**3GPP TSG CT WG3 Meeting #135 *C3-243337***

**Hyderabad, IN, 27 - 31 May, 2024 (revision of C3-243xyz)**

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| --- |
| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **29.519** | **CR** | **0522** | **rev** | **-** | **Current version:** | **18.5.0** |  |
|  |
| *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)*.* |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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| --- |
|  |
| ***Title:***  |  Clarification to Ethernet Flow information |
|  |  |
| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | C3 |
|  |  |
| ***Work item code:*** | GMEC |  | ***Date:*** | 2024-05-30 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-18 |
|  | *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 canbe 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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)Rel-20 (Release 20)* |
|  |  |
| ***Reason for change:*** | The flow information for ethernet service data flows, to enable the per flow notification defined in the AsSessionWithQoS and Npcf\_PolicyAuthorization APIs, require the UL and DL flows are identified with a flow number, otherwise, the notification refers to all the flows of the request. To enable this granularity for Ethernet flows, the EthFlowInfo data type defined in TS 29.122 is required.So, when the ethFlowInfo attribute is provided in the AfRequestedQoS/Patch data types all the provided flows have to be handled in the same way, from QoS and event subscription perspective. |
|  |  |
| ***Summary of change:*** | Completion of the description of the EthFlowInfo data type and the EthFlowdescription data types. |
|  |  |
| ***Consequences if not approved:*** | Incomplete, ambiguous specification |
|  |  |
| ***Clauses affected:*** | 6.4.1, 6.4.24, 6.4.25 |
|  |  |
|  | **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 does not impact the Nudr\_DataRepository for Application Data |
|  |  |
| ***This CR's revision history:*** |  |

\* \* \* \* Start of Changes \* \* \* \*

### 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 |
| IptvConfigData | 6.4.2.9 | Represents IPTV configuration data information. |  |
| 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. | GMEC |
| ServiceParameterData | 6.4.2.15 | Contains the service parameter data. |  |
| 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 |
| A2xParamsPc5 | 3GPP TS 29.522 [19] | Contains the A2X service parameters data provisioned over PC5. | 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 |
| AmInfluEvent | 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. |  |
| 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 |
| 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. | DCAMPCachingTimer |
| DurationSecRm | 3GPP TS 29.571 [7] | Represents a removable duration in seconds. | DCAMP |
| EasDeployInfoData | 3GPP TS 29.591 [23] | Represnts 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, i.e., the flow number and UL and/or DL ethernet flow description. | 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] | Identifies the events 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 property set to true. | 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. |  |
| Ipv6Addr | 3GPP TS 29.571 [7] | Identifies an IPv6 address. |  |
| Link | 3GPP TS 29.122 [9] | Identifies a referenced resource. | HR-SBO |
| MacAddr48 | 3GPP TS 29.571 [7] | MAC Address. |  |
| 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 |
| 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. |  |
| 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. |  |
| ParamForProSeEndUe | 3GPP TS 29.522 [19] | Contains the service parameters for 5G ProSe End UE. | 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. | 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. |  |
| ParamForProSeU2NRelUe | 3GPP TS 29.522 [19] | Contains the service parameters for 5G ProSe UE-to-network relay UE. | 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. |  |
| ParamForProSeU2URelUe | 3GPP TS 29.522 [19] | Contains the service parameters for 5G ProSe UE-to-UE Relay UE. | 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 |
| ParamForRangingSlPos | 3GPP TS 29.522 [19] | Contains the service parameters for ranging and sidelink positioning. | Ranging\_SL |
| ParamForRangingSlPosRm | 3GPP TS 29.522 [19] | This data type is defined in the same way as the "ParamForRangingSlPos" 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 |
| RouteToLocation | 3GPP TS 29.571 [7] | Identifies the N6 traffic routing requirement. |  |
| ServiceAreaCoverageInfo | 3GPP TS 29.534 [22] | Contains service area coverage information. | DCAMP |
| Snssai | 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] | Indicates the time interval during which the NF service consumer request shall not to be applied | GMEC |
| TemporalValidity | 3GPP TS 29.514 [16] | Indicates the time interval during which the AF request is to be applied. | MultiTemporalCondition |
| TnapId | 3GPP TS 29.571 [7] | Trusted Network Access Point identifier. | AfGuideTNAPs |
| TscaiInputContainer | 3GPP TS 29.514 [16] | Represents the TSCAI Input information container. | GMEC |
| TsnQosContainer | 3GPP TS 29.514 [16] | Represents the TSC traffic QoS parameters. | GMEC |
| MappingInfo | 3GPP TS 29.522 [19] | Contains the mapping information between the Application Layer ID and the GPSI. | Ranging\_SL |
| MappingInfoRm | 3GPP TS 29.522 [19] | This data type is defined in the same way as the MappingInfo data type, but with the OpenAPI "nullable: true" property. | 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. |

\* \* \* \* Next change \* \* \* \*

#### 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) |  |
| afAppId | string | O | 0..1 | Contains the identifier of the AF Application. |  |
| dnn | Dnn | O | 0..1 | Represents a DNN.(NOTE 2) |  |
| sliceInfo | Snssai | O | 0..1 | Represents the identifier of a network slice. |  |
| flowInfo | array(FlowInfo) | C | 1..N | Contains the IP data flow(s) which require QoS. 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).(NOTE 3) |  |
| enEthFlowInfo | array(EthFlowInfo) | C | 1..N | Contains the Ethernet flows which require QoS. Each Ethernet data flow consists of a flow identifier and the corresponding UL and/or DL flow 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 references. 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 sets. The lower the index of the array for a given entry, the higher the priority.(NOTE 4) |  |
| disUeNotif | boolean | O | 0..1 | Indicates to disable QoS flow parameters signalling to the UE when it is included and set to "true".The default value "false" shall apply, if the attribute is not present and has not been supplied previously. |  |
| tempInValidity | TemporalInValidity | O | 0..1 | Indicates the time interval during which the AF request is not to be applied. |  |
| headers | array(string) | O | 1..N | Contains the headers provisioned by the NEF, e.g. 3gpp-Sbi-Binding header (specified in 3GPP TS 29.500 [4]) containing the binding indication for the URI included in the "notifUri" attribute. The encoding of the header shall comply with clause 6.3 of IETF RFC 9110 [21]. |  |
| suppFeat | SupportedFeatures | C | 1 | Contains the list of Supported features among the ones defined in clause 6.1.8 of 3GPP TS 29.504.This attribute shall be present only when feature negotiation needs to take place. |  |
| NOTE 1: Either "supi" or "interGroupId" shall be included.NOTE 2: Data Network Name, 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 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 with the full DNN (e.g., because there are multiple Operator Identifiers for a Network Identifier) or the DNN Network Identifier only.NOTE 3: These attributes are mutually exclusive. Either one of them shall be present.NOTE 4: The "qosReqs" attribute and the "qosReference" are mutually exclusive and either one of them shall be present. The "altQoSReferences" attribute and the "altQosReqs" attribute are mutually exclusive. If the "qosReference" attribute is present, then the "altQosReqs" attribute shall not be present. |

\* \* \* \* Next change \* \* \* \*

#### 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 IP data flow(s) which requires QoS. 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 Ethernet packet filters of one or more Ethernet flow(s).(NOTE 1) |  |
| enEthFlowInfo | array(EthFlowInfo) | O | 1..N | Contains the Ethernet flows which require QoS. Each Ethernet data flow consists of a flow identifier and the corresponding UL and/or DL flow description.(NOTE 1) |  |
| qosReference | string | O | 0..1 | Contains a pre-defined QoS reference.(NOTE 2) |  |
| qosReqs | QosRequirementsRm | O | 0..1 | Contains the updated requested QoS parameters related information.(NOTE 2) |  |
| altSerReqs | array(string) | O | 0..N | Contains an ordered list of alternative service requirements that include a set of QoS references. The lower the index of the array for a given entry, the higher the priority.(NOTE 2) |  |
| altSerReqsData | array(AlternativeServiceRequirementsData) | O | 1..N | Contains an ordered list of alternative service requirements that include individual QoS parameter sets. The lower the index of the array for a given entry, the higher the priority.(NOTE 2) |  |
| disUeNotif | boolean | O | 0..1 | Indicates to disable QoS flow parameters signalling to the UE when it is included and set to "true".The default value "false" shall apply, if the attribute is not present and has not been supplied previously. |  |
| tempInValidity | TemporalInValidity | O | 0..1 | Indicates the time interval during which the AF request is not to be applied. |  |
| 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]. |  |
| NOTE 1: These attributes are mutually exclusive.NOTE 2: The "qosReqs" attribute (unless it is set to "NULL") and the "qosReference" are mutually exclusive. The "altQoSReferences" attribute and the "altQosReqs" attribute are mutually exclusive. If the "qosReference" attribute is present, then the "altQosReqs" attribute shall not be present. |

\* \* \* \* End of change \* \* \* \*