**3GPP TSG-CT WG3 Meeting #118e C3-215147**

**E-Meeting, 11th – 15th October 2021 (Revision of C3-21xxxx)**

|  |
| --- |
| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **29.522** | **CR** | **0420** | **rev** | **-** | **Current version:** | **17.3.0** |  |
|  |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
|  |

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

|  |
| --- |
|  |
| ***Title:***  | Support AF subscribed notifications in Nnef\_ServiceParameter\_Create operation |
|  |  |
| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | CT3 |
|  |  |
| ***Work item code:*** | eEDGE\_5GC |  | ***Date:*** | 2021-09-26 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** |  Rel-17 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
|  |  |
| ***Reason for change:*** | TS 23.502 5.2.6.11.2 Nnef\_ServiceParameter\_Create operation defines subscribedEvents and notificationDestination as the Input optional parameters, to support the AF subscribed notficiations of the outcome related to the invocation of service parameters defined in clause 4.15.6.7.Hence need to implement the AF subscribe event(s) notifications related to AF provisioned service parameters in this specification. |
|  |  |
| ***Summary of change:*** | Adding subNotifEvents and notificationDestination attributes in Nnef\_ServiceParameter\_Create operation and ServiceParameter API. |
|  |  |
| ***Consequences if not approved:*** | Misalignment with stage 2. NEF cannot support AF subscription to notification event of the outcome (e.g. UE Policy Delivery result) related to the invocation of AF provisioned service parameters. |
|  |  |
| ***Clauses affected:*** | 5.11.2.3. 5.11.2.3.32, 5.11.2.4.w(new), 5.11.3, A.9 |
|  |  |
|  | **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 backward compatible feature into the OpenAPI file applicable to ServiceParameter API. |
|  |  |
| ***This CR's revision history:*** |  |

**Additional discussion(if needed):**

**Proposed changes:**

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

##### 5.11.2.3.2 Type: ServiceParameterData

Table 5.11.2.3.2-1: Definition of type ServiceParameterData

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| self | Link | C | 0..1 | Identifies the individual service parameter subscription resource URI.Shall be present by the NEF in HTTP responses that include an object of ServiceParameterData type. |  |
| dnn | Dnn | O | 0..1 | Identifies a DNN. (NOTE 2) (NOTE m) |  |
| Snssai | Snssai | O | 0..1 | Identifies an S-NSSAI. (NOTE 2) (NOTE m) |  |
| afTransId | string | C | 0..1 | AF Transaction Reference Id assigned by the NEF for the AF invoked ServiceParameter\_Create request.Shall be present by the NEF in HTTP responses and by the AF in HTTP update request. | AfNotifications |
| afServiceId | string | O | 0..1 | Identifies a service on behalf of which the AF is issuing the request. (NOTE 2) (NOTE m) |  |
| appId | string | O | 0..1 | Identifies an application identifier. (NOTE 2) |  |
| gpsi | Gpsi | O | 0..1 | Identifies GPSI. (NOTE 1) |  |
| ueIpv4 | Ipv4Addr | O | 0..1 | The IPv4 address of the served UE. (NOTE 1) |  |
| ueIpv6 | Ipv6Addr | O | 0..1 | The IPv6 address of the served UE. (NOTE 1) |  |
| ueMac | MacAddr48 | O | 0..1 | The MAC address of the served UE. (NOTE 1) |  |
| exterGroupId | ExternalGroupId | O | 0..1 | Represents a group of users. (NOTE 1) |  |
| anyUeInd | boolean | O | 0..1 | Identifies whether the service parameters applies to any UE. This attribute shall set to "true" if applicable for any UE, otherwise, set to "false". (NOTE 1) (NOTE m) |  |
| subNotifEvents | array(Event) | O | 1..N | Identifies the AF subscribed event(s) notifications related to AF provisioned service parameters. | AfNotifications |
| notificationDestination | Uri | C | 0..1 | Contains the callback URI to receive the notifications from the NEF. Shall be present If "subNotifEvents" attribute is included. | AfNotifications |
| requestTestNotification | boolean | O | 0..1 | Set to true by the AF to request the NEF to send a test notification as defined in subclause 5.2.5.3 of 3GPP TS 29.122 [4]. Set to false or omitted otherwise. | Notification\_test\_event |
| websockNotifConfig | WebsockNotifConfig | O | 0..1 | Configuration parameters to set up notification delivery over Websocket protocol. | Notification\_websocket |
| paramOverPc5 | ParameterOverPc5 | O | 0..1 | Contains the V2X service parameters used over PC5 |  |
| paramOverUu | ParameterOverUu | O | 0..1 | Contains the V2X service parameters used over Uu |  |
| paramForProSeDd | ParamForProSeDd | O | 0..1 | Contains the service parameters for 5G ProSe direct discovery. | ProSe |
| paramForProSeDc | ParamForProSeDc | O | 0..1 | Contains the service parameters for 5G ProSe direct communications. | ProSe |
| paramForProSeU2N | ParamForProSeU2N | O | 0..1 | Contains the service parameters for 5G ProSe UE-to-network relay. | ProSe |
| urspInfluence | array(UrspRuleRequest) | O | 0..1 | Contains the service parameter used to influence the URSP. | EnEDGE |
| mtcProviderId | MtcProviderInformation | O | 0..1 | Indicates MTC provider information. |  |
| suppFeat | SupportedFeatures | C | 0..1 | Indicates the list of Supported features used as described in subclause 5.11.3.This attribute shall be provided in the POST request and in the response of successful resource creation. |  |
| NOTE 1: One of individual UE identifier (i.e. "gpsi", "ueIpv4", "ueIpv6" or "ueMac" attribute), External Group Identifier (i.e. "exterGroupId" attribute) or any UE indication (i.e. "anyUeInd" attribute) shall be included. For V2X and URSP service parameter provisioning (see clause 4.4.20), only "anyUeInd", "gpsi" and "exterGroupId" attributes are applicable.NOTE 2: Either the "afServiceId" attribute, "appId" attribute or the combination of "snssai" and "dnn" attributes shall be provided.NOTE m: When "anyUeInd" attribute is present, "appId" attribute, "afServiceId" attribute or the combination of "snssai" attribute and "dnn" attribute shall be provided. |

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

##### 5.11.2.3.3 Type: ServiceParameterDataPatch

Table 5.11.2.3.3-1: Definition of type ServiceParameterDataPatch

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| paramOverPc5 | ParameterOverPc5Rm | O | 0..1 | Contains the V2X service parameters used over PC5 |  |
| paramOverUu | ParameterOverUuRm | O | 0..1 | Contains the V2X service parameters used over Uu |  |
| paramForProSeDd | ParamForProSeDdRm | O | 0..1 | Contains the service parameters for 5G ProSe direct discovery. | ProSe |
| paramForProSeDc | ParamForProSeDcRm | O | 0..1 | Contains the service parameters for 5G ProSe direct communications. | ProSe |
| paramForProSeU2N | ParamForProSeU2NRm | O | 0..1 | Contains the service parameters for 5G ProSe UE-to-network relay. | ProSe |
| urspInfluence | array(UrspRuleRequest) | O | 0..1 | Contains the service parameter used to influence the URSP. | EnEDGE |
| notificationDestination | Uri | O | 0..1 | Contains the callback URI to receive the notifications from the NEF. May be present If "subNotifEvents" attribute is included. | AfNotifications |

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

##### 5.11.2.4.w(new) Enumeration: Event

Table 5.11.2.4.w-1: Enumeration Event

The enumeration Event represents the AF subscribe to event notification of the outcome related to the invocation of AF provisioned service parameters.

|  |  |
| --- | --- |
| Enumeration value | Description |
| SUCCESS\_UE\_POL\_DEL\_SP | Successful UE Policy Delivery related to the invocation of AF provisioned Service Parameters. |
| UNSUCCESS\_UE\_POL\_DEL\_SP | Unsuccessful UE Policy Delivery related to the invocation of AF provisioned Service Parameters. |

Editor's Note: It is FFS whether and how to further extend the events.

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

### 5.11.3 Used Features

The table below defines the features applicable to the ServiceParameter API. Those features are negotiated as described in subclause 5.2.7 of 3GPP TS 29.122 [4].

Table 5.11.3-1: Features used by ServiceParameter API

|  |  |  |
| --- | --- | --- |
| Feature number | Feature Name | Description |
| 1 | ProSe | This feature indicates the support of UE policy and N2 information provisioning for 5G ProSe. |
| m1 | AfNotifications | This feature indicates the support of AF subscribed event(s) notifications. |
| m2 | Notification\_websocket | The delivery of notifications over Websocket is supported as described in 3GPP TS 29.122 [4]. This feature requires that the Notification\_test\_event feature is also supported. |
| m3 | Notification\_test\_event | The testing of notification connection is supported as described in 3GPP TS 29.122 [4]. |

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

# A.9 ServiceParameter API

openapi: 3.0.0

info:

 title: 3gpp-service-parameter

 version: 1.1.0-alpha.1

 description: |

 API for AF service paramter

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externalDocs:

 description: 3GPP TS 29.522 V17.2.0; 5G System; Network Exposure Function Northbound APIs.

 url: 'http://www.3gpp.org/ftp/Specs/archive/29\_series/29.522/'

security:

 - {}

 - oAuth2ClientCredentials: []

servers:

 - url: '{apiRoot}/3gpp-service-parameter/v1'

 variables:

 apiRoot:

 default: https://example.com

 description: apiRoot as defined in subclause 5.2.4 of 3GPP TS 29.122.

paths:

 /{afId}/subscriptions:

 parameters:

 - name: afId

 in: path

 description: Identifier of the AF

 required: true

 schema:

 type: string

 get:

 summary: read all of the active subscriptions for the AF

 tags:

 - Service Parameter Subscriptions

 responses:

 '200':

 description: OK.

 content:

 application/json:

 schema:

 type: array

 items:

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

 minItems: 0

 '307':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '406':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/406'

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29122\_CommonData.yaml#/components/responses/default'

 post:

 summary: Creates a new subscription resource

 tags:

 - Service Parameter Subscriptions

 requestBody:

 description: Request to create a new subscription resource

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '201':

 description: Created (Successful creation of subscription)

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: 'Contains the URI of the newly created resource'

 required: true

 schema:

 type: string

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '411':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/415'

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29122\_CommonData.yaml#/components/responses/default'

 /{afId}/subscriptions/{subscriptionId}:

 parameters:

 - name: afId

 in: path

 description: Identifier of the AF

 required: true

 schema:

 type: string

 - name: subscriptionId

 in: path

 description: Identifier of the subscription resource

 required: true

 schema:

 type: string

 get:

 summary: read an active subscriptions for the SCS/AS and the subscription Id

 tags:

 - Individual Service Parameter Subscription

 responses:

 '200':

 description: OK (Successful get the active subscription)

 content:

 application/json:

 schema:

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

 '307':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '406':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/406'

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29122\_CommonData.yaml#/components/responses/default'

 put:

 summary: Updates/replaces an existing subscription resource

 tags:

 - Individual Service Parameter Subscription

 requestBody:

 description: Parameters to update/replace the existing subscription

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '200':

 description: OK (Successful update of the subscription)

 content:

 application/json:

 schema:

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

 '307':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '411':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/415'

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29122\_CommonData.yaml#/components/responses/default'

 patch:

 summary: Updates/replaces an existing subscription resource

 tags:

 - Individual Service Parameter Subscription

 requestBody:

 required: true

 content:

 application/merge-patch+json:

 schema:

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

 responses:

 '200':

 description: OK. The subscription was modified successfully.

 content:

 application/json:

 schema:

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

 '307':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '411':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/415'

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29122\_CommonData.yaml#/components/responses/default'

 delete:

 summary: Deletes an already existing subscription

 tags:

 - Individual Service Parameter Subscription

 responses:

 '204':

 description: No Content (Successful deletion of the existing subscription)

 '307':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29122\_CommonData.yaml#/components/responses/default'

components:

 securitySchemes:

 oAuth2ClientCredentials:

 type: oauth2

 flows:

 clientCredentials:

 tokenUrl: '{tokenUrl}'

 scopes: {}

 schemas:

 ServiceParameterData:

 description: Represents an individual Service Parameter subscription resource.

 type: object

 properties:

 afServiceId:

 type: string

 description: Identifies a service on behalf of which the AF is issuing the request.

 appId:

 type: string

 description: Identifies an application.

 dnn:

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

 snssai:

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

 afTransId:

 type: string

 description: AF Transaction Reference Id assigned by the NEF for the AF invoked ServiceParameter\_Create request. Shall be present by the NEF in HTTP responses and by the AF in HTTP update request.

 externalGroupId:

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

 anyUeInd:

 type: boolean

 description: Identifies whether the AF request applies to any UE. This attribute shall set to "true" if applicable for any UE, otherwise, set to "false".

 gpsi:

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

 ueIpv4:

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

 ueIpv6:

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

 ueMac:

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

 self:

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

 subNotifEvents:

 type: array

 items:

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

 minItems: 1

 notificationDestination:

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

 requestTestNotification:

 type: boolean

 description: Set to true by the AF to request the NEF to send a test notification as defined in subclause 5.2.5.3 of 3GPP TS 29.122. Set to false or omitted otherwise.

 websockNotifConfig:

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

 paramOverPc5:

 $ref: '#/components/schemas/ParameterOverPc5'

 paramOverUu:

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

 paramForProSeDd:

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

 paramForProSeDc:

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

 paramForProSeU2N:

 $ref: '#/components/schemas/ParamForProSeU2N'

 paramForProSeUsageRep:

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

 paramForProSeServPathSel:

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

 urspInfluence:

 type: array

 items:

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

 minItems: 1

 description: Contains the service parameter used to influence the URSP.

 mtcProviderId:

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

 suppFeat:

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

 ServiceParameterDataPatch:

 description: Represents the parameters to request the modification of a service parameter subscription resource.

 type: object

 properties:

 paramOverPc5:

 $ref: '#/components/schemas/ParameterOverPc5Rm'

 paramOverUu:

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

 paramForProSeDd:

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

 paramForProSeDc:

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

 paramForProSeU2N:

 $ref: '#/components/schemas/ParamForProSeU2NRm'

 paramForProSeUsageRep:

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

 paramForProSeServPathSel:

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

 urspInfluence:

 type: array

 items:

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

 minItems: 1

 description: Contains the service parameter used to influence the URSP.

 notificationDestination:

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

 ParameterOverPc5:

 description: Represents configuration parameters for V2X communications over PC5 reference point.

 type: string

 ParameterOverPc5Rm:

 description: Represents the same as the ParameterOverPc5 data type but with the nullable:true property.

 type: string

 nullable: true

 ParameterOverUu:

 description: Represents configuration parameters for V2X communications over Uu reference point.

 type: string

 ParameterOverUuRm:

 description: Represents the same as the ParameterOverUu data type but with the nullable:true property.

 type: string

 nullable: true

 ParamForProSeDd:

 description: Represents the service parameters for 5G ProSe direct discovery.

 type: string

 ParamForProSeDdRm:

 description: This data type is defined in the same way as the ParamForProSeDd data type, but with the OpenAPI nullable property set to true.

 type: string

 nullable: true

 ParamForProSeDc:

 description: Represents the service parameters for 5G ProSe direct communications.

 type: string

 ParamForProSeDcRm:

 description: This data type is defined in the same way as the ParamForProSeDc data type, but with the OpenAPI nullable property set to true.

 type: string

 nullable: true

 ParamForProSeU2N:

 description: Represents the service parameters for 5G ProSe UE-to-network relay.

 type: string

 ParamForProSeU2NRm:

 description: This data type is defined in the same way as the ParamForProSeU2N data type, but with the OpenAPI nullable property set to true.

 type: string

 nullable: true

 ParamForProSeUsageRep:

 description: Represents the service parameters for 5G ProSe usage reporting configuration and rules.

 type: string

 ParamForProSeUsageRepRm:

 description: This data type is defined in the same way as the ParamForProSeUsageRep data type, but with the OpenAPI nullable property set to true.

 type: string

 nullable: true

 ParamForProSeServPathSel:

 description: Represents the service parameters for 5G ProSe service path selection.

 type: string

 ParamForProSeServPathSelRm:

 description: This data type is defined in the same way as the ParamForProSeServPathSel data type, but with the OpenAPI nullable property set to true.

 type: string

 nullable: true

 UrspRuleRequest:

 description: Contains parameters that can be used to influence the URSP.

 type: object

 properties:

 trafficDesc:

 $ref: 'TS29122\_ResourceManagementOfBdt.yaml#/components/schemas/TrafficDescriptor'

 routeSelParamSets:

 type: array

 items:

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

 minItems: 1

 description: Sets of parameters that may be used to influence the Route Selection Descriptors of the URSP.

 RouteSelectionParameterSet:

 description: Contains parameters that can be used to influence the Route Selection Descriptors of the URSP.

 type: object

 properties:

 dnn:

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

 snssai:

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

 precedence:

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

 spatialValidity:

 type: array

 items:

 type: string

 minItems: 1

 description: Indicates where the route selection parameters apply. It may correspond to a geographical area, for example using a geographic zone identifier that is known to the AF and is configured by the operator to correspond to a list of Cell Ids or TAIs.

 Event:

 anyOf:

 - type: string

 enum:

 - SUCCESS\_UE\_POL\_DEL\_SP

 - UNSUCCESS\_UE\_POL\_DEL\_SP

 - type: string

 description: >

 This string identifies AF subscribe to event(s) notifications related to AF provisioned service parameters.

 description: >

 Possible values are

 - SUCCESS\_UE\_POL\_DEL\_SP: Successful UE Policy Delivery related to the invocation of AF provisioned Service Parameters.

 - UNSUCCESS\_UE\_POL\_DEL\_SP: Unsuccessful UE Policy Delivery related to the invocation of AF provisioned Service Parameters.

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