**3GPP TSG CT WG3 Meeting #142 C3-253584**

**Goteborg, Sweden, 25 – 29 August, 2025 (Revision of C3-253438)**

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **29.514** | **CR** | **0796** | **rev** | **1** | **Current version:** | **19.3.0** |  |
|  |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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|  |
| ***Title:***  | Support of reporting the QoS notification event with direction information |
|  |  |
| ***Source to WG:*** | Huawei, Nokia |
| ***Source to TSG:*** | CT3 |
|  |  |
| ***Work item code:*** | XRM\_Ph2 |  | ***Date:*** | 2025-08-08 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-19 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
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| ***Reason for change:*** | As defined in clause 6.1.3.18 TS 23.503, if the PCF receives a direction information together with the notification from the SMF, the PCF shall also forward the direction information to the AF. This CR proposes to update the "ExtQoS\_v2" feature name and the support of reporting of direction information together with the QoS notification control. |
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| ***Summary of change:*** | * Update QosNotifType data type to support the reporting of direction information together with the QoS notification control.
* Update the "ExtQoS\_v2" feature and update the OpenAPI file accordingly.
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| ***Consequences if not approved:*** | The stage 2 requirement is not supported in stage 3. |
|  |  |
| ***Clauses affected:*** | 4.2.2.39, 4.2.5.4, 5.6.1, 5.6.2.15, 5.6.2.47, 5.6.3.2, 5.6.3.9, 5.8, 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:*** | This CR introduces a backward compatible feature to the following API:- TS29514\_Npcf\_PolicyAuthorization.yaml |
|  |  |
| ***This CR's revision history:*** |  |

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

#### 4.2.2.39 Provisioning of PDU Set handling related data

If the "PDUSetHandling" feature is supported, the NF service consumer may provide PDU Set handling related data, i.e., PDU Set QoS related information and/or Protocol Description related information.

To indicate the PDU Set QoS related information for the PDU Set of a service data flow, the NF service consumer may include the "pduSetQosDl" and/or "pduSetQosUl" attribute(s) within a media component entry of the "medComponents" attribute. Within the "PduSetQosPara" data type, the NF service consumer may include:

- both:

a. the PDU Set Delay Budget (PSDB), i.e., the upper bound for the delay that a PDU Set may experience for the transfer between the UE and the N6 termination point at the UPF (see 3GPP TS 23.501 [2], clause 5.7.7.2) encoded in the "pduSetDelayBudget" attribute as described in 3GPP TS 29.571 [12]; and

b. the PDU Set Error Rate (PSER), i.e., the upper bound for the non-congestion related PDU Set loss rate (see 3GPP TS 23.501 [2], clause 5.7.7.3) encoded in the "pduSetErrRate" attribute as described in 3GPP TS 29.571 [12]; and/or

- the PDU Set Integrated Handling information (PSIHI), that indicates whether all PDUs of the PDU Set are needed for the usage of the PDU Set by the application layer in the receiver side (see 3GPP TS 23.501 [2], clause 5.7.7.4) in the "pduSetHandlingInfo" attribute as described in 3GPP TS 29.571 [12].

If the "ExtQoSR19" feature is supported, and the PSDB (UL and/or DL) and PSER (UL and/or DL) in "pduSetQosDl" and/or "pduSetQosUl" attribute(s) within "medComponents" attribute are provided, the NF service consumer shall also provide the PSDB (UL and/or DL) and PSER (UL and/or DL) in Alternative QoS Parameter set(s) by including the "pduSetQosDl" and/or "pduSetQosUl" attribute(s) within "altSerReqsData"; otherwise, the corresponding Alternative QoS Parameter set(s) shall not contain the PSDB and PSER in the respective direction(s).

The NF service consumer may provide the Averaging Window and Maximum Data Burst Volume parameters in Alternative QoS Parameter set.

The NF service consumer may also include Protocol Description information for the downlink direction within the "protoDescDl" attribute (to indicate the transport protocol (e.g. RTP, SRTP) and additional information used for identifying the PDU Set information by the PSA UPF) and/or for the uplink direction within the "protoDescUl" attribute (to indicate the transport protocol and additional information used for identifying the PDU Set information by the UE).

The PCF shall reply to the NF service consumer as described in clause 4.2.2.2.

As result of this action, the PCF shall set the appropriate PDU Set handling parameters for the corresponding PCC rule(s) as described in 3GPP TS 29.512 [8].

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

#### 4.2.5.4 Notification about Service Data Flow QoS notification control

When the PCF gets the knowledge that one or more SDFs:

- cannot guarantee the GBR QoS targets; or

- can guarantee again the GBR QoS targets;

the PCF shall inform the NF service consumer accordingly if the AF has previously subscribed as described in clauses 4.2.2.6 and 4.2.3.6.

The PCF shall notify the NF service consumer by including the "EventsNotification" data type in the body of the HTTP POST request as described in clause 4.2.5.2.

The PCF shall include:

- within the "evNotifs" attribute an event entry of the "AfEventNotification" data type with the matched event "QOS\_NOTIF" in the "event" attribute; and

- the "qncReports" array with:

a) the "notifType" attribute to indicate whether the GBR targets for the indicated SDFs are "NOT\_GUARANTEED" or "GUARANTEED" again, or if the "ExtQoSR19" feature is supported, "NOT\_GUARANTEED\_DL" in DL direction or "NOT\_GUARANTEED\_UL" in UL direction;

b) the identification of the affected service flows (if not all the flows are affected) encoded in the "flows" attribute if applicable; and

c) if the "AuthorizationWithRequiredQoS" feature or the "AltSerReqsWithIndQoS" feature as defined in clause 5.8 is supported, the reference to the Alternative Service Requirement corresponding alternative QoS parameter set if received from the SMF within the "altSerReq" attribute. When the "altSerReq" attribute is omitted and the "notifType" attribute is NOT\_GUARANTEED, or if the "ExtQoSR19" feature is supported, "NOT\_GUARANTEED\_DL" and/or "NOT\_GUARANTEED\_UL", it indicates that the lowest priority alternative service requirement could not be fulfilled.

When the "AuthorizationWithRequiredQoS" and "AltQoSProfilesSupportReport" features as defined in clause 5.8 are supported, and the AF included during the media component provisioning the "altSerReqs" attribute for the concerned media components(s), or the "AltSerReqsWithIndQoS" and "AltQoSProfilesSupportReport" features are supported and the AF included during media component provisioning the "altSerReqsData" attribute for the concerned media component(s), if the PCF receives from the SMF the indication that the GBR QoS targets cannot be guaranteed and the indication that alternative QoS profiles are not supported in the NG-RAN where the UE is currently located as specified in in 3GPP TS 29.512 [8], the PCF may include within the QosNotificationControlInfo data structure the "altSerReqNotSuppInd" attribute set to true. When the Alternative QoS profiles are supported by the NG-RAN where the UE is currently located, the PCF may omit or set the "altSerReqNotSuppInd" attribute to false, as indicated by the SMF.

If "MediaComponentVersioning" feature is supported, and if the content version was included when the corresponding media component was provisioned, the "flows" attribute shall also contain the "contVers" attribute including the content version(s) of the media components. The PCF shall include more than one entry in the "contVers" attribute for the same media component if the PCF has received multiple content versions as described in clause 4.2.6.2.14 in 3GPP TS 29.512 [8].

When the NF service consumer receives the HTTP POST request, it shall acknowledge the request by sending a "204 No Content" response to the PCF. The NF service consumer may also update the AF application session context information by sending an HTTP PATCH request to the PCF.

Signalling flows for Service Data Flow QoS notification control are presented in 3GPP TS 29.513 [7].

\*\*\* Next 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 service information. |  |
| 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. |  |
| AfHeaderHandlingControlInfo | 5.6.2.62 | Represents the header handling control information. | HeaderHandling |
| 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 |
| CapabilityReport | 5.6.2.60 | Contains information about whether a QoS monitoring capability is supported or not for the corresponding capability type defined in the attribute "capType". | QoSMonCapRepo |
| 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 |
| DurationMilliSec | 5.6.3.2 | Indicates the time interval in units of milliseconds. | PowerSaving |
| DurationMilliSecRm | 5.6.3.2 | This data type is defined in the same way as the "DurationMilliSec" data type, but with the OpenAPI "nullable: true" property. | PowerSaving |
| 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 | Describes the possible modifications to Events Subscription Data.This data type is defined in the same way as the "EventsSubscReqData" data type, but:- with the OpenAPI "nullable: true" property; and- with individual attribute(s) defined as removable as specified in clause 5.6.2.25. |  |
| 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. |  |
| HeaderHandlingAction | 5.6.3.28 | Represents the type of header handling actions. | HeaderHandling |
| HeaderHandlingActionRequest | 5.6.2.63 | Represents the header handling action related information. | HeaderHandling |
| HeaderHandlingCond | 5.6.3.29 | Represents the header handling conditions to perform the header actions. | HeaderHandling |
| HeaderHandlingReporting | 5.6.2.65 | Indicates that reporting is requested for the performed header handling actions. | HeaderHandling |
| 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 |
| MaxDataBurstVol | 5.6.3.2 | Indicates the Maximum Data Burst Volume value. | ExtQoSR19 |
| MediaComponent | 5.6.2.7 | Contains service information for a media component of an AF session. |  |
| MediaComponentRm | 5.6.2.26 | Describes the possible modifications to a Media Component.This data type is defined in the same way as the "MediaComponent" data type, but:- with the OpenAPI "nullable: true" property; and- with individual attribute(s) defined as removable as specified in clause 5.6.2.26. |  |
| 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 | Describes the possible modifications to a Media Subcomponent.This data type is defined in the same way as the "MediaSubComponent" data type, but:- with the OpenAPI "nullable: true" property; and- with individual attribute(s) defined as removable as specified in clause 5.6.2.27. |  |
| MediaType | 5.6.3.3 | Indicates the media type of a media component. |  |
| MpsAction | 5.6.3.22 | Indicates whether it is an invocation, a revocation or an invocation with authorization of the MPS for DTS service. | MPSforDTS, MPSforMessaging |
| MpxMediaInfo | 5.6.3.61 | Represents the multiplexed media identification information. | MpxMedia |
| MultiModalId | 5.6.3.2 | Contains a multi-modal service identifier. | MultiMedia |
| NotifCap | 5.6.3.27 | Contains information about whether the notified capability is supported or not supported. | QoSMonCapRepo |
| NotifCapType | 5.6.3.31 | Contains information about which type of QoS Monitoring capability report is applied. | QoSMonCapRepo |
| OnPathN6Method | 5.6.3.30 | Represents the on-path N6 signaling method. | OnPathN6MediaInfo |
| OnPathN6SigInfo | 5.6.2.64 | Represents the on-path N6 signaling information, with the OpenAPI "nullable: true" property. | OnPathN6MediaInfo |
| 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 | Represents PDU session related event reporting information. |  |
| 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 | Describes the possible modifications to QoS monitoring data.This data type is defined in the same way as the "QosMonitoringInformation" data type, but:- with the OpenAPI "nullable: true" property; and- when the "EnQoSMon" feature is supported, with individual attribute(s) defined as removable as specified in clause 5.6.2.41 | 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. |  |
| RateLimitRepo | 5.6.2.66 | Indicates the maximum data rate authorized for the non-GBR service data flow(s). | RateLimitReport |
| 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. |  |
| RttFlowReference | 5.6.2.58 | Contains the shared key with the media subcomponent that shares the subscription to round trip time measurements or shares the RT Latency requirement in the complementary direction. | EnQoSMon,RTLatency |
| 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. | InfluenceOnTrafficRoutingSFC |
| 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. | InfluenceOnTrafficRoutingSFC |
| 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. | TimeSensitiveNetworking |
| 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. | TimeSensitiveNetworking |
| UeIdentityInfo | 5.6.2.31 | Represents 5GS-Level UE Identities. | IMS\_SBI |
| 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. | EnQoSMonExtQoSR19 |
| 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 |
| 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. |  |
| IpAddr | 3GPP TS 29.571 [12] | Contains an IP address. | OnPathN6MediaInfo |
| 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 |
| PduSessionType | 3GPP TS 29.571 [12] | Contains the PDU Session Type | 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 |
| ProtocolDescriptionRm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "ProtocolDescription" data type, but with the OpenAPI "nullable: true" property. | 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 |
| ReportingSuggestionInformation | 3GPP TS 29.564 [61] | Contains reporting suggestion information. | HeaderHandling |
| 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 |
| SatelliteId | 3GPP TS 29.571 [11] | Unique identifier of a satellite. | UeSatUeComm |
| SimConnFailEvent | 3GPP TS 29.512 [8] | Represents the subscription information to be delivered to the SMF for the simultaneous connectivity failure event reporting. | SimConnFailure |
| 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 |
| TraffRouteReqOutcomeEvent | 3GPP TS 29.512 [8] | Represents the subscription information to be delivered to the SMF for the traffic routing requirements installation outcome event reporting. | TraffRouteReqOutcome |
| TsnBridgeInfo | 3GPP TS 29.512 [8] | TSC user plane node information. | TimeSensitiveNetworking |
| UeReachabilityStatus | 3GPP TS 29.512 [8] | Represents the UE Reachability Status. | UEUnreachable |
| 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. |  |
| UriRm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "Uri" data type, but with the OpenAPI "nullable: true" property. | HeaderHandling |
| UrspEnforcementInfo | 3GPP TS 29.512 [8] | Contains the URSP rule enforcement information from the UE. | URSPEnforcement |
| 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 |

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

#### 5.6.2.15 Type QosNotificationControlInfo

Table 5.6.2.15-1: Definition of type QosNotificationControlInfo

| Attribute name | Data type | P | Cardinality | Description | Applicability |
| --- | --- | --- | --- | --- | --- |
| notifType | QosNotifType | M | 1 | Indicates whether the GBR targets for the indicated SDFs are "NOT\_GUARANTEED" or "GUARANTEED" again.When the "ExtQoSR19" feature is supported, the direction information may be provided if the QoS targets of one or more SDFs are not being guaranteed. |  |
| flows | array(Flows) | C | 1..N | Identification of the flows. It shall be included if "MediaComponentVersioning" feature is supported. When "MediaComponentVersioning" feature is not supported, if no flows are provided, the notification in the "notifType" applies for all flows within the AF session. |  |
| altSerReq | string | O | 0..1 | Indicates the alternative service requirement the NG-RAN can guarantee. It contains a QoS reference or the reference to the alternative individual QoS related parameters (see "altQosParamSetRef" attribute in Table 5.6.2.47).When it is omitted and the "notifType" attribute is "NOT\_GUARANTEED", if the "ExtQoSR19" feature is supported, "NOT\_GUARANTEED\_DL" and/or "NOT\_GUARANTEED\_UL", it indicates that the lowest priority alternative service requirement could not be fulfilled in the corresponding directions by the NG-RAN. | AuthorizationWithRequiredQoS |
| altSerReqNotSuppInd | boolean | O | 0..1 | It may be set to true when the "notifType" attribute is "NOT\_GUARANTEED", if the "ExtQoSR19" feature is supported, "NOT\_GUARANTEED\_DL" and/or "NOT\_GUARANTEED\_UL" to indicate that alternative service requirements are not supported in the corresponding directions by NG-RAN. The default value false shall apply if the attribute is not present.It may be used when the AuthorizationWithRequiredQoS feature or the AltSerReqsWithIndQoS feature is supported. | AltQoSProfilesSupportReport |

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

#### 5.6.2.47 Type AlternativeServiceRequirementsData

Table 5.6.2.47-1: Definition of type AlternativeServiceRequirementsData

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| altQosParamSetRef | string | M | 1 | It contains a reference to the alternative individual QoS related parameter(s) included in this set. The value of this attribute shall only be used in QoS notification control information (see "altSerReq" attribute in Table 5.6.2.15) to indicate the alternative individual QoS related parameters that can be guaranteed (if any). |  |
| gbrUl | BitRate | O | 0..1 | Indicates the guaranteed bandwidth in uplink.(NOTE 1) |  |
| gbrDl | BitRate | O | 0..1 | Indicates the guaranteed bandwidth in downlink.(NOTE 1) |  |
| pdb | PacketDelBudget | O | 0..1 | Unsigned integer. It indicates the Packet Delay Budget expressed in milliseconds.(NOTE 1) |  |
| per | PacketErrRate | O | 0..1 | It indicates the Packet Error Rate.(NOTE 1) | ExtQoS |
| averWindow | AverWindow | O | 0..1 | Indicates the Averaging Window. | ExtQoSR19 |
| maxDataBurstVol | MaxDataBurstVol | O | 0..1 | Indicates the Maximum Data Burst Volume. | ExtQoSR19 |
| pduSetQosDl | PduSetQosParaRm | O | 0..1 | Contains the PDU Set QoS parameters which are used to support PDU Set based QoS handling in the downlink direction.(NOTE 2) | ExtQoSR19 |
| pduSetQosUl | PduSetQosParaRm | O | 0..1 | Contains the PDU Set QoS parameters which are used to support PDU Set based QoS handling in the uplink direction.(NOTE 2) | ExtQoSR19 |
| NOTE 1: If the "ExtQoSR19" feature is not supported, at least one of the "pdb" attribute, the "per" attribute (if the ExtQoS feature is supported), and the combination of the "gbrUl" and "gbrDl" attributes, shall be provided.NOTE 2: Only the "pduSetDelayBudget" and "pduSetErrRate" attributes within the "pduSetQosDl" and "pduSetQosUl" attributes are applicable and shall be present if the "pduSetDelayBudget" and "pduSetErrRate" attributes in "pduSetQosDl" and/or "pduSetQosUl" attribute(s) within the "medComponents" attribute are provided. |

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

#### 5.6.3.2 Simple data types

The simple data types defined in table 5.6.3.2-1 shall be supported.

Table 5.6.3.2-1: Simple data types

| Type Name | Type Definition | Description | Applicability |
| --- | --- | --- | --- |
| AfAppId | string | Contains an AF application identifier. |  |
| AspId | string | Contains an identity of an application service provider. | SponsoredConnectivity |
| CodecData | string | Contains codec related information.Refer to clause 5.3.7 of 3GPP TS 29.214 [20] for encoding. |  |
| ContentVersion | integer | Unsigned 64-bit integer that indicates the version of some content, as e.g. the content of a media component. The content version shall be unique for the content and for the lifetime of that content. (NOTE) | MediaComponentVersioning |
| DurationMilliSec | integer | Indicates the time interval in units of milliseconds. | PowerSaving |
| DurationMilliSecRm | integer | This data type is defined in the same way as the "DurationMilliSec" data type, but with the OpenAPI "nullable: true" property. | PowerSaving |
| FlowDescription | string | Defines a packet filter for an IP flow. It contains an IPFilterRule according to clause 4.3 of IETF RFC 6733 [52].Refer to clause 5.3.8 of 3GPP TS 29.214 [20] for encoding. |  |
| MaxDataBurstVol | integer | Unsigned integer that indicates the Maximum Data Burst Volume value, expressed in Bytes.Minimum = 1. Maximum = 2000000. | ExtQoSR19 |
| MultiModalId | string | Contains a multi-modal service identifier. | MultiMedia |
| SponId | string | Contains an identity of a sponsor. | SponsoredConnectivity |
| ServiceUrn | string | Indicates that an AF session is used for Emergency traffic.It contains values of the service URN and it may include subservices, as defined in IETF RFC 5031 [34] or registered at IANA. The string "urn:service:" in the beginning of the URN shall be omitted and all subsequent text shall be included. Examples of valid values of the ServiceUrn data structure are "sos", "sos.fire", "sos.police" and "sos.ambulance". | IMS\_SBI |
| TosTrafficClass | string | 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. Each character in the string shall take a value of "0" to "9" or "A" to "F" and shall represent 4 bits. One example is that of a TFT packet filter as defined in 3GPP TS 24.008 [36]. |  |
| TosTrafficClassRm | string | This data type is defined in the same way as the "TosTrafficClass" data type, but with the OpenAPI "nullable: true" property. |  |
| TscPriorityLevel | integer | Indicates the TSC traffic Priority Level, within the range 1 to 8.Values are ordered in decreasing order of priority, i.e. with 1 as the highest priority and 8 as the lowest priority. | TimeSensitiveNetworking |
| TscPriorityLevelRm | integer | This data type is defined in the same way as the "TscPriorityLevel" data type, but with the OpenAPI "nullable: true" property. | TimeSensitiveNetworking |
| NOTE: The method of assigning content versions is implementation specific. |

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

#### 5.6.3.9 Enumeration: QosNotifType

The enumeration "QosNotifType" represents the types of reports bound to the notification of QoS Notification Control.

Table 5.6.3.9-1: Enumeration QosNotifType

|  |  |  |
| --- | --- | --- |
| Enumeration value | Description | Applicability |
| GUARANTEED | The QoS targets of one or more SDFs are guaranteed again.When the "ExtQoSR19" feature is supported, the QoS targets of one or more SDFs are guaranteed again in both DL and UL directions. |  |
| NOT\_GUARANTEED | The QoS targets of one or more SDFs are not being guaranteed.When the "ExtQoSR19" feature is supported, the QoS targets of one or more SDFs are not being guaranteed in both DL and UL directions. |  |
| NOT\_GUARANTEED\_DL | The QoS targets of one or more SDFs are not being guaranteed in DL direction. | ExtQoSR19 |
| NOT\_GUARANTEED\_UL | The QoS targets of one or more SDFs are not being guaranteed in UL direction. | ExtQoSR19 |

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

## 5.8 Feature negotiation

The optional features in table 5.8-1 are defined for the Npcf\_PolicyAuthorization API. They shall be negotiated using the extensibility mechanism defined in clause 6.6.2 of 3GPP TS 29.500 [5].

When requesting the PCF to create an Individual Application Session Context resource the NF service consumer shall indicate the optional features the NF service consumer supports for the Npcf\_PolicyAuthorization service by including the "suppFeat" attribute in the "AppSessionContextReqData" data type of the HTTP POST request.

The PCF shall determine the supported features for the created Individual Application Session Context resource as specified in clause 6.6.2 of 3GPP TS 29.500 [5]. The PCF shall indicate the supported features in the HTTP response confirming the creation of the Individual Application Session Context resource by including the "suppFeat" attribute in the "AppSessionContextRespData" data type.

Table 5.8-1: Supported Features

| Feature number | Feature Name | Description |
| --- | --- | --- |
| 1 | InfluenceOnTrafficRouting | Indicates support of Application Function influence on traffic routing. If the PCF supports this feature, the NF service consumer may influence SMF routing to applications or subscribe to notifications of UP path management for the traffic flows of an active PDU session. |
| 2 | SponsoredConnectivity | Indicates support of sponsored data connectivity. If the PCF supports this feature, the NF service consumer may provide sponsored data connectivity to the SUPI. |
| 3 | MediaComponentVersioning | Indicates the support of the media component versioning. |
| 4 | URLLC | Indicates support of Ultra-Reliable Low-Latency Communication (URLLC) requirements, i.e. AF application relocation acknowledgement and UE address(es) preservation. The InfluenceOnTrafficRouting feature shall be supported in order to support this feature. |
| 5 | IMS\_SBI | Indicates support of the communication with the 5GC IMS NF service consumer via Service Based Interfaces. |
| 6 | NetLoc | Indicates the support of access network information reporting. |
| 7 | ProvAFsignalFlow | This indicates support for the feature of provisioning of AF signalling flow information as described in clauses 4.2.2.16 and 4.2.3.17. If the PCF supports this feature the NF service consumer may provision AF signalling flow information.NOTE: This feature is used by the IMS Restoration Procedures to provide to the SMF the address of the P-CSCF selected by the UE, refer to 3GPP TS 23.380 [39].The IMS\_SBI feature shall be supported in order to support this feature. |
| 8 | ResourceSharing | This feature indicates the support of resource sharing across several "Individual Application Session Context" resources. The IMS\_SBI feature shall be supported in order to support this feature. |
| 9 | MCPTT | This feature indicates the support of Mission Critical Push To Talk services as described in 3GPP TS 24.379 [41]. |
| 10 | MCVideo | This feature indicates the support of Mission Critical Video services as described in 3GPP TS 24.281 [43]. |
| 11 | PrioritySharing | This feature indicates that Priority Sharing is supported as described in 3GPP TS 23.503 [4], clause 6.1.3.15. |
| 12 | MCPTT-Preemption | This feature indicates the support of service pre-emption based on the information provided by the NF service consumer. It requires that both PrioritySharing and MCPTT features are also supported. |
| 13 | MacAddressRange | Indicates the support of a set of MAC addresses with a specific range in the traffic filter. |
| 14 | RAN-NAS-Cause | This feature indicates the support for the release cause code information from the access network. |
| 15 | EnhancedSubscriptionToNotification | Indicates the support of:- Subscription to periodic notifications.- Definition of a waiting time between the reporting of two event triggered events.- Indication of whether the event has to be reported at PDU Session termination.- Notification Correlation Id for a subscription to an event. |
| 16 | QoSMonitoring | Indicates the support of QoS monitoring functionality and the report of packet delay monitoring. This feature requires the support of the EnhancedSubscriptionToNotification feature. |
| 17 | AuthorizationWithRequiredQoS | Indicates support of policy authorization for the AF session with required QoS. |
| 18 | TimeSensitiveNetworking | Indicates that the 5G System is integrated within the external network as a TSN bridge. |
| 19 | PCSCF-Restoration-Enhancement | This feature indicates support of P-CSCF Restoration Enhancement. It is used for the PCF and the P-CSCF to indicate if they support P-CSCF Restoration Enhancement. |
| 20 | CHEM | This feature indicates the support of Coverage and Handover Enhancements for Media (CHEM). |
| 21 | FLUS | This feature indicates the support of FLUS functionality as described in 3GPP TS 26.238 [51]. |
| 22 | EPSFallbackReport | This feature indicates the support of the report of EPS Fallback as defined in clauses 4.2.2.30, 4.2.3.29 and 4.2.5.15. |
| 23 | ATSSS | Indicates the support of the report of the multiple access types of a MA PDU session. |
| 24 | QoSHint | This feature indicates the support of specific QoS hint parameters as described in 3GPP TS 26.114 [30], clause 6.2.10. |
| 25 | ReallocationOfCredit | This feature indicates the support of notifications of reallocation of credits events. It requires the support of IMS\_SBI feature. |
| 26 | ES3XX | Extended Support for 3xx redirections. This feature indicates the support of redirection for any service operation, according to Stateless NF procedures as specified in clauses 6.5.3.2 and 6.5.3.3 of 3GPP TS 29.500 [5] and according to HTTP redirection principles for indirect communication, as specified in clause 6.10.9 of 3GPP TS 29.500 [5].  |
| 27 | DisableUENotification | Indicates the support of disabling QoS flow parameters signalling to the UE when the SMF is notified by the NG-RAN of changes in the fulfilled QoS situation. This feature requires that the AuthorizationWithRequiredQoS featute is also supported. |
| 28 | PatchCorrection | Indicates support of the correction to the PATCH method:When this feature is not supported, the interoperability between a NF service consumer and the PCF can only be ensured when it is not required the update of the Individual Application Session Context resource. |
| 29 | MPSforDTS | Indicates support for MPS for DTS as described in clauses 4.2.2.12.2 and 4.2.3.12. |
| 30 | ApplicationDetectionEvents | This feature indicates the support of the subscription to notifications of the detection of the start and stop of an application's traffic. |
| 31 | TimeSensitiveCommunication | Indicates that the 5G System is integrated within the external network as a TSC user plane node to enable Time Sensitive Communication, Time Synchronization and Deterministic Networking. This feature requires that the TimeSensitiveNetworking feature is also supported. |
| 32 | ExposureToEAS | This feature indicates the support of the indication of direct event notification of QoS monitoring events from the UPF to the Local NEF or AF in 5GC. This indication requires that the QoSMonitoring feature is supported. |
| 33 | SatelliteBackhaul | Indicates the support of the report of the satellite or non-satellite backhaul category of the PDU session. |
| 34 | RoutingReqOutcome | Indicates the support of:- the report of UP path change failures; and - the indication of whether AF routing requirements are applied.It requires the support of InfluenceOnTrafficRouting feature. |
| 35 | EASDiscovery | This feature indicates the support of EAS (re)discovery. |
| 36 | AltSerReqsWithIndQoS | Indicates the support of provisioning Alternative Service Requirements with individual QoS parameters. This feature requires that the AuthorizationWithRequiredQoS feature is also supported. |
| 37 | SimultConnectivity | This feature indicates the support of the indication of temporary simultaneous connectivity over source and target PSA at edge relocation. This indication requires that the InfluenceOnTrafficRouting feature is supported. |
| 38 | EASIPreplacement | This feature indicates the support of provisioning of EAS IP replacement info. This support requires that InfluenceOnTrafficRouting feature is also supported |
| 39 | AccNetChargId\_String | This feature indicates the support of long character strings as access network charging identifier. |
| 40 | WLAN\_Location | This feature indicates the support of the report of the WLAN location information received from the ePDG/EPC, if available. It is only applicable to EPS interworking scenarios as described in 3GPP TS 29.512 [8], Annex B. |
| 41 | AF\_latency | This feature indicates support for edge relocation considering user plane latency. |
| 42 | UEUnreachable | This feature indicates the support for the reporting of UE temporary unavailable. |
| 43 | AltQoSProfilesSupportReport | This feature indicates the support of the report of whether Alternative QoS parameters are supported by NG-RAN. This feature requires that AuthorizationWithRequiredQoS feature is also supported. |
| 44 | PacketDelayFailureReport | Indicates the support of packet delay failure report as part of QoS Monitoring procedures. This feature requires that QoSMonitoring feature is supported. |
| 45 | EnTSCAC | Indicates the support of extensions to TSCAC and the RAN feedback for BAT offset and adjusted periodicity.This feature requires that the TimeSensitiveCommunication feature is also supported. |
| 46 | SignalingPathValidation | This feature indicates the support of the validation of the NF type that originates the Npcf\_PolicyAuthorization\_Create request. |
| 47 | ExtQoS | This feature indicates the support for the extensions to the QoS mechanisms. |
| 48 | CommonEASDNAI | This feature controls the support of the common EAS/DNAI selection. This feature requires that the InfluenceOnTrafficRouting feature is also supported. |
| 49 | SFC | This feature indicates support of Service Function Chaining functionality. |
| 50 | MultiMedia | This feature indicates the support of multi-modal or multimedia communication service. This feature acts as a basic functional block for extended reality (XR) and interactive media services. |
| 51 | EnSatBackhaulCatChg | This feature indicates the support also of the report of the dynamic satellite backhaul category of the PDU session. This feature requires the support of SatelliteBackhaul feature. |
| 52 | MTU\_Size | This feature indicates the support of the report of the MTU size of the device side port. This feature requires that the TimeSensitiveCommunication feature is also supported. |
| 53 | ExtraUEaddrReport | This feature indicates the support of the report of additional IP addresses or address ranges allocated for the given PDU session resulting from framed routes or IPv6 prefix delegation. |
| 54 | AuthorizationForMpsSignalling | This feature indicates support for use of the "mpsAction" attribute to signal that the UE's MPS subscription shall be checked by the PCF prior to enabling MPS for AF signalling. |
| 55 | ExposureToTSC | This feature indicates the support of the direct event notification of TSC management information from the UPF to the TSCTSF or TSN AF in 5GC. This feature requires that the TimeSensitiveCommunication feature is also supported. |
| 56 | URSPEnforcement | This feature indicates the support of awareness of URSP rule enforcement |
| 57 | AddFlowDescriptionInformation | This feature indicates support for use e.g. of additional flow description parameters, as the flow label and the IPSec SPI. |
| 58 | QoSTiming\_5G | This feature indicates the support of QoS timing information for the transfer and support of data transmission (e.g., AI/ML traffic transmission). |
| 59 | PDUSetHandling | This feature indicates the support of PDU Set handling. This feature may be used for eXtended Reality (XR) and interactive media services. |
| 60 | RTLatency | This feature indicates the support of Round-Trip latency. This feature may be used for eXtended Reality (XR) and interactive media services. |
| 61 | EnQoSMon | This feature indicates the support of enhanced QoS monitoring functionality, i.e. the enhancement of packet delay QoS monitoring, and/or, the report of the congestion information, and/or, the RTT delay over two QoS flows, and/or, the data rate information, and/or, the Packet Delay Variation monitoring.This feature requires that the QoSMonitoring feature is supported.In order to support the report of packet delay measurement failure, the PacketDelayFailureReport feature also requires to be supported. |
| 62 | PowerSaving | This feature indicates the support of UE Power Saving management in multi modal traffic as described in clause 4.2.2.42. |
| 63 | L4S | This feature indicates the support of the AF indication of ECN marking for L4S support. |
| 64 | QoSMonCapRepo | This feature indicates the support of the subscription to notifications about network support of QoS Monitoring for packet delay and/or congestion.This feature requires that the QoSMonitoring feature is supported if packet delay is requested.This feature requires that the EnQoSMon feature is supported if congestion is requested, round-trip delay over two QoS flows and/or packet delay variation monitoring.This feature requires that the EnQoSMon\_v2 feature is supported if available bitrate is requested. |
| 65 | MPSforMessaging | Indicates support for MPS for Messaging as described in clauses 4.2.2.12.4 and 4.2.3.13. |
| 66 | VPLMNErrorRep | This feature indicates the support of failure due to QoS not supported by the current serving PLMN. |
| 67 | TraffRouteReqOutcome | This feature indicates the support of the subscription to the traffic routing requirements installation outcome event reporting of SMF.This feature requires that the InfluenceOnTrafficRouting feature is supported. |
| 68 | MpxMedia | This feature indicates the support of uniquely identifying each media flow of multiplexed media with the Multiplexed Media Information. |
| 69 | TrafficCharChange | This feature indicates the support of dynamically changing traffic characteristics, including:- the handling of Data Burst Size marking indication.- the handling of Time to Next Burst Indication.- the handling of Expedite Data Transfer with reflective QoS Indication for the Non-GBR flows. |
| 70 | N6DelayMeasurement | This feature indicates the support of considering N6 delay measurement for traffic influence. |
| 71 | ReleasedUEaddrReport | Indicates the support of:- Indication of PCF triggered AF application session context termination due to released UE address from the SMF. |
| 72 | UeSatUeComm | This feature indicates the support of reporting about serving satellite identity for UE-Satellite-UE communication in IMS.This feature requires that the IMS\_SBI feature is supported.- In order to support of access network information reporting, the NetLoc feature also requires to be supported.- In order to support for the release cause code information from the access network, the RAN-NAS-Cause feature also requires to be supported. |
| 73 | HeaderHandling | This feature indicates the support of the header handling functionality.This feature enables the following functionality:- the support of provisioning of Header Handling Control information for handling of Payload Headers. |
| 74 | OnPathN6MediaInfo | This feature indicates the support of deliver media related information for encrypted traffic, including:- Using on-path N6 signaling method to deliver media related information for encrypted traffic. |
| 75 | RateLimitReport | This feature indicates the support of the AF request the 5GS to expose the data rate limitation information which is determined by the PCF according to the local policy. |
| 76 | EnCommonDnai | This feature indicates support of providing requests to report the candidate DNAI(s) of the PDU Session. |
| 77 | AcceptableQosDetails | This feature indicates the support of providing detailed information about the QoS that the PCF can authorize in error responses of not authorized requests. |
| 78 | ExtQoSR19 | This feature indicates the enhancements on the support for the extensions to the QoS mechanisms, including:- the support of PDU Set QoS parameters in Alternative QoS Profile when the PDUSetHandling feature is supported.- the support of Averaging Window and Maximum Data Burst Volume parameters.- the support of reporting the QoS targets for the indicated SDFs can no longer be guaranteed or can be guaranteed in the certain direction.This feature requires that AltSerReqsWithIndQoS feature is also supported. |
| 79 | SimConnFailure | This feature indicates the support of Simultaneous Connectivity failure events.It requires that the SimultConnectivity feature is also supported. |
| 80 | EnQoSMon\_v2 | This feature indicates the enhancements on the QoS monitoring functionality, including:- the reporting of available bitrate rate for a GBR QoS Flow.This feature requires that the EnQoSMon feature is supported. |

Editor's note: Available bitrate capability reporting dependency on the EnQoSMon\_v2 feature is FFS.

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

# A.2 Npcf\_PolicyAuthorization API

openapi: 3.0.0

info:

 title: Npcf\_PolicyAuthorization Service API

 version: 1.4.0-alpha.4

 description: |

 PCF Policy Authorization Service.

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externalDocs:

 description: 3GPP TS 29.514 V19.3.0; 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'

 afHdrReq:

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

 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'

 afHdrReq:

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

 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'

 avlBitRateMon:

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

 rttFlowRef:

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

 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'

 minItems: 1

 notifUri:

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

 reqQosMonParams:

 type: array

 nullable: true

 items:

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

 minItems: 1

 qosMon:

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

 qosMonDatRate:

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

 pdvReqMonParams:

 type: array

 nullable: true

 items:

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

 minItems: 1

 pdvMon:

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

 congestMon:

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

 rttMon:

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

 rttFlowRef:

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

 avlBitRateMon:

 $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'

 afHdrReq:

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

 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".

 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".

 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'

 datBurstSizeInd:

 type: boolean

 description: >

 Indicates the Data Burst Size marking for the DL service data flow is supported if

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

 timetoNextBurstInd:

 type: boolean

 description: >

 Indicates the Time to Next Burst for the DL service data flow is supported, when it is

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

 onPathN6SigInfo:

 $ref: '#/components/schemas/OnPathN6SigInfo'

 expTranInd:

 type: boolean

 description: >

 Expedited Transfer Indication for the downlink traffic to enable expedited data transfer

 with reflective QoS for the Non-GBR service data flow. "true": the expedited data

 transfer of larger payload for XR application is enabled in the flow. "false": the

 expedited data transfer of larger payload for XR application is not enabled in the flow.

 The default value is "false" if omitted.

 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'

 afHdrReq:

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

 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

 nullable: true

 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/ProtocolDescriptionRm'

 protoDescUl:

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

 periodUl:

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

 periodDl:

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

 l4sInd:

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

 datBurstSizeInd:

 type: boolean

 nullable: true

 description: >

 Indicates the Data Burst Size marking for the DL service data flow is supported if

 present and set to "true".

 timetoNextBurstInd:

 type: boolean

 nullable: true

 description: >

 Indicates the Time to Next Burst for the DL service data flow is supported, when it is

 included and set to "true".

 onPathN6SigInfo:

 $ref: '#/components/schemas/OnPathN6SigInfo'

 expTranInd:

 type: boolean

 nullable: true

 description: >

 Expedited Transfer Indication for the downlink traffic to enable expedited data transfer

 with reflective QoS for the Non-GBR service data flow. "true": the expedited data

 transfer of larger payload for XR application is enabled in the flow. "false":

 the expedited data transfer of larger payload for XR application is not enabled in the

 flow.

 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

 qosMonCapRepos:

 type: object

 additionalProperties:

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

 minProperties: 1

 description: >

 Contains the QoS monitoring is supported or not. It shall be present when

 the notified event is "QOS\_MON\_CAP\_REPO". The key of the map is the attribute

 "capType".

 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'

 ueReqPduSessionType:

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

 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'

 ueReachStatus:

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

 retryAfter:

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

 servSatId:

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

 rateLimitRepo:

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

 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'

 capTypes:

 type: array

 items:

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

 minItems: 1

 description: >

 Contains the type(s) of QoS Monitoring capability report is applied.

 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'

 outcomeSub:

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

 simConnFailSub:

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

 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'

 candDnaiInd:

 type: boolean

 description: Indicates whether candidate DNAI(s) are requested to be reported.

 n6DelayInd:

 type: boolean

 description: >

 Indication of whether the N6 delay measurement is requested to be considered or not.

 The N6 delay measurement is requested to be considered if it is set to true.

 The N6 delay measurement is not requested to be considered if it is set to false.

 The default value is false.

 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'

 simConnFailSub:

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

 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'

 candDnaiInd:

 type: boolean

 description: Indicates whether candidate DNAI(s) are requested to be reported.

 n6DelayInd:

 type: boolean

 description: >

 Indication of whether the N6 delay measurement is requested to be considered or not.

 The N6 delay measurement is requested to be considered if it is set to true.

 The N6 delay measurement is not requested to be considered if it is set to false.

 nullable: true

 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 QoS parameters 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'

 mirBwUl:

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

 mirBwDl:

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

 tsnQos:

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

 addAccQosCombs:

 type: array

 items:

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

 minItems: 1

 description: Contains additional combinations of acceptable service information.

 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'

 avlBitrateUlThrs:

 type: array

 items:

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

 minItems: 1

 description: Indicates a list of thresholds for uplink available bitrate reporting.

 avlBitrateDlThrs:

 type: array

 items:

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

 minItems: 1

 description: Indicates a list of thresholds for downlink available bitrate reporting.

 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

 nullable: true

 repThreshUl:

 type: integer

 nullable: true

 repThreshRp:

 type: integer

 nullable: true

 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'

 avlBitrateUlThrs:

 type: array

 items:

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

 minItems: 1

 avlBitrateDlThrs:

 type: array

 items:

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

 minItems: 1

 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 related events information.

 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'

 averWindow:

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

 maxDataBurstVol:

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

 pduSetQosDl:

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

 pduSetQosUl:

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

 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

 addPeriodicVals:

 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

 RttFlowReference:

 description: >

 Contains the shared key with the media subcomponent that shares the subscription to

 round trip time measurements in the complementary direction.

 type: object

 required:

 - sharedKey

 properties:

 flowDir:

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

 sharedKey:

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

 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

 CapabilityReport:

 description: Contains capability support information.

 type: object

 properties:

 capReport:

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

 capType:

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

 required:

 - capReport

 - capType

 AfHeaderHandlingControlInfo:

 description: Describes AF requirements on handling of payload headers.

 type: object

 required:

 - hDetectionReference

 properties:

 hDetectionReference:

 description: Indication of header detection reference.

 type: string

 hDetectionSuppInfo:

 description: Indication of transparent dynamic information.

 type: string

 nullable: true

 notifUri:

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

 notifId:

 type: string

 nullable: true

 spVal:

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

 tempVals:

 type: array

 items:

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

 minItems: 1

 nullable: true

 hHndlgUl:

 type: array

 items:

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

 minItems: 1

 nullable: true

 description: >

 Contains the list of header handling action request parameters in the uplink

 direction.

 hHndlgDl:

 type: array

 items:

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

 minItems: 1

 nullable: true

 description: >

 Contains the list of header handling action request parameters in the downlink

 direction.

 nullable: true

 HeaderHandlingActionRequest:

 description: >

 Represents the header handling action request.

 properties:

 hHndlgCtrlRef:

 type: string

 hHndlgAction:

 type: array

 items:

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

 minItems: 1

 hInfo:

 type: string

 hVal:

 type: string

 hHndlgCond:

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

 hHndlgRep:

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

 OnPathN6SigInfo:

 description: >

 Represents the on path N6 signaling information.

 nullable: true

 properties:

 onPathN6Method:

 $ref: '#/components/schemas/OnPathN6Method'

 asProxyAddr:

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

 required:

 - onPathN6Method

 HeaderHandlingReporting:

 description: >

 Indicates that reporting is requested for the performed Header Handling Action.

 properties:

 notifFlag:

 type: boolean

 description: >

 Indicates whether reporting is requested for the performed Header Handling Action.

 True indicates a reporting is requested.

 False indicates a reporting is not requested.

 repSuggInfo:

 $ref: 'TS29564\_Nupf\_EventExposure.yaml#/components/schemas/ReportingSuggestionInformation'

 oneTimeInd:

 type: boolean

 description: >

 Indicates whether the reporting of a first occurrence of the action per packet flow

 is enough.

 True indicates that the reporting applies to the first occurrence.

 False indicates that the reporting applies to all occurrences.

 RateLimitRepo:

 description: >

 Contains the rate limit information for the non-GRB flows.

 properties:

 rateLimitRepoUl:

 type: array

 items:

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

 minItems: 1

 description: >

 Indicates the maximum uplink data rate authorized for the non-GBR service data flow(s)

 as indicated in the attribute "flows". If no flows are provided, the maximum data rate

 applies for all the flows.

 rateLimitRepoDl:

 type: array

 items:

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

 minItems: 1

 description: >

 Indicates the maximum downlink data rate authorized for the non-GBR service data flow(s)

 as indicated in the attribute "flows". If no flows are provided, the maximum data rate

 applies for all the flows.

 flows:

 type: array

 items:

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

 minItems: 1

 description: Identifications of the non-GBR service data flows.

#

# 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

 MaxDataBurstVol:

 type: integer

 minimum: 1

 maximum: 2000000

 nullable: true

 description: Unsigned integer indicating Maximum Data Burst Volume value.

#

# 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 or Messaging 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

 - DISABLE\_MPS\_FOR\_MESSAGING\_FOR\_AF\_SIGNALLING

 - ENABLE\_MPS\_FOR\_MESSAGING\_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\_MON\_CAP\_REPO

 - 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\_REACH\_STATUS\_CH

 - BAT\_OFFSET\_INFO

 - URSP\_ENF\_INFO

 - PACK\_DEL\_VAR

 - L4S\_SUPP

 - RT\_DELAY\_TWO\_QOS\_FLOWS

 - RATE\_LIMIT\_INFO\_REPO

 - 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:

 anyOf:

 - type: string

 enum:

 - GUARANTEED

 - NOT\_GUARANTEED

 - NOT\_GUARANTEED\_DL

 - NOT\_GUARANTEED\_UL

 - 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.

 description: |

 Indicates the notification type for QoS Notification Control.

 Possible values are:

 - GUARANTEED: The QoS targets of one or more SDFs are guaranteed. When ExtQoSR19 feature

 is enabled, The QoS targets of one or more SDFs are guaranteed again in both DL and UL

 directions.

 - NOT\_GUARANTEED: The QoS targets of one or more SDFs are not being guaranteed. When

 ExtQoSR19 feature is enabled, The QoS targets of one or more SDFs are not being

 guaranteed in both DL and UL directions.

 - NOT\_GUARANTEED\_DL: The QoS targets of one or more SDFs are not being guaranteed in DL

 direction.

 - NOT\_GUARANTEED\_UL: The QoS targets of one or more SDFs are not being guaranteed in DL

 direction.

 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

 - REQUEST\_QOS\_NOT\_SUPPORTED\_IN\_PLMN

 - UE\_ADDR\_RELEASE

 - 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

 - UE\_SAT\_INFO

 - 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.

 NotifCap:

 description: Indicates whether the notified capability is supported or not supported.

 anyOf:

 - type: string

 enum:

 - SUPPORTED

 - NOT\_SUPPORTED

 - 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.

 HeaderHandlingAction:

 anyOf:

 - type: string

 enum:

 - DETECT

 - REMOVE

 - REPLACE

 - INSERT

 - type: string

 description: >

 This string provides forward-compatibility with future extensions to the enumeration but

 is not used to encode content defined in the present version of this API.

 description: |

 Represents the type of header handling actions.

 Possible values are:

 - DETECT: Indicates that the request is for the detection of a header field.

 - REMOVE: Indicates that the request is for the removal of a header field.

 - REPLACE: Indicates that the request is for the replacement of information in a header

 field.

 - INSERT: Indicates that the request is for the addition of a header field.

 HeaderHandlingCond:

 anyOf:

 - type: string

 enum:

 - EVERY\_MATCH

 - FIRST\_MATCH

 - type: string

 description: >

 This string provides forward-compatibility with future extensions to the enumeration but

 is not used to encode content defined in the present version of this API.

 description: |

 Represents the condition to apply header handling actions.

 Possible values are:

 - EVERY\_MATCH: Indicates that the header handling action is applied to every match.

 - FIRST\_MATCH: Indicates that the header handling action is applied only to the first

 match.

 OnPathN6Method:

 anyOf:

 - type: string

 enum:

 - CONNECT\_UDP

 - type: string

 description: >

 This string provides forward-compatibility with future extensions to the enumeration but

 is not used to encode content defined in the present version of this API.

 description: |

 Represents the method of on-path N6 signaling.

 Possible values are:

 - CONNECT\_UDP: Indicates that the method connect UDP is supported for on-path N6 signaling

 NotifCapType:

 anyOf:

 - type: string

 enum:

 - PACKET\_DELAY

 - CONGESTION

 - AVAILABLE\_BITRATE

 - 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.

 description: |

 Indicates which type of QoS Monitoring capability report is applied.

 Possible values are:

 - PACKET\_DELAY: Indication the Packet delay monitoring capability is monitored.

 - CONGESTION: Indication the Congestion information monitoring capability is monitored.

 - AVAILABLE\_BITRATE: Indication the Available bitrate monitoring capability is monitored.

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