**3GPP TSG-CT3 Meeting #136 *C3-244535***

**Maastricht, Netherlands, 19th Aug 2024 - 23rd Aug 2024** *(revision of C3-244218)*

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **29.525** | **CR** | **0353** | **rev** | **1** | **Current version:** | **18.6.0** |  |
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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:*** | Indication of slice-related N3GPP node selection capability | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, Qualcomm Incorporated | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5WWC\_Ph2, SBIProtoc18 | | | | |  | ***Date:*** | | | 2024-08-23 |
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| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories 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)* | |
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| ***Reason for change:*** | | The SA2 LS S2-2406945 and the attached CR S2-2406944 add that "The AMF indicates to the PCF that the UE supports N3IWF selection based on the slices the UE wishes to use over non-3GPP access" if the UE has this capability. | | | | | | | | |
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| ***Summary of change:*** | | Added the indication if the UE supports N3IWF/TNGF selection based on the slices the UE wishes to use over non-3GPP accesss.  This addition is exceptionally handled as backwards compatible, because otherwise the PCF would be out of synch with the UE capabilities and the 5GS would operate based on wrong assumptions about the UE using (or not) the provided ANDSP, thus the end-to-end functionality for slice-specific selection would be broken.  Further, this CR aligned the description about the applicable values of the "triggers" attribute with the description agreed for the "triggers" attribute of AM Policy Control (TS 29.507 CR#0313). | | | | | | | | |
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| ***Consequences if not approved:*** | | PCF out of synch with UE capabilities, leading to unforeseeable/erroneous end-to-end functionality. | | | | | | | | |
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| ***Clauses affected:*** | | 4.2.2.1, 4.2.2.2.2, 5.6.1, 5.6.2.2, 5.6.2.3, 5.6.2.4, 5.6.2.5, 5.6.3.12 (new), A.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | This CR introduces a backwards compatible correction into the OpenAPI file of the Npcf\_UEPolicyControl API. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\*\*\* First Change \*\*\*

4.2.2.1 General

The procedure in the present clause is applicable when the NF service consumer creates a UE policy association in the following cases:

- UE performs initial registration to the network, as defined in clause 5.5.1.2.2 of 3GPP TS 24.501 [15];

- UE performs a mobility registration, if the UE operating in single-registration mode performs inter-system change from S1 mode to N1 mode, as defined in clause 5.5.1.3.2 of 3GPP TS 24.501 [15], and there is no existing UE Policy Association between AMF and PCF for this UE; and

- the AMF is relocated (between the different AMF sets) and the new AMF selects a new PCF. The procedure for the case where the AMF is relocated and the new AMF selects the old PCF is defined in clause 4.2.3.1.

To support the delivery of URSP in EPS, the procedure in the present clause is also applicable when:

- When the UE triggers a BEARER RESOURCE MODIFICATION REQUEST message with a UE policy container IE after the UE performs ePCO capability negotiation during PDN connection establishment procedure (during the Initial Attach with default PDN connection establishment or during the first PDN connection establishment or during PDN connection modification without QoS update or during new PDN connection establishment when no other existing PDN connection indicates support of URPS provisioning in EPS) as defined in 3GPP TS 24.301 [33], and both, the UE and the network support URSP provisioning in EPS PCO; and

- 5GS to EPS handover or 5GS to EPS Idle Mode mobility (both referred as 5GS to EPS mobility in the present document) as defined in 3GPP TS 24.501 [15] and if the UE and at least one of the PDN connection(s) supports URSP delivery in EPS as specified in 3GPP TS 29.512 [31].

The creation of a UE policy association only applies for normally registered UEs, i.e. it does not apply for emergency-registered UEs.

Figure 4.2.2.1-1 illustrates the procedure used for the creation of a policy association.

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**Figure 4.2.2.1-1: Creation of a UE policy association**

NOTE 1: For the roaming scenario, the PCF represents the V-PCF, if the NF service consumer is an AMF, and the PCF represents the H-PCF, if the NF service consumer is a V-PCF.

When a UE registers to the network and a UE context is being established, if the AMF obtains from the UE a UE policy delivery protocol message as defined in Annex D of 3GPP TS 24.501 [15] and/or the authorized PC5 capability for 5G ProSe, and/or the authorized PC5 capability for V2X communications and/or A2X communications, and/or the authorized PC5 capability for Ranging/SL, the AMF shall establish a UE policy association with the (V-)PCF, in case there is no existing UE policy association for the UE; otherwise, the AMF may establish a UE Policy Association with the (V-)PCF based on AMF local configuration.

NOTE 2: In the roaming scenario, the visited AMF's local configuration can indicate whether UE Policy delivery is needed based on the roaming agreement with the home PLMN of the UE.

During UE Initial Attach with default PDN connection or the establishment of the first PDN connection in EPS or a new PDN connection when no other existing PDN connection indicates the support of URSP provisioning in EPS, if the UE and the SMF+PGW support URSP provisioning in EPS PCO, and the "EpsUrsp" feature is supported between the SMF+PGW-C and the PCF for the PDU session, the PCF for a PDU session associated with the SMF+PGW-C serving the PDN connection obtains from the UE a UE policy container in a Npcf\_SMPolicyControl\_Update procedure triggered by a bearer resource modification procedure as described in 3GPP TS 29.512 [31]. Then, if the "EpsUrsp" feature described in clause 5.8 is supported, the PCF for a PDU session shall establish a UE policy association with the (V-)PCF for the UE for the delivery of URSP only.

During 5GS to EPS mobility with N26, and if the "EpsUrsp" feature described in clause 5.8 is supported, the PCF for the PDU session determines whether 5GS to EPS mobility applies based on the received RAT and/or Access-Type change event as described in 3GPP TS 29.512 [31]. Then, for non-roaming and Home Routed roaming scenarios, the PCF for a PDU session shall determine whether the UE supports URSP provisioning in EPS by checking the UE Policy Set information in UDR as specified in 3GPP TS 29.519 [17], and if supported, shall establish a UE policy association with the PCF for the UE that is handling the UE policy association with the source AMF. For LBO roaming scenarios, the V-PCF for the PDU session determines based on local configuration whether to establish a UE Policy Association towards the V-PCF for the UE.

NOTE 3: The PCF for the PDU session discovers the address of the PCF for the UE handling the UE policy association with the source AMF by querying the BSF as described in 3GPP TS 29.521 [22].

NOTE 4: If during the 5GS to EPS mobility there are more than one PCF for the PDU session maintaining PDN connections for the UE, every PCF for the PDU session establishes a UE Policy Association towards the PCF for the UE. In LBO scenarios, the V-PCF for the UE will handle only one UE Policy Association towards the H-PCF for the UE.

To establish a UE policy association with the PCF, the NF service consumer (e.g. AMF) shall send an HTTP POST request with "{apiRoot}/npcf-ue-policy-control/v1/policies" as Resource URI and the PolicyAssociationRequest data structure as request body, which shall include:

- the Notification URI encoded as "notificationUri" attribute;

- the SUPI encoded as "supi" attribute; and

- the features supported by the NF service consumer encoded as "suppFeat" attribute,

shall also include, when available:

- the GPSI encoded as "gpsi" attribute;

- the Access type encoded as "accessType" attribute;

- the Permanent Equipment Identifier (PEI) encoded as "pei" attribute;

- the User Location Information encoded as "userLoc" attribute;

- the UE Time Zone encoded as "timeZone" attribute;

- the identifier of the serving network (the PLMN Identifier or the SNPN Identifier), encoded as "servingPlmn" attribute;

NOTE 5: The SNPN Identifier consists of the PLMN Identifier and the NID.

- the RAT type encoded as "ratType" attribute;

- the received UE policy delivery protocol message defined in Annex D of 3GPP TS 24.501 [15] encoded as "uePolReq" attribute;

- for the roaming scenario, if the NF service consumer is an AMF, the H-PCF ID encoded as "hPcfId" attribute;

- the Internal Group Identifier(s) encoded as "groupIds" attribute;

- the PC5 capability for V2X encoded as "pc5Capab" attribute if the "V2X" feature defined in clause 5.8 is supported;

- the 5G ProSe capability within the "proSeCapab" attribute, if the "ProSe" feature defined in clause 5.8 is supported;

- the Ranging/SL capability within the "rangSlCapab" attribute, if the "Ranging\_SL" feature defined in clause 5.8 is supported;

- if the NF service consumer is an AMF, the GUAMI encoded as "guami" attribute;

- if the NF service consumer is an AMF, the serving AMF Id encoded as "servingNfId" attribute;

NOTE 6: If the PCF received the "servingNfId" attribute, the PCF can use the Nnrf\_NFDiscovery Service specified in 3GPP TS 29.510 [13] to retrieve the NF profile of the Namf\_Communication service available in the indicated AMF instance Id.

- if the NF service consumer is an AMF and the "SliceAwareANDSP" feature is supported:

- if the UE indicated the support of slice-based N3IWF and/or TNGF selection as specified in 3GPP TS 24.501 [15], the AMF may provide information about these UE indications within the "sliceN3gNodeSelCap" attribute;

- if the AMF has determined that the UE has selected a non-3gpp access node (i.e. TNGF or N3IWF) that is not compatible with the allowed S-NSSAI(s), and the UE indicated the support of slice-based N3IWF and/or TNGF selection as specified in 3GPP TS 24.501 [15], the wrongly selected type of non-3gpp access node encoded as "n3gNodeReSel" attribute, and, in the roaming case, also the Configured NSSAI for the serving PLMN encoded as "confSnssais" attribute;

- if the NF service consumer is an AMF, the Satellite Backhaul Category encoded as "satBackhaulCategory" attribute, if the "EnSatBackhaulCategoryChg" feature defined in clause 5.8 is supported;

- if the NF service consumer is the PCF for the PDU session, and the "EpsUrsp" feature defined in clause 5.8 is supported, the indication that the trigger for the UE Policy Association Establishment is the 5GS to EPS mobility scenario encoded as the "5gsToEpsMob" attribute;

- for the roaming scenario, if the NF service consumer is an AMF and the "NssaiChange" feature is supported, the Configured NSSAI for the serving PLMN encoded as "confSnssais" attribute and optionally the mapped each S-NSSAI value of home network corresponding to the configured S-NSSAI values in the serving PLMN encoded as "mappedHomeSnssai" attribute within the "confSnssais" attribute;

- the A2X capability encoded as "a2xCapab" attribute if the "A2X" feature defined in clause 5.8 is supported;

- if the feature "AccessChange" is supported, the NF service consumer shall include:

a) the "accessTypes" attribute indicating registration in the 3GPP access, in the non-3GPP access, or in both 3GPP and non-3GPP access, if available; and

b) the RAT type entry corresponding to the 3GPP access and/or the RAT type entry corresponding to the non-3GPP access encoded in the "ratTypes" attribute, if available.

NOTE 7: If the feature "AccessChange" is not supported or it is not known yet whether it is supported in the PCF, the NF service consumer can also provide the "accessType" attribute and the "ratType" attribute, if available, with one available access type and RAT type.

NOTE 8: When the UE is simultaneously connected to the 5G Core Network of a PLMN/SNPN over a 3GPP access and a non-3GPP access, the UE is served by the same AMF, as specified in 3GPP TS 23.501 [2]. In this case, the UE Policy Association contains both, 3GPP and non-3GPP accesses.  
When the UE is simultaneously connected to 5G Core Network over 3GPP access and non-3GPP access in different PLMN(s)/SNPN(s), the UE is served by different AMFs. In this case, there can be two UE Policy Associations, each with the corresponding access type.

- for the roaming scenario, if the NF service consumer is a V-PCF and the "VPLMNSpecificURSP" feature is supported, the AF guidance on VPLMN-specific URSP rules related information, if applicable, within the "vpsUePolGuidance" attribute, that shall contain for each related AF:

a. the AF guidance on VPLMN-Specific URSP rules within the "urspGuidance" attribute; and

b. if the AF requested to the VPLMN notifications about the delivery of UE Policies, the "deliveryEvents" attribute including the "SUCCESS\_UE\_POL\_DEL\_SP" and/or "UNSUCCESS\_UE\_POL\_DEL\_SP" events; and

- for the roaming scenario, if the NF service consumer is an AMF, and the "VPLMNSpecificURSP" feature is supported, LBO information within the "lboRoamInfo" attribute.

and may include:

- if the NF service consumer is an AMF, the name of a service produced by the AMF that expects to receive information via the Npcf\_UEPolicyControl\_UpdateNotify service operation encoded as "serviceName" attribute;

- if the NF service consumer is an AMF, the alternate or backup IPv4 Address(es) where to send Notifications encoded as "altNotifIpv4Addrs" attribute;

- if the NF service consumer is an AMF, the alternate or backup IPv6 Address(es) where to send Notifications encoded as "altNotifIpv6Addrs" attribute;

- if the NF service consumer is an AMF, the alternate or backup FQDN(s) where to send Notifications encoded as "altNotifFqdns" attribute;

- if the NF service consumer is an AMF and the "SLAMUP" feature is supported, based on the operator policies the H-PCF indicates that the AMF should select the same CHF that is selected by the H-PCF for a UE, the charging address(es) information encoded in the "chfInfo" attribute.

Upon the reception of the HTTP POST request,

- the (V-)(H-)PCF shall assign a UE policy association ID;

- for the roaming scenario and based on operator policy, the V-PCF (as the NF service consumer) should send to the H-PCF a request for the Creation of a UE policy association as described in the present clause;

- the (V-)(H-)PCF shall determine the applicable UE policy as detailed in clause 4.2.2.2. For the V-PCF, any policy received from the H-PCF in the reply to the possible request for the Creation of a policy association should be taken into consideration;

- if the (V-)PCF determines that UE policy needs to be provisioned, it shall use the Namf\_Communication service specified in 3GPP TS 29.518 [14] to provision the UE policy according to clause 4.2.2.2 and as follows:

(i) the (V-)PCF shall subscribe to the AMF to notifications on N1 messages for UE Policy Delivery Results using the Namf\_Communication\_N1N2MessageSubscribe service operation;

(ii) the (V-)PCF shall send the determined UE policy (e.g. ANDSP, URSP, V2XP, A2XP, ProSeP, RSLPP) using Namf\_Communication\_N1N2MessageTransfer service operation(s); and

(iii) the (V-)PCF shall be prepared to receive UE Policy Delivery Results from the AMF and/or subsequent UE policy requests (e.g. for V2XP and/or A2XP and/or ProSeP and/or RSLPP) within the Namf\_Communication\_N1MessageNotify service operation. For the V-PCF, if the received UE Policy Delivery results relate to UE policy sections provided by the H-PCF, the V-PCF shall use the Npcf\_UEPolicyControl\_Update Service Operation defined in clause 4.2.3 to send those UE Policy Delivery results to the H-PCF;

- if the UE indicates the support of V2X communications over PC5 reference point and the "V2X" feature is supported, the (H-)PCF shall determine the applicable V2XP, as detailed in clause 4.2.2.2.1.2, and V2X N2 PC5 policy, as detailed in clause 4.2.2.3 and based on the operator's policy;

- if the UE indicates the support of 5G ProSe and the "ProSe" feature is supported, the (H-)PCF shall determine the applicable ProSeP, as detailed in clause 4.2.2.2.1.3, and 5G ProSe N2 PC5 policy, as detailed in clause 4.2.2.4 and based on the operator's policy;

- if the UE indicates the support of Ranging/SL and the "Ranging\_SL" feature is supported, the (H-)PCF shall determine the applicable RSLPP, as detailed in clause 4.2.2.2.1.5, and Ranging/SL N2 PC5 policy, as detailed in clause 4.2.2.7, and based on the operator's policy;

- if the PCF determines that N2 PC5 policy (e.g., for V2X communications, for 5G ProSe, for Ranging/SL) needs to be provisioned, including the case of the V-PCF when receiving the N2 PC5 policy from the H-PCF, the PCF shall use the Namf\_Communication service specified in 3GPP TS 29.518 [14] to provision the N2 PC5 policy according to clause 4.2.2.3 and/or clause 4.2.2.4;

- if the UE indicates support for URSP provisionng in EPS, the "EpsUrsp" feature is supported, and the (V-)PCF determines that UE policy needs to be provisioned via a PCF for a PDU session, the (V-)PCF shall select a UE Policy Association and shall provision the UE policy according to clause 4.2.2.2 and as follows:

(i) the (V-)PCF shall send a UE policy container with the determined URSP using Npcf\_UEPolicyControl\_Create response service operation(s); and

(ii) the (V-)PCF shall be prepared to receive UE Policy Delivery Results from the PCF for a PDU session. The PCF for a PDU session shall use the Npcf\_UEPolicyControl\_Update service operation defined in clause 4.2.3 to send those UE Policy Delivery results to the (V-)PCF;

- if the UE indicates the support of A2X communications over PC5 reference point and the "A2X" feature is supported, the (H-)PCF shall determine the applicable A2XP, as detailed in clause 4.2.2.2.1.4, and A2X N2 PC5 policy, as detailed in clause 4.2.2.5 and based on the operator's policy;

for the successful case, the (V-)(H-)PCF shall send a HTTP "201 Created" response with the URI for the created resource in the "Location" header field.

NOTE 9: The assigned policy association ID is part of the URI for the created resource and is thus associated with the SUPI.

and the PolicyAssociation data type as response body, including:

- mandatorily, the negotiated supported features encoded as "suppFeat" attribute;

- optionally, the information provided by the NF service consumer when requesting the creation of this policy association encoded as "request" attribute;

- optionally, for the H-PCF as service producer communicating with the V-PCF, UE policy (see clause 4.2.2.2) encoded as "uePolicy" attribute;

- optionally, for the H-PCF as service producer communicating with the V-PCF, N2 PC5 policy (see clause 4.2.2.3 and/or clause 4.2.2.4 and/or clause 4.2.2.5 and/or clause 4.2.2.6) encoded as "n2Pc5Pol" attribute (for V2X communications) and/or "n2Pc5PolA2x" attribute (for A2X communications) and/or "n2Pc5ProSePol" attribute (for 5G ProSe) and/or "n2Pc5RsppPol" attribute (for Ranging/SL);

- optionally, for the H-PCF as service producer communicating with the V-PCF, and when the feature "UECapabilityIndication" is supported, if the H-PCF did not receive from the UE information about ANDSP support and the information is available and reliable in the UDR (see clause 4.2.2.2.1.1), the ANDSP support indication retrieved from UDR encoded as "andspInd" attribute;

- optionally, for the (V-)PCF communicating with the AMF, and if the "URSPEnforcement" feature is supported, the request to the AMF to be notified about the PDU session established/terminated events by providing the PCF for the UE callback information within the "pcfUeInfo" attribute, and the DNN and S-NSSAI combination of the concerned PDU session(s) within the "matchPdus" attribute.

- optionally, one or several of the following Policy Control Request Trigger(s) encoded as "triggers" attribute (see clause 4.2.3.2):

a) Location change (tracking area);

b) Change of UE presence in PRA;

c) Change of PLMN, if the "PlmnChange" feature is supported;

d) Change of UE connectivity state, if the "ConnectivityStateChange" feature is supported;

e) URSP rule enforcement information, if the "URSPEnforcement" feature is supported;

f) Change of Satellite Backhaul Category, if the "EnSatBackhaulCategoryChg" feature is supported;

g) Change of Access Type and RAT Type, if the "AccessChange" feature is supported;

h) LBO information change, applicable to roaming scenarios, if the "VPLMNSpecificURSP" feature is supported and the NF service consumer is an AMF; and

i) Change of Configured NSSAI, in roaming scenarios, if the "NssaiChange" feature is supported and the NF service consumer is the AMF;

- if the Policy Control Request Trigger "Change of UE presence in PRA" is provided, the presence reporting areas for which reporting is required encoded as "pras" attribute;

- if the Policy Control Request Trigger "LBO information change" is provided, optionally, the DNNs(s) and S-NSSAI(s) for which LBO information is required encoded as "pduSessions" attribute;

NOTE 10: If the PCF uses a Presence Reporting Area identifier referring to a Set of Core Network predefined Presence Reporting Areas as defined in 3GPP TS 23.501 [2], the PCF includes the identifier of this Presence Reporting Area set within the "praId" attribute.

- if the "SliceAwareANDSP" feature is supported, the PCF received the "n3gNodeReSel" attribute and the PCF has successfully delivered to the UE the ANDSP/WLANSP with the slice selection information for the corresponding non-3gpp node, the indication of the successful UE configuration by providing the "andspDelInd" attribute with the value "CONFIGURED". The PCF may delay the indication of the configuration result to a subsequent Npcf\_UEPolicyControl\_UpdateNotify request, as described in clause 4.2.4.2.

- if errors occur when processing the HTTP POST request, the (V-)(H-)PCF shall apply error handling procedures as specified in clause 5.7 and according to the following provisions:

- if the user information received within the "supi" attribute is unknown, the (V-)(H-)PCF shall reject the request and include in an HTTP "400 Bad Request" response message the "cause" attribute of the ProblemDetails data structure set to "USER\_UNKNOWN"; and

- if the (V-)(H-)PCF is, due to incomplete, erroneous or missing information in the request, not able to provision a UE policy decision, the (V-)(H-)PCF may reject the request and include in an HTTP "400 Bad Request" response message the "cause" attribute of the ProblemDetails data structure set to "ERROR\_REQUEST\_PARAMETERS".

If the (V-)PCF received a GUAMI, the (V-)PCF may subscribe to GUAMI changes using the AMFStatusChange service operation of the Namf\_Communication service specified in 3GPP TS 29.518 [14], and it may use the Nnrf\_NFDiscovery Service specified in 3GPP TS 29.510 [13] (using the obtained GUAMI and possibly service name) to query the other AMFs within the AMF (service) set.

When the "SliceAwareANDSP" feature is supported, and the AMF receives the "andspDelInd" attribute, the AMF, based on operator's policies, may reject the UE Registration request, and may provide a valid target N3IWF/TNGF within the Registration Reject message as specified in clause 5.5.1.3.5 of 3GPP TS 24.501 [15]. In this case, the AMF terminates the UE Policy Association as described in clause 4.2.5 (if the UE is not registered over 3GPP access).

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

4.2.2.2.2 UE Access Network discovery and selection policies (ANDSP)

UE Access Network discovery and selection policies are used by the UE to select non-3GPP accesses and to decide how to route traffic between the selected 3GPP and non 3GPP accesses.

In this release of the specification, the Access Network Discovery & Selection policy shall contain only rules that aid the UE in selecting a WLAN access network. Rules for selecting other types of non-3GPP access networks are not specified.

The WLAN access network selected by the UE with the use of Access Network Discovery & Selection policy may be used for direct traffic offload (i.e. sending traffic to the WLAN outside of a PDU Session) and for registering to 5GC using the non-3GPP access network selection information.

The Access Network Discovery & Selection policy shall contain one or more WLAN Selection Policy (WLANSP) rules and and may contain Non-3GPP access network (N3AN) node selection information and configuration information.

N3AN node selection information and configuration information is used to control UE behaviour related to selection of N3IWF, or ePDG for accessing 5GC via untrusted non-3GPP access.

To support N3IWF selection based on the S-NSSAI(s) allowed for the UE, the ANDSP contains the S-NSSAIs supported by the N3IWF(s) and slice-specific configuration, as described in 3GPP TS 24.526 [16]. To support TNGF selection based on the S-NSSAI(s) allowed for the UE, the extended WLANSP information contains the association of the S-NNSAI(s) and SSID(s) supported by the TNGF(s) as described in TS 3GPP TS 24.526 [16]. The (H-)PCF takes into account the UE's subscribed S-NSSAIs and the V-PCF the UE's Configured NSSAI, in both cases together with the UE indication of support of slice-based N3IWF and/or TNGF selection, to provide the ANDSP/WLANSP with slice specific information.

UE Access Network discovery and selection policies are encoded as defined in 3GPP TS 24.526 [16].

UE Access Network discovery and selection policies may be provided by a V-PCF and/or a H-PCF.

If the UE has indicated in the "UE STATE INDICATION" message it does not support ANDSP, or, when the feature "UECapabilityIndication" is supported, the V-PCF receives from the H-PCF the "andspInd" attribute to false, i.e. the UE does not support non-3GPP access, the (V-)(H-)PCF shall not send any Access Network discovery and selection policies to the UE.

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

5.6.1 General

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

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

**Table 5.6.1-1: Npcf\_UEPolicyControl specific Data Types**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Data type** | | **Section defined** | | **Description** | | **Applicability** | |
| A2xCapability | | 5.6.3.12 | | Indicates the A2X capabilities | | A2X | |
| LboRoamingInformation | | 5.6.2.10 | | LBO roaming information for a DNN and S-NSSAI | | VPLMNSpecificURSP | |
| N1N2MessTransferErrorReply | | 5.6.3.8 | | Error the V-PCF may send to the H-PCF when the V-PCF receives from the AMF an error to the N1N2MessageTransfer request. | | EnErrorHandling | |
| Non3gppAccess | | 5.6.3.7 | | Represents a Non-3gpp access node. | | SliceAwareANDSP | |
| Pc5Capability | | 5.6.3.5 | | Indicates the specific PC5 RAT(s) which the UE supports for V2X communications and/or A2X communications over PC5 reference point. | | V2X | |
| ProSeCapability | | 5.6.3.6 | | Indicates the 5G ProSe capabilities. | | ProSe | |
| PolicyAssociation | | 5.6.2.2 | | Description of a policy association that is returned by the PCF when a policy Association is created, updated, or read. | |  | |
| PolicyAssociationReleaseCause | | 5.6.3.4 | | The cause why the PCF requests the termination of the policy association. | |  | |
| PolicyAssociationRequest | | 5.6.2.3 | | Information that NF service consumer provides when requesting the creation of a policy association. | |  | |
| PolicyAssociationUpdateRequest | | 5.6.2.4 | | Information that NF service consumer provides when requesting the update of a policy association. | |  | |
| PolicyStatus | | 5.6.3.10 | | Represents the configuration status of a UE Policy in the UE. | | SliceAwareANDSP | |
| PolicyUpdate | | 5.6.2.5 | | Updated policies that the PCF provides in a notification or in the reply to an Update Request. | |  | |
| RangSLCapability | | 5.6.3.10 | | Represents the Ranging/SL capabilities. | | Ranging\_SL | |
| RequestTrigger | | 5.6.3.3 | | Enumeration of possible Request Triggers. | |  | |
| SliceSpecificN3gNodeSelectionCapability | | 5.6.3.12 | | Represents the UE capabilities with regard to slice-specific non-3gpp node selection. | | SliceAwareANDSP | |
| TerminationNotification | | 5.6.2.6 | | Request to terminate a policy Association that the PCF provides in a notification. | |  | |
| UeRequestedValueRep | | 5.6.2.8 | | Contains the current applicable values corresponding to the policy control request triggers. | | ImmediateReport | |
| UePolicy | | 5.6.3.2 | | UE Policies | |  | |
| UePolicyDeliveryResult | | 5.6.3.2 | | UE Policy delivery Result | |  | |
| UePolicyNotification | | 5.6.2.12 | | Contains the delivery outcome of VPLMN-Specific URSP rules | | VPLMNSpecificURSP | |
| UePolicyParameters | | 5.6.2.9 | | Contains the service parameters used to guide the VPLMN-specific URSP rule determination. | | VPLMNSpecificURSP | |
| UePolicyRequest | | 5.6.3.2 | | Request for UE Policies | |  | |
| UePolicyTransferFailureCause | | 5.6.4.1 | | UE Policy Transfer Failure Cause | | EnErrorHandling | |
| UePolicyTransferFailureNotification | | 5.6.2.7 | | Information that the UE policy is failure to be transferred to the UE. | |  | |
| UrspEnforcementPduSession | | 5.6.2.11 | | Represents URSP rule enforcement information for a PDU session. | | URSPEnforcement | |

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

**Table 5.6.1-2: Npcf\_UEPolicyControl re-used Data Types**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data type** | **Reference** | **Comments** | **Applicability** |
| AccessType | 3GPP TS 29.571 [11] | Represents an Access Type. |  |
| Bytes | 3GPP TS 29.571 [11] | String with format "byte". |  |
| ChargingInformation | 3GPP TS 29.512 [31] | Contains the addresses, and if available, the instance ID and set ID, of the charging functions. | SLAMUP |
| ConfiguredSnssai | 3GPP TS 29.531 [34] | Contains the configured S-NSSAI and optionally mapped home S-NSSA. | SliceAwareANDSP,  NssaiChange |
| CmState | 3GPP TS 29.518 [14] | Connectivity state of UE | ConnectivityStateChange |
| Dnn | 3GPP TS 29.571 [11] | Represents a DNN. | VPLMNSpecificURSP  URSPEnforcement |
| Event | 3GPP TS 29.522 [41] | Subscription to notification about delivery of VPLMN specific URSP rule. | VPLMNSpecificURSP |
| Fqdn | 3GPP TS 29.571 [11] | FQDN |  |
| Gpsi | 3GPP TS 29.571 [11] | Generic Public Subscription Identifier |  |
| GroupId | 3GPP TS 29.571 [11] | Represents a UE Group Identifier |  |
| Guami | 3GPP TS 29.571 [11] | Globally Unique AMF Identifier |  |
| Ipv4Addr | 3GPP TS 29.571 [11] | Represents an Ipv4 address. |  |
| Ipv6Addr | 3GPP TS 29.571 [11] | Represents an Ipv6 address. |  |
| N1N2MessageTransferCause | 3GPP TS 29.518 [14] | Contains an error cause for an N1 or N2 message transfer. |  |
| N2InfoContent | 3GPP TS 29.518 [14] | Represents a transparent N2 information content to be relayed by AMF. | V2X, A2X, ProSe, Ranging\_SL |
| NfInstanceId | 3GPP TS 29.571 [11] | Represents an NF instance identifier |  |
| PcEventNotification | 3GPP TS 29.523 [30] | Represents notification about UE Policy Delivery outcome | VPLMNSpecificURSP |
| PcfUeCallbackInfo | 3GPP TS 29.571 [11] | Contains the PCF for the UE callback information necessary for the PCF for the PDU session to send Establishment and Termination event. | URSPEnforcement |
| PduSessionInfo | 3GPP TS 29.571 [11] | Contains a DNN and SNSSAI combination | VPLMNSpecificURSP  URSPEnforcement |
| PduSessionType | 3GPP TS 29.571 [13] | Contains the PDU Session Type | URSPEnforcement |
| Pei | 3GPP TS 29.571 [11] | Permanent Equipment Identifier |  |
| PlmnId | 3GPP TS 29.571 [11] | Represents a PLMN identifier. |  |
| PlmnIdNid | 3GPP TS 29.571 [11] | Identifies the network: PLMN Identifier or the SNPN Identifier (the PLMN Identifier and the NID). |  |
| PresenceInfo | 3GPP TS 29.571 [11] | Presence reporting area information |  |
| ProblemDetails | 3GPP TS 29.571 [11] | Contains detailed information about an error response. |  |
| RatType | 3GPP TS 29.571 [11] | Represents a RAT type. |  |
| RedirectResponse | 3GPP TS 29.571 [11] | Contains redirection related information. | ES3XX |
| ServiceName | 3GPP TS 29.510 [13] | Name of the service instance. |  |
| SatelliteBackhaulCategory | 3GPP TS 29.571 [11] | Indicates the satellite backhaul category or non-satellite backhaul. | EnSatBackhaulCategoryChg |
| Snssai | 3GPP TS 29.571 [11] | Represents an S-NSSAI | SliceAwareANDSP |
| SscMode | 3GPP TS 29.571 [11] | Service and session continuity mode. | URSPEnforcement |
| Supi | 3GPP TS 29.571 [11] | Subscription Permanent Identifier |  |
| SupportedFeatures | 3GPP TS 29.571 [11] | Used to negotiate the applicability of the optional features defined in table 5.8-1. |  |
| TimeZone | 3GPP TS 29.571 [11] | Represents a time zone. |  |
| Uinteger | 3GPP TS 29.571 [11] | Unsigned integer. |  |
| Uri | 3GPP TS 29.571 [11] | Represents a URI. |  |
| UrspEnforcementInfo | 3GPP TS 29.512 [31] | URSP rule enforcement information as received from the UE. | URSPEnforcement |
| UrspRuleRequest | 3GPP TS 29.522 [41] | URSP rule guidance information | VPLMNSpecificURSP |
| UserLocation | 3GPP TS 29.571 [11] | Contains User Location information. |  |

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

5.6.2.2 Type PolicyAssociation

**Table 5.6.2.2-1: Definition of type PolicyAssociation**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute name** | **Data type** | **P** | **Cardinality** | **Description** | **Applicability** |
| request | PolicyAssociationRequest | O | 0..1 | The information provided by the NF service consumer when requesting the creation of a policy association |  |
| uePolicy | UePolicy | O | 0..1 | The UE policy as determined by the H-PCF (for the H-PCF as NF service producer). |  |
| n2Pc5Pol | N2InfoContent | O | 0..1 | The N2 PC5 policy for V2X communications as determined by the H-PCF. | V2X |
| n2Pc5PolA2x | N2InfoContent | O | 0..1 | The N2 PC5 policy for A2X communications as determined by the H-PCF. | A2X |
| n2Pc5ProSePol | N2InfoContent | O | 0..1 | The N2 PC5 policy for 5G ProSe as determined by the PCF. | ProSe |
| triggers | array(RequestTrigger) | O | 1..N | Request Triggers to which the PCF subscribes.  (NOTE 1) |  |
| pras | map(PresenceInfo) | C | 1..N | If the Request Trigger "PRA\_CH" is provided, the presence reporting area(s) for which reporting is requested shall be provided. The "praId" attribute within the PresenceInfo data type shall also be the key of the map. The "presenceState" and the "additionalPraId" attributes within the PresenceInfo data type shall not be supplied. The "praId" attribute within the PresenceInfo data type shall include the identifier of either a presence reporting area or a presence reporting area set. |  |
| andspDelInd | PolicyStatus | O | 0..1 | Information about whether the updated ANDSP/WLANSP has been successfully delivered to the UE. | SliceAwareANDSP |
| andspInd | boolean | O | 0..1 | Indication of UE support of ANDSP.  True: The UE supports ANDSP;  False: The UE does not support ANDSP. | UECapabilityIndication |
| pduSessions | array(PduSessionInfo) | O | 1..N | Contains the DNNs and S-NSSAIs for which LBO information is being requested. It may be provided when the "LBO\_INFO\_CH" request trigger is provided. | VPLMNSpecificURSP |
| suppFeat | SupportedFeatures | M | 1 | Indicates the negotiated supported features. |  |
| n2Pc5RsppPol | N2InfoContent | O | 0..1 | The N2 PC5 policy for Ranging/SL as determined by the H-PCF. | Ranging\_SL |
| pcfUeInfo | PcfUeCallbackInfo | O | 0..1 | Contains the PCF for the UE information necessary for the PCF for the PDU session to send established/terminated events notifications to the PCF for the UE. | URSPEnforcement |
| matchPdus | array(PduSessionInfo) | C | 1..N | Indicates the matched PDU session(s) for which the AMF shall forward the PCF for the UE callback information in the "pcfUeInfo" attribute to the SMF. It shall be present when the "pcfUeInfo" attribute is present.  (NOTE 2) | URSPEnforcement |
| NOTE 1: Only the RequestTrigger enumeration values corresponding to PCRTs that require explicit subscription as defined in clause 5.6.3.3 shall be applicable within the "triggers" attribute.  NOTE 2: The DNN encoded within the PduSessionInfo element(s) of the "matchPdus" array may contain a full DNN or only the DNN Network Identifier. When the DNN contains the Network Identifier only, the AMF shall match a PDU session for the received Network Identifier and for any value of the Operator Identifier. | | | | | |

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

5.6.2.3 Type PolicyAssociationRequest

**Table 5.6.2.3-1: Definition of type PolicyAssociationRequest**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute name** | **Data type** | **P** | **Cardinality** | **Description** | **Applicability** |
| notificationUri | Uri | M | 1 | Identifies the recipient of Notifications sent by the PCF. |  |
| altNotifIpv4Addrs | array(Ipv4Addr) | O | 1..N | Alternate or backup IPv4 Addess(es) where to send Notifications. |  |
| altNotifIpv6Addrs | array(Ipv6Addr) | O | 1..N | Alternate or backup IPv6 Addess(es) where to send Notifications. |  |
| altNotifFqdns | array(Fqdn) | O | 1..N | Alternate or backup FQDN(s) where to send Notifications. |  |
| supi | Supi | M | 1 | Subscription Permanent Identifier. |  |
| gpsi | Gpsi | C | 0..1 | Generic Public Subscription Identifier. Shall be provided when available. |  |
| accessType | AccessType | C | 0..1 | The Access Type where the served UE is camping. Shall be provided when available. |  |
| accessTypes | array(AccessType) | C | 1..N | The Access Type(s) where the served UE is camping. Shall be provided when available. | AccessChange |
| pei | Pei | C | 0..1 | The Permanent Equipment Identifier of the served UE. Shall be provided when available. |  |
| userLoc | UserLocation | C | 0..1 | The location of the served UE. Shall be provided when available. |  |
| timeZone | TimeZone | C | 0..1 | The time zone of the network where the served UE is camping. Shall be provided when available. |  |
| servingPlmn | PlmnIdNid | C | 0..1 | The serving network (a PLMN or an SNPN) where the served UE is camping. For the SNPN the NID together with the PLMN ID identifies the SNPN. Shall be provided when available. |  |
| ratType | RatType | C | 0..1 | The RAT Type where the served UE is camping. Shall be provided when available. |  |
| ratTypes | array(RatType) | C | 1..N | The RAT Type(s) where the served UE is camping. Shall be provided when available. | AccessChange |
| groupIds | array(GroupId) | C | 1..N | Internal Group Identifier(s) of the served UE. Shall be provided when available. |  |
| hPcfId | NfInstanceId | C | 0..1 | H-PCF Identifier. Shall be provided when available. |  |
| uePolReq | UePolicyRequest | C | 0..1 | A request for UE Policies. Shall be provided when the AMF receives an "UE STATE INDICATION" message, as defined in Annex D.5.4 of 3GPP TS 24.501 [15]. |  |
| guami | Guami | C | 0..1 | The Globally Unique AMF Identifier (GUAMI) shall be provided by an AMF as NF service consumer. |  |
| serviceName | ServiceName | O | 0..1 | If the NF service consumer is an AMF, it should provide the name of a service produced by the AMF that makes use of information received within the Npcf\_UEPolicyControl\_UpdateNotify service operation. |  |
| servingNfId | NfInstanceId | C | 0..1 | If the NF service consumer is an AMF, it shall contain the identifier of the serving AMF. |  |
| pc5Capab | Pc5Capability | C | 0..1 | Indicates the PC5 Capability for V2X communications supported by the UE. It shall be provided when available at the NF service consumer. | V2X |
| a2xCapab | array(A2xCapability) | C | 1..N | Indicates the A2X Capabilities for A2X communications supported by the UE. It shall be provided when available at the NF service consumer. | A2X |
| proSeCapab | array(ProSeCapability) | C | 1..N | Indicates whether the UE is capable of one or more of the the following 5G ProSe Capabilities: 5G ProSe Direct Discovery, 5G ProSe Direct Communication, Layer-2 and/or Layer 3 5G ProSe UE-to-Network Relay and Layer-2 and/or Layer 3 5G ProSe Remote UE, and when the "ProSe\_Ph2" feature is supported, Layer-2 and/or Layer-3 5G ProSe UE-to-UE Relay and Layer-2 and/or Layer-3 5G ProSe End UE.  It shall be provided when available at the NF service consumer. | ProSe |
| confSnssais | array(ConfiguredSnssai) | C | 1..N | The Configured NSSAI for the serving PLMN, and optionally the mapped S-NSSAI value of home network corresponding to the configured S-NSSAI in the serving PLMN.  When the feature SliceAwareANDSP is supported, it shall be provided in the roaming case when available at the NF service consumer and the "n3gNodeReSel" attribute is present.  If the feature NssaiChange is supported, it shall be provided in the roaming case. (NOTE 1) | SliceAwareANDSP, NssaiChange |
| n3gNodeReSel | Non3gppAccess | O | 0..1 | A wrongly selected non-3gpp access node. It shall be provided when the UE has selected a non-3gpp access node that is not compatible with the Allowed NSSAI. | SliceAwareANDSP |
| sliceN3gNodeSelCap | SliceSpecificN3gNodeSelectionCapability | O | 0..1 | Indicates whether the UE supports N3IWF/TNGF selection based on the slices the UE wishes to use over untrusted/trusted non-3GPP access. | SliceAwareANDSP |
| satBackhaulCategory | SatelliteBackhaulCategory | C | 0..1 | Indicates types of the satellite backhaul based on satellite types (when satellite backhaul is used) or non-satellite backhaul (when satellite backhaul is not used).  The default value "NON\_SATELLITE" shall apply if the attribute is not present. | EnSatBackhaulCategoryChg |
| vpsUePolGuidance | map(UePolicyParameters) | O | 1..N | Contains the service parameter used to guide the VPLMN-specific URSP and may contain the subscription to VPLMN-specific URSP delivery outcome. The key of the map represents the AF request to guide the VPLMN-specific URSP rules.  This attribute only applies in roaming and when the V-PCF is the NF service consumer. | VPLMNSpecificURSP |
| lboRoamInfo | array(LboRoamingInformation) | O | 1..N | Contains LBO roaming information for DNN and S-NSSAI combination(s).  This attribute only applies in roaming and when the AMF is the NF service consumer. | VPLMNSpecificURSP |
| 5gsToEpsMob | boolean | O | 0..1 | When it is set to true, it indicates the UE Policy Association creation is triggered by a 5GS to EPS mobility scenario.  Default value is false. | EpsUrsp |
| chfInfo | ChargingInformation | O | 0..1 | Contains the CHF address(es), and if available, the associated CHF instance ID(s) and CHF set ID(s). (NOTE 2) | SLAMUP |
| suppFeat | SupportedFeatures | M | 1 | Indicates the features supported by the service consumer. |  |
| rangSlCapab | array(RangSLCapability) | C | 1..N | Contains the Ranging/SL related UE capabilities.  It shall be provided when available at the NF service consumer. | Ranging\_SL |
| NOTE 1: The "mappedHomeSnssai" attribute within the ConfiguredSnssai data type may only be provided if the "NssaiChange" feature is supported.  NOTE 2: This attribute may only be supplied by the PCF in the response to the initial POST request that requested the creation of an individual UE policy resource. | | | | | |

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

5.6.2.4 Type PolicyAssociationUpdateRequest

**Table 5.6.2.4-1: Definition of type PolicyAssociationUpdateRequest**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Attribute name** | | **Data type** | | **P** | | **Cardinality** | | **Description** | | **Applicability** | |
| notificationUri | | Uri | | O | | 0..1 | | Identifies the recipient of Notifications sent by the PCF. | |  | |
| altNotifIpv4Addrs | | array(Ipv4Addr) | | O | | 1..N | | Alternate or backup IPv4 Address(es) where to send Notifications. | |  | |
| altNotifIpv6Addrs | | array(Ipv6Addr) | | O | | 1..N | | Alternate or backup IPv6 Address(es) where to send Notifications. | |  | |
| altNotifFqdns | | array(Fqdn) | | O | | 1..N | | Alternate or backup FQDN(s) where to send Notifications. | |  | |
| triggers | | array(RequestTrigger) | | C | | 1..N | | Request Triggers that the NF service consumer observes. | |  | |
| praStatuses | | map(PresenceInfo) | | C | | 1..N | | If the Trigger "PRA\_CH" is reported, the UE presence status for tracking area for which changes of the UE presence occurred shall be provided. The "praId" attribute within the PresenceInfo data type shall also be the key of the map. The "presenceState" attribute within the PresenceInfo data type shall be supplied. The "additionalPraId" attribute within the PresenceInfo data type shall not be supplied. The "praId" attribute within the PresenceInfo data type shall include the identifier of an individual presence reporting area. | |  | |
| userLoc | | UserLocation | | C | | 0..1 | | The location of the served UE shall be provided for trigger "LOC\_CH". | |  | |
| uePolDelResult | | UePolicyDeliveryResult | | C | | 0..1 | | UE Policy Delivery Result. Shall be provided together with trigger "UE\_POLICY" when a "MANAGE UE POLICY COMPLETE" message or a "MANAGE UE POLICY COMMAND REJECT" message, as defined in Annex D.5 of 3GPP TS 24.501 [15], has been received by the V-PCF and is being forwarded to the H-PCF. | |  | |
| uePolTransFailNotif | | UePolicyTransferFailureNotification | | C | | 0..1 | | The UE policy transfer failure notification. Shall be the provided together with trigger "UE\_POLICY" when a response with HTTP status code 4xx or 5xx as defined in clause 5.2.2.3.1.2 of 3GPP TS 29.518 [14] or a N1N2 Transfer Failure Notification as defined in clause 5.2.2.3.2 of 3GPP TS 29.518 [14] is received after the V-PCF provisioned the UE policy by invoking the Namf\_Communication\_N1N2MessageTransfer service operation to the AMF and is notifying the H-PCF. | |  | |
| uePolReq | | UePolicyRequest | | C | | 0..1 | | A request for UE Policies. Shall be provided together with trigger "UE\_POLICY" when the V-PCF receives an "UE POLICY PROVISIONING REQUEST" message, as defined in clause 7.2.1.1 of 3GPP TS 24.587 [24], if the "V2X" feature is supported, and/or when the V-PCF receives an "UE POLICY PROVISIONING REQUEST" message for 5G ProSe, as defined in clause 10.4.1 of 3GPP TS 24.554 [28], if the "ProSe" feature is supported and/or when the V-PCF receives an "UE POLICY PROVISIONING REQUEST" message for A2X, as defined 3GPP TS 24.577 [32], if the "A2X" feature is supported and/or when the V-PCF receives an "UE POLICY PROVISIONING REQUEST" message for Ranging/SL, as defined 3GPP TS 24.514 [42], if the "Ranging\_SL" feature is supported.. | | V2X, A2X, ProSe, Ranging\_SL | |
| guami | | Guami | | C | | 0..1 | | The Globally Unique AMF Identifier (GUAMI) shall be provided by an AMF as NF service consumer during the AMF relocation. | |  | |
| servingNfId | | NfInstanceId | | C | | 0..1 | | It shall contain the identifier of the new AMF during the AMF relocation. | |  | |
| plmnId | | PlmnIdNid | | C | | 0..1 | | The serving network identity (a PLMN or an SNPN) of the served UE shall be provided for trigger "PLMN\_CH". | | PlmnChange | |
| connectState | | CmState | | C | | 0..1 | | The connectivity state of the served UE shall be provided for trigger "CON\_STATE\_CH". | | ConnectivityStateChange | |
| groupIds | | array(GroupId) | | C | | 1..N | | Internal Group Identifier(s) of the served UE. Shall be provided for trigger "GROUP\_ID\_LIST\_CHG". | | GroupIdListChange | |
| pc5Capab | | Pc5Capability | | C | | 0..1 | | Indicates the PC5 Capability for V2X communications supported by the UE. It shall be provided when available at the NF service consumer.  It shall be included by the target AMF only in inter-AMF mobility scenarios and for trigger "FEAT\_RENEG". It requires that the "V2X" feature is supported. | | FeatureRenegotiation | |
| a2xCapab | | array(A2xCapability) | | C | | 1..N | | Indicates the A2X capabilities supported by the UE. It shall be provided when available at the NF service consumer.  It shall be included by the target AMF only in inter-AMF mobility scenarios and for trigger "FEAT\_RENEG". It requires that the "A2X" feature is supported. | | FeatureRenegotiation | |
| proSeCapab | | array(ProSeCapability) | | O | | 1..N | | Indicates whether the UE is capable of one or more of the the following 5G ProSe Capabilities: 5G ProSe Direct Discovery, 5G ProSe Direct Communication, Layer-2 and/or Layer 3 5G ProSe UE-to-Network Relay and Layer-2 and/or Layer 3 5G ProSe Remote UE, and when the "ProSe\_Ph2" feature is supported, Layer-2 and/or Layer-3 5G ProSe UE-to-UE Relay and Layer-2 and/or Layer-3 5G ProSe End UE. | | ProSe | |
| confSnssais | | array(ConfiguredSnssai) | | C | | 1..N | | The Configured NSSAI for the serving PLMN, and optionally the mapped S-NSSAI value of home network corresponding to the configured S-NSSAI in the serving PLMN. It shall be provided in case of roaming for trigger "CONF\_NSSAI\_CH" or for trigger "NON\_3GPP\_NODE\_RESELECTION". (NOTE) | | SliceAwareANDSP, NssaiChange | |
| n3gNodeReSel | | Non3gppAccess | | O | | 0..1 | | A wrongly selected non-3gpp access node. It shall be provided when available at the NF service consumer and the "NON\_3GPP\_NODE\_RESELECTION" trigger is reported within the "triggers" attribute. | | SliceAwareANDSP | |
| sliceN3gNodeSelCap | | SliceSpecificN3gNodeSelectionCapability | | O | | 0..1 | | Indicates whether the UE supports N3IWF/TNGF selection based on the slices the UE wishes to use over untrusted/trusted non-3GPP access.  It may be included by the target AMF only in inter-AMF mobility scenarios and for trigger "FEAT\_RENEG". It requires that the "SliceAwareANDSP" feature is supported. | | FeatureRenegotiation | |
| satBackhaulCategory | | SatelliteBackhaulCategory | | C | | 0..1 | | Indicates types of the satellite backhaul based on satellite types (when satellite backhaul is used) or non-satellite backhaul (when satellite backhaul is not used).  It shall be provided for trigger "SAT\_CATEGORY\_CHG". | | EnSatBackhaulCategoryChg | |
| urspEnfReport | | map(UrspEnforcementPduSession) | | O | | 1..N | | Represents information about the enforced URSP rule(s) in one or more PDU sessions for the affected UE.  The key of the map is a character string that represents an integer value (it may correspond with a PDU session identifier).  It shall be present when the notified policy control request trigger is "URSP\_ENF\_INFO". | | URSPEnforcement | |
| vpsUePolGuidance | | map(UePolicyParameters) | | O | | 1..N | | Contains the service parameter used to guide the VPLMN-specific URSP rule determination and may contain the subscription to VPLMN-specific URSP delivery outcome. The key of the map represents the AF request to guide VPLMN-specific URSP rules.  This attribute only applies in roaming and when the V-PCF is the NF service consumer. | | VPLMNSpecificURSP | |
| lboRoamInfo | | array(LboRoamingInformation) | | O | | 1..N | | Contains LBO roaming information for a DNN and S-NSSAI combination(s).  This attribute only applies in roaming and when the AMF is the NF service consumer. | | VPLMNSpecificURSP | |
| accessTypes | | array(AccessType) | | C | | 1..N | | The Access Type(s) where the served UE is camping. It shall be provided for trigger "ACCESS\_TYPE\_CH" when the access type(s) changes or when the access type(s) is initially reported as consequence of the provisioning of the trigger. | | AccessChange | |
| ratTypes | | array(RatType) | | C | | 1..N | | The RAT Type(s), if available, for the reported "accessTypes" where the served UE is camping. It shall be provided, if available, for trigger "ACCESS\_TYPE\_CH" when the access type(s) changes or when the access type(s) is initially reported as consequence of the provisioning of the trigger. | | AccessChange | |
| suppFeat | | SupportedFeatures | | C | | 0..1 | | Indicates the features supported by the NF service consumer. It shall be included by the target AMF in inter-AMF mobility scenarios for trigger "FEAT\_RENEG". | | FeatureRenegotiation | |
| rangSlCapab | | array(RangSLCapability) | | O | | 1..N | | Contains the Ranging/SL related UE capabilities. | | Ranging\_SL | |
| NOTE: The "mappedHomeSnssai" attribute within the ConfiguredSnssai data type may only be provided if the "NssaiChange" feature is supported. | | | | | | | | | | | |

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

5.6.2.5 Type PolicyUpdate

**Table 5.6.2.5-1: Definition of type PolicyUpdate**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Attribute name** | | **Data type** | | **P** | | **Cardinality** | | **Description** | | **Applicability** | |
| resourceUri | | Uri | | M | | 1 | | The resource URI of the individual UE policy association related to the notification.  (NOTE 2) | |  | |
| uePolicy | | UePolicy | | O | | 0..1 | | The UE policy as determined by the H-PCF. | |  | |
| n2Pc5Pol | | N2InfoContent | | O | | 0..1 | | The N2 PC5 policy for V2X communications as determined by the H-PCF. | | V2X | |
| n2Pc5PolA2x | | N2InfoContent | | O | | 0..1 | | The N2 PC5 policy for A2X communications as determined by the H-PCF. | | A2X | |
| n2Pc5ProSePol | | N2InfoContent | | O | | 0..1 | | The N2 PC5 policy for 5G ProSe as determined by the PCF. | | ProSe | |
| triggers | | array(RequestTrigger) | | O | | 1..N | | Request Triggers that the PCF subscribes.  (NOTE 1) | |  | |
| pras | | map(PresenceInfoRm) | | C | | 1..N | | If the Trigger "PRA\_CH" is provided or if that trigger was already set but the requested presence reporting areas need to be changed, the presence reporting area(s) for which reporting is requested shall be provided. The "praId" attribute within the PresenceInfoRm data type shall also be the key of the map. The "presenceState" attribute within the PresenceInfo data type shall not be supplied. The "praId" attribute within the PresenceInfo data type shall include the identifier of either a presence reporting area or a presence reporting area set. | | PresenceInfo | |
| andspDelInd | | PolicyStatus | | O | | 0..1 | | Information about whether the updated ANDSP/WLANSP has been successfully delivered to the UE. | | SliceAwareANDSP | |
| delivReport | | map(UePolicyNotification) | | O | | 1..N | | Contains the delivery outcome of VPLMN-Specific URSP rules. It may be included if the V-PCF indicated the subscription to delivery outcome events as described in clause 4.2.2.2.3.2.  The key of the map represents the AF request of the corresponding subscription, i.e. its value shall match the key that was previously provided by the V-PCF in the “vpsUePolGuidance“ attribute. | | VPLMNSpecificURSP | |
| pduSessions | | array(PduSessionInfo) | | O | | 1..N | | Contains the list of the DNN and SNSSAI pairs for which LBO information is being requested. It may be provided when the "LBO\_INFO\_CH" request trigger is provided. | | VPLMNSpecificURSP | |
| pcfUeInfo | | PcfUeCallbackInfo | | O | | 0..1 | | Contains the PCF for the UE callback information necessary for the PCF for the PDU session to send established/terminated events notifications to the PCF for the UE. | | URSPEnforcement | |
| matchPdus | | array(PduSessionInfo) | | O | | 1..N | | Indicates the matched PDU session(s) for which the AMF shall forward the PCF for the UE information in the "pcfUeInfo" attribute to the SMF. It shall be present when the "pcfUeInfo" attribute is present.  (NOTE 3) | | URSPEnforcement | |
| suppFeat | | SupportedFeatures | | C | | 0..1 | | Indicates the negotiated supported features. It shall be included in the HTTP POST response when the NF service consumer provided the supported features in the HTTP POST request. | | FeatureRenegotiation | |
| n2Pc5RsppPol | | N2InfoContent | | O | | 0..1 | | The N2 PC5 policy for Ranging/SL as determined by the H-PCF. | | Ranging\_SL | |
| NOTE 1: Only the RequestTrigger enumeration values corresponding to PCRTs that require explicit subscription as defined in clause 5.6.3.3 shall be applicable within the "triggers" attribute.  NOTE 2: When the PolicyUpdate data type is used in a policy update notify service operation, either the complete resource URI included in the "resourceUri" attribute or the "apiSpecificResourceUriPart" component (see clause 5.1) of the resource URI included in the "resourceUri" attribute may be used by the NF service consumer (e.g. AMF) for the identification of the Individual UE Policy Association resource related to the notification.  NOTE 3: The DNN encoded within the PduSessionInfo element(s) of the "matchPdus" array may contain a full DNN or only the DNN Network Identifier. When the DNN contains the Network Identifier only, the AMF shall match a PDU session for the received Network Identifier and for any value of the Operator Identifier. | | | | | | | | | | | |

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

5.6.3.12 Enumeration: SliceSpecificN3gNodeSelectionCapability

**Table 5.6.3.12-1: SliceSpecificN3gNodeSelectionCapability**

|  |  |  |
| --- | --- | --- |
| **Enumeration value** | **Description** | **Applicability** |
| ONLY\_N3IWF\_SS\_SEL | Indicates that the UE supports N3IWF selection based on the slices the UE wishes to use over untrusted non-3GPP access. |  |
| ONLY\_TNGF\_SS\_SEL | Indicates that the UE supports TNGF selection based on the slices the UE wishes to use over trusted non-3GPP access. |  |
| TNGF\_N3IWF\_SS\_SEL | Indicates that the UE supports N3IWF selection based on the slices the UE wishes to use over untrusted non-3GPP access and TNGF selection based on the slices the UE wishes to use over trusted non-3GPP access. |  |

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

A.2 Npcf\_UEPolicyControl API

openapi: 3.0.0

info:

version: 1.3.0

title: Npcf\_UEPolicyControl

description: |

UE Policy Control Service.

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externalDocs:

description: 3GPP TS 29.525 V18.6.0; 5G System; UE Policy Control Service.

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.525/'

servers:

- url: '{apiRoot}/npcf-ue-policy-control/v1'

variables:

apiRoot:

default: https://example.com

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

security:

- {}

- oAuth2ClientCredentials:

- npcf-ue-policy-control

paths:

/policies:

post:

operationId: CreateIndividualUEPolicyAssociation

summary: Create individual UE policy association.

tags:

- UE Policy Associations (Collection)

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'201':

description: Created

content:

application/json:

schema:

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

headers:

Location:

description: >

Contains the URI of the newly created resource, according to the structure

{apiRoot}/npcf-ue-policy-control/v1/policies/{polAssoId}'

required: true

schema:

type: string

'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:

policyUpdateNotification:

'{$request.body#/notificationUri}/update':

post:

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: >

OK. The current applicable values corresponding to the policy control request

trigger is reported

content:

application/json:

schema:

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

'204':

description: No Content, Notification was successful

'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'

policyAssocitionTerminationRequestNotification:

'{$request.body#/notificationUri}/terminate':

post:

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content, Notification was successful

'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'

/policies/{polAssoId}:

get:

operationId: ReadIndividualUEPolicyAssociation

summary: Read individual UE policy association.

tags:

- Individual UE Policy Association (Document)

parameters:

- name: polAssoId

in: path

description: Identifier of a policy association

required: true

schema:

type: string

responses:

'200':

description: OK. Resource representation is returned

content:

application/json:

schema:

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

'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'

delete:

operationId: DeleteIndividualUEPolicyAssociation

summary: Delete individual UE policy association.

tags:

- Individual UE Policy Association (Document)

parameters:

- name: polAssoId

in: path

description: Identifier of a policy association

required: true

schema:

type: string

responses:

'204':

description: No Content. Resource was successfully deleted

'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'

/policies/{polAssoId}/update:

post:

operationId: ReportObservedEventTriggersForIndividualUEPolicyAssociation

summary: >

Report observed event triggers and possibly obtain updated policies for an individual UE

policy association.

tags:

- Individual UE Policy Association (Document)

requestBody:

required: true

content:

application/json:

schema:

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

parameters:

- name: polAssoId

in: path

description: Identifier of a policy association

required: true

schema:

type: string

responses:

'200':

description: OK. Updated policies are returned

content:

application/json:

schema:

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

'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'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

npcf-ue-policy-control: Access to the Npcf\_UEPolicyControl API

schemas:

PolicyAssociation:

description: >

Contains the description of a policy association that is returned by the PCF when a policy

Association is created, updated, or read.

type: object

properties:

request:

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

uePolicy:

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

n2Pc5Pol:

$ref: 'TS29518\_Namf\_Communication.yaml#/components/schemas/N2InfoContent'

n2Pc5PolA2x:

$ref: 'TS29518\_Namf\_Communication.yaml#/components/schemas/N2InfoContent'

n2Pc5ProSePol:

$ref: 'TS29518\_Namf\_Communication.yaml#/components/schemas/N2InfoContent'

triggers:

type: array

items:

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

minItems: 1

description: >

Request Triggers that the PCF subscribes.

pras:

type: object

additionalProperties:

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

minProperties: 1

description: >

Contains the presence reporting area(s) for which reporting was requested.

The praId attribute within the PresenceInfoRm data type is the key of the map.

andspDelInd:

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

andspInd:

description: >

Indication of UE support of ANDSP. When set to true, it indicates the UE supports ANDSP,

when set to false it indicates the UE does not support ANDSP.

type: boolean

pduSessions:

type: array

items:

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

minItems: 1

description: Combination of DNN and S-NSSAIs for which LBO information is requested.

suppFeat:

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

n2Pc5RsppPol:

$ref: 'TS29518\_Namf\_Communication.yaml#/components/schemas/N2InfoContent'

pcfUeInfo:

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

matchPdus:

type: array

items:

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

minItems: 1

required:

- suppFeat

PolicyAssociationRequest:

description: >

Represents information that the NF service consumer provides when requesting the creation of

a policy association.

type: object

properties:

notificationUri:

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

altNotifIpv4Addrs:

type: array

items:

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

minItems: 1

description: Alternate or backup IPv4 Address(es) where to send Notifications.

altNotifIpv6Addrs:

type: array

items:

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

minItems: 1

description: Alternate or backup IPv6 Address(es) where to send Notifications.

altNotifFqdns:

type: array

items:

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

minItems: 1

description: Alternate or backup FQDN(s) where to send Notifications.

supi:

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

gpsi:

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

accessType:

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

accessTypes:

type: array

items:

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

minItems: 1

description: >

The Access Type(s) where the served UE is camping.

It shall be provided, if available, for trigger "ACCESS\_TYPE\_CH.

pei:

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

userLoc:

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

timeZone:

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

servingPlmn:

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

ratType:

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

ratTypes:

type: array

items:

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

minItems: 1

description: >

The RAT Type(s), if available, for the reported "accessTypes" where the served UE is

camping. It shall be provided, if available, for trigger "ACCESS\_TYPE\_CH.

groupIds:

type: array

items:

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

minItems: 1

hPcfId:

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

uePolReq:

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

guami:

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

serviceName:

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

servingNfId:

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

pc5Capab:

$ref: '#/components/schemas/Pc5Capability'

a2xCapab:

type: array

items:

$ref: '#/components/schemas/A2xCapability'

minItems: 1

proSeCapab:

type: array

items:

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

minItems: 1

confSnssais:

type: array

items:

$ref: 'TS29531\_Nnssf\_NSSelection.yaml#/components/schemas/ConfiguredSnssai'

minItems: 1

description: >

The Configured NSSAI for the serving PLMN, and the mapped S-NSSAI value of home

network corresponding to the configured S-NSSAI in the serving PLMN.

n3gNodeReSel:

$ref: '#/components/schemas/Non3gppAccess'

sliceN3gNodeSelCap:

$ref: '#/components/schemas/SliceSpecificN3gNodeSelectionCapability'

satBackhaulCategory:

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

5gsToEpsMob:

type: boolean

description: >

It indicates the UE Policy Association is triggered by a 5GS to EPS mobility

scenario.

vpsUePolGuidance:

type: object

additionalProperties:

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

minProperties: 1

description: >

Contains the service parameter used to guide the VPLMN-specific URSP and may contain

the subscription to VPLMN-specific URSP delivery outcome.

The key of the map represents the AF request to guide VPLMN-specific URSP rules.

This attribute only applies in roaming and when the V-PCF is the NF service consumer.

lboRoamInfo:

type: array

items:

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

minItems: 1

description: >

Contains LBO roaming information for DNN and S-NSSAI combination(s).

This attribute only applies in roaming and when the AMF is the NF service consumer.

chfInfo:

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

suppFeat:

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

rangSlCapab:

type: array

items:

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

minItems: 1

required:

- notificationUri

- suppFeat

- supi

PolicyAssociationUpdateRequest:

description: >

Represents Information that the NF service consumer provides when requesting the update of

a policy association.

type: object

properties:

notificationUri:

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

altNotifIpv4Addrs:

type: array

items:

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

minItems: 1

description: Alternate or backup IPv4 Address(es) where to send Notifications.

altNotifIpv6Addrs:

type: array

items:

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

minItems: 1

description: Alternate or backup IPv6 Address(es) where to send Notifications.

altNotifFqdns:

type: array

items:

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

minItems: 1

description: Alternate or backup FQDN(s) where to send Notifications.

triggers:

type: array

items:

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

minItems: 1

description: Request Triggers that the NF service consumer observes.

praStatuses:

type: object

additionalProperties:

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

description: >

Contains the UE presence status for tracking area for which changes of the UE presence

occurred. The praId attribute within the PresenceInfo data type is the key of the map.

minProperties: 1

userLoc:

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

uePolDelResult:

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

uePolTransFailNotif:

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

uePolReq:

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

guami:

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

servingNfId:

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

plmnId:

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

connectState:

$ref: 'TS29518\_Namf\_EventExposure.yaml#/components/schemas/CmState'

groupIds:

type: array

items:

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

minItems: 1

pc5Capab:

$ref: '#/components/schemas/Pc5Capability'

a2xCapab:

type: array

items:

$ref: '#/components/schemas/A2xCapability'

minItems: 1

proSeCapab:

type: array

items:

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

minItems: 1

confSnssais:

type: array

items:

$ref: 'TS29531\_Nnssf\_NSSelection.yaml#/components/schemas/ConfiguredSnssai'

minItems: 1

description: >

The Configured NSSAI for the serving PLMN, and the mapped S-NSSAI value of home

network corresponding to the configured S-NSSAI in the serving PLMN.

sliceN3gNodeSelCap:

$ref: '#/components/schemas/SliceSpecificN3gNodeSelectionCapability'

satBackhaulCategory:

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

urspEnfRep:

type: object

additionalProperties:

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

description: >

Contains information about the enforced URSP rule(s) in one or more PDU sessions.

The key of the map is a character string that represents an integer value.

minProperties: 1

vpsUePolGuidance:

type: object

additionalProperties:

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

minProperties: 1

description: >

Contains the service parameter used to guide the VPLMN-specific URSP and may contain

the subscription to VPLMN-specific URSP delivery outcome.

The key of the map represents the AF request to guide VPLMN-specific URSP rules.

This attribute only applies in roaming and when the V-PCF is the NF service consumer.

lboRoamInfo:

type: array

items:

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

minItems: 1

description: >

Contains LBO roaming information for DNN and S-NSSAI combination(s).

This attribute only applies in roaming and when the AMF is the NF service consumer.

accessTypes:

type: array

items:

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

minItems: 1

description: >

The Access Type(s) where the served UE is camping.

It shall be provided, if available, for trigger "ACCESS\_TYPE\_CH.

ratTypes:

type: array

items:

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

minItems: 1

description: >

The RAT Type(s), if available, for the reported "accessTypes" where the served UE is

camping. It shall be provided, if available, for trigger "ACCESS\_TYPE\_CH.

suppFeat:

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

rangSlCapab:

type: array

items:

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

minItems: 1

description: >

Contains the Ranging/SL related UE capabilities.

PolicyUpdate:

description: >

Represents updated policies that the PCF provides in a notification or in the reply to an

Update Request.

type: object

properties:

resourceUri:

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

uePolicy:

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

n2Pc5Pol:

$ref: 'TS29518\_Namf\_Communication.yaml#/components/schemas/N2InfoContent'

n2Pc5PolA2x:

$ref: 'TS29518\_Namf\_Communication.yaml#/components/schemas/N2InfoContent'

n2Pc5ProSePol:

$ref: 'TS29518\_Namf\_Communication.yaml#/components/schemas/N2InfoContent'

triggers:

type: array

items:

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

minItems: 1

nullable: true

description: >

Request Triggers that the PCF subscribes.

pras:

type: object

additionalProperties:

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

description: >

Contains the presence reporting area(s) for which reporting was requested.

The praId attribute within the PresenceInfo data type is the key of the map.

minProperties: 1

nullable: true

andspDelInd:

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

delivReport:

type: object

additionalProperties:

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

minProperties: 1

description: >

Contains the delivery outcome of the VPLMN-specific URSP.

The key of the map represents the AF request of the corresponding subscription, i.e. its

value shall match the key that was previously provided by the V-PCF in the

vpsUePolGuidance attribute.

This attribute only applies in roaming and when the V-PCF is the NF service consumer.

pduSessions:

type: array

items:

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

minItems: 1

description: >

Combination of DNN and S-NSSAIs for which LBO information is requested.

nullable: true

pcfUeInfo:

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

matchPdus:

type: array

items:

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

minItems: 1

nullable: true

suppFeat:

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

n2Pc5RsppPol:

$ref: 'TS29518\_Namf\_Communication.yaml#/components/schemas/N2InfoContent'

required:

- resourceUri

TerminationNotification:

description: >

Represents a request to terminate a policy association that the PCF provides in a

notification.

type: object

properties:

resourceUri:

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

cause:

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

required:

- resourceUri

- cause

UePolicyTransferFailureNotification:

description: >

Represents information on the failure of a UE policy transfer to the UE because the UE is

not reachable.

type: object

properties:

cause:

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

retryAfter:

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

ptis:

type: array

items:

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

minItems: 1

description: >

This contains a list of PTI assigned by the H-PCF corresponding to the UE policy(s)

which could not be transferred by the AMF.

required:

- cause

- ptis

UeRequestedValueRep:

description: >

Contains the current applicable values corresponding to the policy control request triggers.

type: object

properties:

userLoc:

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

praStatuses:

type: object

additionalProperties:

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

minProperties: 1

description: >

Contains the UE presence statuses for tracking areas. The praId attribute within the

PresenceInfo data type is the key of the map.

plmnId:

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

connectState:

$ref: 'TS29518\_Namf\_EventExposure.yaml#/components/schemas/CmState'

confSnssais:

type: array

items:

$ref: 'TS29531\_Nnssf\_NSSelection.yaml#/components/schemas/ConfiguredSnssai'

minItems: 1

description: >

The Configured NSSAI for the serving PLMN, and the mapped S-NSSAI value of home

network corresponding to the configured S-NSSAI in the serving PLMN.

satBackhaulCategory:

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

urspEnfRep:

type: object

additionalProperties:

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

description: >

Contains information about the enforced URSP rule(s) in one or more PDU sessions.

The key of the map is a character string that represents an integer value.

minProperties: 1

lboRoamInfo:

type: array

items:

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

minItems: 1

description: >

Contains LBO roaming information for DNN and S-NSSAI combination(s).

accessTypes:

type: array

items:

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

minItems: 1

description: >

The Access Type(s) where the served UE is camping.

It shall be provided, if available, for trigger "ACCESS\_TYPE\_CH.

ratTypes:

type: array

items:

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

minItems: 1

description: >

The RAT Type(s), if available, for the reported "accessTypes" where the served UE is

camping. It shall be provided, if available, for trigger "ACCESS\_TYPE\_CH.

UePolicyParameters:

description: >

Contains the service parameters used to guide the VPLMN-specific URSP rule determination.

type: object

properties:

urspGuidance:

type: array

items:

$ref: 'TS29522\_ServiceParameter.yaml#/components/schemas/UrspRuleRequest'

minItems: 1

description: >

Contains the service parameter used to guide the VPLMN-specific URSP.

deliveryEvents:

type: array

items:

$ref: 'TS29522\_ServiceParameter.yaml#/components/schemas/Event'

minItems: 1

description: >

AF subscribed event(s) notifications related to AF provisioned guidance

for VPLMN-specific URSP rules.

LboRoamingInformation:

description: >

Contains LBO roaming information for a DNN and S-NSSAI.

type: object

properties:

lboRoamAllowed:

type: boolean

description: >

Indicates whether LBO for the DNN and S-NSSAI is allowed when roaming.

dnn:

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

snssai:

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

required:

- dnn

- snssai

UrspEnforcementPduSession:

description: >

Represents URSP rule enforcement information for a PDU session.

type: object

required:

- urspEnfInfo

properties:

urspEnfInfo:

$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'

dnn:

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

snssai:

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

UePolicyNotification:

description: >

Contains the delivery outcome of VPLMN-specific URSP rules.

type: object

required:

- eventNotifs

properties:

eventNotifs:

type: array

items:

$ref: 'TS29523\_Npcf\_EventExposure.yaml#/components/schemas/PcEventNotification'

minItems: 1

description: >

Represents the events to be reported according to the subscription to notifications

of VPLMN-specific URSP delivery outcome events.

UePolicy:

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

UePolicyDeliveryResult:

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

UePolicyRequest:

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

RequestTrigger:

anyOf:

- type: string

enum:

- LOC\_CH

- PRA\_CH

- UE\_POLICY

- PLMN\_CH

- CON\_STATE\_CH

- GROUP\_ID\_LIST\_CHG

- UE\_CAP\_CH

- SAT\_CATEGORY\_CHG

- NON\_3GPP\_NODE\_RESELECTION

- CONF\_NSSAI\_CH

- LBO\_INFO\_CH

- FEAT\_RENEG

- URSP\_ENF\_INFO

- ACCESS\_TYPE\_CH

- 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 possible request triggers.

Possible values are:

- LOC\_CH: Location change (tracking area). The tracking area of the UE has changed.

- PRA\_CH: Change of UE presence in PRA. The AMF reports the current presence status

of the UE in a Presence Reporting Area, and notifies that the UE enters/leaves the

Presence Reporting Area.

- UE\_POLICY: A MANAGE UE POLICY COMPLETE message or a MANAGE UE POLICY COMMAND REJECT

message, as defined in Annex D.5 of 3GPP TS 24.501 or a "UE POLICY PROVISIONING REQUEST"

message, as defined in clause 7.2.1.1 of 3GPP TS 24.587, has been received by the AMF

and is being forwarded.

- PLMN\_CH: PLMN change. the serving PLMN of UE has changed.

- CON\_STATE\_CH: Connectivity state change: the connectivity state of UE has changed.

- GROUP\_ID\_LIST\_CHG: UE Internal Group Identifier(s) has changed. This policy

control request

trigger does not require a subscription.

- UE\_CAP\_CH: UE Capabilities change: the UE provided 5G ProSe capabilities have changed.

This policy control request trigger does not require subscription.

- SAT\_CATEGORY\_CHG: Indicates that the AMF has detected a change between different satellite

category, or non-satellite backhaul.

- NON\_3GPP\_NODE\_RESELECTION: The UE has connected to a wrong non-3GPP access node that

does not match its subscribed S-NSSAI(s). This policy control request trigger does not

require a subscription.

- CONF\_NSSAI\_CH: Configured NSSAI change. Indicates that the configured NSSAI has changed.

- LBO\_INFO\_CH: LBO information change. The AMF reports LBO roaming allowed or not allowed

for the requested DNN(s) and S-NSSAI(s). This policy control request trigger only applies

in roaming scenarios when the NF service consumer is the AMF.

- FEAT\_RENEG: The NF service consumer notifies that the target AMF is requesting feature

re-negotiation.

- URSP\_ENF\_INFO: The V-PCF has received URSP rule enforcement information about the enforced

URSP rule(s) in one or more PDU sessions. This trigger applies in roaming scenarios and

to the V-PCF.

- ACCESS\_TYPE\_CH: Access Type change. The registered access type and RAT type

has changed, an access type and RAT type is added or removed.

PolicyAssociationReleaseCause:

anyOf:

- type: string

enum:

- UNSPECIFIED

- UE\_SUBSCRIPTION

- INSUFFICIENT\_RES

- 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 cause why the PCF requests the policy association termination.

Possible values are:

- UNSPECIFIED: This value is used for unspecified reasons.

- UE\_SUBSCRIPTION: This value is used to indicate that the policy association needs to be

terminated because the subscription of UE has changed (e.g. was removed).

- INSUFFICIENT\_RES: This value is used to indicate that the server is overloaded and needs

to abort the policy association.

Pc5Capability:

anyOf:

- type: string

enum:

- LTE\_PC5

- NR\_PC5

- LTE\_NR\_PC5

- 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 specific PC5 RAT(s) which the UE supports for V2X communications over

PC5 reference point.

Possible values are:

- LTE\_PC5: This value is used to indicate that UE supports PC5 LTE RAT for V2X

communications over the PC5 reference point

- NR\_PC5: This value is used to indicate that UE supports PC5 NR RAT for V2X communications

over the PC5 reference point.

- LTE\_NR\_PC5: This value is used to indicate that UE supports both PC5 LTE and NR RAT for

V2X communications over the PC5 reference point.

ProSeCapability:

anyOf:

- type: string

enum:

- PROSE\_DD

- PROSE\_DC

- PROSE\_L2\_U2N\_RELAY

- PROSE\_L3\_U2N\_RELAY

- PROSE\_L2\_REMOTE\_UE

- PROSE\_L3\_REMOTE\_UE

- PROSE\_L2\_U2U\_RELAY

- PROSE\_L3\_U2U\_RELAY

- PROSE\_L2\_END\_UE

- PROSE\_L3\_END\_UE

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration but is not used to encode

the content defined in the present version of this API.

description: |

Represents the 5G ProSe capabilities.

Possible values are:

- PROSE\_DD: This value is used to indicate that 5G ProSe Direct Discovery is supported

by the UE.

- PROSE\_DC: This value is used to indicate that 5G ProSe Direct Communication is supported

by the UE.

- PROSE\_L2\_U2N\_RELAY: This value is used to indicate that Layer-2 5G ProSe UE-to-Network

Relay is supported by the UE.

- PROSE\_L3\_U2N\_RELAY: This value is used to indicate that Layer-3 5G ProSe UE-to-Network

Relay is supported by the UE.

- PROSE\_L2\_REMOTE\_UE: This value is used to indicate that Layer-2 5G ProSe Remote UE is

supported by the UE.

- PROSE\_L3\_REMOTE\_UE: This value is used to indicate that Layer-3 5G ProSe Remote UE is

supported by the UE.

- PROSE\_L2\_U2U\_RELAY: This value is used to indicate that Layer-2 5G ProSe UE-to-UE

Relay is supported by the UE.

- PROSE\_L3\_U2U\_RELAY: This value is used to indicate that Layer-3 5G ProSe UE-to-UE

Relay is supported by the UE.

- PROSE\_L2\_END\_UE: This value is used to indicate that Layer-2 5G ProSe End UE is

supported by the UE.

- PROSE\_L3\_END\_UE: This value is used to indicate that Layer-3 5G ProSe End UE is

supported by the UE.

Non3gppAccess:

anyOf:

- type: string

enum:

- N3IWF

- TNGF

- 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 a non-3gpp access node.

Possible values are:

- N3IWF: Non-3gpp Interworking Function.

- TNGF: Trusted Non-3gpp Gateway Function.

N1N2MessTransferErrorReply:

anyOf:

- type: string

enum:

- UE\_NOT\_REACHABLE

- UNSPECIFIED

- 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 an N1N2 Message Transfer error.

Possible values are:

- UE\_NOT\_REACHABLE: The UE is not reachable for paging.

- UNSPECIFIED: Unspecified error.

RangSLCapability:

anyOf:

- type: string

enum:

- PC5\_RANGING\_SL

- 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: |

Indicates the Ranging and Sidelink Capability.

Possible values are:

- PC5\_RANGING\_SL: Indicates that the PC5 Capability for Ranging and Sidelink is supported

by the UE.

PolicyStatus:

anyOf:

- type: string

enum:

- CONFIGURED

- NOT\_CONFIGURED

- 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 configuration status of a UE Policy in the UE.

Possible values are:

- CONFIGURED: The UE Policy is configured in the UE.

- NOT\_CONFIGURED: The UE Policy is not configured in the UE.

A2xCapability:

anyOf:

- type: string

enum:

- EUTRA\_PC5

- NR\_PC5

- UU

- 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 A2X capabilities the UE supports for A2X communication.

Possible values are:

- EUTRA\_PC5: This value is used to indicate that the UE supports PC5 EUTRA RAT for A2X

communications over the PC5 reference point

- NR\_PC5: This value is used to indicate that the UE supports PC5 NR RAT for A2X

communications over the PC5 reference point.

- UU: This value is used to indicate that UE supports A2X communications over the PC5

reference point.

SliceSpecificN3gNodeSelectionCapability:

anyOf:

- type: string

enum:

- ONLY\_N3IWF\_SS\_SEL

- ONLY\_TNGF\_SS\_SEL

- TNGF\_N3IWF\_SS\_SEL

- 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 UE capabilities with regard to slice-specific non-3gpp node selection.

Possible values are:

- ONLY\_N3IWF\_SS\_SEL: Indicates that the UE supports N3IWF selection based on the slices

the UE wishes to use over untrusted non-3GPP access.

- ONLY\_TNGF\_SS\_SEL: Indicates that the UE supports TNGF selection based on the slices

the UE wishes to use over trusted non-3GPP access.

- TNGF\_N3IWF\_SS\_SEL: Indicates that the UE supports N3IWF selection based on the slices

the UE wishes to use over untrusted non-3GPP access and TNGF selection based on the

slices the UE wishes to use over trusted non-3GPP access.

#

UePolicyTransferFailureCause:

description: UE Policy Transfer Failure Cause.

anyOf:

- $ref: 'TS29518\_Namf\_Communication.yaml#/components/schemas/N1N2MessageTransferCause'

- $ref: '#/components/schemas/N1N2MessTransferErrorReply'

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