**3GPP TSG-CT WG4 Meeting #104-eC4-213xyz**

**E-Meeting, 19th – 28th May 2021 (was C4-213302)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.503** | **CR** | **0653** | **rev** | **1** | **Current version:** | **17.2.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | AAA Server FQDN | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | SBIProtoc17 | | | | |  | ***Date:*** | | | 2021-04-05 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | For DNN secondary authentication, the SMF invokes Nudm\_SDM service to retrieve from UDM/UDR the relevant Session Management Subscription Data.  These data include DnnConfiguration, containing "dnAaaAddress" attribute, to convey the IP address of the AAA server in charge of the secondary authentication.  Similarly, NEF invokes Nudm\_PP Service to get or update the 5GVnGroupConfiguration data, which include 5gVnGroupData containing again a similar "dnAaaAddress" attribute.  The dnAaaAddress is defined as one IpAddress; this implies that, if the AAA Server fails, the secondary authentication and authorization for the UE cannot be completed.  Normally, in a typical network, multiple AAA Servers are configured to provide load balance and redundancy, so it is useful to obtain the AAA Server FQDN information, so the consumer NF can resolve it via DNS to get multiple AAA Server IP addresses, and achieve load balancing and server redundancy. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | For dnAaaAddress Attribute in DnnConfiguration and 5GVnGroupData, add FQDN information for the AAA Server. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | If the AAA Server can’t work properly due to failure, the secondary authentication and authorization for the UE will fail.    No load balance mechanism provided for AAA Server. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.1.6.1, 6.1.6.2.9, 6.5.6.1, 6.5.6.2.7, A.2, A.6 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | This CR introduces backwards-compatible new features, with impacts on the following APIs:  - TS29503\_Nudm\_SDM.yaml  - TS29503\_Nudm\_PP.yaml | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\* \* \* First Change \* \* \* \*

#### 6.1.6.1 General

This clause specifies the application data model supported by the API.

Table 6.1.6.1-1 specifies the data types defined for the Nudm\_SDM service API.

Table 6.1.6.1-1: Nudm\_SDM specific Data Types

|  |  |  |
| --- | --- | --- |
| Data type | Clause defined | Description |
| Nssai | 6.1.6.2.2 | Network Slice Selection Assistance Information |
| SdmSubscription | 6.1.6.2.3 | A subscription to notifications |
| AccessAndMobilitySubscriptionData | 6.1.6.2.4 | Access and Mobility Subscription Data |
| SmfSelectionSubscriptionData | 6.1.6.2.5 | SMF Selection Subscription Data |
| DnnInfo | 6.1.6.2.6 | Data Network Name and associated information (LBO roaming allowed flag) |
| SnssaiInfo | 6.1.6.2.7 | S-NSSAI and associated information (DNN Info) |
| SessionManagementSubscriptionData | 6.1.6.2.8 | User subscribed session management data |
| DnnConfiguration | 6.1.6.2.9 | User subscribed data network configuration |
| PduSessionTypes | 6.1.6.2.11 | Default/allowed session types for a data network |
| SscModes | 6.1.6.2.12 | Default/allowed SSC modes for a data network |
| SmsSubscriptionData | 6.1.6.2.13 |  |
| SmsManagementSubscriptionData | 6.1.6.2.14 | SMS Management Subscription Data |
| SubscriptionDataSets | 6.1.6.2.15 |  |
| UeContextInSmfData | 6.1.6.2.16 | UE Context In SMF Data |
| PduSession | 6.1.6.2.17 |  |
| IdTranslationResult | 6.1.6.2.18 | SUPI that corresponds to a given GPSI |
| ModificationNotification | 6.1.6.2.21 |  |
| IpAddress | 6.1.6.2.22 | IP address (IPv4, or IPv6, or IPv6 prefix) |
| UeContextInSmsfData | 6.1.6.2.23 |  |
| SmsfInfo | 6.1.6.2.24 |  |
| AcknowledgeInfo | 6.1.6.2.25 |  |
| SorInfo | 6.1.6.2.26 | Steering Of Roaming Information |
| SharedData | 6.1.6.2.27 | Subscription Data shared by multiple UEs |
| PgwInfo | 6.1.6.2.28 | Information about the DNNs/APNs and PGW-C+SMF FQDNs used in interworking with EPS |
| TraceDataResponse | 6.1.6.2.29 | Contains Trace Data or a shared data Id identifying shared Trace Data |
| SteeringContainer | 6.1.6.2.30 |  |
| SdmSubsModification | 6.1.6.2.31 | Modification instruction for a subscription to notifications |
| EmergencyInfo | 6.1.6.2.32 | Information about emergency session |
| UpuInfo | 6.1.6.2.33 | UE Parameters Update Information |
| GroupIdentifiers | 6.1.6.2.34 |  |
| NiddInformation | 6.1.6.2.35 | Non-IP Data Delivery information |
| CagData | 6.1.6.2.36 |  |
| CagInfo | 6.1.6.2.37 |  |
| DataSetName | 6.1.6.3.3 |  |
| PduSessionContinuityInd | 6.1.6.3.7 |  |
| AdditionalSnssaiData | 6.1.6.2.38 | Additional information specific to a slice |
| VnGroupData | 6.1.6.2.39 |  |
| AppDescriptor | 6.1.6.2.40 |  |
| AppPortId | 6.1.6.2.41 | Application Port Id |
| LcsPrivacyData | 6.1.6.2.42 |  |
| Lpi | 6.1.6.2.43 |  |
| UnrelatedClass | 6.1.6.2.44 |  |
| PlmnOperatorClass | 6.1.6.2.45 |  |
| ValidTimePeriod | 6.1.6.2.46 |  |
| LcsMoData | 6.1.6.2.47 |  |
| EcRestrictionDataWb | 6.1.6.2.48 | Enhance Coverage Restriction Data |
| ExpectedUeBehaviourData | 6.1.6.2.49 | Expected UE Behaviour Data |
| SuggestedPacketNumDl | 6.1.6.2.52 | Suggested Number of Downlink Packets |
| SmfRegistrationInfo | 6.1.6.2.53 |  |
| FrameRouteInfo | 6.1.6.2.54 | Frame Route Information |
| SorUpdateInfo | 6.1.6.2.55 |  |
| EnhancedCoverageRestrictionData | 6.1.6.2.56 | Enhanced Coverage Restriction Data |
| EdrxParameters | 6.1.6.2.57 | eDRX Parameters |
| PtwParameters | 6.1.6.2.58 | Paging Time Window Parameters |
| OperationMode | 6.1.6.3.12 | Operation Mode |
| SorUpdateIndicator | 6.1.6.3.13 | SoR Update Indicator |
| ExternalUnrelatedClass | 6.1.6.2.62 |  |
| AfExternal | 6.1.6.2.63 |  |
| LcsClientExternal | 6.1.6.2.64 |  |
| LcsClientGroupExternal | 6.1.6.2.65 |  |
| ServiceTypeUnrelatedClass | 6.1.6.2.66 |  |
| UeId | 6.1.6.2.67 |  |
| DefaultUnrelatedClass | 6.1.6.2.68 |  |
| UeContextInAmfData | 6.1.6.2.70 |  |
| V2xSubscriptionData | 6.1.6.2.71 | V2X Subscription Data |
| LcsBroadcastAssistanceTypesData | 6.1.6.2.72 | LCS Broadcast Assistance Data Types |
| DatasetNames | 6.1.6.2.73 | Data Set Names |
| PlmnRestriction | 6.1.6.2.74 |  |
| DefaultDnnIndicator | 6.1.6.3.2 |  |
| LboRoamingAllowed | 6.1.6.3.2 |  |
| UeUsageType | 6.1.6.3.2 |  |
| MpsPriorityIndicator | 6.1.6.3.2 |  |
| McsPriorityIndicator | 6.1.6.3.2 |  |
| 3GppChargingCharacteristics | 6.1.6.3.2 | 3GPP Charging Characteristics |
| MicoAllowed | 6.1.6.3.2 |  |
| SmsSubscribed | 6.1.6.3.2 |  |
| SharedDataId | 6.1.6.3.2 |  |
| IwkEpsInd | 6.1.6.3.2 | Interworking with EPS Indication |
| SecuredPacket | 6.1.6.3.2 |  |
| UpuRegInd | 6.1.6.3.2 |  |
| ExtGroupId | 6.1.6.3.2 |  |
| NbIoTUePriority | 6.1.6.3.2 |  |
| CodeWord | 6.1.6.3.2 |  |
| AfId | 6.1.6.3.2 |  |
| LcsClientId | 6.1.6.3.2 |  |
| DataSetName | 6.1.6.3.3 |  |
| PduSessionContinuityInd | 6.1.6.3.7 |  |
| LocationPrivacyInd | 6.1.6.3.8 |  |
| PrivacyCheckRelatedAction | 6.1.6.3.9 |  |
| LcsClientClass | 6.1.6.3.10 |  |
| LcsMoServiceClass | 6.1.6.3.11 |  |
| OperationMode | 6.1.6.3.12 |  |
| CodeWordInd | 6.1.6.3.14 |  |
| MdtUserConsent | 6.1.6.3.15 | MDT User Consent |
| SharedDataTreatmentInstruction | 6.1.6.3.16 |  |
| SorTransparentContainer | 6.1.6.3.2 |  |

Table 6.1.6.1-2 specifies data types re-used by the Nudm\_SDM service API from other specifications, including a reference to their respective specifications and when needed, a short description of their use within the Nudm\_SDM service API.

Table 6.1.6.1-2: Nudm\_SDM re-used Data Types

|  |  |  |
| --- | --- | --- |
| Data type | Reference | Comments |
| Dnn | 3GPP TS 29.571 [7] | Data Network Name with Network Identifier only; this type is used as key in a map of:  - DnnConfigurations; see clause 6.1.6.2.8;  - EpsIwkPgws; see clause 6.2.6.2.2;  - ExpectedUeBehaviourData; see clause 6.1.6.2.8; |
| DurationSec | 3GPP TS 29.571 [7] | Time value in seconds |
| ProblemDetails | 3GPP TS 29.571 [7] | Common data type used in response bodies |
| Snssai | 3GPP TS 29.571 [7] | Single NSSAI |
| Uri | 3GPP TS 29.571 [7] | Uniform Resource Identifier |
| Gpsi | 3GPP TS 29.571 [7] | Generic Public Subscription Identifier |
| RatType | 3GPP TS 29.571 [7] | Radio Access Technology Type |
| Area | 3GPP TS 29.571 [7] |  |
| ServiceAreaRestriction | 3GPP TS 29.571 [7] |  |
| CoreNetworkType | 3GPP TS 29.571 [7] |  |
| SupportedFeatures | 3GPP TS 29.571 [7] | see 3GPP TS 29.500 [4] clause 6.6 |
| PlmnId | 3GPP TS 29.571 [7] | PLMN Identity |
| PduSessionType | 3GPP TS 29.571 [7] |  |
| SubscribedDefaultQos | 3GPP TS 29.571 [7] | Subscribed Default QoS |
| Ambr | 3GPP TS 29.571 [7] |  |
| PduSessionId | 3GPP TS 29.571 [7] | PduSessionId is used as key in a map of PduSessions; see clause 6.1.6.2.16. |
| NfInstanceId | 3GPP TS 29.571 [7] |  |
| Supi | 3GPP TS 29.571 [7] |  |
| RfspIndex | 3GPP TS 29.571 [7] |  |
| SscMode | 3GPP TS 29.571 [7] |  |
| Ipv4Addr | 3GPP TS 29.571 [7] |  |
| Ipv6Addr | 3GPP TS 29.571 [7] |  |
| Ipv6Prefix | 3GPP TS 29.571 [7] |  |
| SorMac | 3GPP TS 29.509 [24] |  |
| SteeringInfo | 3GPP TS 29.509 [24] |  |
| AckInd | 3GPP TS 29.509 [24] |  |
| CounterSor | 3GPP TS 29.509 [24] |  |
| UpuMac | 3GPP TS 29.509 [24] |  |
| UpuData | 3GPP TS 29.509 [24] |  |
| UpuAckInd | 3GPP TS 29.509 [24] |  |
| CounterUpu | 3GPP TS 29.509 [24] |  |
| TraceData | 3GPP TS 29.571 [7] | Trace control and configuration parameters |
| NotifyItem | 3GPP TS 29.571 [7] |  |
| UpSecurity | 3GPP TS 29.571 [7] |  |
| ServiceName | 3GPP TS 29.510 [19] |  |
| OdbPacketServices | 3GPP TS 29.571 [7] |  |
| GroupId | 3GPP TS 29.571 [7] | This type is also used as key of a map in attributes:  - vnGroupInfo and sharedVnGroupDataIds; see clause 6.1.6.2.4, 6.1.6.2.8, 6.1.6.2.27; |
| DateTime | 3GPP TS 29.571 [7] |  |
| CagId | 3GPP TS 29.571 [7] |  |
| StnSr | 3GPP TS 29.571 [7] | Session Transfer Number for SRVCC |
| CMsisdn | 3GPP TS 29.571 [7] | Correlation MSISDN |
| OsId | 3GPP TS 29.519 [33] |  |
| Uint16 | 3GPP TS 29.571 [7] |  |
| RgWirelineCharacteristics | 3GPP TS 29.571 [7] |  |
| GeographicArea | 3GPP TS 29.572 [34] |  |
| LcsServiceType | 3GPP TS 29.572 [34] |  |
| ScheduledCommunicationTime | 3GPP TS 29.571 [7] | Scheduled Communication Time |
| LocationArea | 6.5.6.2.10 |  |
| StationaryIndication | 3GPP TS 29.571 [7] | Stationary Indication |
| TrafficProfile | 3GPP TS 29.571 [7] | Traffic Profile |
| ScheduledCommunicationType | 3GPP TS 29.571 [7] | Scheduled Communication Type |
| BatteryIndication | 3GPP TS 29.571 [7] | Battery Indication |
| AcsInfo | 3GPP TS 29.571 [7] | ACS Information |
| IPv4AddrMask | 3GPP TS 29.571 [7] |  |
| NefId | 3GPP TS 29.510 [19] |  |
| Fqdn | 3GPP TS 29.510 [19] | Fully Qualified Domain Name |
| PatchResult | 3GPP TS 29.571 [7] |  |
| NrV2xAuth | 3GPP TS 29.571 [7] |  |
| LteV2xAuth | 3GPP TS 29.571 [7] |  |
| BitRate | 3GPP TS 29.571 [7] |  |
| MdtConfiguration | 3GPP TS 29.571 [7] |  |
| Uint64 | 3GPP TS 29.571 [7] |  |
| WirelineArea | 3GPP TS 29.571 [7] |  |
| WirelineServiceAreaRestriction | 3GPP TS 29.571 [7] |  |
| NfGroupId | 3GPP TS 29.571 [7] |  |

\* \* \* Next Change \* \* \* \*

##### 6.1.6.2.9 Type: DnnConfiguration

Table 6.1.6.2.9-1: Definition of type DnnConfiguration

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| pduSessionTypes | PduSessionTypes | M | 1 | Default/Allowed session types |
| sscModes | SscModes | M | 1 | Default/Allowed SSC modes |
| iwkEpsInd | IwkEpsInd | O | 0..1 | Indicates whether interworking with EPS is subscribed:  true: Subscribed; false: Not subscribed; If this attribute is absent it means not subscribed. |
| 5gQosProfile | SubscribedDefaultQos | O | 0..1 | 5G QoS parameters associated to the session for a data network |
| sessionAmbr | Ambr | O | 0..1 | The maximum aggregated uplink and downlink bit rates to be shared across all Non-GBR QoS Flows in each PDU Session |
| 3gppChargingCharacteristics | 3GppChargingCharacteristics | O | 0..1 | Subscribed charging characteristics data associated to the session for a data network. (NOTE 1) |
| staticIpAddress | array(IpAddress) | O | 1..2 | Subscribed static IP address(es) of the IPv4 and/or IPv6 type |
| upSecurity | UpSecurity | O | 0..1 | When present, this IE shall indicate the security policy for integrity protection and encryption for the user plane. |
| pduSessionContinuityInd | PduSessionContinuityInd | O | 0..1 | When present, this IE shall indicate how to handle a PDU Session when UE the moves to or from NB-IoT.  If this attribute is absent it means that Local policy shall be used. |
| niddNefId | NefId | C | 0..1 | Indicates the identity of the NEF to be selected for NIDD service for this DNN. It is required if invokeNefSelection attribute is present with value "true". |
| niddInfo | NiddInformation | O | 0..1 | When present, this IE shall indicate information used for SMF-NEF Connection.  This attribute may be present if "Invoke NEF Selection" indicator is set. |
| redundantSessionAllowed | boolean | O | 0..1 | Indicates whether redundant PDU Sessions are allowed:  true: Allowed; false: Not allowed; If this attribute is absent it means not allowed. |
| acsInfo | AcsInfo | O | 0..1 | When present, this IE shall include the ACS information for the 5G-RG as defined in BBF TR-069 [42] or in BBF TR-369 [43]. |
| ipv4FrameRouteList | array(FrameRouteInfo) | O | 1..N | List of Frame Route information of IPv4, see clause 5.6.14 of 3GPP TS 23.501 [2]. |
| ipv6FrameRouteList | array(FrameRouteInfo) | O | 1..N | List of Frame Route information of IPv6, see clause 5.6.14 of 3GPP TS 23.501 [2]. |
| atsssAllowed | boolean | O | 0..1 | Indicates whether this DNN supports ATSSS, i.e. whether Multi-Access PDU session is allowed to this DNN.  true: Allowed; false (default): Not allowed; If this attribute is absent it means this DNN does not allow ATSSS. |
| secondaryAuth | boolean | O | 0..1 | Indicates whether secondary authentication and authorization is needed.  true: required.  false: not required.  If absent, it indicates that secondary authentication is not required by subscription data, but it still may be required by local policies at the SMF.  (NOTE 2) |
| dnAaaIpAddressAllocation | boolean | O | 0..1 | Indicates whether the SMF is required to request the UE IP address from the DN-AAA server for PDU Session Establishment.  true: required  false: not required  If absent, it indicates that the request by SMF of the UE IP address from the DN-AAA server is not required by subscription data, but it still may be required by local policies at the SMF. |
| dnAaaAddress | IpAddress | O | 0..1 | The IP address of the DN-AAA server used for secondary authentication and authorization.  (NOTE 2) |
| additionalDnAaaAddresses | array(IpAddress) | O | 1..N | Additional IP addresses of the DN-AAA server used for secondary authentication and authorization.  (NOTE 2) |
| dnAaaFqdn | Fqdn | O | 0..1 | The FQDN of the DN-AAA server used for secondary authentication and authorization.  (NOTE 2) |
| iptvAccCtrlInfo | string | O | 0..1 | The IPTV access control information used in IPTV access procedure, see clause 7.7.1.1.2 of 3GPP TS 23.316 [37]. |
| NOTE 1: When present, this attribute shall take precedence over the "3gppChargingCharacteristics" attribute in the SessionManagementSubscriptionData level.  NOTE 2: These attributes shall be consistent with the information received on the 5GVnGroupData (see clause 6.5.6.2.7), in the Nudm\_PP API. If both FQDN and IP addresses are provided, the IP addresses should be preferred to target the DN-AAA server. | | | | |

\* \* \* Next Change \* \* \* \*

#### 6.5.6.1 General

This clause specifies the application data model supported by the API.

Table 6.5.6.1-1 specifies the data types defined for the Nudm\_PP service API.

Table 6.5.6.1-1: Nudm\_PP specific Data Types

|  |  |  |
| --- | --- | --- |
| Data type | Clause defined | Description |
| PpData | 6.5.6.2.2 | Parameter Provision Data |
| CommunicationCharacteristics | 6.5.6.2.3 | Communication Characteristics |
| PpSubsRegTimer | 6.5.6.2.4 |  |
| PpActiveTime | 6.5.6.2.5 |  |
| 5GVnGroupConfiguration | 6.5.6.2.6 |  |
| 5GVnGroupData | 6.5.6.2.7 |  |
| ExpectedUeBehaviour | 6.5.6.2.8 | Expected UE Behaviour Parameters |
| LocationArea | 6.5.6.2.10 | Location Area |
| NetworkAreaInfo | 6.5.6.2.11 | Network Area Information |
| EcRestriction | 6.5.6.2.12 |  |
| PlmnEcInfo | 6.5.6.2.13 |  |
| PpDlPacketCountExt | 6.5.6.2.14 |  |
| PpMaximumResponseTime | 6.5.6.2.15 |  |
| PpMaximumLatency | 6.5.6.2.16 |  |
| LcsPrivacy | 6.5.6.2.17 |  |
| UmtTime | 6.5.6.2.18 |  |
| ReferenceId | 6.5.6.3.2 |  |
| PpDlPacketCount | 6.5.6.3.2 |  |

Table 6.5.6.1-2 specifies data types re-used by the Nudm\_PP service API from other APIs, including a reference and when needed, a short description of their use within the Nudm\_PP service API.

Table 6.5.6.1-2: Nudm\_PP re-used Data Types

|  |  |  |
| --- | --- | --- |
| Data type | Reference | Comments |
| DurationSec | 3GPP TS 29.571 [7] | Time value in seconds |
| DurationSecRm | 3GPP TS 29.571 [7] | Time value in seconds; nullable |
| SupportedFeatures | 3GPP TS 29.571 [7] |  |
| NfInstanceId | 3GPP TS 29.571 [7] |  |
| ProblemDetails | 3GPP TS 29.571 [7] |  |
| Gpsi | 3GPP TS 29.571 [7] |  |
| PatchResult | 3GPP TS 29.571 [7] |  |
| DateTime | 3GPP TS 29.571 [7] |  |
| Ecgi | 3GPP TS 29.571 [7] | an EUTRA cell identifier |
| Ncgi | 3GPP TS 29.571 [7] | an NR cell identifier |
| GlobalRanNodeId | 3GPP TS 29.571 [7] | an identity of the NG-RAN node |
| Tai | 3GPP TS 29.571 [7] | a tracking area identity |
| GeographicArea | 3GPP TS 29.572 [34] | Identifies the geographical information of the user(s). |
| CivicAddress | 3GPP TS 29.572 [34] | Identifies the civic address information of the user(s). |
| PduSessionType | 3GPP TS 29.571 [7] |  |
| AppDescriptor | 6.1.6.2.40 |  |
| AcsInfoRm | 3GPP TS 29.571 [7] |  |
| StnSrRm | 3GPP TS 29.571 [7] | Session Transfer Number for SRVCC |
| Supi | 3GPP TS 29.571 [7] |  |
| Lpi | 6.1.6.2.43 |  |
| MtcProviderInformation | 3GPP TS 29.571 [7] | MTC Provider Information |
| StationaryIndicationRm | 3GPP TS 29.571 [7] |  |
| ScheduledCommunicationTimeRm | 3GPP TS 29.571 [7] |  |
| ScheduledCommunicationTypeRm | 3GPP TS 29.571 [7] |  |
| TrafficProfileRm | 3GPP TS 29.571 [7] |  |
| BatteryIndicationRm | 3GPP TS 29.571 [7] |  |
| Fqdn | 3GPP TS 29.510 [19] | Fully Qualified Domain Name |

\* \* \* Next Change \* \* \* \*

##### 6.5.6.2.7 Type: 5GVnGroupData

Table 6.5.6.2.7-1: Definition of type 5GVnGroupData

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| dnn | Dnn | M | 1 | DNN of the 5G VN group, shall contain the Network Identifier only. |
| sNssai | Snssai | M | 1 | S-NSSAI of the 5G VN group's communication session |
| pduSessionTypes | array(PduSessionType) | O | 1..N | List of PDU Session Types allowed for 5G VN group's communication session |
| appDescriptors | array(AppDescriptor) | O | 1..N | List of Application Descriptors allowed for 5G VN group's communication session |
| secondaryAuth | boolean | O | 0..1 | Indicates whether secondary authentication and authorization is needed.  true: secondary authentication and authorization is needed.  false: secondary authentication and authorization is not needed.  If absent, it indicates that secondary authentication is not required by the NEF, but it still may be required by local policies at the SMF. |
| dnAaaAddress | IpAddress | O | 0..1 | The IP address of the DN-AAA server used for secondary authentication and authorization. |
| additionalDnAaaAddresses | array(IpAddress) | O | 1..N | Additional IP addresses of the DN-AAA server used for secondary authentication and authorization. |
| dnAaaFqdn | Fqdn | O | 0..1 | The FQDN of the DN-AAA server used for secondary authentication and authorization. |

\* \* \* Next Change \* \* \* \*

## A.2 Nudm\_SDM API

*(... text not shown for clarity ...)*

DnnConfiguration:

type: object

required:

- pduSessionTypes

- sscModes

properties:

pduSessionTypes:

$ref: '#/components/schemas/PduSessionTypes'

sscModes:

$ref: '#/components/schemas/SscModes'

iwkEpsInd:

$ref: '#/components/schemas/IwkEpsInd'

5gQosProfile:

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

sessionAmbr:

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

3gppChargingCharacteristics:

$ref: '#/components/schemas/3GppChargingCharacteristics'

staticIpAddress:

type: array

items:

$ref: '#/components/schemas/IpAddress'

minItems: 1

maxItems: 2

upSecurity:

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

pduSessionContinuityInd:

$ref: '#/components/schemas/PduSessionContinuityInd'

niddNefId:

$ref: 'TS29510\_Nnrf\_NFManagement.yaml#/components/schemas/NefId'

niddInfo:

$ref: '#/components/schemas/NiddInformation'

redundantSessionAllowed:

type: boolean

acsInfo:

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

ipv4FrameRouteList:

type: array

items:

$ref: '#/components/schemas/FrameRouteInfo'

minItems: 1

ipv6FrameRouteList:

type: array

items:

$ref: '#/components/schemas/FrameRouteInfo'

minItems: 1

atsssAllowed:

type: boolean

default: false

secondaryAuth:

type: boolean

dnAaaIpAddressAllocation:

type: boolean

dnAaaAddress:

$ref: '#/components/schemas/IpAddress'

additionalDnAaaAddresses:

type: array

items:

$ref: '#/components/schemas/IpAddress'

minItems: 1

dnAaaFqdn:

$ref: 'TS29510\_Nnrf\_NFManagement.yaml#/components/schemas/Fqdn'

iptvAccCtrlInfo:

type: string

*(... text not shown for clarity ...)*

\* \* \* Next Change \* \* \* \*

## A.6 Nudm\_PP API

*(... text not shown for clarity ...)*

5GVnGroupData:

type: object

required:

- dnn

- sNssai

properties:

dnn:

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

sNssai:

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

pduSessionTypes:

type: array

items:

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

minItems: 1

appDescriptors:

type: array

items:

$ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/AppDescriptor'

minItems: 1

secondaryAuth:

type: boolean

dnAaaAddress:

$ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/IpAddress'

additionalDnAaaAddresses:

type: array

items:

$ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/IpAddress'

minItems: 1

dnAaaFqdn:

$ref: 'TS29510\_Nnrf\_NFManagement.yaml#/components/schemas/Fqdn'

*(... text not shown for clarity ...)*

\* \* \* End of Changes \* \* \* \*