**3GPP TSG-CT WG3 Meeting #108-eC3-201114**

[**E-Meeting**](https://www.3gpp.org/ftp/tsg_ct/WG3_interworking_ex-CN3/TSGC3_108_Sophia_Antipolis/)**, 19th -28th February 2020 (Revision of C3-201xyz)**

|  |
| --- |
| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **29.522** | **CR** | **0124** | **rev** | **-** | **Current version:** | **16.2.0** |  |
|  |
| *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:***  | OpenAPI file of Nnef\_ServiceParameter Service |
|  |  |
| ***Source to WG:*** | Huawei |
| ***Source to TSG:*** | CT3 |
|  |  |
| ***Work item code:*** | eV2XARC |  | ***Date:*** | 2020-02-28 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-16 |
|  | *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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
|  |  |
| ***Reason for change:*** | Nnef\_ServiceParameter service is defined in stage 2 |
|  |  |
| ***Summary of change:*** | Define the OpenAPI file of the Nnef\_ServiceParameter service. |
|  |  |
| ***Consequences if not approved:*** | Feature is not supported |
|  |  |
| ***Clauses affected:*** | A.x (new) |
|  |  |
|  | **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 feature to the OpenAPI file. |
|  |  |
| ***This CR's revision history:*** |  |

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

# A.x ServiceParameter API

openapi: 3.0.0

info:

 title: 3gpp-service-parameter

 version: 0.0.0.alpha-1

 description: |

 API for AF service paramter

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externalDocs:

 description: 3GPP TS 29.522 V16.2.0; 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:

 - ServiceParameter API SCS/AS level GET Operation

 responses:

 '200':

 description: OK.

 content:

 application/json:

 schema:

 type: array

 items:

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

 '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:

 - ServiceParameter API Subscription level POST Operation

 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:

 - ServiceParameter API Subscription level GET Operation

 responses:

 '200':

 description: OK (Successful get the active subscription)

 content:

 application/json:

 schema:

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

 '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:

 - TrafficInfluence API subscription level PUT Operation

 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'

 '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:

 - ServiceParameter API subscription level PATCH Operation

 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'

 '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:

 - ServiceParameter API Subscription level DELETE Operation

 responses:

 '204':

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

 '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:

 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'

 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: 'TS29122\_CommonData.yaml#/components/schemas/Ipv4Addr'

 ueIpv6:

 $ref: 'TS29122\_CommonData.yaml#/components/schemas/Ipv6Addr'

 ueMac:

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

 self:

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

 paramOverPc5:

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

 paramOverUu:

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

 suppFeat:

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

 ServiceParameterDataPatch:

 type: object

 properties:

 paramOverPc5:

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

 ParamOverUu:

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

 ParameterOverPc5:

 type: object

 properties:

 expiry:

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

 plmmRatServed:

 type: array

 items:

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

 minItems: 1

 authNotServed:

 type: boolean

 radioParamsNotServed:

 type: array

 items:

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

 minItems: 1

 serToTx:

 type: array

 items:

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

 minItems: 1

 privacyParams:

 type: array

 items:

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

 minItems: 1

 configParaEutra:

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

 configParaNr:

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

 ParameterOverUu:

 type: object

 properties:

 expiry:

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

 serToPduSess:

 type: array

 items:

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

 minItems: 1

 serToAppAddr:

 type: array

 items:

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

 minItems: 1

 PlmnRatServed:

 type: object

 properties:

 plmn:

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

 rats:

 type: array

 items:

 $ref: '#/components/schemas/V2xRatType'

 required:

 - plmn

 - rats RadioParameterNotServed:

 type: object

 properties:

 radioParams:

 type: string

 rat:

 $ref: '#/components/schemas/V2xRatType'

 geographicalArea:

 type: string

 operManaged:

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

 required:

 - radioParams

 - geographicalArea

 - operManaged

 - rat

 ServiceToTx:

 type: object

 properties:

 serIds:

 type: array

 items:

 type: string

 minItems: 1

 txProfile:

 type: string

 rat:

 $ref: '#/components/schemas/V2xRatType'

 required:

 - serIds

 - txProfile

 - rat

 PrivacyParameter:

 type: object

 properties:

 serIds:

 type: array

 items:

 type: string

 minItems: 1

 geographicalArea:

 type: string

 timer:

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

 required:

 - serIds

 - geographicalArea

 - timer

 ConfigurationParameterEutra:

 type: object

 properties:

 serToLayer2Ids:

 type: array

 items:

 $ref: '#/components/schemas/ServiceIdToLayer2Id'

 minItems: 1

 ppppToPdbs:

 type: array

 items:

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

 minItems: 1

 serIdToFrequs:

 type: array

 items:

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

 minItems: 1

 serIdToPpprs:

 type: array

 items:

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

 minItems: 1

 ConfigurationParameterNr:

 type: object

 properties:

 serToBroLayer2Ids:

 type: array

 items:

 $ref: '#/components/schemas/ServiceIdToLayer2Id'

 minItems: 1

 serToGroLayer2Ids:

 type: array

 items:

 $ref: '#/components/schemas/ServiceIdToLayer2Id'

 minItems: 1

 serToDefLayer2Ids:

 type: array

 items:

 $ref: '#/components/schemas/ServiceIdToLayer2Id'

 minItems: 1

 serIdToFrequs:

 type: array

 items:

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

 minItems: 1

 pc5QosMappings:

 type: array

 items:

 $ref: '#/components/schemas/Pc5QosMapping'

 minItems: 1

 slrbConfigs

 type: array

 items:

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

 minItems: 1

 ServiceIdToLayer2Id

 type: object

 properties:

 serIds:

 type: array

 items:

 type: string

 minItems: 1

 desLayer2Id:

 type: string

 required:

 - serIds

 - desLayer2Id

 ppppToPdb

 type: object

 properties:

 pppp:

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

 minimum: 1

 maximum: 8

 pdb:

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

 required:

 - pppp

 - pdb

 ServiceIdToFrequency

 type: object

 properties:

 serIds:

 type: array

 items:

 type: string

 minItems: 1

 frequency:

 type: number

 geographicalArea:

 type: string

 required:

 - serIds

 - frequency

 - geopraphicalArea

 ServiceIdToPppr

 type: object

 properties:

 serIds:

 type: array

 items:

 type: string

 minItems: 1

 pppr:

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

 minimum: 1

 maximum: 8

 required:

 - serIds

 - pppr

 Pc5QosMapping

 type: object

 properties:

 serIds:

 type: array

 items:

 type: string

 minItems: 1

 pc5QoSFlowParam:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Pc5QoSFlowItem'

 required:

 - serIds

 - pc5QosFlowParam

 SlrbConfigurations

 type: object

 properties:

 pc5QosPara:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Pc5QosPara'

 slrb:

 type: string

 required:

 - pc5QosPara

 - slrb

 ServiceToPduSession

 type: object

 properties:

 serIds:

 type: array

 items:

 type: string

 minItems: 1

 pduSessionType:

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

 sscMode:

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

 sliceInfo:

 type: array

 items:

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

 minItems: 1

 dnns:

 type: array

 items:

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

 minItems: 1

 required:

 - serIds

 ServiceToApplicationServerAddress

 type: object

 properties:

 serIds:

 type: array

 items:

 type: string

 minItems: 1

 fqdn:

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

 Ipv4Addrs:

 type: array

 items:

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

 minItems: 1

 Ipv6Addrs:

 type: array

 items:

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

 minItems: 1

 udpPortNumbers:

 type: array

 items:

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

 minItems: 1

 tcpPortNumbers:

 type: array

 items:

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

 minItems: 1

 plmns:

 type: array

 items:

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

 geopraphicalArea:

 type: string

 required:

 - serIds

 - plmns

 - geographicalArea

 OperatorManaged:

 anyOf:

 - type: string

 enum:

 - OPERATOR\_MANAGED

 - NON\_OPERATOR\_MANAGED

 - type: string

 description: >

 Possible values are

 - OPERATOR\_MANAGED: The radio parameters are "operator managed".

 - NON\_OPERATOR\_MANAGED: The radio parameters are "non-operator managed".

 V2xRatType:

 anyOf:

 - type: string

 enum:

 - PC5\_LTE

 - PC5\_NR

 - type: string

 description: >

 Possible values are

 - PC5\_LTE: Indicates the LTE RAT type over PC5 interface..

 - PC5\_NR: Indicates the NR RAT type over NR interface.

\*\*\* End of Change \*\*\*