**3GPP TSG- Meeting #C3-243576**

**Hyderabad, IN, 27 - 31 May, 2024 was C3-243261**

|  |
| --- |
| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **29.522** | **CR** | **1291** | **rev** | **1** | **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:***  | Additional corrections to the DNAIMapping API |
|  |  |
| ***Source to WG:*** | Huawei |
| ***Source to TSG:*** | CT3 |
|  |  |
| ***Work item code:*** | EDGE\_Ph2 |  | ***Date:*** | 2024-05-30 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***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 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:*** | There is a need to apply further corrections and alignments with the drafting rules and NBI TS skeleton (in addition to the ones already agreed in C3-242566). |
|  |  |
| ***Summary of change:*** | This CR proposes to:* Address the above-detailed missing provisions and issues.
 |
|  |  |
| ***Consequences if not approved:*** | * The provisions related to the definition of the DNAIMapping API continue to contain errors and misalignments with the drafting rules and NBI TS skeleton.
 |
|  |  |
| ***Clauses affected:*** | 5.30.2.1, 5.30.2.2.3.2A (new clause), 5.30.5.1, 5.30.5.2.2, 5.30.5.2.3, 5.30.5.2.4 (new clause), 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 backwards compatible new feature and corrections to the OpenAPI description of the DNAIMapping API defined in this specification.
* The clashes between this CR and C3-242566 in clause 5.30.5.1 are to be solved by the rapporteur.
 |
|  |  |
| ***This CR's revision history:*** |  |

\* \* \* \* Start of changes \* \* \* \*

#### 5.30.2.1 Overview

This clause describes the structure for the Resource URIs as shown in figure 5.30.2.1-1 and the resources and HTTP methods used for the DNAIMapping API.



Figure 5.30.2.1-1: Resource URI structure of the DNAIMapping API

Table 5.30.2.1-1 provides an overview of the resources and HTTP methods applicable for the DNAIMapping API.

Table 5.30.2.1-1: Resources and methods overview

|  |  |  |  |
| --- | --- | --- | --- |
| Resource name | Resource URI | HTTP method | Description |
| DNAI Mapping Subscriptions | /{afId}/subscriptions | GET | Read all subscriptions for a given AF |
| POST | Create a new subscription to DNAI Mapping |
| Individual DNAI Mapping Subscription | /{afId}/subscriptions/{subscriptionId} | GET | Read a subscription to DNAI Mapping |
| DELETE | Delete a subscription to DNAI Mapping |

\* \* \* \* Next changes \* \* \* \*

#### 5.30.5.1 General

This clause specifies the application data model supported by the DNAIMapping API. Table 5.30.5.1-1 specifies the data types defined for the DNAIMapping API.

Table 5.30.5.1-1: DNAIMapping specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Clause defined | Description | Applicability |
| DnaiMapUpdateNotif | 5.30.5.2.3 | Represents the notification data of they update of DNAI Mapping information. |  |
| DnaiMapSub | 5.30.5.2.2 | Represents DNAI Mapping subscription data. |  |
|  |  |  |  |

Table 5.30.5.1-2 specifies data types re-used by the DNAIMapping API from other specifications, including a reference to their respective specifications, and when needed, a short description of their use within the DNAIMapping API.

Table 5.30.5.1-2: Re-used Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
|  |  |  |  |
|  |  |  |  |
| DnaiEasInfo | 3GPP TS 29.519 [23] | Contains EAS information for a DNAI. |  |
| Dnn | 3GPP TS 29.571 [8] | Identifies the DNN. |  |
| Fqdn | 3GPP TS 29.571 [8] | Identifies an FQDN. |  |
| IpAddr | 3GPP TS 29.571 [8] | Identifes an IP address. |  |
| ReportingInformation | 3GPP TS 29.523 [22] | Represents the event reporting requirements. |  |
| Snssai | 3GPP TS 29.571 [8] | Identifies an S-NSSAI. |  |
| SupportedFeatures | 3GPP TS 29.571 [8] | Represents the list of supported feature(s) and used to negotiate the applicability of the optional features. |  |
| Uri | 3GPP TS 29.122 [4] | Contains a URI. |  |
| WebsockNotifConfig | 3GPP TS 29.122 [4] | Contains the configuration parameters to set up notification delivery over Websocket protocol. |  |

\* \* \* \* Next changes \* \* \* \*

##### 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 | the IP address(es) of the EAS(s) in the Local part of the DN or the IP address range(s) (i.e., IPv4 subnetwork(s) and/or IPv6 prefix(es)) of the Local part of the DN where the EAS(s) is/are deployed.(NOTE) |  |
| fqdns | array(Fqdn) | C | 1..N | the 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 | Contains 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(DnaiEasInfo) | C | 1..N | the DNAI EAS mapping information.This attribute shall be present only in subscription creation/update responses and only when immediate reporting was requested in the corresponding subscription creation/update request and the information is available. |  |
| eventReq | ReportingInformation | O | 0..1 | Indicates the event reporting requirements. |  |
| notifUri | Uri | M | 1 | Represents the URI via which the DNAI Mapping Information Update notifications shall be delivered. |  |
| 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 changes \* \* \* \*

##### 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) | M | 1..N | Represents the mapping information between the DNAI(s) and the EAS address(es). |  |
| notifCorrId | string | M | 1 | Notification correlation identifier. |  |

\* \* \* \* Next changes \* \* \* \*

# 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: Create 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: >

 Contains the IP address(es) of the EAS(s) in the Local part of the DN or the IP address

 range(s)(IPv4 subnetwork(s) and/or IPv6 prefix(es)) of the Local part of the DN where the

 EAS(s) is/are deployed.

 fqdns:

 type: array

 items:

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

 minItems: 1

 description: >

 Contains the FQDN(s) of the EAS(s) in the Local part of the DN 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/DnaiEasInfo'

 minItems: 1

 description: Contains the DNAI EAS mapping information.

 notifUri:

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

 notifCorrId:

 type: string

 description: Contains the updated 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).

 notifCorrId:

 type: string

 description: Contains the notification correlation identifier.

 required:

 - dnaiEasAddrMap

 - notifCorrId

\* \* \* \* End of changes \* \* \* \*