

ETSI TS 129 503 V15.6.0 (2020-01)



**5G;
5G System;
Unified Data Management Services;
Stage 3
(3GPP TS 29.503 version 15.6.0 Release 15)**

REDACTED
4130-9d6f-cda94a1e00b4tsi-ts129503v15.6.0-2020-01
https://standards.iteh.aero/docstore/standards/etsi-ts129503v15.6.0-2020-01



Reference

RTS/TSGC-0429503vf60

Keywords

5G

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Important notice

The present document can be downloaded from:
<http://www.etsi.org/standards-search>

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the prevailing version of an ETSI deliverable is the one made publicly available in PDF format at www.etsi.org/deliver.

Users of the present document should be aware that the document may be subject to revision or change of status.
Information on the current status of this and other ETSI documents is available at

<https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx>

If you find errors in the present document, please send your comment to one of the following services:
<https://portal.etsi.org/People/CommitteeSupportStaff.aspx>

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2020.
All rights reserved.

DECT™, PLUGTESTS™, UMTS™ and the ETSI logo are trademarks of ETSI registered for the benefit of its Members.
3GPP™ and **LTE™** are trademarks of ETSI registered for the benefit of its Members and
of the 3GPP Organizational Partners.

oneM2M™ logo is a trademark of ETSI registered for the benefit of its Members and
of the oneM2M Partners.

GSM® and the GSM logo are trademarks registered and owned by the GSM Association.

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<https://ipr.etsi.org/>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

Legal Notice

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

The present document may refer to technical specifications or reports using their 3GPP identities. These shall be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between 3GPP and ETSI identities can be found under <http://webapp.etsi.org/key/queryform.asp>.

Modal verbs terminology

In the present document "shall", "shall not", "should", "should not", "may", "need not", "will", "will not", "can" and "cannot" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

"must" and "must not" are NOT allowed in ETSI deliverables except when used in direct citation.

Contents

Intellectual Property Rights	2
Legal Notice	2
Modal verbs terminology.....	2
Foreword.....	12
1 Scope	13
2 References	13
3 Definitions and abbreviations.....	14
3.1 Definitions	14
3.2 Abbreviations	14
4 Overview	15
4.1 Introduction	15
5 Services offered by the UDM.....	15
5.1 Introduction	15
5.2 Nudm_SubscriberDataManagement Service	16
5.2.1 Service Description.....	16
5.2.2 Service Operations	16
5.2.2.1 Introduction	16
5.2.2.2 Get.....	17
5.2.2.2.1 General	17
5.2.2.2.2 Slice Selection Subscription Data Retrieval	17
5.2.2.2.3 Access and Mobility Subscription Data Retrieval	18
5.2.2.2.4 SMF Selection Subscription Data Retrieval	18
5.2.2.2.5 Session Management Subscription Data Retrieval	19
5.2.2.2.6 SMS Subscription Data Retrieval	20
5.2.2.2.7 SMS Management Subscription Data Retrieval	20
5.2.2.2.8 UE Context In SMF Data Retrieval	21
5.2.2.2.9 Retrieval Of Multiple Data Sets	21
5.2.2.2.10 Identifier Translation	22
5.2.2.2.11 Shared Subscription Data Retrieval	22
5.2.2.2.12 UE Context In SMSF Data Retrieval	23
5.2.2.2.13 Trace data Retrieval	23
5.2.2.2.14 Group Identifier Translation	24
5.2.2.3 Subscribe	24
5.2.2.3.1 General	24
5.2.2.3.2 Subscription to notifications of data change	24
5.2.2.3.3 Subscription to notifications of shared data change	25
5.2.2.4 Unsubscribe	25
5.2.2.4.1 General	25
5.2.2.4.2 Unsubscribe to notifications of data change	25
5.2.2.4.3 Unsubscribe to notifications of shared data change	26
5.2.2.5 Notification	27
5.2.2.5.1 General	27
5.2.2.5.2 Data Change Notification To NF	27
5.2.2.6 Info	27
5.2.2.6.1 General	27
5.2.2.6.2 Providing acknowledgement of Steering of Roaming	27
5.2.2.6.3 Providing acknowledgement of UE parameters update	28
5.2.2.7 ModifySubscription	28
5.2.2.7.1 General	28
5.2.2.7.2 Modification of a subscription to notifications of data change	29
5.2.2.7.3 Modification of a subscription to notifications of shared data change	29
5.3 Nudm_UEContextManagement Service	30
5.3.1 Service Description.....	30

5.3.2	Service Operations	30
5.3.2.1	Introduction	30
5.3.2.2	Registration	30
5.3.2.2.1	General	30
5.3.2.2.2	AMF registration for 3GPP access	31
5.3.2.2.3	AMF registration for non 3GPP access	32
5.3.2.2.4	SMF registration	32
5.3.2.2.5	SMSF Registration for 3GPP Access	33
5.3.2.2.6	SMSF Registration for Non 3GPP Access	33
5.3.2.3	DeregistrationNotification	34
5.3.2.3.1	General	34
5.3.2.3.2	UDM initiated NF Deregistration	34
5.3.2.4	Deregistration	35
5.3.2.4.1	General	35
5.3.2.4.2	AMF deregistration for 3GPP access	35
5.3.2.4.3	AMF deregistration for non-3GPP access	35
5.3.2.4.4	SMF deregistration	36
5.3.2.4.5	SMSF Deregistration for 3GPP Access	36
5.3.2.4.6	SMSF Deregistration for Non 3GPP Access	37
5.3.2.5	Get	37
5.3.2.5.1	General	37
5.3.2.5.2	Amf3GppAccessRegistration Information Retrieval	38
5.3.2.5.3	AmfNon3GppAccessRegistration Information Retrieval	38
5.3.2.5.4	SmfRegistrations Information Retrieval	39
5.3.2.5.5	SmsfRegistration Information Retrieval for 3GPP Access	39
5.3.2.5.6	SmsfRegistration Information Retrieval for Non-3GPP Access	39
5.3.2.6	Update	40
5.3.2.6.1	General	40
5.3.2.6.2	Update A Parameter (e.g. PEI) in the AMF Registration For 3GPP Access	40
5.3.2.6.3	Update A Parameter (e.g. PEI) in the AMF Registration For Non 3GPP Access	40
5.3.2.7	P-CSCF-RestorationNotification	41
5.3.2.7.1	General	41
5.3.2.7.2	UDM initiated P-CSCF-Restoration	41
5.4	Nudm_UEAuthentication Service	42
5.4.1	Service Description	42
5.4.2	Service Operations	42
5.4.2.1	Introduction	42
5.4.2.2	Get	42
5.4.2.2.1	General	42
5.4.2.2.2	Authentication Information Retrieval	42
5.4.2.3	ResultConfirmationInform	43
5.4.2.3.1	General	43
5.4.2.3.2	Authentication Confirmation	43
5.5	Nudm_EventExposure Service	43
5.5.1	Service Description	43
5.5.2	Service Operations	43
5.5.2.1	Introduction	43
5.5.2.2	Subscribe	44
5.5.2.2.1	General	44
5.5.2.2.2	Subscription to Notification of event occurrence	44
5.5.2.2.3	Void	45
5.5.2.3	Unsubscribe	45
5.5.2.3.1	General	45
5.5.2.3.2	Unsubscribe to notifications of event occurrence	45
5.5.2.4	Notify	46
5.5.2.4.1	General	46
5.5.2.4.2	Event Occurrence Notification	46
5.5.2.5	ModifySubscription	46
5.5.2.5.1	General	46
5.5.2.5.2	Modification of a subscription	46
5.6	Nudm_ParameterProvision Service	47
5.6.1	Service Description	47

5.6.2	Service Operations	47
5.6.2.1	Introduction	47
5.6.2.2	Update	47
5.6.2.2.1	General	47
5.6.2.2.2	Subscription data update.....	48
6	API Definitions	48
6.1	Nudm_SubscriberDataManagement Service API	48
6.1.1	API URI.....	48
6.1.2	Usage of HTTP	48
6.1.2.1	General.....	48
6.1.2.2	HTTP standard headers	49
6.1.2.2.1	General	49
6.1.2.2.2	Content type	49
6.1.2.2.3	Cache-Control	49
6.1.2.2.4	ETag	49
6.1.2.2.5	If-None-Match.....	49
6.1.2.2.6	Last-Modified.....	49
6.1.2.2.7	If-Modified-Since	49
6.1.2.2.8	When to Use Entity-Tags and Last-Modified Dates.....	49
6.1.2.3	HTTP custom headers	50
6.1.2.3.1	General	50
6.1.3	Resources.....	50
6.1.3.1	Overview	50
6.1.3.2	Resource: Nssai	51
6.1.3.2.1	Description	51
6.1.3.2.2	Resource Definition.....	51
6.1.3.2.3	Resource Standard Methods	52
6.1.3.2.3.1	GET.....	52
6.1.3.3	Resource: SdmSubscriptions.....	52
6.1.3.3.1	Description	52
6.1.3.3.2	Resource Definition.....	52
6.1.3.3.3	Resource Standard Methods	53
6.1.3.3.3.1	POST.....	53
6.1.3.4	Resource: Individual subscription	53
6.1.3.4.1	Description	53
6.1.3.4.2	Resource Definition.....	53
6.1.3.4.3	Resource Standard Methods	54
6.1.3.4.3.1	DELETE	54
6.1.3.4.3.2	PATCH	54
6.1.3.5	Resource: AccessAndMobilitySubscriptionData	55
6.1.3.5.1	Description	55
6.1.3.5.2	Resource Definition.....	55
6.1.3.5.3	Resource Standard Methods	55
6.1.3.5.3.1	GET.....	55
6.1.3.6	Resource: SmfSelectionSubscriptionData.....	56
6.1.3.6.1	Description	56
6.1.3.6.2	Resource Definition.....	56
6.1.3.6.3	Resource Standard Methods	56
6.1.3.6.3.1	GET.....	56
6.1.3.7	Resource: UeContextInSmfData.....	57
6.1.3.7.1	Description	57
6.1.3.7.2	Resource Definition.....	57
6.1.3.7.3	Resource Standard Methods	57
6.1.3.7.3.1	GET.....	57
6.1.3.8	Resource: SessionManagementSubscriptionData	58
6.1.3.8.1	Description	58
6.1.3.8.2	Resource Definition.....	58
6.1.3.8.3	Resource Standard Methods	58
6.1.3.8.3.1	GET.....	58
6.1.3.9	Resource: SMSSubscriptionData	59
6.1.3.9.1	Description	59

6.1.3.9.2	Resource Definition	59
6.1.3.9.3	Resource Standard Methods	59
6.1.3.9.3.1	GET	59
6.1.3.10	Resource: SMSManagementSubscriptionData	60
6.1.3.10.1	Description	60
6.1.3.10.2	Resource Definition	60
6.1.3.10.3	Resource Standard Methods	60
6.1.3.10.3.1	GET	60
6.1.3.11	Resource: Supi	61
6.1.3.11.1	Description	61
6.1.3.11.2	Resource Definition	61
6.1.3.11.3	Resource Standard Methods	61
6.1.3.11.3.1	GET	61
6.1.3.12	Resource: IdTranslationResult	62
6.1.3.12.1	Description	62
6.1.3.12.2	Resource Definition	62
6.1.3.12.3	Resource Standard Methods	62
6.1.3.12.3.1	GET	62
6.1.3.13	Resource: SorAck	63
6.1.3.13.1	Description	63
6.1.3.13.2	Resource Definition	63
6.1.3.13.3	Resource Standard Methods	63
6.1.3.13.3.1	PUT	63
6.1.3.14	Resource: TraceData	64
6.1.3.14.1	Description	64
6.1.3.14.2	Resource Definition	64
6.1.3.14.3	Resource Standard Methods	64
6.1.3.14.3.1	GET	64
6.1.3.15	Resource: SharedData	65
6.1.3.15.1	Description	65
6.1.3.15.2	Resource Definition	65
6.1.3.15.3	Resource Standard Methods	65
6.1.3.15.3.1	GET	65
6.1.3.16	Resource: SharedDataSubscriptions	66
6.1.3.16.1	Description	66
6.1.3.16.2	Resource Definition	66
6.1.3.16.3	Resource Standard Methods	66
6.1.3.16.3.1	POST	66
6.1.3.17	Resource: Individual subscription	67
6.1.3.17.1	Description	67
6.1.3.17.2	Resource Definition	67
6.1.3.17.3	Resource Standard Methods	67
6.1.3.17.3.1	DELETE	67
6.1.3.17.3.2	PATCH	68
6.1.3.18	Resource: UeContextInSmsfData	68
6.1.3.18.1	Description	68
6.1.3.18.2	Resource Definition	68
6.1.3.18.3	Resource Standard Methods	69
6.1.3.18.3.1	GET	69
6.1.3.19	Resource: UpuAck	69
6.1.3.19.1	Description	69
6.1.3.19.2	Resource Definition	69
6.1.3.19.3	Resource Standard Methods	69
6.1.3.19.3.1	PUT	69
6.1.3.20	Resource: GroupIdentifiers	70
6.1.3.20.1	Description	70
6.1.3.20.2	Resource Definition	70
6.1.3.20.3	Resource Standard Methods	70
6.1.3.20.3.1	GET	70
6.1.4	Custom Operations without associated resources	71
6.1.5	Notifications	71
6.1.5.1	General	71

6.1.5.2	Data Change Notification.....	71
6.1.6	Data Model	72
6.1.6.1	General.....	72
6.1.6.2	Structured data types.....	74
6.1.6.2.1	Introduction	74
6.1.6.2.2	Type: Nssai.....	74
6.1.6.2.3	Type: SdmSubscription	75
6.1.6.2.4	Type: AccessAndMobilitySubscriptionData	76
6.1.6.2.5	Type: SmfSelectionSubscriptionData.....	77
6.1.6.2.6	Type: DnnInfo	77
6.1.6.2.7	Type: SnssaiInfo	77
6.1.6.2.8	Type: SessionManagementSubscriptionData	78
6.1.6.2.9	Type: DnnConfiguration.....	78
6.1.6.2.10	Void.....	78
6.1.6.2.11	Type: PduSessionTypes.....	78
6.1.6.2.12	Type: SscModes	79
6.1.6.2.13	Type: SmsSubscriptionData	79
6.1.6.2.14	Type: SmsManagementSubscriptionData	79
6.1.6.2.15	Type: SubscriptionDataSets	80
6.1.6.2.16	Type: UeContextInSmfData	80
6.1.6.2.17	Type: PduSession	80
6.1.6.2.18	Type: IdTranslationResult	80
6.1.6.2.19	Void.....	81
6.1.6.2.20	Void.....	81
6.1.6.2.21	Type: ModificationNotification.....	81
6.1.6.2.22	Type: IpAddress	81
6.1.6.2.23	Type: UeContextInSmsfData	81
6.1.6.2.24	Type: SmsfInfo.....	81
6.1.6.2.25	Type: AcknowledgeInfo	81
6.1.6.2.26	Type: SorInfo	82
6.1.6.2.27	Type: SharedData	82
6.1.6.2.28	Type: PgwInfo	82
6.1.6.2.29	Type: TraceDataResponse.....	83
6.1.6.2.30	Type: SteeringContainer.....	83
6.1.6.2.31	Type: SdmSubsModification	83
6.1.6.2.32	Type: EmergencyInfo	83
6.1.6.2.33	Type: UpuInfo	84
6.1.6.2.34	Type: GroupIdentifiers.....	84
6.1.6.3	Simple data types and enumerations	84
6.1.6.3.1	Introduction	84
6.1.6.3.2	Simple data types.....	84
6.1.6.3.3	Enumeration: DataSetName	85
6.1.6.3.4	Void.....	86
6.1.6.3.5	Void.....	86
6.1.6.3.6	Void.....	86
6.1.7	Error Handling	86
6.1.7.1	General	86
6.1.7.2	Protocol Errors	86
6.1.7.3	Application Errors	86
6.1.8	Feature Negotiation.....	86
6.1.9	Security	87
6.2	Nudm_UEContextManagement Service API.....	87
6.2.1	API URI.....	87
6.2.2	Usage of HTTP	87
6.2.2.1	General.....	87
6.2.2.2	HTTP standard headers	87
6.2.2.2.1	General	87
6.2.2.2.2	Content type	88
6.2.2.3	HTTP custom headers	88
6.2.2.3.1	General	88
6.2.3	Resources.....	88
6.2.3.1	Overview	88

6.2.3.2	Resource: Amf3GppAccessRegistration.....	89
6.2.3.2.1	Description	89
6.2.3.2.2	Resource Definition.....	89
6.2.3.2.3	Resource Standard Methods	90
6.2.3.2.3.1	PUT	90
6.2.3.2.3.2	PATCH	90
6.2.3.2.3.3	GET.....	91
6.2.3.3	Resource: AmfNon3GppAccessRegistration	92
6.2.3.3.1	Description	92
6.2.3.3.2	Resource Definition.....	92
6.2.3.3.3	Resource Standard Methods	92
6.2.3.3.3.1	PUT	92
6.2.3.3.3.2	PATCH	93
6.2.3.3.3.3	GET.....	94
6.2.3.4	Resource: SmfRegistrations	94
6.2.3.4.1	Description	94
6.2.3.4.2	Resource Definition.....	94
6.2.3.4.3	Resource Standard Methods	94
6.2.3.5	Resource: IndividualSmfRegistration	94
6.2.3.5.1	Resource Definition	94
6.2.3.5.2	Resource Standard Methods	95
6.2.3.5.2.1	PUT	95
6.2.3.5.2.2	DELETE	95
6.2.3.6	Resource: Smsf3GppAccessRegistration	96
6.2.3.6.1	Description	96
6.2.3.6.2	Resource Definition.....	96
6.2.3.6.3	Resource Standard Methods	96
6.2.3.6.3.1	PUT	96
6.2.3.6.3.2	DELETE	97
6.2.3.6.3.3	GET.....	97
6.2.3.7	Resource: SmsfNon3GppAccessRegistration	98
6.2.3.7.1	Description	98
6.2.3.7.2	Resource Definition.....	98
6.2.3.7.3	Resource Standard Methods	98
6.2.3.7.3.1	PUT	98
6.2.3.7.3.2	DELETE	99
6.2.3.7.3.3	GET.....	99
6.2.4	Custom Operations without associated resources	100
6.2.5	Notifications	100
6.2.5.1	General	100
6.2.5.2	Deregistration Notification.....	100
6.2.5.3	P-CSCF Restoration Notification.....	101
6.2.6	Data Model	101
6.2.6.1	General	101
6.2.6.2	Structured data types	102
6.2.6.2.1	Introduction	102
6.2.6.2.2	Type: Amf3GppAccessRegistration	103
6.2.6.2.3	Type: AmfNon3GppAccessRegistration	106
6.2.6.2.4	Type: SmfRegistration.....	108
6.2.6.2.5	Type: DeregistrationData	108
6.2.6.2.6	Type: SmsfRegistration	108
6.2.6.2.7	Type: Amf3GppAccessRegistrationModification	108
6.2.6.2.8	Type: AmfNon3GppAccessRegistrationModification	109
6.2.6.2.9	Type: PcsfcRestorationNotification.....	110
6.2.6.2.10	Type: NetworkNodeDiameterAddress	110
6.2.6.2.11	Type: EpsIwkPgw	110
6.2.6.3	Simple data types and enumerations	110
6.2.6.3.1	Introduction	110
6.2.6.3.2	Simple data types.....	110
6.2.6.3.3	Enumeration: DeregistrationReason.....	110
6.2.6.3.4	Enumeration: ImsVoPs.....	111
6.2.7	Error Handling	111

6.2.7.1	General	111
6.2.7.2	Protocol Errors	111
6.2.7.3	Application Errors	111
6.2.8	Feature Negotiation	112
6.2.9	Security	112
6.3	Nudm_UEAuthentication Service API	112
6.3.1	API URI	112
6.3.2	Usage of HTTP	113
6.3.2.1	General	113
6.3.2.2	HTTP standard headers	113
6.3.2.2.1	General	113
6.3.2.2.2	Content type	113
6.3.2.3	HTTP custom headers	113
6.3.2.3.1	General	113
6.3.3	Resources	113
6.3.3.1	Overview	113
6.3.3.2	Resource: SecurityInformation	114
6.3.3.2.1	Description	114
6.3.3.2.2	Resource Definition	114
6.3.3.2.3	Resource Standard Methods	114
6.3.3.2.4	Resource Custom Operations	115
6.3.3.2.4.1	Overview	115
6.3.3.2.4.2	Operation: generate-auth-data	115
6.3.3.2.4.2.1	Description	115
6.3.3.2.4.2.2	Operation Definition	115
6.3.3.3	Resource: AuthEvents	115
6.3.3.3.1	Description	115
6.3.3.3.2	Resource Definition	116
6.3.3.3.3	Resource Standard Methods	116
6.3.3.3.3.1	POST	116
6.3.4	Custom Operations without associated resources	116
6.3.5	Notifications	116
6.3.6	Data Model	117
6.3.6.1	General	117
6.3.6.2	Structured data types	117
6.3.6.2.1	Introduction	117
6.3.6.2.2	Type: AuthenticationInfoRequest	117
6.3.6.2.3	Type: AuthenticationInfoResult	118
6.3.6.2.4	Type: AvEapAkaPrime	118
6.3.6.2.5	Type: Av5GHeAka	118
6.3.6.2.6	Type: ResynchronizationInfo	118
6.3.6.2.7	Type: AuthEvent	118
6.3.6.2.8	Type: AuthenticationVector	119
6.3.6.3	Simple data types and enumerations	119
6.3.6.3.1	Introduction	119
6.3.6.3.2	Simple data types	119
6.3.6.3.3	Enumeration: AuthType	119
6.3.6.3.4	Enumeration: AvType	119
6.3.7	Error Handling	120
6.3.7.1	General	120
6.3.7.2	Protocol Errors	120
6.3.7.3	Application Errors	120
6.3.8	Feature Negotiation	120
6.3.9	Security	120
6.4	Nudm_EventExposure Service API	121
6.4.1	API URI	121
6.4.2	Usage of HTTP	121
6.4.2.1	General	121
6.4.2.2	HTTP standard headers	121
6.4.2.2.1	General	121
6.4.2.2.2	Content type	121
6.4.2.3	HTTP custom headers	121

6.4.2.3.1	General	121
6.4.3	Resources.....	122
6.4.3.1	Overview.....	122
6.4.3.2	Resource: EeSubscriptions.....	122
6.4.3.2.1	Description	122
6.4.3.2.2	Resource Definition.....	122
6.4.3.2.3	Resource Standard Methods	123
6.4.3.2.3.1	POST.....	123
6.4.3.3	Resource: Individual subscription.....	124
6.4.3.3.1	Resource Definition.....	124
6.4.3.3.2	Resource Standard Methods	124
6.4.3.3.2.1	DELETE	124
6.4.3.3.2.2	PATCH	124
6.4.4	Custom Operations without associated resources	125
6.4.5	Notifications	125
6.4.5.1	General.....	125
6.4.5.2	Event Occurrence Notification.....	125
6.4.6	Data Model	126
6.4.6.1	General.....	126
6.4.6.2	Structured data types	126
6.4.6.2.1	Introduction	126
6.4.6.2.2	Type: EeSubscription	127
6.4.6.2.3	Type: MonitoringConfiguration	127
6.4.6.2.4	Type: MonitoringReport.....	127
6.4.6.2.5	Type: Report.....	128
6.4.6.2.6	Type: ReportingOptions	128
6.4.6.2.7	Type: ChangeOfSupiPeiAssociationReport.....	128
6.4.6.2.8	Type: RoamingStatusReport.....	128
6.4.6.2.9	Type: CreatedEeSubscription.....	129
6.4.6.2.10	Type: LocationReportingConfiguration	129
6.4.6.3	Simple data types and enumerations	129
6.4.6.3.1	Introduction	129
6.4.6.3.2	Simple data types.....	129
6.4.6.3.3	Enumeration: EventType.....	130
6.4.6.3.4	Enumeration: LocationAccuracy	130
6.4.6.3.5	Enumeration: AssociationType	130
6.4.7	Error Handling	130
6.4.7.1	General.....	130
6.4.7.2	Protocol Errors	130
6.4.7.3	Application Errors	130
6.4.8	Feature Negotiation.....	132
6.4.9	Security	132
6.5	Nudm_ParameterProvision Service API	132
6.5.1	API URI.....	132
6.5.2	Usage of HTTP	132
6.5.2.1	General	132
6.5.2.2	HTTP standard headers	132
6.5.2.2.1	General	132
6.5.2.2.2	Content type	132
6.5.2.3	HTTP custom headers	133
6.5.2.3.1	General	133
6.5.3	Resources.....	133
6.5.3.1	Overview.....	133
6.5.3.2	Resource: PpData.....	133
6.5.3.2.1	Description	133
6.5.3.2.2	Resource Definition.....	133
6.5.3.2.3	Resource Standard Methods	134
6.5.3.2.3.1	PATCH	134
6.5.4	Custom Operations without associated resources	134
6.5.5	Notifications	134
6.5.6	Data Model	134
6.5.6.1	General	134

6.5.6.2	Structured data types	135
6.5.6.2.1	Introduction	135
6.5.6.2.2	Type: PpData	135
6.5.6.2.3	Type: CommunicationCharacteristics	135
6.5.6.2.4	Type: PpSubsRegTimer	135
6.5.6.2.5	Type: PpActiveTime	136
6.5.6.3	Simple data types and enumerations	136
6.5.6.3.1	Introduction	136
6.5.6.3.2	Simple data types	136
6.5.6.3.3	Enumeration: <EnumType1>	136
6.5.7	Error Handling	136
6.5.7.1	General	136
6.5.7.2	Protocol Errors	136
6.5.7.3	Application Errors	136
6.5.8	Feature Negotiation	137
6.5.9	Security	137
Annex A (normative):	OpenAPI specification.....	138
A.1	General	138
A.2	Nudm_SDM API	138
A.3	Nudm_UECM API	161
A.4	Nudm_UEAU API	174
A.5	Nudm_EE API	178
A.6	Nudm_PP API	183
Annex B (informative):	Stateless UDMs.....	185
Annex C (informative):	SUCI encoding.....	189
Annex D (informative):	Change history	191
History		196

iTeh STANDARD PREVIEW
 https://standards.iteh.ai/catalog/standards/etsi-ts-129-503-v15.6.0-2020-01
 Full standard:
 4130-9d6f-cda94a1eb0b0/etsi-ts-129-503-v15.6.0-2020-01

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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
<https://standards.iteh.ai/catalog/standards/sist/d6437dce-8973-4130-9d6f-cda94a1eb0b0/etsi-ts-129-503-v15.6.0-2020-01>