**3GPP TSG-CT WG3 Meeting #142 *C3-253132r2***

**Gothenburg, SE, 25 - 29 August 2025**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **29.512** | **CR** | **1392** | **rev** | **1** | **Current version:** | **19.3.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | Additional required feature URLLC for UE-Satellite-UE communication | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | ZTE | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GSAT\_Ph3\_ARCH | | | | |  | ***Date:*** | | | 2025-08-19 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***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:*** | | According to 4.3.6.3 of 23.502, P-CSCF may need to acknowledge the UP path change notification from SMF via PCF, which means afAckInd attribute under the feature control of URLLC is applicable to UE-Satellite-UE communication, therefore UeSatUeComm feature requires the support of URLLC feature. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Update the description of UeSatUeComm feature in 5.8 to indicate that URLLC feature also requires to be supported. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The acknowledgement of UP path change event notification may not work properly. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.2.6.2.6, 4.2.6.2.6.2, 5.6.1, 5.6.2.10, 5.6.2.20, 5.8 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | This CR does not have any impact in the OpenAPI specification. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**Additional discussion(if needed):**

**Proposed changes:**

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

##### 4.2.6.2.6 Traffic Steering Control support

If the "TSC" feature is supported, the PCF may instruct the SMF to apply a traffic steering control for the purpose of:

- steering the subscriber's traffic to an appropriate operator or 3rd party service functions (e.g. NAT, antimalware, parental control, DdoS protection) in the N6-LAN or 5G-LAN type of services according to operator policy or, if the SFC feature is supported, according to the information of AF influenced service function chaining, and/or

- enabling the routing of the user traffic to a local Data Network identified by a DNAI per AF request. When the "CommonEASDNAI" feature is supported, the procedure is also used by the PCF to request to select a common EAS or a common DNAI for a set of UE associated with the same traffic correlation Id accessing the application identified by the service data flow template as requested by the AF or to provide endpoint information for the NEF to be notified with information related to UE members of the set of UEs identified by traffic correlation ID.

If the "SFC" feature is supported, the PCF may instruct the SMF to apply both traffic steering controls above simultaneously.

If the "HeaderHandling" feature is supported,

- in the non-roaming scenario, the PCF may instruct the SMF to applythe traffic steering controls above and the handling of payload headers defined in clause 4.2.6.2.24 simultaneously;

- in the Home Routed roaming scenario, the PCF may instruct the SMF to apply the AF influenced service function chaining and the handling of payload headers defined in clause 4.2.6.2.24 simultaneously.

If the "UeSatUeComm" feature is supported, the PCF may also subscribe to notifications about UP path management events as defined in clause 4.2.6.2.6.2.

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

###### 4.2.6.2.6.2 Steering the traffic to a local access of the data network

This procedure is only applicable in non-roaming and visited access (i.e. LBO) scenarios.

The PCF shall determine if the ongoing PDU Session is impacted by the routing of traffic to a local access to a data network as follows:

- If the AF request includes the individual IP address/ prefix allocated to a UE or the UE MAC address, the PCF shall store the received traffic routing information and perform session binding as defined in clause 6.2 of 3GPP TS 29.513 [7] to determine the impacted PDU session.

- Otherwise, the PCF fetches from the UDR, as defined in 3GPP TS 29.519 [15], the traffic routing data information applicable for a UE, any UE or one or more Internal Group Id(s) (if received in the SMF request) and/or subscriber category(ies).

NOTE 1: If the UDR provides as part of the traffic routing data information a list of Internal Group Id(s), this information applies to all the PDU sessions related to UEs that belong to every one of these groups, i.e. a single UE needs to be a member of every group in the list of Internal Group Id(s). If the list of subscriber category(ies) is part of the traffic routing data information, this information applies to all the PDU sessions related to the UEs that belong to every one of these Subscriber Categories.

Then the PCF authorizes the request for influencing SMF routing decisions. For the impacted PDU Session that corresponds to the AF request, the PCF shall take into account, if available, the local routing indication stored in the policy data subscription information in the UDR, as defined in 3GPP TS 29.519 [15], to determine whether it is allowed to generate PCC rules with traffic routing information. When allowed, the PCC rules are generated based on the AF request as follows:

- When the request is for influencing SMF routing decisions, based on traffic routing information, operator's policy, etc., the PCF determines the traffic steering policy. The traffic steering policy indicates, for each DNAI, a traffic steering policy identifier configured in the SMF and/or if the N6 routing information associated to the application is explicitly provided by the AF, the N6 routing information (as provided by the AF). The traffic steering policy identifier is derived by the PCF from the routing profile Id provided by the AF and is related to the mechanism enabling traffic steering to the DN. Then:

- The PCF shall include within each PccRule data structure the necessary information to identify the concerned traffic within either the "flowInfos" attribute or the "appId" attribute, and include within the TrafficControlData data type that the PCC rule refers to a list of locations that the traffic shall be routed to in the "routeToLocs" attribute, and, if the "AF\_latency" feature is supported, the PCF shall include the maximum allowed user plane latency within the "maxAllowedUpLat" attribute if available. If "EASIPreplacement" feature is supported, the PCF shall include the EAS IP replacement information within the "easIpReplaceInfos" attribute if available.

- Within each RouteToLocation instance, the PCF shall include a DNAI in the "dnai" attribute to indicate the location of the application towards which the traffic routing is applied, and a traffic steering policy identifier in the "routeProfId" attribute, to indicate the traffic steering policy that applies to the indicated DNAI, and/ or the explicit N6 traffic routing information in the "routeInfo" attribute.

- If the AF provides both a routing profile Id and N6 routing information for a DNAI, the PCF may include a RouteToLocation instance with the required information or may include two RouteToLocation instances with the same DNAI within the "dnai" attribute and a traffic steering policy identifier within the "routeProfId" attribute in one instance and explicit routing information within the "routeInfo" attribute in the other instance.

NOTE 2: The N6 traffic routing requirements are related to the mechanism enabling traffic steering in the local access to the DN. The routing profile ID refers to a pre-agreed policy between the AF and the 5GC. This policy may refer to different steering policy identifier(s) sent to the SMF and e.g. based on time of the day, etc.

NOTE 3: When per DNAI both, the "routeProfId" and the "routeInfo"attributes are provided, if the pre-configured traffic steering policy referenced by the "routeProfId" attribute contains information that is overlapping with the N6 traffic routing information provided in the "routeInfo" attribute, the N6 traffic routing information takes precedence.

NOTE 4: In this release of the specification, either a traffic steering policy identifier for UL or a traffic steering policy identifier for DL can be defined per DNAI.

- When the request is for subscribing to UP path change and/or traffic routing requirements installation outcome and/or simultaneous connectivity failure events of the PDU session, the PCF shall include the information on AF subscription to UP path change events and/or traffic routing requirements installation outcome and/or simultaneous connectivity failure events within the PCC rule(s) to request the SMF to create a subscription to such notifications for the AF. In order to do so, the PCF shall include within each PccRule data structure the necessary information to identify the concerned traffic within either the "flowInfos" attribute or the "appId" attribute, and include within the Traffic Control Data decision that the PCC rule refers to the information on AF subscription to events within the "upPathChgEvent" attribute and/or "outcomeEvent" attribute and/or "simConnFailEvent" attribute.

Within this "upPathChgEvent" attribute, the PCF shall include the "dnaiChgType" attribute to indicate the type of notification (i.e. early notification, late notification or both), the notification URI within the "notificationUri" attribute, the notification correlation Id within the "notifCorreId" attribute, and if the "URLLC" feature and/or the "UeSatUeComm" feature is(are) supported, an indication of AF acknowledgement to be expected within the "afAckInd" attribute. In order to enable the AF to identify the AF request to which the notification corresponds when the AF receives a UP path change notification from the SMF, as defined in clause 4.2.2.2 of 3GPP TS 29.508 [12], the PCF shall set the values of the "notificationUri" attribute and "notifCorreId" attribute respectively as follows:

- If the PCF fetches the traffic routing data information from the UDR, the PCF shall set the value of the "notificationUri" attribute to the value of the "upPathChgNotifUri" attribute of the TrafficInfluData data structure and set the value of the "notifCorreId" attribute to the value of the "upPathChgNotifCorreId" attribute of the TrafficInfluData data structure as defined in 3GPP TS 29.519 [15].

- If the PCF receives the traffic routing data information from the AF via N5 interface, the PCF shall set the values of the "notificationUri" attribute and the "notifCorreId" attribute according to the "upPathChgSub" attribute within the AfRoutingRequirement data structure as defined in 3GPP TS 29.514 [17].

- If the feature "UeSatUeComm" is supported, when the PCF receives the traffic routing data information from the AF and determines that the request is from P-CSCF, the PCF shall generate its own notification address and correlation ID, and set the values of the "notificationUri" attribute and the "notifCorreId" attribute. The Notification for UP path change will be sent from SMF to AF via PCF.

If the "TraffRouteReqOutcome" feature is supported, within this "outcomeEvent" attribute, the PCF shall include the notification URI within the "notificationUri" attribute, the notification correlation Id within the "notifCorreId" attribute. In order to enable the AF to identify the AF request to which the notification corresponds when the AF receives a traffic route requirements installation outcome notification from the SMF, as defined in clause 4.2.2.2 of 3GPP TS 29.508 [12], the PCF shall set the values of the "notificationUri" attribute and "notifCorreId" attribute respectively as follows:

- If the PCF fetches the traffic routing requirements data information from the UDR, the PCF shall set the value of the "notificationUri" attribute to the value of the "notifUri" attribute of the TrafficInfluData data structure and set the value of the "notifCorreId" attribute to the value of the "notifCorreId" attribute of the TrafficInfluData data structure as defined in 3GPP TS 29.519 [15].

- If the PCF receives the traffic routing data information from the AF via N5 interface, the PCF shall set the values of the "notificationUri" attribute and the "notifCorreId" attribute according to the "outcomeSub" attribute within the AfRoutingRequirement data structure as defined in 3GPP TS 29.514 [17].

If the "SimConnFailure" feature is supported, within this "simConnFailEvent" attribute, the PCF shall include the notification URI within the "notificationUri" attribute and the notification correlation Id within the "notifCorreId" attribute. In order to enable the AF to identify the AF request to which the notification corresponds when the AF receives a simultaneous connectivity failure notification from the SMF as defined in clause 4.2.2.2 of 3GPP TS 29.508 [12], the PCF shall set the values of the "notificationUri" attribute and "notifCorreId" attribute respectively as follows:

- If the PCF fetches the traffic routing requirements data information from the UDR, the PCF shall set the value of the "notificationUri" attribute to the value of the "notifUri" attribute of the TrafficInfluData data structure and set the value of the "notifCorreId" attribute to the value of the "notifCorreId" attribute of the TrafficInfluData data structure as defined in 3GPP TS 29.519 [15].

- If the PCF receives the traffic routing data information from the AF via N5 interface, the PCF shall set the values of the "notificationUri" attribute and the "notifCorreId" attribute according to the "simConnFailSub" attribute within the AfRoutingRequirement data structure as defined in 3GPP TS 29.514 [17].

If the NEF/AF provided information about the feature support on Nsmf\_EventExposure service as described in 3GPP TS 29.514 [17] (AF request applies an individual UE address) or 3GPP TS 29.519[15] (AF request applies to PDU sessions not identified by a UE address), the PCF may also include this information within the "nscSuppFeats" attribute included within the PccRule data type.

- If the AF request includes an indication that application relocation is not possible, the PCF shall include within the PccRule data instance(s) the necessary information to identify the traffic within either the "flowInfos" attribute or the "appId" attribute and the "appReloc" attribute set to true. In this case, the SMF shall ensure that for the traffic related with the concerned application, no DNAI change takes place once selected initially for this application.

- If the "EASDiscovery" feature is supported and the AF request includes an indication that EAS rediscovery is required, the PCF shall include within the PccRule data instance(s) the necessary information to identify the traffic within the "appId" attribute and the "easRedisInd" attribute set to true.

- If the URLLC feature is supported and the AF request includes an indication that the UE IP address preservation should be considered, the PCF shall include within the concerned PccRule data instance(s) the "addrPreserInd" attribute set to true.

- If the AF request includes an indication that the PDU session should be correlated via a common DNAI for a given traffic, the PCF shall include within the TrafficControlData data instance provisioned for one or more PCC rule(s), the "traffCorreInd" attribute set to true.

NOTE 5: The indication of traffic correlation can be provided together with the traffic routing information by the AF for all the members of the 5G VN group. Referred to clause 5.29.4 of 3GPP TS 23.501 [2].

- If the feature "SimultConnectivity" is supported and the AF request includes an indication that the simultaneous connectivity may be temporarily maintained for the target and the source PSA during the edge re-location procedure, the PCF may include within the TrafficControlData data instance provisioned for one or more PCC rule(s) the "simConnInd" attribute set to true, as indicated by the AF. If the feature "SimultConnectivity" is supported and the AF request includes the time interval to be considered for inactivity of the traffic routed through the source PSA after which the simultaneous connectivity can be terminated, the PCF may also include the received duration within the "simConnTerm" attribute.

- If the feature "N6DelayMeasurement" is supported and AF includes an indication to consider the N6 delay, the PCF may include within the TrafficControlData data instance provisioned for one or more PCC rule(s) the "n6DelayInd" attribute set to true, as indicated by the AF.

- If the feature "CommonEASDNAI" is supported and AF includes a traffic correlation information within "tfcCorreInfo" attribute, and

- if the AF request also includes an indication that the PDU session should be correlated via a common DNAI, the PCF shall include the TrafficControlData data instance provisioned for one or more PCC rule(s), "COMMON\_DNAI" within the "corrType" attribute and the identification of a set of UEs accessing the application identified by the service data flow template within the "tfcCorrId" attribute. If the NEF has added its information in the AF request in order to be notified with information related to UE members of the set of UEs identified by traffic correlation ID, then the PCF shall include also the "notifUri" and "notifCorrId" attributes within the "tfcCorreInfo" attribute of the TrafficControlData; or

- if the AF request also includes an indication that a common EAS for the application identified by the service data flow template should be selected, the PCF shall include the TrafficControlData data instance provisioned for one or more PCC rule(s), the "COMMON\_EAS" within the "corrType" attribute, the identification of a set of UEs accessing the application identified by the service data flow template within the "tfcCorrId" attribute, the common EAS address(s) within the "comEasIpv4Addr" attribute and/or "comEasIpv6Addr" attribute and/or the FQDN range corresponding to the application within the "fqdnRange" attribute. If the NEF has added its information in the AF request in order to be notified with information related to UE members of the set of UEs identified by traffic correlation ID, then the PCF shall include also the "notifUri" and "notifCorrId" attributes within the "tfcCorreInfo" attribute of the TrafficControlData.

NOTE 6: Common EAS selection means the common DNAI is selected.

The PCF shall provide the PCC rule(s) as defined in clause 4.2.6.2.1.

If the temporal validity condition is received, the PCF shall evaluate the temporal validity condition of the AF request and inform the SMF to install or remove the corresponding PCC rule(s) according to the evaluation result. When policies specific to the PDU Session and policies general to multiple PDU Sessions exist, the PCF gives precedence to the PDU Session specific policies over the general policies.

If the spatial validity condition is received, the PCF considers the latest known UE location to determine the PCC rules provided to the SMF. In order to do that, the PCF shall request the SMF to report the notifications about change of UE location in an area of interest (i.e. Presence Reporting Area) as defined in clauses 4.2.2.13 or 4.2.3.19. The subscribed area of interest may be the same as the one provided in spatial validity condition, or may be a subset of the spatial validity condition (e.g. a list of TAs) based on the latest known UE location. When the SMF detects that the UE entered the area of interest subscribed by the PCF, the SMF notifies the PCF and the PCF provides to the SMF the PCC rule(s) described above. When the SMF becomes aware that the UE left the area subscribed by the PCF, the SMF notifies the PCF and the PCF may remove or provide updated PCC rule(s) to the SMF.

When the PCC rules are installed, the SMF may, based on local policies, take the information in the PCC rule(s) into account to:

- if the PDU Session is of IP type and the "addrPreserInd" attribute is included and set to true in the PCC rule(s), the SMF should preserve the UE IP address and, if necessary, not reselect the related PSA UPF for the traffic identified in the PCC rule once the PSA UPF is selected; otherwise, the SMF (re)selects UPF(s) as it might be required for PDU Sessions.

- activate mechanisms for traffic multi-homing or enforcement of an UL Classifier (UL CL).

- inform the AF of the (re)selection of the UP path (change of DNAI) and/or the candidate DNAI(s) for the PDU Session if the "CommonEASDNAI" feature is supported and the "candDnaiInd" attribute was set to "true".

- determine the target DNAI(s) for the current UE location, which may imply I-SMF selection or removal to be requested to the AMF as defined in 3GPP TS 29.502 [22].

- if the "traffCorreInd" attribute set to true is included in the TrafficControlData data type referenced by a set of PCC rules, based on SMF implementation and local configuration, the SMF should select a common DNAI from the list of DNAI included in the "routeToLocs" attribute for the identified traffic of the PDU session.

- if the "simConnInd" attribute set to true is included in the TrafficControlData data type referenced by a set of PCC rules, the SMF may temporarily maintain simultaneous connectivity for the source and target PSA at edge relocation procedure, and may influence the establishment of a temporary N9 forwarding tunnel between the source UL CL and target UL CL. If the "simConnTerm" attribute is also included, the SMF may consider the indicated time interval as the minimum one to be considered for inactivity for the described traffic before the connectivity over the source PSA may be removed.

- if the "maxAllowedUpLat" attribute is received, SMF may use this value to decide whether edge relocation is needed to ensure that the user plane latency does not exceed the value and whether to relocate the PSA UPF to satisfy the user plane latency.

- if the "easIpReplaceInfos" attribute is received, the SMF may instruct the local PSA UPF with the EAS IP replacement information using "Outer Header Creation" as defined in 3GPP TS 29.244 [13] clause 8.2.56 and "Outer Header Removal" as defined in 3GPP TS 29.244 [13] clause 8.2.64. The PSA UPF shall be configured by the SMF to perform one creation and one removal of the appropriate outer header(s) both in the uplink and in the downlink direction in a way that the address information indicated by the "source" attribute (within "easIpReplaceInfos") is used in the headers of the packets towards the UE and the address information indicated by the "target" attribute (within "easIpReplaceInfos") is used in the headers of the packets towards the DN.

- if the "easRedisInd" attribute set to true is included, the SMF may indicate the UE to refresh the cached EAS information as defined in clause 6.3.2 of 3GPP TS 24.501 [20].

- if the "n6DelayInd" attribute set to true is included, the SMF may trigger N6 delay measurements and consider the results for traffic steering decisions.

- if the "tfcCorreInfo" attribute is received, and,

- if the "COMMON\_DNAI" is included within the "corrType" attribute in the TrafficControlData data type referenced by a set of PCC rules, based on SMF implementation and local configuration, the SMF should select a common DNAI from the list of DNAI included in the "routeToLocs" attribute for the traffic of the PDU session which have the same traffic correlation Id within the "tfcCorrId" attribute as defined in clause 6.2.3.2.6 of TS 23.548 [62]. The SMF shall use the provided DNAI as the common DNAI when only one is included in the "routeToLocs" attribute; or

- if the "COMMON\_EAS" is included within the "corrType" attribute in the TrafficControlData data type referenced by a set of PCC rules, the SMF should use the value within the "fqdnRange" if received to match the FQDN received from the EASDF via the Neasdf\_DNSContext\_Notify request. If they are matched, the SMF may indicate the UE the common EAS address(s) received within the "comEasIpv4Addr" attribute and/or "comEasIpv6Addr" attribute.

NOTE 7: In order for the SMF to initiate the EASDF-based EAS discovery procedure, the SMF will use the FQDN information received within the "fqdnRange" attribute for setting traffic route and finding DNAI. The "flowInfos" attribute or the "appId" attribute will not be considered for that purpose.

- if the "notifUri" attribute and "notifCorrId" attribute are included, the SMF shall notify the 5GC determined information for a set of UEs identified by Traffic Correlation ID.

NOTE 8: Common EAS selection means the common DNAI is selected.

If routing of traffic to a local access to a data network policy provided in the "routeToLocs" attribute is invalid, unknown or not applicable, or the enforcement of the steering of the traffic to the indicated DNAI failed, the SMF shall return a PCC Rule Error Report, as specified in clauses 4.2.3.16 and 4.2.4.15, and set the "failureCode" attribute to "DNAI\_STEERING\_ERROR".

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

### 5.6.1 General

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

The Npcf\_SMPolicyControl API allows the NF service consumer to retrieve the session management related policy from the PCF as defined in 3GPP TS 23.503 [6].

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

Table 5.6.1-1: Npcf\_SMPolicyControl specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Section defined | Description | Applicability |
| 5GSmCause | 5.6.3.2 | Indicates the 5GSM cause code value. | RAN-NAS-Cause |
| AdditionalAccessInfo | 5.6.2.43 | Indicates the combination of additional Access Type and RAT Type for MA PDU session | ATSSS |
| AccNetChargingAddress | 5.6.2.35 | Identifies the address of the network node performing charging and used for charging applications. |  |
| AccNetChId | 5.6.2.23 | Contains the access network charging identifier for the PCC rule(s) or whole PDU session. |  |
| AccuUsageReport | 5.6.2.18 | Contains the accumulated usage report information. | UMC |
| AtsssCapabilityExt | 5.6.3.66 | Contains the ATSSS capability(ies) supported for the MA PDU Session. | EnATSSS\_v3 |
| AfSigProtocol | 5.6.3.10 | Indicates the protocol used for signalling between the UE and the AF. | ProvAFsignalFlow |
| AppDetectionInfo | 5.6.2.22 | Contains the detected application's traffic information. | ADC |
| ApplicationDescriptor | 5.6.3.2 | Defines the Application Descriptor for an ATSSS rule. | ATSSS |
| AtsssCapability | 5.6.3.26 | Contains the ATSSS capability supported for the MA PDU Session. | ATSSS |
| AuthorizedDefaultQos | 5.6.2.34 | Authorized Default QoS. |  |
| BatOffsetInfoPcc | 5.6.2.60 | Contains the offset of the BAT and the optionally adjusted periodicity for the corresponding PCC rules(s). | EnTSCAC |
| BridgeManagementContainer | 5.6.2.47 | Contains the UMIC. | TimeSensitiveNetworking |
| CalleeInfo | 5.6.2.55 | Identifies the callee information. | VBCforIMS |
| CallInfo | 5.6.2.54 | Identifies the caller and callee information. | VBCforIMS |
| ChargingData | 5.6.2.11 | Contains charging related parameters. |  |
| ChargingInformation | 5.6.2.17 | Represents the charging information. |  |
| ConditionData | 5.6.2.9 | Contains conditions for applicability of a rule. |  |
| CreditManagementStatus | 5.6.3.16 | Indicates the reason of the credit management session failure. |  |
| DownlinkDataNotificationControl | 5.6.2.48 | Contains the downlink data notification control information. | DDNEventPolicyControl |
| DownlinkDataNotificationControlRm | 5.6.2.49 | This data type is defined in the same way as the "DownlinkDataNotificationControl" data type, but with the OpenAPI "nullable: true" property. | DDNEventPolicyControl2 |
| EpsRanNasRelCause | 5.6.3.2 | Indicates the RAN or NAS release cause code information in 3GPP-EPS access type or indicates the TWAN or untrusted WLAN release cause code information in Non-3GPP-EPS access type. | RAN-NAS-Cause |
| ErrorReport | 5.6.2.36 | Contains the PCC rule and/or session rule and/or policy decision and/or condition data reports. |  |
| FailureCause | 5.6.3.14 | Indicates the cause of the failure in a Partial Success Report. |  |
| FailureCode | 5.6.3.9 | Indicates the reason of the PCC rule failure. |  |
| FlowDescription | 5.6.3.2 | Defines a packet filter for an IP flow. |  |
| FlowDirection | 5.6.3.3 | Indicates the direction of the service data flow. |  |
| FlowDirectionRm | 5.6.3.15 | This data type is defined in the same way as the "FlowDirection" data type, but allows null value. |  |
| FlowInformation | 5.6.2.14 | Contains the flow information. |  |
| IpMulticastAddressInfo | 5.6.2.46 | Contains the IP multicast addressing information | WWC |
| L4sSupportInfo | 5.6.2.57 | Indicates whether the ECN marking for L4S is available in 5GS for the indicated PCC rules. | L4S |
| MaPduIndication | 5.6.3.25 | Contains the MA PDU session indication, i.e., MA PDU Request or MA PDU Network-Upgrade Allowed. | ATSSS |
| MeteringMethod | 5.6.3.5 | Indicates the metering method. |  |
| MulticastAccessControl | 5.6.3.20 | Indicates whether the service data flow, corresponding to the service data flow template, is allowed or not allowed. | WWC |
| NetLocAccessSupport | 5.6.3.27 | Indicates the access network support of the report of the requested access network information. | NetLoc |
| Non3gppDeviceInfo | 5.6.2.63 | Represents information about the non-3gpp device which is behind a UE and is using a PDU Session of the UE. | Non3gppDevice |
| NotificationControlIndication | 5.6.3.29 | Indicates the notification of DDD Status is requested and/or notification of DDN Failure is requested. | DDNEventPolicyControl |
| NwdafData | 5.6.2.53 | Indicates the list of NWDAF instance IDs used for the PDU Session and their associated Analytics ID(s) consumed by the NF service consumer. | EneNA |
| PacketFilterContent | 5.6.3.2 | Defines a packet filter for an IP flow. |  |
| PacketFilterInfo | 5.6.2.30 | Contains the information from a single packet filter sent from the NF service consumer to the PCF. |  |
| PartialSuccessReport | 5.6.2.33 | Includes the information reported by the NF service consumer when some of the PCC rules and/or session rules and/or policy decisions and/or condition data are not successfully installed/activated or stored. |  |
| PccRule | 5.6.2.6 | Contains the PCC rule information. |  |
| PduSessionRelCause | 5.6.3.24 | Contains the NF service consumer PDU Session release cause. | PDUSessionRelCause,  ImmediateTermination |
| PolicyControlRequestTrigger | 5.6.3.6 | Contains the policy control request trigger(s). |  |
| PolicyDecisionFailureCode | 5.6.3.28 | Indicates the type of the failed policy decision and/or condition data. | PolicyDecisionErrorHandling |
| PortManagementContainer | 5.6.2.45 | Contains the port management information container for a port. | TimeSensitiveNetworking |
| PortRange | 5.6.2.65 | Contains the port range. | Non3gppDevice |
| QosCharacteristics | 5.6.2.16 | Contains QoS characteristics for a non-standardized or non-configured 5QI. |  |
| QosData | 5.6.2.8 | Contains the QoS parameters. |  |
| QosFlowUsage | 5.6.3.13 | Indicates a QoS flow usage information. |  |
| QosMonitoringData | 5.6.2.40 | Contains QoS monitoring related control information. | QosMonitoring |
| QosMonitoringReport | 5.6.2.42 | Contains QoS monitoring reporting information. | QosMonitoring |
| QosNotificationControlInfo | 5.6.2.32 | Contains the QoS Notification Control Information. |  |
| QosMonitoringParamType | 5.6.3.32 | Contains the QoS monitoring parameter to be monitored. | EnQoSMon |
| RanNasRelCause | 5.6.2.28 | Contains the RAN/NAS release cause. | RAN-NAS-Cause |
| RedirectAddressType | 5.6.3.12 | Indicates the redirect address type. | ADC |
| RedirectInformation | 5.6.2.13 | Contains the redirect information. | ADC |
| ReportingFrequency | 5.6.3.22 | Indicates the frequency for the reporting | QosMonitoring |
| ReportingLevel | 5.6.3.4 | Indicates the reporting level. |  |
| RequestedQos | 5.6.2.31 | Contains the QoS information requested by the UE. |  |
| RequestedQosMonitoringParameter | 5.6.3.21 | Indicates the requested QoS monitoring parameters to be measured. | QosMonitoring |
| RequestedRuleData | 5.6.2.24 | Contains rule data requested by the PCF to receive information associated with PCC rules. |  |
| RequestedRuleDataType | 5.6.3.7 | Contains the type of rule data requested by the PCF. |  |
| RequestedUsageData | 5.6.2.25 | Contains usage data requested by the PCF requesting usage reports for the corresponding usage monitoring data instances. | UMC |
| RuleOperation | 5.6.3.11 | Indicates a UE initiated resource operation that causes a request for PCC rules. |  |
| RuleReport | 5.6.2.27 | Reports the status of PCC rule(s). |  |
| RuleStatus | 5.6.3.8 | Indicates the status of PCC or session rule. |  |
| ServingNfIdenty | 5.6.2.38 | Contains the serving Network Function identity. |  |
| SessionRule | 5.6.2.7 | Contains session level policy information. |  |
| SessionRuleFailureCode | 5.6.3.17 | Indicates the reason of the session rule failure. | SessionRuleErrorHandling |
| SessionRuleReport | 5.6.2.37 | Reports the status of session rule. | SessionRuleErrorHandling |
| SgsnAddress | 5.6.2.50 | Contains the serving SGSN address. | 2G3GIWK |
| SimConnFailEvent | 5.6.2.66 | Contains the simultaneous connectivity failure event subscription information from the AF. | SimConnFailure |
| SliceUsgCtrlInfo | 5.6.2.59 | Represents network slice usage control information. | NetSliceUsageCtrl |
| SmPolicyAssociationReleaseCause | 5.6.3.23 | Represents the cause why the PCF requests the termination of the SM policy association. |  |
| SmPolicyControl | 5.6.2.2 | Contains the parameters to request the SM policies and the SM policies authorized by the PCF. |  |
| SmPolicyContextData | 5.6.2.3 | Contains the parameters to create individual SM policy resource. |  |
| SmPolicyDecision | 5.6.2.4 | Contains the SM policies authorized by the PCF. |  |
| SmPolicyNotification | 5.6.2.5 | Contains the update of the SM policies. |  |
| SmPolicyDeleteData | 5.6.2.15 | Contains the parameters to be sent to the PCF when the individual SM policy is deleted. |  |
| SmPolicyUpdateContextData | 5.6.2.19 | Contains the met policy control request trigger(s) and corresponding new value(s) or the error report of the policy enforcement. |  |
| SteeringFunctionality | 5.6.3.18 | Indicates functionality to support traffic steering, switching and splitting determined by the PCF. | ATSSS |
| SteeringMode | 5.6.2.39 | Contains the steering mode value and parameters determined by the PCF. | ATSSS |
| SteerModeIndicator | 5.6.3.31 | Contains Autonomous load-balance indicator or UE-assistance indicator. | EnATSSS |
| SteerModeValue | 5.6.3.19 | Indicates the steering mode value determined by the PCF. | ATSSS |
| TerminationNotification | 5.6.2.21 | Termination Notification. |  |
| ThresholdValue | 5.6.2.52 | Contains the threshold value(s) for RTT and/or Packet Loss Rate. | EnATSSS |
| TrafficControlData | 5.6.2.10 | Contains parameters determining how flows associated with a PCCRule are treated (blocked, redirected, etc). |  |
| TrafficParaData | 5.6.2.56 | Contains Traffic Parameter(s) related control information. | PowerSaving |
| TrafficParameterMeas | 5.6.3.32 | Indicates the traffic parameters to be measured. | PowerSaving |
| TraffRouteReqOutcomeEvent | 5.6.2.62 | Contains the traffic routing requirements installation outcome event subscription from the AF. | TraffRouteReqOutcome |
| TransportMode | 5.6.3.34 | Indicates the transport mode for MPQUIC-UDP, MPQUIC-IP and MPQUIC-E functionalities. | EnATSSS\_v2 |
| TsnBridgeInfo | 5.6.2.41 | Contains parameters that describe and identify the TSC user plane node. | TimeSensitiveNetworking |
| TsnPortNumber | 5.6.3.2 | Contains a port number. | TimeSensitiveNetworking |
| UeCampingRep | 5.6.2.26 | Contains the current applicable values corresponding to the policy control request triggers. |  |
| UeInitiatedResourceRequest | 5.6.2.29 | Indicates a UE requests specific QoS handling for selected SDF. |  |
| UePolicyContainer | 5.6.3.2 | Contains a UE policy container | EpsUrsp |
| UeReachabilityStatus | 5.6.3.35 | Contains the UE reachability status. | UEUnreachable |
| UpPathChgEvent | 5.6.2.20 | Contains the UP path change event subscription from the AF. | TSC  UeSatUeComm |
| UrspEnforcementInfo | 5.6.3.2 | Contains the report of URSP rule(s) enforcement information as received from the UE. | URSPEnforcement |
| UsageMonitoringData | 5.6.2.12 | Contains usage monitoring related control information. | UMC |
| UserPlaneAddress | 5.6.2.64 | Represents a User Plane Address. | Non3gppDevice |

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

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

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
| 5GMmCause | 3GPP TS 29.571 [11] | Contains the cause value of 5GMM protocol. | RAN-NAS-Cause |
| 5Qi | 3GPP TS 29.571 [11] | Unsigned integer representing a 5G QoS Identifier (see clause 5.7.2.1 of 3GPP TS 23.501 [2]), within the range 0 to 255. |  |
| 5QiPriorityLevel | 3GPP TS 29.571 [11] | Unsigned integer indicating the 5QI Priority Level (see clauses 5.7.3.3 and 5.7.4 of 3GPP TS 23.501 [2]), within the range 1 to 127.  Values are ordered in decreasing order of priority, i.e. with 1 as the highest priority and 127 as the lowest priority. |  |
| 5QiPriorityLevelRm | 3GPP TS 29.571 [11] | This data type is defined in the same way as the "5QiPriorityLevel" data type, but with the OpenAPI "nullable: true" property. |  |
| AccessType | 3GPP TS 29.571 [11] | The identification of the type of access network. |  |
| AccessTypeRm | 3GPP TS 29.571 [11] | This data type is defined in the same way as the "AccessType" data type, but with the OpenAPI "nullable: true" property. | ATSSS |
| AfHeaderHandlingControlInfo | 3GPP TS 29.514 [17] | Contains header handling control information for handling payload headers that is provided by AF. | HeaderHandling |
| Ambr | 3GPP TS 29.571 [11] | Session-AMBR. |  |
| AnGwAddress | 3GPP TS 29.514 [17] | Carries the control plane address of the access network gateway. |  |
| ApplicationChargingId | 3GPP TS 29.571 [11] | Application provided charging identifier allowing correlation of charging information. | AF\_Charging\_Identifier |
| ApplicationId | 3GPP TS 29.571 [11] | Application Identifier | UPEAS |
| Arp | 3GPP TS 29.571 [11] | ARP. |  |
| AverWindow | 3GPP TS 29.571 [11] | Averaging Window. |  |
| AverWindowRm | 3GPP TS 29.571 [11] | This data type is defined in the same way as the "AverWindow" data type, but with the OpenAPI "nullable: true" property. |  |
| BitRate | 3GPP TS 29.571 [11] | String representing a bit rate that shall be formatted as follows:  pattern: "^\d+(\.\d+)? (bps|Kbps|Mbps|Gbps|Tbps)$"  Examples:  "125 Mbps", "0.125 Gbps", "125000 Kbps". |  |
| BitRateRm | 3GPP TS 29.571 [11] | This data type is defined in the same way as the "BitRate" data type, but with the OpenAPI "nullable: true" property. |  |
| Bytes | 3GPP TS 29.571 [11] | String with format "byte". | TimeSensitiveNetworking |
| CapabilityReport | 3GPP TS 29.514 [17] | Indicates the QoS monitoring capability is supported or not for the corresponding capability type. | QoSMonCapRepo |
| ChargingId | 3GPP TS 29.571 [11] | Charging identifier allowing correlation of charging information. |  |
| ContentVersion | 3GPP TS 29.514 [17] | Indicates the content version of a PCC rule. It uniquely identifies a version of the PCC rule as defined in clause 4.2.6.2.14. | RuleVersioning |
| DateTime | 3GPP TS 29.571 [11] | String with format "date-time" as defined in OpenAPI Specification [10]. |  |
| DateTimeRm | 3GPP TS 29.571 [11] | This data type is defined in the same way as the "DateTime" data type, but with the OpenAPI "nullable: true" property. |  |
| DddTrafficDescriptor | 3GPP TS 29.571 [11] | Traffic Descriptor | DDNEventPolicyControl |
| DlDataDeliveryStatus | 3GPP TS 29.571 [11] | Downlink data delivery status. | DDNEventPolicyControl |
| DnaiChangeType | 3GPP TS 29.571 [11] | Describes the types of DNAI change. |  |
| Dnn | 3GPP TS 29.571 [11] | The DNN the user is connected to. |  |
| DnnSelectionMode | 3GPP TS 29.502 [22] | DNN selection mode. | DNNSelectionMode |
| DurationSec | 3GPP TS 29.571 [11] | Identifies a period of time in units of seconds. |  |
| DurationSecRm | 3GPP TS 29.571 [11] | This data type is defined in the same way as the "DurationSec" data type, but with the OpenAPI "nullable: true" property. |  |
| DurationMilliSec | 3GPP TS 29.514 [17] | Indicates the time interval in units of milliseconds. | PowerSaving |
| DurationMilliSecRm | 3GPP TS 29.514 [17] | This data type is defined in the same way as the "DurationMilliSec" data type, but with the OpenAPI "nullable: true" property. | PowerSaving |
| EasIpReplacementInfo | 3GPP TS 29.571 [11] | Contains EAS IP replacement information for a Source and a Target EAS. | EASIPreplacement |
| EthFlowDescription | 3GPP TS 29.514 [17] | Defines a packet filter for an Ethernet flow.  (NOTE 2) |  |
| ExtMaxDataBurstVol | 3GPP TS 29.571 [11] | Maximum Data Burst Volume. | EMDBV |
| ExtMaxDataBurstVolRm | 3GPP TS 29.571 [11] | This data type is defined in the same way as the "ExtMaxDataBurstVol" data type, but with the OpenAPI "nullable: true" property. | EMDBV |
| Metadata | 3GPP TS 29.571 [11] | This datatype contains opaque information for the service functions in the N6-LAN that is provided by AF and transparently sent to UPF. | SFC |
| FinalUnitAction | 3GPP TS 32.291 [19] | Indicates the action to be taken when the user's account cannot cover the service cost. |  |
| FlowStatus | 3GPP TS 29.514 [17] | Describes whether the IP flow(s) are enabled or disabled. The value "REMOVED" is not applicable to Npcf\_SMPolicyControl service. |  |
| Gpsi | 3GPP TS 29.571 [11] | Identifies a GPSI. |  |
| GroupId | 3GPP TS 29.571 [11] | Identifies a group of internal globally unique ID. |  |
| Guami | 3GPP TS 29.571 [11] | Globally Unique AMF Identifier. |  |
| InvalidParam | 3GPP TS 29.571 [11] | Invalid Parameters for the reported failed policy decisions | ExtPolicyDecisionErrorHandling |
| IpIndex | 3GPP TS 29.519 [15] | Information that identifies which IP pool or external server is used to allocate the IP address. |  |
| Ipv4Addr | 3GPP TS 29.571 [11] | Identifies an Ipv4 address. |  |
| Ipv4AddrMask | 3GPP TS 29.571 [11] | String identifying an IPv4 address mask. |  |
| Ipv6Addr | 3GPP TS 29.571 [11] | Identifies an IPv6 address. |  |
| Ipv6Prefix | 3GPP TS 29.571 [11] | The Ipv6 prefix allocated for the user. |  |
| L4sNotifType | 3GPP TS 29.514 [17] | Indicates whether the ECN marking for L4S support for the indicated SDFs is "NOT\_AVAILABLE" or "AVAILABLE" again. | L4S |
| LocalOffloadingManagementInfo | 3GPP TS 29.571 [11] | Contains the local Offloading Management Policy Information. | LocalOffloading |
| MacAddr48 | 3GPP TS 29.571 [11] | MAC Address. |  |
| MaxDataBurstVol | 3GPP TS 29.571 [11] | Maximum Data Burst Volume. |  |
| MaxDataBurstVolRm | 3GPP TS 29.571 [11] | This data type is defined in the same way as the "MaxDataBurstVol" data type, but with the OpenAPI "nullable: true" property. |  |
| MultiModalId | 3GPP TS 29.514 [17] | Indicates the multi-modal service identifier | MultiModaIId |
| MpxMediaInfo | 3GPP TS 29.514 [17] | Contains the Multiplexed Media Information. | MpxMedia |
| NfGroupId | 3GPP TS 29.571 [11] | The NF group identifier. | CHFGroupID |
| NfInstanceId | 3GPP TS 29.571 [11] | The NF instance identifier. |  |
| NfSetId | 3GPP TS 29.571 [11] | The NF set identifier. |  |
| NgApCause | 3GPP TS 29.571 [11] | Contains the cause value of NgAP protocol. | RAN-NAS-Cause |
| NotifCapType | 3GPP TS 29.514 [17] | Contains the notification capability type. | QoSMonCapRepo |
| NullValue | 3GPP TS 29.571 [11] | JSON's null value, used as an explicit value of an enumeration. |  |
| NwdafEvent | 3GPP TS 29.520 [51] | Analytics ID consumed by the NF service consumer. | EneNA |
| OnPathN6SigInfo | 3GPP TS 29.514 [17] | Contains the on-path N6 signaling information with the OpenAPI "nullable: true" property. | OnPathN6MediaInfo |
| PacketDelBudget | 3GPP TS 29.571 [11] | Packet Delay Budget. |  |
| PacketErrRate | 3GPP TS 29.571 [11] | Packet Error Rate. |  |
| PacketLossRateRm | 3GPP TS 29.571 [11] | This data type is defined in the same way as the "PacketLossRate" data type, but with the OpenAPI "nullable: true" property. |  |
| PcfUeCallbackInfo | 3GPP TS 29.571 [11] | Contains the PCF for the UE callback URI and SBA binding information, if available | AMInfluence |
| PduSessionId | 3GPP TS 29.571 [11] | The identification of the PDU session. |  |
| PduSessionType | 3GPP TS 29.571 [11] | Indicate the type of a PDU session. |  |
| PduSetQosParaRm | 3GPP TS 29.571 [11] | Represents the PDU Set level QoS parameters to be modified. | PDUSetHandling |
| Pei | 3GPP TS 29.571 [11] | The Identification of a Permanent Equipment. |  |
| PlmnIdNid | 3GPP TS 29.571 [11] | The identification of the Network: The PLMN Identifier (the mobile country code and the mobile network code) or the SNPN Identifier (the PLMN Identifier and the NID). |  |
| PresenceInfo | 3GPP TS 29.571 [11] | Contains the information which describes a Presence Reporting Area. | PRA |
| PresenceInfoRm | 3GPP TS 29.571 [11] | This data type is defined in the same way as the "PresenceInfo" data type, but with the OpenAPI "nullable: true" property. | PRA |
| ProblemDetails | 3GPP TS 29.571 [11] | Contains a detailed information about an error. |  |
| ProtocolDescription | 3GPP TS 29.571 [11] | Represents Protocol description of the media flow | PDUSetHandling  PowerSaving  TrafficCharChange |
| QosNotifType | 3GPP TS 29.514 [17] | Indicates the QoS notification control type of the GBR targets for the indicated SDFs are "NOT\_GUARANTEED" or "GUARANTEED" again.  When the "ExtQoS\_v2" feature is supported, the direction information may be provided if the QoS targets of one or more SDFs are not being guaranteed. |  |
| QosResourceType | 3GPP TS 29.571 [11] | Indicates whether the resource type is GBR, delay critical GBR, or non-GBR. |  |
| RatingGroup | 3GPP TS 29.571 [11] | Identifier of a rating group. |  |
| RatType | 3GPP TS 29.571 [11] | The identification of the RAT type. |  |
| RedirectResponse | 3GPP TS 29.571 [11] | Contains redirection related information. | ES3XX |
| RouteToLocation | 3GPP TS 29.571 [11] | A traffic routes to applications location. | TSC |
| SatelliteBackhaulCategory | 3GPP TS 29.571 [11] | Indicates the satellite backhaul category or non-satellite backhaul. | SatBackhaulCategoryChg |
| SatelliteId | 3GPP TS 29.571 [11] | Unique identifier of a satellite. | UeSatUeComm |
| ServerAddressingInfo | 3GPP TS 29.571 [11] | Contains the Provisioning Server information that provisions the UE with credentials and other data to enable SNPN access. | PvsSupport |
| ServiceId | 3GPP TS 29.571 [11] | Identifier of a service. |  |
| Snssai | 3GPP TS 29.571 [11] | Identifies the S-NSSAI. |  |
| SscMode | 3GPP TS 29.571 [11] | Represents the service and session continuity mode. | URSPEnforcement |
| SubscribedDefaultQos | 3GPP TS 29.571 [11] | Subscribed Default QoS. |  |
| Supi | 3GPP TS 29.571 [11] | The identification of the user (i.e. IMSI, NAI). |  |
| SupportedFeatures | 3GPP TS 29.571 [11] | Used to negotiate the applicability of the optional features defined in table 5.8-1. |  |
| TraceData | 3GPP TS 29.571 [11] | Contains trace control and configuration parameters. |  |
| TimeZone | 3GPP TS 29.571 [11] | Contains the user time zone information. |  |
| TscaiInputContainer | 3GPP TS 29.514 [17] | TSCAI Input information. | TimeSensitiveNetworking |
| TrafficCorrelationInfo | 3GPP TS 29.519 [15] | Contains the information for traffic correlation. | CommonEASDNAI |
| UePolicyTransferFailureCause | 3GPP TS 29.525 [57] | UE Policy Transfer Failure Cause. | EpsUrsp |
| Uinteger | 3GPP TS 29.571 [11] | Unsigned Integer. |  |
| UintegerRm | 3GPP TS 29.571 [11] | This data type is defined in the same way as the "Uinteger" data type, but with the OpenAPI "nullable: true" property. | EnATSSS,  AF\_latency,  EnQoSMon |
| Uint16 | 3GPP TS 29.571 [11] | Unsigned 16-bit integers. | MTU\_Size |
| Uint32 | 3GPP TS 29.571 [11] | Unsigned 32-bit integers. | MTU\_Size |
| Uint64 | 3GPP TS 29.571 [11] | Unsigned 64-bit integers. | TimeSensitiveNetworking |
| UplinkDownlinkSupport | 3GPP TS 29.514 [17] | Represents whether a capability is supported for the UL, the DL or both UL and DL service data flows | L4S |
| Uri | 3GPP TS 29.571 [11] | URI. |  |
| UserLocation | 3GPP TS 29.571 [11] | Contains the user location(s). |  |
| Volume | 3GPP TS 29.122 [32] | Unsigned integer identifying a volume in units of bytes. |  |
| VolumeRm | 3GPP TS 29.122 [32] | This data type is defined in the same way as the "Volume" data type, but with the OpenAPI "nullable: true" property. |  |
| VplmnDlAmbr | 3GPP TS 29.571 [11] | VPLMN Specific DL AMBR. | HR-SBO |
| VplmnOffloadingInfo | 3GPP TS 29.571 [11] | VPLMN Specific Offloading Policy Information. | HR-SBO |
| VplmnQos | 3GPP TS 29.502 [22] | QoS constraints in the VPLMN. | VPLMN-QoS-Control |
| NOTE 1: Void  NOTE 2: In order to support a set of MAC addresses with a specific range in the traffic filter, feature MacAddressRange as specified in clause 5.8 shall be supported. | | | |

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

#### 5.6.2.10 Type TrafficControlData

Table 5.6.2.10-1: Definition of type TrafficControlData

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| tcId | string | M | 1 | Univocally identifies the traffic control policy data within a PDU session. |  |
| 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. | L4S |
| flowStatus | FlowStatus | O | 0..1 | Enum determining what action to perform on traffic. Possible values are: [enable, disable, enable\_uplink, enable\_downlink]. The default value "ENABLED" shall apply, if the attribute is not present and has not been supplied previously.  (NOTE 3) |  |
| redirectInfo | RedirectInformation | O | 0..1 | It indicates whether the detected application traffic should be redirected to another controlled address. | ADC |
| addRedirectInfo | array(RedirectInformation) | O | 1..N | Additional redirection information.  Each element indicates whether the detected application traffic should be redirected to another controlled address. | ADCmultiRedirection |
| muteNotif | boolean | O | 0..1 | Indicates whether application's start or stop notifications are to be muted.  It shall be set to true to indicate application’s start or stop notifications are muted. When it is set to false, it indicates application’s start or stop notifications are not muted. The default value false shall apply, if the attribute is not present and has not been supplied previously. | ADC |
| trafficSteeringPolIdDl  (NOTE 1) | string | O | 0..1 | Reference to a pre-configured traffic steering policy for downlink traffic at the SMF. | TSC |
| trafficSteeringPolIdUl  (NOTE 1) | string | O | 0..1 | Reference to a pre-configured traffic steering policy for uplink traffic at the SMF. | TSC |
| metadata | Metadata | O | 0..1 | This datatype contains opaque information for the service functions in the N6-LAN that is provided by AF and transparently sent to UPF. May be only provided when "trafficSteeringPolIdDl" and/or "trafficSteeringPolIdUl" are provided for the first time. | SFC |
| routeToLocs  (NOTE 1) | array(RouteToLocation) | O | 1..N | A list of location(s) to which the traffic shall be routed for the AF request. | TSC |
| maxAllowedUpLat | UintegerRm | O | 0..1 | Indicates the target user plane latency in units of milliseconds. The SMF may use this value to decide whether edge relocation is needed to ensure that the user plane latency does not exceed the value. | AF\_latency |
| easIpReplaceInfos | array(EasIpReplacementInfo) | O | 1..N | Contains EAS IP replacement information. | EASIPreplacement |
| traffCorreInd | boolean | O | 0..1 | Indication of traffic correlation. If it is included and set to "true", traffic should be correlated; The default value "false" applies, if the attribute is not present and has not been supplied previously. (NOTE 2) |  |
| tfcCorreInfo | TrafficCorrelationInfo | O | 0..1 | Contains the information for traffic correlation. | CommonEASDNAI |
| simConnInd | boolean | O | 0..1 | Indication of simultaneous connectivity temporarily maintained for the source and target PSA. If it is included and set to "true", temporary simultaneous connectivity should be kept. The default value "false" applies, if the attribute is not present and has not been supplied previously. | SimultConnectivity |
| simConnTerm | DurationSec | C | 0..1 | Indication of the minimum time interval to be considered for inactivity of the traffic routed via the source PSA during the edge re-location procedure.  It may be included when the "simConnInd" attribute is set to true. | SimultConnectivity |
| n6DelayInd | boolean | O | 0..1 | Indicates whether the N6 delay is requested to be considered or not.  - "true" indicates that the N6 delay is requested to be considered.  - "false" indicates that the N6 delay is not requested to be considered.  - The default value is “false”, if omitted. | N6DelayMeasurement |
| upPathChgEvent | UpPathChgEvent | O | 0..1 | Contains the information about the AF subscription to UP path change events. | TSC, UeSatUeComm |
| outcomeEvent | TraffRouteReqOutcomeEvent | O | 0..1 | Contains the information about the AF subscription to the traffic routing requirements installation outcome event. | TraffRouteReqOutcome |
| simConnFailEvent | SimConnFailEvent | O | 0..1 | Contains the information about the AF subscription to simultaneous connectivity failure event. (NOTE 4)  It may only be provided if the "simConnInd" attribute is provided and set to "true". | SimConnFailure |
| steerFun | SteeringFunctionality | O | 0..1 | Indicates the applicable traffic steering functionality. | ATSSS |
| transMode | TransportMode | C | 0..1 | It identifies the transport mode for transmitting a UDP flow between the UE and the UPF. The transport mode shall be included if the steering functionality indicated in the "steerFun" attribute is MPQUIC-UDP, or if the feature "EnATSSS\_v3" is supported and the steering functionality indicated in the "steerFun" attribute is MPQUIC-IP, or MPQUIC-E. Otherwise, if the steering functionality is not MPQUIC-UDP, MPQUIC-IP, or MPQUIC-E, the transport mode shall not be included. | EnATSSS\_v2 |
| steerModeDl | SteeringMode | O | 0..1 | Determines the traffic distribution rule across 3GPP and Non-3GPP accesses to apply for downlink traffic. | ATSSS |
| steerModeUl | SteeringMode | O | 0..1 | Determines the traffic distribution rule across 3GPP and Non-3GPP accesses to apply for uplink traffic. | ATSSS |
| mulAccCtrl | MulticastAccessControl | O | 0..1 | Indicates whether the service data flow, corresponding to the service data flow template, is allowed or not allowed. The default value "NOT\_ALLOWED" applies, if the attribute is not present and has not been supplied previously. | WWC |
| candDnaiInd | boolean | O | 0..1 | Indication of reporting candidate DNAI(s). If it is included and set to "true", the candidate DNAI(s) for the PDU session need to be reported. Otherwise set to "false" or omitted. | CommonEASDNAI |
| datEndMarkInd | boolean | O | 0..1 | The data burst end marking is enabled if it is set to "true". Default value is "false" if omitted. | PowerSaving |
| datBurstSizeInd | boolean | O | 0..1 | Indicates the Data Burst Size marking for the DL service data flow is supported, when it is included and set to "true". The default value is "false" if omitted. | TrafficCharChange |
| payloadHdrReq | AfHeaderHandlingControlInfo | O | 0..1 | This datatype contains the header handing control information that is provided by AF. | HeaderHandling |
| onPathN6SigInfo | OnPathN6SigInfo | O | 0..1 | Contains the on-path N6 signaling information for delivering media related information. | OnPathN6MediaInfo |
| NOTE 1: If SFC feature is not supported, traffic steering policy identifier(s) (i.e. "trafficSteeringPolIdDl" attribute and/or "trafficSteeringPolIdUl" attribute) and N6 traffic routing requirements (i.e. "routeToLocs" attribute) are mutually exclusive; otherwise, they can be provided simultaneously.  NOTE 2: The TSC feature shall be supported in order to support this attribute. The Indication of traffic correlation shall be provided only when all the PDU sessions related to the 5G VN group member UEs should be correlated by a common DNAI in the user plane for the traffic as described in 3GPP TS 23.501 [2], clause 5.6.7.1 and clause 5.29.  NOTE 3: The "flowStatus" attribute and the "mulAccCtrl" attribute are mutually exclusive.  NOTE 4: If the Simultaneous Connectivity succeeds, no related notifications will be sent. | | | | | |

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

#### 5.6.2.20 Type UpPathChgEvent

Table 5.6.2.20-1: Definition of type UpPathChgEvent

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| notificationUri | Uri | M | 1 | Notification address of AF receiving the event notification.  If the feature UeSatUeComm is supported, this attribute may contain the notification address of the PCF receiving the event notificaiton. |  |
| notifCorreId | string | M | 1 | It is used to set the value of Notification Correlation ID in the notification sent by the NF service consumer. |  |
| dnaiChgType | DnaiChangeType | M | 1 | Indicates the type of DNAI change. |  |
| afAckInd | boolean | O | 0..1 | Identifies whether the AF acknowledgement of UP path event notification is expected.  Set to "true" if the AF acknowledge is expected; otherwise set to "false".  Default value is "false" if omitted. | URLLC |

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

## 5.8 Feature negotiation

The optional features in table 5.8-1 are defined for the Npcf\_SMPolicyControl API. They shall be negotiated using the extensibility mechanism defined in clause 6.6 of 3GPP TS 29.500 [4].

Table 5.8-1: Supported Features

|  |  |  |
| --- | --- | --- |
| Feature number | Feature Name | Description |
| 1 | TSC | This feature indicates support for traffic steering control in the (S)Gi-LAN, steering the 5G-LAN type of services or routing of the user traffic to a local Data Network identified by the DNAI per AF request. If the NF service consumer supports this feature, the PCF shall behave as described in clause 4.2.6.2.6. |
| 2 | ResShare | This feature indicates the support of service data flows that share resources. If the NF service consumer supports this feature, the PCF shall behave as described in clause 4.2.6.2.8. |
| 3 | 3GPP-PS-Data-Off | This feature indicates the support of 3GPP PS Data off status change reporting. |
| 4 | ADC | This feature indicates the support of application detection and control. |
| 5 | UMC | Indicates that the usage monitoring control is supported. |
| 6 | NetLoc | This feature indicates the support of the Access Network Information Reporting for 5GS. |
| 7 | RAN-NAS-Cause | This feature indicates the support for the detailed release cause code information from the access network.  (NOTE) |
| 8 | ProvAFsignalFlow | This feature indicates support for the feature of IMS Restoration as described in clause 4.2.3.17. If NF service consumer supports this feature the PCF may provision AF signalling IP flow information. |
| 9 | PCSCF-Restoration-Enhancement | This feature indicates support of P-CSCF Restoration Enhancement. It is used for the NF service consumer to indicate if it supports P-CSCF Restoration Enhancement. |
| 10 | PRA | This feature indicates the support of presence reporting area change reporting. The support of the update of a UE Dedicated Presence Reporting Area is unspecified. |
| 11 | RuleVersioning | This feature indicates the support of PCC rule versioning as defined in clause 4.2.6.2.14. |
| 12 | SponsoredConnectivity | This feature indicates support for sponsored data connectivity feature. If the NF service consumer supports this feature, the PCF may authorize sponsored data connectivity to the subscriber. |
| 13 | RAN-Support-Info | This feature indicates the support of maximum packet loss rate value(s) for uplink and/or downlink voice service data flow(s). |
| 14 | PolicyUpdateWhenUESuspends | This feature indicates the support of report when the UE is suspended and then resumed from suspend state. Only applicable to the interworking scenario as defined in Annex B. |
| 15 | AccessTypeCondition | This feature indicates the support of access type conditioned authorized Session-AMBR as defined in clause 4.2.6.3.2.4. |
| 16 | MultiIpv6AddrPrefix | This feature indicates the support of additional new/removed (up to two) Ipv6 address prefixes reporting. |
| 17 | SessionRuleErrorHandling | This feature indicates the support of session rule error handling. |
| 18 | AF\_Charging\_Identifier | This feature indicates the support of long character strings as charging identifiers. |
| 19 | ATSSS | This feature indicates the support of the access traffic switching, steering and splitting functionality as defined in clauses 4.2.6.2.17 and 4.2.6.3.4. |
| 20 | PendingTransaction | This feature indicates support for the race condition handling as defined in 3GPP TS 29.513 [7]. |
| 21 | URLLC | This feature indicates support of Ultra-Reliable Low-Latency Communication (URLLC) requirements, i.e. AF application relocation acknowledgement requirement and UE address(es) preservation. The TSC feature shall be supported in order to support this feature. |
| 22 | MacAddressRange | Indicates the support of a set of MAC addresses with a specific range in the traffic filter. |
| 23 | WWC | Indicates support of wireless and wireline convergence access as defined in annex C. |
| 24 | QosMonitoring | Indicates support of QoS monitoring as defined in clause 4.2.3.25 and 4.2.4.24. Reporting of monitoring data applies to packet delay information when only this feature is supported. |
| 25 | AuthorizationWithRequiredQoS | Indicates support of policy authorization for the AF session with required QoS as defined in clause 4.2.3.22. |
| 26 | EnhancedBackgroundDataTransfer | Indicates the support of applying the Background Data Transfer Policy to a future PDU session. |
| 27 | DN-Authorization | This feature indicates the support of DN-AAA authorization data for policy control. |
| 28 | PDUSessionRelCause | Indicates the support of "PS\_TO\_CS\_HO" PDU session release cause. |
| 29 | SamePcf | This feature indicates the support of same PCF selection for the parameter's combination. |
| 30 | ADCmultiRedirection | This feature indicates support for multiple redirection information in application detection and control. It requires the support of ADC feature. |
| 31 | RespBasedSessionRel | Indicates support of handling PDU session termination functionality as defined in clause 4.2.4.22. |
| 32 | TimeSensitiveNetworking | Indicates that the 5G System is integrated within the external network as a TSN bridge. |
| 33 | EMDBV | This feature indicates the support of the ExtMaxDataBurstVol data type defined in 3GPP TS 29.571 [11]. The use of this data type is specified in clause 4.2.2.1. |
| 34 | DNNSelectionMode | This feature indicates the support of DNN selection mode. |
| 35 | EPSFallbackReport | This feature indicates the support of the report of EPS Fallback as defined in clauses B.3.3.2 and B.3.4.6. |
| 36 | PolicyDecisionErrorHandling | This feature indicates the support of the error report of the policy decision and/or condition data which is not referred by any PCC rule or session rule as defined in clause 4.2.3.26 and 4.2.4.26. |
| 37 | DDNEventPolicyControl | This feature indicates the support for policy control in the case of DDN Failure and Delivery Status events as defined in clause 4.2.4.27. |
| 38 | ReallocationOfCredit | This feature indicates the support of notifications of reallocation of credit. |
| 39 | BDTPolicyRenegotiation | This feature indicates the support of the BDT policy re-negotiation. |
| 40 | ExtPolicyDecisionErrorHandling | This feature indicates the support of the error report of a faulty SM policy decision parameter as defined in clause 4.2.3.26 and 4.2.4.26. It requires the support of PolicyDecisionErrorHandling feature. |
| 41 | ImmediateTermination | This feature indicates the support of the termination the PDU session when the NF service consumer cannot ensure the UE, RAN, AMF, or UPF can revert to the status before the PDU session modification occurred, as defined in clause 4.2.4.21. |
| 42 | AggregatedUELocChanges | This feature indicates the support of notifications of serving area (i.e. tracking area) and/or serving cell changes. |
| 43 | 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 [4] and according to HTTP redirection principles for indirect communication, as specified in clause 6.10.9 of 3GPP TS 29.500 [4]. |
| 44 | GroupIdListChange | This feature indicates the support for the notification of changes in the list of internal group identifiers. |
| 45 | 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. |
| 46 | OfflineChOnly | This feature enables the PCF to signal the "PDU Session with offline charging only" indication as defined in clause 4.2.2.3.3. |
| 47 | Dual-Connectivity-redundant-UP-paths | Indicates the support of policy authorization of end to end redundant user plane path using dual connectivity as described in clause 4.2.2.20. |
| 48 | DDNEventPolicyControl2 | This feature indicates the support for the policy control removal in the case of DDN Failure and/or Delivery Status event(s) is cancelled as defined in clause 4.2.4.27. The DDNEventPolicyControl feature shall be supported in order to support this feature. |
| 49 | VPLMN-QoS-Control | Indicates the support of QoS constraints from the VPLMN for the derivation of the authorized Session-AMBR and authorized default QoS. |
| 50 | 2G3GIWK | This feature indicates the support of GERAN and UTRAN access over N7 interface. |
| 51 | TimeSensitiveCommunication | Indicates that the 5G System is integrated within the external network as a TSC user plane node to enable the Time Sensitive Communications and Time Synchronization. This feature requires that the TimeSensitiveNetworking feature is also supported. |
| 52 | AF\_latency | This feature indicates the support of Edge relocation considering user plane latency. This feature requires that the TSC feature is also supported. |
| 53 | SatBackhaulCategoryChg | This feature indicates the support of notification of a change between different satellite backhaul categories, or between satellite backhaul and non-satellite backhaul. |
| 54 | CHFsetSupport | Indicates the support of CHF redundancy and failover mechanisms based on CHF instance availability within a CHF Set, as described in clause 4.2.2.3.1. |
| 55 | EnATSSS | Indicates the support of ATSSS enhancement. It requires the support of ATSSS feature. |
| 56 | MPSforDTS | Indicates support of the MPSfor DTS feature as described in clause 4.2.6.2.12.4. |
| 57 | RoutingInfoRemoval | Indicates the support of the removal of the "routeToLocs" attribute from the TrafficControlData instance. |
| 58 | ePRA | This feature indicates the support of presence reporting area change reporting. It additionally supports the update of the elements of a UE Dedicated Presence Reporting Area by the full replacement of the previously provided one comparing with the PRA feature. |
| 59 | AMInfluence | Indicates the support of the delivery of the PCF for the UE request to be notified by the PCF for the PDU session about PDU session established/terminated events. |
| 60 | PvsSupport | This feature indicates the support of SNPN UE Remote Provisioning via User Plane as described in clause 4.2.2.21. |
| 61 | EneNA | This feature indicates the support of NWDAF data reporting. |
| 62 | BIUMR | This feature bit indicates whether the NF Service Consumer (e.g. SMF) and PCF supports Binding Indication Update for multiple resource contexts specified in clauses 6.12.1 and 5.2.3.2.6 of 3GPP TS 29.500 [4]. |
| 63 | EASIPreplacement | This feature indicates the support of EAS IP replacement. This feature requires that the TSC feature is also supported. |
| 64 | ExposureToEAS | This feature indicates the support of exposure of QoS monitoring results to local AF. This feature requires that QosMonitoring feature is also supported. |
| 65 | SimultConnectivity | This feature indicates the support of temporary simultaneously connectivity at edge relocation. This feature requires that the TSC feature is also supported. |
| 66 | SGWRest | This feature indicates the support of SGW Restoration procedures. Only applicable to the interworking scenario as defined in Annex B. |
| 67 | ReleaseToReactivate | This feature indicates that the PCF can request the SMF for reactivation of a PDU session based on an SM Policy Association release cause. |
| 68 | EASDiscovery | This feature indicates the support of EAS (re)discovery. |
| 69 | AccNetChargId\_String | This feature indicates the support of long character strings as access network charging identifier. |
| 70 | 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 specified in Annex B. |
| 71 | PackFiltAllocPrecedence | This feature indicates the support of the control of the maximum number of packet filters in the EPS network in the EPS interworking scenarios as described in Annex B. |
| 72 | SatBackhaulCategoryChg\_v2 | This feature indicates the support of the indication of satellite backhaul categories, or the indication of non-satellite backhaul during the response to the update notify request. |
| 73 | PacketDelayFailureReport | Indicates the support of packet delay failure report as part of QoS Monitoring procedures. This feature requires that QosMonitoring feature is supported. |
| 74 | 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. |
| 75 | Ext2PolicyDecisionErrorHandling | This feature indicates the support of the error report of the policy decision and/or condition data which is not referred by any PCC rule or session rule when no PCC rules and no session rules are provided and the handling of partial errors.  It requires the support of ExtPolicyDecisionErrorHandling feature. |
| 76 | UEUnreachable | This feature indicates the support for the reporting of UE temporarily unavailable. |
| 77 | EnTSCAC | Indicates the support of extensions to TSCAC and the RAN feedback for BAT offset and adjusted periodicity.  This feature requires that TimeSensitiveCommunication feature is also supported. |
| 78 | 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. |
| 79 | EnSatBackhaulCatChg | This feature indicates the support of notification of dynamic satellite backhaul categories.  It requires the support of SatBackhaulCategoryChg and SatBackhaulCategoryChg\_v2 features. |
| 80 | SFC | This feature indicates support for application function influence on service function chaining(s).  It requires the support of TSC feature. |
| 81 | EpsUrsp | This feature indicates the support of URSP provisioning in EPS. Only applicable to the interworking scenario as defined in Annex B. |
| 82 | CommonEASDNAI | This feature controls the support of the common EAS/DNAI selection. It requires the support of TSC feature. |
| 83 | UnlimitedMultiIpv6Prefix | This feature indicates the support of multiple Ipv6 address prefixes reporting. |
| 84 | NscSupportedFeatures | This feature indicates the support of provisioning of the Network Function Service Consumer features supported in Nsmf\_EventExposure service as described in 3GPP TS 29.508 [12]. |
| 85 | URSPEnforcement | This feature indicates the support of awareness of URSP rule enforcement |
| 86 | VBCforIMS | This feature indicates the support of provisioning of the caller and callee informations in volume based charging for IMS as defined in clause A.16 of 3GPP TS 29.214 [18] (replacing PCRF with PCF). |
| 87 | 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 TimeSensitiveCommunication feature is also supported. |
| 88 | NetSliceRepl | This feature indicates the support of the network slice replacement functionality introduced in this specification as part of the end-to-end network slicing functionality.  The following functionalities are supported:  - Support the reporting of the network slice replacement information to the PCF. |
| 89 | SessQoSModEnforcementFailure | This feature indicates the support of the report PDU session modification failure because the enforcement of the default QoS modification or session-AMBR modification of the active session rule failed. |
| 90 | HR-SBO | This feature indicates the support of VPLMN specific Offloading policy in Home Routed deployments with Session Breakout (HR-SBO). |
| 91 | EnATSSS\_v2 | Indicates the support of ATSSS enhancements which includes REDUNDANT steering mode, MPQUIC-UDP functionality and MA PDU session interworking enhancements. It requires the support of the EnATSSS features. |
| 92 | NetSliceUsageCtrl | This feature indicates the support of the network slice usage control functionality introduced in this specification as part of the end-to-end network slicing functionality.  The following functionalities are supported:  - Support the provisioning by the PCF of the network slice usage control information (e.g., slice PDU session inactivity timer value). |
| 93 | VPLMN-5QIPrioLevel | Indicates the support of the indication of the VPLMN supported 5QI priority level when the required 5QI Priority Level is different from the standardized Default Priority Level value in the QoS characteristics Table 5.7.4-1 in 3GPP TS 23.501 [2].  This feature requires that VPLMN-QoS-Control feature is also supported. |
| 94 | PDUSetHandling | This feature indicates the support of PDU Set handling. This feature may be used for eXtended Reality (XR) and interactive media services. |
| 95 | EnQoSMon | This feature indicates the support of enhanced QoS monitoring functionality, i.e. the report of the congestion information, and/or, the data rate information monitoring.  This feature requires that QosMonitoring feature is supported. |
| 96 | PowerSaving | This feature indicates the PCC support for UE Power Saving management.  The following functionalities are supported:  - Policy provisioning of Periodicity and N6 Traffic Parameters to be measured.  - End of Data Burst Handling. |
| 97 | L4S | This feature indicates the support of the PCF indication of ECN marking for L4S support. |
| 98 | UPEAS | This feature indicates the support of UPF enhancements for exposure related to the identification of QoS monitoring event exposure subscription. |
| 99 | QoSMonCapRepo | This feature indicates the support of QoS Monitoring for packet delay and/or congestion Capability Report.  This feature requires that QosMonitoring feature is supported if packet delay is requested.  This feature requires that the EnQoSMon feature is supported if congestion is requested.  This feature requires that the EnQoSMon\_v2 feature is supported if available bitrate is requested. |
| 100 | LocalOffloading | This feature indicates the support of Local Offloading Management Policy, i.e. local offloading management via the I-SMF. |
| 101 | TraffRouteReqOutcome | This feature indicates the support in PCF for the indication of AF requesting the installation outcome of requested traffic routing in the traffic route requirement installation outcome event notification.  This feature requires that the TSC feature is supported. |
| 102 | EnATSSS\_v3 | Indicates the support of ATSSS enhancements which includes MPQUIC-IP and MPQUIC-E functionalities. It requires the support of the EnATSSS\_v2 features. |
| 103 | EnEpsUrsp | This feature indicates the support of enhancement for URSP provisioning in EPS.  The following functionalities are supported:  - Indication of URSP provisioning in EPS. Only applicable to the interworking scenario as defined in Annex B.  This feature requires that EpsUrsp feature is supported. |
| 104 | MpxMedia | This feature indicates the support of uniquely identifying each media flow of multiplexed media with the provided Multiplexed Media Information. |
| 105 | N6DelayMeasurement | This feature indicates the support of considering N6 delay measurement for traffic steering. |
| 106 | Non3gppDevice | This feature indicates support of provisioning policies based on information about the non-3gpp device behind the UE. |
| 107 | TrafficCharChange | This feature indicates the support of dynamically changing traffic characteristics, including:  - the handling of Data Burst Size marking indication.  - the handling of Expedite Data Transfer Indication. |
| 108 | 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. |
| 109 | UeSatUeComm | This feature indicates the support of reporting about serving satellite identity for UE-Satellite-UE communication in IMS.  In order to support of access network information reporting, the NetLoc feature also requires to be supported.  In order to support for the release cause code information from the access network, the RAN-NAS-Cause feature also requires to be supported. |
| 110 | EnPDUSetHandling | This feature indicates the enhancements on the PDU set based QoS handling, including:  - the support of PDU Set QoS parameters in Alternative QoS Profile.  This feature requires that the PDUSetHandling and AuthorizationWithRequiredQoS features are also supported. |
| 111 | SimConnFailure | This feature indicates the support of Simultaneous Connectivity failure events.  It requires that the SimultConnectivity feature is also supported. |
| 112 | CHFGroupID | This feature indicates the support of the CHF Group ID handling for the discovery of the CHF. |
| 113 | EnQoSMon\_v2 | This feature indicates the enhancements on the QoS monitoring functionality, including:  - the reporting of available bitrate rate for a GBR QoS Flow.  This feature requires that the EnQoSMon feature is supported. |
| 114 | MultiModaIId | This feature indicates the support of providing Multi-modal Service Id to the NG-RAN. |
| 115 | OnPathN6MediaInfo | This feature indicates the support of deliver media related information for encrypted traffic, including:  - Using on-path N6 signaling method to deliver media related information for encrypted traffic. |
| 116 | RuleVersioning\_Ext | This feature indicates the support of one or more content version(s) for a PCC rule versioning.  This feature requires the support of the "RuleVersioning" feature. |
| NOTE: 5GS and EPS release cause code information is supported. The EPS release cause code information from the access network is only applicable to EPS interworking scenarios as specified in Annex B. | | |

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

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