non3gppDevice

6.4.3.4 Enumeration: CorrelationType

Table 6.4.3.4-1: Enumeration CorrelationType

Enumeration value	Description	Applicability
COMMON_DNAI	Indicates that the EAS(es) corresponding to a common DNAI should be selected.	
COMMON_EAS	Indicates that the common EAS should be selected	

6.5 Error handling

6.5.1 General

HTTP error handling shall be supported as specified in clause 5.2.4 of 3GPP TS 29.500 [4].

For the Nudr_DataRepository Service API for Application Data, HTTP error responses shall be supported as specified in clause 4.8 of 3GPP TS 29.501 [5]. Protocol errors and application errors specified in table 5.2.7.2-1 of 3GPP TS 29.500 [4] shall be supported for an HTTP method if the corresponding HTTP status codes are specified as mandatory for that HTTP method in table 5.2.7.1-1 of 3GPP TS 29.500 [4]. In addition, the requirements in the following clauses shall apply.

6.5.2 Protocol Errors

In this Release of the specification, there are no additional protocol errors applicable for the Nudr_DataRepository Service API for Application Data.

6.5.3 Application Errors

The application errors defined for the Nudr_DataRepository Service API for Application Data are listed in table 6.5.3-1.

Table 6.5.3-1: Application errors

Application Error	HTTP status code	Description
NOTE: Including a "ProblemDetails" data structure with the "cause" attribute in the HTTP response is optional unless explicitly mandated by other clauses in this document.		

The application error handling shall follow 3GPP TS 29.504 [6] clause 6.1.6 unless explicitly specified in this document.

6.6 Feature negotiation

The optional features in table 6.1.8-1 of 3GPP TS 29.504 [6] 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 [4].

7 Usage of Nudr_DataRepository Service API for Structured Data for Exposure

7.1 Introduction

The following clauses specify the usage of Nudr_DataRepository service for exposure data. The principles specified in 3GPP TS 29.504 [6] are followed unless explicitly specified otherwise in the following clauses.

7.2 Resources

7.2.1 Overview

This clause specifies the resources for the usage of the Unified Data Repository service for Structured Data for Exposure.

7.2.2 Resource Structure

This clause describes the structure for the Resource URIs and the resources and methods used for the service.

Figure 7.2.2-1 depicts the resource URIs structure for the Nudr_DataRepository API for exposure data data.

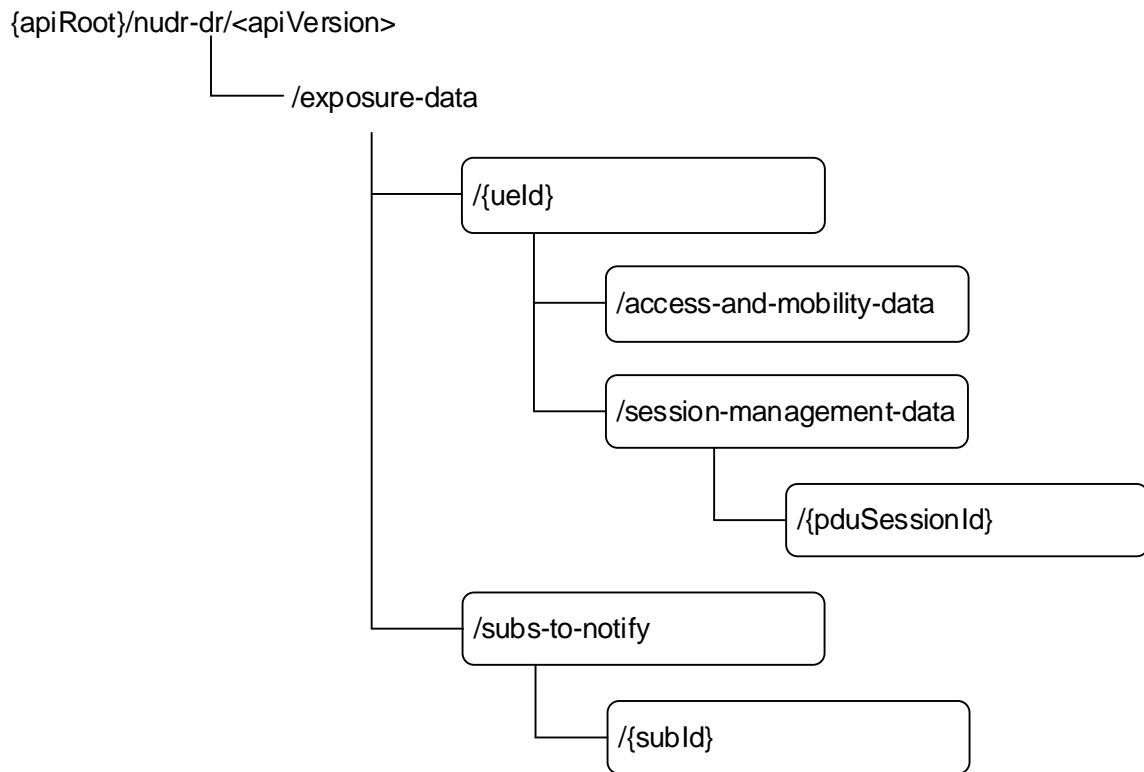


Figure 7.2.2-1: Resource URI structure of the Nudr_DataRepository API for exposure data

Table 7.2.2-1 provides an overview of the resources and applicable HTTP methods.

Table 7.2.2-1: Resources and methods overview

Resource name	Resource URI	HTTP method	Description
AccessAndMobility Data	/exposure-data/{ueld}/access-and-mobility-data	PUT	Create and update the access and mobility exposure data for a UE
		PATCH	Update the access and mobility exposure data for a UE.
		GET	Retrieve the access and mobility exposure data for a UE
		DELETE	Delete the access and mobility exposure data for a UE
PduSessionManagementData	/exposure-data/{ueld}/session-management-data/{pduSessionId}	PUT	Create and update the session management data for a UE and for an individual PDU session
		GET	Retrieve the session management data for a UE and for an individual PDU session
		DELETE	Delete the session management data for a UE and for an individual PDU session
PduSessionManagementData collection	/exposure-data/{ueld}/		PduSessionManagementData collection
ExposureDataSubscriptions	/exposure-data/subs-to-notify	POST	Create a subscription to receive notifications on exposure data changes.
IndividualExposureDataSubscription	/exposure-data/subs-to-notify/{subId}	PUT	Modify a subscription to receive notifications on exposure data changes.
		DELETE	Delete a subscription identified by {subId}.

7.2.3 Resource: AccessAndMobilityData

7.2.3.1 Description

This resource represents the exposure data related to access and mobility.

7.2.3.2 Resource definition

Resource URI: `{apiRoot}/nudr-dr/<apiVersion>/exposure-data/{ueId}/access-and-mobility-data`

This resource shall support the resource URI variables defined in table 7.2.3.2-1.

Table 7.2.3.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
ueId	VarUeId	Represents the SUPI or GPSI. Data type VarUeId is defined in 3GPP TS 29.571 [7].

7.2.3.3 Resource Standard Methods

7.2.3.3.1 PUT

This method shall support the URI query parameters specified in table 7.2.3.3.1-1.

Table 7.2.3.3.1-1: 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 7.2.3.3.1-2 and the response data structures and response codes specified in table 7.2.3.3.1-3.

Table 7.2.3.3.1-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
AccessAndMobilityData	M	1	Access and mobility data for the UE is created or updated.

Table 7.2.3.3.1-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
AccessAndMobilityData	M	1	201 Created	Successful case. The resource has been successfully created and a response body containing a representation of the access and mobility data shall be returned.
AccessAndMobilityData	M	1	200 OK	Successful case. The resource has been successfully updated and a response body containing a representation of the access and mobility data shall be returned.
n/a			204 No Content	Successful case. The resource has been successfully updated and no additional content is to be sent in the response message.

NOTE: The HTTP status code for the PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.

Table 7.2.3.3.1-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/exposure-data/{ueId}/access-and-mobility-data

7.2.3.3.2 GET

This method shall support the URI query parameters specified in table 7.2.3.3.2-1.

Table 7.2.3.3.2-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
supp-feat	SupportedFeatures	O	0..1	The features supported by the NF service consumer. See 3GPP TS 29.500 [4] clause 6.6.2 and 3GPP TS 29.571 [7].

This method shall support the request data structures specified in table 7.2.3.3.2-2 and the response data structures and response codes specified in table 7.2.3.3.2-3.

Table 7.2.3.3.2-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 7.2.3.3.2-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response codes	Description
AccessAndMobilityData	M	1	200 OK	The response body contains the access and mobility data.
NOTE: The HTTP status code for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

7.2.3.3.3 DELETE

This method shall support the URI query parameters specified in table 7.2.3.3.3-1.

Table 7.2.3.3.3-1: 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 7.2.3.3.3-2 and the response data structures and response codes specified in table 7.2.3.3.3-3.

Table 7.2.3.3.3-2: Data structures supported by the DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 7.2.3.3.3-3: 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: The HTTP status code for the DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

7.2.3.3.4 PATCH

This method shall support the URI query parameters specified in table 7.2.3.3.4-1.

Table 7.2.3.3.4-1: URI query parameters supported by the PATCH method on this resource

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 7.2.3.3.4-2 and the response data structures and response codes specified in table 7.2.3.3.4-3.

Table 7.2.3.3.4-2: Data structures supported by the PATCH Request Body on this resource

Data type	P	Cardinality	Description
AccessAndMobilityData	M	1	Access and mobility data for the UE.

Table 7.2.3.3.4-3: 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: The HTTP status code for the PATCH method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

7.2.4 Resource: PduSessionManagementData

7.2.4.1 Description

This resource represents the exposure data related to session and management data for a given subscriber and a given PDU session.

7.2.4.2 Resource definition

Resource URI: **{apiRoot}/nudr-dr/<apiVersion>/exposure-data/{ueId}/session-management-data/{pduSessionId}**

This resource shall support the resource URI variables defined in table 7.2.4.2-1.

Table 7.2.4.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
ueId	VarUeId	Represents the SUPI or GPSI. Data type VarUeId is defined in 3GPP TS 29.571 [7].
pduSessionId	PduSessionId	Identifies an individual PDU session. Data type PduSessionId is defined in 3GPP TS 29.571 [7].

7.2.4.3 Resource Standard Methods

7.2.4.3.1 PUT

This method shall support the URI query parameters specified in table 7.2.4.3.1-1.

Table 7.2.4.3.1-1: 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 7.2.4.3.1-2 and the response data structures and response codes specified in table 7.2.4.3.1-3.

Table 7.2.4.3.1-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
PduSessionManagementData	M	1	Session management data for a UE and a PDU session is created or updated.

Table 7.2.4.3.1-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response Codes	Description
PduSessionManagementData	M	1	201 Created	Successful case. The resource has been successfully created and a response body containing a representation of the session management data shall be returned.
PduSessionManagementData	M	1	200 OK	Successful case. The resource has been successfully updated and a response body containing a representation of the session management data shall be returned.
n/a			204 No Content	Successful case. The resource has been successfully updated and no additional content is to be sent in the response message.

NOTE: The HTTP status code for the PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.

Table 7.2.4.3.1-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/exposure-data/{ueId}/session-management-data/{pduSessionId}

7.2.4.3.2 GET

This method shall support the URI query parameters specified in table 7.2.4.3.2-1.

Table 7.2.4.3.2-1: URI query parameters supported by the GET method on this resource

Name	Data type	P	Cardinality	Description
ipv4-addr	Ipv4Addr	O	0..1	UE IPv4 address.
ipv6-prefix	Ipv6Prefix	O	0..1	UE IPv6 prefix.
dnn	Dnn	O	0..1	Identifies a DNN.
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.
supp-feat	SupportedFeatures	O	0..1	The features supported by the NF service consumer. See 3GPP TS 29.500 [4] clause 6.6.2 and 3GPP TS 29.571 [7].

NOTE: The URI query parameters of the GET method on this resource contain filters such as the IP address and the DNN although the resource is an individual resource (identified by the PDU Session id). This means that if the provided URI query parameters do not match the targetted resource, the UDR will return an error response as specified in 3GPP TS 29.504 [6].

This method shall support the request data structures specified in table 7.2.4.3.2-2 and the response data structures and response codes specified in table 7.2.4.3.2-3.

Table 7.2.4.3.2-2: Data structures supported by the GET Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 7.2.4.3.2-3: Data structures supported by the GET Response Body on this resource

Data type	P	Cardinality	Response Codes	Description
PduSessionManagement Data	M	1	200 OK	The response body contains the session management data.

NOTE: The HTTP status code for the GET method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.

7.2.4.3.3 DELETE

This method shall support the URI query parameters specified in table 7.2.4.3.3-1.

Table 7.2.4.3.3-1: 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 7.2.4.3.3-2 and the response data structures and response codes specified in table 7.2.4.3.3-3.

Table 7.2.4.3.3-2: Data structures supported by the DELETE Request Body on this resource

Data type	P	Cardinality	Description
n/a			

Table 7.2.4.3.3-3: 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: The HTTP status code for the DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.

7.2.5 Resource: ExposureDataSubscriptions

7.2.5.1 Description

This resource is used to represent subscriptions to notifications of exposure data modifications.

7.2.5.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 7.2.5.2-1.

Table 7.2.5.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.

7.2.5.3 Resource Standard Methods

7.2.5.3.1 POST

This method shall support the URI query parameters specified in table 7.2.5.3.1-1.

Table 7.2.5.3.1-1: 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 7.2.5.3.1-2 and the response data structures and response codes specified in table 7.2.5.3.1-3.

Table 7.2.5.3.1-2: Data structures supported by the POST Request Body on this resource

Data type	P	Cardinality	Description
ExposureDataSubscription	M	1	Identifies an individual subscription to notifications of exposure data modifications.

Table 7.2.5.3.1-3: Data structures supported by the POST Response Body on this resource

Data type	P	Cardinality	Response codes	Description
ExposureDataSubscription	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: The mandatory HTTP error status codes for the POST method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

Table 7.2.5.3.1-4: Headers supported by the 201 Response Code on this resource

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/<apiVersion>/exposure-data/subs-to-notify/{subId}

7.2.6 Resource: IndividualExposureDataSubscription

7.2.6.1 Description

This resource represents an individual subscription to notifications of exposure data modifications.

7.2.6.2 Resource Definition

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

This resource shall support the resource URI variables defined in table 7.2.6.2-1.

Table 7.2.6.2-1: Resource URI variables for this resource

Name	Data type	Definition
apiRoot	string	See 3GPP TS 29.504 [6] clause 6.1.1.
subId	string	Identifies an individual subscription to notifications. The value is allocated by the UDR during creation of the IndividualExposureDataSubscription resource.

7.2.6.3 Resource Standard Methods

7.2.6.3.1 PUT

This method shall support the URI query parameters specified in table 7.2.6.3.1-1.

Table 7.2.6.3.1-1: 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 7.2.6.3.1-2 and the response data structures and response codes specified in table 7.2.6.3.1-3.

Table 7.2.6.3.1-2: Data structures supported by the PUT Request Body on this resource

Data type	P	Cardinality	Description
ExposureDataSubscription	M	1	Identifies an individual subscription to notifications of exposure data modifications.

Table 7.2.6.3.1-3: Data structures supported by the PUT Response Body on this resource

Data type	P	Cardinality	Response codes	Description
ExposureDataSubscription	M	1	200 OK	The individual subscription resource was updated successfully and a body with the modified subscription to notifications about exposure data is returned.
n/a			204 No Content	The individual subscription resource was successfully modified.
NOTE: The mandatory HTTP error status codes for the PUT method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

7.2.6.3.2 DELETE

This method shall support the URI query parameters specified in table 7.2.6.3.2-1.

Table 7.2.6.3.1-1: 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 7.2.6.3.2-2 and the response data structures and response codes specified in table 7.2.6.3.2-3.

Table 7.2.6.3.2-2: 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 7.2.6.3.2-3: 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: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

7.3 Data Model

7.3.1 General

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

Table 7.3.1-1 specifies the data types defined for the Nudr_DataRepository for Exposure Data service based interface protocol.

Table 7.3.1-1: Nudr_DataRepository specific Data Types for Exposure Data

Data type	Section defined	Description	Applicability
AccessAndMobilityData	7.3.2.2	Represents the Access and Mobility Data.	
ExposureDataChangeNotification	7.3.2.5	Contains changed exposure data for one UE for which Notification was requested.	
ExposureDataSubscription	7.3.2.4	Subscription to Notifications about Exposure Data.	
PduSessionManagementData	7.3.2.3	Represents the PDU Session Management Data.	
PduSessionStatus	7.3.3.3	Represents the state of the PDU session, i.e. active or released.	
SmsSupport	7.3.3.4	Indicates the supported SMS delivery of a UE.	

Table 7.3.1-2 specifies data types re-used by the Nudr_DataRepository for Exposure Data 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_DataRepository for Exposure Data service based interface.

Table 7.3.1-2: Nudr_DataRepository re-used Data Types for Exposure Data

Data type	Reference	Comments	Applicability
AccessType	3GPP TS 29.571 [7]	Identifies the access type, i.e. 3GPP access or Non-3GPP access.	
CmlInfo	3GPP TS 29.518 [10]	Describes the connectivity management state of a UE.	
DateTime	3GPP TS 29.571 [7]		
Dnai	3GPP TS 29.571 [7]	Identifies a Data network access identifier.	
Dnn	3GPP TS 29.571 [7]	Identifies a Data Network Name. (NOTE)	
Ipv4Addr	3GPP TS 29.571 [7]	The IPv4 Address.	
Ipv6Addr	3GPP TS 29.571 [7]	The Ipv6 Address.	
Ipv6Prefix	3GPP TS 29.571 [7]	The Ipv6 Address Prefix.	
PduSessionId	3GPP TS 29.571 [7]	PDU Session Identifier	
PduSessionType	3GPP TS 29.571 [7]	PDU Session type.	
PlmnId	3GPP TS 29.571 [7]	Identifies a PLMN.	
RatType	3GPP TS 29.571 [7]	Identifies a RAT type.	
RmlInfo	3GPP TS 29.518 [10]	Describes the registration management state of a UE.	
RouteToLocation	3GPP TS 29.571 [7]	A traffic route to/from a DNAI.	
TimeZone	3GPP TS 29.571 [7]	Identifies a time zone.	
SupportedFeatures	3GPP TS 29.571 [7]	Used to negotiate the applicability of the optional features.	
UeReachability	3GPP TS 29.518 [10]	Describes the reachability of the UE.	
Uri	3GPP TS 29.571 [7]		
UserLocation	3GPP TS 29.571 [7]	Identifies the user location.	
VarUeId	3GPP TS 29.571 [7]	String represents the SUPI or GPSI.	
NOTE: The UDR uses the DNN as received from the NF service consumer without applying any transformation. To successfully perform DNN matching, a DNN shall always be encoded either with the full DNN (e.g., because there are multiple Operator Identifiers for a Network Identifier) or the DNN Network Identifier only.			

7.3.2 Structured data types

7.3.2.1 Introduction

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

7.3.2.2 Type AccessAndMobilityData

Table 7.3.2.2-1: Definition of type AccessAndMobilityData

Attribute name	Data type	P	Cardinality	Description	Applicability
location	UserLocation	O	0..1	Current location for the UE, which can be a combination of E-UTRA, NR and non-3GPP access location.	
locationTs	DateTime	O	0..1	Indicates when the location was last updated.	
timeZone	TimeZone	O	0..1	Current time zone for the UE.	
timeZoneTs	DateTime	O	0..1	Indicates when the timeZone was last updated.	
accessType	AccessType	O	0..1	Current access type for the UE (3GPP access or non-3GPP access).	
accessTypeTs	DateTime	O	0..1	Indicates when the accessType was last updated.	
regStates	array(RmInfo)	O	1..N	Describes the registration management state of the UE.	
regStatesTs	DateTime	O	0..1	Indicates when the regStates were last updated.	
connStates	array(CmInfo)	O	1..N	Describes the connectivity management state of the UE.	
connStatesTs	DateTime	O	0..1	Indicates when the connStates were last updated.	
reachabilityStatus	UeReachability	O	0..1	Describes the reachability of the UE.	
reachabilityStatusTs	DateTime	O	0..1	Indicates when the reachabilityStatus was last updated.	
smsOverNasStatus	SmsSupport	O	0..1	Indicates the supported SMS delivery for the UE.	
smsOverNasStatusTs	DateTime	O	0..1	Indicates when the smsOverNasStatus was last updated.	
roamingStatus	boolean	O	0..1	True: The serving PLMN of the UE is different from the HPLMN of the UE; False: The serving PLMN of the UE is the HPLMN of the UE.	
roamingStatusTs	DateTime	O	0..1	Indicates when the roamingStatus was last updated.	
currentPlmn	PlmnId	O	0..1	The identity of the PLMN serving the UE.	
currentPlmnTs	DateTime	O	0..1	Indicates when the currentPlmn was last updated.	
ratType	array(RatType)	O	1..N	RAT type(s)	
ratTypesTs	DateTime	O	0..1	Indicates when the ratTypes was last updated.	
suppFeat	SupportedFeatures	C	0..1	This IE contains a list of supported feature(s) among the ones defined in clause 7.5. This attribute shall be present only when feature negotiation needs to take place. (NOTE)	
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.	
NOTE: In the HTTP request, it represents the set of features supported by the NF service consumer. In the HTTP response, it represents the set of features supported by both the NF service consumer and the UDR.					

7.3.2.3 Type PduSessionManagementData

Table 7.3.2.3-1: Definition of type PduSessionManagementData

Attribute name	Data type	P	Cardinality	Description	Applicability
pduSessionStatus	PduSessionStatus	O	0..1	Status of the PDU session.	
pduSessionStatusTs	DateTime	O	0..1	Indicates when the pduSessionStatus was last updated.	
dnai	Dnai	O	0..1	DNAI	
dnaiTs	DateTime	O	0..1	Indicates when the dnai was last updated.	
n6TrafficRoutingInfo	array(RouteToLocation)	O	1..N	N6 traffic routing information.	
n6TrafficRoutingInfoTs	DateTime	O	0..1	Indicates when the n6TrafficRoutingInfo was last updated.	
ipv4Addr	Ipv4Addr	O	0..1	UE IPv4 address.	
ipv6Prefix	array(Ipv6Prefix)	O	1..N	UE IPv6 prefix.	
ipv6Addrs	array(Ipv6Addr)	O	1..N	IPv6 addresses.	
pduSessType	PduSessionType	O	0..1	PDU session type.	
ipAddrTs	DateTime	O	0..1	Indicates when the ipv4Addr and Ipv6Prefix were last updated.	
dnn	Dnn	O	0..1	DNN	
pduSessionId	PduSessionId	O	0..1	The identifier of a PduSessionManagement resource. (NOTE 1).	ResourceNotificationExposureDataFix
suppFeat	SupportedFeatures	C	0..1	This IE contains a list of supported feature(s) among the ones defined in clause 7.5. This attribute shall be present only when feature negotiation needs to take place. (NOTE 2)	
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.	
NOTE 1: The "pduSessionId" attribute shall be present when the ResourceNotificationExposureDataFix is supported.					
NOTE 2: In the HTTP request, it represents the set of features supported by the NF service consumer. In the HTTP response, it represents the set of features supported by both the NF service consumer and the UDR.					

7.3.2.4 Type ExposureDataSubscription

Table 7.3.2.4-1: Definition of type ExposureDataSubscription

Attribute name	Data type	P	Cardinality	Description	Applicability
notificationUri	Uri	M	1	URI provided by the NF service consumer indicating where to receive to subscribed notifications from the UDR.	
notifId	string	O	0..1	Contains the notification correlation identifier.	NotifCorrelIdsSupport
monitoredResourceUris	array(Uri)	M	1..N	A set of URIs that identify the resources (as specified in Table 7.2.2-1) for which a modification triggers a notification. (NOTE)	
expiry	DateTime	C	0..1	<p>This attribute indicates the expiry time of the subscription.</p> <p>In Subscribe request messages this attribute may be included to suggest a time after which the subscription becomes invalid. Absence of this attribute from subscribe request messages indicates that the requested subscription is suggested to be unlimited in time until explicitly terminated by the service consumer.</p> <p>In Subscribe response messages this attribute may be included to confirm a time after which the subscription becomes invalid.</p> <p>The confirmed expiry time should be less than or equal to the suggested expiry time. If the suggested expiry time is present in the request, the confirmed expiry time should not be absent from the response.</p>	
supportedFeatures	SupportedFeatures	C	0..1	Used to negotiate the applicability of the optional features. This attribute shall be provided in the POST request and in the response of successful resource creation.	
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.	
immRep	boolean	O	0..1	If provided and set to "true", it indicates that existing entries that match this subscription shall be immediately reported within the "immReports" attribute in the response. The default value is false.	ImmediateReportPcc
immReports	array(ExposureDataChangeNotification)	O	1..N	Contains entries stored in the UDR that match this subscription. It may be included only in the POST (or PUT) response body of a subscription creation (or modification), and only if the request included the "immRep" attribute set to true.	ImmediateReportPcc

NOTE: Within this attribute, the URIs of the "ExposureDataSubscriptions" and "IndividualExposureDataSubscription" resources are not applicable and shall not be monitored.

7.3.2.5 Type ExposureDataChangeNotification

Table 7.3.2.5-1: Definition of type ExposureDataChangeNotification

Attribute name	Data type	P	Cardinality	Description	Applicability
ueld	VarUeld	O	0..1	User identity of modified data.	
accessAndMobilityData	AccessAndMobilityData	O	0..1	Access and Mobility Data for the UE.	
pduSessionManagementData	array(PduSessionManagementData)	O	1..N	PDU Session Management Data for one or several PDU sessions of the UE.	
delResources	array(Uri)	O	1..N	The resources, as defined in table 7.2.2-1, if removed from UDR and notification on resource data change was requested. It may be present when the ResourceNotificationExposureData Fix is supported (NOTE).	
notifld	string	O	0..1	Contains the notification correlation identifier.	NotifCorrelds Support
NOTE:	When the "delResources" attribute is present, the attributes that correspond with the values included in the "delResources" attribute shall be omitted. I.e., when the "delResources" attribute includes the value "{ueld}/access-and-mobility-data" the attribute "accessAndMobilityData" shall be omitted, and when the "delResources" attribute includes all the existing "{ueld}/session-management-data/{pduSessionId}" resource URIs, the attribute "pduSessionManagementData" shall be omitted.				

7.3.3 Simple data types and enumerations

7.3.3.1 Introduction

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

7.3.3.2 Simple data types

The simple data types defined in table 7.3.3.2-1 shall be supported.

Table 7.3.3.2-1: Simple data types

Type Name	Type Definition	Description	Applicability

7.3.3.3 Enumeration: PduSessionStatus

Table 7.3.3.3-1: Enumeration PduSessionStatus

Enumeration value	Description	Applicability
"ACTIVE"	The PDU session is active.	
"RELEASED"	The PDU session is released.	

7.3.3.4 Enumeration: SmsSupport

Table 7.3.3.4-1: Enumeration SmsSupport

Enumeration value	Description	Applicability
3GPP	Indicates the support of SMS delivery over NAS via 3GPP access.	
NON_3GPP	Indicates the support of SMS delivery via non-3GPP access.	
BOTH	Indicates the support of SMS delivery over NAS (i.e., via 3GPP access) or via non-3GPP access.	
NONE	Indicates to not support SMS delivery.	

7.4 Error handling

7.4.1 General

For the Nudr_DataRepository service API for Exposure Data, HTTP error responses shall be supported as specified in clause 4.8 of 3GPP TS 29.501 [5]. Protocol errors and application errors specified in table 5.2.7.2-1 of 3GPP TS 29.500 [4] shall be supported for an HTTP method if the corresponding HTTP status codes are specified as mandatory for that HTTP method in table 5.2.7.1-1 of 3GPP TS 29.500 [4].

In addition, the requirements in the following clauses are applicable for the Nudr_DataRepository service API for Exposure Data.

7.4.2 Protocol Errors

No specific procedures for the Nudr_DataRepository service API for Exposure Data are specified.

7.4.3 Application Errors

The application errors defined for the Nudr_DataRepository service API for Exposure Data are listed in table 7.4.3-1.

Table 7.4.3-1: Application errors

Application Error	HTTP status code	Description

The application error handling shall follow 3GPP TS 29.504 [6] clause 6.1.6 unless explicitly specified in this document.

7.5 Feature negotiation

The optional features in table 6.1.8-1 of 3GPP TS 29.504 [6] 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 [4].

7.6 Notifications

7.6.1 General

Notifications shall comply with clause 6.2 of 3GPP TS 29.500 [4] and clause 4.6.2.3 of 3GPP TS 29.501 [5].

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

Table 7.6.1-1: Notifications overview

Notification	Callback URI	HTTP method or custom operation	Description (service operation)
Exposure Data Change Notification	{notificationUri}	POST	Exposure Data Change Notification

7.6.2 Exposure Data Change Notification

The POST method shall be used for Data Change Notifications and the URI shall be as provided during the subscription procedure.

Callback URI: {notificationUri}

Support of URI query parameters is specified in table 7.6.2-1.

Table 7.6.2-1: 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 7.6.2-2 and of response data structures and response codes is specified in table 7.6.2-3.

Table 7.6.2-2: Data structures supported by the POST Request Body

Data type	P	Cardinality	Description
array(ExposureDataChange Notification)	M	1..N	Each element in the array provides the changed exposure data for one user.

Table 7.6.2-3: Data structures supported by the POST Response Body

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Upon success, an empty response body shall be returned.
NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.				

Annex A (normative): OpenAPI specification

A.1 General

The present Annex contains an OpenAPI [3] specification of HTTP messages and content bodies used by the Nudr_DataRepository service for Policy Data, Application Data and Exposure Data.

This Annex shall take precedence when being discrepant to other parts of the specification with respect to the encoding of information elements and methods.

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 clause 5B of the 3GPP TR 21.900 [18] and clause 5.3.1 of the 3GPP TS 29.501 [5] for further information).

A.2 Nudr_DataRepository API for Policy 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 "TS29519_Policy_Data.yaml".

openapi: 3.0.0

info:

```
version: '-'
title: Unified Data Repository Service API file for policy data
description: |
  The API version is defined in 3GPP TS 29.504
  © 2025, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).
  All rights reserved.
```

externalDocs:

```
description: >
  3GPP TS 29.519 V19.5.0; 5G System; Usage of the Unified Data Repository Service for Policy Data,
  Application Data and Structured Data for Exposure.
url: 'https://www.3gpp.org/ftp/Specs/archive/29_series/29.519/'
```

paths:

```
/policy-data/ues/{ueId}:
  parameters:
    - name: ueId
      in: path
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
  get:
    summary: Retrieve the policy data for a subscriber
    operationId: ReadPolicyData
    tags:
      - PolicyDataForIndividualUe (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
          - nudr-dr:policy-data:ues:read
    parameters:
      - name: supp-feat
```

```

    in: query
    description: Supported Features
    required: false
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  - name: data-subset-names
    in: query
    style: form
    explode: false
    description: List of policy data subset names
    required: false
    schema:
      type: array
      items:
        $ref: '#/components/schemas/PolicyDataSubset'
      minItems: 2
  responses:
    '200':
      description: Upon success, a response body containing policy data shall be returned.
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/PolicyDataForIndividualUe'
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '406':
      $ref: 'TS29571_CommonData.yaml#/components/responses/406'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/ues/{ueId}/am-data:
  parameters:
    - name: ueId
      in: path
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
  get:
    summary: Retrieves the access and mobility policy data for a subscriber
    operationId: ReadAccessAndMobilityPolicyData
    tags:
      - AccessAndMobilityPolicyData (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
          - nudr-dr:policy-data:ues:am-data:read
    parameters:
      - name: supp-feat
        in: query
        description: Supported Features
        required: false
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: >
          Upon success, a response body containing access and mobility policies shall be returned.
        content:
          application/json:

```

```

    schema:
      $ref: '#/components/schemas/AmPolicyData'
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '406':
    $ref: 'TS29571_CommonData.yaml#/components/responses/406'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
patch:
  summary: Modify the access and mobility policy data for a subscriber.
  operationId: UpdateAccessAndMobilityPolicyData
  tags:
    - AccessAndMobilityPolicyData (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:policy-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:policy-data
      - nudr-dr:policy-data:ues:am-data:modify
  requestBody:
    required: true
    content:
      application/merge-patch+json:
        schema:
          $ref: '#/components/schemas/AmPolicyDataPatch'
  responses:
    '200':
      description: >
        Upon success, a response body containing access and mobility policies is returned.
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/AmPolicyData'
    '204':
      description: >
        Successful case. The resource has been successfully updated and no additional content is
        to be sent in the response message.
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '411':
      $ref: 'TS29571_CommonData.yaml#/components/responses/411'
    '413':
      $ref: 'TS29571_CommonData.yaml#/components/responses/413'
    '415':
      $ref: 'TS29571_CommonData.yaml#/components/responses/415'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'

```

```

    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'
/policy-data/ues/{ueId}/ue-policy-set:
  parameters:
    - name: ueId
      in: path
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
  get:
    summary: Retrieves the UE policy set data for a subscriber
    operationId: ReadUEPolicySet
    tags:
      - UEPolicySet (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
          - nudr-dr:policy-data:ues:ue-policy-set:read
    parameters:
      - name: supp-feat
        in: query
        description: Supported Features
        required: false
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Upon success, a response body containing UE policies shall be returned.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/UEPolicySet'
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '406':
        $ref: 'TS29571_CommonData.yaml#/components/responses/406'
      '429':
        $ref: 'TS29571_CommonData.yaml#/components/responses/429'
      '500':
        $ref: 'TS29571_CommonData.yaml#/components/responses/500'
      '502':
        $ref: 'TS29571_CommonData.yaml#/components/responses/502'
      '503':
        $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  put:
    summary: Create or modify the UE policy set data for a subscriber
    operationId: CreateOrReplaceUEPolicySet
    tags:
      - UEPolicySet (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
          - nudr-dr:policy-data:ues:ue-policy-set:create
    requestBody:
      required: true

```

```

content:
  application/json:
    schema:
      $ref: '#/components/schemas/UePolicySet'
responses:
  '201':
    description: >
      Successful case. The resource has been successfully created and a response body
      containing a representation of the created UePolicySet resource shall be returned.
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/UePolicySet'
    headers:
      Location:
        description: 'Contains the URI of the newly created resource'
        required: true
        schema:
          type: string
  '200':
    description: >
      Successful case. The resource has been successfully created and a response body
      containing UE policies shall be returned.
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/UePolicySet'
  '204':
    description: >
      Successful case. The resource has been successfully updated and no additional content
      is to be sent in the response message.
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '411':
    $ref: 'TS29571_CommonData.yaml#/components/responses/411'
  '413':
    $ref: 'TS29571_CommonData.yaml#/components/responses/413'
  '415':
    $ref: 'TS29571_CommonData.yaml#/components/responses/415'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
patch:
  summary: Modify the UE policy set data for a subscriber
  operationId: UpdateUEPolicySet
  tags:
    - UePolicySet (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:policy-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:policy-data
      - nudr-dr:policy-data:ues:ue-policy-set:modify
  requestBody:
    required: true
    content:
      application/merge-patch+json:
        schema:
          $ref: '#/components/schemas/UePolicySetPatch'
  responses:

```

```

'204':
  description: >
    Successful case. The resource has been successfully updated and no additional content is
    to be sent in the response message.
'400':
  $ref: 'TS29571_CommonData.yaml#/components/responses/400'
'401':
  $ref: 'TS29571_CommonData.yaml#/components/responses/401'
'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  $ref: 'TS29571_CommonData.yaml#/components/responses/404'
'411':
  $ref: 'TS29571_CommonData.yaml#/components/responses/411'
'413':
  $ref: 'TS29571_CommonData.yaml#/components/responses/413'
'415':
  $ref: 'TS29571_CommonData.yaml#/components/responses/415'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'

```

/policy-data/ues/{ueId}/sm-data:

```

get:
  summary: Retrieves the session management policy data for a subscriber
  operationId: ReadSessionManagementPolicyData
  tags:
    - SessionManagementPolicyData (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:policy-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:policy-data
      - nudr-dr:policy-data:ues:sm-data:read
  parameters:
    - name: ueId
      in: path
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - name: snssai
      in: query
      required: false
      content:
        application/json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    - name: multi-pdu-sess-info
      in: query
      required: false
      content:
        application/json:
          schema:
            type: array
            items:
              $ref: 'TS29571_CommonData.yaml#/components/schemas/PduSessionInfo'
            minItems: 2
    - name: dnn
      in: query
      required: false
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
    - name: fields
      in: query
      description: attributes to be retrieved
      required: false

```

```

    style: form
    explode: false
    schema:
      type: array
      items:
        type: string
        minItems: 1
  - name: supp-feat
    in: query
    description: Supported Features
    required: false
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
responses:
  '200':
    description: Upon success, a response body containing SmPolicyData shall be returned.
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/SmPolicyData'
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '406':
    $ref: 'TS29571_CommonData.yaml#/components/responses/406'
  '414':
    $ref: 'TS29571_CommonData.yaml#/components/responses/414'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
patch:
  summary: Modify the session management policy data for a subscriber
  operationId: UpdateSessionManagementPolicyData
  tags:
    - SessionManagementPolicyData (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:policy-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:policy-data
      - nudr-dr:policy-data:ues:sm-data:modify
  parameters:
    - name: ueId
      in: path
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
  requestBody:
    required: true
    content:
      application/merge-patch+json:
        schema:
          $ref: '#/components/schemas/SmPolicyDataPatch'
  responses:
    '204':
      description: >
        Successful case. The resource has been successfully updated and no
        additional content is to be sent in the response message.
    '200':
      description: Expected response to a valid request
      content:

```

```

    application/json:
      schema:
        $ref: '#/components/schemas/SmPolicyData'
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '411':
    $ref: 'TS29571_CommonData.yaml#/components/responses/411'
  '413':
    $ref: 'TS29571_CommonData.yaml#/components/responses/413'
  '415':
    $ref: 'TS29571_CommonData.yaml#/components/responses/415'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/ues/{ueId}/sm-data/{usageMonId}:
  get:
    summary: Retrieve a usage monitoring resource
    operationId: ReadUsageMonitoringInformation
    tags:
      - UsageMonitoringInformation (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
          - nudr-dr:policy-data:ues:sm-data:read
    parameters:
      - name: ueId
        in: path
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: usageMonId
        in: path
        required: true
        schema:
          type: string
      - name: supp-feat
        in: query
        description: Supported Features
        required: false
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Successful case. The usage monitoring data is returned.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/UsageMonData'
      '204':
        description: The resource was found but no usage monitoring data is available.
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':

```

```

    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '406':
    $ref: 'TS29571_CommonData.yaml#/components/responses/406'
  '414':
    $ref: 'TS29571_CommonData.yaml#/components/responses/414'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
put:
  summary: Create a usage monitoring resource
  operationId: CreateUsageMonitoringResource
  tags:
    - UsageMonitoringInformation (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:policy-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:policy-data
      - nudr-dr:policy-data:ues:sm-data:create
  parameters:
    - name: ueId
      in: path
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - name: usageMonId
      in: path
      required: true
      schema:
        type: string
  requestBody:
    required: true
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/UsageMonData'
  responses:
    '201':
      description: >
        Successful case. The resource has been successfully created and a response body is
        returned containing a representation of the resource.
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/UsageMonData'
      headers:
        Location:
          description: 'Contains the URI of the newly created resource'
          required: true
          schema:
            type: string
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '411':
      $ref: 'TS29571_CommonData.yaml#/components/responses/411'
    '413':
      $ref: 'TS29571_CommonData.yaml#/components/responses/413'
    '414':
      $ref: 'TS29571_CommonData.yaml#/components/responses/414'
    '415':

```

```

    $ref: 'TS29571_CommonData.yaml#/components/responses/415'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
delete:
  summary: Delete a usage monitoring resource
  operationId: DeleteUsageMonitoringInformation
  tags:
    - UsageMonitoringInformation (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:policy-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:policy-data
      - nudr-dr:policy-data:ues:sm-data:modify
  parameters:
    - name: ueId
      in: path
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - name: usageMonId
      in: path
      required: true
      schema:
        type: string
  responses:
    '204':
      description: Successful case. The resource has been successfully deleted.
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/sponsor-connectivity-data/{sponsorId}:
  parameters:
    - name: sponsorId
      in: path
      required: true
      schema:
        type: string
  get:
    summary: Retrieves the sponsored connectivity information for a given sponsorId
    operationId: ReadSponsorConnectivityData
    tags:
      - SponsorConnectivityData (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr

```

```

- nudr-dr:policy-data
- oAuth2ClientCredentials:
  - nudr-dr
  - nudr-dr:policy-data
  - nudr-dr:policy-data:sponsor-connectivity-data:read
parameters:
- name: supp-feat
  in: query
  description: Supported Features
  required: false
  schema:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
responses:
'200':
  description: >
    Upon success, a response body containing Sponsor Connectivity Data shall be returned.
  content:
    application/json:
      schema:
        $ref: '#/components/schemas/SponsorConnectivityData'
'204':
  description: The resource was found but no Sponsor Connectivity Data is available.
'400':
  $ref: 'TS29571_CommonData.yaml#/components/responses/400'
'401':
  $ref: 'TS29571_CommonData.yaml#/components/responses/401'
'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  $ref: 'TS29571_CommonData.yaml#/components/responses/404'
'406':
  $ref: 'TS29571_CommonData.yaml#/components/responses/406'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/bdt-data:
get:
  summary: Retrieves the BDT data collection
  operationId: ReadBdtData
  tags:
  - BdtData (Store)
  security:
  - {}
  - oAuth2ClientCredentials:
    - nudr-dr
  - oAuth2ClientCredentials:
    - nudr-dr
    - nudr-dr:policy-data
  - oAuth2ClientCredentials:
    - nudr-dr
    - nudr-dr:policy-data
    - nudr-dr:policy-data:bdt-data:read
parameters:
- name: bdt-ref-ids
  in: query
  description: List of the BDT reference identifiers.
  required: false
  schema:
    type: array
    items:
      $ref: 'TS29122_CommonData.yaml#/components/schemas/BdtReferenceId'
    minItems: 1
    style: form
    explode: false
- name: supp-feat
  in: query
  description: Supported Features
  required: false
  schema:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

```

```

responses:
  '200':
    description: Upon success, a response body containing the BDT data shall be returned.
    content:
      application/json:
        schema:
          type: array
          items:
            $ref: '#/components/schemas/BdtData'
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '406':
    $ref: 'TS29571_CommonData.yaml#/components/responses/406'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/bdt-data/{bdtReferenceId}:
  parameters:
    - name: bdtReferenceId
      in: path
      required: true
      schema:
        $ref: 'TS29122_CommonData.yaml#/components/schemas/BdtReferenceId'
  get:
    summary: Retrieves the BDT data information associated with a BDT reference Id
    operationId: ReadIndividualBdtData
    tags:
      - IndividualBdtData (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
          - nudr-dr:policy-data:bdt-data:read
    parameters:
      - name: supp-feat
        in: query
        description: Supported Features
        required: false
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Upon success, a response body containing the BDT data shall be returned.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/BdtData'
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '406':
        $ref: 'TS29571_CommonData.yaml#/components/responses/406'
      '429':

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    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
put:
  summary: Creates an BDT data resource associated with an BDT reference Id
  operationId: CreateIndividualBdtData
  tags:
    - IndividualBdtData (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:policy-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:policy-data
      - nudr-dr:policy-data:bdt-data:create
  requestBody:
    required: true
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/BdtData'
  responses:
    '201':
      description: Successful case. The resource has been successfully created.
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/BdtData'
      headers:
        Location:
          description: 'Contains the URI of the newly created resource'
          required: true
          schema:
            type: string
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '411':
      $ref: 'TS29571_CommonData.yaml#/components/responses/411'
    '413':
      $ref: 'TS29571_CommonData.yaml#/components/responses/413'
    '414':
      $ref: 'TS29571_CommonData.yaml#/components/responses/414'
    '415':
      $ref: 'TS29571_CommonData.yaml#/components/responses/415'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'
patch:
  summary: Modifies an BDT data resource associated with an BDT reference Id
  operationId: UpdateIndividualBdtData
  tags:
    - IndividualBdtData (Document)
  security:
    - {}
    - oAuth2ClientCredentials:

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- nudr-dr
- oAuth2ClientCredentials:
  - nudr-dr
  - nudr-dr:policy-data
- oAuth2ClientCredentials:
  - nudr-dr
  - nudr-dr:policy-data
  - nudr-dr:policy-data:bdt-data:modify
requestBody:
  required: true
  content:
    application/merge-patch+json:
      schema:
        $ref: '#/components/schemas/BdtDataPatch'
responses:
  '200':
    description: Expected response to a valid request
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/BdtData'
  '204':
    description: >
      Successful case. The resource has been successfully updated and no additional content
      is to be sent in the response message.
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '411':
    $ref: 'TS29571_CommonData.yaml#/components/responses/411'
  '413':
    $ref: 'TS29571_CommonData.yaml#/components/responses/413'
  '415':
    $ref: 'TS29571_CommonData.yaml#/components/responses/415'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
delete:
  summary: Deletes an BDT data resource associated with an BDT reference Id
  operationId: DeleteIndividualBdtData
  tags:
    - IndividualBdtData (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:policy-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:policy-data
      - nudr-dr:policy-data:bdt-data:modify
responses:
  '204':
    description: Successful case. The resource has been successfully deleted.
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'

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'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/subs-to-notify:
  get:
    summary: Retrieves the list of Individual Policy Data Subscription resources
    operationId: ReadPolicyDataSubscriptions
    tags:
      - PolicyDataSubscriptions (Collection)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
          - nudr-dr:policy-data:subs-to-notify:read
    parameters:
      - name: mon-resources
        in: query
        style: form
        explode: false
        description: List of monitored resources whose subscriptions are requested.
        required: false
        schema:
          type: array
          items:
            type: string
            description: Contains the apiSpecificResourceUriPart of the resource URI.
            minItems: 1
      - name: ue-id
        in: query
        description: Represents the Subscription Identifier SUPI or GPSI.
        required: false
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
      - name: supp-feat
        in: query
        description: Supported Features
        required: false
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: >
          Upon success, a response body containing a list of Individual Policy Data
          Subscription resources shall be returned.
        content:
          application/json:
            schema:
              type: array
              items:
                $ref: '#/components/schemas/PolicyDataSubscription'
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '406':
        $ref: 'TS29571_CommonData.yaml#/components/responses/406'
      '429':
        $ref: 'TS29571_CommonData.yaml#/components/responses/429'
      '500':
        $ref: 'TS29571_CommonData.yaml#/components/responses/500'
      '503':
        $ref: 'TS29571_CommonData.yaml#/components/responses/503'

```

```

    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  post:
    summary: Create a subscription to receive notification of policy data changes
    operationId: CreateIndividualPolicyDataSubscription
    tags:
      - PolicyDataSubscriptions (Collection)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
          - nudr-dr:policy-data:subs-to-notify:create
    requestBody:
      required: true
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/PolicyDataSubscription'
    responses:
      '201':
        description: >
          Upon success, a response body containing a representation of each Individual
          subscription resource shall be returned.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/PolicyDataSubscription'
        headers:
          Location:
            description: 'Contains the URI of the newly created resource'
            required: true
            schema:
              type: string
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '411':
        $ref: 'TS29571_CommonData.yaml#/components/responses/411'
      '413':
        $ref: 'TS29571_CommonData.yaml#/components/responses/413'
      '415':
        $ref: 'TS29571_CommonData.yaml#/components/responses/415'
      '429':
        $ref: 'TS29571_CommonData.yaml#/components/responses/429'
      '500':
        $ref: 'TS29571_CommonData.yaml#/components/responses/500'
      '502':
        $ref: 'TS29571_CommonData.yaml#/components/responses/502'
      '503':
        $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  callbacks:
    policyDataChangeNotification:
      '{$request.body#/notificationUri}':
        post:
          requestBody:
            required: true
            content:
              application/json:
                schema:
                  type: array
                  items:
                    $ref: '#/components/schemas/PolicyDataChangeNotification'
                  minItems: 1
          responses:
            '204':

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        description: No Content, Notification was successful
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '411':
        $ref: 'TS29571_CommonData.yaml#/components/responses/411'
      '413':
        $ref: 'TS29571_CommonData.yaml#/components/responses/413'
      '415':
        $ref: 'TS29571_CommonData.yaml#/components/responses/415'
      '429':
        $ref: 'TS29571_CommonData.yaml#/components/responses/429'
      '500':
        $ref: 'TS29571_CommonData.yaml#/components/responses/500'
      '502':
        $ref: 'TS29571_CommonData.yaml#/components/responses/502'
      '503':
        $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/subs-to-notify/{subsId}:
  parameters:
    - name: subsId
      in: path
      required: true
      schema:
        type: string
  get:
    summary: Retrieves Individual Policy Subscription data
    operationId: ReadIndividualPolicySubscriptionData
    tags:
      - IndividualPolicySubscriptionData (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
          - nudr-dr:policy-data:subs-to-notify:read
    responses:
      '200':
        description: >
          Upon success, a response body containing Policy Data Subscription shall be returned.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/PolicyDataSubscription'
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '406':
        $ref: 'TS29571_CommonData.yaml#/components/responses/406'
      '414':
        $ref: 'TS29571_CommonData.yaml#/components/responses/414'
      '429':
        $ref: 'TS29571_CommonData.yaml#/components/responses/429'
      '500':
        $ref: 'TS29571_CommonData.yaml#/components/responses/500'
      '502':
        $ref: 'TS29571_CommonData.yaml#/components/responses/502'
      '503':
        $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:

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    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  put:
    summary: Modify a subscription to receive notification of policy data changes
    operationId: ReplaceIndividualPolicyDataSubscription
    tags:
      - IndividualPolicyDataSubscription (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
          - nudr-dr:policy-data:subs-to-notify:modify
    requestBody:
      required: true
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/PolicyDataSubscription'
    responses:
      '200':
        description: The individual subscription resource was updated successfully.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/PolicyDataSubscription'
      '204':
        description: >
          The individual subscription resource was updated successfully and no
          additional content is to be sent in the response message.
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '411':
        $ref: 'TS29571_CommonData.yaml#/components/responses/411'
      '413':
        $ref: 'TS29571_CommonData.yaml#/components/responses/413'
      '415':
        $ref: 'TS29571_CommonData.yaml#/components/responses/415'
      '429':
        $ref: 'TS29571_CommonData.yaml#/components/responses/429'
      '500':
        $ref: 'TS29571_CommonData.yaml#/components/responses/500'
      '502':
        $ref: 'TS29571_CommonData.yaml#/components/responses/502'
      '503':
        $ref: 'TS29571_CommonData.yaml#/components/responses/503'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  delete:
    summary: Delete the individual Policy Data subscription
    operationId: DeleteIndividualPolicyDataSubscription
    tags:
      - IndividualPolicyDataSubscription (Document)
    responses:
      '204':
        description: Upon success, an empty response body shall be returned.
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '429':
        $ref: 'TS29571_CommonData.yaml#/components/responses/429'
      '500':
        $ref: 'TS29571_CommonData.yaml#/components/responses/500'

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```

'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/ues/{ueId}/operator-specific-data:
  get:
    summary: Retrieve the operator specific policy data of an UE
    operationId: ReadOperatorSpecificData
    tags:
      - OperatorSpecificData (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
          - nudr-dr:policy-data:ues:operator-specific-data:read
    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
        style: form
        explode: false
        schema:
          type: array
          items:
            type: string
            minItems: 1
      - name: supp-feat
        in: query
        description: Supported Features
        required: false
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Expected response to a valid request
        content:
          application/json:
            schema:
              type: object
              additionalProperties:
                $ref:
' TS29505_Subscription_Data.yaml#/components/schemas/OperatorSpecificDataContainer'
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '406':
        $ref: 'TS29571_CommonData.yaml#/components/responses/406'
      '414':
        $ref: 'TS29571_CommonData.yaml#/components/responses/414'
      '429':
        $ref: 'TS29571_CommonData.yaml#/components/responses/429'
      '500':
        $ref: 'TS29571_CommonData.yaml#/components/responses/500'
      '502':
        $ref: 'TS29571_CommonData.yaml#/components/responses/502'
      '503':
        $ref: 'TS29571_CommonData.yaml#/components/responses/503'

```

```

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

patch:
  summary: Modify the operator specific policy data of a UE
  operationId: UpdateOperatorSpecificData
  tags:
    - OperatorSpecificData (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:policy-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:policy-data
      - nudr-dr:policy-data:ues:operator-specific-data:modify
  parameters:
    - name: ueId
      in: path
      description: UE Id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
  requestBody:
    content:
      application/json-patch+json:
        schema:
          type: array
          items:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
    required: true
  responses:
    '204':
      description: No content. Response to successful modification.
    '200':
      description: Expected response to a valid request
      content:
        application/json:
          schema:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '411':
      $ref: 'TS29571_CommonData.yaml#/components/responses/411'
    '413':
      $ref: 'TS29571_CommonData.yaml#/components/responses/413'
    '415':
      $ref: 'TS29571_CommonData.yaml#/components/responses/415'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

put:
  summary: Create or modify the operator specific policy data of a UE
  operationId: ReplaceOperatorSpecificData
  tags:
    - OperatorSpecificData (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr

```

```

- nudr-dr:policy-data
- OAuth2ClientCredentials:
- nudr-dr
- nudr-dr:policy-data
- nudr-dr:policy-data:ues:operator-specific-data:create
parameters:
- name: ueId
  in: path
  description: UE Id
  required: true
  schema:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
requestBody:
  required: true
  content:
    application/json:
      schema:
        type: object
        additionalProperties:
          $ref:
'TS29505_Subscription_Data.yaml#/components/schemas/OperatorSpecificDataContainer'
  responses:
    '200':
      description: OK
      content:
        application/json:
          schema:
            type: object
            additionalProperties:
              $ref:
'TS29505_Subscription_Data.yaml#/components/schemas/OperatorSpecificDataContainer'
    '201':
      description: >
        Successful case. When the feature OSDResource_Create_Delete is supported
        and the resource has been successfully created, a response body containing a
        representation of the created OperatorSpecificData resource shall be returned.
      content:
        application/json:
          schema:
            type: object
            additionalProperties:
              $ref:
'TS29505_Subscription_Data.yaml#/components/schemas/OperatorSpecificDataContainer'
  headers:
    Location:
      description: 'Contains the URI of the newly created resource'
      required: true
      schema:
        type: string
    '204':
      description: The resource has been successfully updated.
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '411':
      $ref: 'TS29571_CommonData.yaml#/components/responses/411'
    '413':
      $ref: 'TS29571_CommonData.yaml#/components/responses/413'
    '415':
      $ref: 'TS29571_CommonData.yaml#/components/responses/415'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
delete:
  summary: When the feature OSDResource_Create_Delete is supported, delete OperatorSpecificData
resource

```

```

operationId: DeleteOperatorSpecificData
tags:
  - OperatorSpecificData (Document)
security:
  - {}
  - oAuth2ClientCredentials:
    - nudr-dr
  - oAuth2ClientCredentials:
    - nudr-dr
    - nudr-dr:policy-data
  - oAuth2ClientCredentials:
    - nudr-dr
    - nudr-dr:policy-data
    - nudr-dr:policy-data:ues:operator-specific-data:modify
parameters:
  - name: ueId
    in: path
    required: true
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
responses:
  '204':
    description: Successful case. The resource has been successfully deleted.
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/plmns/{plmnId}/ue-policy-set:
parameters:
  - name: plmnId
    in: path
    required: true
    schema:
      $ref: 'TS29505_Subscription_Data.yaml#/components/schemas/VarPlmnId'
get:
summary: Retrieve the UE policy set data for an H-PLMN
operationId: ReadPlmnUePolicySet
tags:
  - PlmnUePolicySet (Document)
security:
  - {}
  - oAuth2ClientCredentials:
    - nudr-dr
  - oAuth2ClientCredentials:
    - nudr-dr
    - nudr-dr:policy-data
  - oAuth2ClientCredentials:
    - nudr-dr
    - nudr-dr:policy-data
    - nudr-dr:policy-data:plmns:ue-policy-set:read
parameters:
  - name: supp-feat
    in: query
    description: Supported Features
    required: false
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
responses:
  '200':
    description: Upon success, a response body containing UE policies shall be returned.
    content:
      application/json:
        schema:

```

```

    $ref: '#/components/schemas/UePolicySet'
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '406':
    $ref: 'TS29571_CommonData.yaml#/components/responses/406'
  '412':
    $ref: 'TS29571_CommonData.yaml#/components/responses/412'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/slice-control-data/{snssai}:
  parameters:
    - name: snssai
      in: path
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
  get:
    summary: Retrieves a network Slice specific policy control data resource
    operationId: ReadSlicePolicyControlData
    tags:
      - SlicePolicyControlData (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
          - nudr-dr:policy-data:slice-control-data:read
    parameters:
      - name: supp-feat
        in: query
        description: Supported Features
        required: false
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: >
          Successful case. The network slice specific policy control data shall be returned.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/SlicePolicyData'
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '406':
        $ref: 'TS29571_CommonData.yaml#/components/responses/406'
      '429':
        $ref: 'TS29571_CommonData.yaml#/components/responses/429'
      '500':
        $ref: 'TS29571_CommonData.yaml#/components/responses/500'
      '502':
        $ref: 'TS29571_CommonData.yaml#/components/responses/502'

```

```

    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  patch:
    summary: Modify a network Slice specific policy control data resource
    operationId: UpdateSlicePolicyControlData
    tags:
      - SlicePolicyControlData (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
          - nudr-dr:policy-data:slice-control-data:modify
    requestBody:
      required: true
      content:
        application/merge-patch+json:
          schema:
            $ref: '#/components/schemas/SlicePolicyDataPatch'
    responses:
      '200':
        description: >
          The resource has been successfully updated and a response body containing network slice specific policy control data shall be returned.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/SlicePolicyData'
      '204':
        description: >
          The resource has been successfully updated and no additional content is to be sent in the response message.
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '411':
        $ref: 'TS29571_CommonData.yaml#/components/responses/411'
      '413':
        $ref: 'TS29571_CommonData.yaml#/components/responses/413'
      '415':
        $ref: 'TS29571_CommonData.yaml#/components/responses/415'
      '429':
        $ref: 'TS29571_CommonData.yaml#/components/responses/429'
      '500':
        $ref: 'TS29571_CommonData.yaml#/components/responses/500'
      '502':
        $ref: 'TS29571_CommonData.yaml#/components/responses/502'
      '503':
        $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/mbs-session-pol-data/{polSessionId}:
  parameters:
    - name: polSessionId
      description: >
        Represents the identifier of the MBS Session Policy Control Data.
      in: path
      required: true
      schema:
        $ref: '#/components/schemas/MbsSessPolDataId'

  get:
    summary: Retrieve MBS Session Policy Control Data for an MBS Session.
    operationId: GetMBSsessPolCtrlData
    tags:

```

```

- MBSsessionPolicyControlData (Document)
security:
- {}
- oAuth2ClientCredentials:
- nudr-dr
- oAuth2ClientCredentials:
- nudr-dr
- nudr-dr:policy-data
- oAuth2ClientCredentials:
- nudr-dr
- nudr-dr:policy-data
- nudr-dr:policy-data:mbs-session-pol-data:read
responses:
'200':
description: >
OK. The requested MBS Session Policy Control Data is successfully returned.
content:
application/json:
schema:
$ref: '#/components/schemas/MbsSessPolCtrlData'
'400':
$ref: 'TS29571_CommonData.yaml#/components/responses/400'
'401':
$ref: 'TS29571_CommonData.yaml#/components/responses/401'
'403':
$ref: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
$ref: 'TS29571_CommonData.yaml#/components/responses/404'
'406':
$ref: 'TS29571_CommonData.yaml#/components/responses/406'
'414':
$ref: 'TS29571_CommonData.yaml#/components/responses/414'
'429':
$ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
$ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
$ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
$ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
$ref: 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/pdtq-data:
get:
summary: Retrieves the PDTQ data collection
operationId: ReadPdtqData
tags:
- PdtqData (Store)
security:
- {}
- oAuth2ClientCredentials:
- nudr-dr
- oAuth2ClientCredentials:
- nudr-dr
- nudr-dr:policy-data
- oAuth2ClientCredentials:
- nudr-dr
- nudr-dr:policy-data
- nudr-dr:policy-data:pdtq-data:read
parameters:
- name: pdtq-ref-ids
in: query
description: List of the PDTQ reference identifiers.
required: false
schema:
type: array
items:
$ref: 'TS29543_Npcf_PDTQPolicyControl.yaml#/components/schemas/PdtqReferenceId'
minItems: 1
style: form
explode: false
- name: supp-feat
in: query
description: Supported Features
required: false
schema:
$ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

```

```

responses:
  '200':
    description: Upon success, a response body containing the PDTQ data shall be returned.
    content:
      application/json:
        schema:
          type: array
          items:
            $ref: '#/components/schemas/PdtqData'
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '406':
    $ref: 'TS29571_CommonData.yaml#/components/responses/406'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/pdtq-data/{pdtqReferenceId}:
  parameters:
    - name: pdtqReferenceId
      in: path
      required: true
      schema:
        type: string
  get:
    summary: Retrieves the PDTQ data information associated with a PDTQ reference Id
    operationId: ReadIndividualPdtqData
    tags:
      - IndividualPdtqData (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
          - nudr-dr:policy-data:pdtq-data:read
    parameters:
      - name: supp-feat
        in: query
        description: Supported Features
        required: false
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: Upon success, a response body containing the PDTQ data shall be returned.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/PdtqData'
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '406':
        $ref: 'TS29571_CommonData.yaml#/components/responses/406'
      '429':

```

```

    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
put:
  summary: Creates a PDTQ data resource associated with a PDTQ reference Id
  operationId: CreateIndividualPdtqData
  tags:
    - IndividualPdtqData (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:policy-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:policy-data
      - nudr-dr:policy-data:pdtq-data:create
  requestBody:
    required: true
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/PdtqData'
  responses:
    '201':
      description: Successful case. The resource has been successfully created.
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/PdtqData'
      headers:
        Location:
          description: 'Contains the URI of the newly created resource'
          required: true
          schema:
            type: string
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '411':
      $ref: 'TS29571_CommonData.yaml#/components/responses/411'
    '413':
      $ref: 'TS29571_CommonData.yaml#/components/responses/413'
    '414':
      $ref: 'TS29571_CommonData.yaml#/components/responses/414'
    '415':
      $ref: 'TS29571_CommonData.yaml#/components/responses/415'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'
patch:
  summary: Modifies a PDTQ data resource associated with a PDTQ reference Id
  operationId: UpdateIndividualPdtqData
  tags:
    - IndividualPdtqData (Document)
  security:
    - {}
    - oAuth2ClientCredentials:

```

```

- nudr-dr
- oAuth2ClientCredentials:
- nudr-dr
- nudr-dr:policy-data
- oAuth2ClientCredentials:
- nudr-dr
- nudr-dr:policy-data
- nudr-dr:policy-data:pdqtq-data:modify
requestBody:
  required: true
  content:
    application/merge-patch+json:
      schema:
        $ref: '#/components/schemas/PdtqDataPatch'
responses:
  '200':
    description: Expected response to a valid request
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/PdtqData'
  '204':
    description: >
      Successful case. The resource has been successfully updated and no additional content
      is to be sent in the response message.
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '411':
    $ref: 'TS29571_CommonData.yaml#/components/responses/411'
  '413':
    $ref: 'TS29571_CommonData.yaml#/components/responses/413'
  '415':
    $ref: 'TS29571_CommonData.yaml#/components/responses/415'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
delete:
  summary: Deletes a PDTQ data resource associated with a PDTQ reference Id
  operationId: DeleteIndividualPdtqData
  tags:
  - IndividualPdtqData (Document)
  security:
  - {}
  - oAuth2ClientCredentials:
  - nudr-dr
  - oAuth2ClientCredentials:
  - nudr-dr
  - nudr-dr:policy-data
  - oAuth2ClientCredentials:
  - nudr-dr
  - nudr-dr:policy-data
  - nudr-dr:policy-data:pdqtq-data:modify
responses:
  '204':
    description: Successful case. The resource has been successfully deleted.
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'

```

```

'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/group-control-data/{intGroupId}:
  parameters:
    - name: intGroupId
      in: path
      required: true
      description: >
        Represents the identifier of the internal group of subscriber(s).
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'

  get:
    summary: Retrieves group specific policy control data.
    operationId: ReadGroupPolCtrlData
    tags:
      - GroupPolicyControlData (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:policy-data
          - nudr-dr:policy-data:group-control-data:read
    parameters:
      - name: supp-feat
        in: query
        description: Represents the supported features.
        required: false
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    responses:
      '200':
        description: >
          Successful case. The requested group specific policy control data for the
          targeted 5G VN group shall be returned.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/GroupPolicyData'
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '406':
        $ref: 'TS29571_CommonData.yaml#/components/responses/406'
      '429':
        $ref: 'TS29571_CommonData.yaml#/components/responses/429'
      '500':
        $ref: 'TS29571_CommonData.yaml#/components/responses/500'
      '503':
        $ref: 'TS29571_CommonData.yaml#/components/responses/503'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'

  patch:
    summary: Modify existing group specific policy control data.
    operationId: ModifyGroupPolCtrlData
    tags:
      - GroupPolicyControlData (Document)
    security:
      - {}
      - oAuth2ClientCredentials:

```

```

- nudr-dr
- oAuth2ClientCredentials:
- nudr-dr
- nudr-dr:policy-data
- oAuth2ClientCredentials:
- nudr-dr
- nudr-dr:policy-data
- nudr-dr:policy-data:group-control-data:modify
requestBody:
  required: true
  content:
    application/merge-patch+json:
      schema:
        $ref: '#/components/schemas/GroupPolicyDataPatch'
responses:
  '200':
    description: >
      The resource is successfully modified and a representation of the updated resource
      (i.e., updated group specific policy control data) is returned in the response body.
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/GroupPolicyData'
  '204':
    description: >
      The resource is successfully modified and no content is returned in the response body.
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '411':
    $ref: 'TS29571_CommonData.yaml#/components/responses/411'
  '413':
    $ref: 'TS29571_CommonData.yaml#/components/responses/413'
  '415':
    $ref: 'TS29571_CommonData.yaml#/components/responses/415'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

components:

  schemas:

    PolicyDataForIndividualUe:
      description: Contains policy data for a given subscriber.
      type: object
      properties:
        uePolicyDataSet:
          $ref: '#/components/schemas/UePolicySet'
        smPolicyDataSet:
          $ref: '#/components/schemas/SmPolicyData'
        amPolicyDataSet:
          $ref: '#/components/schemas/AmPolicyData'
        umData:
          type: object
          additionalProperties:
            $ref: '#/components/schemas/UsageMonData'
          minProperties: 1
          description: >
            Contains UM policies. The value of the limit identifier is used as the key of the map.
        operatorSpecificDataSet:
          type: object
          additionalProperties:
            $ref: 'TS29505_Subscription_Data.yaml#/components/schemas/OperatorSpecificDataContainer'
          minProperties: 1
          description: >
            Contains Operator Specific Data resource data. The key of the map is operator
            specific data element name and the value is the operator specific data of the UE.

```

```

    suppFeat:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

AmPolicyData:
  description: Contains the AM policy data for a given subscriber.
  type: object
  properties:
    praInfos:
      type: object
      additionalProperties:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/PresenceInfo'
      minProperties: 1
      description: >
        Contains Presence reporting area information. The praId attribute within the
        PresenceInfo data type is the key of the map.
    subscCats:
      type: array
      items:
        type: string
      minItems: 1
    chfInfo:
      $ref: 'TS29512_Npcf_SMPolicyControl.yaml#/components/schemas/ChargingInformation'
    chfGroupId:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'
    subscSpendingLimits:
      type: boolean
      description: >
        Indicates whether the PCF must enforce Access and Mobility management related
        policies based on subscriber spending limits.
    spendLimInfo:
      type: object
      additionalProperties:
        $ref: 'TS29594_Nchf_SpendingLimitControl.yaml#/components/schemas/PolicyCounterInfo'
      minProperties: 1
      description: >
        Contains the status of the requested policy counters for UE.
        The key of the map is the attribute policyCounterId.
    restriStatus:
      type: array
      items:
        $ref: '#/components/schemas/RestrictedStatus'
      minItems: 1
    suppFeat:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

AmPolicyDataPatch:
  description: Contains the modifiable AM policy data for a given subscriber.
  type: object
  properties:
    restriStatus:
      type: array
      items:
        $ref: '#/components/schemas/RestrictedStatus'
      minItems: 1
      description: >
        List of restricted status that contains the reason for the status and the time
        stamp of when the status was stored.
    spendLimInfo:
      type: object
      additionalProperties:
        $ref: '#/components/schemas/PolicyCounterInfoRm'
      minProperties: 1
      description: >
        Contains the status of the requested policy counters for UE.
        The key of the map is the attribute policyCounterId.

UePolicySet:
  description: Contains the UE policy data for a given subscriber.
  type: object
  properties:
    praInfos:
      type: object
      additionalProperties:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/PresenceInfo'
      minProperties: 1
      description: >
        Contains Presence reporting area information. The praId attribute within the
        PresenceInfo data type is the key of the map.

```

```

subscCats:
  type: array
  items:
    type: string
  minItems: 1
uePolicySections:
  type: object
  additionalProperties:
    $ref: '#/components/schemas/UEPolicySection'
  minProperties: 1
  description: >
    Contains the UE Policy Sections. The UE Policy Section Identifier is used as
    the key of the map.
upsis:
  type: array
  items:
    $ref: '#/components/schemas/Upsi'
  minItems: 1
allowedRouteSelDescs:
  type: object
  additionalProperties:
    $ref: '#/components/schemas/PlmnRouteSelectionDescriptor'
  minProperties: 1
  description: >
    Contains allowed route selection descriptors per serving PLMN for a UE.
    The serving PLMN identifier is the key of the map.
andspInd:
  type: boolean
epsUrspInd:
  type: boolean
  description: Indication of UE supporting URSP provisioning in EPS.
vpsUrspInd:
  type: boolean
  description: Indication of UE supporting VPLMN-specific URSP.
urspEnfInd:
  type: boolean
  description: Indication of UE supporting URSP enforcement report.
pei:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/Pei'
osIds:
  type: array
  items:
    $ref: '#/components/schemas/OsId'
  minItems: 1
chfInfo:
  $ref: 'TS29512_Npcf_SMPolicyControl.yaml#/components/schemas/ChargingInformation'
chfGroupId:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'
subscSpendingLimits:
  type: boolean
  description: >
    Indicates whether the PCF must enforce UE policies based on subscriber spending limits.
spendLimInfo:
  type: object
  additionalProperties:
    $ref: 'TS29594_Nchf_SpendingLimitControl.yaml#/components/schemas/PolicyCounterInfo'
  minProperties: 1
  description: >
    Contains the status of the requested policy counters for UE.
    The key of the map is the attribute policyCounterId.
tracingReq:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
resetIds:
  type: array
  items:
    type: string
  minItems: 1
restrStatus:
  type: array
  items:
    $ref: '#/components/schemas/RestrictedStatus'
  minItems: 1
suppFeat:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

UePolicySetPatch:
  description: Contains the UE policy set for a given subscriber.
  type: object

```

```

properties:
  uePolicySections:
    type: object
    additionalProperties:
      $ref: '#/components/schemas/UEPolicySection'
    minProperties: 1
    description: >
      Contains the UE Policy Sections. The UE Policy Section Identifier is used
      as the key of the map.
  upsis:
    type: array
    items:
      $ref: '#/components/schemas/Upsi'
    minItems: 1
  andspInd:
    type: boolean
  epsUrspInd:
    type: boolean
    description: Indication of UE supporting URSP provisioning in EPS.
  vpsUrspInd:
    type: boolean
    description: Indication of UE supporting VPLMN-specific URSP.
  urspEnfInd:
    type: boolean
    description: Indication of UE supporting URSP enforcement report.
  pei:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Pei'
  osIds:
    type: array
    items:
      $ref: '#/components/schemas/OsId'
    minItems: 1
  restriStatus:
    type: array
    items:
      $ref: '#/components/schemas/RestrictedStatus'
    minItems: 1
  spendLimInfo:
    type: object
    nullable: true
    additionalProperties:
      $ref: '#/components/schemas/PolicyCounterInfoRm'
    minProperties: 1
    description: >
      Contains the updated status of the requested policy counters for UE.
      The key of the map is the attribute policyCounterId.

UePolicySection:
  description: Contains the UE policy section.
  type: object
  properties:
    uePolicySectionInfo:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Bytes'
    upsi:
      $ref: '#/components/schemas/Upsi'
  required:
    - uePolicySectionInfo
    - upsi

SmPolicyData:
  description: Contains the SM policy data for a given subscriber.
  type: object
  properties:
    smPolicySnssaiData:
      type: object
      additionalProperties:
        $ref: '#/components/schemas/SmPolicySnssaiData'
      minProperties: 1
      description: >
        Contains Session Management Policy data per S-NSSAI for all the SNSSAIs
        of the subscriber. The key of the map is the S-NSSAI.
    umDataLimits:
      type: object
      additionalProperties:
        $ref: '#/components/schemas/UsageMonDataLimit'
      minProperties: 1
      description: >
        Contains a list of usage monitoring profiles associated with the subscriber.

```

```

    The limit identifier is used as the key of the map.
  umData:
    type: object
    additionalProperties:
      $ref: '#/components/schemas/UsageMonData'
    minProperties: 1
    description: >
      Contains the remaining allowed usage data associated with the subscriber.
      The limit identifier is used as the key of the map.
  suppFeat:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  required:
    - smPolicySnssaiData

SmPolicySnssaiData:
  description: Contains the SM policy data for a given subscriber and S-NSSAI.
  type: object
  properties:
    snssai:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    smPolicyDnnData:
      type: object
      additionalProperties:
        $ref: '#/components/schemas/SmPolicyDnnData'
      minProperties: 1
      description: >
        Session Management Policy data per DNN for all the DNNs of the indicated S-NSSAI.
        The key of the map is the DNN.
    ueSliceMbr:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SliceMbr'
  required:
    - snssai

SmPolicyDnnData:
  description: Contains the SM policy data for a given DNN (and S-NSSAI).
  type: object
  properties:
    dnn:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
    allowedServices:
      type: array
      items:
        type: string
      minItems: 1
    subscCats:
      type: array
      items:
        type: string
      minItems: 1
    gbrUl:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
    gbrDl:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
    adcSupport:
      type: boolean
    subscSpendingLimits:
      type: boolean
      description: >
        Indicates whether the PCF must enforce session management related policies based
        on subscriber spending limits.
    spendLimInfo:
      type: object
      additionalProperties:
        $ref: 'TS29594_Nchf_SpendingLimitControl.yaml#/components/schemas/PolicyCounterInfo'
      minProperties: 1
      description: >
        Contains the status of the requested policy counters for the PDU session.
        The key of the map is the attribute policyCounterId.
    ipv4Index:
      $ref: '#/components/schemas/IpIndex'
    ipv6Index:
      $ref: '#/components/schemas/IpIndex'
    offline:
      type: boolean
    online:
      type: boolean
    chfInfo:
      $ref: 'TS29512_Npcf_SMPolicyControl.yaml#/components/schemas/ChargingInformation'

```

```

  chfGroupId:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'
  refUmDataLimitIds:
    type: object
    additionalProperties:
      $ref: '#/components/schemas/LimitIdToMonitoringKey'
    minProperties: 1
    description: >
      A reference to the UsageMonDataLimit or UsageMonData instances for this DNN and SNSSAI
      that may also include the related monitoring key(s).
      The key of the map is the limit identifier.
  mpsPriority:
    type: boolean
  mcsPriority:
    type: boolean
  imsSignallingPrio:
    type: boolean
  mpsPriorityLevel:
    type: integer
  mcsPriorityLevel:
    type: integer
  praInfos:
    type: object
    additionalProperties:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/PresenceInfo'
    minProperties: 1
    description: >
      Contains Presence reporting area information. The praId attribute within the
      PresenceInfo data type is the key of the map.
  bdtRefIds:
    type: object
    additionalProperties:
      $ref: '#/components/schemas/BdtReferenceIdRm'
    minProperties: 1
    description: >
      Identifies transfer policies of background data transfer. Any string value can
      be used as a key of the map.
    nullable: true
  locRoutNotAllowed:
    type: boolean
  sfcNotAllowed:
    type: boolean
  tnap:
    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/TnapId'
    minItems: 1
    description: Contains the TNAP IDs collocated with the 5G-RG(s) of a specific user.
  restriStatus:
    type: array
    items:
      $ref: '#/components/schemas/RestrictedStatus'
    minItems: 1
  headerNotAllowed:
    type: boolean
  required:
    - dnn

UsageMonDataLimit:
  description: Contains usage monitoring control data for a subscriber.
  type: object
  properties:
    limitId:
      type: string
    scopes:
      type: object
      additionalProperties:
        $ref: '#/components/schemas/UsageMonDataScope'
      minProperties: 1
      description: >
        Identifies the SNSSAI and DNN combinations to which the usage monitoring data
        limit applies. The S-NSSAI is the key of the map.
    umLevel:
      $ref: '#/components/schemas/UsageMonLevel'
    startDate:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    endDate:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

```

```

    usageLimit:
      $ref: 'TS29122_CommonData.yaml#/components/schemas/UsageThreshold'
    resetPeriod:
      $ref: '#/components/schemas/TimePeriod'
  required:
  - limitId

UsageMonData:
  description: Contains remain allowed usage data for a subscriber.
  type: object
  properties:
    limitId:
      type: string
    scopes:
      type: object
      additionalProperties:
        $ref: '#/components/schemas/UsageMonDataScope'
      minProperties: 1
      description: >
        Identifies the SNSSAI and DNN combinations for remain allowed usage data
        for a subscriber. The S-NSSAI is the key of the map.
    umLevel:
      $ref: '#/components/schemas/UsageMonLevel'
    allowedUsage:
      $ref: 'TS29122_CommonData.yaml#/components/schemas/UsageThreshold'
    resetTime:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    suppFeat:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    resetIds:
      type: array
      items:
        type: string
      minItems: 1
  required:
  - limitId

LimitIdToMonitoringKey:
  description: >
    Contains the limit identifier and the corresponding monitoring key for a given
    S-NSSAI and DNN.
  type: object
  properties:
    limitId:
      type: string
    monkey:
      type: array
      items:
        type: string
      minItems: 1
  required:
  - limitId
  nullable: true

UsageMonDataScope:
  description: >
    Contains a SNSSAI and DNN combinations to which the UsageMonData instance belongs to.
  type: object
  properties:
    snssai:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    dnn:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
      minItems: 1
  required:
  - snssai

TimePeriod:
  description: Contains the periodicity for the defined usage monitoring data limits.
  type: object
  properties:
    period:
      $ref: '#/components/schemas/Periodicity'
    maxNumPeriod:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Uinteger'
  required:

```

```

- period

SponsorConnectivityData:
  description: >
    Contains the sponsored data connectivity related information for a sponsor identifier.
  type: object
  properties:
    aspIds:
      type: array
      items:
        type: string
    suppFeat:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  required:
    - aspIds

BdtData:
  description: Contains the background data transfer data.
  type: object
  properties:
    aspId:
      type: string
    transPolicy:
      $ref: 'TS29554_Npcf_BDTPolicyControl.yaml#/components/schemas/TransferPolicy'
    bdtRefId:
      $ref: 'TS29122_CommonData.yaml#/components/schemas/BdtReferenceId'
    nwAreaInfo:
      $ref: 'TS29554_Npcf_BDTPolicyControl.yaml#/components/schemas/NetworkAreaInfo'
    numOfUes:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Uinteger'
    volPerUe:
      $ref: 'TS29122_CommonData.yaml#/components/schemas/UsageThreshold'
    dnn:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
    snssai:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    trafficDes:
      $ref: 'TS29122_ResourceManagementOfBdt.yaml#/components/schemas/TrafficDescriptor'
    bdtpStatus:
      $ref: '#/components/schemas/BdtPolicyStatus'
    warnNotifEnabled:
      description: >
        Indicates whether the BDT warning notification is enabled or not.
        true indicates that the BDT warning notification is enabled.
        false (default) indicates that the BDT warning notification is disabled.
        Default value is false.
    energyInd:
      type: boolean
      default: false
      description: >
        Contains the Energy Indicator that indicates whether the AF is interested in
        transferring data in time windows that consume lower energy.
        true indicates that the AF is interested in transferring data in time windows that
        consume lower energy.
        false (default) indicates the AF is not interested in transferring data in time windows
        that consume lower energy.
    notifUri:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    suppFeat:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    resetIds:
      type: array
      items:
        type: string
      minItems: 1
  required:
    - aspId
    - transPolicy

PolicyDataSubscription:
  description: Identifies a subscription to policy data change notification.
  type: object
  properties:
    notificationUri:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    notifId:
      type: string
    monitoredResourceUris:

```

```

    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  monResItems:
    type: array
    items:
      $ref: '#/components/schemas/ResourceItem'
    minItems: 1
  excludedResItems:
    type: array
    items:
      $ref: '#/components/schemas/ResourceItem'
    minItems: 1
  immRep:
    type: boolean
    description: >
      If provided and set to true, it indicates that existing entries that
      match this subscription shall be immediately reported in the response.
  immReports:
    type: array
    items:
      $ref: '#/components/schemas/PolicyDataChangeNotification'
    minItems: 1
    description: Immediate report with existing UDR entries.
  expiry:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  supportedFeatures:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  resetIds:
    type: array
    items:
      type: string
    minItems: 1
  subsId:
    type: string
  required:
    - notificationUri
    - monitoredResourceUris

PolicyDataChangeNotification:
  description: Contains changed policy data for which notification was requested.
  type: object
  properties:
    amPolicyData:
      $ref: '#/components/schemas/AmPolicyData'
    uePolicySet:
      $ref: '#/components/schemas/UePolicySet'
    plmnUePolicySet:
      $ref: '#/components/schemas/UePolicySet'
    smPolicyData:
      $ref: '#/components/schemas/SmPolicyData'
    usageMonData:
      $ref: '#/components/schemas/UsageMonData'
    SponsorConnectivityData:
      $ref: '#/components/schemas/SponsorConnectivityData'
    bdtData:
      $ref: '#/components/schemas/BdtData'
    opSpecData:
      $ref: 'TS29505_Subscription_Data.yaml#/components/schemas/OperatorSpecificDataContainer'
    opSpecDataMap:
      type: object
      additionalProperties:
        $ref: 'TS29505_Subscription_Data.yaml#/components/schemas/OperatorSpecificDataContainer'
      minProperties: 1
      description: >
        Operator Specific Data resource data, if changed and notification was requested.
        The key of the map is operator specific data element name and the value is the
        operator specific data of the UE.
  ueId:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
  sponsorId:
    type: string
  bdtRefId:
    $ref: 'TS29122_CommonData.yaml#/components/schemas/BdtReferenceId'
  usageMonId:
    type: string
  plmnId:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

```

```

delResources:
  type: array
  items:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  minItems: 1
notifId:
  type: string
reportedFragments:
  type: array
  items:
    $ref: '#/components/schemas/NotificationItem'
  minItems: 1
slicePolicyData:
  $ref: '#/components/schemas/SlicePolicyData'
snssai:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
pdtqData:
  $ref: '#/components/schemas/PdtqData'
pdtqRefId:
  $ref: 'TS29543_Npcf_PDTQPolicyControl.yaml#/components/schemas/PdtqReferenceId'
groupPolicyData:
  $ref: '#/components/schemas/GroupPolicyData'
intGroupId:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'

PlmnRouteSelectionDescriptor:
  description: >
    Contains the route selection descriptors (combinations of SNSSAI, DNNs, PDU session types,
    SSC modes and ATSSS information) allowed by subscription to the UE for a serving PLMN
  type: object
  properties:
    servingPlmn:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
    snssaiRouteSelDescs:
      type: array
      items:
        $ref: '#/components/schemas/SnssaiRouteSelectionDescriptor'
      minItems: 1
  required:
    - servingPlmn

SnssaiRouteSelectionDescriptor:
  description: >
    Contains the route selector parameters (DNNs, PDU session types, SSC modes and ATSSS
    information) per SNSSAI
  type: object
  properties:
    snssai:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    dnnRouteSelDescs:
      type: array
      items:
        $ref: '#/components/schemas/DnnRouteSelectionDescriptor'
      minItems: 1
  required:
    - snssai

DnnRouteSelectionDescriptor:
  description: >
    Contains the route selector parameters (PDU session types, SSC modes and ATSSS
    information) per DNN
  type: object
  properties:
    dnn:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
    sscModes:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SscMode'
      minItems: 1
    pduSessTypes:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/PduSessionType'
      minItems: 1
    atsssInfo:
      description: >
        Indicates whether MA PDU session establishment is allowed for this DNN.

```

```

    When set to value true MA PDU session establishment is allowed for this DNN.
    type: boolean
    default: false
  lboRoamAllowed:
    type: boolean
    description: >
      Indicates whether LBO for the DNN and S-NSSAI is allowed when roaming.
  required:
  - dnn

SmPolicyDataPatch:
  description: Contains the SM policy data for a given subscriber.
  type: object
  properties:
    umData:
      type: object
      additionalProperties:
        $ref: '#/components/schemas/UsageMonData'
      minProperties: 1
      description: >
        Contains the remaining allowed usage data associated with the subscriber.
        The value of the limit identifier is used as the key of the map.
      nullable: true
    smPolicySnssaiData:
      type: object
      additionalProperties:
        $ref: '#/components/schemas/SmPolicySnssaiDataPatch'
      minProperties: 1
      description: >
        Modifiable Session Management Policy data per S-NSSAI for all the SNSSAIs
        of the subscriber. The key of the map is the S-NSSAI.

SmPolicySnssaiDataPatch:
  description: Contains the SM policy data for a given subscriber and S-NSSAI.
  type: object
  properties:
    snssai:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    smPolicyDnnData:
      type: object
      additionalProperties:
        $ref: '#/components/schemas/SmPolicyDnnDataPatch'
      minProperties: 1
      description: >
        Modifiable Session Management Policy data per DNN for all the DNNs of the
        indicated S-NSSAI. The key of the map is the DNN.
  required:
  - snssai

SmPolicyDnnDataPatch:
  description: Contains the SM policy data for a given DNN (and S-NSSAI).
  type: object
  properties:
    dnn:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
    bdtRefIds:
      type: object
      additionalProperties:
        $ref: '#/components/schemas/BdtReferenceIdRm'
      minProperties: 1
      description: >
        Contains updated transfer policies of background data transfer.
        Any string value can be used as a key of the map.
      nullable: true
    restriStatus:
      type: array
      items:
        $ref: '#/components/schemas/RestrictedStatus'
      minItems: 1
    spendLimInfo:
      type: object
      nullable: true
      additionalProperties:
        $ref: '#/components/schemas/PolicyCounterInfoRm'
      minProperties: 1
      description: >
        Contains the updated status of the requested policy counters for the PDU session.
        The key of the map is the attribute policyCounterId.
  required:

```

```

- dnn

ResourceItem:
  description: >
    Identifies a subscription to policy data change notification when the change occurs
    in a fragment (subset of resource data) of a given resource.
  type: object
  properties:
    monResourceUri:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    items:
      type: array
      items:
        $ref: '#/components/schemas/ItemPath'
      minItems: 1
  required:
    - monResourceUri
    - items

NotificationItem:
  description: >
    Identifies a data change notification when the change occurs in a fragment
    (subset of resource data) of a given resource.
  type: object
  properties:
    resourceId:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    notifItems:
      type: array
      items:
        $ref: '#/components/schemas/UpdatedItem'
      minItems: 1
  required:
    - resourceId
    - notifItems

UpdatedItem:
  description: Identifies a fragment of a resource.
  type: object
  properties:
    item:
      $ref: '#/components/schemas/ItemPath'
    value: {}
  required:
    - item
    - value

BdtDataPatch:
  description: Contains the modified background data transfer data.
  type: object
  properties:
    transPolicy:
      $ref: 'TS29554_Npcf_BDTPolicyControl.yaml#/components/schemas/TransferPolicy'
    bdtStatus:
      $ref: '#/components/schemas/BdtPolicyStatus'
    warnNotifEnabled:
      type: boolean
      description: >
        Indicates whether the BDT warning notification is enabled or not.
        true indicates that the BDT warning notification is enabled.
        false indicates that the BDT warning notification is disabled.
    notifUri:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    energyInd:
      type: boolean
      description: >
        Contains the Energy Indicator that indicates whether the AF is interested in
        transferring data in time windows that consume lower energy.
        true indicates that the AF is interested in transferring data in time windows that
        consume lower energy.
        false indicates that the AF is not interested in transferring data in time windows
        that consume lower energy.

SlicePolicyData:
  description: Contains the network slice specific policy control information.
  type: object
  properties:
    mbrUl:

```

```

    $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
  mbrDl:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
  remainMbrUl:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
  remainMbrDl:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
  suppFeat:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

SlicePolicyDataPatch:
  description: Contains the modified network slice specific policy control information.
  type: object
  properties:
    remainMbrUl:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
    remainMbrDl:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
  oneOf:
    - required: [remainMbrUl]
    - required: [remainMbrDl]

MbsSessPolCtrlData:
  description: Represents MBS Session Policy Control Data.
  type: object
  properties:
    5qis:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/5Qi'
      minItems: 1
    maxMbsArpLevel:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/ArpPriorityLevel'
    maxMbsSessionAmbr:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
    maxGbr:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
    suppFeat:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

MbsSessPolDataId:
  description: Represents the identifier used to access the MBS Session Policy Control Data.
  type: object
  properties:
    mbsSessionId:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/MbsSessionId'
    afAppId:
      type: string
  oneOf:
    - required: [mbsSessionId]
    - required: [afAppId]

PdtqData:
  description: Contains the planned data transfer data with QoS requirements.
  type: object
  properties:
    aspId:
      type: string
    pdtqPolicy:
      $ref: 'TS29543_Npcf_PDTQPolicyControl.yaml#/components/schemas/PdtqPolicy'
    appId:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/ApplicationId'
    pdtqRefId:
      $ref: 'TS29543_Npcf_PDTQPolicyControl.yaml#/components/schemas/PdtqReferenceId'
    nwAreaInfo:
      $ref: 'TS29554_Npcf_BDTPolicyControl.yaml#/components/schemas/NetworkAreaInfo'
    numOfUes:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/UInteger'
    desTimeInts:
      type: array
      items:
        $ref: 'TS29122_CommonData.yaml#/components/schemas/TimeWindow'
      minItems: 1
      description: Identifies the time interval(s).
    dnn:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
    snssai:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'

```

```

altQosParamSets:
  type: array
  items:
    $ref: 'TS29543_Npcf_PDTQPolicyControl.yaml#/components/schemas/AltQosParamSet'
  minItems: 1
  description: >
    Contains the alternative QoS requirements as a list of individual QoS parameter
    sets in a prioritized order.
altQosRefs:
  type: array
  items:
    type: string
  minItems: 1
  description: >
    Contains the alternative QoS requirements as the list of QoS references in a
    prioritized order.
qosParamSet:
  $ref: 'TS29543_Npcf_PDTQPolicyControl.yaml#/components/schemas/QosParameterSet'
qosReference:
  type: string
  description: >
    Requested QoS requirements expressed as the QoS Reference which represents
    a pre-defined QoS information.
notifUri:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
warnNotifEnabled:
  type: boolean
  description: >
    Indicates whether the PDTQ warning notification is enabled (true) or not (false).
    Default value is false.
suppFeat:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
resetIds:
  type: array
  items:
    type: string
  minItems: 1
oneOf:
  - required: [qosParamSet]
  - required: [qosReference]
required:
  - aspId
  - pdtqPolicy

PdtqDataPatch:
  description: Contains the modified planned data transfer data with QoS requirements.
  type: object
  properties:
    pdtqPolicy:
      $ref: 'TS29543_Npcf_PDTQPolicyControl.yaml#/components/schemas/PdtqPolicy'
    warnNotifEnabled:
      type: boolean
      description: >
        Indicates whether the PDTQ warning notification is enabled (true) or not (false).
    notifUri:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'

GroupPolicyData:
  description: Contains the group specific policy control data information.
  type: object
  properties:
    maxGroupMbrUl:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
    maxGroupMbrDl:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
    remainGroupMbrUl:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
    remainGroupMbrDl:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
    suppFeat:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

GroupPolicyDataPatch:
  description: >
    Contains the requested modifications to the group specific policy control data
    information.
  type: object
  properties:

```

```

    maxGroupMbrUl:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
    maxGroupMbrDl:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
    remainGroupMbrUl:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
    remainGroupMbrDl:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
  anyOf:
    - required: [maxGroupMbrUl]
    - required: [maxGroupMbrDl]
    - required: [remainGroupMbrUl]
    - required: [remainGroupMbrDl]

RestrictedStatus:
  description: >
    Contains reason for restricted status and the time stamp of when the status was
    stored.
  type: object
  properties:
    exceptionId:
      $ref: 'TS29520_Nnwdaf_EventsSubscription.yaml#/components/schemas/ExceptionId'
    timeStamp:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  required:
    - exceptionId
    - timeStamp

PolicyCounterInfoRm:
  description: Represents the data structure presenting the policy counter status.
  nullable: true
  type: object
  properties:
    currentStatus:
      type: string
      nullable: true
    penPolCounterStatuses:
      type: array
      items:
        $ref:
'    'TS29594_Nchf_SpendingLimitControl.yaml#/components/schemas/PendingPolicyCounterStatus'
      minItems: 1
      description: Provides the pending policy counter status.
      nullable: true

# SIMPLE TYPES:

IpIndex:
  description: >
    Represents information that identifies which IP pool or external server
    is used to allocate the IP address.
  type: integer

OsId:
  description: Represents the Operating System of the served UE.
  type: string
  format: uuid

ItemPath:
  description: Identifies a fragment (subset of resource data) of a given resource.
  type: string

BdtReferenceIdRm:
  type: string
  description: >
    This data type is defined in the same way as the BdtReferenceId data type defined in
    3GPP TS 29.122, but with the nullable property set to true.
  nullable: true

Upsi:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/Bytes'

# ENUMS:

UsageMonLevel:
  description: Represents the usage monitoring level.
  anyOf:
    - type: string

```

```

enum:
  - SESSION_LEVEL
  - SERVICE_LEVEL
- type: string
description: >
  This string provides forward-compatibility with future extensions to the enumeration
  and is not used to encode content defined in the present version of this API.

Periodicity:
description: Represents the time period.
anyOf:
- type: string
  enum:
    - YEARLY
    - MONTHLY
    - WEEKLY
    - DAILY
    - HOURLY
- type: string
description: >
  This string provides forward-compatibility with future extensions to the enumeration
  and is not used to encode content defined in the present version of this API.

BdtPolicyStatus:
description: Indicates the validation status of a negotiated BDT policy.
anyOf:
- type: string
  enum:
    - INVALID
    - VALID
- type: string
description: >
  This string provides forward-compatibility with future extensions to the enumeration
  and is not used to encode content defined in the present version of this API.

PolicyDataSubset:
description: Indicates a policy data subset.
anyOf:
- type: string
  enum:
    - AM_POLICY_DATA
    - SM_POLICY_DATA
    - UE_POLICY_DATA
    - UM_DATA
    - OPERATOR_SPECIFIC_DATA
- type: string
description: >
  This string provides forward-compatibility with future extensions to the enumeration
  and is not used to encode content defined in the present version of this API.

```

A.3 Nudr_DataRepository API for Application 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 "TS29519_Application_Data.yaml".

openapi: 3.0.0

info:

```

version: '-'
title: Unified Data Repository Service API file for Application Data
description: |
  The API version is defined in 3GPP TS 29.504
  © 2026, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).
  All rights reserved.

```

externalDocs:

```

description: >
  3GPP TS 29.519 V19.7.0; 5G System; Usage of the Unified Data Repository Service for Policy Data,
  Application Data and Structured Data for Exposure.
url: 'https://www.3gpp.org/ftp/Specs/archive/29_series/29.519/'

```

paths:

```

/application-data/pfds:

```

```

get:
  summary: Retrieve PFDs for application identifier(s)
  operationId: ReadPFDData
  tags:
    - PFD Data (Store)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
      - nudr-dr:application-data:pfd:read
  parameters:
    - name: appId
      in: query
      description: >
        Contains the information of the application identifier(s) for the querying PFD
        Data resource. If none appId is included in the URI, it applies to all application
        identifier(s) for the querying PFD Data resource.
      style: form
      explode: false
      required: false
      schema:
        type: array
        items:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/ApplicationId'
        minItems: 1
    - name: supp-feat
      in: query
      description: Supported Features
      required: false
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  responses:
    '200':
      description: A representation of PFDs for request applications is returned.
      content:
        application/json:
          schema:
            type: array
            items:
              $ref: '#/components/schemas/PfdDataForAppExt'
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '406':
      $ref: 'TS29571_CommonData.yaml#/components/responses/406'
    '414':
      $ref: 'TS29571_CommonData.yaml#/components/responses/414'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/pfds/{appId}:
get:
  summary: Retrieve the corresponding PFDs of the specified application identifier
  operationId: ReadIndividualPFDData
  tags:
    - Individual PFD Data (Document)
  security:
    - {}
    - oAuth2ClientCredentials:

```

```

    - nudr-dr
  - OAuth2ClientCredentials:
    - nudr-dr
    - nudr-dr:application-data
  - OAuth2ClientCredentials:
    - nudr-dr
    - nudr-dr:application-data
    - nudr-dr:application-data:pfds:read
parameters:
  - name: appId
    in: path
    description: >
      Indicate the application identifier for the request pfd(s). It shall apply the
      format of Data type ApplicationId.
    required: true
    schema:
      type: string
  - name: supp-feat
    in: query
    description: Supported Features
    required: false
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
responses:
  '200':
    description: >
      A representation of PFDs for the request application identified by the application
      identifier is returned.
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/PfdDataForAppExt'
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '406':
    $ref: 'TS29571_CommonData.yaml#/components/responses/406'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
delete:
  summary: Delete the corresponding PFDs of the specified application identifier
  operationId: DeleteIndividualPFDData
  tags:
    - Individual PFD Data (Document)
  security:
    - {}
    - OAuth2ClientCredentials:
      - nudr-dr
    - OAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
    - OAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
      - nudr-dr:application-data:pfds:modify
parameters:
  - name: appId
    in: path
    description: >
      Indicate the application identifier for the request pfd(s). It shall apply the
      format of Data type ApplicationId.
    required: true
    schema:
      type: string
responses:

```

```

'204':
  description: >
    Successful case. The Individual PFD Data resource related to the application
    identifier was deleted.
'400':
  $ref: 'TS29571_CommonData.yaml#/components/responses/400'
'401':
  $ref: 'TS29571_CommonData.yaml#/components/responses/401'
'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  $ref: 'TS29571_CommonData.yaml#/components/responses/404'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'
put:
  summary: Create or update the corresponding PFDs for the specified application identifier
  operationId: CreateOrReplaceIndividualPFDData
  tags:
    - Individual PFD Data (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
      - nudr-dr:application-data:pfd:create
  requestBody:
    required: true
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/PfdDataForAppExt'
  parameters:
    - name: appId
      in: path
      description: >
        Indicate the application identifier for the request pfd(s). It shall apply the format
        of Data type ApplicationId.
      required: true
      schema:
        type: string
  responses:
    '201':
      description: >
        The creation of an Individual PFD Data resource related to the application-identifier
        is confirmed and a representation of that resource is returned.
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/PfdDataForAppExt'
      headers:
        Location:
          description: >
            'Contains the URI of the newly created resource, according to the structure:
            {apiRoot}/nudr-dr/<apiVersion>/application-data/pfds/{appId}'
          required: true
          schema:
            type: string
    '200':
      description: >
        Successful case. The upgrade of an Individual PFD Data resource related to the
        application identifier is confirmed and a representation of that resource is returned.
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/PfdDataForAppExt'

```

```

'204':
  description: No content
'400':
  $ref: 'TS29571_CommonData.yaml#/components/responses/400'
'401':
  $ref: 'TS29571_CommonData.yaml#/components/responses/401'
'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  $ref: 'TS29571_CommonData.yaml#/components/responses/404'
'411':
  $ref: 'TS29571_CommonData.yaml#/components/responses/411'
'413':
  $ref: 'TS29571_CommonData.yaml#/components/responses/413'
'414':
  $ref: 'TS29571_CommonData.yaml#/components/responses/414'
'415':
  $ref: 'TS29571_CommonData.yaml#/components/responses/415'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'

```

/application-data/influenceData:

```

get:
  summary: Retrieve Traffic Influence Data
  operationId: ReadInfluenceData
  tags:
    - Influence Data (Store)
  security:
    - {}
    - oAuth2ClientCredentials:
        - nudr-dr
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:application-data
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:application-data
        - nudr-dr:application-data:influence-data:read
  parameters:
    - name: influence-Ids
      in: query
      description: Each element identifies a service.
      required: false
      style: form
      explode: false
      schema:
        type: array
        items:
          type: string
        minItems: 1
    - name: dnns
      in: query
      description: Each element identifies a DNN.
      required: false
      style: form
      explode: false
      schema:
        type: array
        items:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
        minItems: 1
    - name: snssais
      in: query
      description: Each element identifies a slice.
      required: false
      content:
        application/json:
          schema:
            type: array
            items:

```

```

        $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
        minItems: 1
- name: internal-Group-Ids
  in: query
  description: Each element identifies a group of users.
  required: false
  style: form
  explode: false
  schema:
    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
      minItems: 1
- name: internal-group-ids-Add
  in: query
  description: Each element identifies an internal Group.
  required: false
  style: form
  explode: false
  schema:
    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
      minItems: 1
- name: subscriber-categories
  in: query
  description: >
    Each element identifies a subscriber category.
  required: false
  style: form
  explode: false
  schema:
    type: array
    items:
      type: string
      minItems: 1
- name: supis
  in: query
  description: Each element identifies the user.
  required: false
  style: form
  explode: false
  schema:
    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      minItems: 1
- name: supp-feat
  in: query
  required: false
  description: Supported Features
  schema:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
responses:
  '200':
    description: The Traffic Influence Data stored in the UDR are returned.
    content:
      application/json:
        schema:
          type: array
          items:
            $ref: '#/components/schemas/TrafficInfluData'
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '406':
    $ref: 'TS29571_CommonData.yaml#/components/responses/406'
  '414':
    $ref: 'TS29571_CommonData.yaml#/components/responses/414'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'

```

```

'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/influenceData/{influenceId}:
  put:
    summary: Create or update an individual Influence Data resource
    operationId: CreateOrReplaceIndividualInfluenceData
    tags:
      - Individual Influence Data (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
          - nudr-dr:application-data:influence-data:create
    requestBody:
      required: true
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/TrafficInfluData'
    parameters:
      - name: influenceId
        in: path
        description: >
          The Identifier of an Individual Influence Data to be created or updated.
          It shall apply the format of Data type string.
        required: true
        schema:
          type: string
    responses:
      '201':
        description: >
          The creation of an Individual Traffic Influence Data resource is confirmed
          and a representation of that resource is returned.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/TrafficInfluData'
        headers:
          Location:
            description: >
              'Contains the URI of the newly created resource, according to the structure:
              {apiRoot}/nudr-dr/<apiVersion>/application-data/influenceData/{influenceId}'
            required: true
            schema:
              type: string
      '200':
        description: >
          The update of an Individual Traffic Influence Data resource is confirmed and a
          response body containing Traffic Influence Data shall be returned.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/TrafficInfluData'
      '204':
        description: No content
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '411':
        $ref: 'TS29571_CommonData.yaml#/components/responses/411'
      '413':
        $ref: 'TS29571_CommonData.yaml#/components/responses/413'

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'414':
  $ref: 'TS29571_CommonData.yaml#/components/responses/414'
'415':
  $ref: 'TS29571_CommonData.yaml#/components/responses/415'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'
patch:
  summary: Modify part of the properties of an individual Influence Data resource
  operationId: UpdateIndividualInfluenceData
  tags:
    - Individual Influence Data (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
      - nudr-dr:application-data:influence-data:modify
  requestBody:
    required: true
    content:
      application/merge-patch+json:
        schema:
          $ref: '#/components/schemas/TrafficInfluDataPatch'
  parameters:
    - name: influenceId
      in: path
      description: >
        The Identifier of an Individual Influence Data to be updated. It shall apply
        the format of Data type string.
      required: true
      schema:
        type: string
  responses:
    '200':
      description: >
        The update of an Individual Traffic Influence Data resource is confirmed and
        a response body containing Traffic Influence Data shall be returned.
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/TrafficInfluData'
    '204':
      description: No content
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '411':
      $ref: 'TS29571_CommonData.yaml#/components/responses/411'
    '413':
      $ref: 'TS29571_CommonData.yaml#/components/responses/413'
    '415':
      $ref: 'TS29571_CommonData.yaml#/components/responses/415'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'

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    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'
delete:
  summary: Delete an individual Influence Data resource
  operationId: DeleteIndividualInfluenceData
  tags:
    - Individual Influence Data (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
      - nudr-dr:application-data:influence-data:modify
  parameters:
    - name: influenceId
      in: path
      description: >
        The Identifier of an Individual Influence Data to be deleted. It shall apply
        the format of Data type string.
      required: true
      schema:
        type: string
  responses:
    '204':
      description: The Individual Influence Data was deleted successfully.
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/influenceData/subs-to-notify:
  post:
    summary: Create a new Individual Influence Data Subscription resource
    operationId: CreateIndividualInfluenceDataSubscription
    tags:
      - Influence Data Subscriptions (Collection)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:application-data
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:application-data
        - nudr-dr:application-data:influence-data:subscriptions:create
    requestBody:
      required: true
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/TrafficInfluSub'
    responses:
      '201':
        description: The subscription was created successfully.
        content:
          application/json:
            schema:

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    $ref: '#/components/schemas/TrafficInfluSub'
  headers:
    Location:
      description: 'Contains the URI of the newly created resource'
      required: true
      schema:
        type: string
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '411':
    $ref: 'TS29571_CommonData.yaml#/components/responses/411'
  '413':
    $ref: 'TS29571_CommonData.yaml#/components/responses/413'
  '415':
    $ref: 'TS29571_CommonData.yaml#/components/responses/415'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  callbacks:
    trafficInfluenceDataChangeNotification:
      '{$request.body#/notificationUri}':
        post:
          requestBody:
            required: true
            content:
              application/json:
                schema:
                  type: array
                  items:
                    oneOf:
                      - $ref: '#/components/schemas/TrafficInfluData'
                      - $ref: '#/components/schemas/TrafficInfluDataNotif'
                  minItems: 1
          responses:
            '204':
              description: No Content, Notification was successful
            '400':
              $ref: 'TS29571_CommonData.yaml#/components/responses/400'
            '403':
              $ref: 'TS29571_CommonData.yaml#/components/responses/403'
            '404':
              $ref: 'TS29571_CommonData.yaml#/components/responses/404'
            '411':
              $ref: 'TS29571_CommonData.yaml#/components/responses/411'
            '413':
              $ref: 'TS29571_CommonData.yaml#/components/responses/413'
            '415':
              $ref: 'TS29571_CommonData.yaml#/components/responses/415'
            '429':
              $ref: 'TS29571_CommonData.yaml#/components/responses/429'
            '500':
              $ref: 'TS29571_CommonData.yaml#/components/responses/500'
            '502':
              $ref: 'TS29571_CommonData.yaml#/components/responses/502'
            '503':
              $ref: 'TS29571_CommonData.yaml#/components/responses/503'
            default:
              $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  get:
    summary: Read Influence Data Subscriptions
    operationId: ReadInfluenceDataSubscriptions
    tags:
      - Influence Data Subscriptions (Collection)
    security:
      - {}

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- oAuth2ClientCredentials:
- nudr-dr
- oAuth2ClientCredentials:
- nudr-dr
- nudr-dr:application-data
- oAuth2ClientCredentials:
- nudr-dr
- nudr-dr:application-data
- nudr-dr:application-data:influence-data:subscriptions:read
parameters:
- name: dnn
  in: query
  description: Identifies a DNN.
  required: false
  schema:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
- name: snssai
  in: query
  description: Identifies a slice.
  required: false
  content:
    application/json:
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
- name: internal-Group-Id
  in: query
  description: Identifies a group of users.
  required: false
  schema:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
- name: supi
  in: query
  description: Identifies a user.
  required: false
  schema:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
- name: internal-group-ids
  in: query
  description: >
    Each element identifies an internal group.
  required: false
  style: form
  explode: false
  schema:
    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
    minItems: 1
- name: subscriber-categories
  in: query
  description: >
    Each element identifies a subscriber category.
  required: false
  style: form
  explode: false
  schema:
    type: array
    items:
      type: string
    minItems: 1
responses:
'200':
  description: >
    The subscription information as request in the request URI query parameter(s)
    are returned.
  content:
    application/json:
      schema:
        type: array
        items:
          $ref: '#/components/schemas/TrafficInfluSub'
        minItems: 0
'400':
  $ref: 'TS29571_CommonData.yaml#/components/responses/400'
'401':
  $ref: 'TS29571_CommonData.yaml#/components/responses/401'
'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'

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'404':
  $ref: 'TS29571_CommonData.yaml#/components/responses/404'
'406':
  $ref: 'TS29571_CommonData.yaml#/components/responses/406'
'414':
  $ref: 'TS29571_CommonData.yaml#/components/responses/414'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/influenceData/subs-to-notify/{subscriptionId}:
  get:
    summary: Get an existing individual Influence Data Subscription resource
    operationId: ReadIndividualInfluenceDataSubscription
    tags:
      - Individual Influence Data Subscription (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
          - nudr-dr:application-data:influence-data:subscriptions:read
    parameters:
      - name: subscriptionId
        in: path
        description: >
          String identifying a subscription to the Individual Influence Data Subscription
        required: true
        schema:
          type: string
    responses:
      '200':
        description: The subscription information is returned.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/TrafficInfluSub'
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '406':
        $ref: 'TS29571_CommonData.yaml#/components/responses/406'
      '414':
        $ref: 'TS29571_CommonData.yaml#/components/responses/414'
      '429':
        $ref: 'TS29571_CommonData.yaml#/components/responses/429'
      '500':
        $ref: 'TS29571_CommonData.yaml#/components/responses/500'
      '502':
        $ref: 'TS29571_CommonData.yaml#/components/responses/502'
      '503':
        $ref: 'TS29571_CommonData.yaml#/components/responses/503'
      default:
        $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  put:
    summary: Modify an existing individual Influence Data Subscription resource
    operationId: ReplaceIndividualInfluenceDataSubscription
    tags:
      - Individual Influence Data Subscription (Document)
    security:
      - {}

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- oAuth2ClientCredentials:
- nudr-dr
- oAuth2ClientCredentials:
- nudr-dr
- nudr-dr:application-data
- oAuth2ClientCredentials:
- nudr-dr
- nudr-dr:application-data
- nudr-dr:application-data:influence-data:subscriptions:modify
requestBody:
required: true
content:
  application/json:
    schema:
      $ref: '#/components/schemas/TrafficInfluSub'
parameters:
- name: subscriptionId
  in: path
  description: >
    String identifying a subscription to the Individual Influence Data Subscription.
  required: true
  schema:
    type: string
responses:
'200':
  description: The subscription was updated successfully.
  content:
    application/json:
      schema:
        $ref: '#/components/schemas/TrafficInfluSub'
'204':
  description: No content
'400':
  $ref: 'TS29571_CommonData.yaml#/components/responses/400'
'401':
  $ref: 'TS29571_CommonData.yaml#/components/responses/401'
'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  $ref: 'TS29571_CommonData.yaml#/components/responses/404'
'411':
  $ref: 'TS29571_CommonData.yaml#/components/responses/411'
'413':
  $ref: 'TS29571_CommonData.yaml#/components/responses/413'
'415':
  $ref: 'TS29571_CommonData.yaml#/components/responses/415'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'
delete:
summary: Delete an individual Influence Data Subscription resource
operationId: DeleteIndividualInfluenceDataSubscription
tags:
- Individual Influence Data Subscription (Document)
security:
- {}
- oAuth2ClientCredentials:
- nudr-dr
- oAuth2ClientCredentials:
- nudr-dr
- nudr-dr:application-data
- oAuth2ClientCredentials:
- nudr-dr
- nudr-dr:application-data
- nudr-dr:application-data:influence-data:subscriptions:modify
parameters:
- name: subscriptionId
  in: path
  description: >
    String identifying a subscription to the Individual Influence Data Subscription.
  required: true

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```

    schema:
      type: string
  responses:
    '204':
      description: The subscription was terminated successfully.
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/bdtPolicyData:
  get:
    summary: Retrieve applied BDT Policy Data
    operationId: ReadBdtPolicyData
    tags:
      - BdtPolicy Data (Store)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
          - nudr-dr:application-data:bdt-policy-data:read
    parameters:
      - name: bdt-policy-ids
        in: query
        description: Each element identifies a service.
        required: false
        style: form
        explode: false
        schema:
          type: array
          items:
            type: string
            minItems: 1
      - name: internal-group-ids
        in: query
        description: Each element identifies a group of users.
        required: false
        style: form
        explode: false
        schema:
          type: array
          items:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
            minItems: 1
      - name: supis
        in: query
        description: Each element identifies the user.
        required: false
        style: form
        explode: false
        schema:
          type: array
          items:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
            minItems: 1
    responses:
      '200':
        description: The applied BDT policy Data stored in the UDR are returned.

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    content:
      application/json:
        schema:
          type: array
          items:
            $ref: '#/components/schemas/BdtPolicyData'
'400':
  $ref: 'TS29571_CommonData.yaml#/components/responses/400'
'401':
  $ref: 'TS29571_CommonData.yaml#/components/responses/401'
'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  $ref: 'TS29571_CommonData.yaml#/components/responses/404'
'406':
  $ref: 'TS29571_CommonData.yaml#/components/responses/406'
'414':
  $ref: 'TS29571_CommonData.yaml#/components/responses/414'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/bdtPolicyData/{bdtPolicyId}:
  put:
    summary: Create an individual applied BDT Policy Data resource
    operationId: CreateIndividualAppliedBdtPolicyData
    tags:
      - Individual Applied BDT Policy Data (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
          - nudr-dr:application-data:bdt-policy-data:create
    requestBody:
      required: true
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/BdtPolicyData'
    parameters:
      - name: bdtPolicyId
        in: path
        description: >
          The Identifier of an Individual Applied BDT Policy Data to be created or updated.
          It shall apply the format of Data type string.
        required: true
        schema:
          type: string
    responses:
      '201':
        description: >
          The creation of an Individual Applied BDT Policy Data resource is confirmed and a
          representation of that resource is returned.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/BdtPolicyData'
    headers:
      Location:
        description: >
          Contains the URI of the newly created resource, according to the structure:
          {apiRoot}/nudr-dr/<apiVersion>/application-data/bdtPolicyData/{bdtPolicyId}
        required: true
        schema:
          type: string

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'400':
  $ref: 'TS29571_CommonData.yaml#/components/responses/400'
'401':
  $ref: 'TS29571_CommonData.yaml#/components/responses/401'
'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  $ref: 'TS29571_CommonData.yaml#/components/responses/404'
'411':
  $ref: 'TS29571_CommonData.yaml#/components/responses/411'
'413':
  $ref: 'TS29571_CommonData.yaml#/components/responses/413'
'414':
  $ref: 'TS29571_CommonData.yaml#/components/responses/414'
'415':
  $ref: 'TS29571_CommonData.yaml#/components/responses/415'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'
patch:
  summary: Modify part of the properties of an individual Applied BDT Policy Data resource
  operationId: UpdateIndividualAppliedBdtPolicyData
  tags:
    - Individual Applied BDT Policy Data (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
        - nudr-dr
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:application-data
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:application-data
        - nudr-dr:application-data:bdt-policy-data:modify
  requestBody:
    required: true
    content:
      application/merge-patch+json:
        schema:
          $ref: '#/components/schemas/BdtPolicyDataPatch'
  parameters:
    - name: bdtPolicyId
      in: path
      description: >
        The Identifier of an Individual Applied BDT Policy Data to be updated. It shall
        apply the format of Data type string.
      required: true
      schema:
        type: string
  responses:
    '200':
      description: >
        The update of an Individual Applied BDT Policy Data resource is confirmed and
        a response body containing Applied BDT Policy Data shall be returned.
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/BdtPolicyData'
    '204':
      description: No content
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '411':
      $ref: 'TS29571_CommonData.yaml#/components/responses/411'

```

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'413':
  $ref: 'TS29571_CommonData.yaml#/components/responses/413'
'415':
  $ref: 'TS29571_CommonData.yaml#/components/responses/415'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'
delete:
  summary: Delete an individual Applied BDT Policy Data resource
  operationId: DeleteIndividualAppliedBdtPolicyData
  tags:
    - Individual Applied BDT Policy Data (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
      - nudr-dr:application-data:bdt-policy-data:modify
  parameters:
    - name: bdtPolicyId
      in: path
      description: >
        The Identifier of an Individual Applied BDT Policy Data to be deleted.
        It shall apply the format of Data type string.
      required: true
      schema:
        type: string
  responses:
    '204':
      description: The Individual Applied BDT Policy Data was deleted successfully.
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/iptvConfigData:
  get:
    summary: Retrieve IPTV configuration Data
    operationId: ReadIPTVConfigurationData
    tags:
      - IPTV Configuration Data (Store)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:application-data
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:application-data
        - nudr-dr:application-data:iptv-config-data:read

```

```

parameters:
- name: config-ids
  in: query
  description: Each element identifies a configuration.
  required: false
  style: form
  explode: false
  schema:
    type: array
    items:
      type: string
    minItems: 1
- name: dnns
  in: query
  description: Each element identifies a DNN.
  required: false
  style: form
  explode: false
  schema:
    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
    minItems: 1
- name: snssais
  in: query
  description: Each element identifies a slice.
  required: false
  content:
    application/json:
      schema:
        type: array
        items:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
        minItems: 1
- name: supis
  in: query
  description: Each element identifies the user.
  required: false
  style: form
  explode: false
  schema:
    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    minItems: 1
- name: inter-group-ids
  in: query
  description: Each element identifies a group of users.
  required: false
  style: form
  explode: false
  schema:
    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
    minItems: 1
- name: supp-feat
  in: query
  description: Supported Features.
  required: false
  schema:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
responses:
'200':
  description: The IPTV configuration data stored in the UDR are returned.
  content:
    application/json:
      schema:
        type: array
        items:
          $ref: '#/components/schemas/IptvConfigData'
'400':
  $ref: 'TS29571_CommonData.yaml#/components/responses/400'
'401':
  $ref: 'TS29571_CommonData.yaml#/components/responses/401'
'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'
'404':

```

```

    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '406':
    $ref: 'TS29571_CommonData.yaml#/components/responses/406'
  '414':
    $ref: 'TS29571_CommonData.yaml#/components/responses/414'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/iptvConfigData/{configurationId}:
  put:
    summary: Create or update an individual IPTV configuration resource
    operationId: CreateOrReplaceIndividualIPTVConfigurationData
    tags:
      - Individual IPTV Configuration Data (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
          - nudr-dr:application-data:iptv-config-data:create
    requestBody:
      required: true
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/IptvConfigData'
    parameters:
      - name: configurationId
        in: path
        description: >
          The Identifier of an Individual IPTV Configuration Data to be created or updated.
          It shall apply the format of Data type string.
        required: true
        schema:
          type: string
    responses:
      '201':
        description: >
          The creation of an Individual IPTV Configuration Data resource is confirmed and a
          representation of that resource is returned.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/IptvConfigData'
        headers:
          Location:
            description: 'Contains the URI of the newly created resource'
            required: true
            schema:
              type: string
      '200':
        description: The update of an Individual IPTV configuration resource.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/IptvConfigData'
      '204':
        description: No content
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':

```

```

    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '411':
    $ref: 'TS29571_CommonData.yaml#/components/responses/411'
  '413':
    $ref: 'TS29571_CommonData.yaml#/components/responses/413'
  '414':
    $ref: 'TS29571_CommonData.yaml#/components/responses/414'
  '415':
    $ref: 'TS29571_CommonData.yaml#/components/responses/415'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
patch:
  summary: Partial update an individual IPTV configuration resource
  operationId: PartialReplaceIndividualIPTVConfigurationData
  tags:
    - Individual IPTV Configuration Data (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
      - nudr-dr:application-data:iptv-config-data:modify
  requestBody:
    required: true
    content:
      application/merge-patch+json:
        schema:
          $ref: 'TS29522_IPTVConfiguration.yaml#/components/schemas/IptvConfigDataPatch'
  parameters:
    - name: configurationId
      in: path
      description: >
        The Identifier of an Individual IPTV Configuration Data to be updated.
        It shall apply the format of Data type string.
      required: true
      schema:
        type: string
  responses:
    '200':
      description: The update of an Individual IPTV configuration resource.
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/IptvConfigData'
    '204':
      description: No content
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '411':
      $ref: 'TS29571_CommonData.yaml#/components/responses/411'
    '413':
      $ref: 'TS29571_CommonData.yaml#/components/responses/413'
    '414':
      $ref: 'TS29571_CommonData.yaml#/components/responses/414'
    '415':
      $ref: 'TS29571_CommonData.yaml#/components/responses/415'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':

```

```

    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
delete:
  summary: Delete an individual IPTV configuration resource
  operationId: DeleteIndividualIPTVConfigurationData
  tags:
    - Individual IPTV Configuration Data (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
      - nudr-dr:application-data:iptv-config-data:modify
  parameters:
    - name: configurationId
      in: path
      description: >
        The Identifier of an Individual IPTV Configuration to be deleted. It shall
        apply the format of Data type string.
      required: true
      schema:
        type: string
  responses:
    '204':
      description: The resource was deleted successfully.
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/serviceParamData:
  get:
    summary: Retrieve Service Parameter Data
    operationId: ReadServiceParameterData
    tags:
      - Service Parameter Data (Store)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:application-data
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:application-data
        - nudr-dr:application-data:service-param-data:read
    parameters:
      - name: service-param-ids
        in: query
        description: Each element identifies a service.
        required: false
        style: form
        explode: false

```

```
schema:
  type: array
  items:
    type: string
    minItems: 1
- name: dnns
  in: query
  description: Each element identifies a DNN.
  required: false
  style: form
  explode: false
  schema:
    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
    minItems: 1
- name: snssais
  in: query
  description: Each element identifies a slice.
  required: false
  content:
    application/json:
      schema:
        type: array
        items:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
        minItems: 1
- name: internal-group-ids
  in: query
  description: Each element identifies a group of users.
  required: false
  style: form
  explode: false
  schema:
    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
    minItems: 1
- name: supis
  in: query
  description: Each element identifies the user.
  required: false
  style: form
  explode: false
  schema:
    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    minItems: 1
- name: ue-ipv4s
  in: query
  description: Each element identifies the user.
  required: false
  style: form
  explode: false
  schema:
    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
    minItems: 1
- name: ue-ipv6s
  in: query
  description: Each element identifies the user.
  required: false
  style: form
  explode: false
  schema:
    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'
    minItems: 1
- name: ue-macs
  in: query
  description: Each element identifies the user.
  required: false
  style: form
  explode: false
  schema:
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    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/MacAddr48'
    minItems: 1
  - name: any-ue
    in: query
    description: Indicates whether the request is for any UE.
    required: false
    schema:
      type: boolean
  - name: roam-ue-net-descs
    in: query
    description: >
      Each element identifies one or more PLMNs for a roaming UE.
    required: false
    content:
      application/json:
        schema:
          type: array
          items:
            $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/NetworkDescription'
          minItems: 1
  - name: supp-feat
    in: query
    description: Supported Features
    required: false
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
responses:
  '200':
    description: The Service Parameter Data stored in the UDR are returned.
    content:
      application/json:
        schema:
          type: array
          items:
            $ref: '#/components/schemas/ServiceParameterData'
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '406':
    $ref: 'TS29571_CommonData.yaml#/components/responses/406'
  '414':
    $ref: 'TS29571_CommonData.yaml#/components/responses/414'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
/application-data/serviceParamData/{serviceParamId}:
  put:
    summary: Create or update an individual Service Parameter Data resource
    operationId: CreateOrReplaceServiceParameterData
    tags:
      - Individual Service Parameter Data (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
          - nudr-dr:application-data:service-param-data:create
    requestBody:

```

```

    required: true
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/ServiceParameterData'
  parameters:
    - name: serviceParamId
      in: path
      description: >
        The Identifier of an Individual Service Parameter Data to be created or updated.
        It shall apply the format of Data type string.
      required: true
      schema:
        type: string
  responses:
    '201':
      description: >
        The creation of an Individual Service Parameter Data resource is confirmed
        and a representation of that resource is returned.
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/ServiceParameterData'
      headers:
        Location:
          description: >
            'Contains the URI of the newly created resource, according to the structure:
            {apiRoot}/nudr-dr/<apiVersion>/application-data/serviceParamData/{serviceParamId}'
          required: true
          schema:
            type: string
    '200':
      description: >
        The update of an Individual Service Parameter Data resource is confirmed and
        a response body containing Service Parameter Data shall be returned.
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/ServiceParameterData'
    '204':
      description: No content
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '411':
      $ref: 'TS29571_CommonData.yaml#/components/responses/411'
    '413':
      $ref: 'TS29571_CommonData.yaml#/components/responses/413'
    '414':
      $ref: 'TS29571_CommonData.yaml#/components/responses/414'
    '415':
      $ref: 'TS29571_CommonData.yaml#/components/responses/415'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  patch:
    summary: Modify part of the properties of an individual Service Parameter Data resource
    operationId: UpdateIndividualServiceParameterData
    tags:
      - Individual Service Parameter Data (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr

```

```

- nudr-dr:application-data
- oAuth2ClientCredentials:
- nudr-dr
- nudr-dr:application-data
- nudr-dr:application-data:service-param-data:modify
requestBody:
  required: true
  content:
    application/merge-patch+json:
      schema:
        $ref: '#/components/schemas/ServiceParameterDataPatch'
parameters:
- name: serviceParamId
  in: path
  description: >
    The Identifier of an Individual Service Parameter Data to be updated.
    It shall apply the format of Data type string.
  required: true
  schema:
    type: string
responses:
'200':
  description: >
    The update of an Individual Service Parameter Data resource is confirmed
    and a response body containing Service Parameter Data shall be returned.
  content:
    application/json:
      schema:
        $ref: '#/components/schemas/ServiceParameterData'
'204':
  description: No content
'400':
  $ref: 'TS29571_CommonData.yaml#/components/responses/400'
'401':
  $ref: 'TS29571_CommonData.yaml#/components/responses/401'
'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  $ref: 'TS29571_CommonData.yaml#/components/responses/404'
'411':
  $ref: 'TS29571_CommonData.yaml#/components/responses/411'
'413':
  $ref: 'TS29571_CommonData.yaml#/components/responses/413'
'415':
  $ref: 'TS29571_CommonData.yaml#/components/responses/415'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'
delete:
  summary: Delete an individual Service Parameter Data resource
  operationId: DeleteIndividualServiceParameterData
  tags:
  - Individual Service Parameter Data (Document)
  security:
  - {}
  - oAuth2ClientCredentials:
    - nudr-dr
  - oAuth2ClientCredentials:
    - nudr-dr
    - nudr-dr:application-data
  - oAuth2ClientCredentials:
    - nudr-dr
    - nudr-dr:application-data
    - nudr-dr:application-data:service-param-data:modify
parameters:
- name: serviceParamId
  in: path
  description: >
    The Identifier of an Individual Service Parameter Data to be deleted.
    It shall apply the format of Data type string.
  required: true

```

```

    schema:
      type: string
  responses:
    '204':
      description: The Individual Service Parameter Data was deleted successfully.
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/am-influence-data:
  get:
    summary: Retrieve AM Influence Data
    operationId: ReadAmInfluenceData
    tags:
      - AM Influence Data (Store)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
          - nudr-dr:application-data:am-influence-data:read
    parameters:
      - name: am-influence-ids
        in: query
        description: Each element identifies a service.
        required: false
        style: form
        explode: false
        schema:
          type: array
          items:
            type: string
          minItems: 1
      - name: dnns
        in: query
        description: Each element identifies a DNN.
        required: false
        style: form
        explode: false
        schema:
          type: array
          items:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
          minItems: 1
      - name: snssais
        in: query
        description: Each element identifies a slice.
        required: false
        content:
          application/json:
            schema:
              type: array
              items:
                $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
              minItems: 1
      - name: dnn-snssai-infos
        in: query
        description: Each element identifies a combination of (DNN, S-NSSAI).

```

```

    required: false
    content:
      application/json:
        schema:
          type: array
          items:
            $ref: 'TS29522_AMInfluence.yaml#/components/schemas/DnnSnssaiInformation'
          minItems: 1
  - name: internal-group-ids
    in: query
    description: Each element identifies a group of users.
    required: false
    style: form
    explode: false
    schema:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
      minItems: 1
  - name: supis
    in: query
    description: Each element identifies the user.
    required: false
    style: form
    explode: false
    schema:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      minItems: 1
  - name: any-ue
    in: query
    description: Indicates whether the request is for any UE.
    required: false
    schema:
      type: boolean
  - name: roam-ue-plmn-ids
    in: query
    description: >
      Each element identifies a PLMN.
    required: false
    content:
      application/json:
        schema:
          type: array
          items:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
          minItems: 1
  - name: supp-feat
    in: query
    required: false
    description: Supported Features
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
responses:
  '200':
    description: The AM Influence Data stored in the UDR are returned.
    content:
      application/json:
        schema:
          type: array
          items:
            $ref: '#/components/schemas/AmInfluData'
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '406':
    $ref: 'TS29571_CommonData.yaml#/components/responses/406'
  '414':
    $ref: 'TS29571_CommonData.yaml#/components/responses/414'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':

```

```

    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/am-influence-data/{amInfluenceId}:
  put:
    summary: Create or update an individual AM Influence Data resource
    operationId: CreateOrReplaceIndividualAmInfluenceData
    tags:
      - Individual AM Influence Data (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
          - nudr-dr:application-data:am-influence-data:create
    requestBody:
      required: true
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/AmInfluData'
    parameters:
      - name: amInfluenceId
        in: path
        description: >
          The Identifier of an Individual AM Influence Data to be created or updated.
          It shall apply the format of Data type string.
        required: true
        schema:
          type: string
    responses:
      '201':
        description: >
          The creation of an Individual AM Influence Data resource is confirmed and
          a representation of that resource is returned.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/AmInfluData'
        headers:
          Location:
            description: >
              'Contains the URI of the newly created resource, according to the structure:
              {apiRoot}/nudr-dr/<apiVersion>/application-data/am-influence-data/{amInfluenceId}'
            required: true
            schema:
              type: string
      '200':
        description: >
          The update of an Individual AM Influence Data resource is confirmed and a response
          body containing AM Influence Data shall be returned.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/AmInfluData'
      '204':
        description: No content
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '411':
        $ref: 'TS29571_CommonData.yaml#/components/responses/411'
      '413':

```

```

    $ref: 'TS29571_CommonData.yaml#/components/responses/413'
  '414':
    $ref: 'TS29571_CommonData.yaml#/components/responses/414'
  '415':
    $ref: 'TS29571_CommonData.yaml#/components/responses/415'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
patch:
  summary: Modify part of the properties of an individual AM Influence Data resource
  operationId: UpdateIndividualAmInfluenceData
  tags:
    - Individual AM Influence Data (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
      - nudr-dr:application-data:am-influence-data:modify
  requestBody:
    required: true
    content:
      application/merge-patch+json:
        schema:
          $ref: '#/components/schemas/AmInfluDataPatch'
  parameters:
    - name: amInfluenceId
      in: path
      description: >
        The Identifier of an Individual AM Influence Data to be updated. It shall
        apply the format of Data type string.
      required: true
      schema:
        type: string
  responses:
    '200':
      description: >
        The update of an Individual AM Influence Data resource is confirmed and a
        response body containing AM Influence Data shall be returned.
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/AmInfluData'
    '204':
      description: No content
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '411':
      $ref: 'TS29571_CommonData.yaml#/components/responses/411'
    '413':
      $ref: 'TS29571_CommonData.yaml#/components/responses/413'
    '415':
      $ref: 'TS29571_CommonData.yaml#/components/responses/415'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':

```

```

    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
delete:
  summary: Delete an individual AM Influence Data resource
  operationId: DeleteIndividualAmInfluenceData
  tags:
    - Individual AM Influence Data (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
      - nudr-dr:application-data:am-influence-data:modify
  parameters:
    - name: amInfluenceId
      in: path
      description: >
        The Identifier of an Individual AM Influence Data to be deleted. It shall
        apply the format of Data type string.
      required: true
      schema:
        type: string
  responses:
    '204':
      description: The Individual AM Influence Data was deleted successfully.
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/subs-to-notify:
  post:
    summary: Create a subscription to receive notification of application data changes
    operationId: CreateIndividualApplicationDataSubscription
    tags:
      - ApplicationDataSubscriptions (Collection)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:application-data
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:application-data
        - nudr-dr:application-data:subs-to-notify:create
    requestBody:
      required: true
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/ApplicationDataSubs'
    responses:
      '201':
        description: >
          Upon success, a response body containing a representation of each
          Individual subscription resource shall be returned.

```

```

content:
  application/json:
    schema:
      $ref: '#/components/schemas/ApplicationDataSubs'
headers:
  Location:
    description: 'Contains the URI of the newly created resource'
    required: true
    schema:
      type: string
'400':
  $ref: 'TS29571_CommonData.yaml#/components/responses/400'
'401':
  $ref: 'TS29571_CommonData.yaml#/components/responses/401'
'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  $ref: 'TS29571_CommonData.yaml#/components/responses/404'
'411':
  $ref: 'TS29571_CommonData.yaml#/components/responses/411'
'413':
  $ref: 'TS29571_CommonData.yaml#/components/responses/413'
'415':
  $ref: 'TS29571_CommonData.yaml#/components/responses/415'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'
callbacks:
  applicationDataChangeNotif:
    '{$request.body#/notificationUri}':
      post:
        requestBody:
          required: true
          content:
            application/json:
              schema:
                type: array
                items:
                  $ref: '#/components/schemas/ApplicationDataChangeNotif'
                minItems: 1
      responses:
        '204':
          description: No Content, Notification was successful
        '400':
          $ref: 'TS29571_CommonData.yaml#/components/responses/400'
        '401':
          $ref: 'TS29571_CommonData.yaml#/components/responses/401'
        '403':
          $ref: 'TS29571_CommonData.yaml#/components/responses/403'
        '404':
          $ref: 'TS29571_CommonData.yaml#/components/responses/404'
        '411':
          $ref: 'TS29571_CommonData.yaml#/components/responses/411'
        '413':
          $ref: 'TS29571_CommonData.yaml#/components/responses/413'
        '415':
          $ref: 'TS29571_CommonData.yaml#/components/responses/415'
        '429':
          $ref: 'TS29571_CommonData.yaml#/components/responses/429'
        '500':
          $ref: 'TS29571_CommonData.yaml#/components/responses/500'
        '502':
          $ref: 'TS29571_CommonData.yaml#/components/responses/502'
        '503':
          $ref: 'TS29571_CommonData.yaml#/components/responses/503'
        default:
          $ref: 'TS29571_CommonData.yaml#/components/responses/default'
get:
  summary: Read Application Data change Subscriptions
  operationId: ReadApplicationDataChangeSubscriptions
  tags:

```

```

    - ApplicationDataSubscriptions (Collection)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
      - nudr-dr:application-data:subs-to-notify:read
  parameters:
    - name: data-filter
      in: query
      description: The data filter for the query.
      required: false
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/DataFilter'
  responses:
    '200':
      description: >
        The subscription information as request in the request URI query parameter(s)
        are returned.
      content:
        application/json:
          schema:
            type: array
            items:
              $ref: '#/components/schemas/ApplicationDataSubs'
            minItems: 0
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '406':
      $ref: 'TS29571_CommonData.yaml#/components/responses/406'
    '414':
      $ref: 'TS29571_CommonData.yaml#/components/responses/414'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/af-qos-data-sets:
  get:
    summary: Retrieve one or several existing Individual AF Requested QoS Data Set resource(s).
    operationId: ReadAFReqQoSDataSets
    tags:
      - AF Requested QoS Data Sets (Collection)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:application-data
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:application-data
        - nudr-dr:application-data:af-qos-data-sets:read
    parameters:
      - name: dnns
        in: query
        description: Each element identifies a DNN.
        required: false

```

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    style: form
    explode: false
    schema:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
      minItems: 1
  - name: snssais
    in: query
    description: Each element identifies a network slice.
    required: false
    content:
      application/json:
        schema:
          type: array
          items:
            $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
          minItems: 1
  - name: int-group-ids
    in: query
    description: Each element identifies a group of subscriber(s).
    required: false
    style: form
    explode: false
    schema:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
      minItems: 1
  - name: supis
    in: query
    description: Each element identifies a subscriber.
    required: false
    style: form
    explode: false
    schema:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      minItems: 1
  - name: data-set-ids
    in: query
    description: Each element identifies an Individual AF requested QoS Data Set resource.
    required: false
    style: form
    explode: false
    schema:
      type: array
      items:
        type: string
      minItems: 1
  - name: supp-feat
    in: query
    required: false
    description: Supported Features
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
responses:
  '200':
    description: >
      The requested Individual AF requested QoS Data Set resource(s) are returned.
      If there are no Individual AF Requested QoS Data Set resource(s) matching the provided
      query parameter(s), an empty array shall be returned.
    content:
      application/json:
        schema:
          type: array
          items:
            $ref: '#/components/schemas/AfRequestedQosData'
          minItems: 0
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'

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```

'406':
  $ref: 'TS29571_CommonData.yaml#/components/responses/406'
'414':
  $ref: 'TS29571_CommonData.yaml#/components/responses/414'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/af-qos-data-sets/{afReqQosId}:
  parameters:
    - name: afReqQosId
      in: path
      description: >
        Represents the identifier of the Individual AF Requested QoS Data Set resource.
      required: true
      schema:
        type: string

  put:
    summary: Create or update an Individual AF Requested QoS Data Set resource.
    operationId: CreateOrUpdateIndAFReqQoSDataSet
    tags:
      - Individual AF Requested QoS Data Set (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
          - nudr-dr:application-data:af-qos-data-sets:create
    requestBody:
      required: true
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/AfRequestedQoSData'
    responses:
      '201':
        description: >
          Created. The Individual AF Requested QoS Data Set resource is successfully created and a
          representation of the created resource shall be returned in the response body.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/AfRequestedQoSData'
        headers:
          Location:
            description: >
              Contains the URI of the newly created resource.
            required: true
            schema:
              type: string
      '200':
        description: >
          OK. The Individual AF Requested QoS Data Set resource is successfully updated and a
          representation of the updated resource shall be returned in the response body.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/AfRequestedQoSData'
      '204':
        description: >
          No Content. The Individual AF Requested QoS Data Set resource is successfully updated
          and no content is returned in the response body.
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':

```

```

    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '411':
    $ref: 'TS29571_CommonData.yaml#/components/responses/411'
  '413':
    $ref: 'TS29571_CommonData.yaml#/components/responses/413'
  '414':
    $ref: 'TS29571_CommonData.yaml#/components/responses/414'
  '415':
    $ref: 'TS29571_CommonData.yaml#/components/responses/415'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

```

patch:

```

summary: Modify of an existing Individual AF Requested QoS Data Set resource
operationId: ModifyIndAFReqQoSDataSet
tags:
  - Individual AF requested QoS Data Set (Document)
security:
  - {}
  - oAuth2ClientCredentials:
    - nudr-dr
  - oAuth2ClientCredentials:
    - nudr-dr
    - nudr-dr:application-data
  - oAuth2ClientCredentials:
    - nudr-dr
    - nudr-dr:application-data
    - nudr-dr:application-data:af-qos-data-sets:modify
requestBody:
  required: true
  content:
    application/merge-patch+json:
      schema:
        $ref: '#/components/schemas/AfRequestedQoSDataPatch'
responses:
  '200':
    description: >
      OK. The Individual AF Requested QoS Data Set resource is successfully modified and a
      representation of the updated resource shall be returned in the response body.
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/AfRequestedQoSData'
  '204':
    description: >
      No Content. The Individual AF Requested QoS Data Set resource is successfully modified
      and no content is returned in the response body.
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '411':
    $ref: 'TS29571_CommonData.yaml#/components/responses/411'
  '413':
    $ref: 'TS29571_CommonData.yaml#/components/responses/413'
  '415':
    $ref: 'TS29571_CommonData.yaml#/components/responses/415'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':

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    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

delete:
  summary: Delete an existing Individual AF requested QoS Data Set resource
  operationId: DeleteIndAFReqQoSDataSet
  tags:
    - Individual AF requested QoS Data Set (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
        - nudr-dr
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:application-data
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:application-data
        - nudr-dr:application-data:af-qos-data-sets:modify
  responses:
    '204':
      description: >
        No Content. The Individual AF requested QoS Data Set is successfully deleted.
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/subs-to-notify/{subsId}:
  parameters:
    - name: subsId
      in: path
      required: true
      schema:
        type: string
  put:
    summary: Modify a subscription to receive notification of application data changes
    operationId: ReplaceIndividualApplicationDataSubscription
    tags:
      - IndividualApplicationDataSubscription (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
          - nudr-dr:application-data:subs-to-notify:modify
    requestBody:
      required: true
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/ApplicationDataSubs'
    responses:
      '200':
        description: The individual subscription resource was updated successfully.
        content:

```

```
    application/json:
      schema:
        $ref: '#/components/schemas/ApplicationDataSubs'
  '204':
    description: >
      The individual subscription resource was updated successfully and no
      additional content is to be sent in the response message.
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '411':
    $ref: 'TS29571_CommonData.yaml#/components/responses/411'
  '413':
    $ref: 'TS29571_CommonData.yaml#/components/responses/413'
  '415':
    $ref: 'TS29571_CommonData.yaml#/components/responses/415'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
delete:
  summary: Delete the individual Application Data subscription
  operationId: DeleteIndividualApplicationDataSubscription
  tags:
    - IndividualApplicationDataSubscription (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
      - nudr-dr:application-data:subs-to-notify:modify
  responses:
    '204':
      description: Upon success, an empty response body shall be returned.
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'
get:
  summary: Get an existing individual Application Data Subscription resource
  operationId: ReadIndividualApplicationDataSubscription
  tags:
    - IndividualApplicationDataSubscription (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
```

```

- nudr-dr
- nudr-dr:application-data
- oAuth2ClientCredentials:
- nudr-dr
- nudr-dr:application-data
- nudr-dr:application-data:subs-to-notify:read
parameters:
- name: subsId
  in: path
  description: >
    String identifying a subscription to the Individual Application Data Subscription
  required: true
  schema:
    type: string
responses:
'200':
  description: The subscription information is returned.
  content:
    application/json:
      schema:
        $ref: '#/components/schemas/ApplicationDataSubs'
'400':
  $ref: 'TS29571_CommonData.yaml#/components/responses/400'
'401':
  $ref: 'TS29571_CommonData.yaml#/components/responses/401'
'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  $ref: 'TS29571_CommonData.yaml#/components/responses/404'
'406':
  $ref: 'TS29571_CommonData.yaml#/components/responses/406'
'414':
  $ref: 'TS29571_CommonData.yaml#/components/responses/414'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/eas-deploy-data:
get:
  summary: Retrieve EAS Deployment Information Data
  operationId: ReadEasDeployData
  tags:
  - EAS Deployment Data (Store)
  security:
  - {}
  - oAuth2ClientCredentials:
    - nudr-dr
  - oAuth2ClientCredentials:
    - nudr-dr
    - nudr-dr:application-data
  - oAuth2ClientCredentials:
    - nudr-dr
    - nudr-dr:application-data
    - nudr-dr:application-data:eas-deploy-data:read
parameters:
- name: dnn
  in: query
  description: Identifies a DNN.
  required: false
  schema:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
- name: snssai
  in: query
  description: Identifies an S-NSSAI.
  required: false
  content:
    application/json:
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
- name: internal-group-id
  in: query

```

```

    description: Identifies a group of users.
    required: false
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
  - name: appID
    in: query
    description: Identifies an application.
    required: false
    schema:
      type: string
responses:
  '200':
    description: The EAS Deployment Data stored in the UDR are returned.
    content:
      application/json:
        schema:
          type: array
          items:
            $ref: 'TS29591_Nnef_EASDeployment.yaml#/components/schemas/EasDeployInfoData'
          minItems: 1
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '406':
    $ref: 'TS29571_CommonData.yaml#/components/responses/406'
  '414':
    $ref: 'TS29571_CommonData.yaml#/components/responses/414'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
/application-data/eas-deploy-data/{easDeployInfoId}:
  get:
    summary: Retrieve an individual EAS Deployment Data resource
    operationId: ReadIndividualEasDeployData
    tags:
      - Individual EAS Deployment Data (Document)
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
      - OAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
          - nudr-dr:application-data:eas-deploy-data:read
    parameters:
      - name: easDeployInfoId
        description: >
          String identifying an Individual EAS Deployment Information Data resource.
        in: path
        required: true
        schema:
          type: string
    responses:
      '200':
        description: >
          The EAS Deployment Data stored in the UDR for an Individual EAS Deployment
          Information Data resource is returned.
        content:
          application/json:
            schema:
              $ref: 'TS29591_Nnef_EASDeployment.yaml#/components/schemas/EasDeployInfoData'
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'

```

```

'401':
  $ref: 'TS29571_CommonData.yaml#/components/responses/401'
'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  $ref: 'TS29571_CommonData.yaml#/components/responses/404'
'406':
  $ref: 'TS29571_CommonData.yaml#/components/responses/406'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'
put:
  summary: Create or update an individual EAS Deployment Data resource
  operationId: CreateOrReplaceIndividualEasDeployData
  tags:
    - Individual EAS Deployment Data (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
        - nudr-dr
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:application-data
    - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:application-data
        - nudr-dr:application-data:eas-deploy-data:create
  requestBody:
    required: true
    content:
      application/json:
        schema:
          $ref: 'TS29591_Nnef_EASDeployment.yaml#/components/schemas/EasDeployInfoData'
  parameters:
    - name: easDeployInfoId
      in: path
      description: >
        The Identifier of an Individual EAS Deployment Data to be created or updated.
        It shall apply the format of Data type string.
      required: true
      schema:
        type: string
  responses:
    '201':
      description: >
        The creation of an Individual EAS Deployment Data resource is confirmed and a
        representation of that resource is returned.
      content:
        application/json:
          schema:
            $ref: 'TS29591_Nnef_EASDeployment.yaml#/components/schemas/EasDeployInfoData'
      headers:
        Location:
          description: >
            Contains the URI of the newly created resource, according to the structure:
            {apiRoot}/nudr-dr/<apiVersion>/application-data/eas-deploy-data/{easDeployInfoId}
          required: true
          schema:
            type: string
    '200':
      description: >
        The update of an Individual EAS Deployment Data resource is confirmed and a response
        body containing EAS Deployment Data shall be returned.
      content:
        application/json:
          schema:
            $ref: 'TS29591_Nnef_EASDeployment.yaml#/components/schemas/EasDeployInfoData'
    '204':
      description: No content
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'

```

```

'401':
  $ref: 'TS29571_CommonData.yaml#/components/responses/401'
'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  $ref: 'TS29571_CommonData.yaml#/components/responses/404'
'411':
  $ref: 'TS29571_CommonData.yaml#/components/responses/411'
'413':
  $ref: 'TS29571_CommonData.yaml#/components/responses/413'
'414':
  $ref: 'TS29571_CommonData.yaml#/components/responses/414'
'415':
  $ref: 'TS29571_CommonData.yaml#/components/responses/415'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'
delete:
  summary: Delete an individual EAS Deployment Data resource
  operationId: DeleteIndividualEasDeployData
  tags:
    - Individual EasDeployment Data (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
      - nudr-dr:application-data:eas-deploy-data:modify
  parameters:
    - name: easDeployInfoId
      in: path
      description: >
        The Identifier of an Individual EAS Deployment Data to be deleted.
        It shall apply the format of Data type string.
      required: true
      schema:
        type: string
  responses:
    '204':
      description: The Individual EAS Deployment Data was deleted successfully.
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/dnai-eas-mappings/{dnai}:
  parameters:
    - name: dnai
      in: path
      required: true
      schema:
        type: string
  get:
    summary: Retrieves the EAS address information for a DNAI.

```

```

operationId: ReadDnaiEasMapping
tags:
  - DnaiEasMapping (Document)
security:
  - {}
  - oAuth2ClientCredentials:
    - nudr-dr
  - oAuth2ClientCredentials:
    - nudr-dr
    - nudr-dr:application-data
  - oAuth2ClientCredentials:
    - nudr-dr
    - nudr-dr:application-data
    - nudr-dr:application-data:dnai-eas:read
parameters:
  - name: supp-feat
    in: query
    description: Supported Features
    required: false
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
responses:
  '200':
    description: >
      Upon success, a response body containing EAS address information for a DNAI
      is returned.
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/DnaiEasMapping'
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '406':
    $ref: 'TS29571_CommonData.yaml#/components/responses/406'
  '414':
    $ref: 'TS29571_CommonData.yaml#/components/responses/414'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/ecs-address-roaming:
get:
  summary: Retrieve ECS Address Roaming Data
  operationId: ReadEcsRoamingData
  tags:
    - ECS Address Roaming Data (Store)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
      - nudr-dr:application-data:ecs-address-roaming:read
  responses:
    '200':
      description: The ECS Address Roaming Data stored in the UDR are returned.
      content:
        application/json:
          schema:
            type: array
            items:

```

```

    $ref: '#/components/schemas/EcsAddrData'
    minItems: 1
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '406':
    $ref: 'TS29571_CommonData.yaml#/components/responses/406'
  '414':
    $ref: 'TS29571_CommonData.yaml#/components/responses/414'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

```

```
/application-data/ecs-address-roaming/{ecsAddrInfoId}:
```

```

  get:
    summary: Retrieve an individual ECS Address Roaming Data resource
    operationId: ReadIndividualEcsAddr
    tags:
      - Individual ECS Address Roaming Data (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
          - nudr-dr:application-data:ecs-address-roaming:read
    parameters:
      - name: ecsAddrInfoId
        description: >
          String identifying an Individual ECS Address Roaming Data resource.
        in: path
        required: true
        schema:
          type: string
    responses:
      '200':
        description: >
          The ECS Address Roaming Data stored in the UDR for an Individual ECS Address Roaming
          Data resource is returned.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/EcsAddrData'
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '406':
        $ref: 'TS29571_CommonData.yaml#/components/responses/406'
      '429':
        $ref: 'TS29571_CommonData.yaml#/components/responses/429'
      '500':
        $ref: 'TS29571_CommonData.yaml#/components/responses/500'
      '502':
        $ref: 'TS29571_CommonData.yaml#/components/responses/502'
      '503':
        $ref: 'TS29571_CommonData.yaml#/components/responses/503'
      default:

```

```

    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  put:
    summary: Create or update an individual ECS Address Roaming Data resource
    operationId: CreateOrReplaceIndividualEcsAddressData
    tags:
      - Individual ECS Address Roaming Data (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
          - nudr-dr:application-data:ecs-address-roaming:create
    requestBody:
      required: true
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/EcsAddrData'
    parameters:
      - name: ecsAddrInfoId
        in: path
        description: >
          The Identifier of an Individual ECS Address Roaming Data to be created or updated.
        required: true
        schema:
          type: string
    responses:
      '201':
        description: >
          The creation of an Individual ECS Address Roaming Data resource is confirmed
          and a representation of that resource is returned.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/EcsAddrData'
        headers:
          Location:
            description: >
              Contains the URI of the newly created resource.
            required: true
            schema:
              type: string
      '200':
        description: >
          The update of an Individual ECS Address Roaming Data resource is confirmed
          and a response body containing ECS Address Roaming Data is returned.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/EcsAddrData'
      '204':
        description: No content
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'
      '411':
        $ref: 'TS29571_CommonData.yaml#/components/responses/411'
      '413':
        $ref: 'TS29571_CommonData.yaml#/components/responses/413'
      '415':
        $ref: 'TS29571_CommonData.yaml#/components/responses/415'
      '429':
        $ref: 'TS29571_CommonData.yaml#/components/responses/429'
      '500':
        $ref: 'TS29571_CommonData.yaml#/components/responses/500'
      '502':
        $ref: 'TS29571_CommonData.yaml#/components/responses/502'
      '503':

```

```

    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
patch:
  summary: Update an individual ECS Address Roaming Data resource
  operationId: UpdateIndividualEcsAddressData
  tags:
    - Individual ECS Address Roaming Data (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
      - nudr-dr:application-data:ecs-address-roaming:modify
  requestBody:
    required: true
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/EcsAddrDataPatch'
  parameters:
    - name: ecsAddrInfoId
      in: path
      description: >
        The Identifier of an Individual ECS Address Roaming Data to be updated.
      required: true
      schema:
        type: string
  responses:
    '200':
      description: >
        The update of an Individual ECS Address Roaming Data resource is confirmed
        and a response body containing ECS Address Roaming Data is returned.
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/EcsAddrData'
    '204':
      description: Successful case. No content
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '411':
      $ref: 'TS29571_CommonData.yaml#/components/responses/411'
    '413':
      $ref: 'TS29571_CommonData.yaml#/components/responses/413'
    '415':
      $ref: 'TS29571_CommonData.yaml#/components/responses/415'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
delete:
  summary: Delete an individual ECS Address Roaming Data resource
  operationId: DeleteIndividualEcsAddrData
  tags:
    - Individual ECS Address Roaming Data (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:

```

```

- nudr-dr
- nudr-dr:application-data
- oAuth2ClientCredentials:
- nudr-dr
- nudr-dr:application-data
- nudr-dr:application-data:ecs-address-roaming:modify
parameters:
- name: ecsAddrInfoId
  in: path
  description: >
    The Identifier of an Individual ECS Address Roaming Data to be updated.
  required: true
  schema:
    type: string
responses:
'204':
  description: The Individual ECS Address Roaming Data was deleted successfully.
'400':
  $ref: 'TS29571_CommonData.yaml#/components/responses/400'
'401':
  $ref: 'TS29571_CommonData.yaml#/components/responses/401'
'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  $ref: 'TS29571_CommonData.yaml#/components/responses/404'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/ueid-mappings:
get:
  summary: Retrieve one or several UE ID Mapping(s).
  operationId: GetUeIdMappings
  tags:
    - UE ID Mappings (Store)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
      - nudr-dr:application-data:ueid-mappings:read
  parameters:
    - name: app-layer-ids
      in: query
      description: Contains the requested Application layer Id(s).
      required: false
      style: form
      explode: false
      schema:
        type: array
        items:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/ApplicationlayerId'
        minItems: 1
    - name: gpsis
      in: query
      description: Contains the requested GPSI(s).
      required: false
      style: form
      explode: false
      schema:
        type: array
        items:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
        minItems: 1
    - name: supp-feat
      in: query
      description: Supported Features
      required: false

```

```

    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  responses:
    '200':
      description: The requested UE ID Mapping is returned.
      content:
        application/json:
          schema:
            type: array
            items:
              $ref: 'TS29522_UEId.yaml#/components/schemas/UEIdMappingInfo'
            minItems: 0
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '406':
      $ref: 'TS29571_CommonData.yaml#/components/responses/406'
    '414':
      $ref: 'TS29571_CommonData.yaml#/components/responses/414'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/ueid-mappings/{ueMappingId}:
  parameters:
    - name: ueMappingId
      description: >
        Contains the identifier of the Individual UE ID Mapping resource.
      in: path
      required: true
      schema:
        type: string

  get:
    summary: Retrieve an existing Individual UE ID Mapping resource.
    operationId: GetIndividualUEIdMapping
    tags:
      - Individual UE ID Mapping (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:application-data
          - nudr-dr:application-data:ueid-mappings:read
    responses:
      '200':
        description: >
          The UE ID Mapping Data stored in the UDR for an Individual UE Mapping Id
          Data resource is returned.
        content:
          application/json:
            schema:
              $ref: 'TS29522_UEId.yaml#/components/schemas/UEIdMappingInfo'
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29571_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29571_CommonData.yaml#/components/responses/404'

```

```

'406':
  $ref: 'TS29571_CommonData.yaml#/components/responses/406'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'

```

put:

```

summary: Create or update a UE ID Mapping.
operationId: CreateOrReplaceIndividualUeIdMapping
tags:
  - Individual UE ID Mapping (Document)
security:
  - {}
  - oAuth2ClientCredentials:
    - nudr-dr
  - oAuth2ClientCredentials:
    - nudr-dr
    - nudr-dr:application-data
  - oAuth2ClientCredentials:
    - nudr-dr
    - nudr-dr:application-data
    - nudr-dr:application-data:ueid-mappings:create
requestBody:
  required: true
  content:
    application/json:
      schema:
        $ref: 'TS29522_UEId.yaml#/components/schemas/UeIdMappingInfo'
responses:
  '201':
    description: >
      Successful case. The UE ID Mapping resource is successfully created and a representation
      of the created resource is returned in the response body.
    content:
      application/json:
        schema:
          $ref: 'TS29522_UEId.yaml#/components/schemas/UeIdMappingInfo'
    headers:
      Location:
        description: >
          Contains the URI of the newly created resource.
        required: true
        schema:
          type: string
  '200':
    description: >
      The "UE ID Mapping" resource has beenis successfully updated and a response body is
      returned containing a representation of the updated resource is returned in the response
      body.
    content:
      application/json:
        schema:
          $ref: 'TS29522_UEId.yaml#/components/schemas/UeIdMappingInfo'
  '204':
    description: >
      No content. The UE ID Mapping resource has beenis successfully updated and no content is
      returned in the response body.
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '411':
    $ref: 'TS29571_CommonData.yaml#/components/responses/411'
  '413':
    $ref: 'TS29571_CommonData.yaml#/components/responses/413'
  '415':
    $ref: 'TS29571_CommonData.yaml#/components/responses/415'

```

```

'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'

delete:
  summary: Delete an existing Individual UE ID Mapping resource.
  operationId: DeleteIndividualUeIdMappingData
  tags:
    - Individual UE ID Mapping (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
      - nudr-dr:application-data:ueid-mappings:delete
  responses:
    '204':
      description: >
        Successful case. The Individual UE ID Mapping Data is successfully deleted.
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/non3gpp-device-Id:
  get:
    summary: Retrieve the Non-3GPP Device Identifier Information
    operationId: ReadNon3GPPDeviceInfo
    tags:
      - Non-3GPP Device Identifier Information (Store)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:application-data
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:application-data
        - nudr-dr:application-data:non3gpp-device-Id:read
    responses:
      '200':
        description: The Non-3GPP Device Identifier Information stored in the UDR are returned.
        content:
          application/json:
            schema:
              type: array
              items:
                $ref: '#/components/schemas/Non3gppDevInfo'
              minItems: 1
      '400':
        $ref: 'TS29571_CommonData.yaml#/components/responses/400'
      '401':

```

```

    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '406':
    $ref: 'TS29571_CommonData.yaml#/components/responses/406'
  '414':
    $ref: 'TS29571_CommonData.yaml#/components/responses/414'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

```

```
/application-data/non3gpp-device-Id/{non3gppDevId}:
```

```
get:
```

```
summary: Retrieve an Individual Non-3GPP Device Identifier Information resource
operationId: ReadIndividualNo3GPPDevInfo
```

```
tags:
```

```
- Individual Non-3GPP Device Identifier Information (Document)
```

```
security:
```

```
- {}
```

```
- oAuth2ClientCredentials:
```

```
- nudr-dr
```

```
- oAuth2ClientCredentials:
```

```
- nudr-dr
```

```
- nudr-dr:application-data
```

```
- oAuth2ClientCredentials:
```

```
- nudr-dr
```

```
- nudr-dr:application-data
```

```
- nudr-dr:application-data:non3gpp-device-Id:read
```

```
parameters:
```

```
- name: non3gppDevId
```

```
description: >
```

```
String identifying an Individual Non-3GPP Device Identifier Information resource.
```

```
in: path
```

```
required: true
```

```
schema:
```

```
type: string
```

```
- name: dnns
```

```
in: query
```

```
description: Each element identifies a DNN.
```

```
required: false
```

```
style: form
```

```
explode: false
```

```
schema:
```

```
type: array
```

```
items:
```

```
$ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
```

```
minItems: 1
```

```
- name: snssais
```

```
in: query
```

```
description: Each element identifies a slice.
```

```
required: false
```

```
content:
```

```
application/json:
```

```
schema:
```

```
type: array
```

```
items:
```

```
$ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
```

```
minItems: 1
```

```
- name: supis
```

```
in: query
```

```
description: Each element identifies a subscriber.
```

```
required: false
```

```
style: form
```

```
explode: false
```

```
schema:
```

```
type: array
```

```
items:
```

```
$ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
```

```
minItems: 1
```

```

responses:
  '200':
    description: >
      The Non-3GPP Device Identifier Information stored in the UDR for an Individual
      Non-3GPP Device Identifier Information resource is returned.
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/Non3gppDevInfo'
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '406':
    $ref: 'TS29571_CommonData.yaml#/components/responses/406'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
put:
  summary: Create or update an Individual Non-3GPP Device Identifier Information resource
  operationId: CreateOrReplaceIndividualNo3GPPDevInfo
  tags:
    - Individual Non-3GPP Device Identifier Information (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
      - nudr-dr:application-data:non3gpp-device-id:create
  requestBody:
    required: true
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/Non3gppDevInfo'
  parameters:
    - name: non3gppDevId
      in: path
      description: >
        The Identifier of the Non-3GPP Device Identifier Information to be created or updated.
      required: true
      schema:
        type: string
  responses:
    '201':
      description: >
        The creation of an Individual Non-3GPP Device Identifier Information resource
        is confirmed and a representation of that resource is returned.
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/Non3gppDevInfo'
      headers:
        Location:
          description: >
            Contains the URI of the newly created resource.
          required: true
          schema:
            type: string
    '200':
      description: >
        The update of an Individual Non-3GPP Device Identifier Information resource

```

```

    is confirmed and a response body containing Non-3GPP Device Identifier Information
    is returned.
  content:
    application/json:
      schema:
        $ref: '#/components/schemas/Non3gppDevInfo'
  '204':
    description: No content
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '411':
    $ref: 'TS29571_CommonData.yaml#/components/responses/411'
  '413':
    $ref: 'TS29571_CommonData.yaml#/components/responses/413'
  '415':
    $ref: 'TS29571_CommonData.yaml#/components/responses/415'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
patch:
  summary: Update an Individual Non-3GPP Device Identifier Information resource
  operationId: UpdateIndividualNo3GPPDevInfo
  tags:
    - Individual Non-3GPP Device Identifier Information (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
      - nudr-dr:application-data:non3gpp-device-id:modify
  requestBody:
    required: true
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/Non3gppDevInfoPatch'
  parameters:
    - name: non3gppDevId
      in: path
      description: >
        The Identifier of an Individual Non-3GPP Device Identifier Information to be updated.
      required: true
      schema:
        type: string
  responses:
    '200':
      description: >
        The update of an Individual Non-3GPP Device Identifier Information resource
        is confirmed and a response body containing Non-3GPP Device Identifier Information
        is returned.
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/Non3gppDevInfo'
    '204':
      description: Successful case. No content
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'

```

```

'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  $ref: 'TS29571_CommonData.yaml#/components/responses/404'
'411':
  $ref: 'TS29571_CommonData.yaml#/components/responses/411'
'413':
  $ref: 'TS29571_CommonData.yaml#/components/responses/413'
'415':
  $ref: 'TS29571_CommonData.yaml#/components/responses/415'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'
delete:
  summary: Delete an Individual Non-3GPP Device Identifier Information resource
  operationId: DeleteIndividualNo3GPPDevInfo
  tags:
    - Individual Non-3GPP Device Identifier Information (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:application-data
      - nudr-dr:application-data:non3gpp-device-Id:modify
  parameters:
    - name: non3gppDevId
      in: path
      description: >
        The Identifier of an Individual Non-3GPP Device Identifier Information to be deleted.
      required: true
      schema:
        type: string
  responses:
    '204':
      description: >
        The Individual Non-3GPP Device Identifier Information was deleted successfully.
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'

components:

schemas:

TrafficInfluData:
  description: Represents the Traffic Influence Data.
  type: object
  properties:
    upPathChgNotifCorreId:
      type: string
      description: >
        Contains the Notification Correlation Id allocated by the NEF for the UP
        path change notification.

```

```

appReloInd:
  type: boolean
  description: >
    Identifies whether an application can be relocated once a location of the
    application has been selected.
afAppId:
  type: string
  description: Identifies an application.
dnn:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
ethTrafficFilters:
  type: array
  items:
    $ref: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/EthFlowDescription'
  minItems: 1
  description: >
    Identifies Ethernet packet filters. Either "trafficFilters" or
    "ethTrafficFilters" shall be included if applicable.
snssai:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
interGroupId:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
interGroupIdList:
  type: array
  items:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
  minItems: 2
  description: >
    Identifies a list of Internal Groups.
subscriberCatList:
  type: array
  items:
    type: string
  minItems: 1
  description: >
    Identifies a list of Subscriber Category(ies).
plmnId:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
ipv4Addr:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
ipv6Addr:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'
supi:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
trafficDataSets:
  type: object
  additionalProperties:
    $ref: 'TS29522_TrafficInfluence.yaml#/components/schemas/TrafficDataSet'
  minProperties: 2
  description: >
    Contains multiple sets of traffic filters with the corresponding N6 traffic routing
    requirements. The key of the map shall be the value of the setId attribute of the
    TrafficDataSet data structure.
trafficFilters:
  type: array
  items:
    $ref: 'TS29122_CommonData.yaml#/components/schemas/FlowInfo'
  minItems: 1
  description: >
    Identifies IP packet filters. Either "trafficFilters" or "ethTrafficFilters"
    shall be included if applicable.
trafficRoutes:
  type: array
  items:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/RouteToLocation'
  minItems: 1
  description: Identifies the N6 traffic routing requirement.
sfcIdDl:
  type: string
  description: Reference to a pre-configured service function chain for DL traffic
sfcIdUl:
  type: string
  description: Reference to a pre-configured service function chain for UL traffic
metadata:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/Metadata'
traffCorreInd:
  type: boolean
tfcCorreInfo:

```

```

    $ref: '#/components/schemas/TrafficCorrelationInfo'
  candDnaiInd:
    type: boolean
    description: Indicates whether candidate DNAI(s) are requested to be reported.
  validStartTime:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  validEndTime:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  tempValidities:
    type: array
    items:
      $ref: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/TemporalValidity'
    minItems: 1
    description: Identifies the temporal validities for the N6 traffic routing requirement.
  nwAreaInfo:
    $ref: 'TS29554_Npcf_BDTPolicyControl.yaml#/components/schemas/NetworkAreaInfo'
  upPathChgNotifUri:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  headers:
    description: Contains the headers provisioned by the NEF.
    type: array
    items:
      type: string
    minItems: 1
  subscribedEvents:
    type: array
    items:
      $ref: 'TS29522_TrafficInfluence.yaml#/components/schemas/SubscribedEvent'
    minItems: 1
  notifUri:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  notifCorreId:
    type: string
  dnaiChgType:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/DnaiChangeType'
  afAckInd:
    type: boolean
  addrPreserInd:
    type: boolean
  maxAllowedUpLat:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/UInteger'
  simConnInd:
    type: boolean
    description: >
      Indicates whether simultaneous connectivity should be temporarily
      maintained for the source and target PSA.
  simConnTerm:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/DurationSec'
  n6DelayInd:
    type: boolean
    description: Indicates whether the N6 delay shall be considered or not.
  supportedFeatures:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  resUri:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  resetIds:
    type: array
    items:
      type: string
    minItems: 1
  nscSuppFeats:
    type: object
    additionalProperties:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    minProperties: 1
    description: >
      Identifies a list of Network Function Service Consumer supported per service. The key
      used in this map for each entry is the ServiceName value as defined in
      3GPP TS 29.510.
  afHdrReq:
    $ref:
'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/AfHeaderHandlingControlInfo'
  allof:
    - oneOf:
      - required: [afAppId]
      - required: [trafficFilters]
      - required: [ethTrafficFilters]
      - required: [trafficDataSets]

```

- oneOf:
- required: [supi]
- required: [interGroupId]
- required: [interGroupIdList]
- required: [ipv4Addr]
- required: [ipv6Addr]

TrafficInfluDataPatch:

description: Represents the Traffic Influence Data to be updated in the UDR.

type: object

properties:

upPathChgNotifCorreId:

type: string

description: >
Contains the Notification Correlation Id allocated by the NEF for the UP path change notification.

appReloInd:

type: boolean

description: >
Identifies whether an application can be relocated once a location of the application has been selected.

ethTrafficFilters:

type: array

items:

\$ref: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/EthFlowDescription'

minItems: 1

description: >
Identifies Ethernet packet filters. Either "trafficFilters" or "ethTrafficFilters" shall be included if applicable.

trafficDataSets:

type: object

additionalProperties:

\$ref: 'TS29522_TrafficInfluence.yaml#/components/schemas/TrafficDataSetRm'

minProperties: 1

description: >
Contains one or several set(s) of traffic filters with the corresponding N6 traffic routing requirements. The key of the map shall be the value of the setId attribute of the TrafficDataSet data structure.

trafficFilters:

type: array

items:

\$ref: 'TS29122_CommonData.yaml#/components/schemas/FlowInfo'

minItems: 1

description: >
Identifies IP packet filters. Either "trafficFilters" or "ethTrafficFilters" shall be included if applicable.

trafficRoutes:

type: array

items:

\$ref: 'TS29571_CommonData.yaml#/components/schemas/RouteToLocation'

minItems: 1

description: Identifies the N6 traffic routing requirement.

sfcIdDl:

type: string

description: Reference to a pre-configured service function chain for DL traffic

nullable: true

sfcIdUl:

type: string

description: Reference to a pre-configured service function chain for UL traffic

nullable: true

metadata:

\$ref: 'TS29571_CommonData.yaml#/components/schemas/Metadata'

traffCorreInd:

type: boolean

tfcCorreInfo:

\$ref: '#/components/schemas/TrafficCorrelationInfo'

candDnaiInd:

type: boolean

description: Indicates whether candidate DNAI(s) are requested to be reported.

validStartTime:

\$ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

validEndTime:

\$ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

tempValidities:

type: array

items:

\$ref: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/TemporalValidity'

minItems: 1

```

    nullable: true
    description: Identifies the temporal validities for the N6 traffic routing requirement.
  nwAreaInfo:
    $ref: 'TS29554_Npcf_BDTPolicyControl.yaml#/components/schemas/NetworkAreaInfo'
  upPathChgNotifUri:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  headers:
    description: Contains the headers provisioned by the NEF.
    type: array
    items:
      type: string
    minItems: 1
  afAckInd:
    type: boolean
  addrPreserInd:
    type: boolean
  maxAllowedUpLat:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/UIntegerRm'
  simConnInd:
    type: boolean
    description: >
      Indicates whether simultaneous connectivity should be temporarily maintained
      for the source and target PSA.
  simConnTerm:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/DurationSecRm'
  n6DelayInd:
    type: boolean
    description: Indicates whether the N6 delay shall be considered or not.
    nullable: true
  afHdrReq:
    $ref:
'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/AfHeaderHandlingControlInfo'

  TrafficInfluSub:
    description: Represents traffic influence subscription data.
    type: object
    properties:
      dnns:
        type: array
        items:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
        minItems: 1
        description: Each element identifies a DNN.
      snssais:
        type: array
        items:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
        minItems: 1
        description: Each element identifies a slice.
      internalGroupIds:
        type: array
        items:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
        minItems: 1
        description: Each element identifies a group of users.
      internalGroupIdsAdd:
        type: array
        items:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
        minItems: 1
        description: >
          Each element identifies an internal group.
      subscriberCatList:
        type: array
        items:
          type: string
        minItems: 1
        description: >
          Each element identifies a subscriber category.
      supis:
        type: array
        items:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
        minItems: 1
        description: Each element identifies the user.
      plmnId:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
      ipv4Addr:

```

```

    $ref: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
  ipv6Addr:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'
  notificationUri:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  notifId:
    type: string
  expiry:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  supportedFeatures:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  resetIds:
    type: array
    items:
      type: string
    minItems: 1
  immRep:
    type: boolean
  description: >
    If provided and set to true, it indicates that existing entries that
    match this subscription shall be immediately reported in the response.
  immReports:
    type: array
    items:
      $ref: '#/components/schemas/TrafficInfluDataNotif'
    minItems: 1
  description: Immediate report with existing UDR entries.
  required:
  - notificationUri

TrafficInfluDataNotif:
  description: Represents traffic influence data for notification.
  type: object
  properties:
    resUri:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    trafficInfluData:
      $ref: '#/components/schemas/TrafficInfluData'
    notifId:
      type: string
  required:
  - resUri

PfdDataForAppExt:
  description: Represents the PFDs and related data for the application.
  type: object
  properties:
    applicationId:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/ApplicationId'
    pfd:
      type: array
      items:
        $ref: 'TS29551_Nnef_PFDmanagement.yaml#/components/schemas/PfdContent'
      minItems: 1
    cachingTime:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    cachingTimer:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/DurationSec'
    suppFeat:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  resetIds:
    type: array
    items:
      type: string
    minItems: 1
  allowedDelay:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/DurationSec'
  required:
  - applicationId
  - pfd
  not:
    required: [cachingTime, cachingTimer]

BdtPolicyData:
  description: Represents applied BDT policy data.
  type: object
  properties:
    interGroupId:

```

```

    $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
  supi:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
  bdtRefId:
    $ref: 'TS29122_CommonData.yaml#/components/schemas/BdtReferenceId'
  dnn:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
  snssai:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
  resUri:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  resetIds:
    type: array
    items:
      type: string
    minItems: 1
  required:
  - bdtRefId

BdtPolicyDataPatch:
  description: >
    Represents modification instructions to be performed on the applied BDT policy data.
  type: object
  properties:
    bdtRefId:
      $ref: 'TS29122_CommonData.yaml#/components/schemas/BdtReferenceId'
  required:
  - bdtRefId

IptvConfigData:
  description: Represents IPTV configuration data information.
  type: object
  properties:
    supi:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    interGroupId:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
    dnn:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
    snssai:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    afAppId:
      type: string
    multiAccCtrls:
      type: object
      additionalProperties:
        $ref: 'TS29522_IPTVConfiguration.yaml#/components/schemas/MulticastAccessControl'
      minProperties: 1
      description: >
        Identifies a list of multicast address access control information. Any string
        value can be used as a key of the map.
    suppFeat:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    resUri:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    resetIds:
      type: array
      items:
        type: string
      minItems: 1
  required:
  - afAppId
  - multiAccCtrls
  oneOf:
  - required: [interGroupId]
  - required: [supi]

ServiceParameterData:
  description: Represents the service parameter data.
  type: object
  properties:
    appId:
      type: string
      description: Identifies an application.
    dnn:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
    snssai:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'

```

```

interGroupId:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
supi:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
ueIpv4:
  $ref: 'TS29122_CommonData.yaml#/components/schemas/Ipv4Addr'
ueIpv6:
  $ref: 'TS29122_CommonData.yaml#/components/schemas/Ipv6Addr'
ueMac:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/MacAddr48'
anyUeInd:
  type: boolean
  description: >
    Identifies whether the service parameters applies to any non roaming UE. "true": the
    request is applied for any UE; "false"(default): the request is not applied for any UE.
roamUeNetDescs:
  type: array
  items:
    $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/NetworkDescription'
  minItems: 1
  description: Each element identifies one or more PLMN IDs of inbound roamers.
paramOverPc5:
  $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParameterOverPc5'
paramOverUu:
  $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParameterOverUu'
a2xParamsPc5:
  $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/A2xParamsPc5'
a2xParamsUu:
  $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/A2xParamsUu'
paramForProSeDd:
  $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamForProSeDd'
paramForProSeDc:
  $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamForProSeDc'
paramForProSeU2NRelUe:
  $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamForProSeU2NRelUe'
paramForProSeRemUe:
  $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamForProSeRemUe'
paramForProSeU2URelUe:
  $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamForProSeU2URelUe'
paramForProSeEndUe:
  $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamForProSeEndUe'
multiHopU2URelUe:
  $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamProSeMultiHopU2URelUe'
multiHopU2UEndUe:
  $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamProSeMultiHopEndUe'
multiHopU2NRelUe:
  $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamProSeMultiHopU2NRelUe'
multiHopU2NRemUe:
  $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamProSeMultiHopRemUe'
multiHopU2NIntermUe:
  $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamProSeMultiHopIntermUe'
urspGuidance:
  type: array
  items:
    $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/UrspRuleRequest'
  minItems: 1
  description: >
    Contains the service parameters used to guide the URSP rule(s).
vpsUrspGuidance:
  type: array
  items:
    $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/UrspRuleRequest'
  minItems: 1
  description: >
    Contains the service parameters used to guide the VPLMN-specific URSP rule(s).
tnaps:
  type: array
  items:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/TnapId'
  minItems: 1
  description: Contains the TNAP IDs collocated with the 5G-RG(s) of a specific user.
deliveryEvents:
  type: array
  items:
    $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/Event'
  minItems: 1
  description: >
    Contains the outcome of the UE Policy Delivery and/or events related to service

```

```

    parameters not authorized by the PCF.
  policDelivNotifCorreId:
    type: string
    description: >
      Contains the Notification Correlation Id allocated by the NEF for the notification
      of UE Policy delivery outcome and/or the notification about service parameters not
      authorized by the PCF.
  policDelivNotifUri:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  suppFeat:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  resUri:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  headers:
    description: Contains the headers provisioned by the NEF.
    type: array
    items:
      type: string
    minItems: 1
  resetIds:
    type: array
    items:
      type: string
    minItems: 1
  paramForRangingSlPos:
    $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamForRangingSlPos'

ServiceParameterDataPatch:
  description: Represents the service parameter data that can be updated.
  type: object
  properties:
    paramOverPc5:
      $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParameterOverPc5Rm'
    paramOverUu:
      $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParameterOverUuRm'
    a2xParamsPc5:
      $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/A2xParamsPc5Rm'
    a2xParamsUu:
      $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/A2xParamsUuRm'
    paramForProSeDd:
      $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamForProSeDdRm'
    paramForProSeDc:
      $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamForProSeDcRm'
    paramForProSeU2NRelUe:
      $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamForProSeU2NRelUeRm'
    paramForProSeRemUe:
      $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamForProSeRemUeRm'
    paramForProSeU2URelUE:
      $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamForProSeU2URelUeRm'
    paramForProSeEndUe:
      $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamForProSeEndUeRm'
    multiHopU2URelUe:
      $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamProSeMultiHopU2URelUeRm'
    multiHopU2UEndUe:
      $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamProSeMultiHopEndUeRm'
    multiHopU2NRelUe:
      $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamProSeMultiHopU2NRelUeRm'
    multiHopU2NRemUe:
      $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamProSeMultiHopRemUeRm'
    multiHopU2NIntermUe:
      $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamProSeMultiHopIntermUeRm'
  urspInfluence:
    type: array
    items:
      $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/UrspRuleRequest'
    minItems: 1
    deprecated: true
    description: Contains the service parameter used to influence the URSP. This attribute is
      deprecated by the urspGuidance attribute.
  urspGuidance:
    type: array
    items:
      $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/UrspRuleRequest'
    minItems: 1
    nullable: true
    description: >
      Contains the service parameters used to influence the URSP rule(s).
  vpsUrspGuidance:

```

```

    type: array
    items:
      $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/UrspRuleRequest'
    minItems: 1
    nullable: true
    description: >
      Contains the service parameters used to guide the VPLMN specific URSP rule(s).
  tnaps:
    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/TnapId'
    minItems: 1
    description: Contains the TNAP IDs collocated with the 5G-RG(s) of a specific user.
    nullable: true
  deliveryEvents:
    type: array
    items:
      $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/Event'
    minItems: 1
    nullable: true
    description: >
      Contains the outcome of the UE Policy Delivery and/or events related to service
      parameters not authorized by the PCF.
  policDelivNotifUri:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  headers:
    description: Contains the headers provisioned by the NEF.
    type: array
    items:
      type: string
    minItems: 1
  paramForRangingSlPos:
    $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/ParamForRangingSlPosRm'

AmInfluData:
  description: Represents the AM Influence Data.
  type: object
  properties:
    appIds:
      type: array
      items:
        type: string
      minItems: 1
      description: Identifies one or more applications.
    dnnSnssaiInfos:
      type: array
      items:
        $ref: 'TS29522_AMInfluence.yaml#/components/schemas/DnnSnssaiInformation'
      minItems: 1
      description: Identifies one or more DNN, S-NSSAI combinations.
    interGroupId:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
    supi:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    anyUeInd:
      type: boolean
      description: >
        When set to true, it indicates the data is applicable for any UE. Otherwise set
        to "false". Default value is "false" if omitted.
    roamUePlmnIds:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
      minItems: 1
      description: >
        Indicates a list of PLMNs representing the home PLMN for the inbound roaming
        UEs in LBO roaming scenario.
    policyDuration:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/DurationSec'
    evSubs:
      type: array
      items:
        $ref: 'TS29522_AMInfluence.yaml#/components/schemas/AmInfluEvent'
      minItems: 1
      description: List of AM related events for which a subscription needs to take place.
    notifUri:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    notifCorrId:

```

```

    type: string
    description: Notification correlation identifier.
  headers:
    type: array
    description: Contains the headers provisioned by the NEF.
    items:
      type: string
    minItems: 1
  thruReq:
    type: boolean
    description: >
      When set to true, it indicates whether high throughput is desired for the
      indicated UE traffic. Otherwise set to "false". Default value is "false" if omitted.
  covReq:
    type: array
    items:
      $ref:
'TS29534_Npcf_AMPolicyAuthorization.yaml#/components/schemas/ServiceAreaCoverageInfo'
    minItems: 1
    description: Indicates the service area coverage requirement.
  afSliceReplReqInfo:
    $ref: 'TS29534_Npcf_AMPolicyAuthorization.yaml#/components/schemas/SliceReplReqInfo'
  supportedFeatures:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  resUri:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  resetIds:
    type: array
    items:
      type: string
    minItems: 1
  allOf:
  - anyOf:
    - required: [thruReq]
    - required: [covReq]
    - required: [afSliceReplReqInfo]
  - oneOf:
    - required: [supi]
    - required: [interGroupId]
    - required: [anyUeInd]
    - required: [roamUePlmnIds]

AmInfluDataPatch:
  description: Represents the AM Influence Data that can be updated.
  type: object
  properties:
    appIds:
      type: array
      items:
        type: string
      minItems: 1
      description: Identifies one or more applications.
      nullable: true
    dnnSnssaiInfos:
      type: array
      items:
        $ref: 'TS29522_AMInfluence.yaml#/components/schemas/DnnSnssaiInformation'
      minItems: 1
      description: Identifies one or more DNN, S-NSSAI combinations.
      nullable: true
    evSubs:
      type: array
      items:
        $ref: 'TS29522_AMInfluence.yaml#/components/schemas/AmInfluEvent'
      minItems: 1
      description: List of AM related events for which a subscription needs to take place.
      nullable: true
    headers:
      type: array
      description: Contains the headers provisioned by the NEF.
      items:
        type: string
      minItems: 1
    thruReq:
      type: boolean
      description: Indicates whether high throughput is desired for the indicated UE traffic.
      nullable: true
    notifUri:

```

```

    $ref: 'TS29571_CommonData.yaml#/components/schemas/UriRm'
  notifCorrId:
    type: string
    description: Notification correlation identifier.
    nullable: true
  covReq:
    type: array
    items:
      $ref:
'TS29534_Npcf_AMPolicyAuthorization.yaml#/components/schemas/ServiceAreaCoverageInfo'
    minItems: 1
    description: Indicates the service area coverage requirement.
    nullable: true
  afSliceReplReqInfo:
    $ref: '#/components/schemas/SliceReplReqInfoRm'
  policyDuration:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/DurationSec'

```

```

ApplicationDataSubs:
  description: Identifies a subscription to application data change notification.
  type: object
  properties:
    notificationUri:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    notifId:
      type: string
    dataFilters:
      type: array
      items:
        $ref: '#/components/schemas/DataFilter'
      minItems: 1
    expiry:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    immRep:
      type: boolean
      description: Immediate reporting indication.
    amInfluEntries:
      type: array
      items:
        $ref: '#/components/schemas/AmInfluData'
      minItems: 1
      description: The AM Influence Data entries stored in the UDR that match a subscription.
    supportedFeatures:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    resetIds:
      type: array
      items:
        type: string
      minItems: 1
    immReports:
      type: array
      items:
        $ref: '#/components/schemas/ApplicationDataChangeNotif'
      minItems: 1
      description: Immediate report with existing UDR entries.
  required:
    - notificationUri

```

```

ApplicationDataChangeNotif:
  description: Contains changed application data for which notification was requested.
  type: object
  properties:
    iptvConfigData:
      $ref: '#/components/schemas/IptvConfigData'
    pfdData:
      $ref: 'TS29551_Nnef_PFDmanagement.yaml#/components/schemas/PfdChangeNotification'
    bdtPolicyData:
      $ref: '#/components/schemas/BdtPolicyData'
    resUri:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    serParamData:
      $ref: '#/components/schemas/ServiceParameterData'
    amInfluData:
      $ref: '#/components/schemas/AmInfluData'
    dnaiEasData:
      $ref: '#/components/schemas/DnaiEasMapping'
    afReqQosData:

```

```

    $ref: '#/components/schemas/AfRequestedQosData'
  ecsAddrData:
    $ref: '#/components/schemas/EcsAddrData'
  n3gDevData:
    $ref: '#/components/schemas/Non3gppDevInfo'
  notifId:
    type: string
  required:
    - resUri

DataFilter:
  description: Identifies a data filter.
  type: object
  properties:
    dataInd:
      $ref: '#/components/schemas/DataInd'
    dnns:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
      minItems: 1
    snssais:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
      minItems: 1
    internalGroupIds:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
      minItems: 1
    supis:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      minItems: 1
    appIds:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/ApplicationId'
      minItems: 1
    ueIpv4s:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
      minItems: 1
    ueIpv6s:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'
      minItems: 1
    ueMacs:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/MacAddr48'
      minItems: 1
    anyUeInd:
      type: boolean
      description: >
        Indicates whether the request is filtered based on any UE or not. "true": the
        request is filtered based on any UE; "false"(default): the request is not filtered based
        on any UE.
    dnnSnssaiInfos:
      description: >
        Indicates the request is for any DNN and S-NSSAI combination present in the array.
      type: array
      items:
        $ref: 'TS29522_AMInfluence.yaml#/components/schemas/DnnSnssaiInformation'
      minItems: 1
    dnais:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnai'
      minItems: 1
    roamUePlmnIds:
      description: >
        Indicates the request is for the AM Influence Data with the PLMN identifiers
        that match at least a PLMN Identifier present in the array.

```

```

    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
    minItems: 1
  roamUeNetDescs:
    description: >
      Indicates the request is for the Service Parameter Data with the PLMN identifiers
      that match at least a PLMN Identifier present in the array.
    type: array
    items:
      $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/NetworkDescription'
    minItems: 1
  required:
  - dataInd

TrafficCorrelationInfo:
  description: >
    Contains the information for traffic correlation.
  type: object
  properties:
    corrType:
      $ref: '#/components/schemas/CorrelationType'
    tfcCorrId:
      type: string
      description: >
        Identification of a set of UEs accessing the application identified by the
        Application Identifier or traffic filtering information.
    comEasIpv4Addr:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Ipv4AddrRm'
    comEasIpv6Addr:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Ipv6AddrRm'
    fqdnRange:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/FqdnPatternMatchingRule'
      minItems: 1
      nullable: true
    notifUri:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/UriRm'
    notifCorrId:
      type: string
      nullable: true
      description: Notification correlation identifier.
    nullable: true

AfRequestedQosData:
  description: Represents AF Requested QoS data.
  type: object
  properties:
    supi:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    interGroupId:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
    afAppId:
      type: string
      description: Identifies an AF application.
    dnn:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
    sliceInfo:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    flowInfo:
      type: array
      items:
        $ref: 'TS29122_CommonData.yaml#/components/schemas/FlowInfo'
      minItems: 1
    ethFlowInfo:
      type: array
      items:
        $ref: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/EthFlowDescription'
      minItems: 1
    enEthFlowInfo:
      type: array
      items:
        $ref: 'TS29122_CommonData.yaml#/components/schemas/EthFlowInfo'
      minItems: 1
    evSubsc:
      $ref: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/EventsSubscReqData'
    qosReference:

```

```

    type: string
  qosReqs:
    $ref: '#/components/schemas/QosRequirements'
  altSerReqs:
    type: array
    items:
      type: string
    minItems: 1
  altSerReqsData:
    type: array
    items:
      $ref:
'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/AlternativeServiceRequirementsData'
    minItems: 1
    description: >
      Contains alternative service requirements that include individual QoS parameter sets.
  disUeNotif:
    type: boolean
    description: >
      true indicates to disable QoS flow parameters signalling to the UE.
      false indicates not to disable QoS flow parameters signalling to the UE.
      The default value is "false" if this attribute is absent and has not been previously
      provisioned.
  tempInValidity:
    $ref: 'TS29565_Ntsctsf_QoSandTSCAssistance.yaml#/components/schemas/TemporalInValidity'
  headers:
    description: Contains the headers provisioned by the NEF.
    type: array
    items:
      type: string
    minItems: 1
  suppFeat:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
allOf:
  - oneOf:
    - required: [supi]
    - required: [interGroupId]
  - oneOf:
    - required: [flowInfo]
    - required: [ethFlowInfo]
    - required: [enEthFlowInfo]
  - oneOf:
    - required: [qosReference]
    - required: [qosReqs]
  - not:
    required: [qosReference, altSerReqsData]
  - not:
    required: [altSerReqs, altSerReqsData]

AfRequestedQosDataPatch:
  description: Represents the requested modifications to AF Requested QoS data.
  type: object
  properties:
    afAppId:
      type: string
      description: Identifies an AF application.
      nullable: true
    evSubsc:
      $ref: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/EventsSubscReqDataRm'
    flowInfo:
      type: array
      items:
        $ref: 'TS29122_CommonData.yaml#/components/schemas/FlowInfo'
      minItems: 1
      nullable: true
    ethFlowInfo:
      type: array
      items:
        $ref: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/EthFlowDescription'
      minItems: 1
    enEthFlowInfo:
      type: array
      items:
        $ref: 'TS29122_CommonData.yaml#/components/schemas/EthFlowInfo'
      minItems: 1
    qosReference:
      type: string
      nullable: true

```

```

    qosReqs:
      $ref: '#/components/schemas/QosRequirementsRm'
    altSerReqs:
      type: array
      items:
        type: string
      minItems: 1
      nullable: true
    altSerReqsData:
      type: array
      items:
        $ref:
'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/AlternativeServiceRequirementsData'
      minItems: 1
      description: >
        Contains removable alternative service requirements that include individual QoS
        parameter sets.
      nullable: true
    disUseNotif:
      type: boolean
      description: >
        true indicates to disable QoS flow parameters signalling to the UE.
        false indicates not to disable QoS flow parameters signalling to the UE.
      nullable: true
    tempInValidity:
      $ref: 'TS29565_Ntsctsf_QoSandTSCAssistance.yaml#/components/schemas/TemporalInvalidity'
    headers:
      description: Contains the headers provisioned by the NEF.
      type: array
      items:
        type: string
      minItems: 1

DnaiEasMapping:
  description: Contains DNAI to EAS mapping information.
  type: object
  properties:
    dnaiEasInfos:
      type: array
      items:
        $ref: '#/components/schemas/DnaiEasInfo'
      minItems: 1
      description: Each element contains EAS address information for a DNAI.
  required:
    - dnaiEasInfos

DnaiEasInfo:
  description: Contains EAS information for a DNAI.
  type: object
  properties:
    dnn:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
    snssai:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    dnais:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnai'
      minItems: 1
      description: DNAI(s) for the EAS Deployment Information.
    easIpAddrs:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/IpAddr'
      minItems: 1
      description: >
        Each element contains EAS IP address(es), IP address ranges, and/or IPv6 prefixes.
    fqdns:
      type: array
      items:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/FqdnPatternMatchingRule'
      minItems: 1
      description: Each element contains FQDN for the EAS(s) of a DNAI.
  required:
    - dnais
  anyOf:
    - required: [dnn]
    - required: [snssai]

```

```

oneOf:
  - required: [easIpAdrs]
  - required: [fqdns]

EcsAddrData:
  description: Represents ECS Address Data.
  type: object
  properties:
    self:
      $ref: 'TS29122_CommonData.yaml#/components/schemas/Link'
    ecsServerAddr:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/EcsServerAddr'
    spatialValidityCond:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SpatialValidityCond'
    ecsAuthMethods:
      type: array
      items:
        $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/EcsAuthMethod'
      minItems: 1
    dnn:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
    snssai:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    suppFeat:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  required:
    - ecsServerAddr

EcsAddrDataPatch:
  description: Represents Updatable ECS Address Data.
  type: object
  properties:
    ecsServerAddr:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/EcsServerAddr'
    spatialValidityCond:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SpatialValidityCond'
    ecsAuthMethods:
      type: array
      items:
        $ref: 'TS29503_Nudm_PP.yaml#/components/schemas/EcsAuthMethod'
      minItems: 1

QoSRequirements:
  description: Represents QoS requirements.
  type: object
  properties:
    marBwUl:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
    marBwDl:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
    mirBwUl:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
    mirBwDl:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
    maxBurstSize:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/MaxDataBurstVol'
    extMaxBurstSize:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/ExtMaxDataBurstVol'
    pdb:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/PacketDelBudget'
    per:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/PacketErrRate'
    priorLevel:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/5QiPriorityLevel'

QoSRequirementsRm:
  description: Represents QoS requirements.
  nullable: true
  type: object
  properties:
    marBwUl:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRateRm'
    marBwDl:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRateRm'
    mirBwUl:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRateRm'
    mirBwDl:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/BitRateRm'

```

```

maxBurstSize:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/MaxDataBurstVolRm'
extMaxBurstSize:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/ExtMaxDataBurstVolRm'
pdb:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/PacketDelBudgetRm'
per:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/PacketErrRateRm'
priorLevel:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/5QiPriorityLevelRm'

```

```

Non3gppDevInfo:
  description: Represents the Non-3GPP Device Identifier Information.
  type: object
  properties:
    supi:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    non3gppDevInfos:
      type: array
      items:
        $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/Non3gppDeviceInformation'
      minItems: 1
    suppFeat:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  required:
    - supi
    - non3gppDevInfos

```

```

Non3gppDevInfoPatch:
  description: Represents the updated Non-3GPP Device Identifier Information.
  nullable: true
  type: object
  properties:
    non3gppDevInfos:
      type: array
      items:
        $ref: 'TS29522_ServiceParameter.yaml#/components/schemas/Non3gppDeviceInformation'
      minItems: 1

```

```

SliceReplReqInfoRm:
  description: >
    Represents the same as the SliceReplReqInfo data type defined in clause 5.6.2.12 of
    3GPP TS 29.534 [22] but with the OpenAPI "nullable" property set to "true".
  type: object
  properties:
    snssai:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    altSnssai:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
  nullable: true
  required:
    - snssai
    - altSnssai

```

```

#
# ENUMERATIONS
#

```

```

DataInd:
  anyOf:
    - type: string
      enum:
        - PFD
        - IPTV
        - BDT
        - SVC_PARAM
        - AM
        - DNAI_EAS
        - REQ_QOS
        - ECS
        - N3GDEV
    - type: string
      description: >
        This string provides forward-compatibility with future
        extensions to the enumeration but is not used to encode
        content defined in the present version of this API.
  description: |
    Indicates the type of data.

```

Possible values are

- PFD: PFD data.
- IPTV: IPTV configuration data.
- BDT: BDT data.
- SVC_PARAM: Service parameter data.
- AM: AM influence data.
- DNAI_EAS: DNAI EAS mapping data.
- REQ_QOS: AF Requested QoS data for a UE or group of UE(s) not identified by UE address(es).
- ECS: ECS Address Roaming data.
- N3GDEV: Non-3gpp Device Identifier Information.

CorrelationType:

description: Indicates that a common DNAI or common EAS should be selected.

anyOf:

- type: string
- enum:
 - COMMON_DNAI
 - COMMON_EAS
- type: string

description: >

This string provides forward-compatibility with future extensions to the enumeration and is not used to encode content defined in the present version of this API.

A.4 Nudr_DataRepository API for Exposure Data

For the purpose of referencing entities defined in the Open API file defined in this Annex, it shall be assumed that this Open API file is contained in a physical file termed "TS29519_Exposure_Data.yaml".

openapi: 3.0.0

info:

```
version: '-'
title: Unified Data Repository Service API file for structured data for exposure
description: |
  The API version is defined in 3GPP TS 29.504
  © 2026, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).
  All rights reserved.
```

externalDocs:

```
description: >
  3GPP TS 29.519 V19.7.0; 5G System; Usage of the Unified Data Repository Service for Policy Data,
  Application Data and Structured Data for Exposure.
url: 'https://www.3gpp.org/ftp/Specs/archive/29_series/29.519/'
```

paths:

```
/exposure-data/{ueId}/access-and-mobility-data:
  put:
    summary: Creates and updates the access and mobility exposure data for a UE
    operationId: CreateOrReplaceAccessAndMobilityData
    tags:
      - AccessAndMobilityData
    security:
      - {}
      - OAuth2ClientCredentials:
          - nudr-dr
      - OAuth2ClientCredentials:
          - nudr-dr
      - nudr-dr:exposure-data
      - OAuth2ClientCredentials:
          - nudr-dr
      - nudr-dr:exposure-data
      - nudr-dr:exposure-data:access-and-mobility-data:create
    parameters:
      - name: ueId
        in: path
        description: UE id
        required: true
        schema:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    requestBody:
      required: true
      content:
        application/json:
          schema:
```

```

    $ref: '#/components/schemas/AccessAndMobilityData'
responses:
  '201':
    description: >
      Successful case. The resource has been successfully created and a response
      body containing a representation of the access and mobility data shall be returned.
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/AccessAndMobilityData'
    headers:
      Location:
        description: 'Contains the URI of the newly created resource'
        required: true
        schema:
          type: string
  '200':
    description: >
      Successful case. The resource has been successfully updated and a response
      body containing a representation of the access and mobility data shall be returned.
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/AccessAndMobilityData'
  '204':
    description: >
      Successful case. The resource has been successfully updated and no additional content
      is to be sent in the response message.
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '411':
    $ref: 'TS29571_CommonData.yaml#/components/responses/411'
  '413':
    $ref: 'TS29571_CommonData.yaml#/components/responses/413'
  '415':
    $ref: 'TS29571_CommonData.yaml#/components/responses/415'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
get:
  summary: Retrieves the access and mobility exposure data for a UE
  operationId: QueryAccessAndMobilityData
  tags:
    - AccessAndMobilityData
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:exposure-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:exposure-data
      - nudr-dr:exposure-data:access-and-mobility-data:read
  parameters:
    - name: ueId
      in: path
      description: UE id
      required: true
      schema:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - name: supp-feat
      in: query
      description: Supported Features

```

```

    required: false
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  responses:
    '200':
      description: The response body contains the access and mobility data
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/AccessAndMobilityData'
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '406':
      $ref: 'TS29571_CommonData.yaml#/components/responses/406'
    '414':
      $ref: 'TS29571_CommonData.yaml#/components/responses/414'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  delete:
    summary: Deletes the access and mobility exposure data for a UE
    operationId: DeleteAccessAndMobilityData
    tags:
      - AccessAndMobilityData
    security:
      - {}
      - oAuth2ClientCredentials:
          - nudr-dr
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:exposure-data
      - oAuth2ClientCredentials:
          - nudr-dr
          - nudr-dr:exposure-data
          - nudr-dr:exposure-data:access-and-mobility-data:modify
    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
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  patch:
    summary: Updates the access and mobility exposure data for a UE

```

```

operationId: UpdateAccessAndMobilityData
tags:
  - AccessAndMobilityData
security:
  - {}
  - oAuth2ClientCredentials:
    - nudr-dr
  - oAuth2ClientCredentials:
    - nudr-dr
    - nudr-dr:exposure-data
  - oAuth2ClientCredentials:
    - nudr-dr
    - nudr-dr:exposure-data
    - nudr-dr:exposure-data:access-and-mobility-data:modify
parameters:
  - name: ueId
    in: path
    description: UE id
    required: true
    schema:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
requestBody:
  required: true
  content:
    application/merge-patch+json:
      schema:
        $ref: '#/components/schemas/AccessAndMobilityData'
responses:
  '204':
    description: >
      Successful case. The resource has been successfully updated and no additional
      content is to be sent in the response message.
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '411':
    $ref: 'TS29571_CommonData.yaml#/components/responses/411'
  '413':
    $ref: 'TS29571_CommonData.yaml#/components/responses/413'
  '415':
    $ref: 'TS29571_CommonData.yaml#/components/responses/415'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
/exposure-data/{ueId}/session-management-data/{pduSessionId}:
  put:
    summary: Creates and updates the session management data for a UE and for an individual PDU
    session
    operationId: CreateOrReplaceSessionManagementData
    tags:
      - PduSessionManagementData
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:exposure-data
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:exposure-data
        - nudr-dr:exposure-data:session-management-data:create
    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:
  required: true
  content:
    application/json:
      schema:
        $ref: '#/components/schemas/PduSessionManagementData'
responses:
  '201':
    description: >
      Successful case. The resource has been successfully created and a response
      body containing a representation of the session management data shall be returned.
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/PduSessionManagementData'
    headers:
      Location:
        description: 'Contains the URI of the newly created resource'
        required: true
        schema:
          type: string
  '200':
    description: >
      Successful case. The resource has been successfully updated and a response body
      containing a representation of the session management data shall be returned.
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/PduSessionManagementData'
  '204':
    description: >
      Successful case. The resource has been successfully updated and no additional
      content is to be sent in the response message.
  '400':
    $ref: 'TS29571_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29571_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29571_CommonData.yaml#/components/responses/404'
  '411':
    $ref: 'TS29571_CommonData.yaml#/components/responses/411'
  '413':
    $ref: 'TS29571_CommonData.yaml#/components/responses/413'
  '415':
    $ref: 'TS29571_CommonData.yaml#/components/responses/415'
  '429':
    $ref: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29571_CommonData.yaml#/components/responses/500'
  '502':
    $ref: 'TS29571_CommonData.yaml#/components/responses/502'
  '503':
    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
get:
  summary: Retrieves the session management data for a UE and for an individual PDU session
  operationId: QuerySessionManagementData
  tags:
    - PduSessionManagementData
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:exposure-data

```

```

- oAuth2ClientCredentials:
  - nudr-dr
  - nudr-dr:exposure-data
  - nudr-dr:exposure-data:session-management-data:read
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: ipv4-addr
  in: query
  description: IPv4 Address of the UE
  required: false
  schema:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
- name: ipv6-prefix
  in: query
  description: IPv6 Address Prefix of the UE
  required: false
  schema:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'
- name: dnn
  in: query
  description: DNN of the UE
  required: false
  schema:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
- name: fields
  in: query
  description: attributes to be retrieved
  required: false
  style: form
  explode: false
  schema:
    type: array
    items:
      type: string
      minItems: 1
- name: supp-feat
  in: query
  description: Supported Features
  required: false
  schema:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
responses:
'200':
  description: The response body contains the session management data
  content:
    application/json:
      schema:
        $ref: '#/components/schemas/PduSessionManagementData'
'400':
  $ref: 'TS29571_CommonData.yaml#/components/responses/400'
'401':
  $ref: 'TS29571_CommonData.yaml#/components/responses/401'
'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  $ref: 'TS29571_CommonData.yaml#/components/responses/404'
'406':
  $ref: 'TS29571_CommonData.yaml#/components/responses/406'
'414':
  $ref: 'TS29571_CommonData.yaml#/components/responses/414'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':

```

```

    $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'
delete:
  summary: Deletes the session management data for a UE and for an individual PDU session
  operationId: DeleteSessionManagementData
  tags:
    - PduSessionManagementData
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:exposure-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:exposure-data
      - nudr-dr:exposure-data:session-management-data:modify
  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
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

/exposure-data/subs-to-notify:
  post:
    summary: Create a subscription to receive notification of exposure data changes
    operationId: CreateIndividualExposureDataSubscription
    tags:
      - ExposureDataSubscriptions (Collection)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:exposure-data
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:exposure-data
        - nudr-dr:exposure-data:subs-to-notify:create
    requestBody:
      required: true
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/ExposureDataSubscription'
  responses:

```

```

'201':
  description: Created
  content:
    application/json:
      schema:
        $ref: '#/components/schemas/ExposureDataSubscription'
  headers:
    Location:
      description: 'Contains the URI of the newly created resource'
      required: true
      schema:
        type: string
'400':
  $ref: 'TS29571_CommonData.yaml#/components/responses/400'
'401':
  $ref: 'TS29571_CommonData.yaml#/components/responses/401'
'403':
  $ref: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  $ref: 'TS29571_CommonData.yaml#/components/responses/404'
'411':
  $ref: 'TS29571_CommonData.yaml#/components/responses/411'
'413':
  $ref: 'TS29571_CommonData.yaml#/components/responses/413'
'415':
  $ref: 'TS29571_CommonData.yaml#/components/responses/415'
'429':
  $ref: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29571_CommonData.yaml#/components/responses/500'
'502':
  $ref: 'TS29571_CommonData.yaml#/components/responses/502'
'503':
  $ref: 'TS29571_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29571_CommonData.yaml#/components/responses/default'
callbacks:
  exposureDataChangeNotification:
    '{$request.body#/notificationUri}':
      post:
        requestBody:
          required: true
          content:
            application/json:
              schema:
                type: array
                items:
                  $ref: '#/components/schemas/ExposureDataChangeNotification'
                minItems: 1
  responses:
    '204':
      description: No Content, Notification was successful
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '411':
      $ref: 'TS29571_CommonData.yaml#/components/responses/411'
    '413':
      $ref: 'TS29571_CommonData.yaml#/components/responses/413'
    '415':
      $ref: 'TS29571_CommonData.yaml#/components/responses/415'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'
/exposure-data/subs-to-notify/{subId}:

```

```

put:
  summary: updates a subscription to receive notifications of exposure data changes
  operationId: ReplaceIndividualExposureDataSubscription
  tags:
    - IndividualExposureDataSubscription (Document)
  security:
    - {}
    - oAuth2ClientCredentials:
      - nudr-dr
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:exposure-data
    - oAuth2ClientCredentials:
      - nudr-dr
      - nudr-dr:exposure-data
      - nudr-dr:exposure-data:subs-to-notify:modify
  parameters:
    - name: subId
      in: path
      description: Subscription id
      required: true
      schema:
        type: string
  requestBody:
    required: true
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/ExposureDataSubscription'
  responses:
    '200':
      description: >
        Resource was successfully modified and a body with the modified subscription
        to notifications about exposure data is returned..
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/ExposureDataSubscription'
    '204':
      description: The individual subscription resource was successfully modified.
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '411':
      $ref: 'TS29571_CommonData.yaml#/components/responses/411'
    '413':
      $ref: 'TS29571_CommonData.yaml#/components/responses/413'
    '415':
      $ref: 'TS29571_CommonData.yaml#/components/responses/415'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29571_CommonData.yaml#/components/responses/default'
  delete:
    summary: Deletes the individual Exposure Data subscription
    operationId: DeleteIndividualExposureDataSubscription
    tags:
      - IndividualExposureDataSubscription (Document)
    security:
      - {}
      - oAuth2ClientCredentials:
        - nudr-dr
      - oAuth2ClientCredentials:
        - nudr-dr
        - nudr-dr:exposure-data
      - oAuth2ClientCredentials:
        - nudr-dr

```

```

    - nudr-dr:exposure-data
    - nudr-dr:exposure-data:subs-to-notify:modify
  parameters:
    - name: subId
      in: path
      description: Subscription id
      required: true
      schema:
        type: string
  responses:
    '204':
      description: Resource was successfully deleted.
    '400':
      $ref: 'TS29571_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29571_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29571_CommonData.yaml#/components/responses/404'
    '429':
      $ref: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29571_CommonData.yaml#/components/responses/500'
    '502':
      $ref: 'TS29571_CommonData.yaml#/components/responses/502'
    '503':
      $ref: 'TS29571_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29571_CommonData.yaml#/components/responses/default'

components:
  schemas:
    AccessAndMobilityData:
      description: Represents Access and Mobility data for a UE.
      type: object
      properties:
        location:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
        locationTs:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
        timeZone:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/TimeZone'
        timeZoneTs:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
        accessType:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
        accessTypeTs:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
        regStates:
          type: array
          items:
            $ref: 'TS29518_Namf_EventExposure.yaml#/components/schemas/RmInfo'
        regStatesTs:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
        connStates:
          type: array
          items:
            $ref: 'TS29518_Namf_EventExposure.yaml#/components/schemas/CmInfo'
        connStatesTs:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
        reachabilityStatus:
          $ref: 'TS29518_Namf_EventExposure.yaml#/components/schemas/UeReachability'
        reachabilityStatusTs:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
        smsOverNasStatus:
          $ref: '#/components/schemas/SmsSupport'
        smsOverNasStatusTs:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
        roamingStatus:
          type: boolean
          description: >
            True The serving PLMN of the UE is different from the HPLMN of the UE; False
            The serving PLMN of the UE is the HPLMN of the UE.
        roamingStatusTs:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
        currentPlmn:
          $ref: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

```

```

currentPlmnTs:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
ratType:
  type: array
  items:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/RatType'
ratTypesTs:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
suppFeat:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
resetIds:
  type: array
  items:
    type: string
  minItems: 1

PduSessionManagementData:
description: Represents Session management data for a UE and a PDU session.
type: object
properties:
  pduSessionStatus:
    $ref: '#/components/schemas/PduSessionStatus'
  pduSessionStatusTs:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  dnai:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnai'
  dnaiTs:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  n6TrafficRoutingInfo:
    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/RouteToLocation'
  n6TrafficRoutingInfoTs:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  ipv4Addr:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
  ipv6Prefix:
    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'
    minItems: 1
    description: UE IPv6 prefix.
  ipv6Addrs:
    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'
    minItems: 1
  pduSessType:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/PduSessionType'
  ipAddrTs:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  dnn:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
  pduSessionId:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
  suppFeat:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  resetIds:
    type: array
    items:
      type: string
    minItems: 1

ExposureDataSubscription:
description: Represents a Subscription to Notifications about Exposure Data.
type: object
properties:
  notificationUri:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  notifId:
    type: string
  monitoredResourceUris:
    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    minItems: 1
  expiry:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

```

```

supportedFeatures:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
resetIds:
  type: array
  items:
    type: string
  minItems: 1
immRep:
  type: boolean
  description: >
    If provided and set to true, it indicates that existing entries that
    match this subscription shall be immediately reported in the response.
immReports:
  type: array
  items:
    $ref: '#/components/schemas/ExposureDataChangeNotification'
  minItems: 1
  description: Immediate report with existing UDR entries.
required:
  - notificationUri
  - monitoredResourceUris

ExposureDataChangeNotification:
description: Represents changed exposure data for one UE for which Notification was requested.
type: object
properties:
  ueId:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
  accessAndMobilityData:
    $ref: '#/components/schemas/AccessAndMobilityData'
  pduSessionManagementData:
    type: array
    items:
      $ref: '#/components/schemas/PduSessionManagementData'
    minItems: 1
  delResources:
    type: array
    items:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    minItems: 1
  notifId:
    type: string

PduSessionStatus:
  anyOf:
  - type: string
  enum:
    - "ACTIVE"
    - "RELEASED"
  - type: string
  description: >
    This string provides forward-compatibility with future
    extensions to the enumeration but is not used to encode
    content defined in the present version of this API.
  description: |
    Represents the state of the PDU session.
    Possible values are
    - "ACTIVE": the PDU session is active.
    - "RELEASED": the PDU session released.

SmsSupport:
  anyOf:
  - type: string
  enum:
    - 3GPP
    - NON_3GPP
    - BOTH
    - NONE
  - type: string
  description: >
    This string provides forward-compatibility with future
    extensions to the enumeration but is not used to encode
    content defined in the present version of this API.
  description: |
    Indicates the supported SMS delivery for a UE.
    Possible values are
    - 3GPP: Indicates the support of SMS delivery over NAS via 3GPP access.
    - NON_3GPP: Indicates the support of SMS delivery via non-3GPP access.

```

- BOTH: Indicates the support of SMS delivery over NAS (i.e., via 3GPP access) or via non-3GPP access.
- NONE: Indicates to not support SMS delivery.

Annex B (informative): Change history

Change history							
Date	Meeting #	TSG Doc.	CR	Rev	Cat	Subject/Comment	New
2018-01	CT3#94					TS skeleton of Usage of the Unified Data Repository service for Policy Data and Structured Data for exposure	0.0.0
2018-01	CT3#94					Inclusion of C3-180352, C3-180326, C3-180327	0.1.0
2018-03	CT3#95					Inclusion of C3-181145, C3-181288, C3-181289, C3-181313	0.2.0
2018-04	CT3#96					Inclusion of C3-182402, C3-182476, C3-182456, C3-182404, C3-182457, C3-182458	0.3.0
2018-05	CT3#97					Inclusion of C3-183872, C3-183705, C3-183704, C3-183873, C3-183732, C3-183706 C3-183874, C3-183709, C3-183876, C3-183263, C3-183877, C3-183712, C3-183715 and editorial changes by Rapporteur	0.4.0
2018-06	CT#80	CP-181033				TS sent to plenary for approval	1.0.0
2018-06	CT#80	CP-181033				TS approved by plenary	15.0.0
2018-09	CT#81	CP-182015	0006		F	Scope and Overview	15.1.0
2018-09	CT#81	CP-182015	0007		F	Introduction subclauses 5.1, 6.1 and 7.1	15.1.0
2018-09	CT#81	CP-182015	0008		F	Resource overview subclauses 5.2.1, 6.2.1 and 7.2.1	15.1.0
2018-09	CT#81	CP-182015	0009	3	F	Nudr reused data types	15.1.0
2018-09	CT#81	CP-182015	0010	6	B	AM policy data resource definition	15.1.0
2018-09	CT#81	CP-182015	0011	8	B	SM policy data resource definition	15.1.0
2018-09	CT#81	CP-182015	0012	3	B	Sponsored data connectivity profiles	15.1.0
2018-09	CT#81	CP-182015	0014	5	B	Background Data Transfer data	15.1.0
2018-09	CT#81	CP-182015	0015	4	B	Policy data change subscription	15.1.0
2018-09	CT#81	CP-182015	0016	5	B	Data change notification	15.1.0
2018-09	CT#81	CP-182015	0017	2	F	Error handling subcaluses	15.1.0
2018-09	CT#81	CP-182015	0018	1	F	Feature negotiation	15.1.0
2018-09	CT#81	CP-182015	0019	1	F	Resource PFD Datas and Data types definition	15.1.0
2018-09	CT#81	CP-182015	0020	1	F	OpenAPI schema for Policy Data	15.1.0
2018-09	CT#81	CP-182015	0021	3	F	Stage 2 Alignments for Structured Data for Exposure	15.1.0
2018-09	CT#81	CP-182015	0022	4	B	Subscription for Structured Data for Exposure	15.1.0
2018-09	CT#81	CP-182015	0023	3	F	Get query parameters for structured data for exposure	15.1.0
2018-09	CT#81	CP-182015	0024	5	F	HTTP error responses for structured data for exposure	15.1.0
2018-09	CT#81	CP-182015	0025	1	F	Description of Structured data types	15.1.0
2018-09	CT#81	CP-182032	0026	3	B	Resource Structure for policy data	15.1.0
2018-09	CT#81	CP-182015	0027		F	n6 Traffic Routing Information encoding	15.1.0
2018-09	CT#81	CP-182015	0028	1	F	Removal of ExternalDocs section in OpenApi file for Exposure Data	15.1.0
2018-09	CT#81	CP-182015	0029	1	F	VarUeld used in TS 29.519	15.1.0
2018-09	CT#81	CP-182015	0034	1	F	OpenAPI schema for PolicyData	15.1.0
2018-09	CT#81	CP-182015	0035	3	F	External information stored in UDR for Application Data	15.1.0
2018-09	CT#81	CP-182015	0036		F	Clean up the Editor Note in applicatoin data	15.1.0
2018-09	CT#81	CP-182015	0037	4	F	Correction the data type of application data	15.1.0
2018-09	CT#81	CP-182015	0038	3	B	Introduce the operator policy data	15.1.0
2018-09	CT#81	CP-182015	0039	2	B	OpenAPI of Application data	15.1.0
2018-09	CT#81	CP-182015	0040	1	F	Update of resource structure of application data 29.519	15.1.0
2018-09	CT#81	CP-182015	0041	1	F	Ethernet packet filter for traffic influence data of applicatoin data 29.519	15.1.0
2018-12	CP#82	CP-183205	0042	1	F	DNAl reused data	15.2.0
2018-12	CP#82	CP-183205	0043	1	F	ExternalDocs field	15.2.0
2018-12	CP#82	CP-183205	0044		F	PduSessionStatus	15.2.0
2018-12	CP#82	CP-183205	0045	1	F	Query parameters correction on application data	15.2.0
2018-12	CP#82	CP-183205	0046	1	F	PUT operation for Individual Influence Data Subscription	15.2.0
2018-12	CP#82	CP-183205	0047	3	F	Background Data Transfer Data	15.2.0
2018-12	CP#82	CP-183205	0048	1	F	Cardinality for array and map	15.2.0
2018-12	CP#82	CP-183205	0049	1	F	Resource URI for ExposureData	15.2.0
2018-12	CP#82	CP-183205	0050		F	Ueld definition	15.2.0
2018-12	CP#82	CP-183205	0052	1	F	Error status codes for HTTP responses	15.2.0
2018-12	CP#82	CP-183205	0053		F	Service name	15.2.0
2018-12	CP#82	CP-183205	0054	1	F	Reference to the yaml file of Npcf_BDTPolicyControl API	15.2.0
2018-12	CP#82	CP-183205	0055		F	Missed GET method on UEPolicySetResource	15.2.0

2018-12	CP#82	CP-183205	0055	2	F	Missed GET method on UEPolicySetResource	15.2.0
2018-12	CP#82	CP-183205	0056	4	F	Corrections on AM Policy and UE Policy data	15.2.0
2018-12	CP#82	CP-183205	0057	6	F	Corrections on SM Policy Data	15.2.0
2018-12	CP#82	CP-183205	0058	1	F	Correct TrafficRoute data type	15.2.0
2018-12	CP#82	CP-183205	0060	4	F	Correct subscription for application data	15.2.0
2018-12	CP#82	CP-183205	0062	3	F	Correction to the AF Influence on traffic steering control	15.2.0
2018-12	CP#82	CP-183205	0063	3	F	PLMN ID as key for UE data sets	15.2.0
2018-12	CP#82	CP-183205	0066	1	F	Supported features	15.2.0
2018-12	CP#82	CP-183205	0067	1	F	Add AF application ID for traffic influence	15.2.0
2018-12	CP#82	CP-183205	0068		F	Correct referenced file in openAPI for application data	15.2.0
2018-12	CP#82	CP-183205	0069		F	Correct referenced file in openAPI for exposure data	15.2.0
2018-12	CP#82	CP-183205	0070	1	F	Use correct naming convention	15.2.0
2018-12	CP#82	CP-183205	0071	1	F	Correct subscription for Application Data	15.2.0
2018-12	CP#82	CP-183205	0072	1	F	Status code update for Application Data	15.2.0
2018-12	CP#82	CP-183205	0073	1	F	Correction on UsageThreshold	15.2.0
2018-12	CP#82	CP-183205	0075	2	F	Status code update for Exposure Data	15.2.0
2018-12	CP#82	CP-183205	0076	2	F	Status code update for Policy Data	15.2.0
2018-12	CP#82	CP-183205	0077	2	F	Incorrect response code of PUT method for individual PFD Data creation	15.2.0
2018-12	CP#82	CP-183205	0078	1	F	corrections on individual Influence Data	15.2.0
2018-12	CP#82	CP-183205	0079	2	F	Adding timestamp for allowed usage storage	15.2.0
2018-12	CP#82	CP-183205	0080		F	Missing 201 response body for /policy-data/subs-to-notify	15.2.0
2018-12	CP#82	CP-183205	0081	1	F	Location header	15.2.0
2018-12	CP#82	CP-183205	0083	4	F	Corrections on Usage Monitoring information	15.2.0
2018-12	CP#82	CP-183205	0087		F	Correction on PduSessionManagementData	15.2.0
2019-03	CP#83	CP-190115	0090	1	F	Correction on ChargingInformation data type reference in the OpenAPI file	15.3.0
2019-03	CP#83	CP-190115	0091	1	F	Formatting of structured data types in query parameters	15.3.0
2019-03	CP#83	CP-190115	0092	1	F	Correcting resource definitions	15.3.0
2019-03	CP#83	CP-190115	0093		F	References to data types	15.3.0
2019-03	CP#83	CP-190115	0095	2	F	Correction on Policy Data change notification	15.3.0
2019-03	CP#83	CP-190115	0096	1	F	Correction on BDT data	15.3.0
2019-03	CP#83	CP-190115	0098	1	F	Support of allowed Route Selection data	15.3.0
2019-03	CP#83	CP-190115	0099	1	F	Support of PEI, OSid and ANDSP support indication in UE Policy Set	15.3.0
2019-03	CP#83	CP-190115	0100		F	Support of PRA information	15.3.0
2019-06	CP#84	CP-191077	0101		F	Correction of OpenAPI file and main body misalignments for Notification messages	15.4.0
2019-06	CP#84	CP-191077	0102	2	F	Corrections in PolicyDataSubscription and PolicyDataChangeNotification types	15.4.0
2019-06	CP#84	CP-191077	0106	1	F	Precedence of OpenAPI file	15.4.0
2019-06	CP#84	CP-191077	0113		F	Correcting the name of URI to receive notifications	15.4.0
2019-06	CP#84	CP-191077	0103	4	F	"201 Created" response without body and other HTTP response errors	15.4.0
2019-06	CP#84	CP-191077	0116	1	F	Expiry time in subscription data types	15.4.0
2019-06	CP#84	CP-191184	0117	3	F	Notification of resource deletion	15.4.0
2019-06	CP#84	CP-191208	0118	3	F	Copyright Note in YAML file	15.4.0
2019-06	CP#84	CP-191077	0119	1	F	Missed Traffic Influence information	15.4.0
2019-06	CP#84	CP-191183	0120	4	F	Notification of resource deletion for Application and Exposure data sets	15.4.0
2019-06	CP#84	CP-191089	0105	2	B	PFD extension for domain name protocol	16.0.0
2019-06	CP#84	CP-191071	0109	3	B	AF acknowledgement to be expected	16.0.0
2019-06	CP#84	CP-191071	0110	2	B	UE IP address preservation indication	16.0.0
2019-06	CP#84	CP-191100	0114	1	B	NEF stored exposure data	16.0.0
2019-09	CT#85	CP-192169	0125	2	F	UDR Application Errors	16.1.0
2019-09	CT#85	CP-192145	0127	2	A	Missed any UE traffic influence data	16.1.0
2019-09	CT#85	CP-192169	0128	1	B	Multiple temporal validity conditions for AF traffic influence	16.1.0
2019-09	CT#85	CP-192244	0130	2	A	Remove PFD change notification	16.1.0
2019-09	CT#85	CP-192156	0131	1	B	Support a set of MAC addresses in traffic filter	16.1.0
2019-09	CT#85	CP-192196	0138	4	B	Application Data update to support xBDT	16.1.0
2019-09	CT#85	CP-192152	0140	3	B	Subscription and Notification of IPTV configuration data change	16.1.0
2019-09	CT#85	CP-192152	0141	2	B	Resource structure of Nudr API for Application Data	16.1.0
2019-09	CT#85	CP-192152	0142	2	B	Storage of IPTV configuration data	16.1.0
2019-09	CT#85	CP-192156	0143	2	F	Subscription/unsubscription for PFDs update notifications and related callback correction	16.1.0
2019-10	CT#85	-	-	-	-	Addition of missing yaml files	16.1.1

2019-12	CT#86	CP-193223	0144	2	B	Retrieval of BDT policy data for a set of BDT reference identifiers	16.2.0
2019-12	CT#86	CP-193181	0145	1	F	Open issue for AddrPreservation feature	16.2.0
2019-12	CT#86	CP-193223	0149	3	B	Support of BDT reference Id within Session Management data	16.2.0
2019-12	CT#86	CP-193191	0151	3	B	Partial update of IPTVConfiguration API	16.2.0
2019-12	CT#86	CP-193210	0152	2	B	Patch Report to Nudr_DataRepository API for Policy data	16.2.0
2019-12	CT#86	CP-193223	0153		F	Reference correction to BdtReferenceId	16.2.0
2019-12	CT#86	CP-193212	0155	1	F	Update of TS version_Rel-16	16.2.0
2019-12	CT#86	CP-193197	0156	2	B	MCS Priority Indication	16.2.0
2019-12	CT#86	CP-193187	0158	-	A	Definition of BdtData in OpenAPI	16.2.0
2019-12	CT#86	CP-193197	0159	-	F	Usage of BdtReferenceId data type	16.2.0
2019-12	CT#86	CP-193223	0161	1	B	include S-NSSAI and DNN in Application Data for xBDT	16.2.0
2019-12	CT#86	CP-193223	0162		F	remove 204 response on PUT request for AppliedBDTPolicyData	16.2.0
2019-12	CT#86	CP-193210	0164		B	Feature Negotiation for OperatorSpecificData resource	16.2.0
2019-12	CT#86	CP-193210	0165		B	Feature Negotiation for Influence Data resource	16.2.0
2019-12	CT#86	CP-193126	0166		B	URI correction on resource Individual Applied BDT Policy Data	16.2.0
2020-03	CT#87e	CP-200141	0167	2	B	Application data change notification	16.3.0
2020-03	CT#87e	CP-200203	0168	1	B	Complete the IPTV configuration	16.3.0
2020-03	CT#87e	CP-200263	0169	2	B	Nudr_DataRepository API update for Service Parameter provisioning	16.3.0
2020-03	CT#87e	CP-200218	0170	1	B	Indication of traffic correlation	16.3.0
2020-03	CT#87e	CP-200136	0171	2	B	Include influenceId into TrafficInfluData for Notification	16.3.0
2020-03	CT#87e	CP-200219	0172	2	B	Correct the mapping of ASPid for xBDT	16.3.0
2020-03	CT#87e	CP-200207	0173	1	B	Subscription and notification to data changes related to a subset of resource data, Policy Data set	16.3.0
2020-03	CT#87e	CP-200203	0174		F	Correct content type in PATCHing IPTV application data	16.3.0
2020-03	CT#87e	CP-200198	0175		B	Additional PDU session status data	16.3.0
2020-03	CT#87e	CP-200219	0176		F	Correct content type in PATCHing BDT application data	16.3.0
2020-03	CT#87e	CP-200219	0177		F	Removal of the BDT policy from the "bdtReflDs" object	16.3.0
2020-06	CT#88e	CP-201220	0179	2	A	internalGroupId in Influence Data	16.4.0
2020-06	CT#88e	CP-201238	0180	2	F	Definition of ServiceParameterData in openAPI	16.4.0
2020-06	CT#88e	CP-201246	0181	3	F	Data Types for Application Data	16.4.0
2020-06	CT#88e	CP-201228	0183	1	F	Correction to IPTV Configuration	16.4.0
2020-06	CT#88e	CP-201253	0184	1	F	Correction to BDT Policy	16.4.0
2020-06	CT#88e	CP-201220	0185	1	A	Correction to notifications of Operator Specific Data changes	16.4.0
2020-06	CT#88e	CP-201220	0188		A	Correct content type in PATCHing traffic influence application data	16.4.0
2020-06	CT#88e	CP-201233	0189		F	Correct DataFilter presence condition	16.4.0
2020-06	CT#88e	CP-201233	0190		F	Correct resourceId in required field	16.4.0
2020-06	CT#88e	CP-201233	0191	1	B	Support local traffic routing in session subscription	16.4.0
2020-06	CT#88e	CP-201244	0192	1	F	Storage of YAML files in ETSI Forge	16.4.0
2020-06	CT#88e	CP-201276	0194	1	F	Traffic descriptor for xBDT	16.4.0
2020-06	CT#88e	CP-201256	0195	1	F	URI of the Nudr_DataRepository service for Policy, Application and Exposure data	16.4.0
2020-06	CT#88e	CP-201313	0197		F	Data type of internalGroupId attribute	16.4.0
2020-06	CT#88e	CP-201228	0199		F	Data model correction for IPTV	16.4.0
2020-06	CT#88e	CP-201228	0200		F	Remove feature for IPTV data configuration	16.4.0
2020-06	CT#88e	CP-201244	0201		F	Optionality of ProblemDetails	16.4.0
2020-06	CT#88e	CP-201233	0202	2	F	Corrections on supported features definition	16.4.0
2020-06	CT#88e	CP-201244	0203		F	required field in OpenAPI file	16.4.0
2020-06	CT#88e	CP-201244	0204	1	F	Supported headers, Resource Data type	16.4.0
2020-06	CT#88e	CP-201255	0206		F	Update in TS version in externalDocs field	16.4.0
2020-09	CT#89e	CP-202059	0207		F	Include resourceURI in IptvConfigData for change notification association	16.5.0
2020-09	CT#89e	CP-202069	0208		F	Include resourceURI in ServiceParameterData for change notification association	16.5.0
2020-09	CT#89e	CP-202209	0209		F	Include resourceURI in TrafficInfluData for change notification association	16.5.0
2020-09	CT#89e	CP-202082	0210		F	Include resourceURI in BdtPolicyData for change notification association	16.5.0
2020-09	CT#89e	CP-202073	0211		F	Removal of sibling elements	17.0.0
2020-09	CT#89e	CP-202073	0212		B	Resource Level Authorization for Policy Data, Application Data, and Exposure Data	17.0.0
2020-09	CT#89e	CP-202085	0214		F	Update of TS version in externalDocs field	17.0.0
2020-12	CT#90e	CP-203139	0216		A	TS 29.519 Essential Corrections and alignments	17.1.0

2020-12	CT#90e	CP-203110	0218	1	A	Correction to support NEF binding indication	17.1.0
2020-12	CT#90e	CP-203129	0220	1	A	Correction to the BDT policy re-negotiation	17.1.0
2020-12	CT#90e	CP-203139	0222		A	Storage of YAML files in 3GPP Forge	17.1.0
2020-12	CT#90e	CP-203147	0223	2	B	Data retrieval of multiple policy data sets	17.1.0
2020-12	CT#90e	CP-203154	0225		A	MA Support indication within UE Context policy control subscription information	17.1.0
2020-12	CT#90e	CP-203139	0227	1	A	Callback URI correction	17.1.0
2020-12	CT#90e	CP-203153	0229		F	Update of TS version in externalDocs field	17.1.0
2021-03	CT#91e	CP-210226	0230	1	B	Allow the retrieval of a set of policy data subsets for a UE	17.2.0
2021-03	CT#91e	CP-210218	0231		F	Adding "description" field for map data types	17.2.0
2021-03	CT#91e	CP-210218	0232		F	OpenAPI reference	17.2.0
2021-03	CT#91e	CP-210226	0233		F	Encoding of Snssai as key of a map	17.2.0
2021-03	CT#91e	CP-210219	0235		F	Adding some missing description fields to data type definitions in OpenAPI specification files	17.2.0
2021-03	CT#91e	CP-210198	0238	1	A	UsageMonData: definition of "scopes" attribute	17.2.0
2021-03	CT#91e	CP-210198	0242	1	A	PUT method for Exposure Data modification	17.2.0
2021-03	CT#91e	CP-210206	0244	1	A	extend bdtStatus to include VALID	17.2.0
2021-03	CT#91e	CP-210240	0248		F	Update of TS version in externalDocs field	17.2.0
2021-06	CT#92e	CP-211242	0250	1	F	Correction to Charging Information	17.3.0
2021-06	CT#92e	CP-211211	0252	3	B	Correction to OSD handling	17.3.0
2021-06	CT#92e	CP-211121	0253	4	B	5G ProSe related updates to Nudr	17.3.0
2021-06	CT#92e	CP-211218	0254	2	B	Support of User Plane Latency requirement	17.3.0
2021-06	CT#92e	CP-211218	0257	1	B	UDR application data update to support AF influence on URSP	17.3.0
2021-06	CT#92e	CP-211265	0259		F	Update of TS version in externalDocs field	17.3.0
2021-09	CT#93e	CP-212242	0260	1	B	AM Influence UDR models for DCAMP	17.4.0
2021-09	CT#93e	CP-212206	0261	1	B	PDU session policy data extension for UE-Slice-MBR	17.4.0
2021-09	CT#93e	CP-212206	0263	1	B	Policy Data extension for Slice-MBR	17.4.0
2021-09	CT#93e	CP-212224	0264	1	F	Corrections to IPTV configuration data	17.4.0
2021-09	CT#93e	CP-212229	0266	1	F	Correction of cardinality for xBDT	17.4.0
2021-09	CT#93e	CP-212190	0269		F	Correction of data types of resetPeriod and resetTime in openAPI file	17.4.0
2021-09	CT#93e	CP-212188	0271		B	Removal of some 5G ProSe related Ens	17.4.0
2021-09	CT#93e	CP-2112223	0272		F	Update of externalDocs field	17.4.0
2021-12	CT#94e	CP-213230	0275	1	B	Correction on Network Slice Policy Control Subscription information	17.5.0
2021-12	CT#94e	CP-213230	0276		B	Correction on PolicyDataChangeNotification	17.5.0
2021-12	CT#94e	CP-213222	0277	1	B	Nudr impacts for the notification on the outcome of UE Policies delivery due to service specific parameter provisioning	17.5.0
2021-12	CT#94e	CP-213194	0278		F	AM Influence Data: alignment with naming convention	17.5.0
2021-12	CT#94e	CP-213230	0279	1	F	Presence conditions for attributes in SlicePolicyData	17.5.0
2021-12	CT#94e	CP-213234	0280	1	B	Time Synch data in UDR	17.5.0
2021-12	CT#94e	CP-213239	0281	1	F	Clarification about the data type used for UE policy section information	17.5.0
2021-12	CT#94e	CP-213194	0282	1	B	AM Influence data model updates	17.5.0
2021-12	CT#94e	CP-213213	0283	1	B	Updates to the 5G ProSe service parameters	17.5.0
2021-12	CT#94e	CP-213223	0286	1	B	Clarification of AF preference for the user plane latency	17.5.0
2021-12	CT#94e	CP-213168	0288	2	F	Feature negotiation at PFD data retrieval	17.5.0
2021-12	CT#94e	CP-213170	0290	2	F	Reference PfdDataForApp data type	17.5.0
2021-12	CT#94e	CP-213223	0291	1	B	AF Request for Simultaneous Connectivity over Source and Target PSA at Edge Relocation	17.5.0
2021-12	CT#94e	CP-213239	0293	1	F	Naming Convention	17.5.0
2021-12	CT#94e	CP-213246	0294		F	Update of externalDocs field	17.5.0
2022-03	CT#95e	CP-220198	0296	2	B	Resolution of DCAMP open issues such as applicable filters and immediate reporting	17.6.0
2022-03	CT#95e	CP-220201	0297		B	Support of Operator-Specific Data with no keys	17.6.0
2022-03	CT#95e	CP-220176	0298	2	A	Alignment of "Application Errors" clauses with SBI TS template	17.6.0
2022-03	CT#95e	CP-220185	0299	1	B	Updates to support AF Guidance on URSP for Application Data	17.6.0
2022-03	CT#95e	CP-220327	0300	2	B	resetId assignment to UDR consumers (PCF, NEF)	17.6.0
2022-03	CT#95e	CP-220195	0301	1	D	Clause Correction	17.6.0
2022-03	CT#95e	CP-220186	0302	1	B	API definition for EAS Deployment Information Data	17.6.0
2022-03	CT#95e	CP-220330	0303	2	B	OpenAPI to support EAS Deployment Information Data	17.6.0
2022-03	CT#95e	CP-220183	0304	1	B	Time Synch data updates	17.6.0
2022-03	CT#95e	CP-220176	0306		A	Correction of query parameter content type	17.6.0
2022-03	CT#95e	CP-220215	0308	2	F	Introduction of ServiceParameterDataPatch	17.6.0
2022-03	CT#95e	CP-220185	0309		F	Removal of Editor's Notes for URSP encoding and DeliveryOutcome feature	17.6.0

2022-03	CT#95e	CP-220186	0310	1	B	Support of binding principles for UE Policy Delivery outcome	17.6.0
2022-03	CT#95e	CP-220198	0312	1	F	Updates of AM Influence Data resource	17.6.0
2022-03	CT#95e	CP-220198	0313	1	F	Query for AM Influence data for Any UE	17.6.0
2022-03	CT#95e	CP-220197	0314	1	B	Support of service area coverage notifications	17.6.0
2022-03	CT#95e	CP-220198	0315	1	F	Solving Editor's Note on query parameters	17.6.0
2022-03	CT#95e	CP-220201	0316	1	F	Formatting of description fields	17.6.0
2022-03	CT#95e	CP-220334	0318	2	F	Query for Service Parameter Data for Any UE	17.6.0
2022-03	CT#95e	CP-220196	0320	1	F	Subscription to notifications for Any UE	17.6.0
2022-03	CT#95e	CP-220195	0321	1	F	Updates of Traffic Influence resource	17.6.0
2022-03	CT#95e	CP-220195	0322	2	F	Correction to default values	17.6.0
2022-03	CT#95e	CP-220194	0324		F	Update of info and externalDocs fields	17.6.0
2022-06	CT#96	CP-221157	0326		F	Removal of allowEmptyValue parameter	17.7.0
2022-06	CT#96	CP-221153	0327	2	F	Support of allowedDelay for PFD data	17.7.0
2022-06	CT#96	CP-221126	0328		F	Correction of supported features for Edge Computing functionality	17.7.0
2022-06	CT#96	CP-221159	0329	2	F	Handling of query parameters for AM Influence Data resource	17.7.0
2022-06	CT#96	CP-221157	0330	1	B	Policy Data Subscription enhancements	17.7.0
2022-06	CT#96	CP-221157	0331	1	F	Handling of combinations of attributes of DataFilter data type	17.7.0
2022-06	CT#96	CP-221158	0332	2	F	Handling of query parameters in Applied BDT Data	17.7.0
2022-06	CT#96	CP-221158	0333	2	F	Handling of query parameters in IPTV Configuration resource	17.7.0
2022-06	CT#96	CP-221157	0334	1	F	Handling of query parameters for PFD Data	17.7.0
2022-06	CT#96	CP-221158	0335	2	F	Handling of query parameters in Traffic Influence Data	17.7.0
2022-06	CT#96	CP-221158	0336	2	F	Handling of query parameters in Service Parameter Data resource	17.7.0
2022-06	CT#96	CP-221155	0337	1	B	Nudr_DataRepository Application data Access Scope update for API, resource, operation	17.7.0
2022-06	CT#96	CP-221155	0338	1	B	Nudr_DataRepository Exposure Data Access Scope update for API, resource, operation	17.7.0
2022-06	CT#96	CP-221155	0339	1	B	Nudr_DataRepository Policy data Access Scope update for API, resource, operation	17.7.0
2022-06	CT#96	CP-221126	0340	1	F	Update on EAS Deployment Information Data	17.7.0
2022-06	CT#96	CP-221159	0341	1	F	Clarification about subscription to cha	17.7.0
2022-06	CT#96	CP-221154	0342	1	F	Removing the apiVersion placeholder from the Resource URI variables tables	17.7.0
2022-06	CT#96	CP-221154	0343		F	Nudr_DataRepository Policy data description field update	17.7.0
2022-06	CT#96	CP-221158	0344	1	F	Dependencies between UM resource(s) and SM resource	17.7.0
2022-06	CT#96	CP-221151	0345		F	Update of info and externalDocs fields	17.7.0
2022-09	CT#97e	CP-222123	0346	2	F	Correction in the handling of individual AM Influence Data resource	17.8.0
2022-09	CT#97e	CP-222123	0347	2	F	Correction in the handling of individual Applied BDT Policy Data resource	17.8.0
2022-09	CT#97e	CP-222123	0348	2	F	Correction in the handling of individual Influence Data resource	17.8.0
2022-09	CT#97e	CP-222123	0349	2	F	Correction in the handling of individual IPTV configuration resource	17.8.0
2022-09	CT#97e	CP-222123	0350	2	F	Correction in the handling of individual Service Parameter Data resource	17.8.0
2022-09	CT#97e	CP-222123	0351		F	OpenAPI file for policy data: tabs removal and "description" field adding	17.8.0
2022-09	CT#97e	CP-222123	0352	1	F	Application data API: definitions of 403 and 404 responses	17.8.0
2022-09	CT#97e	CP-222099	0353		F	Support of GET for Individual EAS Deployment Information Data resource	17.8.0
2022-09	CT#97e	CP-222099	0354		F	Incomplete implementation of CR #0308	17.8.0
2022-09	CT#97e	CP-222093	0357		A	Correction to UE Dedicated PRAs	17.8.0
2022-09	CT#97e	CP-222099	0358		F	Corrections to Group Id	17.8.0
2022-09	CT#97e	CP-222095	0359	1	B	Supporting MBS policy control	17.8.0
2022-09	CT#97e	CP-222121	0360		F	Update of info and externalDocs fields	17.8.0
2022-12	CT#98e	CP-223196	0366	1	F	Correction related to applicability of traffic correlation indicator	17.9.0
2022-12	CT#98e	CP-223166	0367		F	Correction to MbsSessPolCtrlData data type	17.9.0
2022-12	CT#98e	CP-223191	0361		F	Adding the mandatory error code 502 Bad Gateway	18.0.0
2022-12	CT#98e	CP-223192	0362	1	B	Immediate reporting for policy data	18.0.0
2022-12	CT#98e	CP-223192	0363	1	F	Nudr_DataRepository API for policy data: enumeration definitions	18.0.0
2022-12	CT#98e	CP-223199	0365	1	F	Corrections to the resource EAS Deployment Information Data	18.0.0

2022-12	CT#98e	CP-223192	0369		F	Corrections on Resource URI structures	18.0.0
2022-12	CT#98e	CP-223198	0370		F	Correction to DNN encoding	18.0.0
2022-12	CT#98e	CP-223189	0371		F	Update of info and externalDocs fields	18.0.0
2023-03	CT#99	CP-230170	0372	1	B	Service Function Chaining support in Nudr_DataRepository	18.1.0
2023-03	CT#99	CP-230165	0375	1	A	Partial subscriptions corrections	18.1.0
2023-03	CT#99	CP-230167	0377	1	B	Immediate reporting for application data	18.1.0
2023-03	CT#99	CP-230167	0378	1	B	Immediate reporting for exposure data	18.1.0
2023-03	CT#99	CP-230167	0380	1	B	Addressing inconsistencies in the supported features negotiation	18.1.0
2023-03	CT#99	CP-230137	0381			Support External Subscriber Category	18.1.0
2023-03	CT#99	CP-230163	0383		A	Correction to allowedDelay for PFD data	18.1.0
2023-03	CT#99	CP-230164	0386		A	Internal-Group-Ids attribute correction	18.1.0
2023-03	CT#99	CP-230166	0387		F	Correction of the description fields in enumerations	18.1.0
2023-03	CT#99	CP-230137	0389	1	B	Support for AF traffic influence for common EAS, DNAI selection	18.1.0
2023-03	CT#99	CP-230175	0390	1	F	Support of indirect feature negotiation	18.1.0
2023-03	CT#99	CP-230152	0391	1	B	New Indication of URSP provisioning support in EPS	18.1.0
2023-03	CT#99	CP-230167	0392	1	B	Solving Editor's Notes for Immediate Report of Policy Data	18.1.0
2023-03	CT#99	CP-230167	0393	1	B	Retrieval of Policy Data Subscriptions	18.1.0
2023-03	CT#99	CP-230129	0397	1	A	Correction of a misalignment in an attribute's name	18.1.0
2023-03	CT#99	CP-230166	0398		F	Corrections to query parameters not respecting the naming convention	18.1.0
2023-03	CT#99	CP-230161	0399		F	Update of info and externalDocs fields	18.1.0
2023-06	CT#100	CP-231156	0400	1	B	Support for A2X service parameters provisioning	18.2.0
2023-06	CT#100	CP-231127	0401		B	Introduction of PDTQ impacts in Nudr service	18.2.0
2023-06	CT#100	CP-231131	0402		F	Missing implementation for immediate reporting functionality	18.2.0
2023-06	CT#100	CP-231149	0405	3	B	Resource for Group-MBR in Nudr_DataRepository service for Policy Data	18.2.0
2023-06	CT#100	CP-231149	0406	3	B	Data Model for Group-MBR in Nudr_DataRepository service for Policy Data	18.2.0
2023-06	CT#100	CP-231158	0407	1	B	Correction to AF influence on Service Function Chaining	18.2.0
2023-06	CT#100	CP-231135	0408		B	Complete common DNAI and EAS selection	18.2.0
2023-06	CT#100	CP-231171	0410	1	B	Adding list of PLMN ID(s) for inbound roaming UEs in AM Influence Data.	18.2.0
2023-06	CT#100	CP-231145	0411	1	B	Add applicability information for URSP provisioning in EPS	18.2.0
2023-06	CT#100	CP-231149	0412	1	B	OpenAPI for Group-MBR in Nudr_DataRepository service for Policy Data	18.2.0
2023-06	CT#100	CP-231141	0414		F	Update of externalDocs fields	18.2.0
2023-09	CT#101	CP-232090	0416	1	F	Corrections to the definition of Group related Policy Control Data	18.3.0
2023-09	CT#101	CP-232114	0417	1	A	Correction in ServiceParameterDataPatch data type	18.3.0
2023-09	CT#101	CP-232099	0418	1	B	CHF address(es) for policy decision	18.3.0
2023-09	CT#101	CP-232099	0419	1	B	Spending limits control for policy decision	18.3.0
2023-09	CT#101	CP-232086	0420	1	B	Support of the tracing requirements for UE policy	18.3.0
2023-09	CT#101	CP-232119	0421	1	B	Service parameter provisioning for 5G ProSe UE-to-UE relay	18.3.0
2023-09	CT#101	CP-232101	0422	1	B	Adding TNAP IDs to Service Parameter data	18.3.0
2023-09	CT#101	CP-232101	0423	1	B	Adding subscribed TNAP IDs to Policy data	18.3.0
2023-09	CT#101	CP-232090	0424	1	B	Resource and data model for the AF Requested QoS for a UE or a group of UEs	18.3.0
2023-09	CT#101	CP-232086	0425	1	B	Support for AM policy data in the operator specific data resource	18.3.0
2023-09	CT#101	CP-232090	0427	1	B	Removal of ENs on Group-MBR	18.3.0
2023-09	CT#101	CP-232102	0429	1	F	Correction on SFC terminology and editorial issues	18.3.0
2023-09	CT#101	CP-232087	0430	1	B	Update the storage of the PDTQ policy data	18.3.0
2023-09	CT#101	CP-232087	0431		B	PdtqData: support of Application Identifier parameter	18.3.0
2023-09	CT#101	CP-232087	0432		F	Correction of resource URI for resource IndividualPdtqData	18.3.0
2023-09	CT#101	CP-232106	0434		A	Correction on headers attribute	18.3.0
2023-09	CT#101	CP-232183	0435	2	B	Common EAS/DNAI determination for a set of UEs	18.3.0
2023-09	CT#101	CP-232092	0436	1	B	Completion of eUEPO impacts	18.3.0
2023-09	CT#101	CP-232086	0438	1	F	Correction to Service Parameter Data query	18.3.0
2023-09	CT#101	CP-232103	0439	3	B	Add ParmForRangingSI	18.3.0
2023-09	CT#101	CP-232085	0442		F	Update of info and externalDocs fields	18.3.0
2023-09	CT#101	CP-232086	0443		F	defining BdtReferenceldRm data type	18.3.0
2023-12	CT#102	CP-233254	0448	1	A	Corrections on attribute names of SM Policy Data	18.4.0
2023-12	CT#102	CP-233245	0450	2	B	Resolving the remaining EN on group data rate control	18.4.0
2023-12	CT#102	CP-233228	0451		F	HTTP RFCs obsoleted by IETF RFC 9110	18.4.0

2023-12	CT#102	CP-233239	0452	1	F	Data model corrections for TrafficCorrelationInfo	18.4.0
2023-12	CT#102	CP-233240	0453	3	B	DNAI-EAS Mappings data subset in the UDR	18.4.0
2023-12	CT#102	CP-233247	0454	1	F	Handling of the warning notification enabled flag.	18.4.0
2023-12	CT#102	CP-233228	0456		F	Correction in data type for AmInfluData	18.4.0
2023-12	CT#102	CP-233235	0457	1	F	Handling of the warning notification enabled flag.	18.4.0
2023-12	CT#102	CP-233245	0460	3	B	AF Requested QoS for a UE or Group of UEs	18.4.0
2023-12	CT#102	CP-233245	0461	1	B	Subscription to notification of changes of AF Requested QoS	18.4.0
2023-12	CT#102	CP-233228	0462		F	Correction to presence conditions in the OpenAPI file	18.4.0
2023-12	CT#102	CP-233247	0464	1	F	Correction to subscription to notification of changes of AF influence on AM Policies	18.4.0
2023-12	CT#102	CP-233228	0465		F	Removing the unnecessary resetIds attributes	18.4.0
2023-12	CT#102	CP-233239	0466	1	B	ECS Address Information in Roaming	18.4.0
2023-12	CT#102	CP-233245	0467	1	F	Security scopes are missing in OpenAPI definition for GroupPolicyControlData.	18.4.0
2023-12	CT#102	CP-233267	0468		F	Correcting the presence indicator of metadata attribute	18.4.0
2023-12	CT#102	CP-233270	0469	1	F	Incorrect feature name	18.4.0
2023-12	CT#102	CP-233147	0470	2	A	Correction of anyUeInd attribute	18.4.0
2023-12	CT#102	CP-233247	0472	1	F	EAS Deployment Data corrections	18.4.0
2023-12	CT#102	CP-233244	0474	1	B	Completion of LBO roaming information	18.4.0
2023-12	CT#102	CP-233237	0475		F	Update of externalDocs fields	18.4.0
2024-03	CT#103	CP-240176	0478	1	F	Correction on enforcement of Maximum Group Data Rate in Policy Data	18.5.0
2024-03	CT#103	CP-240172	0483		F	Roaming ECS Address Provisioning feature	18.5.0
2024-03	CT#103	CP-240172	0484	1	F	Corrections on External Subscriber Category	18.5.0
2024-03	CT#103	CP-240180	0485	1	F	Corrections on presence condition	18.5.0
2024-03	CT#103	CP-240190	0486	2	B	Support of spending limits control	18.5.0
2024-03	CT#103	CP-240245	0488	1	B	Various updates and corrections	18.5.0
2024-03	CT#103	CP-240172	0489		B	Updates to DNAI EAS mapping information	18.5.0
2024-03	CT#103	CP-240179	0490	1	B	Add GPSI and Application Layer ID mapping information	18.5.0
2024-03	CT#103	CP-240181	0491	1	B	AF provisioning of list of TNAP(s) and updates to Caching Timer	18.5.0
2024-03	CT#103	CP-240176	0492	1	B	Provisioning of NEF headers related information	18.5.0
2024-03	CT#103	CP-240166	0493		F	Update of externalDocs fields	18.5.0
2024-06	CT#104	CP-241087	0494		F	ECSAddress contents correction	18.6.0
2024-06	CT#104	CP-241134	0496	1	A	Data type misalignment for group identifier	18.6.0
2024-06	CT#104	CP-241078	0500	2	F	Support of updating restricted status in UDR	18.6.0
2024-06	CT#104	CP-241095	0502		F	Corrections on tracing requirements	18.6.0
2024-06	CT#104	CP-241122	0504	1	B	Support of subscriber spending limits information modify in SM/UE policy data	18.6.0
2024-06	CT#104	CP-241122	0505	1	B	Support of subscriber spending limits information modify in AM policy data	18.6.0
2024-06	CT#104	CP-241103	0506	1	F	Corrections to presence conditions	18.6.0
2024-06	CT#104	CP-241103	0508	1	F	Various GMEC related corrections	18.6.0
2024-06	CT#104	CP-241093	0509	1	F	UPSI Encoding	18.6.0
2024-06	CT#104	CP-241088	0512	2	B	Completion of HR-SBO functionality in the UDR	18.6.0
2024-06	CT#104	CP-241271	0513	3	B	Updates to GPSI and Application Layer ID mapping information	18.6.0
2024-06	CT#104	CP-241079	0515	1	F	Clarification of sourceNfType	18.6.0
2024-06	CT#104	CP-241095	0516	1	F	Correction of PFD data	18.6.0
2024-06	CT#104	CP-241092	0517	1	F	Corrections related to mutual exclusivity in PdtqData	18.6.0
2024-06	CT#104	CP-241088	0518	1	B	Updates to ECS Address Configuration Information for roaming	18.6.0
2024-06	CT#104	CP-241088	0519	1	B	Updates to Traffic Influence data for HR-SBO	18.6.0
2024-06	CT#104	CP-241103	0521	1	F	Removal of TSC related parameters and other corrections	18.6.0
2024-06	CT#104	CP-241103	0522	1	F	Correction to Ethernet Flow information	18.6.0
2024-06	CT#104	CP-241121	0523		F	Correction to A2X policy provisioning	18.6.0
2024-06	CT#104	CP-241094	0524	1	F	Correction on the Bdt policy data type and OpenAPI	18.6.0
2024-06	CT#104	CP-241085	0525		F	Update of externalDocs fields	18.6.0
2024-09	CT#105	CP-242144	0528	1	F	Support PCF to query UDR with multiple S-NSSAIs as inputs	18.7.0
2024-09	CT#105	CP-242137	0531	1	F	Corrections to the provisioning of VPLMN Specific URSP rules	18.7.0
2024-09	CT#105	CP-242145	0536	1	F	Corrections to spendLimInfo attribute	18.7.0
2024-09	CT#105	CP-242135	0537	1	F	Corrections to the UE ID Mapping Information retrieval request	18.7.0
2024-09	CT#105	CP-242126	0538	1	F	ECS Address Configuration Information consolidation	18.7.0
2024-09	CT#105	CP-242134	0540	1	A	OAuth2 scope correction	18.7.0
2024-09	CT#105	CP-242134	0542	1	A	Non-workable OAuth2 scope	18.7.0

2024-09	CT#105	CP-242126	0544		F	Alignment of the internal-group-ids-Add query parameter name	18.7.0
2024-09	CT#105	CP-242120	0549		F	Update of externalDocs fields	18.7.0
2024-09	CT#105	CP-242121	0529		F	Define the SmsSupport data type	19.0.0
2024-09	CT#105	CP-242118	0532		B	Optimization of the subscription to changes of AM influence data	19.0.0
2024-09	CT#105	CP-242220	0533	1	B	Optimization of the subscription to changes of AM influence data	19.0.0
2024-09	CT#105	CP-242118	0543	1	F	Expiry time disambiguation	19.0.0
2024-09	CT#105	CP-242221	0546	1	F	Corrections to data types in Application Data	19.0.0
2024-09	CT#105	CP-242121	0547	1	F	Corrections to any UE in Application Data	19.0.0
2024-09	CT#105	CP-242113	0550		F	Update of externalDocs fields	19.0.0
2024-09	CT#105					Correction to align Policy_Data YAML file with TS contents	19.0.1
2024-12	CT#106	CP-243084	0527	2	B	Support of MultiTrafficInflu Feature for future PDU session(s)	19.1.0
2024-12	CT#106	CP-243130	0552		A	Correction of the wrong implementation of "roam-ue-plmn-ids" query parameter in Nudr_DataRepository API for Application Data	19.1.0
2024-12	CT#106	CP-243107	0554	2	A	Correction on handling of VPLMN specific URSP rules	19.1.0
2024-12	CT#106	CP-243111	0555	1	B	Support 5G ProSe Multi-hop UE-to-Network Relay	19.1.0
2024-12	CT#106	CP-243111	0556		B	Support 5G ProSe Multi-hop UE-to-UE Relay	19.1.0
2024-12	CT#106	CP-243083	0560	1	B	Addition of traffic routing outcome request in UP path change event subscription in UDR for future PDU(s)	19.1.0
2024-12	CT#106	CP-243100	0561	1	B	N6 delay consideration indication	19.1.0
2024-12	CT#106	CP-243091	0564		F	Various corrections on Nudr service	19.1.0
2024-12	CT#106	CP-243124	0565	1	B	Support of the non-3GPP devices information	19.1.0
2024-12	CT#106	CP-243091	0566	1	F	Corrections to the definition of some query parameters	19.1.0
2024-12	CT#106	CP-243099	0567	1	B	Support of Handling of Payload Headers in the Nudr_DataRepository Service API for Application Data	19.1.0
2024-12	CT#106	CP-243099	0568	1	B	Support of Handling of Payload Headers in the Nudr_DataRepository Service API for Policy Data	19.1.0
2024-12	CT#106	CP-243147	0570		F	Update of externalDocs fields	19.1.0
2025-03	CT#107	CP-250235	0571	3	B	Support AF requested network slicing replacement	19.2.0
2025-03	CT#107	CP-250088	0572	1	B	Correction on the Non-3GPP device provisioning	19.2.0
2025-03	CT#107	CP-250080	0573	2	B	Candidate DNAs handling	19.2.0
2025-03	CT#107	CP-250088	0574	1	F	Non-3gpp device identifier information resource corrections	19.2.0
2025-03	CT#107	CP-250086	0576	1	F	Correction on AF Requested data	19.2.0
2025-03	CT#107	CP-250093	0577		B	Support Layer-2 multi-hop UE-to-Network Relaying	19.2.0
2025-03	CT#107	CP-250080	0582	1	F	Essential correction on Access Type	19.2.0
2025-03	CT#107	CP-250086	0583	1	F	Corrections on the BDT Reference ID	19.2.0
2025-03	CT#107	CP-250088	0584	2	B	Support of the Non-3GPP Device Identifier Information notification	19.2.0
2025-03	CT#107	CP-250081	0585	1	F	Corrections in UDR service	19.2.0
2025-03	CT#107	CP-250129	0586		F	Update of externalDocs fields	19.2.0
2025-06	CT#108	CP-251251	0587	3	B	Updates and corrections to the new AF-requested Network Slice Replacement functionality	19.3.0
2025-06	CT#108	CP-251082	0590	1	B	Simultaneous Connectivity failure events	19.3.0
2025-06	CT#108	CP-251102	0591	2	B	Subscription to non-3gpp device information changes	19.3.0
2025-06	CT#108	CP-251120	0592		B	Service parameter authorization in the PCF	19.3.0
2025-06	CT#108	CP-251091	0593		B	Update of BdtData for Energy indicator	19.3.0
2025-06	CT#108	CP-251083	0594	2	B	Extending Charging support in 5GC	19.3.0
2025-06	CT#108	CP-251114	0597		A	Correction on QoS related attribute conditions	19.3.0
2025-06	CT#108	CP-251090	0598	1	F	Correction on conditions for notification of service parameter data	19.3.0
2025-06	CT#108	CP-251090	0599	2	F	Updates to obsoleted IETF RFC	19.3.0
2025-06	CT#108	CP-251090	0601	1	F	Corrections on data types for Application Data	19.3.0
2025-06	CT#108	CP-251114	0603		A	Correction on Individual AF Requested QoS Data Set	19.3.0
2025-06	CT#108	CP-251090	0604	1	F	Corrections on HTTP error codes and URI	19.3.0
2025-06	CT#108	CP-251097	0607		A	Wrong attribute name	19.3.0
2025-06	CT#108	CP-251102	0608	1	B	Retrieving non-3gpp device information from the UDR	19.3.0
2025-06	CT#108	CP-251231	0610		F	Update of externalDocs fields	19.3.0
2025-09	CT#109	CP-252080	0612	1	F	Clarification on AF requested slice replacement for individual UE	19.4.0
2025-09	CT#109	CP-252073	0613	1	F	Missing data filter for application data modification	19.4.0
2025-09	CT#109	CP-252073	0615	1	F	Unspecified behaviour when querying Traffic Influence subscriptions	19.4.0
2025-09	CT#109	CP-252073	0616	1	F	Exposure Data corrections	19.4.0
2025-09	CT#109	CP-252090	0617	1	B	Detailed UE Policy Delivery Outcome in the UDR	19.4.0
2025-09	CT#109	CP-252073	0618	1	F	Corrections to Supported Features for Policy Data and Exposure Data	19.4.0
2025-09	CT#109	CP-252073	0619	1	F	Corrections to Supported Features for Application Data	19.4.0

2025-09	CT#109	CP-252113	0621		F	Update of externalDocs fields	19.4.0
2025-12	CT#110	CP-253031	0611	4	F	Correction of charging information	19.5.0
2025-12	CT#110	CP-253035	0622		F	Updates and corrections to Energy Consumption information management	19.5.0
2025-12	CT#110	CP-253035	0624	3	F	Modification of BDT energy indicator	19.5.0
2025-12	CT#110	CP-253031	0625	1	F	Corrections for handling when FinerGranUEs feature is supported	19.5.0
2025-12	CT#110	CP-253029	0626	1	B	Adding correlation identifiers to Application Data and Exposure Data subscriptions	19.5.0
2025-12	CT#110	CP-253029	0627	1	D	OpenAPI type correction	19.5.0
2025-12	CT#110	CP-253030	0628	3	F	Policy Data Corrections	19.5.0
2025-12	CT#110	CP-253064	0611	4	F	Correction of charging information	19.5.0
2025-12	CT#110	CP-253031	0629		F	Update externalDocs fields	19.5.0
2026-03	CT#111	CP-260048	0635		A	Policy and Exposure Data Corrections	19.6.0
2026-03	CT#111	CP-260053	0638		A	AM Influence Data Corrections	19.6.0
2026-03	CT#111	CP-260055	0641		A	Traffic Influence Data Corrections	19.6.0
2026-03	CT#111	CP-260067	0642		F	PDTQ Corrections	19.6.0
2026-03	CT#111	CP-260081	0645		F	Update of externalDocs fields	19.6.0
2026-06	CT#112	CP-261249	0653		F	Update of externalDocs fields	19.7.0

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