**3GPP TSG-CT WG3 Meeting #135C3-243377**

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

|  |
| --- |
| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **29.514** | **CR** | **0644** | **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)*.* |
|  |

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

|  |
| --- |
|  |
| ***Title:***  | Support of UL and DL policy control based on Round-Trip latency requirements |
|  |  |
| ***Source to WG:*** | Huawei, Ericsson, Nokia |
| ***Source to TSG:*** | CT3 |
|  |  |
| ***Work item code:*** | XRM |  | ***Date:*** | 2024-05-10 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
|  |  |
| ***Reason for change:*** | * The Round-Trip latency requirement is twice of the single direction delay requirement between UE and the PSA UPF derived from the "qosReference" attribute or a single attribute. The single attribute representing the packet delay is not defined in stage 3.
* If the "evSubsc" attribute is not provided, the AF needs to provide the correlation identifier which correlates the two service data flows.
 |
|  |  |
| ***Summary of change:*** | * Add new "pdb" attribute to indicate the packet delay requirement. For clarity, the "tscPackDelay" attribute in TsnQosContainer data type are not reused to avoid introducing too many clarifications.
* Add the correlation identifier which correlates the two service data flows.
* Define new RttFlowReferenceRm data type to be used in the HTTP PATCH method.
 |
|  |  |
| ***Consequences if not approved:*** | Stage 2 requirement is not implemented. |
|  |  |
| ***Clauses affected:*** | 4.2.2.38, 4.2.3.37, 5.6.1, 5.6.2.7, 5.6.2.26, 5.6.2.59(new), A.2 |
|  |  |
|  | **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:*** | The CR introduces backward compatible features to the OpenAPI file for Npcf\_PolicyAuthorization API. |
|  |  |
| ***This CR's revision history:*** |  |

**Additional discussion(if needed):**

**Proposed changes:**

\*\*\* 1st Change \*\*\*

#### 4.2.2.38 Initial provisioning of Round-Trip latency requirements

When the "RTLatency" feature is supported, this procedure is used by a NF service consumer to provision Round-Trip (RT) latency indication and RT latency requirement for an XR or other interactive media services via the AF session with required QoS procedure. The RT latency indication and RT Latency requirement may be provided for the UL and DL flow directions of a service data flow or for the UL and DL flow directions of two service data flows.

When the RT latency indication and requirement is provided for the UL and DL flow directions of a service data flow, the AF may provide the "rTLatencyInd" attribute contained in MediaComponent data type to indicate that RT delay of the UL and DL flow directions of the service data flow needs to meet the RT latency requirement of the service, which is twice of the single direction delay requirement between the UE and the PSA UPF derived from the "qosReference" attribute or included in the "pdb" attribute.

When the RT latency indication and requirement is provided for the UL and DL flow directions of two service data flows, the AF may provide:

- the DL flow description and the UL flow description, each one in a MediaSubcomponent entry of separate MediaComponent entries;

- the RT latency requirement for the UL or DL flow directions included in the MediaSubComponent entry within the "qosReference" attribute or within the "pdb" attribute included in each MediaComponent entry. The sum of the UL and DL direction delay between the UE and PSA needs to meet the RT latency requirement;

- the "rTLatencyIndCorreId" attribute within each MediaComponent entry, to indicate that RT Latency requirement needs to be fulfilled by the two MediaComponent entries that share the same "sharedKey" attribute value.

Due to the received Round-Trip latency requirements, the PCF may need to provision or modify the related PCC rules as specified in 3GPP TS 29.513 [7] and provide the related information towards the SMF following the corresponding procedures specified in clause 4.2.6.2.22 of 3GPP TS 29.512 [8].

\*\*\* 2nd Change \*\*\*

#### 4.2.3.37 Modification of Round-Trip latency requirements

If the "RTLatency" feature is supported, the NF service consumer may update the RT latency requirement (i.e., provide RT latency requirement for a media component or for the UL and DL flows of two media components as described in clause 4.2.2.38 or update/delete RT latency requirements previously provided) using the HTTP PATCH method as described in clause 4.2.3.2 by invoking the Npcf\_PolicyAuthorization\_Update service operation.

Due to the change of Round-Trip latency requirements, the PCF may need to provision or modify the related PCC rules as specified in 3GPP TS 29.513 [7] and provide the related information towards the SMF following the corresponding procedures specified in clause 4.2.6.21.2 of 3GPP TS 29.512 [8].

\*\*\* 3rd Change \*\*\*

### 5.6.1 General

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

Table 5.6.1-1 specifies the data types defined for the Npcf\_PolicyAuthorization service based interface protocol.

Table 5.6.1-1: Npcf\_PolicyAuthorization specific Data Types

| Data type | Section defined | Description | Applicability |
| --- | --- | --- | --- |
| AcceptableServiceInfo | 5.6.2.30 | Acceptable maximum requested bandwidth. |  |
| AccessNetChargingIdentifier | 5.6.2.32 | Contains the access network charging identifier. | IMS\_SBI |
| AddFlowDescriptionInfo | 5.6.2.55 | Contains additional flow description information, as the flow label and the IPsec SPI. | AddFlowDescriptionInformation |
| AfAppId | 5.6.3.2 | Contains an AF application identifier. |  |
| AfEvent | 5.6.3.7 | Represents an event to notify to the NF service consumer. |  |
| AfEventNotification | 5.6.2.11 | Represents the notification of an event. |  |
| AfEventSubscription | 5.6.2.10 | Represents the subscription to events. |  |
| AfNotifMethod | 5.6.3.8 | Represents the notification methods that can be subscribed for an event. |  |
| AfRequestedData | 5.6.3.18 | Represents the information the NF service consumer requested to be exposed. | IMS\_SBI |
| AfRoutingRequirement | 5.6.2.13 | Describes the routing requirements for the application traffic flows. | InfluenceOnTrafficRouting |
| AfRoutingRequirementRm | 5.6.2.24 | This data type is defined in the same way as the "AfRoutingRequirement" data type, but with the OpenAPI "nullable: true" property. | InfluenceOnTrafficRouting |
| AfSfcRequirement | 5.6.2.49 | Describes the requirements to steer the traffic to a pre-configured chain of service functions on N6-LAN. | SFC |
| AlternativeServiceRequirementsData | 5.6.2.47 | Contains alternative QoS related parameter sets. | AltSerReqsWithIndQoS |
| AnGwAddress | 5.6.2.20 | Carries the control plane address of the access network gateway. |  |
| AppDetectionReport | 5.6.2.44 | Indicates the start or stop of the detected application traffic and the detected AF application identifier. | ApplicationDetectionEvents |
| AppDetectionNotifType | 5.6.3.23 | Represents the types of reports bound to the notification of application detection information. | ApplicationDetectionEvents |
| AppSessionContext | 5.6.2.2 | Represents an Individual Application Session Context resource. |  |
| AppSessionContextReqData | 5.6.2.3 | Represents the Individual Application Session Context resource data received in an HTTP POST request message. |  |
| AppSessionContextRespData | 5.6.2.4 | Represents the Individual Application Session Context resource data produced by the server and returned in an HTTP response message. |  |
| AppSessionContextUpdateData | 5.6.2.5 | Describes the modifications to the "ascReqData" property of an Individual Application Session Context resource. |  |
| AppSessionContextUpdateDataPatch | 5.6.2.43 | Describes the modifications to an Individual Application Session Context resource | PatchCorrection |
| AspId | 5.6.3.2 | Contains an identity of an application service provider. | SponsoredConnectivity |
| BatOffsetInfo | 5.6.2.50 | Contains the offset of the BAT and the optionally adjusted periodicity. | EnTSCAC |
| CodecData | 5.6.3.2 | Contains a codec related information. |  |
| ContentVersion | 5.6.3.2 | Represents the version of a media component. | MediaComponentVersioning |
| DirectNotificationReport | 5.6.2.57 | Represents the QoS monitoring parameter that is not authorized to be directly notified for the indicated flows. | EnQoSMon |
| EthFlowDescription | 5.6.2.17 | Defines a packet filter for an Ethernet flow. |  |
| EventsNotification | 5.6.2.9 | Describes the notification about the events occurred within an Individual Application Session Context resource. |  |
| EventsSubscPutData | 5.6.2.42 | Identifies the events the application subscribes to within an Events Subscription sub-resource data. It may also include the attributes of the notification about the events already met at the time of subscription. It is represented as a non-exclusive list of two data types: EventsSubscReqData and EventsNotification. |  |
| EventsSubscReqData | 5.6.2.6 | Identifies the events the application subscribes to within an Individual Application Session Context resource. |  |
| EventsSubscReqDataRm | 5.6.2. 25 | This data type is defined in the same way as the "EventsSubscReqData" data type, but with the OpenAPI "nullable: true" property. |  |
| ExtendedProblemDetails | 5.6.2.29 | Data type that extends ProblemDetails. |  |
| FlowDescription | 5.6.3.2 | Defines a packet filter for an IP flow. |  |
| Flows | 5.6.2.21 | Identifies the flows related to a media component. |  |
| FlowStatus | 5.6.3.12 | Describes whether the IP flow(s) are enabled or disabled. |  |
| FlowUsage | 5.6.3.14 | Describes the flow usage of the flows described by a media subcomponent. |  |
| L4sNotifType | 5.6.3.25 | Indicates whether the ECN marking for L4S support for the indicated SDFs is "NOT\_AVAILABLE" or "AVAILABLE" again. | L4S |
| L4sSupport | 5.6.2.56 | Indicates whether the ECN marking for L4S is available in 5GS for the indicated service data flows.  | L4S |
| MediaComponent | 5.6.2.7 | Contains service information for a media component of an AF session. |  |
| MediaComponentRm | 5.6.2.26 | This data type is defined in the same way as the "MediaComponent" data type, but with the OpenAPI "nullable: true" property. |  |
| MediaComponentResourcesStatus | 5.6.3.13 | Indicates whether the media component is active or inactive. |  |
| MediaSubComponent | 5.6.2.8 | Contains the requested bitrate and filters for the set of IP flows identified by their common flow identifier. |  |
| MediaSubComponentRm | 5.6.2.27 | This data type is defined in the same way as the "MediaSubComponent" data type, but with the OpenAPI "nullable: true" property. |  |
| MediaType | 5.6.3.3 | Indicates the media type of a media component. |  |
| MpsAction | 5.6.3.22 | Indicates whethe it is an invocation, a revocation or an invocation with authorization of the MPS for DTS service. | MPSforDTS |
| MultiModalId | 5.6.3.2 | Contains a multi-modal service identifier. | MultiMedia |
| OutOfCreditInformation | 5.6.2.33 | Indicates the service data flows without available credit and the corresponding termination action. | IMS\_SBI |
| PcfAddressingInfo | 5.6.2.46 | Contains PCF address information. |  |
| PcscfRestorationRequestData | 5.6.2.36 | Indicates P-CSCF restoration. | PCSCF-Restoration-Enhancement |
| PduSessionEventNotification | 5.6.2.45 | Indicates PDU session information for the established/terminated PDU session. |  |
| PduSessionStatus | 5.6.3.24 | Indicates whether the PDU session is established or terminated. |  |
| PduSessionTsnBridge | 5.6.2.40 | Contains the TSC user plane node Information and DS-TT port and/or NW-TT ports management information of a new detected TSC user plane node in the context of a new PDU session. | TimeSensitiveNetworking |
| PdvMonitoringReport | 5.6.2.53 | Packet Delay Variation reporting information. | EnQoSMon |
| PeriodicityRange | 5.6.2.48 | Contains the acceptable range (which is formulated as lower bound and upper bound of the periodicity of the start two bursts in reference to the external GM) or acceptable periodicity value(s) (which is formulated as a list of values for the periodicity). | EnTSCAC |
| PreemptionControlInformation | 5.6.3.19 | Pre-emption control information. | MCPTT-Preemption |
| PreemptionControlInformationRm | 5.6.3.21 | This data type is defined in the same way as the "PreemptionControlInformation" data type, but with the OpenAPI "nullable: true" property. | MCPTT-Preemption |
| PrioritySharingIndicator | 5.6.3.20 | Priority sharing indicator. | PrioritySharing |
| QosMonitoringInformation | 5.6.2.34 | QoS monitoring information (e.g. UL, DL or round trip packet delay). | QoSMonitoring |
| QosMonitoringInformationRm | 5.6.2.41 | This data type is defined in the same way as the "QosMonitoringInformation" data type, but with the OpenAPI "nullable: true" property. | QoSMonitoring |
| QosMonitoringReport | 5.6.2.37 | Contains QoS monitoring reporting information. | QoSMonitoring |
| QosNotificationControlInfo | 5.6.2.15 | Indicates whether the QoS targets related to certain media component are not guaranteed or are guaranteed again. |  |
| QosNotifType | 5.6.3.9 | Indicates type of notification for QoS Notification Control. |  |
| RequiredAccessInfo | 5.6.3.15 | Indicates the access network information required for an AF session. | NetLoc |
| ReservPriority | 5.6.3.4 | Indicates the reservation priority. |  |
| ResourcesAllocationInfo | 5.6.2.14 | Indicates the status of the PCC rule(s) related to certain media component. |  |
| RttFlowReferenceRm | 5.6.2.59 | This data type is defined in the same way as the "RttFlowReference" data type, but with the OpenAPI "nullable: true" property. | RTLatencyEnQoSMon |
| ServAuthInfo | 5.6.3.5 | Indicates the result of the Policy Authorization service request from the NF service consumer. |  |
| ServiceInfoStatus | 5.6.3.16 | Preliminary or final service information status. | IMS\_SBI |
| ServiceUrn | 5.6.3.2 | Service URN. | IMS\_SBI |
| SipForkingIndication | 5.6.3.17 | Describes if several SIP dialogues are related to an "Individual Application Session Context" resource. | IMS\_SBI |
| SpatialValidity | 5.6.2.16 | Describes the spatial validity of an NF service consumer request for influencing traffic routing. | InfluenceOnTrafficRouting |
| SpatialValidityRm | 5.6.2.28 | This data type is defined in the same way as the "SpatialValidity" data type, but with the OpenAPI "nullable: true" property. | InfluenceOnTrafficRouting |
| SponId | 5.6.3.2 | Contains an Identity of a sponsor. | SponsoredConnectivity |
| SponsoringStatus | 5.6.3.6 | Represents whether sponsored data connectivity is enabled or disabled/not enabled. | SponsoredConnectivity |
| TemporalValidity | 5.6.2.22 | Indicates the time interval during which the NF service consumer request is to be applied. | InfluenceOnTrafficRouting |
| TerminationCause | 5.6.3.10 | Indicates the cause for requesting the deletion of the Individual Application Session Context resource. |  |
| TerminationInfo | 5.6.2.12 | Includes information related to the termination of the Individual Application Session Context resource. |  |
| TosTrafficClass | 5.6.3.2 | Contains the IPv4 Type-of-Service or the IPv6 Traffic-Class field and the ToS/Traffic Class mask field. |  |
| TosTrafficClassRm | 5.6.3.2 | This data type is defined in the same way as the "TosTrafficClass" data type, but with the OpenAPI "nullable: true" property. |  |
| TscPriorityLevel | 5.6.3.2 | Priority of TSC Flows | TimeSensitiveNetworking |
| TscPriorityLevelRm | 5.6.3.2 | This data type is defined in the same way as the "TscPriorityLevel" data type, but with the OpenAPI "nullable: true" property | TimeSensitiveNetworking |
| TscaiInputContainer | 5.6.2.39 | TSCAI Input information container. | TimeSensitiveNetworking |
| TsnQosContainer | 5.6.2.35 | TSC traffic QoS parameters. | TimeSensitiveNetworkingXRM\_5G |
| TsnQosContainerRm | 5.6.2.38 | This data type is defined in the same way as the "TsnQosContainer" data type, but with the OpenAPI "nullable: true" property. | TimeSensitiveNetworkingXRM\_5G |
| UeIdentityInfo | 5.6.2.31 | Represents 5GS-Level UE Identities. | IMS\_SBI |
| UrspEnforcementReport | 5.6.2.53 | Indicates the UE reporting Connection Capabilities from associated URSP rule(s). | URSPEnforcement |
| UplinkDownlinkSupport | 5.6.3.25 | Represents whether a capability is supported for the UL, the DL or both UL and DL service data flows | L4S |

Table 5.6.1-2 specifies data types re-used by the Npcf\_PolicyAuthorization 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 Npcf\_PolicyAuthorization service based interface.

Table 5.6.1-2: Npcf\_PolicyAuthorization re-used Data Types

| Data type | Reference | Comments | Applicability |
| --- | --- | --- | --- |
| AccNetChargingAddress | 3GPP TS 29.512 [8] | Indicates the IP address of the network entity within the access network performing charging. | IMS\_SBI |
| AccessType | 3GPP TS 29.571 [12] | The identification of the type of access network. |  |
| AccumulatedUsage | 3GPP TS 29.122 [15] | Accumulated Usage. | SponsoredConnectivity |
| AdditionalAccessInfo | 3GPP TS 29.512 [8] | Indicates the combination of additional Access Type and RAT Type for MA PDU session | ATSSS |
| AfSigProtocol | 3GPP TS 29.512 [8] | Represents the protocol used for signalling between the UE and the NF service consumer. | ProvAFsignalFlow |
| ApplicationChargingId | 3GPP TS 29.571 [12] | Application provided charging identifier allowing correlation of charging information. | IMS\_SBI |
| AverWindow | 3GPP TS 29.571 [12] | Averaging Window. | EnQoSMon |
| AverWindowRm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "AverWindow" data type, but with the OpenAPI "nullable: true" property. | EnQoSMon |
| BdtReferenceId | 3GPP TS 29.122 [15] | Identifies transfer policies. |  |
| BitRate | 3GPP TS 29.571 [12] | Specifies bitrate in kbits per second. |  |
| BitRateRm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "BitRate" data type, but with the OpenAPI "nullable: true" property. |  |
| BridgeManagementContainer | 3GPP TS 29.512 [8] | Contains TSC user plane node management information. | TimeSensitiveNetworking |
| Bytes | 3GPP TS 29.571 [12] | String with format "byte". |  |
| ChargingId | 3GPP TS 29.571 [12] | Charging identifier allowing correlation of charging information. | IMS\_SBI |
| DateTime | 3GPP TS 29.571 [12] | String with format "date-time" as defined in OpenAPI Specification [11]. | InfluenceOnTrafficRouting, TimeSensitiveNetworking |
| Dnn | 3GPP TS 29.571 [12] | Data Network Name. |  |
| DurationSec | 3GPP TS 29.571 [12] | Identifies a period of time in units of seconds. | TimeSensitiveNetworking, EnhancedSubscriptionToNotification,SimultConnectivity  |
| DurationSecRm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "DurationSec" data type, but with the OpenAPI "nullable: true" property. | SimultConnectivity  |
| EasIpReplacementInfo | 3GPP TS 29.571 [12] | Contains EAS IP replacement information for a Source and a Target EAS. | EASIPreplacement |
| FinalUnitAction | 3GPP TS 32.291 [22] | Indicates the action to be taken when the user's account cannot cover the service cost. |  |
| Float | 3GPP TS 29.571 [12] | Number with format "float" as defined in OpenAPI Specification [11]. | FLUS |
| FloatRm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "Float" data type, but with the OpenAPI "nullable: true" property. | FLUS |
| FlowDirection | 3GPP TS 29.512 [8] | Flow Direction. |  |
| Fqdn | 3GPP TS 29.571 [12] | Contains a FQDN |  |
| ExtMaxDataBurstVol | 3GPP TS 29.571 [12] | Maximum Burst Size. | TimeSensitiveNetworking |
| ExtMaxDataBurstVolRm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "ExtMaxDataBurstVol" data type, but with the OpenAPI "nullable: true" property | TimeSensitiveNetworking |
| Gpsi | 3GPP TS 29.571 [12] | Identifies the GPSI. |  |
| Ipv4Addr | 3GPP TS 29.571 [12] | Identifies an IPv4 address. |  |
| Ipv4AddrMask | 3GPP TS 29.571 [12] | IPv4 address mask | ExtraUEaddrReport |
| Ipv6Addr | 3GPP TS 29.571 [12] | Identifies an IPv6 address. |  |
| IpEndPoint | 3GPP TS 29.510 [27] | Contains a NF IPv4 and/or IPv6 end points. |  |
| MacAddr48 | 3GPP TS 29.571 [12] | MAC Address. |  |
| Metadata | 3GPP TS 29.571 [12] | This datatype contains opaque information for the service functions in the N6-LAN that is provided by AF and transparently sent to UPF. | SFC |
| NetLocAccessSupport | 3GPP TS 29.512 [8] | Indicates the access network does not support the report of the requested access network information. | NetLoc |
| NullValue | 3GPP TS 29.571 [12] | JSON's null value, used as an explicit value of an enumeration. | MCPTT-Preemption |
| PacketDelBudget | 3GPP TS 29.571 [12] | Packet Delay Budget. | TimeSensitiveNetworking |
| PacketDelBudgetRm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "PacketDelBudget" data type, but with the OpenAPI "nullable: true" property | TimeSensitiveNetworking |
| PacketErrRate | 3GPP TS 29.571 [12] | String representing Packet Error Rate (see clauses 5.7.3.5 and 5.7.4 of 3GPP TS 23.501 [8]), expressed as a "*scalar* x 10-k" where the scalar and the *exponent k are each encoded as one decimal digit*.Pattern: '^([0-9]E-[0-9])$'Examples:Packer Error Rate 4x10-6 shall be encoded as "4E-6".Packer Error Rate 10-2 shall be encoded as "1E-2". | ExtQoS |
| PacketErrRateRm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "PacketErrRate" data type, but with the OpenAPI "nullable: true" property. | ExtQoS |
| PacketLossRateRm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "PacketLossRate" data type, but with the OpenAPI "nullable: true" property. | CHEM |
| PduSessionId | 3GPP TS 29.571 [12] | The identification of the PDU session. | URSPEnforcement |
| PduSetQosPara | 3GPP TS 29.571 [12] | PDU Set related QoS parameters. | PDUSetHandling |
| PduSetQosParaRm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "PduSetQosPara" data type, but with the OpenAPI "nullable: true" property. | PDUSetHandling |
| Pei | 3GPP TS 29.571 [12] | Identifies the PEI. | IMS\_SBI |
| PlmnIdNid | 3GPP TS 29.571 [12] | Identifies the network: the PLMN Identifier (the mobile country code and the mobile network code) or the SNPN Identifier (the PLMN Identifier and the NID). |  |
| PreemptionCapability | 3GPP TS 29.571 [12] | Pre-emption capability. | MCPTT-Preemption |
| PreemptionVulnerability | 3GPP TS 29.571 [12] | Pre-emption vulnerability. | MCPTT-Preemption |
| PreemptionCapabilityRm | 3GPP TS 29.571 [12] | It is defined in the same way as the "PreemptionCapability" data type, but with the OpenAPI "nullable: true" property. | MCPTT-Preemption |
| PreemptionVulnerabilityRm | 3GPP TS 29.571 [12] | It is defined in the same way as the "PreemptionVulnerability" data type, but with the OpenAPI "nullable: true" property. | MCPTT-Preemption |
| PresenceInfo | 3GPP TS 29.571 [12] | Represents an area of interest, e.g. a Presence Reporting Area. | InfluenceOnTrafficRouting |
| PortManagementContainer | 3GPP TS 29.512 [8] | Contains port management information for a related port. | TimeSensitiveNetworking |
| ProblemDetails | 3GPP TS 29.571 [12] | Contains a detailed information about an error. |  |
| ProtocolDescription | 3GPP TS 29.571 [12] | Represents Protocol description of the media flow | PDUSetHandlingPowerSaving |
| QosMonitoringParamType | 3GPP TS 29.512 [8] | Contains the QoS monitoring parameter to be monitored. | EnQosMon |
| RanNasRelCause | 3GPP TS 29.512 [8] | Indicates RAN and/or NAS release cause code information. | RAN-NAS-Cause |
| RatType | 3GPP TS 29.571 [12] | RAT Type. |  |
| RedirectResponse | 3GPP TS 29.571 [12] | Contains redirection related information. | ES3XX |
| RedundantPduSessionInformation | 3GPP TS 29.502 [57] | Contains the Redundant PDU session information, i.e, the RSN and the PDU Session Pair ID. | URSPEnforcement |
| RequestedQosMonitoringParameter | 3GPP TS 29.512 [8] | Indicate the QoS information to be monitored, e.g. UL packet delay, DL packet delay or round trip packet delay between the UE and the UPF is to be monitored when the QoS Monitoring for packet delay is enabled for the service data flow. | QoSMonitoring |
| RouteToLocation | 3GPP TS 29.571 [12] | Identifies routes to locations of applications. | InfluenceOnTrafficRouting |
| SatelliteBackhaulCategory | 3GPP TS 29.571 [12] | Indicates the satellite or non-satellite backhaul category | SatelliteBackhaul |
| Snssai | 3GPP TS 29.571 [12] | Identifies the S-NSSAI. |  |
| SscMode | 3GPP TS 29.571 [12] | Service and session continuity mode. | URSPEnforcement |
| Supi | 3GPP TS 29.571 [12] | Identifies the SUPI. |  |
| SupportedFeatures | 3GPP TS 29.571 [12] | Used to negotiate the applicability of the optional features defined in table 5.8-1. |  |
| TimeWindow | 3GPP TS 29.122 [15] | Time window identified by a start time and a stop time. | EnTSCAC |
| TrafficCorrelationInfo | 3GPP TS 29.519 [53] | Contains the information for traffic correlation. | CommonEASDNAI |
| TimeZone | 3GPP TS 29.571 [12] | Time Zone. | NetLoc |
| TsnBridgeInfo | 3GPP TS 29.512 [8] | TSC user plane node information. | TimeSensitiveNetworking |
| Uint32 | 3GPP TS 29.571 [12] | Unsigned 32-bit integers, i.e. only value 0 and 32-bit integers above 0 are permissible. | ResourceSharing |
| Uint32Rm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "Uint32" data type, but with the OpenAPI "nullable: true" property. | ResourceSharing |
| Uinteger | 3GPP TS 29.571 [12] | Unsigned Integer, i.e. only value 0 and integers above 0 are permissible.Minimum = 0. | TimeSensitiveNetworking |
| UintegerRm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "Uint32" data type, but with the OpenAPI "nullable: true" property. | AF\_latency, QoSMonitoring |
| UpPathChgEvent | 3GPP TS 29.512 [8] | Contains the subscription information to be delivered to SMF for the UP path management events. | InfluenceOnTrafficRouting |
| Uri | 3GPP TS 29.571 [12] | String providing an URI. |  |
| UsageThreshold | 3GPP TS 29.122 [15] | Usage Thresholds. | SponsoredConnectivity |
| UsageThresholdRm | 3GPP TS 29.122 [15] | This data type is defined in the same way as the "UsageThreshold" data type, but with the OpenAPI "nullable: true" property. | SponsoredConnectivity |
| UserLocation | 3GPP TS 29.571 [12] | User Location(s). | NetLoc |

\*\*\* 4th Change \*\*\*

#### 5.6.2.7 Type MediaComponent

Table 5.6.2.7-1: Definition of type MediaComponent

| Attribute name | Data type | P | Cardinality | Description | Applicability |
| --- | --- | --- | --- | --- | --- |
| afAppId | AfAppId | O | 0..1 | Contains information that identifies the particular service the AF session belongs to. |  |
| afRoutReq | AfRoutingRequirement | O | 0..1 | Indicates the AF traffic routing requirements. | InfluenceOnTrafficRouting |
| afSfcReq | AfSfcRequirement | O | 0..1 | Indicates the AF requirements on steering traffic to a pre-configured chain of service functions on N6-LAN. | SFC |
| qosReference | string | O | 0..1 | Identifies a pre-defined QoS information. | AuthorizationWithRequiredQoS |
| altSerReqs | array(string) | O | 1..N | 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 1) | AuthorizationWithRequiredQoS |
| altSerReqsData | array(AlternativeServiceRequirementsData) | O | 1..N | 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 1) | AltSerReqsWithIndQoS |
| disUeNotif | boolean | O | 0..1 | Indicates to disable QoS flow parameters signalling to the UE when the SMF is notified by the NG-RAN of changes in the fulfilled QoS situation when it is included and set to "true". The fulfilled situation is either the QoS profile or an Alternative QoS Profile. The default value "false" shall apply, if the attribute is not present and has not been supplied previously. | DisableUENotification |
| contVer | ContentVersion | O | 0..1 | Represents the content version of a media component. | MediaComponentVersioning |
| desMaxLatency | Float | O | 0..1 | Indicates a maximum desirable transport level packet latency in milliseconds. | FLUS, QoSHint |
| desMaxLoss | Float | O | 0..1 | Indicates the maximum desirable transport level packet loss rate in percent (without "%" sign). | FLUS, QoSHint |
| flusId | string | O | 0..1 | Indicates that the media component is used for FLUS media.It is derived from the media level attribute "a=label:" (see IETF RFC 4574 [50]) obtained from the SDP body. It contains the string after "a=label:" starting with "flus" and may be followed by more characters as described in 3GPP TS 26.238 [51]. | FLUS |
| medCompN | integer | M | 1 | Identifies the media component number, and it contains the ordinal number of the media component. |  |
| medSubComps | map(MediaSubComponent) | O | 1..N | Contains the requested bitrate and filters for the set of service data flows identified by their common flow identifier. The key of the map is the attribute "fNum".(NOTE 3) |  |
| medType | MediaType | O | 0..1 | Indicates the media type of the service. |  |
| marBwUl | BitRate | O | 0..1 | Maximum requested bandwidth for the Uplink. |  |
| marBwDl | BitRate | O | 0..1 | Maximum requested bandwidth for the Downlink. |  |
| maxPacketLossRateDl | PacketLossRateRm | O | 0..1 | Indicates the downlink maximum rate for lost packets that can be tolerated for the service data flow. | CHEM |
| maxPacketLossRateUl | PacketLossRateRm | O | 0..1 | Indicates the uplink maximum rate for lost packets that can be tolerated for the service data flow. | CHEM |
| maxSuppBwDl | BitRate | O | 0..1 | Maximum supported bandwidth for the Downlink. | IMS\_SBI |
| maxSuppBwUl | BitRate | O | 0..1 | Maximum supported bandwidth for the Uplink. | IMS\_SBI |
| minDesBwDl | BitRate | O | 0..1 | Minimum desired bandwidth for the Downlink. | IMS\_SBI |
| minDesBwUl | BitRate | O | 0..1 | Minimum desired bandwidth for the Uplink. | IMS\_SBI |
| mirBwUl | BitRate | O | 0..1 | Minimum requested bandwidth for the Uplink. |  |
| mirBwDl | BitRate | O | 0..1 | Minimum requested bandwidth for the Downlink. |  |
| fStatus | FlowStatus | O | 0..1 | Indicates whether the status of the service data flows is enabled, or disabled. |  |
| preemptCap | PreemptionCapability | O | 0..1 | Defines whether the media flow may get resources that were already assigned to another media flow with a lower priority level. It may be included together with "prioSharingInd" for ARP decision. | MCPTT-Preemption |
| preemptVuln | PreemptionVulnerability | O | 0..1 | Defines whether the media flow may lose the resources assigned to it in order to admit a media flow with higher priority level. It may be included together with "prioSharingInd" for ARP decision. | MCPTT-Preemption |
| prioSharingInd | PrioritySharingIndicator | O | 0..1 | Indicates that the media flow is allowed to use the same ARP as media flows belonging to other "Individual Application Session Context" resources bound to the same PDU session. | PrioritySharing |
| resPrio | ReservPriority | O | 0..1 | Indicates the reservation priority. |  |
| rrBw | BitRate | O | 0..1 | Indicates the maximum required bandwidth in bits per second for RTCP receiver reports within the session component as specified in IETF RFC 3556 [37]. The bandwidth contains all the overhead coming from the IP-layer and the layers above, i.e. IP, UDP and RTCP. | IMS\_SBI |
| rsBw | BitRate | O | 0..1 | Indicates the maximum required bandwidth in bits per second for RTCP sender reports within the session component as specified in IETF RFC 3556 [37]. The bandwidth contains all the overhead coming from the IP-layer and the layers above, i.e. IP, UDP and RTCP. | IMS\_SBI |
| sharingKeyDl | Uint32 | O | 0..1 | Identifies which media components share resources in the downlink direction.If resource sharing applies between media components across "Individual Application Session Context" resources for the same PDU session, the same value of the "sharingKeyDl" attribute shall be used. If resource sharing does not apply among media components across "Individual Application Session Context" resources for the same PDU session, a different value for the "sharingKeyDl" attribute shall be used. | ResourceSharing |
| sharingKeyUl | Uint32 | O | 0..1 | Identifies which media components share resources in the uplink direction.If resource sharing applies between media components across "Individual Application Session Context" resources for the same PDU session, the same value of the "sharingKeyUl" attribute shall be used. If resource sharing does not apply among media components across "Individual Application Session Context" resources for the same PDU session, a different value for the "sharingKeyUl" attribute shall be used. | ResourceSharing |
| codecs | array(CodecData) | O | 1..2 | Indicates the codec data. |  |
| tsnQos | TsnQoSContainer | O | 0..1 | Transports QoS parameters for TSC traffic. | TimeSensitiveNetworkingXRM\_5G |
| tscaiInputUl | TscaiInputContainer | O | 0..1 | Transports TSCAI input parameters for TSC traffic at the ingress interface of the DS-TT/UE (uplink flow direction). (NOTE 2) | TimeSensitiveNetworking |
| tscaiInputDl | TscaiInputContainer | O | 0..1 | Transports TSCAI input parameters for TSC traffic at the ingress of the NW-TT (downlink flow direction). (NOTE 2) | TimeSensitiveNetworking |
| tscaiTimeDom | Uinteger | O | 0..1 | Indicates the (g)PTP domain that the (TSN)AF is located in. | TimeSensitiveCommunication |
| capBatAdaptation | boolean | O | 0..1 | Indicates the capability for AF to adjust the burst sending time, when it is supported and set to "true".The default value is "false" if omitted.(NOTE 2) | EnTSCAC |
| rTLatencyInd | boolean | O | 0..1 | Indicates the service data flow needs to meet the Round-Trip (RT) latency requirement of the service, when it is included and set to "true".The default value is "false" if omitted.(NOTE 4, NOTE 5) | RTLatency |
| pdb | PacketDelBudget | O | 0..1 | Indicates an upper bound for the time that a packet may be delayed between the UE and the PSA UPF. | RTLatency |
| rTLatencyIndCorreId | RttFlowReference | O | 0..1 | Identifies which Media Components contribute to the RT Latency requirement for two service data flows.(NOTE 4) | RTLatency |
| pduSetQosDl | PduSetQosPara | O | 0..1 | PDU Set QoS parameter(s) for the downlink direction. | PDUSetHandling |
| pduSetQosUl | PduSetQosPara | O | 0..1 | PDU Set QoS parameter(s) for the uplink direction. | PDUSetHandling |
| protoDescDl | ProtocolDescription | O | 0..1 | Downlink Protocol description for PDU Set identification and/or dectection of the end of data burst in UPF.  | PDUSetHandlingPowerSaving |
| protoDescUl | ProtocolDescription | O | 0..1 | Uplink Protocol description for PDU Set identification in UPF.  | PDUSetHandling |
| periodUl | DurationMilliSec | O | 0..1 | Indicates the time period between the start of the two data bursts in units of milliseconds in Uplink direction. | PowerSaving |
| periodDl | DurationMilliSec | O | 0..1 | Indicates the time period between the start of the two data bursts in units of milliseconds in Downlink direction. | PowerSaving |
| l4sInd | UplinkDownlinkSupport | O | 0..1 | Indicates whether ECN marking for L4S support is supported for the UL, the DL or both, UL and DL.(NOTE 3) | L4S |
| NOTE 1: The attributes "altSerReqs" and "altSerReqsData" are mutually exclusive. Of the two, only the attribute "altSerReqs" may be provided if the attribute "qosReference" is provided, while only the attribute "altSerReqsData" may be provided if the attribute "qosReference" is not provided.NOTE 2: The "burstArrivalTimeWnd" attribute, within the "tscaiInputUl" and/or "tscaiInputDl" attributes, and the "capBatAdaptation attribute are mutually exclusive.NOTE 3: Within the MediaComponent entry, the NF service consumer may include either the indication of L4S support within the "l4sInd" attribute or the request for congestion measurements within the "evSubsc" attribute included in one or more entries of the "medSubComps" attribute, but the indication of L4S and the subscription to congestion monitoring shall not be provided simultaneously.NOTE 4: The "rTLatencyInd" attribute and the "rTLatencyIndCorreId" attribute are mutually exclusive.NOTE 5: If more than one "medSubComps" attributes are present, the PCF selects the media subcomponent and derive the PCC rule for RT latency control. |

All IP flows within a "MediaSubComponent" data type are permanently disabled by supplying "FlowStatus" data type with a deletion indication.

Bandwidth information and the "fStatus" attribute provided within the MediaComponent applies to all those IP flows within the media component, for which no corresponding information is being provided within the "medSubComps" attribute. As defined in 3GPP TS 29.513 [7], the bandwidth information within the media component level "marBwUl" and "marBwDl" attributes applies separately to each media subcomponent except for media subcomponents with a "flowUsage" attribute with the value "RTCP". The mapping of bandwidth information for RTCP media subcomponent is defined in 3GPP TS 29.513 [7] clause 7.3.3.

\*\*\* 5th Change \*\*\*

#### 5.6.2.26 Type MediaComponentRm

This data type is defined in the same way as the "MediaComponent" data type, but:

- with the OpenAPI "nullable: true" property; and

- the removable attributes "afRoutReq" is defined with the removable data type "AfRoutingRequirementRm"; "maxPacketLossRateDl" and "maxPacketLossRateUl" are defined with the removable data type "PacketLossRateRm"; "medSubComps" is defined with the removable data type "MediaSubComponentRm"; "preemptCap" is defined with the removable data type "PreemptionCapabilityRm"; "preemptVuln" is defined with the removable data type "PreemptionVulnerabilityRm"; "marBwDl", "marBwUl", "minDesBwDl", "minDesBwUl", "mirBwDl", "mirBwUl", "maxSuppBwDl", "maxSuppBwUl", "rrBw", "rsBw" are defined with the removable data type "BitRateRm"; "sharingKeyDl", "sharingKeyUl", "tsnQos", "tsnQos", "pduSetQosDl" and "pduSetQosUl" are defined with the removable data types "Uint32Rm", "TsnQosContainerRm" and "pduSetQosParaRm"; the removable attributes "desMaxLatency" and "desMaxLoss are defined with the removable data type "FloatRm"; "protoDescDl" and "protoDescUl" are defined with the removable data type "ProtocolDescription", "protoDescUl" is defined with the removable data type "ProtocolDescription", the removable attribute "pdb" with the removable data type "PacketDelBudgetRm", the removable attribute "rTLatencyIndCorreId" with the removable data type "RttFlowReferenceRm", the removable attribute "flusId", "qosReference", "altSerReqs" and "afSfcReq" are defined as nullable in the OpenAPI.

Table 5.6.2.26-1: Definition of type MediaComponentRm

| Attribute name | Data type | P | Cardinality | Description | Applicability |
| --- | --- | --- | --- | --- | --- |
| afAppId | AfAppId | O | 0..1 | Contains information that identifies the particular service the AF session belongs to. |  |
| afRoutReq | AfRoutingRequirementRm | O | 0..1 | Indicates the AF traffic routing requirements. | InfluenceOnTrafficRouting |
| afSfcReq | AfSfcRequirement | O | 0..1 | Indicates the AF requirements on steering traffic to a pre-configured chain of service functions on N6-LAN. | SFC |
| qosReference | string | O | 0..1 | Identifies a pre-defined QoS information. | AuthorizationWithRequiredQoS |
| altSerReqs | array(string) | O | 1..N | 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 1) | AuthorizationWithRequiredQoS |
| altSerReqsData | array(AlternativeServiceRequirementsData) | O | 1..N | 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 1) | AltSerReqsWithIndQoS |
| disUeNotif | boolean | O | 0..1 | Indicates to disable QoS flow parameters signalling to the UE when the SMF is notified by the NG-RAN of changes in the fulfilled QoS situation when it is included and set to "true". The fulfilled situation is either the QoS profile or an Alternative QoS Profile. The default value "false" shall apply, if the attribute is not present and has not been supplied previously. | DisableUENotification |
| contVer | ContentVersion | O | 0..1 | Represents the content version of a media component. | MediaComponentVersioning |
| desMaxLatency | FloatRm | O | 0..1 | Indicates a maximum desirable transport level packet latency in milliseconds. | FLUS, QoSHint |
| desMaxLoss | FloatRm | O | 0..1 | Indicates the maximum desirable transport level packet loss rate in percent (without "%" sign). | FLUS, QoSHint |
| flusId | string | O | 0..1 | Indicates that the media component is used for FLUS media.It is derived from the media level attribute "a=label:" (see IETF RFC 4574 [50]) obtained from the SDP body. It contains the string after "a=label:" starting with "flus" and may be followed by more characters as described in 3GPP TS 26.238 [51]. | FLUS |
| maxPacketLossRateDl | PacketLossRateRm | O | 0..1 | Indicates the downlink maximum rate for lost packets that can be tolerated for the service data flow. | CHEM |
| maxPacketLossRateUl | PacketLossRateRm | O | 0..1 | Indicates the uplink maximum rate for lost packets that can be tolerated for the service data flow. | CHEM |
| medCompN | integer | M | 1 | Identifies the media component number, and it contains the ordinal number of the media component. |  |
| medSubComps | map(MediaSubComponentRm) | O | 1..N | Contains the requested bitrate and filters for the set of service data flows identified by their common flow identifier. The key of the map is the attribute "fNum".(NOTE 3) |  |
| medType | MediaType | O | 0..1 | Indicates the media type of the service. |  |
| marBwUl | BitRateRm | O | 0..1 | Maximum requested bandwidth for the Uplink. |  |
| marBwDl | BitRateRm | O | 0..1 | Maximum requested bandwidth for the Downlink. |  |
| maxSuppBwDl | BitRateRm | O | 0..1 | Maximum supported bandwidth for the Downlink. | IMS\_SBI |
| maxSuppBwUl | BitRateRm | O | 0..1 | Maximum supported bandwidth for the Uplink. | IMS\_SBI |
| minDesBwDl | BitRateRm | O | 0..1 | Minimum desired bandwidth for the Downlink. | IMS\_SBI |
| minDesBwUl | BitRateRm | O | 0..1 | Minimum desired bandwidth for the Uplink. | IMS\_SBI |
| mirBwUl | BitRateRm | O | 0..1 | Minimum requested bandwidth for the Uplink. |  |
| mirBwDl | BitRateRm | O | 0..1 | Minimum requested bandwidth for the Downlink. |  |
| fStatus | FlowStatus | O | 0..1 | Indicates whether the status of the service data flows is enabled, or disabled. |  |
| preemptCap | PreemptionCapabilityRm | O | 0..1 | Defines whether the media flow may get resources that were already assigned to another media flow with a lower priority level. | MCPTT-Preemption |
| preemptVuln | PreemptionVulnerabilityRm | O | 0..1 | Defines whether the media flow may lose the resources assigned to it in order to admit a media flow with higher priority level. | MCPTT-Preemption |
| prioSharingInd | PrioritySharingIndicator | O | 0..1 | Indicates that the media flow is allowed to use the same ARP as media flows belonging to other "Individual Application Session Context" resources bound to the same PDU session. | PrioritySharing |
| resPrio | ReservPriority | O | 0..1 | Indicates the reservation priority. |  |
| rrBw | BitRateRm | O | 0..1 | Indicates the maximum required bandwidth in bits per second for RTCP receiver reports within the session component as specified in IETF RFC 3556 [37]. The bandwidth contains all the overhead coming from the IP-layer and the layers above, i.e. IP, UDP and RTCP. | IMS\_SBI |
| rsBw | BitRateRm | O | 0..1 | Indicates the maximum required bandwidth in bits per second for RTCP sender reports within the session component as specified in IETF RFC 3556 [37]. The bandwidth contains all the overhead coming from the IP-layer and the layers above, i.e. IP, UDP and RTCP. | IMS\_SBI |
| codecs | array(CodecData) | O | 1..2 | Indicates the codec data. |  |
| sharingKeyDl | Uint32Rm | O | 0..1 | Identifies which media components share resources in the downlink direction.If resource sharing applies between media components across "Individual Application Session Context" resources for the same PDU session, the same value of the "sharingKeyDl" attribute shall be used. If resource sharing does not apply among media components across "Individual Application Session Context" resources for the same PDU session, a different value for the "sharingKeyDl" attribute shall be used.If resource sharing does no longer apply for this media component, the "sharingKeyDl" attribute shall be set to "null". | ResourceSharing |
| sharingKeyUl | Uint32Rm | O | 0..1 | Identifies which media components share resources in the uplink direction.If resource sharing applies between media components across "Individual Application Session Context" resources for the same PDU session, the same value of the "sharingKeyUl" attribute shall be used. If resource sharing does not apply among media components across "Individual Application Session Context" resources for the same PDU session, a different value for the "sharingKeyUl" attribute shall be used.If resource sharing does no longer apply for this media component, the "sharingKeyUl" attribute shall be set to "null". | ResourceSharing |
| tsnQos | TsnQoSContainerRm | O | 0..1 | Transports QoS parameters for TSC traffic. | TimeSensitiveNetworkingXRM\_5G |
| tscaiInputUl | TscaiInputContainer | O | 0..1 | Transports TSCAI input parameters for TSC traffic at the ingress interface of the DS-TT/UE (uplink flow direction). | TimeSensitiveNetworking |
| tscaiInputDl | TscaiInputContainer | O | 0..1 | Transports TSCAI input parameters for TSC traffic at the ingress of the NW-TT (downlink flow direction). | TimeSensitiveNetworking |
| tscaiTimeDom | Uinteger | O | 0..1 | Indicates the (g)PTP domain that the (TSN)AF is located in. | TimeSensitiveCommunication |
| capBatAdaptation | boolean | O | 0..1 | Indicates the capability for AF to adjust the burst sending time, when it is supported and set to "true".The default value is "false" if omitted.(NOTE 2) | EnTSCAC |
| rTLatencyInd | boolean | O | 0..1 | Indicates the service data flow needs to meet the Round-Trip (RT) latency requirement of the service, when it is included and set to "true".The default value is "false" if omitted. | RTLatency |
| pdb | PacketDelBudgetRm | O | 0..1 | Indicates an upper bound for the time that a packet may be delayed between the UE and the PSA UPF. | RTLatency |
| rTLatencyIndCorreId | RttFlowReferenceRm | O | 0..1 | Identifies which Media Components contribute to the RT Latency requirement for two service data flows. | RTLatency |
| pduSetQosDl | PduSetQosParaRm | O | 0..1 | PDU Set QoS parameter(s) for the downlink direction. | PDUSetHandling |
| pduSetQosUl | PduSetQosParaRm | O | 0..1 | PDU Set QoS parameter(s) for the uplink direction. | PDUSetHandling |
| protoDescDl | ProtocolDescription | O | 0..1 | Downlink Protocol description for PDU Set identification and/or dectection of the end of data burst in UPF | PDUSetHandlingPowerSaving |
| protoDescUl | ProtocolDescription | O | 0..1 | Uplink Protocol description for PDU Set identification in UE.  | PDUSetHandling |
| periodUl | DurationMilliSecRm | O | 0..1 | Indicates the time period between the start of the two data bursts in units of milliseconds in Uplink direction. | PowerSaving |
| periodDl | DurationMilliSecRm | O | 0..1 | Indicates the time period between the start of the two data bursts in units of milliseconds in Downlink direction. | PowerSaving |
| l4sInd | UplinkDownlinkSupport | O | 0..1 | When provided, it represents an explicit indication of whether ECN marking for L4S support is supported for the UL, the DL or both, UL and DL.It may be present when the media component is initially provided.(NOTE 3) | L4S |
| NOTE 1: The attributes "altSerReqs" and "altSerReqsData" are mutually exclusive.NOTE 2: The "burstArrivalTimeWnd" attribute, within the "tscaiInputUl" and/or "tscaiInputDl" attributes, and the "capBatAdaptation" attribute are mutually exclusive.NOTE 3: Within a MediaComponentRm entry, the NF service consumer may include either the indication of L4S support within the "l4sInd" attribute or the request for congestion measurements within the "evSubsc" attribute included in one or more entries of the "medSubComps" attribute. A MediaComponent entry within the Individual Application Session Context resource shall not contain simultaneously both, the indication of L4S support and the subscription to congestion monitoring. |

\*\*\* 6th Change \*\*\*

#### 5.6.2.59 Type RttFlowReferenceRm

This data type is defined in the same way as the "RttFlowReference" data type, but with the OpenAPI "nullable:true" property.

\*\*\* 7th Change \*\*\*

# A.2 Npcf\_PolicyAuthorization API

openapi: 3.0.0

info:

 title: Npcf\_PolicyAuthorization Service API

 version: 1.3.0-alpha.6

 description: |

 PCF Policy Authorization Service.

 © 2024, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

 All rights reserved.

externalDocs:

 description: 3GPP TS 29.514 V18.5.0; 5G System; Policy Authorization Service; Stage 3.

 url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.514/'

servers:

 - url: '{apiRoot}/npcf-policyauthorization/v1'

 variables:

 apiRoot:

 default: https://example.com

 description: apiRoot as defined in clause 4.4 of 3GPP TS 29.501

security:

 - {}

 - oAuth2ClientCredentials:

 - npcf-policyauthorization

paths:

 /app-sessions:

 post:

 summary: Creates a new Individual Application Session Context resource

 operationId: PostAppSessions

 tags:

 - Application Sessions (Collection)

 security:

 - {}

 - oAuth2ClientCredentials:

 - npcf-policyauthorization

 - oAuth2ClientCredentials:

 - npcf-policyauthorization

 - npcf-policyauthorization:policy-auth-mgmt

 requestBody:

 description: Contains the information for the creation the resource.

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '201':

 description: Successful creation of the resource

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: >

 Contains the URI of the created individual application session context resource,

 according to the structure

 {apiRoot}/npcf-policyauthorization/v1/app-sessions/{appSessionId}

 or the URI of the created events subscription sub-resource,

 according to the structure

 {apiRoot}/npcf-policyauthorization/v1/app-sessions/{appSessionId}

 /events-subscription

 required: true

 schema:

 type: string

 '303':

 description: >

 See Other. The result of the HTTP POST request would be equivalent to the existing

 Application Session Context.

 headers:

 Location:

 description: >

 Contains the URI of the existing individual Application Session Context resource.

 required: true

 schema:

 type: string

 '400':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/401'

 '403':

 description: Forbidden

 content:

 application/problem+json:

 schema:

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

 headers:

 Retry-After:

 description: >

 Indicates the time the AF has to wait before making a new request. It can be a

 non-negative integer (decimal number) indicating the number of seconds the AF

 has to wait before making a new request or an HTTP-date after which the AF can

 retry a new request.

 schema:

 anyOf:

 - type: integer

 - type: string

 '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:

 terminationRequest:

 '{$request.body#/ascReqData/notifUri}/terminate':

 post:

 requestBody:

 description: >

 Request of the termination of the Individual Application Session Context.

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: The receipt of the notification is acknowledged.

 '307':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/308'

 '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'

 eventNotification:

 '{$request.body#/ascReqData/evSubsc/notifUri}/notify':

 post:

 requestBody:

 description: Notification of an event occurrence in the PCF.

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: The receipt of the notification is acknowledged.

 '307':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/308'

 '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'

 detected5GsBridgeForPduSession:

 '{$request.body#/ascReqData/evSubsc/notifUri}/new-bridge':

 post:

 requestBody:

 description: Notification of a new TSC user plane node detected in the PCF.

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: The receipt of the notification is acknowledged.

 '307':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/308'

 '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'

 eventNotificationPduSession:

 '{$request.body#/ascReqData/evSubsc/notifUri}/pdu-session':

 post:

 requestBody:

 description: Notification of PDU session established or terminated.

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: The receipt of the notification is acknowledged.

 '307':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/308'

 '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'

 /app-sessions/pcscf-restoration:

 post:

 summary: "Indicates P-CSCF restoration and does not create an Individual Application Session Context"

 operationId: PcscfRestoration

 tags:

 - PCSCF Restoration Indication

 requestBody:

 description: PCSCF Restoration Indication.

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: The deletion is confirmed without returning additional data.

 '307':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/308'

 '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'

 /app-sessions/{appSessionId}:

 get:

 summary: "Reads an existing Individual Application Session Context"

 operationId: GetAppSession

 tags:

 - Individual Application Session Context (Document)

 security:

 - {}

 - oAuth2ClientCredentials:

 - npcf-policyauthorization

 - oAuth2ClientCredentials:

 - npcf-policyauthorization

 - npcf-policyauthorization:policy-auth-mgmt

 parameters:

 - name: appSessionId

 description: String identifying the resource.

 in: path

 required: true

 schema:

 type: string

 responses:

 '200':

 description: A representation of the resource is returned.

 content:

 application/json:

 schema:

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

 '307':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/308'

 '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: "Modifies an existing Individual Application Session Context"

 operationId: ModAppSession

 tags:

 - Individual Application Session Context (Document)

 security:

 - {}

 - oAuth2ClientCredentials:

 - npcf-policyauthorization

 - oAuth2ClientCredentials:

 - npcf-policyauthorization

 - npcf-policyauthorization:policy-auth-mgmt

 parameters:

 - name: appSessionId

 description: String identifying the resource.

 in: path

 required: true

 schema:

 type: string

 requestBody:

 description: Modification of the resource.

 required: true

 content:

 application/merge-patch+json:

 schema:

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

 responses:

 '200':

 description: >

 Successful modification of the resource and a representation of that resource is

 returned.

 content:

 application/json:

 schema:

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

 '204':

 description: The successful modification.

 '307':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/401'

 '403':

 description: Forbidden

 content:

 application/problem+json:

 schema:

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

 headers:

 Retry-After:

 description: >

 Indicates the time the AF has to wait before making a new request. It can be a

 non-negative integer (decimal number) indicating the number of seconds the AF has

 to wait before making a new request or an HTTP-date after which the AF can retry

 a new request.

 schema:

 anyOf:

 - type: integer

 - type: string

 '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:

 eventNotification:

 '{$request.body#/ascReqData/evSubsc/notifUri}/notify':

 post:

 requestBody:

 description: Notification of an event occurrence in the PCF.

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: The receipt of the notification is acknowledged

 '307':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/308'

 '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'

 /app-sessions/{appSessionId}/delete:

 post:

 summary: "Deletes an existing Individual Application Session Context"

 operationId: DeleteAppSession

 tags:

 - Individual Application Session Context (Document)

 security:

 - {}

 - oAuth2ClientCredentials:

 - npcf-policyauthorization

 - oAuth2ClientCredentials:

 - npcf-policyauthorization

 - npcf-policyauthorization:policy-auth-mgmt

 parameters:

 - name: appSessionId

 description: String identifying the Individual Application Session Context resource.

 in: path

 required: true

 schema:

 type: string

 requestBody:

 description: >

 Deletion of the Individual Application Session Context resource, req notification.

 required: false

 content:

 application/json:

 schema:

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

 responses:

 '200':

 description: The deletion of the resource is confirmed and a resource is returned.

 content:

 application/json:

 schema:

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

 '204':

 description: The deletion is confirmed without returning additional data.

 '307':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/308'

 '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'

 /app-sessions/{appSessionId}/events-subscription:

 put:

 summary: "creates or modifies an Events Subscription subresource"

 operationId: updateEventsSubsc

 tags:

 - Events Subscription (Document)

 parameters:

 - name: appSessionId

 description: String identifying the Events Subscription resource.

 in: path

 required: true

 schema:

 type: string

 requestBody:

 description: Creation or modification of an Events Subscription resource.

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '201':

 description: >

 The creation of the Events Subscription resource is confirmed and its representation is

 returned.

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: >

 Contains the URI of the created Events Subscription resource,

 according to the structure

 {apiRoot}/npcf-policyauthorization/v1/app-sessions/{appSessionId}/

 events-subscription

 required: true

 schema:

 type: string

 '200':

 description: >

 The modification of the Events Subscription resource is confirmed its representation is

 returned.

 content:

 application/json:

 schema:

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

 '204':

 description: >

 The modification of the Events Subscription subresource is confirmed without returning

 additional data.

 '307':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/308'

 '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:

 eventNotification:

 '{$request.body#/notifUri}/notify':

 post:

 requestBody:

 description: >

 Contains the information for the notification of an event occurrence in the PCF.

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: The receipt of the notification is acknowledged.

 '307':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/308'

 '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 Events Subscription subresource

 operationId: DeleteEventsSubsc

 tags:

 - Events Subscription (Document)

 parameters:

 - name: appSessionId

 description: String identifying the Individual Application Session Context resource.

 in: path

 required: true

 schema:

 type: string

 responses:

 '204':

 description: >

 The deletion of the of the Events Subscription sub-resource is confirmed without

 returning additional data.

 '307':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/308'

 '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:

 securitySchemes:

 oAuth2ClientCredentials:

 type: oauth2

 flows:

 clientCredentials:

 tokenUrl: '{nrfApiRoot}/oauth2/token'

 scopes:

 npcf-policyauthorization: Access to the Npcf\_PolicyAuthorization API

 npcf-policyauthorization:policy-auth-mgmt: >

 Access to service operations applying to PCF Policy Authorization for creation,

 updation, deletion, retrieval.

 schemas:

 AppSessionContext:

 description: Represents an Individual Application Session Context resource.

 type: object

 properties:

 ascReqData:

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

 ascRespData:

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

 evsNotif:

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

 AppSessionContextReqData:

 description: Identifies the service requirements of an Individual Application Session Context.

 type: object

 required:

 - notifUri

 - suppFeat

 oneOf:

 - required: [ueIpv4]

 - required: [ueIpv6]

 - required: [ueMac]

 properties:

 afAppId:

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

 afChargId:

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

 afReqData:

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

 afRoutReq:

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

 afSfcReq:

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

 aspId:

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

 bdtRefId:

 $ref: 'TS29122\_CommonData.yaml#/components/schemas/BdtReferenceId'

 dnn:

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

 evSubsc:

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

 mcpttId:

 description: Indication of MCPTT service request.

 type: string

 mcVideoId:

 description: Indication of MCVideo service request.

 type: string

 medComponents:

 type: object

 additionalProperties:

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

 minProperties: 1

 description: >

 Contains media component information. The key of the map is the medCompN attribute.

 multiModalId:

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

 ipDomain:

 type: string

 mpsAction:

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

 mpsId:

 description: Indication of MPS service request.

 type: string

 mcsId:

 description: Indication of MCS service request.

 type: string

 preemptControlInfo:

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

 qosDuration:

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

 qosInactInt:

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

 resPrio:

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

 servInfStatus:

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

 notifUri:

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

 servUrn:

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

 sliceInfo:

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

 sponId:

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

 sponStatus:

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

 supi:

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

 gpsi:

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

 suppFeat:

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

 ueIpv4:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 ueIpv6:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Addr'

 ueMac:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/MacAddr48'

 tsnBridgeManCont:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/BridgeManagementContainer'

 tsnPortManContDstt:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/PortManagementContainer'

 tsnPortManContNwtts:

 type: array

 items:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/PortManagementContainer'

 minItems: 1

 tscNotifUri:

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

 tscNotifCorreId:

 type: string

 description: >

 Correlation identifier for TSC management information notifications.

 AppSessionContextRespData:

 description: >

 Describes the authorization data of an Individual Application Session Context created by

 the PCF.

 type: object

 properties:

 servAuthInfo:

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

 directNotifReports:

 type: array

 items:

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

 minItems: 1

 description: >

 QoS monitoring parameter(s) that cannot be directly notified for the indicated flows.

 ueIds:

 type: array

 items:

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

 minItems: 1

 suppFeat:

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

 AppSessionContextUpdateDataPatch:

 description: >

 Identifies the modifications to an Individual Application Session Context and/or the

 modifications to the sub-resource Events Subscription.

 type: object

 properties:

 ascReqData:

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

 AppSessionContextUpdateData:

 description: >

 Identifies the modifications to the "ascReqData" property of an Individual Application

 Session Context which may include the modifications to the sub-resource Events Subscription.

 type: object

 properties:

 afAppId:

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

 afRoutReq:

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

 afSfcReq:

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

 aspId:

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

 bdtRefId:

 $ref: 'TS29122\_CommonData.yaml#/components/schemas/BdtReferenceId'

 evSubsc:

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

 mcpttId:

 description: Indication of MCPTT service request.

 type: string

 mcVideoId:

 description: Indication of modification of MCVideo service.

 type: string

 medComponents:

 type: object

 additionalProperties:

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

 minProperties: 1

 description: >

 Contains media component information. The key of the map is the medCompN attribute.

 mpsAction:

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

 mpsId:

 description: Indication of MPS service request.

 type: string

 mcsId:

 description: Indication of MCS service request.

 type: string

 preemptControlInfo:

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

 qosDuration:

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

 qosInactInt:

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

 resPrio:

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

 servInfStatus:

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

 sipForkInd:

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

 sponId:

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

 sponStatus:

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

 tsnBridgeManCont:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/BridgeManagementContainer'

 tsnPortManContDstt:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/PortManagementContainer'

 tsnPortManContNwtts:

 type: array

 items:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/PortManagementContainer'

 minItems: 1

 tscNotifUri:

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

 tscNotifCorreId:

 type: string

 description: >

 Correlation identifier for TSC management information notifications.

 EventsSubscReqData:

 description: Identifies the events the application subscribes to.

 type: object

 required:

 - events

 properties:

 events:

 type: array

 items:

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

 minItems: 1

 notifUri:

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

 reqQosMonParams:

 type: array

 items:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/RequestedQosMonitoringParameter'

 minItems: 1

 qosMon:

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

 qosMonDatRate:

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

 pdvReqMonParams:

 type: array

 items:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/RequestedQosMonitoringParameter'

 minItems: 1

 pdvMon:

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

 congestMon:

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

 rttMon:

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

 reqAnis:

 type: array

 items:

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

 minItems: 1

 usgThres:

 $ref: 'TS29122\_CommonData.yaml#/components/schemas/UsageThreshold'

 notifCorreId:

 type: string

 afAppIds:

 type: array

 items:

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

 minItems: 1

 directNotifInd:

 type: boolean

 description: >

 Indicates whether the direct event notification is requested (true) or not (false) for

 the provided QoS monitoring parameters.

 Default value is false.

 avrgWndw:

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

 EventsSubscReqDataRm:

 description: >

 This data type is defined in the same way as the EventsSubscReqData data type, but with

 the OpenAPI nullable property set to true.

 type: object

 required:

 - events

 properties:

 events:

 type: array

 items:

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

 notifUri:

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

 reqQosMonParams:

 type: array

 items:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/RequestedQosMonitoringParameter'

 minItems: 1

 qosMon:

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

 qosMonDatRate:

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

 pdvReqMonParams:

 type: array

 items:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/RequestedQosMonitoringParameter'

 minItems: 1

 pdvMon:

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

 congestMon:

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

 reqAnis:

 type: array

 items:

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

 minItems: 1

 usgThres:

 $ref: 'TS29122\_CommonData.yaml#/components/schemas/UsageThresholdRm'

 notifCorreId:

 type: string

 directNotifInd:

 type: boolean

 nullable: true

 description: >

 Indicates whether the direct event notification is requested (true) or not (false) for

 the provided and/or previously provided QoS monitoring parameters.

 avrgWndw:

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

 nullable: true

 MediaComponent:

 description: Identifies a media component.

 type: object

 required:

 - medCompN

 allOf:

 - not:

 required: [altSerReqs,altSerReqsData]

 - not:

 required: [qosReference,altSerReqsData]

 properties:

 afAppId:

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

 afRoutReq:

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

 afSfcReq:

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

 qosReference:

 type: string

 disUeNotif:

 type: boolean

 altSerReqs:

 type: array

 items:

 type: string

 minItems: 1

 altSerReqsData:

 type: array

 items:

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

 minItems: 1

 description: >

 Contains alternative service requirements that include individual QoS parameter sets.

 contVer:

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

 codecs:

 type: array

 items:

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

 minItems: 1

 maxItems: 2

 desMaxLatency:

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

 desMaxLoss:

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

 flusId:

 type: string

 fStatus:

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

 marBwDl:

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

 marBwUl:

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

 maxPacketLossRateDl:

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

 maxPacketLossRateUl:

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

 maxSuppBwDl:

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

 maxSuppBwUl:

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

 medCompN:

 type: integer

 medSubComps:

 type: object

 additionalProperties:

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

 minProperties: 1

 description: >

 Contains the requested bitrate and filters for the set of service data flows identified

 by their common flow identifier. The key of the map is the fNum attribute.

 medType:

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

 minDesBwDl:

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

 minDesBwUl:

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

 mirBwDl:

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

 mirBwUl:

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

 preemptCap:

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

 preemptVuln:

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

 prioSharingInd:

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

 resPrio:

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

 rrBw:

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

 rsBw:

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

 sharingKeyDl:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

 sharingKeyUl:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

 tsnQos:

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

 tscaiInputDl:

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

 tscaiInputUl:

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

 tscaiTimeDom:

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

 capBatAdaptation:

 type: boolean

 description: >

 Indicates the capability for AF to adjust the burst sending time, when it is supported

 and set to "true". The default value is "false" if omitted.

 rTLatencyInd:

 type: boolean

 description: >

 Indicates the service data flow needs to meet the Round-Trip (RT) latency requirement of

 the service, when it is included and set to "true". The default value is "false" if

 omitted.

 pdb:

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

 rTLatencyIndCorreId:

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

 pduSetQosDl:

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

 pduSetQosUl:

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

 protoDescDl:

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

 protoDescUl:

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

 periodUl:

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

 periodDl:

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

 l4sInd:

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

 MediaComponentRm:

 description: >

 This data type is defined in the same way as the MediaComponent data type, but with the

 OpenAPI nullable property set to true.

 type: object

 required:

 - medCompN

 not:

 required: [altSerReqs,altSerReqsData]

 properties:

 afAppId:

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

 afRoutReq:

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

 afSfcReq:

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

 qosReference:

 type: string

 nullable: true

 altSerReqs:

 type: array

 items:

 type: string

 minItems: 1

 nullable: true

 altSerReqsData:

 type: array

 items:

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

 minItems: 1

 description: >

 Contains removable alternative service requirements that include individual QoS

 parameter sets.

 nullable: true

 disUeNotif:

 type: boolean

 contVer:

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

 codecs:

 type: array

 items:

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

 minItems: 1

 maxItems: 2

 desMaxLatency:

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

 desMaxLoss:

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

 flusId:

 type: string

 nullable: true

 fStatus:

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

 marBwDl:

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

 marBwUl:

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

 maxPacketLossRateDl:

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

 maxPacketLossRateUl:

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

 maxSuppBwDl:

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

 maxSuppBwUl:

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

 medCompN:

 type: integer

 medSubComps:

 type: object

 additionalProperties:

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

 minProperties: 1

 description: >

 Contains the requested bitrate and filters for the set of service data flows identified

 by their common flow identifier. The key of the map is the fNum attribute.

 medType:

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

 minDesBwDl:

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

 minDesBwUl:

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

 mirBwDl:

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

 mirBwUl:

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

 preemptCap:

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

 preemptVuln:

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

 prioSharingInd:

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

 resPrio:

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

 rrBw:

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

 rsBw:

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

 sharingKeyDl:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32Rm'

 sharingKeyUl:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32Rm'

 tsnQos:

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

 tscaiInputDl:

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

 tscaiInputUl:

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

 tscaiTimeDom:

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

 capBatAdaptation:

 type: boolean

 description: >

 Indicates the capability for AF to adjust the burst sending time, when it is supported

 and set to "true". The default value is "false" if omitted.

 rTLatencyInd:

 type: boolean

 description: >

 Indicates the service data flow needs to meet the Round-Trip (RT) latency requirement of

 the service, when it is included and set to "true". The default value is "false" if

 omitted.

 pdb:

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

 rTLatencyIndCorreId:

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

 pduSetQosDl:

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

 pduSetQosUl:

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

 protoDescDl:

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

 protoDescUl:

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

 periodUl:

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

 periodDl:

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

 l4sInd:

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

 nullable: true

 MediaSubComponent:

 description: Identifies a media subcomponent.

 type: object

 required:

 - fNum

 properties:

 afSigProtocol:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/AfSigProtocol'

 ethfDescs:

 type: array

 items:

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

 minItems: 1

 maxItems: 2

 fNum:

 type: integer

 fDescs:

 type: array

 items:

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

 minItems: 1

 maxItems: 2

 addInfoFlowDescs:

 type: array

 items:

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

 minItems: 1

 maxItems: 2

 description: >

 Represents additional flow description information (flow label and IPsec SPI)

 per Uplink and/or Downlink IP flows.

 fStatus:

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

 marBwDl:

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

 marBwUl:

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

 tosTrCl:

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

 flowUsage:

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

 evSubsc:

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

 MediaSubComponentRm:

 description: >

 This data type is defined in the same way as the MediaSubComponent data type, but with the

 OpenAPI nullable property set to true. Removable attributes marBwDl and marBwUl are defined

 with the corresponding removable data type.

 type: object

 required:

 - fNum

 properties:

 afSigProtocol:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/AfSigProtocol'

 ethfDescs:

 type: array

 items:

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

 minItems: 1

 maxItems: 2

 nullable: true

 fNum:

 type: integer

 fDescs:

 type: array

 items:

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

 minItems: 1

 maxItems: 2

 nullable: true

 addInfoFlowDescs:

 type: array

 items:

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

 minItems: 1

 maxItems: 2

 nullable: true

 description: >

 Represents additional flow description information (flow label and IPsec SPI)

 per Uplink and/or Downlink IP flows.

 fStatus:

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

 marBwDl:

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

 marBwUl:

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

 tosTrCl:

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

 flowUsage:

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

 evSubsc:

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

 nullable: true

 EventsNotification:

 description: Describes the notification of a matched event.

 type: object

 required:

 - evSubsUri

 - evNotifs

 properties:

 adReports:

 type: array

 items:

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

 minItems: 1

 description: Includes the detected application report.

 accessType:

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

 addAccessInfo:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/AdditionalAccessInfo'

 relAccessInfo:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/AdditionalAccessInfo'

 anChargAddr:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/AccNetChargingAddress'

 anChargIds:

 type: array

 items:

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

 minItems: 1

 anGwAddr:

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

 l4sReports:

 type: array

 items:

 $ref: '#/components/schemas/L4sSupport'

 minItems: 1

 evSubsUri:

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

 evNotifs:

 type: array

 items:

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

 minItems: 1

 failedResourcAllocReports:

 type: array

 items:

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

 minItems: 1

 succResourcAllocReports:

 type: array

 items:

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

 minItems: 1

 noNetLocSupp:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/NetLocAccessSupport'

 outOfCredReports:

 type: array

 items:

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

 minItems: 1

 plmnId:

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

 qncReports:

 type: array

 items:

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

 minItems: 1

 qosMonReports:

 type: array

 items:

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

 minItems: 1

 qosMonDatRateReps:

 type: array

 items:

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

 minItems: 1

 pdvMonReports:

 type: array

 items:

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

 minItems: 1

 congestReports:

 type: array

 items:

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

 minItems: 1

 rttMonReports:

 type: array

 items:

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

 minItems: 1

 ranNasRelCauses:

 type: array

 items:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/RanNasRelCause'

 minItems: 1

 description: Contains the RAN and/or NAS release cause.

 ratType:

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

 satBackhaulCategory:

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

 ueLoc:

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

 ueLocTime:

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

 ueTimeZone:

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

 usgRep:

 $ref: 'TS29122\_CommonData.yaml#/components/schemas/AccumulatedUsage'

 urspEnfRep:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/UrspEnforcementInfo'

 sscMode:

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

 ueReqDnn:

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

 redundantPduSessionInfo:

 $ref: 'TS29502\_Nsmf\_PDUSession.yaml#/components/schemas/RedundantPduSessionInformation'

 tsnBridgeManCont:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/BridgeManagementContainer'

 tsnPortManContDstt:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/PortManagementContainer'

 tsnPortManContNwtts:

 type: array

 items:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/PortManagementContainer'

 minItems: 1

 ipv4AddrList:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4AddrMask'

 minItems: 1

 ipv6PrefixList:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Prefix'

 minItems: 1

 batOffsetInfo:

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

 AfEventSubscription:

 description: Describes the event information delivered in the subscription.

 type: object

 required:

 - event

 properties:

 event:

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

 notifMethod:

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

 repPeriod:

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

 waitTime:

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

 qosMonParamType:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/QosMonitoringParamType'

 AfEventNotification:

 description: Describes the event information delivered in the notification.

 type: object

 required:

 - event

 properties:

 event:

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

 flows:

 type: array

 items:

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

 minItems: 1

 retryAfter:

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

 TerminationInfo:

 description: >

 Indicates the cause for requesting the deletion of the Individual Application Session

 Context resource.

 type: object

 required:

 - termCause

 - resUri

 properties:

 termCause:

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

 resUri:

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

 AfRoutingRequirement:

 description: Describes AF requirements on routing traffic.

 type: object

 properties:

 appReloc:

 type: boolean

 routeToLocs:

 type: array

 items:

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

 minItems: 1

 spVal:

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

 tempVals:

 type: array

 items:

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

 minItems: 1

 upPathChgSub:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/UpPathChgEvent'

 addrPreserInd:

 type: boolean

 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'

 easIpReplaceInfos:

 type: array

 items:

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

 minItems: 1

 description: Contains EAS IP replacement information.

 easRedisInd:

 type: boolean

 description: Indicates the EAS rediscovery is required.

 maxAllowedUpLat:

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

 tfcCorreInfo:

 $ref: 'TS29519\_Application\_Data.yaml#/components/schemas/TrafficCorrelationInfo'

 AfSfcRequirement:

 description: Describes AF requirements on steering traffic to N6-LAN.

 type: object

 properties:

 sfcIdDl:

 type: string

 description: Reference to a pre-configured SFC for downlink traffic.

 nullable: true

 sfcIdUl:

 type: string

 description: Reference to a pre-configured SFC for uplink traffic.

 nullable: true

 spVal:

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

 metadata:

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

 nullable: true

 SpatialValidity:

 description: Describes explicitly the route to an Application location.

 type: object

 required:

 - presenceInfoList

 properties:

 presenceInfoList:

 type: object

 additionalProperties:

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

 minProperties: 1

 description: >

 Defines the presence information provisioned by the AF. The praId attribute within the

 PresenceInfo data type is the key of the map.

 SpatialValidityRm:

 description: >

 This data type is defined in the same way as the SpatialValidity data type, but with the

 OpenAPI nullable property set to true.

 type: object

 required:

 - presenceInfoList

 properties:

 presenceInfoList:

 type: object

 additionalProperties:

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

 minProperties: 1

 description: >

 Defines the presence information provisioned by the AF. The praId attribute within the

 PresenceInfo data type is the key of the map.

 nullable: true

 AfRoutingRequirementRm:

 description: >

 This data type is defined in the same way as the AfRoutingRequirement data type, but with

 the OpenAPI nullable property set to true and the spVal and tempVals attributes defined as

 removable.

 type: object

 properties:

 appReloc:

 type: boolean

 routeToLocs:

 type: array

 items:

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

 minItems: 1

 nullable: true

 spVal:

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

 tempVals:

 type: array

 items:

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

 minItems: 1

 nullable: true

 upPathChgSub:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/UpPathChgEvent'

 addrPreserInd:

 type: boolean

 nullable: true

 simConnInd:

 type: boolean

 nullable: true

 description: >

 Indicates whether simultaneous connectivity should be temporarily maintained for the

 source and target PSA.

 simConnTerm:

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

 easIpReplaceInfos:

 type: array

 items:

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

 minItems: 1

 description: Contains EAS IP replacement information.

 nullable: true

 easRedisInd:

 type: boolean

 description: Indicates the EAS rediscovery is required.

 maxAllowedUpLat:

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

 tfcCorreInfo:

 $ref: 'TS29519\_Application\_Data.yaml#/components/schemas/TrafficCorrelationInfo'

 nullable: true

 AnGwAddress:

 description: Describes the address of the access network gateway control node.

 type: object

 anyOf:

 - required: [anGwIpv4Addr]

 - required: [anGwIpv6Addr]

 properties:

 anGwIpv4Addr:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 anGwIpv6Addr:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Addr'

 Flows:

 description: Identifies the flows.

 type: object

 required:

 - medCompN

 properties:

 contVers:

 type: array

 items:

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

 minItems: 1

 fNums:

 type: array

 items:

 type: integer

 minItems: 1

 medCompN:

 type: integer

 EthFlowDescription:

 description: Identifies an Ethernet flow.

 type: object

 required:

 - ethType

 properties:

 destMacAddr:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/MacAddr48'

 ethType:

 type: string

 fDesc:

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

 fDir:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/FlowDirection'

 sourceMacAddr:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/MacAddr48'

 vlanTags:

 type: array

 items:

 type: string

 minItems: 1

 maxItems: 2

 srcMacAddrEnd:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/MacAddr48'

 destMacAddrEnd:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/MacAddr48'

 ResourcesAllocationInfo:

 description: Describes the status of the PCC rule(s) related to certain media components.

 type: object

 properties:

 mcResourcStatus:

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

 flows:

 type: array

 items:

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

 minItems: 1

 altSerReq:

 type: string

 description: >

 Indicates whether NG-RAN supports alternative QoS parameters. The default value false

 shall apply if the attribute is not present. It shall be set to false to indicate that

 the lowest priority alternative QoS profile could not be fulfilled.

 TemporalValidity:

 description: Indicates the time interval(s) during which the AF request is to be applied.

 type: object

 properties:

 startTime:

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

 stopTime:

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

 QosNotificationControlInfo:

 description: >

 Indicates whether the QoS targets for a GRB flow are not guaranteed or guaranteed again.

 type: object

 required:

 - notifType

 properties:

 notifType:

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

 flows:

 type: array

 items:

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

 minItems: 1

 altSerReq:

 type: string

 description: >

 Indicates the alternative service requirement NG-RAN can guarantee. When it is omitted

 and the notifType attribute is set to NOT\_GUAARANTEED it indicates that the lowest

 priority alternative alternative service requirement could not be fulfilled by NG-RAN.

 altSerReqNotSuppInd:

 type: boolean

 description: >

 When present and set to true it indicates that Alternative Service Requirements are not

 supported by NG-RAN.

 AcceptableServiceInfo:

 description: Indicates the maximum bandwidth that shall be authorized by the PCF.

 type: object

 properties:

 accBwMedComps:

 type: object

 additionalProperties:

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

 description: >

 Indicates the maximum bandwidth that shall be authorized by the PCF for each media

 component of the map. The key of the map is the media component number.

 minProperties: 1

 marBwUl:

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

 marBwDl:

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

 UeIdentityInfo:

 description: Represents 5GS-Level UE identities.

 type: object

 anyOf:

 - required: [gpsi]

 - required: [pei]

 - required: [supi]

 properties:

 gpsi:

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

 pei:

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

 supi:

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

 AccessNetChargingIdentifier:

 description: Describes the access network charging identifier.

 type: object

 oneOf:

 - required: [accNetChaIdValue]

 - required: [accNetChargIdString]

 properties:

 accNetChaIdValue:

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

 accNetChargIdString:

 type: string

 description: A character string containing the access network charging identifier.

 flows:

 type: array

 items:

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

 minItems: 1

 OutOfCreditInformation:

 description: >

 Indicates the SDFs without available credit and the corresponding termination action.

 type: object

 required:

 - finUnitAct

 properties:

 finUnitAct:

 $ref: 'TS32291\_Nchf\_ConvergedCharging.yaml#/components/schemas/FinalUnitAction'

 flows:

 type: array

 items:

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

 minItems: 1

 QosMonitoringInformation:

 description: >

 Indicates the QoS Monitoring information to report, i.e. UL and/or DL and or

 round trip delay.

 type: object

 properties:

 repThreshDl:

 type: integer

 repThreshUl:

 type: integer

 repThreshRp:

 type: integer

 repThreshDatRateUl:

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

 repThreshDatRateDl:

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

 conThreshDl:

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

 conThreshUl:

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

 PduSessionTsnBridge:

 description: >

 Contains the new TSC user plane node information and may contain the DS-TT port and/or

 NW-TT port management information.

 type: object

 required:

 - tsnBridgeInfo

 properties:

 tsnBridgeInfo:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/TsnBridgeInfo'

 tsnBridgeManCont:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/BridgeManagementContainer'

 tsnPortManContDstt:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/PortManagementContainer'

 tsnPortManContNwtts:

 type: array

 items:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/PortManagementContainer'

 minItems: 1

 ueIpv4Addr:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 dnn:

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

 snssai:

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

 ipDomain:

 type: string

 description: IPv4 address domain identifier.

 ueIpv6AddrPrefix:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Prefix'

 QosMonitoringInformationRm:

 description: >

 This data type is defined in the same way as the QosMonitoringInformation data type, but

 with the OpenAPI nullable property set to true.

 type: object

 properties:

 repThreshDl:

 type: integer

 repThreshUl:

 type: integer

 repThreshRp:

 type: integer

 repThreshDatRateUl:

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

 repThreshDatRateDl:

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

 conThreshDl:

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

 conThreshUl:

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

 nullable: true

 PcscfRestorationRequestData:

 description: Indicates P-CSCF restoration.

 type: object

 oneOf:

 - required: [ueIpv4]

 - required: [ueIpv6]

 properties:

 dnn:

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

 ipDomain:

 type: string

 sliceInfo:

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

 supi:

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

 ueIpv4:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 ueIpv6:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Addr'

 QosMonitoringReport:

 description: QoS Monitoring reporting information.

 type: object

 properties:

 flows:

 type: array

 items:

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

 minItems: 1

 ulDelays:

 type: array

 items:

 type: integer

 minItems: 1

 dlDelays:

 type: array

 items:

 type: integer

 minItems: 1

 rtDelays:

 type: array

 items:

 type: integer

 minItems: 1

 pdmf:

 type: boolean

 description: Represents the packet delay measurement failure indicator.

 ulConInfo:

 type: array

 items:

 type: integer

 minItems: 1

 dlConInfo:

 type: array

 items:

 type: integer

 minItems: 1

 ulDataRate:

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

 dlDataRate:

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

 TsnQosContainer:

 description: Indicates TSC Traffic QoS.

 type: object

 properties:

 maxTscBurstSize:

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

 tscPackDelay:

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

 maxPer:

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

 tscPrioLevel:

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

 TsnQosContainerRm:

 description: Indicates removable TSC Traffic QoS.

 type: object

 properties:

 maxTscBurstSize:

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

 tscPackDelay:

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

 maxPer:

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

 tscPrioLevel:

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

 nullable: true

 TscaiInputContainer:

 description: Indicates TSC Traffic pattern.

 type: object

 properties:

 periodicity:

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

 burstArrivalTime:

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

 surTimeInNumMsg:

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

 surTimeInTime:

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

 burstArrivalTimeWnd:

 $ref: 'TS29122\_CommonData.yaml#/components/schemas/TimeWindow'

 periodicityRange:

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

 nullable: true

 AppDetectionReport:

 description: >

 Indicates the start or stop of the detected application traffic and the application

 identifier of the detected application traffic.

 type: object

 required:

 - adNotifType

 - afAppId

 properties:

 adNotifType:

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

 afAppId:

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

 PduSessionEventNotification:

 description: >

 Indicates PDU session information for the concerned established/terminated PDU session.

 type: object

 required:

 - evNotif

 properties:

 evNotif:

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

 supi:

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

 ueIpv4:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 ueIpv6:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Addr'

 ueMac:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/MacAddr48'

 status:

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

 pcfInfo:

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

 dnn:

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

 snssai:

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

 gpsi:

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

 PcfAddressingInfo:

 description: Contains PCF address information.

 type: object

 properties:

 pcfFqdn:

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

 pcfIpEndPoints:

 type: array

 items:

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

 minItems: 1

 description: IP end points of the PCF hosting the Npcf\_PolicyAuthorization service.

 bindingInfo:

 type: string

 description: contains the binding indications of the PCF.

 AlternativeServiceRequirementsData:

 description: Contains an alternative QoS related parameter set.

 type: object

 required:

 - altQosParamSetRef

 properties:

 altQosParamSetRef:

 type: string

 description: Reference to this alternative QoS related parameter set.

 gbrUl:

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

 gbrDl:

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

 pdb:

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

 per:

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

 EventsSubscPutData:

 description: >

 Identifies the events the application subscribes to within an Events Subscription

 sub-resource data. It may contain the notification of the already met events.

 anyOf:

 - $ref: '#/components/schemas/EventsSubscReqData'

 - $ref: '#/components/schemas/EventsNotification'

 PeriodicityRange:

 description: >

 Contains the acceptable range (which is formulated as lower bound and upper bound of

 the periodicity of the start twobursts in reference to the external GM) or

 acceptable periodicity value(s) (which is formulated as a list of values for

 the periodicity).

 type: object

 oneOf:

 - required: [lowerBound, upperBound]

 - required: [periodicVals]

 properties:

 lowerBound:

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

 upperBound:

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

 periodicVals:

 type: array

 items:

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

 minItems: 1

 BatOffsetInfo:

 description: >

 Indicates the offset of the BAT and the optionally adjusted periodicity.

 type: object

 required:

 - ranBatOffsetNotif

 properties:

 ranBatOffsetNotif:

 type: integer

 description: >

 Indicates the BAT offset of the arrival time of the data burst in units

 of milliseconds.

 adjPeriod:

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

 flows:

 type: array

 items:

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

 minItems: 1

 description: >

 Identification of the flows. If no flows are provided, the BAT offset applies

 for all flows of the AF session.

 PdvMonitoringReport:

 description: Packet Delay Variation reporting information.

 type: object

 properties:

 flows:

 type: array

 items:

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

 minItems: 1

 description: Identification of the flows.

 ulPdv:

 type: integer

 description: Uplink packet delay variation in units of milliseconds.

 dlPdv:

 type: integer

 description: Downlink packet delay variation in units of milliseconds.

 rtPdv:

 type: integer

 description: Round trip packet delay variation in units of milliseconds.

 AddFlowDescriptionInfo:

 description: Contains additional flow description information.

 type: object

 properties:

 spi:

 type: string

 description: >

 4-octet string representing the security parameter index of the IPSec packet

 in hexadecimal representation.

 flowLabel:

 type: string

 description: >

 3-octet string representing the IPv6 flow label header field in hexadecimal

 representation.

 flowDir:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/FlowDirection'

 L4sSupport:

 description: >

 Indicates whether the ECN marking for L4S support is not available or available

 again in 5GS.

 type: object

 required:

 - notifType

 properties:

 notifType:

 $ref: '#/components/schemas/L4sNotifType'

 flows:

 type: array

 items:

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

 minItems: 1

 DirectNotificationReport:

 description: >

 Represents the QoS monitoring parameters that cannot be directly notified for

 the indicated flows.

 type: object

 required:

 - qosMonParamType

 properties:

 qosMonParamType:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/QosMonitoringParamType'

 flows:

 type: array

 items:

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

 minItems: 1

 RttFlowReferenceRm:

 description: >

 It is defined as the RttFlowRerence data type but with the OpenAPI nullable true property.

 type: object

 required:

 - sharedKey

 properties:

 flowDir:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/FlowDirection'

 sharedKey:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

 nullable: true

#

# EXTENDED PROBLEMDETAILS

#

 ExtendedProblemDetails:

 description: Extends ProblemDetails to also include the acceptable service info.

 allOf:

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

 - type: object

 properties:

 acceptableServInfo:

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

#

# SIMPLE DATA TYPES

#

 AfAppId:

 description: Contains an AF application identifier.

 type: string

 AspId:

 description: Contains an identity of an application service provider.

 type: string

 CodecData:

 description: Contains codec related information.

 type: string

 ContentVersion:

 description: Represents the content version of some content.

 type: integer

 FlowDescription:

 description: Defines a packet filter of an IP flow.

 type: string

 SponId:

 description: Contains an identity of a sponsor.

 type: string

 ServiceUrn:

 description: Contains values of the service URN and may include subservices.

 type: string

 TosTrafficClass:

 description: >

 2-octet string, where each octet is encoded in hexadecimal representation. The first octet

 contains the IPv4 Type-of-Service or the IPv6 Traffic-Class field and the second octet

 contains the ToS/Traffic Class mask field.

 type: string

 TosTrafficClassRm:

 description: >

 This data type is defined in the same way as the TosTrafficClass data type, but with the

 OpenAPI nullable property set to true.

 type: string

 nullable: true

 MultiModalId:

 description: >

 This data type contains a multi-modal service identifier.

 type: string

 TscPriorityLevel:

 description: Represents the priority level of TSC Flows.

 type: integer

 minimum: 1

 maximum: 8

 TscPriorityLevelRm:

 description: >

 This data type is defined in the same way as the TscPriorityLevel data type, but with the

 OpenAPI nullable property set to true.

 type: integer

 minimum: 1

 maximum: 8

 nullable: true

 DurationMilliSec:

 description: Indicates the time interval in units of milliseconds.

 type: integer

 DurationMilliSecRm:

 description: >

 This data type is defined in the same way as the "DurationMillisec" data type, but with the

 OpenAPI nullable property set to true.

 type: integer

#

# ENUMERATIONS DATA TYPES

#

 MediaType:

 description: Indicates the media type of a media component.

 anyOf:

 - type: string

 enum:

 - AUDIO

 - VIDEO

 - DATA

 - APPLICATION

 - CONTROL

 - TEXT

 - MESSAGE

 - OTHER

 - 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.

 MpsAction:

 description: >

 Indicates whether it is an invocation, a revocation or an invocation with authorization of

 the MPS for DTS service.

 anyOf:

 - type: string

 enum:

 - DISABLE\_MPS\_FOR\_DTS

 - ENABLE\_MPS\_FOR\_DTS

 - AUTHORIZE\_AND\_ENABLE\_MPS\_FOR\_DTS

 - AUTHORIZE\_AND\_ENABLE\_MPS\_FOR\_AF\_SIGNALLING

 - 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.

 ReservPriority:

 description: Indicates the reservation priority.

 anyOf:

 - type: string

 enum:

 - PRIO\_1

 - PRIO\_2

 - PRIO\_3

 - PRIO\_4

 - PRIO\_5

 - PRIO\_6

 - PRIO\_7

 - PRIO\_8

 - PRIO\_9

 - PRIO\_10

 - PRIO\_11

 - PRIO\_12

 - PRIO\_13

 - PRIO\_14

 - PRIO\_15

 - PRIO\_16

 - 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.

 ServAuthInfo:

 description: Indicates the result of the Policy Authorization service request from the AF.

 anyOf:

 - type: string

 enum:

 - TP\_NOT\_KNOWN

 - TP\_EXPIRED

 - TP\_NOT\_YET\_OCURRED

 - ROUT\_REQ\_NOT\_AUTHORIZED

 - DIRECT\_NOTIF\_NOT\_POSSIBLE

 - 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.

 SponsoringStatus:

 description: Indicates whether sponsored data connectivity is enabled or disabled/not enabled.

 anyOf:

 - type: string

 enum:

 - SPONSOR\_DISABLED

 - SPONSOR\_ENABLED

 - 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.

 AfEvent:

 description: Represents an event to notify to the AF.

 anyOf:

 - type: string

 enum:

 - ACCESS\_TYPE\_CHANGE

 - ANI\_REPORT

 - APP\_DETECTION

 - CHARGING\_CORRELATION

 - EPS\_FALLBACK

 - EXTRA\_UE\_ADDR

 - FAILED\_QOS\_UPDATE

 - FAILED\_RESOURCES\_ALLOCATION

 - OUT\_OF\_CREDIT

 - PDU\_SESSION\_STATUS

 - PLMN\_CHG

 - QOS\_MONITORING

 - QOS\_NOTIF

 - RAN\_NAS\_CAUSE

 - REALLOCATION\_OF\_CREDIT

 - SAT\_CATEGORY\_CHG

 - SUCCESSFUL\_QOS\_UPDATE

 - SUCCESSFUL\_RESOURCES\_ALLOCATION

 - TSN\_BRIDGE\_INFO

 - UP\_PATH\_CHG\_FAILURE

 - USAGE\_REPORT

 - UE\_TEMPORARILY\_UNAVAILABLE

 - BAT\_OFFSET\_INFO

 - URSP\_ENF\_INFO

 - PACK\_DEL\_VAR

 - L4S\_SUPP

 - RT\_DELAY\_TWO\_QOS\_FLOWS

 - 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.

 AfNotifMethod:

 description: Represents the notification methods that can be subscribed for an event.

 anyOf:

 - type: string

 enum:

 - EVENT\_DETECTION

 - ONE\_TIME

 - PERIODIC

 - 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.

 QosNotifType:

 description: Indicates the notification type for QoS Notification Control.

 anyOf:

 - type: string

 enum:

 - GUARANTEED

 - NOT\_GUARANTEED

 - 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.

 TerminationCause:

 description: >

 Indicates the cause behind requesting the deletion of the Individual Application Session

 Context resource.

 anyOf:

 - type: string

 enum:

 - ALL\_SDF\_DEACTIVATION

 - PDU\_SESSION\_TERMINATION

 - PS\_TO\_CS\_HO

 - INSUFFICIENT\_SERVER\_RESOURCES

 - INSUFFICIENT\_QOS\_FLOW\_RESOURCES

 - SPONSORED\_DATA\_CONNECTIVITY\_DISALLOWED

 - 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.

 MediaComponentResourcesStatus:

 description: Indicates whether the media component is active or inactive.

 anyOf:

 - type: string

 enum:

 - ACTIVE

 - INACTIVE

 - 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.

 FlowUsage:

 description: Describes the flow usage of the flows described by a media subcomponent.

 anyOf:

 - type: string

 enum:

 - NO\_INFO

 - RTCP

 - AF\_SIGNALLING

 - 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.

 FlowStatus:

 description: Describes whether the IP flow(s) are enabled or disabled.

 anyOf:

 - type: string

 enum:

 - ENABLED-UPLINK

 - ENABLED-DOWNLINK

 - ENABLED

 - DISABLED

 - REMOVED

 - 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.

 RequiredAccessInfo:

 description: Indicates the access network information required for an AF session.

 anyOf:

 - type: string

 enum:

 - USER\_LOCATION

 - UE\_TIME\_ZONE

 - 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.

 SipForkingIndication:

 description: >

 Indicates whether several SIP dialogues are related to an "Individual Application Session

 Context" resource.

 anyOf:

 - type: string

 enum:

 - SINGLE\_DIALOGUE

 - SEVERAL\_DIALOGUES

 - 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.

 AfRequestedData:

 description: Represents the information that the AF requested to be exposed.

 anyOf:

 - type: string

 enum:

 - UE\_IDENTITY

 - 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.

 ServiceInfoStatus:

 description: Represents the preliminary or final service information status.

 anyOf:

 - type: string

 enum:

 - FINAL

 - PRELIMINARY

 - 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.

 PreemptionControlInformation:

 description: Represents Pre-emption control information.

 anyOf:

 - type: string

 enum:

 - MOST\_RECENT

 - LEAST\_RECENT

 - HIGHEST\_BW

 - 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.

 PrioritySharingIndicator:

 description: Represents the Priority sharing indicator.

 anyOf:

 - type: string

 enum:

 - ENABLED

 - DISABLED

 - 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.

 PreemptionControlInformationRm:

 description: >

 This data type is defined in the same way as the PreemptionControlInformation data type, but

 with the OpenAPI nullable property set to true.

 anyOf:

 - $ref: '#/components/schemas/PreemptionControlInformation'

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

 AppDetectionNotifType:

 description: Indicates the notification type for Application Detection Control.

 anyOf:

 - type: string

 enum:

 - APP\_START

 - APP\_STOP

 - 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.

 PduSessionStatus:

 description: Indicates whether the PDU session is established or terminated.

 anyOf:

 - type: string

 enum:

 - ESTABLISHED

 - TERMINATED

 - 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.

 UplinkDownlinkSupport:

 description: >

 Represents whether an indication or capability is supported for the UL, the DL or both,

 UL and DL.

 anyOf:

 - type: string

 enum:

 - UL

 - DL

 - UL\_DL

 - 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.

 L4sNotifType:

 description: Indicates the notification type for ECN marking for L4S support in 5GS.

 anyOf:

 - type: string

 enum:

 - AVAILABLE

 - NOT\_AVAILABLE

 - 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.

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