**3GPP TSG-CT3 Meeting #135 *C3-243193***

**Hyderabad, India, 27th May 2024 - 31st May 2024**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.522** | **CR** | **1283** | **rev** | **-** | **Current version:** | **18.5.0** |  |
|  | | | | | | | | |
| *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:*** | DNAI Mapping deletion notification | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | EDGE\_Ph2 | | | | |  | ***Date:*** | | | 2024-05-20 |
|  |  | | | |  | |  | | |  |
| ***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)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | For notifying about update or deletion of UDR entries, the UDR always provides a "plain" resource URI (without content). The NEF has currently no way of indicating the update or removal of previously provided DNAI Mappings towards the AF (or the NFs in the SBI, since the DnaiMapUpdateNotif data type is re-used in 29.591). | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Added the mappingId for informing about update or removal of previously provided DNAI Mappings (when such notifications are received from the UDR). | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Incomplete notification mechanism, inconsistent specs. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.30.5.2.2, 5.30.5.2.3, A.28 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 DNAIMapping API. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

5.30.5.2.2 Type: DnaiMapSub

**Table 5.30.5.2.2-1: Definition of type DnaiMapSub**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Attribute name** | | **Data type** | | **P** | | **Cardinality** | | **Description** | | **Applicability** | |
| easIpAddrs | | array(IpAddr) | | C | | 1..N | | IP address(es) of the EASs in the Local part of the DN or the IP address ranges (IPv4 subnetwork(s) and/or IPv6 prefix(es) of the Local part of the DN where the EAS is deployed.  (NOTE) | |  | |
| fqdns | | array(Fqdn) | | C | | 1..N | | FQDN(s) of the EAS(s) in the Local part of the DN where the EAS(s) is/are deployed.  (NOTE) | |  | |
| dnn | | Dnn | | O | | 0..1 | | Identifies a DNN, a full DNN with both the Network Identifier and Operator Identifier, or a DNN with the Network Identifier only. | |  | |
| snssai | | Snssai | | O | | 0..1 | | Identifies an S-NSSAI. | |  | |
| immReports | | array(DnaiMapUpdateNotif) | | C | | 1..N | | DNAI EAS mapping information.  It shall be included in the subscription response if immediate reporting has been requested and the information is available. | |  | |
| eventReq | | ReportingInformation | | O | | 0..1 | | Indicates the event reporting requirements. | |  | |
| notifUri | | Uri | | M | | 1 | | Represents the notification URI to be used for DNAI Mapping information reporting. | |  | |
| notifCorrId | | string | | M | | 1 | | Notification correlation identifier | |  | |
| requestTestNotification | | boolean | | O | | 0..1 | | Set to true by the AF to request the NEF to send a test notification as defined in clause 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 | |
| suppFeat | | SupportedFeatures | | C | | 0..1 | | Indicates the list of Supported features used as described in clause 5.30.4.  This attribute shall be provided in the POST request and in the response of successful resource creation. | |  | |
| NOTE: Either "easIpAddrs" or "fqdns" attribute shall be provided. | | | | | | | | | | | |

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

5.30.5.2.3 Type: DnaiMapUpdateNotif

**Table 5.30.5.2.3-1: Definition of type DnaiMapUpdateNotif**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute name** | **Data type** | **P** | **Cardinality** | **Description** | **Applicability** |
| dnaiEasAddrMap | array(DnaiEasInfo) | C | 1..N | Represents the mapping information between DNAI(s) and EAS address(es). It shall be provided unless the notification is sent to notify deletion. |  |
| mappingId | String | M | 1 | Identifies the mapping information provided in the "dnaiEasAddrMap" attribute. For notifying deletion, this attribute shall be provided without the "dnaiEasAddrMap" attribute. |  |
| notifCorrId | string | M | 1 | Notification correlation identifier. |  |

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

A.28 DNAIMapping API

openapi: 3.0.0

info:

title: 3gpp-dnaimapping

version: 1.0.0-alpha.4

description: |

API for DNAI Mapping.

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externalDocs:

description: >

3GPP TS 29.522 V18.5.0; 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-dnai-mapping/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/{afId}/subscriptions:

get:

summary: read all of the active subscriptions for the AF

operationId: ReadAllSubscriptions

tags:

- DNAI Mapping Subscriptions

parameters:

- name: afId

in: path

description: Identifier of the AF

required: true

schema:

type: string

responses:

'200':

description: OK (Successful get all of the active subscriptions for the AF)

content:

application/json:

schema:

type: array

items:

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

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

operationId: CreateNewSubscription

tags:

- DNAI Mapping Subscriptions

parameters:

- name: afId

in: path

description: Identifier of the AF

required: true

schema:

type: string

requestBody:

description: new subscription creation

required: true

content:

application/json:

schema:

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

callbacks:

notification:

'{request.body#/notifUri}':

post:

requestBody: # contents of the callback message

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content (successful notification)

'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'

responses:

'201':

description: Created (Successful creation)

content:

application/json:

schema:

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

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}:

get:

summary: read an active subscription for the AF and the subscription Id

operationId: ReadAnSubscription

tags:

- Individual DNAI Mapping Subscription

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

responses:

'200':

description: OK (Successful get the active subscription)

content:

application/json:

schema:

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

'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'

delete:

summary: Deletes an already existing subscription

operationId: DeleteAnSubscription

tags:

- Individual Dnai Mapping Subscription

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

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:

DnaiMapSub:

description: Represents a DNAI Mapping subscription.

type: object

properties:

easIpAddrs:

type: array

items:

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

minItems: 1

description: >

IP address(es) of the EASs in the Local part of the DN or the IP address ranges(IPv4

subnetwork(s) and/or IPv6 prefix(es) of the Local part of the DN where the EAS is

deployed.

fqdns:

type: array

items:

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

minItems: 1

description: FQDN(s) where the EAS(s) is/are deployed.

dnn:

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

snssai:

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

eventReq:

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

immReport:

type: array

items:

$ref: 'TS29519\_Application\_Data.yaml#/components/schemas/DnaiMapUpdateNotif'

minItems: 1

description: DNAI EAS mapping information.

notifUri:

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

notifCorrId:

type: string

description: Notification correlation identifier.

requestTestNotification:

type: boolean

description: >

Set to true by the AF to request the NEF to send a test notification

as defined in clause 5.2.5.3 of 3GPP TS 29.122. Set to false or omitted otherwise.

websockNotifConfig:

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

suppFeat:

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

oneOf:

- required: [easIpAddrs]

- required: [fqdn]

required:

- notifUri

- notifCorrId

DnaiMapUpdateNotif:

description: Represents an updated DNAI Mapping notification.

type: object

properties:

dnaiEasAddrMap:

type: array

items:

$ref: 'TS29519\_Application\_Data.yaml#/components/schemas/DnaiEasInfo'

minItems: 1

description: >

Contains the mapping information between DNAI(s) and EAS address(es).

mappingId:

type: string

description: Identifies the provided mapping information.

notifCorrId:

type: string

description: Notification correlation identifier.

required:

- mappingId

- notifCorrId

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