**3GPP TSG CT WG3 Meeting #137 *C3-245095***

**Hefei, CN, 14th – 18th October, 2024**

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| --- |
| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **29.522** | **CR** | **1362** | **rev** | **-** | **Current version:** | **19.0.0** |  |
|  |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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| --- |
|  |
| ***Title:***  | 5G Femto parameter provision open API |
|  |  |
| ***Source to WG:*** | Nokia, ZTE |
| ***Source to TSG:*** | CT3 |
|  |  |
| ***Work item code:*** | 5G\_Femto |  | ***Date:*** | 2024-10-07 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-19 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories 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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
|  |  |
| ***Reason for change:*** |  Stage-2 (SA2) agreed CR related to 5G Femto parameters provisioning with S2-2409520 (CR#4987).Accordingly, a new clause for the procedure describing the 5G Femto parameters provisioning is defined. A new API – FemtoParamProvision API is defined for this purpose and the Nnef\_ParameterProvision service defined in stage-2 procedure shall use the FemtoParamProvision API for:- 5G Femto Parameters provisioning. |
|  |  |
| ***Summary of change:*** | Open API for the 5G Femto parameter provisioning is defined. |
|  |  |
| ***Consequences if not approved:*** | Missing stage-3 implementation for the agreed Stage-2 requirements related to 5G Femto parameters provision feature. |
|  |  |
| ***Clauses affected:*** | A.36 (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 new backward compatible feature support with new open API – FemtoParamProvision API |
|  |  |
| ***This CR's revision history:*** |  |

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

# A.36 FemtoParamProvision API

openapi: 3.0.0

info:

 title: 3gpp-femto-pp

 version: 1.0.0

 description: |

 API for 5G Femto Parameters Provisioning.

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externalDocs:

 description: >

 3GPP TS 29.522 V19.0.0; 5G System; Network Exposure Function Northbound APIs.

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

security:

 - {}

 - oAuth2ClientCredentials: []

servers:

 - url: '{apiRoot}/3gpp-femto-pp/v1'

 variables:

 apiRoot:

 default: https://example.com

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

paths:

 /pp:

 get:

 summary: Request to retrieve all the active Femto Parameters Provisionings at the NEF.

 operationId: GetFemtoParamProvisionings

 tags:

 - Femto Parameters Provisionings (Collection)

 responses:

 '200':

 description: >

 OK. All the active Femto Parameters Provisioning resources managed by the

 NEF are returned.

 content:

 application/json:

 schema:

 type: array

 items:

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

 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: Request the creation of a new Femto Parameters Provisioning.

 tags:

 - Femto Parameters Provisionings (Collection)

 operationId: CreateFemtoParamProvisioning

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '201':

 description: >

 Created. Successful creation of a new Individual Femto Parameters Provisioning

 resource.

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: >

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

 {apiRoot}/3gpp-femto-pp/v1/pp/{ppId}

 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'

 /pp/{ppId}:

 parameters:

 - name: ppId

 in: path

 description: >

 Represents the identifier of the Individual Femto Parameters Provisioning resource.

 required: true

 schema:

 type: string

 get:

 summary: Request to retrieve an existing Individual Femto Parameters Provisioning resource.

 operationId: GetIndFemtoParamProvisioning

 tags:

 - Individual Femto Parameters Provisioning (Document)

 responses:

 '200':

 description: >

 OK. The requested "Individual Femto Parameters Provisioning" resource is successfully

 returned in the response body.

 content:

 application/json:

 schema:

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

 '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: Request to update an existing Individual Femto Parameters Provisioning resource.

 operationId: UpdateIndFemtoParamProvisioning

 tags:

 - Individual Femto Parameters Provisioning (Document)

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '200':

 description: >

 OK. The Individual Femto Parameters Provisioning resource is successfully updated

 and a representation of the updated resource is returned in the response body.

 content:

 application/json:

 schema:

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

 '204':

 description: >

 No Content. The Individual Femto Parameters Provisioning resource is successfully

 updated and no content is returned in the response body.

 '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: Request the modification of an existing Individual Femto Parameters Provisioning resource.

 operationId: ModifyIndFemtoParamProvisioning

 tags:

 - Individual Femto Parameters Provisioning (Document)

 requestBody:

 required: true

 content:

 application/merge-patch+json:

 schema:

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

 responses:

 '200':

 description: >

 OK. The Individual Femto Parameters Provisioning resource is successfully modified

 and a representation of the updated resource is returned in the response body.

 content:

 application/json:

 schema:

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

 '204':

 description: >

 No Content. The Individual Femto Parameters Provisioning resource is successfully

 modified and no content is returned in the response body.

 '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: Request the deletion of an existing Individual Femto Parameters Provisioning resource.

 operationId: DeleteIndFemtoParamProvisioning

 tags:

 - Individual Femto Parameters Provisioning (Document)

 responses:

 '204':

 description: >

 No Content. The Individual Femto Parameters Provisioning resource is successfully

 deleted.

 '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:

#

# STRUCTURED DATA TYPES

#

 FemtoPpData:

 description: Represents the Femto Parameters Provisioning data.

 type: object

 properties:

 afId:

 type: string

 femtoInfos:

 type: array

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

 minProperties: 1

 description: >

 Contains the Femto information to be provisioned.

 suppFeat:

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

 required:

 - afId

 FemtoPpDataPatch:

 description: >

 Represents the requested modifications to an existing Femto Parameters Provisioning

 data.

 type: object

 properties:

 femtoInfos:

 type: array

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

 minProperties: 1

 description: >

 Contains the Femto information to be provisioned.

#

# SIMPLE DATA TYPES

#

#

# ENUMERATIONS

#

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