**3GPP TSG CT WG3 Meeting #137 *C3-245094***

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

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **522** | **CR** | **1361** | **rev** |  | **Current version:** |  |  |
|  | | | | | | | | |
| *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 API data model definition | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, ZTE, Ericsson | | | | | | | | | |
| ***Source to TSG:*** |  | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5G\_Femto | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | |  |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Stage-2 (SA2) agreed CR related to 5G Femto parameters provisioning with S2-2409518 (TS 23.501 CR#5488), S2-2409519 (TS 23.502 CR#4921), S2-2409520 (TS 23.502 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:*** | | 5G Femto Parameters provisioning API's resources and data model are defined. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Missing stage-3 implementation for the agreed Stage-2 requirements related to 5G Femto parameters provision feature. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.38 (and its sub clauses) 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 does not impact any open API defined in this specification.  The reused FemtoInformation data type is defined in TS 29.571 CR 0584. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

## 5.38 FemtoParamProvision API

### 5.38.1 Introduction

The Nnef\_ParameterProvision service shall use the FemtoParamProvision API for:

- 5G Femto Parameters provisioning.

The API URI of the FemtoParamProvision API shall be:

**{apiRoot}/<apiName>/<apiVersion>**

The request URIs used in HTTP requests shall have the Resource URI structure defined in clause 5.2.4 of 3GPP TS 29.122 [4], i.e.:

**{apiRoot}/<apiName>/<apiVersion>/<apiSpecificSuffixes>**

with the following components:

- "apiRoot" is set as defined in clause 5.2.4 of 3GPP TS 29.122 [4].

- "apiName" shall be set to "3gpp-femto-pp".

- "apiVersion" shall be set to "v1" for the current version defined in the present document.

- The <apiSpecificSuffixes> shall be set as described in clause 5.2.4 of 3GPP TS 29.122 [4].

All resource URIs in the clauses below are defined relative to the above API URI.

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

### 5.38.2 Resources

#### 5.38.2.1 Overview

This clause describes the structure for the Resource URIs as shown in figure 5.38.2.1-1 and the resources and HTTP methods used for the FemtoParamProvision API.



Figure 5.38.2.1-1: Resource URI structure of the FemtoParamProvision API

Table 5.38.2.1-1 provides an overview of the resources and applicable HTTP methods.

Table 5.38.2.1-1: Resources and methods overview

|  |  |  |  |
| --- | --- | --- | --- |
| Resource name | Resource URI (relative path under API URI) | HTTP method or custom operation | Description  (service operation) |
| Femto Parameters Provisionings | /pp | GET | Retrieve all the active Femto Parameters Provisionings managed by the NEF. |
| POST | Request the creation of a new Femto Parameters Provisioning at the NEF. |
| Individual Femto Parameters Provisioning | /pp/{ppId} | GET | Retrieve an existing "Individual Femto Parameters Provisioning" resource managed by the NEF. |
| PUT | Update an existing "Individual Femto Parameters Provisioning" resource managed by the NEF. |
| PATCH | Modify an existing "Individual Femto Parameters Provisioning" resource managed by the NEF. |
| DELETE | Delete an existing "Individual Femto Parameters Provisioning" resource managed by the NEF. |

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

#### 5.38.2.2 Resource: Femto Parameters Provisionings

##### 5.38.2.2.1 Introduction

This resource represents the collection of 5G Femto Parameters Provisionings managed by the NEF.

This resource is modelled with the Collection resource archetype (see clause C.2 of 3GPP TS 29.501 [32]).

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

##### 5.38.2.2.2 Resource Definition

Resource URI: **{apiRoot}/3gpp-femto-pp/<apiVersion>/pp**

This resource shall support the resource URI variables defined in table 5.38.2.2.2-1.

Table 5.38.2.2.2-1: Resource URI variables for this resource

|  |  |  |
| --- | --- | --- |
| Name | Data type | Definition |
| apiRoot | string | See clause 5.38.1. |

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

##### 5.38.2.2.3 Resource Methods

###### 5.38.2.2.3.1 GET

This method enables an AF to request to retrieve all the active 5G Femto Parameters Provisionings managed by the NEF.

This method shall support the URI query parameters specified in table 5.38.2.2.3.1-1.

Table 5.38.2.2.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description | Applicability |
| n/a |  |  |  |  |  |

This method shall support the request data structures specified in table 5.38.2.2.3.1-2 and the response data structures and response codes specified in table 5.38.2.2.3.1-3.

Table 5.38.2.2.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.38.2.2.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| array(FemtoPpData) | M | 0..N | 200 OK | Successful case. All the "Individual Femto Parameters Provisioning" resource(s) managed by the NEF are returned.  If there are no active "Individual Femto Parameters Provisioning" resources at the NEF, an empty array is returned. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection.  The response shall include a Location header field containing an alternative target URI of the resource located in an alternative NEF.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [4]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection.  The response shall include a Location header field containing an alternative target URI of the resource located in an alternative NEF.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [4]. |
| NOTE: The mandatory HTTP error status codes for the HTTP GET method listed in table 5.2.6-1 of 3GPP TS 29.122 [4] shall also apply. | | | | | |

Table 5.38.2.2.3.1-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains an alternative target URI of the resource located in an alternative NEF. |

Table 5.38.2.2.3.1-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains an alternative target URI of the resource located in an alternative NEF. |

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

###### 5.38.2.2.3.2 POST

This method enables an AF to request the creation of a new 5G Femto Parameters Provisioning at the NEF.

This method shall support the URI query parameters specified in table 5.38.2.2.3.2-1.

Table 5.38.2.2.3.2-1: URI query parameters supported by the POST method on this resource

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description | Applicability |
| n/a |  |  |  |  |  |

This method shall support the request data structures specified in table 5.38.2.2.3.2-2 and the response data structures and response codes specified in table 5.38.2.2.3.2-3.

Table 5.38.2.2.3.2-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| FemtoPpData | M | 1 | Contains the representation of the 5G Femto Parameters Provisioning to be created at the NEF. |

Table 5.38.2.2.3.2-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| FemtoPpData | M | 1 | 201 Created | Successful case. A representation of the created "Individual Femto Parameters Provisioning" resource is returned in the response body.  The URI of the created resource shall be returned in an HTTP "Location" header. |
| NOTE: The mandatory HTTP error status codes for the HTTP POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [4] shall also apply. | | | | |

Table 5.38.2.2.3.2-4: Headers supported by the 201 response code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains the URI of the newly created resource, according to the structure:  {apiRoot}/3gpp-femto-pp/<apiVersion>/pp/{ppId} |

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

##### 5.38.2.2.4 Resource Custom Operations

There are no resource custom operations defined for this resource in this release of the specification.

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

#### 5.38.2.3 Resource: Individual Femto Parameters Provisioning

##### 5.38.2.3.1 Introduction

This resource represents an "Individual Femto Parameters Provisioning" resource managed by the NEF.

This resource is modelled with the Document resource archetype (see clause C.2 of 3GPP TS 29.501 [32]).

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

##### 5.38.2.3.2 Resource Definition

Resource URI: **{apiRoot}/3gpp-femto-pp/<apiVersion>/pp/{ppId}**

This resource shall support the resource URI variables defined in table 5.38.2.3.2-1.

Table 5.38.2.3.2-1: Resource URI variables for this resource

|  |  |  |
| --- | --- | --- |
| Name | Data type | Definition |
| apiRoot | string | See clause 5.38.1. |
| ppId | string | Represents the identifier of the "Individual Femto Parameters Provisioning" resource. |

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

##### 5.38.2.3.3 Resource Methods

###### 5.38.2.3.3.1 GET

This method enables an AF to request to retrieve an existing "Individual Femto Parameters Provisioning" resource at the NEF.

This method shall support the URI query parameters specified in table 5.38.2.3.3.1-1.

Table 5.38.2.3.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description | Applicability |
| n/a |  |  |  |  |  |

This method shall support the request data structures specified in table 5.38.2.3.3.1-2 and the response data structures and response codes specified in table 5.38.2.3.3.1-3.

Table 5.38.2.3.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.38.2.3.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| FemtoPpData | M | 1 | 200 OK | Successful case. The requested "Individual Femto Parameters Provisioning" resource is successfully returned in the response body. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection.  The response shall include a Location header field containing an alternative target URI of the resource located in an alternative NEF.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [4]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection.  The response shall include a Location header field containing an alternative target URI of the resource located in an alternative NEF.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [4]. |
| NOTE: The mandatory HTTP error status codes for the HTTP GET method listed in table 5.2.6-1 of 3GPP TS 29.122 [4] shall also apply. | | | | |

Table 5.38.2.3.3.1-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains an alternative target URI of the resource located in an alternative NEF. |

Table 5.38.2.3.3.1-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains an alternative target URI of the resource located in an alternative NEF. |

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

###### 5.38.2.3.3.2 PUT

This method enables an AF to request the update of an existing "Individual Femto Parameters Provisioning" resource at the NEF.

This method shall support the URI query parameters specified in table 5.38.2.3.3.2-1.

Table 5.38.2.3.3.2-1: URI query parameters supported by the PUT method on this resource

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description | Applicability |
| n/a |  |  |  |  |  |

This method shall support the request data structures specified in table 5.38.2.3.3.2-2 and the response data structures and response codes specified in table 5.38.2.3.3.2-3.

Table 5.38.2.3.3.2-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| FemtoPpData | M | 1 | Represents the updated "Individual Femto Parameters Provisioning" resource representation. |

Table 5.38.2.3.3.2-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description | |
| FemtoPpData | M | 1 | 200 OK | Successful response. The "Individual Femto Parameters Provisioning" resource is successfully updated and a representation of the updated resource is returned in the response body. | |
| n/a |  |  | 204 No Content | Successful response. The "Individual Femto Parameters Provisioning" resource is successfully updated and no content is returned in the response body. | |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection.  The response shall include a Location header field containing an alternative target URI of the resource located in an alternative NEF.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [4]. | |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection.  The response shall include a Location header field containing an alternative target URI of the resource located in an alternative NEF.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [4]. | |
| NOTE: The mandatory HTTP error status codes for the HTTP PUT method listed in Table 5.2.6-1 of 3GPP TS 29.122 [4] shall also apply. | | | | |

Table 5.38.2.3.3.2-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains an alternative URI of the resource located in an alternative NEF. |

Table 5.38.2.3.3.2-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains an alternative URI of the resource located in an alternative NEF. |

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

###### 5.38.2.3.3.3 PATCH

This method enables an AF to request the modification of an existing "Individual Femto Parameters Provisioning" resource at the NEF.

This method shall support the URI query parameters specified in table 5.38.2.3.3.3-1.

Table 5.38.2.3.3.3-1: URI query parameters supported by the PATCH method on this resource

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description | Applicability |
| n/a |  |  |  |  |  |

This method shall support the request data structures specified in table 5.38.2.3.3.3-2 and the response data structures and response codes specified in table 5.38.2.3.3.3-3.

Table 5.38.2.3.3.3-2: Data structures supported by the PATCH Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| FemtoPpDataPatch | M | 1 | Represents the requested modifications to the "Individual Femto Parameters Provisioning" resource. |

Table 5.38.2.3.3.3-3: Data structures supported by the PATCH Response Body on this resource

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description | |
| FemtoPpData | M | 1 | 200 OK | Successful response. The "Individual Femto Parameters Provisioning" resource is successfully modified and a representation of the updated resource is returned in the response body. | |
| n/a |  |  | 204 No Content | Successful response. The "Individual Femto Parameters Provisioning" resource is successfully modified and no content is returned in the response body. | |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection.  The response shall include a Location header field containing an alternative target URI of the resource located in an alternative NEF.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [4]. | |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection.  The response shall include a Location header field containing an alternative target URI of the resource located in an alternative NEF.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [4]. | |
| NOTE: The mandatory HTTP error status codes for the HTTP PATCH method listed in Table 5.2.6-1 of 3GPP TS 29.122 [4] shall also apply. | | | | |

Table 5.38.2.3.3.3-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains an alternative URI of the resource located in an alternative NEF. |

Table 5.38.2.3.3.3-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains an alternative URI of the resource located in an alternative NEF. |

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

###### 5.38.2.3.3.4 DELETE

This method enables an AF to request the deletion of an existing "Individual Femto Parameters Provisioning" resource at the NEF.

This method shall support the URI query parameters specified in table 5.38.2.3.3.4-1.

Table 5.38.2.3.3.4-1: URI query parameters supported by the DELETE method on this resource

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description | Applicability |
| n/a |  |  |  |  |  |

This method shall support the request data structures specified in table 5.38.2.3.3.4-2 and the response data structures and response codes specified in table 5.38.2.3.3.4-3.

Table 5.38.2.3.3.4-2: Data structures supported by the DELETE Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.38.2.3.3.4-3: Data structures supported by the DELETE Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Successful case. The "Individual Femto Parameters Provisioning" resource is successfully deleted. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection.  The response shall include a Location header field containing an alternative target URI of the resource located in an alternative NEF.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [4]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection.  The response shall include a Location header field containing an alternative target URI of the resource located in an alternative NEF.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [4]. |
| NOTE: The mandatory HTTP error status codes for the HTTP DELETE method listed in table 5.2.6-1 of 3GPP TS 29.122 [4] shall also apply. | | | | |

Table 5.38.2.3.3.4-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains an alternative target URI of the resource located in an alternative NEF. |

Table 5.38.2.3.3.4-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains an alternative target URI of the resource located in an alternative NEF. |

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

##### 5.38.2.3.4 Resource Custom Operations

There are no resource custom operations defined for this resource in this release of the specification.

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

### 5.38.3 Custom Operations without associated resources

There are no custom operations without associated resources defined for this API in this release of the specification.

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

### 5.38.4 Notifications

There are no notifications defined for this API in this release of the specification.

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

### 5.38.5 Data Model

#### 5.38.5.1 General

This clause specifies the application data model supported by the FemtoParamProvision API. Table 5.38.5.1-1 specifies the data types defined for the FemtoParamProvision API.

Table 5.38.5.1-1: FemtoParamProvision API specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Clause defined | Description | Applicability |
| FemtoPpData | 5.38.5.2.1 | Represents 5G Femto Parameters Provisioning data. |  |
| FemtoPpDataPatch | 5.38.5.2.2 | Represents the requested modification to existing 5G Femto Parameters Provisioning data. |  |

Table 5.38.5.1-2 specifies data types re-used by the FemtoParamProvision API from other specifications, including a reference to their respective specifications, and when needed, a short description of their use within the FemtoParamProvision API.

Table 5.38.5.1-2: FemtoParamProvision API re-used Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
| FemtoInformation | 3GPP TS 29.571 [8] | Represents the Femto information for provisioning. |  |
| SupportedFeatures | 3GPP TS 29.571 [8] | Represents the list of supported feature(s) and is used to negotiate the applicability of the optional features. |  |

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

#### 5.38.5.2 Structured data types

##### 5.38.5.2.1 Introduction

This clause defines the structures to be used in resource representations.

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

##### 5.38.5.2.2 Type: FemtoPpData

Table 5.38.5.2.2-1: Definition of type FemtoPpData

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| afId | string | M | 1 | Represents the identifier of the AF that is sending the request. |  |
| femtoInfos | array(FemtoInformation) | C | 1..N | Represents the Femto information to be provisioned.  This attribute shall be present only when the AF requests to provision 5G Femto parameters. |  |
| suppFeat | SupportedFeatures | C | 0..1 | Represents the list of supported features among the ones defined in clause 5.38.6.  This attribute shall be present only when feature negotiation needs to take place. |  |

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

##### 5.38.5.2.3 Type: FemtoPpDataPatch

Table 5.38.5.2.3-1: Definition of type FemtoPpDataPatch

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| femtoInfos | array(FemtoInformation) | C | 1..N | Represents the requested modifications to an existing Femto Parameters Provisioning data. |  |

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

#### 5.38.5.3 Simple data types and enumerations

##### 5.38.5.3.1 Introduction

This clause defines simple data types and enumerations that can be referenced from data structures defined in the previous clauses.

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

##### 5.38.5.3.2 Simple data types

The simple data types defined in table 5.38.5.3.2-1 shall be supported.

Table 5.38.5.3.2-1: Simple data types

|  |  |  |  |
| --- | --- | --- | --- |
| Type Name | Type Definition | Description | Applicability |
|  |  |  |  |

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

### 5.38.6 Used Features

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

Table 5.38.6-1: Supported Features

|  |  |  |
| --- | --- | --- |
| Feature number | Feature Name | Description |
|  |  |  |

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

### 5.38.7 Error handling

#### 5.38.7.1 General

For the FemtoParamProvision API, HTTP error responses shall be supported as specified in clause 5.2.6 of 3GPP TS 29.122 [4]. Protocol errors and application errors specified in clause 5.2.6 of 3GPP TS 29.122 [4] shall be supported for the HTTP status codes specified in table 5.2.6-1 of 3GPP TS 29.122 [4].

In addition, the requirements in the following clauses are applicable for the FemtoParamProvision API.

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

#### 5.38.7.2 Protocol Errors

In this Release of the specification, there are no additional protocol errors applicable for the FemtoParamProvision API.

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

#### 5.38.7.3 Application Errors

The application errors defined for the FemtoParamProvision API are listed in table 5.38.7.3-1.

Table 5.38.7.3-1: Application errors

|  |  |  |  |
| --- | --- | --- | --- |
| **Application Error** | **HTTP status code** | **Description** | **Applicability** |
|  |  |  |  |

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