**3GPP TSG-CT3 Meeting #138 *C3-246472***

**Orlando, United States, 18th Nov 2024 - 22nd Nov 2024 revision of C3-246334**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.514** | **CR** | **0707** | **rev** | **1** | **Current version:** | **19.0.0** |  |
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| *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 handling of Payload Headers in Npcf\_PolicyAuthorization API | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, Ericsson, Vodafone, ZTE | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | UPEAS\_Ph2 | | | | |  | ***Date:*** | | | 2024-11-22 |
|  |  | | | |  | |  | | |  |
| ***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 can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | As per agreed CR S2-2410812, S2-2411013 and S2-2411014:  Additional information requires in Npcf\_PolicyAuthorization service to support the request for handling of payload headers. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | This CR proposes to:  - define the header handling control information to be sent from AF/NEF via Npcf\_PolicyAuthorization API. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Stage-2 requirement is not supported in stage-3. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.2.2.1, 4.2.2.8, 4.2.3.1, 4.2.3.8, 5.6.1, 5.6.2.3, 5.6.2.5, 5.6.2.7, 5.6.2.26, 5.6.2.61(new), 5.6.2.62(new), 5.6.3.28(new), 5.6.3.29(new),5.8, A.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 23.501 CR 5454 | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS 23.502 CR 4877 | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS 23.503 CR 1329 | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | This CR provides backward compatible feature updates to the Open API Npcf\_PolicyAuthorization API. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

#### 4.2.2.1 General

The Npcf\_PolicyAuthorization\_Create service operation authorizes the request from the NF service consumer, and optionally communicates with Npcf\_SMPolicyControl service to determine and install the policy according to the information provided by the NF service consumer.

The Npcf\_PolicyAuthorization\_Create service operation creates an application session context in the PCF.

The following procedures using the Npcf\_PolicyAuthorization\_Create service operation are supported:

- Initial provisioning of service information.

- Gate control.

- Initial Background Data Transfer policy indication.

- Initial provisioning of sponsored connectivity information.

- Subscription to Service Data Flow QoS notification control.

- Subscription to Service Data Flow Deactivation.

- Initial provisioning of traffic routing, service function chaining information and handling of payload headers.

- Subscription to resources allocation outcome.

- Invocation of Multimedia Priority Services.

- Support of content versioning.

- Request of access network information.

- Initial provisioning of service information status.

- Provisioning of signalling flow information.

- Support of resource sharing.

- Indication of Emergency traffic.

- Invocation of MCPTT.

- Invocation of MCVideo.

- Priority sharing indication.

- Subscription to out of credit notification.

- Subscription to Service Data Flow QoS Monitoring information.

- Provisioning of TSCAI input information and TSC QoS related data.

- Provisioning of TSC user plane node management information and port management information.

- P-CSCF restoration enhancements.

- Support of CHEM feature.

- Support of FLUS feature.

- Subscription to EPS Fallback report.

- Subscription to TSC user plane node related events.

- Initial provisioning of required QoS information.

- Support of QoSHint feature.

- Subscription to reallocation of credit notification.

- Subscription to satellite backhaul category changes.

- Subscription to the report of extra UE addresses.

- Initial provisioning of Round-Trip latency requirements.

- Provisioning of multi-modal services.

- Provisioning of PDU Set handling related data.

- Subscription to BAT offset notification.

- Subscription to Packet Delay Variation monitoring.

- Provisioning of the indication of ECN marking for L4S support.

- Subscription of Round-Trip delay monitoring requirements over two QoS flows.

- Provisioning of the QoS timing information.

- Initial provisioning of traffic information for UE power saving management.

- Subscription to the report of network support for QoS Monitoring.

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

#### 4.2.2.8 Initial provisioning of traffic routing, service function chaining information and handling of payload headers

This procedure is used by a NF service consumer to:

when "InfluenceOnTrafficRouting" feature is supported:

- influence SMF traffic routing decisions to a local access to a Data Network identified by a DNAI; and/or

- request subscriptions to notifications about UP path management events related to the PDU session.

when "SFC" feature is supported:

- influence the steering of user traffic to service function chain(s) on N6-LAN.

when "HeaderHandling" feature is supported:

influence the handling of payload headers on the existing or future PDU session(s).

NOTE 1: The NF service consumer uses the Npcf\_PolicyAuthorization service for requests targeting specific on-going PDU sessions of individual UE(s). The NF service consumer requests that target existing or future PDU Sessions of multiple UE(s) or any UE are sent via the NEF and may target multiple PCF(s), as described in 3GPP TS 29.513 [7].

NOTE 2: In the non-roaming scenario, the AF can request simultaneously to influence on traffic routing, steering of user traffic to service function chain(s) on N6-LAN and header handling and payload header handling.

When the "CommonEASDNAI" feature is supported, the procedure is also used by a NF service consumer to request to select a common EAS or EAS(es) corresponding to a common DNAI for a set of UE associated with the same traffic correlation Id accessing the application identified by the provided service information.

NOTE 3: Common EAS selection means the common DNAI is selected.

In order to influence on traffic routing, the NF service consumer shall include in the HTTP POST request message described in clause 4.2.2.2 the "afRoutReq" attribute of "AfRoutingRequirement" data type with specific routing requirements for the application traffic flows either within "AppSessionContextReqData" data type for the service indicated in the "afAppId" attribute, or within the "medComponents" attribute. When provided at both levels, the "afRoutReq" attribute value in the "medComponents" attribute shall have precedence over the "afRoutReq" attribute included in the "AppSessionContextReqData" data type.

In order to influence on N6-LAN traffic steering, the NF service consumer shall include in the HTTP POST request message described in clause 4.2.2.2 the "afSfcReq" attribute of "AfSfcRequirement" data type with specific N6-LAN traffic steering requirements for the application traffic flows either within "AppSessionContextReqData" data type for the service indicated in the "afAppId" attribute, or within the "medComponents" attribute. When provided at both levels, the "afSfcReq" attribute value in the "medComponents" attribute shall have precedence over the "afSfcReq" attribute included in the "AppSessionContextReqData" data type.

In order to influence on handling of payload headers, the NF service consumer shall include in the HTTP POST request message described in clause 4.2.2.2 the "afHdrReq" attribute of "AfHeaderHandlingContrInfo" data type with specific handling of payload headers requirements for the application traffic flows either within "AppSessionContextReqData" data type for the service indicated in the "afAppId" attribute, or within the "medComponents" attribute. When provided at both levels, the "afHdrReq" attribute value in the "medComponents" attribute shall have precedence over the "afHdrReq" attribute included in the "AppSessionContextReqData" data type. In order to retrieve header handling event report for the performed header handling action, the AF shall set the"notifFlag" attribute to true for the related "HeaderHandlingActionRequest" data type and shall also provide the "notifUri" attribute and the "notifId" attribute within the "AfHeaderHandlingControlInfo" data type.

The NF service consumer may include traffic routing, N6-LAN traffic steering requirements, and handling of payload headers together with service information.

The NF service consumer may request to influence on N6-LAN traffic steering, to influence SMF traffic routing decisions and/or to influence handling of payload headers to a DNAI.

If the "SFC" feature is supported, when the NF service consumer requests to influence N6-LAN traffic steering, it shall include in the "afSfcReq" attribute:

a) the pre-defined Service Function Chain identifier for downlink in "sfcIdDl" and/or for uplink in "sfcIdUl";

and may also include:

b) spatial validity which the NF service consumer request is valid shall be indicated in terms of validity areas encoded in the "spVal" attribute of "SpatialValidity" data type. The "SpatialValidity" data type consists of a list of presence areas included in the "presenceInfoList" attribute, where each element shall include the presence reporting area identifier in the "praId" attribute and may include the elements composing a presence area encoded in the attributes: "trackingAreaList", "ecgList", "ncgList", "globalRanNodeIdList".

c) The metadata information wich should be sent to the UPF via SMF transparently as defined in 3GPP TS 29.512[8].

If the "InfluenceOnTrafficRouting" feature is supported, when the NF service consumer request to influence on traffic routing, the NF service consumer shall include in the "afRoutReq" attribute:

a) A list of routes to locations of applications in the "routeToLocs" attribute. Each element of the list shall contain:

- a DNAI in the "dnai" attribute to indicate the location of the application towards which the traffic routing is applied; and

- a routing profile identifier in the "routeProfId" attribute, and/or the explicit routing information in the "routeInfo" attribute.

and may also include:

a) Indication of application relocation possibility in the "appReloc" attribute.

b) Temporal validity during which the NF service consumer request is valid shall be indicated with the "startTime" and "stopTime" attributes.

c) Spatial validity during which the NF service consumer request is valid shall be indicated in terms of validity areas encoded in the "spVal" attribute of "SpatialValidity" data type. The "SpatialValidity" data type consists of a list of presence areas included in the "presenceInfoList" attribute, where each element shall include the presence reporting area identifier in the "praId" attribute and may include the elements composing a presence area encoded in the attributes: "trackingAreaList", "ecgList", "ncgList", "globalRanNodeIdList".

d) Indication of UE IP address preservation in the "addrPreserInd" attribute if the URLLC feature is supported.

e) If the SimultConnectivity feature is supported:

- indication of simultaneous connectivity temporarily maintained in the source and target PSA during the edge re-location procedure in the "simConnInd" attribute; and

- if the "simConnInd" attribute is set to true, the minimum time interval to be considered for inactivity of the traffic routed via the source PSA in the "simConnTerm" attribute.

f) EAS IP replacement information in the "easIpReplaceInfos" attribute if the EASIPreplacement feature is supported.

g) Indication of EAS rediscovery in the "easRedisInd" attribute if the EASDiscovery feature is supported.

h) Maximum allowed user plane latency in the "maxAllowedUpLat" attribute if the AF\_latency feature is supported.

NOTE 4: The EAS IP Replacement information and the information indicating the EAS rediscovery are not provided simultaneously.

i) If the CommonEASDNAI feature is supported, traffic correlation information in the "tfcCorreInfo" attribute.

If the "HeaderHandling" feature is supported, when the NF service consumer requests to influence handling of payload headers, it shall include in the "afHdrReq" attribute:

a) the pre-defined header handling control information in the "AfHeaderHandlingContrInfo" attribute;

and may also include:

b) temporal validity during which the NF service consumer request is valid shall be indicated with the "startTime" and "stopTime" attributes;

c) spatial validity which the NF service consumer request is valid shall be indicated in terms of validity areas encoded in the "spVal" attribute of "SpatialValidity" data type. The "SpatialValidity" data type consists of a list of presence areas included in the "presenceInfoList" attribute, where each element shall include the presence reporting area identifier in the "praId" attribute and may include the elements composing a presence area encoded in the attributes: "trackingAreaList", "ecgList", "ncgList", "globalRanNodeIdList".

When "InfluenceOnTrafficRouting" feature is supported, the NF service consumer may also subscribe to notifications about UP path management events. The NF service consumer shall include in the "upPathChgSub" attribute:

- notifications of early and/or late DNAI change, using the attribute "dnaiChgType" indicating whether the subscription is for "EARLY", "LATE" or "EARLY\_LATE";

- the notification URI where the NF service consumer is receiving the Nsmf\_EventExposure\_Notify service operation in the "notificationUri" attribute; and

- the notification correlation identifier assigned by the NF service consumer in the "notifCorreId" attribute.

When the NF service consumer subscribes to notifications about UP path management events, it may include the "3gpp-Sbi-Consumer-Info" custom HTTP header as described in clause 6.6.2 of 3GPP TS 29.500 [5] to indicate the features supported by the NF service consumer over the Nsmf\_EventExposure service related to UP path management event handling as described in 3GPP TS 29.508[13].

If the URLLC feature is supported, the NF service consumer may include an indication of NF service consumer acknowledgement to be expected as an "afAckInd" attribute within the "upPathChgSub" attribute.

When the feature "RoutingReqOutcome" is supported:

- the PCF may set the "servAuthInfo" attribute in the HTTP response message to "ROUT\_REQ\_NOT\_AUTHORIZED" when the PCF determines, e.g. based on subscription, the AF influence on traffic routing is not allowed for the PDU session;

- when the NF service consumer requests the steering of traffic to a DNAI and/or the subscription to notifications about UP path management events, the NF service consumer may subscribe to notifications of failures in the enforcement of UP path changes including within the "evSubsc" attribute the "event" attribute value "UP\_PATH\_CHG\_FAILURE" in an entry of the "events" array.

NOTE 5: In the case that the PCF determines that the requested AF routing requirements cannot be applied and returns the "servAuthInfo" attribute in the HTTP response, the PCF makes the decision without considering the requested AF routing requirements.

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

The PCF shall store the routing requirements included in the "afRoutReq" attribute and/or if the SFC feature is supported, the N6-LAN traffic steering requirements within the "afSfcReq" attribute.

The PCF shall check whether the received routing requirements and/or N6-LAN traffic steering requirements require PCC rules to be created or provisioned to include or modify traffic steering policies (for both routing requirements and/or N6-LAN traffic steering requirements) and the application relocation possibility (only for routing requirements) as specified in 3GPP TS 29.513 [7]. Provisioning of PCC rules to the SMF shall be carried out as specified in 3GPP TS 29.512 [8].

NOTE 5: The NF service consumer receives the notification about UP path management events by the Nsmf\_EventExposure\_Notify service operation as defined in clause 4.2.2.2 of 3GPP TS 29.508 [13].

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

#### 4.2.3.1 General

The Npcf\_PolicyAuthorization\_Update service operation provides updated application level information from the NF service consumer and optionally communicates with the Npcf\_SMPolicyControl service to determine and install the policy according to the information provided by the NF service consumer.

The Npcf\_PolicyAuthorization\_Update service operation updates an application session context in the PCF.

The following procedures using the Npcf\_PolicyAuthorization\_Update service operation are supported:

- Modification of service information.

- Gate control.

- Background Data Transfer policy indication at policy authorization update.

- Modification of sponsored connectivity information.

- Modification of Subscription to Service Data Flow QoS notification control.

- Modification of Subscription to Service Data Flow Deactivation.

- Update of traffic routing, service function chaining information and handling of payload headers.

- Modification of subscription to resources allocation outcome.

- Modification of Multimedia Priority Services.

- Support of content versioning.

- Request of access network information.

- Modification of service information status.

- Support of SIP forking.

- Provisioning of signalling flow information.

- Support of resource sharing.

- Modification of MCPTT.

- Modification of MCVideo.

- Priority sharing indication.

- Modification of subscription to out of credit notification.

- Modification of Subscription to Service Data Flow QoS Monitoring Information.

- Update of TSCAI Input Information and TSC QoS related data.

- Provisioning of TSC user plane node management information and port management information.

- Support of CHEM feature.

- Support of FLUS feature.

- Subscription to EPS Fallback report.

- Modification of required QoS information.

- Support of QoSHint feature.

- Modification of subscription to reallocation of credit notification.

- Modification of subscription to satellite backhaul category changes.

- Modification of the subscription to the report of extra UE addresses.

- Modification of multi-modal services

- Modification of Round-Trip latency requirements.

- Update of PDU Set handling related data.

- Modification of subscription to BAT offset notification.

- Modification of subscription to Packet Delay Variation monitoring.

- Provisioning of the indication of ECN marking for L4S support.

- Modification of Round-Trip delay monitoring requirements over two QoS flows.

- Provisioning of the QoS timing information.

- Modification of traffic information for UE power saving management.

- Modification of the subscription to the report of network support for QoS Monitoring.

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

#### 4.2.3.8 Update of traffic routing, service function chaining information and handling of payload headers

When the "InfluenceOnTrafficRouting" feature is supported, this procedure is used by the NF service consumer to modify the traffic routing information to a local access to a DNN, and/or to modify the subscription to notifications about UP path management events. Additionally:

- when the "SimultConnectivity" feature is supported, this procedure may be used to modify (create, delete, update) the indication of simultaneous connectivity temporarily maintained for the source and target PSA and/or the indication of the minimum time interval to be considered for inactivity for the traffic routed via the source PSA;

- when the "URLLC" feature is supported, this procedure may be used to modify (create, delete, update) the indication of UE IP address preservation; and

- when the "EASIPreplacement" feature is supported, this procedure may be used to modify (initially provide, delete, update) the EAS IP replacement information to the PCF.

When the "SFC" feature is supported, this procedure is used by the NF service consumer to modify service chaining information.

When the "HeaderHandling" feature is supported, this procedure is used by the NF service consumer to modify header handling control information.

The NF service consumer shall use the HTTP PATCH method.

To modify traffic routing information, the NF service consumer shall include in the HTTP PATCH request message described in clause 4.2.3.2, in the "ascReqData" attribute, an updated "afRoutReq" attribute(s) with the modified traffic routing information. To modify the indication of simultaneous connectivity and/or the termination of the simultaneous connectivity, the NF service consumer shall include an updated "simConnInd" attribute and/or an updated "simConnTem" attribute, if applicable. To modify the indication of UE IP address preservation, the NF service consumer shall include the updated indication of UE IP address preservation in the "addrPreserInd" attribute, if applicable. To modify the EAS IP replacement information, the NF service consumer shall include the updated/new "easIpReplaceInfos" attribute, if applicable. To modify the maximum allowed user plane latency, the NF service consumer shall include the updated/new "maxAllowedUpLat" attribute, if applicable. To modify the traffic correlation information, the NF service consumer shall include an updated/new "tfcCorreInfo" attribute. To send a new indication of EAS rediscovery, the NF service consumer shall include the indication in the "easRedisInd" attribute, if applicable.

To modify (create, delete or modify) the service function chaining information, the NF service consumer shall include the"afSfcReq" attribute including the modified service function chaining information within the AppSessionContextUpdateData.

To modify header handling control information, the NF service consumer shall include in the HTTP PATCH request message described in clause 4.2.3.2, in the "ascReqData" attribute, an updated "afHdrReq" attribute with the modified header handling control information within the AppSessionContextUpdateData. In order to retrieve header handling event report for the performed header handling action, the AF shall set the"notifFlag" attribute to true true for the related "HeaderHandlingActionRequest" data type and shall also provide the "notifUri" attribute and the "notifId" attribute within the "AfHeaderHandlingControlInfo" data type if not provided yet.

To modify the subscription to notifications about UP path management events (create, delete or modify), the NF service consumer shall include in the HTTP PATCH request message described in clause 4.2.3.2, in the "ascReqData" attribute, the updated values of the "upPathChgSub" attribute with the modified subscription to UP path management events.

When the feature "RoutingReqOutcome" is supported:

- and the NF service consumer is creating or modifying AF routing information, the PCF may set the "servAuthInfo" attribute in the HTTP response message to "ROUT\_REQ\_NOT\_AUTHORIZED" when the PCF determines, e.g. based on subscription, the AF influence on traffic routing is not allowed for the PDU session;

- when the NF service consumer requests the update of the steering of traffic to a DNAI and/or the subscription to notifications about UP path management events, the NF service consumer may subscribe to notifications of failures in the enforcement of UP path changes including within the "evSubsc" attribute the "event" attribute value "UP\_PATH\_CHG\_FAILURE" in an entry of the "events" array, or may remove the subscription to notification of failures in the enforcement of UP path changes by not including the the "event" attribute value "UP\_PATH\_CHG\_FAILURE" in an entry of the "events" array of the "evSubsc" attribute.

NOTE: In the case that the PCF determines that the requested AF routing requirements cannot be applied and returns the "servAuthInfo" attribute in the HTTP response, the PCF makes the decision without considering the requested AF routing requirements.

The PCF shall reply to the NF service consumer as described in clause 4.2.3.2.

The PCF shall store the application routing requirements included in the "afRoutReq" attribute when the "InfluenceOnTrafficRouting" feature is supported, the N6-LAN traffic steering requirements within the "afSfcReq" attribute when the "SFC" feature is supported and/or the header handling contain information included in the "afHdrReq" attribute when the "HeaderHandling" feature is supported.

The PCF shall check whether the updated application routing requirements, N6-LAN traffic steering requirements and/or the header handling control information requirements require PCC rules to be created or modified to include updated traffic steering policies (for routing requirements, N6-LAN traffic steering requirements and/or the header handling control information), or to update the application relocation possibility (only for routing requirements) as specified in 3GPP TS 29.513 [7]. Provisioning of PCC rules to the SMF shall be carried out as specified at 3GPP TS 29.512 [8].

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

### 5.6.1 General

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

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

Table 5.6.1-1: Npcf\_PolicyAuthorization specific Data Types

| Data type | Section defined | Description | Applicability |
| --- | --- | --- | --- |
| AcceptableServiceInfo | 5.6.2.30 | Acceptable maximum requested bandwidth. |  |
| AccessNetChargingIdentifier | 5.6.2.32 | Contains the access network charging identifier. | IMS\_SBI |
| AddFlowDescriptionInfo | 5.6.2.55 | Contains additional flow description information, as the flow label and the IPsec SPI. | AddFlowDescriptionInformation |
| AfAppId | 5.6.3.2 | Contains an AF application identifier. |  |
| AfEvent | 5.6.3.7 | Represents an event to notify to the NF service consumer. |  |
| AfEventNotification | 5.6.2.11 | Represents the notification of an event. |  |
| AfEventSubscription | 5.6.2.10 | Represents the subscription to events. |  |
| AfHeaderHandlingControlInfo | 5.6.2.61 | 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 |
| CapabilityReportFlow | 5.6.2.60 | Contains information about whether a control is supported or not for one or more flows. | 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 |
| 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 | 5.6.2.62 | Represents the header handling action related information. | HeaderHandling |
| HeaderHandlingCond | 5.6.3.29 | Represents the header handling conditions to perform the header 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 |
| 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 whethe it is an invocation, a revocation or an invocation with authorization of the MPS for DTS service. | MPSforDTS |
| MultiModalId | 5.6.3.2 | Contains a multi-modal service identifier. | MultiMedia |
| NotifCap | 5.6.3.27 | Contains information about whether the notified capability is supported or not supported. | QoSMonCapRepo |
| 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. |  |
| 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 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. | RTLatency  EnQoSMon |
| ServAuthInfo | 5.6.3.5 | Indicates the result of the Policy Authorization service request from the NF service consumer. |  |
| ServiceInfoStatus | 5.6.3.16 | Preliminary or final service information status. | IMS\_SBI |
| ServiceUrn | 5.6.3.2 | Service URN. | IMS\_SBI |
| SipForkingIndication | 5.6.3.17 | Describes if several SIP dialogues are related to an "Individual Application Session Context" resource. | IMS\_SBI |
| SpatialValidity | 5.6.2.16 | Describes the spatial validity of an NF service consumer request for influencing traffic routing. | InfluenceOnTrafficRouting  SFC |
| SpatialValidityRm | 5.6.2.28 | This data type is defined in the same way as the "SpatialValidity" data type, but with the OpenAPI "nullable: true" property. | InfluenceOnTrafficRouting  SFC |
| 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. | EnQoSMon |
| AverWindowRm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "AverWindow" data type, but with the OpenAPI "nullable: true" property. | EnQoSMon |
| BdtReferenceId | 3GPP TS 29.122 [15] | Identifies transfer policies. |  |
| BitRate | 3GPP TS 29.571 [12] | Specifies bitrate in kbits per second. |  |
| BitRateRm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "BitRate" data type, but with the OpenAPI "nullable: true" property. |  |
| BridgeManagementContainer | 3GPP TS 29.512 [8] | Contains TSC user plane node management information. | TimeSensitiveNetworking |
| ChargingId | 3GPP TS 29.571 [12] | Charging identifier allowing correlation of charging information. | IMS\_SBI |
| DateTime | 3GPP TS 29.571 [12] | String with format "date-time" as defined in OpenAPI Specification [11]. | InfluenceOnTrafficRouting, TimeSensitiveNetworking |
| Dnn | 3GPP TS 29.571 [12] | Data Network Name. |  |
| DurationSec | 3GPP TS 29.571 [12] | Identifies a period of time in units of seconds. | TimeSensitiveNetworking, EnhancedSubscriptionToNotification,  SimultConnectivity |
| DurationSecRm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "DurationSec" data type, but with the OpenAPI "nullable: true" property. | SimultConnectivity |
| EasIpReplacementInfo | 3GPP TS 29.571 [12] | Contains EAS IP replacement information for a Source and a Target EAS. | EASIPreplacement |
| FinalUnitAction | 3GPP TS 32.291 [22] | Indicates the action to be taken when the user's account cannot cover the service cost. |  |
| Float | 3GPP TS 29.571 [12] | Number with format "float" as defined in OpenAPI Specification [11]. | FLUS |
| FloatRm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "Float" data type, but with the OpenAPI "nullable: true" property. | FLUS |
| FlowDirection | 3GPP TS 29.512 [8] | Flow Direction. |  |
| Fqdn | 3GPP TS 29.571 [12] | Contains a FQDN |  |
| ExtMaxDataBurstVol | 3GPP TS 29.571 [12] | Maximum Burst Size. | TimeSensitiveNetworking |
| ExtMaxDataBurstVolRm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "ExtMaxDataBurstVol" data type, but with the OpenAPI "nullable: true" property | TimeSensitiveNetworking |
| Gpsi | 3GPP TS 29.571 [12] | Identifies the GPSI. |  |
| Ipv4Addr | 3GPP TS 29.571 [12] | Identifies an IPv4 address. |  |
| Ipv4AddrMask | 3GPP TS 29.571 [12] | IPv4 address mask | ExtraUEaddrReport |
| Ipv6Addr | 3GPP TS 29.571 [12] | Identifies an IPv6 address. |  |
| IpEndPoint | 3GPP TS 29.510 [27] | Contains a NF IPv4 and/or IPv6 end points. |  |
| MacAddr48 | 3GPP TS 29.571 [12] | MAC Address. |  |
| Metadata | 3GPP TS 29.571 [12] | This datatype contains opaque information for the service functions in the N6-LAN that is provided by AF and transparently sent to UPF. | SFC |
| NetLocAccessSupport | 3GPP TS 29.512 [8] | Indicates the access network does not support the report of the requested access network information. | NetLoc |
| NullValue | 3GPP TS 29.571 [12] | JSON's null value, used as an explicit value of an enumeration. | MCPTT-Preemption |
| PacketDelBudget | 3GPP TS 29.571 [12] | Packet Delay Budget. | TimeSensitiveNetworking |
| PacketDelBudgetRm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "PacketDelBudget" data type, but with the OpenAPI "nullable: true" property | TimeSensitiveNetworking |
| PacketErrRate | 3GPP TS 29.571 [12] | String representing Packet Error Rate (see clauses 5.7.3.5 and 5.7.4 of 3GPP TS 23.501 [8]), expressed as a "*scalar* x 10-k" where the scalar and the *exponent k are each encoded as one decimal digit*.  Pattern: '^([0-9]E-[0-9])$'  Examples:  Packer Error Rate 4x10-6 shall be encoded as "4E-6".  Packer Error Rate 10-2 shall be encoded as "1E-2". | ExtQoS |
| PacketErrRateRm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "PacketErrRate" data type, but with the OpenAPI "nullable: true" property. | ExtQoS |
| PacketLossRateRm | 3GPP TS 29.571 [12] | This data type is defined in the same way as the "PacketLossRate" data type, but with the OpenAPI "nullable: true" property. | CHEM |
| PduSessionId | 3GPP TS 29.571 [12] | The identification of the PDU session. | URSPEnforcement |
| 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 | PDUSetHandling PowerSaving |
| 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 |
| RequestedQosMonitoringParameter | 3GPP TS 29.512 [8] | Indicate the QoS information to be monitored, e.g. UL packet delay, DL packet delay or round trip packet delay between the UE and the UPF is to be monitored when the QoS Monitoring for packet delay is enabled for the service data flow. | QoSMonitoring |
| RouteToLocation | 3GPP TS 29.571 [12] | Identifies routes to locations of applications. | InfluenceOnTrafficRouting |
| SatelliteBackhaulCategory | 3GPP TS 29.571 [12] | Indicates the satellite or non-satellite backhaul category | SatelliteBackhaul |
| Snssai | 3GPP TS 29.571 [12] | Identifies the S-NSSAI. |  |
| SscMode | 3GPP TS 29.571 [12] | Service and session continuity mode. | URSPEnforcement |
| Supi | 3GPP TS 29.571 [12] | Identifies the SUPI. |  |
| SupportedFeatures | 3GPP TS 29.571 [12] | Used to negotiate the applicability of the optional features defined in table 5.8-1. |  |
| TimeWindow | 3GPP TS 29.122 [15] | Time window identified by a start time and a stop time. | EnTSCAC |
| TrafficCorrelationInfo | 3GPP TS 29.519 [53] | Contains the information for traffic correlation. | CommonEASDNAI |
| TimeZone | 3GPP TS 29.571 [12] | Time Zone. | NetLoc |
| TsnBridgeInfo | 3GPP TS 29.512 [8] | TSC user plane node information. | TimeSensitiveNetworking |
| 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. |  |
| 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 |

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

#### 5.6.2.3 Type AppSessionContextReqData

Table 5.6.2.3-1: Definition of type AppSessionContextReqData

| Attribute name | Data type | P | Cardinality | Description | Applicability |
| --- | --- | --- | --- | --- | --- |
| afAppId | AfAppId | O | 0..1 | AF application identifier. |  |
| afChargId | ApplicationChargingId | O | 0..1 | AF charging identifier. This information may be used for charging correlation with QoS flow. | IMS\_SBI |
| afReqData | AfRequestedData | O | 0..1 | Represents the NF service consumer requested data to be exposed. | IMS\_SBI |
| afRoutReq | AfRoutingRequirement | C | 0..1 | Indicates the AF traffic routing requirements. It shall be included if InfluenceOnTrafficRouting feature is supported. | InfluenceOnTrafficRouting |
| afSfcReq | AfSfcRequirement | O | 0..1 | Describes the AF requirements to steer the traffic to a pre-configured chain of service functions on N6-LAN. | SFC |
| afHdrReq | AfHeaderHandlingControlInfo | O | 0..1 | Indicates the AF handling of payload headers requirements. | HeaderHandling |
| aspId | AspId | C | 0..1 | Application service provider identity. It shall be included if "SponsoredConnectivity" feature is supported. | SponsoredConnectivity |
| bdtRefId | BdtReferenceId | O | 0..1 | Reference to a transfer policy negotiated for background data traffic. |  |
| dnn | Dnn | C | 0..1 | Data Network Name, a full DNN with both the Network Identifier and Operator Identifier, or a DNN with the Network Identifier only. It shall be present when the "afRoutReq" attribute is present.  (NOTE 2) |  |
| evSubsc | EventsSubscReqData | O | 0..1 | Identifies the events the application subscribes to at creation of an Individual Application Session Context resource. |  |
| ipDomain | String | O | 0..1 | Indicates the IPv4 address domain information that assists session binding. |  |
| mcpttId | String | O | 0..1 | Indicates that the created Individual Application Session Context resource relates to an MCPTT session prioritized call.  It includes either one of the namespace values used for MCPTT (see IETF RFC 8101 [42]) and it may include the name of the MCPTT service provider. | MCPTT |
| mcVideoId | String | O | 0..1 | Indicates that the created Individual Application Session Context resource relates to an MCVideo session prioritized call.  It includes either one of the namespace values used for MCPTT (see IETF RFC 8101 [42]) and it may include the name of the MCVideo service provider. | MCVideo |
| medComponents | map(MediaComponent) | O | 1..N | Media Component information. The key of the map is the attribute "medCompN". |  |
| mpsAction | MpsAction | O | 0..1 | Indicates a request to invoke an MPS action. | MPSforDTS |
| mpsId | String | O | 0..1 | Indicates that the created Individual Application Session Context resource relates to an MPS service. It contains the national variant for MPS service name. |  |
| mcsId | String | O | 0..1 | Indicates that the created Individual Application Session Context resource relates to an MCS service. It contains the national variant for MCS service name. |  |
| preemptControlInfo | PreemptionControlInformation | O | 0..1 | Pre-emption control information. | MCPTT-Preemption |
| resPrio | ReservPriority | O | 0..1 | Indicates the reservation priority. |  |
| servInfStatus | ServiceInfoStatus | O | 0..1 | Indicates whether the service information is preliminary or final.  When the attribute is not provided the default value is "FINAL". | IMS\_SBI |
| notifUri | Uri | M | 1 | Notification URI for Application Session Context termination requests. |  |
| servUrn | ServiceUrn | O | 0..1 | Service URN. | IMS\_SBI |
| sliceInfo | Snssai | O | 0..1 | Identifies the S-NSSAI. |  |
| sponId | SponId | C | 0..1 | Sponsor identity. It shall be included if "SponsoredConnectivity" feature is supported. | SponsoredConnectivity |
| sponStatus | SponsoringStatus | O | 0..1 | Indication of whether sponsored connectivity is enabled or disabled/not enabled.  The absence of the attribute indicates that the sponsored connectivity is enabled. | SponsoredConnectivity |
| supi | Supi | O | 0..1 | Subscription Permanent Identifier. |  |
| gpsi | Gpsi | O | 0..1 | Generic Public Subscription Identifier. |  |
| suppFeat | SupportedFeatures | M | 1 | This IE represents a list of Supported features used as described in clause 5.8.  It shall be supplied by the NF service consumer in the POST request that requests a creation of an Individual Application Session Context resource. |  |
| ueIpv4 | Ipv4Addr | C | 0..1 | The IPv4 address of the served UE.  (NOTE 1) |  |
| ueIpv6 | Ipv6Addr | C | 0..1 | The IPv6 address of the served UE.  (NOTE 1) |  |
| ueMac | MacAddr48 | C | 0..1 | The MAC address of the served UE. When the feature "TimeSensitiveNetworking" is supported this attribute represents the DS-TT port MAC address.  (NOTE 1) |  |
| tsnBridgeManCont | BridgeManagementContainer | O | 0..1 | Transports TSC user plane node management information. | TimeSensitiveNetworking |
| tsnPortManContDstt | PortManagementContainer | O | 0..1 | Transports port management information for the DS-TT port. | TimeSensitiveNetworking |
| tsnPortManContNwtts | array(PortManagementContainer) | O | 1..N | Transports port management information for one or more NW-TT ports. | TimeSensitiveNetworking |
| tscNotifUri | Uri | O | 0..1 | Notification address of the TSCTSF or TSN AF receiving the TSC management information. | ExposureToTSC |
| tscNotifCorreId | string | O | 0..1 | Correlation identifier for TSC management information notifications.  It shall be provided if the “tscNotifUri” attribute is provided. | ExposureToTSC |
| multiModalId | MultiModalId | O | 0..1 | Multi-modal Service Identifier | MultiMedia |
| qosDuration | DurationSec | O | 0..1 | Contains the QoS duration to transfer data transmission (e.g., AI/ML transmission). The minimum value of the QoS duration is 60 sec. | QoSTiming\_5G |
| qosInactInt | DurationSec | O | 0..1 | Contains the QoS inactivity interval for the given data transmission (e.g., AI/ML transmission). The minimum value of the QoS duration is 60 sec | QoSTiming\_5G |
| NOTE 1: Only one of the served UE addressing parameters (the IPv4 address or the IPv6 address or MAC address) shall always be included.  NOTE 2: The PCF uses the DNN as received from the NF service consumer without applying any transformation (e.g. during session binding). To successfully perform DNN matching, in a specific deployment a DNN shall always be encoded either with the full DNN (e.g., because there are multiple Operator Identifiers for a Network Identifier) or the DNN Network Identifier only. The NF service consumer may include the DNN Operator Identifier based on local configuration. | | | | | |

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

#### 5.6.2.5 Type AppSessionContextUpdateData

Table 5.6.2.5-1: Definition of type AppSessionContextUpdateData

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Attribute name | | Data type | | P | | Cardinality | | Description | | Applicability | |
| afAppId | | AfAppId | | O | | 0..1 | | AF application identifier. | |  | |
| afRoutReq | | AfRoutingRequirementRm | | O | | 0..1 | | Indicates the AF traffic routing requirements. | | InfluenceOnTrafficRouting | |
| afSfcReq | AfSfcRequirement | | O | | 0..1 | | Indicates the AF requirements on steering traffic to a pre-configured chain of service functions on N6-LAN. | | SFC | | |
| afHdrReq | | | AfHeaderHandlingControlInfo | | O | | 0..1 | | Indicates the AF handling of payload headers requirements. | | HeaderHandling | |
| aspId | | AspId | | O | | 0..1 | | Application service provider identity. | | SponsoredConnectivity | |
| bdtRefId | | BdtReferenceId | | O | | 0..1 | | Reference to a transfer policy negotiated for background data traffic. | |  | |
| evSubsc | | EventsSubscReqDataRm | | O | | 0..1 | | Identifies the events the application subscribes to at modification of an Individual Application Session Context resource. | |  | |
| mcpttId | | string | | O | | 0..1 | | Indicates that the updated Individual Application Session Context resource relates to an MCPTT session prioritized call.  It includes either one of the namespace values used for MCPTT (see IETF RFC 8101 [42]) and it may include the name of the MCPTT service provider. | | MCPTT | |
| mcVideoId | | string | | O | | 0..1 | | Indicates that the updated Individual Application Session Context resource relates to an MCVideo session prioritized call.  It includes either one of the namespace values used for MCPTT (see IETF RFC 8101 [42]) and it may include the name of the MCVideo service provider. | | MCVideo | |
| medComponents | | map(MediaComponentRm) | | O | | 1..N | | Media Component information.  The key of the map is the "medCompN" attribute. | |  | |
| mpsAction | | MpsAction | | O | | 0..1 | | Indicates a request to invoke or revoke MPS for DTS. | | MPSforDTS | |
| mpsId | | string | | O | | 0..1 | | Indicates that the modified Individual Application Session Context resource relates to an MPS service. It contains the national variant for MPS service name. | |  | |
| mcsId | | string | | O | | 0..1 | | Indicates that the updated Individual Application Session Context resource relates to an MCS service. It contains the national variant for MCS service name. | |  | |
| preemptControlInfo | | PreemptionControlInformationRm | | O | | 0..1 | | Preemption control information. | | MCPTT-Preemption | |
| resPrio | | ReservPriority | | O | | 0..1 | | Indicates the reservation priority. | |  | |
| servInfStatus | | ServiceInfoStatus | | O | | 0..1 | | Indicates whether the service information is preliminary or final. | | IMS\_SBI | |
| sipForkInd | | SipForkingIndication | | O | | 0..1 | | Describes if several SIP dialogues are related to an "Individual Application Session Context" resource. | | IMS\_SBI | |
| sponId | | SponId | | O | | 0..1 | | Sponsor identity. | | SponsoredConnectivity | |
| sponStatus | | SponsoringStatus | | O | | 0..1 | | Indication of whether sponsored connectivity is enabled or disabled/not enabled. | | SponsoredConnectivity | |
| tsnBridgeManCont | | BridgeManagementContainer | | O | | 0..1 | | Transports TSC user plane node management information. | | TimeSensitiveNetworking | |
| tsnPortManContDstt | | PortManagementContainer | | O | | 0..1 | | Transports port management information for the DS-TT port. | | TimeSensitiveNetworking | |
| tsnPortManContNwtts | | array(PortManagementContainer) | | O | | 1..N | | Transports port management information for one or more NW-TT ports. | | TimeSensitiveNetworking | |
| tscNotifUri | | Uri | | O | | 0..1 | | Notification address of the TSCTSF or TSN AF receiving the TSC management information. | | ExposureToTSC | |
| tscNotifCorreId | | string | | O | | 0..1 | | Correlation identifier for TSC management information notifications.  It shall be provided if the “tscNotifUri” attribute is provided. | | ExposureToTSC | |
| qosDuration | | DurationSecRm | | O | | 0..1 | | Contains the QoS duration to transfer data transmission (e.g., AI/ML transmission). The minimum value of the QoS duration is 60 second. | | QoSTiming\_5G | |
| qosInactInt | | DurationSecRm | | O | | 0..1 | | Contains the QoS inactivity interval for the given data transmission (e.g., AI/ML transmission). The minimum value of the QoS inactivity interval duration is 60 second. | | QoSTiming\_5G | |

\* \* \* \* 8th Change \* \* \* \*

#### 5.6.2.7 Type MediaComponent

Table 5.6.2.7-1: Definition of type MediaComponent

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

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

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

\* \* \* \* 9th Change \* \* \* \*

#### 5.6.2.26 Type MediaComponentRm

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

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

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

- the removable attributes "flusId", "qosReference", "altSerReqs", "altSerReqsData", and "rTLatencyInd" are defined with the property "nullable: true" in the OpenAPI.

Table 5.6.2.26-1: Definition of type MediaComponentRm

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

\* \* \* \* 10th Change \* \* \* \*

#### 5.6.2.61 Type AfHeaderHandlingControlInfo

Table 5.6.2.61-1: Definition of type AfHeaderHandlingControlInfo

| Attribute name | Data type | P | Cardinality | Description | Applicability |
| --- | --- | --- | --- | --- | --- |
| hDetectionReference | string | M | 1 | Indicates header detection reference to a configuration pre-configured in a UPF for performing the header handling actions. |  |
| hDetectionSuppInfo | string | O | 0..N | Contains dynamic information not pre-configured in a UPF and is transparently passed to the UPF to be applied to detect the headers. Its format is unspecified and operator specific. |  |
| notifUri | Uri | O | 0..1 | Contains a URI indicating the notification target address as a header handling reporting endpoint. |  |
| notifId | string | O | 0..1 | Contains a Notification Correlation ID indicating the notification destination as a header handling reporting endpoint. |  |
| spVal | SpatialValidity | O | 0..1 | Indicates where the traffic routing requirements apply. The absence of this attribute indicates no spatial restrictions. |  |
| tempVals | array(TemporalValidity) | O | 1..N | Indicates the time interval(s) during which the NF service consumer request is to be applied. |  |
| hHndlgUl | array(HeaderHandlingActionRequest) | O | 1..N | Represents the list of header handling action request parameters in the uplink direction.  If multiple elements are provided within the hHndlgUl attribute, then the hInfo value within each HeaderHandlingActionRequest data type shall be unique, if available. |  |
| hHndlgDl | array(HeaderHandlingActionRequest) | O | 1..N | Represents the list of header handling action request parameters in the downlink direction.  If multiple elements are provided within the hHndlgUl attribute, then the hInfo value within each HeaderHandlingActionRequest data type shall be unique, if available. |  |

\* \* \* \* 11th Change \* \* \* \*

#### 5.6.2.62 Type: HeaderHandlingActionRequest

Table 5.6.2.62-1: Definition of type HeaderHandlingActionRequest

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| hHndlgCtrlRef | string | O | 0..1 | Indicates reference to a header handling action related information that is pre-configured in a UPF, and the corresponding header handling behaviour has to be agreed as part of the SLA.  An operator may choose to set this reference to the same value as the attribute "hDetectionReference" in the "HeaderHandlingControInfo" data type. |  |
| hHndlgAction | array(HeaderHandlingAction) | O | 1..N | Contains the action to be performed on a specific header field that is identified by the attribute "hInfo" and the attribute "hVal", if it is provided.  The execution order is relevant to build a request that has the intended impact on the traffic. For example, a header that is removed cannot be replaced.  If multiple header handing actions are provided then it shall follow the order: DETECT, REMOVE, REPLACE, and INSERT. |  |
| hInfo | string | O | 0..1 | A reference to a configuration pre-configured in a UPF that defines how to identify or build a specific header field for which to perform the header handling action. |  |
| hVal | string | O | 0..1 | Contains a string providing the value of the specific header field relevant for the hader handing action  This attribute shall be provided if "hHndlgAction" attribute is provided and one of the values is set to REPLACE. |  |
| hHndlgCond | HeaderHandlingCond | O | 0..1 | Contains the condition to apply the header handling action. |  |
| notifFlag | boolean | O | 0..1 | Indicates whether reporting is requested for the performed Header Handling Actions.  - "true" indicates that the reporting is requested for the performed Header Handling.  - "false" indicates that the reporting is not requested for the performed Header Handling.  - Default value is "false" if omitted. |  |
| NOTE: If "hHndlgCtrlRef" attribute is present, any other attributes included within the "HeaderHandlingActionRequest" data type shall overwrite the related information pre-configured in the UPF. | | | | | |

\* \* \* \* 12th Change \* \* \* \*

#### 5.6.3.28 Enumeration: HeaderHandlingAction

The enumeration HeaderHandlingAction represents the type of header handling actions. It shall comply with the provisions defined in table 5.6.3.28-1.

Table 5.6.3.28-1: Enumeration HeaderHandlingAction

|  |  |
| --- | --- |
| Enumeration value | Description |
| DETECT | Indicates that the request for the detection of a header field. |
| REMOVE | Indicates that the request for the removal of a header field. |
| REPLACE | Indicates that the request for the replacement of information in a header field. |
| INSERT | Indicates that the request for the addition of a header field. |

\* \* \* \* 13th Change \* \* \* \*

#### 5.6.3.29 Enumeration: HeaderHandlingCond

The enumeration HeaderHandlingCond represents the condition to apply the header handling action. It shall comply with the provisions defined in table 5.6.3.29-1.

Table 5.6.3.29-1: Enumeration HeaderHandlingCond

|  |  |
| --- | --- |
| Enumeration value | Description |
| EVERY\_MATCH | Indicates that the header handling action is applied to every match. |
| FIRST\_MATCH\_ONLY | Indicates that the header handling action is applied only to the first match. |

\* \* \* \* 14th 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 for QoS Monitoring.  This feature requires that the QoSMonitoring feature is supported. |
| 65 | 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. |

Editor's Note: Whether the QoSMonCapRepo feature can be applied or depended separately to/on QosMonitoring or Rel-18 QoS Monitoring functinaly(e.g. EnQoSMon) is FFS.

\* \* \* \* 15th Change \* \* \* \*

# A.2 Npcf\_PolicyAuthorization API

openapi: 3.0.0

info:

title: Npcf\_PolicyAuthorization Service API

version: 1.4.0-alpha.1

description: |

PCF Policy Authorization Service.

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externalDocs:

description: 3GPP TS 29.514 V19.0.0; 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'

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'

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'

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'

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'

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: array

items:

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

minItems: 1

ranNasRelCauses:

type: array

items:

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

minItems: 1

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

ratType:

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

satBackhaulCategory:

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

ueLoc:

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

ueLocTime:

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

ueTimeZone:

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

usgRep:

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

urspEnfRep:

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

sscMode:

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

ueReqDnn:

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

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'

AfEventSubscription:

description: Describes the event information delivered in the subscription.

type: object

required:

- event

properties:

event:

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

notifMethod:

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

repPeriod:

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

waitTime:

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

qosMonParamType:

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

AfEventNotification:

description: Describes the event information delivered in the notification.

type: object

required:

- event

properties:

event:

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

flows:

type: array

items:

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

minItems: 1

retryAfter:

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

TerminationInfo:

description: >

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

Context resource.

type: object

required:

- termCause

- resUri

properties:

termCause:

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

resUri:

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

AfRoutingRequirement:

description: Describes AF requirements on routing traffic.

type: object

properties:

appReloc:

type: boolean

routeToLocs:

type: array

items:

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

minItems: 1

spVal:

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

tempVals:

type: array

items:

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

minItems: 1

upPathChgSub:

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

addrPreserInd:

type: boolean

simConnInd:

type: boolean

description: >

Indicates whether simultaneous connectivity should be temporarily maintained for the

source and target PSA.

simConnTerm:

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

easIpReplaceInfos:

type: array

items:

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

minItems: 1

description: Contains EAS IP replacement information.

easRedisInd:

type: boolean

description: Indicates the EAS rediscovery is required.

maxAllowedUpLat:

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

tfcCorreInfo:

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

AfSfcRequirement:

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

type: object

properties:

sfcIdDl:

type: string

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

nullable: true

sfcIdUl:

type: string

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

nullable: true

spVal:

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

metadata:

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

nullable: true

SpatialValidity:

description: Describes explicitly the route to an Application location.

type: object

required:

- presenceInfoList

properties:

presenceInfoList:

type: object

additionalProperties:

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

minProperties: 1

description: >

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

PresenceInfo data type is the key of the map.

SpatialValidityRm:

description: >

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

OpenAPI nullable property set to true.

type: object

required:

- presenceInfoList

properties:

presenceInfoList:

type: object

additionalProperties:

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

minProperties: 1

description: >

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

PresenceInfo data type is the key of the map.

nullable: true

AfRoutingRequirementRm:

description: >

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

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

removable.

type: object

properties:

appReloc:

type: boolean

routeToLocs:

type: array

items:

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

minItems: 1

nullable: true

spVal:

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

tempVals:

type: array

items:

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

minItems: 1

nullable: true

upPathChgSub:

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

addrPreserInd:

type: boolean

nullable: true

simConnInd:

type: boolean

nullable: true

description: >

Indicates whether simultaneous connectivity should be temporarily maintained for the

source and target PSA.

simConnTerm:

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

easIpReplaceInfos:

type: array

items:

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

minItems: 1

description: Contains EAS IP replacement information.

nullable: true

easRedisInd:

type: boolean

description: Indicates the EAS rediscovery is required.

maxAllowedUpLat:

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

tfcCorreInfo:

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

nullable: true

AnGwAddress:

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

type: object

anyOf:

- required: [anGwIpv4Addr]

- required: [anGwIpv6Addr]

properties:

anGwIpv4Addr:

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

anGwIpv6Addr:

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

Flows:

description: Identifies the flows.

type: object

required:

- medCompN

properties:

contVers:

type: array

items:

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

minItems: 1

fNums:

type: array

items:

type: integer

minItems: 1

medCompN:

type: integer

EthFlowDescription:

description: Identifies an Ethernet flow.

type: object

required:

- ethType

properties:

destMacAddr:

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

ethType:

type: string

fDesc:

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

fDir:

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

sourceMacAddr:

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

vlanTags:

type: array

items:

type: string

minItems: 1

maxItems: 2

srcMacAddrEnd:

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

destMacAddrEnd:

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

ResourcesAllocationInfo:

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

type: object

properties:

mcResourcStatus:

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

flows:

type: array

items:

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

minItems: 1

altSerReq:

type: string

description: >

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

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

the lowest priority alternative QoS profile could not be fulfilled.

TemporalValidity:

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

type: object

properties:

startTime:

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

stopTime:

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

QosNotificationControlInfo:

description: >

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

type: object

required:

- notifType

properties:

notifType:

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

flows:

type: array

items:

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

minItems: 1

altSerReq:

type: string

description: >

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

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

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

altSerReqNotSuppInd:

type: boolean

description: >

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

supported by NG-RAN.

AcceptableServiceInfo:

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

type: object

properties:

accBwMedComps:

type: object

additionalProperties:

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

description: >

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

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

minProperties: 1

marBwUl:

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

marBwDl:

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

UeIdentityInfo:

description: Represents 5GS-Level UE identities.

type: object

anyOf:

- required: [gpsi]

- required: [pei]

- required: [supi]

properties:

gpsi:

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

pei:

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

supi:

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

AccessNetChargingIdentifier:

description: Describes the access network charging identifier.

type: object

oneOf:

- required: [accNetChaIdValue]

- required: [accNetChargIdString]

properties:

accNetChaIdValue:

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

accNetChargIdString:

type: string

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

flows:

type: array

items:

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

minItems: 1

OutOfCreditInformation:

description: >

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

type: object

required:

- finUnitAct

properties:

finUnitAct:

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

flows:

type: array

items:

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

minItems: 1

QosMonitoringInformation:

description: >

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

round trip delay.

type: object

properties:

repThreshDl:

type: integer

repThreshUl:

type: integer

repThreshRp:

type: integer

repThreshDatRateUl:

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

repThreshDatRateDl:

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

conThreshDl:

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

conThreshUl:

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

PduSessionTsnBridge:

description: >

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

NW-TT port management information.

type: object

required:

- tsnBridgeInfo

properties:

tsnBridgeInfo:

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

tsnBridgeManCont:

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

tsnPortManContDstt:

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

tsnPortManContNwtts:

type: array

items:

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

minItems: 1

ueIpv4Addr:

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

dnn:

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

snssai:

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

ipDomain:

type: string

description: IPv4 address domain identifier.

ueIpv6AddrPrefix:

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

QosMonitoringInformationRm:

description: >

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

with the OpenAPI nullable property set to true.

type: object

properties:

repThreshDl:

type: integer

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'

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'

EventsSubscPutData:

description: >

Identifies the events the application subscribes to within an Events Subscription

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

anyOf:

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

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

PeriodicityRange:

description: >

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

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

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

the periodicity).

type: object

oneOf:

- required: [lowerBound, upperBound]

- required: [periodicVals]

properties:

lowerBound:

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

upperBound:

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

periodicVals:

type: array

items:

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

minItems: 1

BatOffsetInfo:

description: >

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

type: object

required:

- ranBatOffsetNotif

properties:

ranBatOffsetNotif:

type: integer

description: >

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

of milliseconds.

adjPeriod:

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

flows:

type: array

items:

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

minItems: 1

description: >

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

for all flows of the AF session.

PdvMonitoringReport:

description: Packet Delay Variation reporting information.

type: object

properties:

flows:

type: array

items:

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

minItems: 1

description: Identification of the flows.

ulPdv:

type: integer

description: Uplink packet delay variation in units of milliseconds.

dlPdv:

type: integer

description: Downlink packet delay variation in units of milliseconds.

rtPdv:

type: integer

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

AddFlowDescriptionInfo:

description: Contains additional flow description information.

type: object

properties:

spi:

type: string

description: >

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

in hexadecimal representation.

flowLabel:

type: string

description: >

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

representation.

flowDir:

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

L4sSupport:

description: >

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

again in 5GS.

type: object

required:

- notifType

properties:

notifType:

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

flows:

type: array

items:

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

minItems: 1

DirectNotificationReport:

description: >

Represents the QoS monitoring parameters that cannot be directly notified for

the indicated flows.

type: object

required:

- qosMonParamType

properties:

qosMonParamType:

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

flows:

type: array

items:

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

minItems: 1

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

CapabilityReportFlow:

description: Contains control support information.

type: object

properties:

flows:

type: array

items:

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

minItems: 1

description: >

An array of flows associated with the notified support.

capReport:

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

required:

- capReport

AfHeaderHandlingControlInfo:

description: Describes AF requirements on handling of payload headers.

type: object

required:

- hDetectioReference

properties:

hDetectioReference:

description: Indication of header detection reference.

type: string

hDetectionSuppInfo:

description: Indication of transparent dynamic information.

type: string

spVal:

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

tempVals:

type: array

items:

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

minItems: 1

hHndlgUl:

type: array

items:

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

minItems: 1

description: >

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

direction.

hHndlgDl:

type: object

items:

$ref: 'TS29522\_TrafficInfluence.yaml#/components/schemas/HeaderHandlingActionRequest'

minItems: 1

description: >

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

direction.

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/HeaderHandlingAction'

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.

#

# EXTENDED PROBLEMDETAILS

#

ExtendedProblemDetails:

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

allOf:

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

- type: object

properties:

acceptableServInfo:

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

#

# SIMPLE DATA TYPES

#

AfAppId:

description: Contains an AF application identifier.

type: string

AspId:

description: Contains an identity of an application service provider.

type: string

CodecData:

description: Contains codec related information.

type: string

ContentVersion:

description: Represents the content version of some content.

type: integer

FlowDescription:

description: Defines a packet filter of an IP flow.

type: string

SponId:

description: Contains an identity of a sponsor.

type: string

ServiceUrn:

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

type: string

TosTrafficClass:

description: >

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

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

contains the ToS/Traffic Class mask field.

type: string

TosTrafficClassRm:

description: >

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

OpenAPI nullable property set to true.

type: string

nullable: true

MultiModalId:

description: >

This data type contains a multi-modal service identifier.

type: string

TscPriorityLevel:

description: Represents the priority level of TSC Flows.

type: integer

minimum: 1

maximum: 8

TscPriorityLevelRm:

description: >

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

OpenAPI nullable property set to true.

type: integer

minimum: 1

maximum: 8

nullable: true

DurationMilliSec:

description: Indicates the time interval in units of milliseconds.

type: integer

DurationMilliSecRm:

description: >

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

OpenAPI nullable property set to true.

type: integer

#

# ENUMERATIONS DATA TYPES

#

MediaType:

description: Indicates the media type of a media component.

anyOf:

- type: string

enum:

- AUDIO

- VIDEO

- DATA

- APPLICATION

- CONTROL

- TEXT

- MESSAGE

- OTHER

- type: string

description: >

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

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

MpsAction:

description: >

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

the MPS for DTS service.

anyOf:

- type: string

enum:

- DISABLE\_MPS\_FOR\_DTS

- ENABLE\_MPS\_FOR\_DTS

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

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

- type: string

description: >

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

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

ReservPriority:

description: Indicates the reservation priority.

anyOf:

- type: string

enum:

- PRIO\_1

- PRIO\_2

- PRIO\_3

- PRIO\_4

- PRIO\_5

- PRIO\_6

- PRIO\_7

- PRIO\_8

- PRIO\_9

- PRIO\_10

- PRIO\_11

- PRIO\_12

- PRIO\_13

- PRIO\_14

- PRIO\_15

- PRIO\_16

- type: string

description: >

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

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

ServAuthInfo:

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

anyOf:

- type: string

enum:

- TP\_NOT\_KNOWN

- TP\_EXPIRED

- TP\_NOT\_YET\_OCURRED

- ROUT\_REQ\_NOT\_AUTHORIZED

- DIRECT\_NOTIF\_NOT\_POSSIBLE

- type: string

description: >

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

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

SponsoringStatus:

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

anyOf:

- type: string

enum:

- SPONSOR\_DISABLED

- SPONSOR\_ENABLED

- type: string

description: >

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

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

AfEvent:

description: Represents an event to notify to the AF.

anyOf:

- type: string

enum:

- ACCESS\_TYPE\_CHANGE

- ANI\_REPORT

- APP\_DETECTION

- CHARGING\_CORRELATION

- EPS\_FALLBACK

- EXTRA\_UE\_ADDR

- FAILED\_QOS\_UPDATE

- FAILED\_RESOURCES\_ALLOCATION

- OUT\_OF\_CREDIT

- PDU\_SESSION\_STATUS

- PLMN\_CHG

- QOS\_MONITORING

- QOS\_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

- type: string

description: >

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

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

AfNotifMethod:

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

anyOf:

- type: string

enum:

- EVENT\_DETECTION

- ONE\_TIME

- PERIODIC

- type: string

description: >

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

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

QosNotifType:

description: Indicates the notification type for QoS Notification Control.

anyOf:

- type: string

enum:

- GUARANTEED

- NOT\_GUARANTEED

- type: string

description: >

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

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

TerminationCause:

description: >

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

Context resource.

anyOf:

- type: string

enum:

- ALL\_SDF\_DEACTIVATION

- PDU\_SESSION\_TERMINATION

- PS\_TO\_CS\_HO

- INSUFFICIENT\_SERVER\_RESOURCES

- INSUFFICIENT\_QOS\_FLOW\_RESOURCES

- SPONSORED\_DATA\_CONNECTIVITY\_DISALLOWED

- type: string

description: >

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

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

MediaComponentResourcesStatus:

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

anyOf:

- type: string

enum:

- ACTIVE

- INACTIVE

- type: string

description: >

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

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

FlowUsage:

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

anyOf:

- type: string

enum:

- NO\_INFO

- RTCP

- AF\_SIGNALLING

- type: string

description: >

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

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

FlowStatus:

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

anyOf:

- type: string

enum:

- ENABLED-UPLINK

- ENABLED-DOWNLINK

- ENABLED

- DISABLED

- REMOVED

- type: string

description: >

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

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

RequiredAccessInfo:

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

anyOf:

- type: string

enum:

- USER\_LOCATION

- UE\_TIME\_ZONE

- type: string

description: >

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

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

SipForkingIndication:

description: >

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

Context" resource.

anyOf:

- type: string

enum:

- SINGLE\_DIALOGUE

- SEVERAL\_DIALOGUES

- type: string

description: >

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

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

AfRequestedData:

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

anyOf:

- type: string

enum:

- UE\_IDENTITY

- type: string

description: >

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

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

ServiceInfoStatus:

description: Represents the preliminary or final service information status.

anyOf:

- type: string

enum:

- FINAL

- PRELIMINARY

- type: string

description: >

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

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

PreemptionControlInformation:

description: Represents Pre-emption control information.

anyOf:

- type: string

enum:

- MOST\_RECENT

- LEAST\_RECENT

- HIGHEST\_BW

- type: string

description: >

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

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

PrioritySharingIndicator:

description: Represents the Priority sharing indicator.

anyOf:

- type: string

enum:

- ENABLED

- DISABLED

- type: string

description: >

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

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

PreemptionControlInformationRm:

description: >

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

with the OpenAPI nullable property set to true.

anyOf:

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

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

AppDetectionNotifType:

description: Indicates the notification type for Application Detection Control.

anyOf:

- type: string

enum:

- APP\_START

- APP\_STOP

- type: string

description: >

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

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

PduSessionStatus:

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

anyOf:

- type: string

enum:

- ESTABLISHED

- TERMINATED

- type: string

description: >

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

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

UplinkDownlinkSupport:

description: >

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

UL and DL.

anyOf:

- type: string

enum:

- UL

- DL

- UL\_DL

- type: string

description: >

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

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

L4sNotifType:

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

anyOf:

- type: string

enum:

- AVAILABLE

- NOT\_AVAILABLE

- type: string

description: >

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

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

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 for the detection of a header field.

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

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

field.

- INSERT: Indicates that the request 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 type of 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.

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