**3GPP TSG- Meeting #C3-242363**

**Changsha, China, –**

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| --- |
| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  |  | **CR** | **1254** | **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** |

|  |
| --- |
|  |
| ***Title:***  | Various corrections to the definition of the DNAIMapping API |
|  |  |
| ***Source to WG:*** | Huawei, Ericsson |
| ***Source to TSG:*** | CT3 |
|  |  |
| ***Work item code:*** | EDGE\_Ph2 |  | ***Date:*** | 2024-04-08 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***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 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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
|  |  |
| ***Reason for change:*** | The definition of the DNAIMapping API needs various corrections and alignments with the drafting rules and NBI TS skeleton. |
|  |  |
| ***Summary of change:*** | This CR proposes to:* Correct the above-detailed 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:*** | 5.2, 5.30.1, 5.30.2, 5.30.2.1, 5.30.2.2.1, 5.30.2.2.2, 5.30.2.2.3, 5.30.2.2.3.1, 5.30.2.2.3.2, 5.30.2.2.3.3, 5.30.2.2.4 (new clause), 5.30.2.3.1, 5.30.2.3.2, 5.30.2.3.3, 5.30.2.3.3.1, 5.30.2.3.3.2, 5.30.2.3.3.3, 5.30.2.3.4 (new clause), 5.30.4.1, 5.30.4.2.1, 5.30.4.2.2, 5.30.4.2.3.1, 5.30.5.1, 5.30.5.2.2, 5.30.5.2.3, 5.30.5.4 (new clause), 5.30.6, 5.30.7.1, 5.30.7.3, 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 backwards compatible corrections to the OpenAPI description of the DNAIMapping API defined in this specification. |
|  |  |
| ***This CR's revision history:*** |  |

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

## 5.2 Information applicable to several APIs

The usage of HTTP, content type and URI structure definition, as specified in clauses 5.2.2, 5.2.3 and 5.2.4 of 3GPP TS 29.122 [4] respectively, shall be applicable for NEF Northbound APIs.

The notification, error handling, feature negotiation, HTTP custom headers as specified in clauses 5.2.5, 5.2.6, 5.2.7, 5.2.8 of 3GPP TS 29.122 [4] respectively, shall be applicable for NEF Northbound APIs except that the SCEF is replaced by the NEF and the SCS/AS is replaced by the AF.

The conventions for Open API specification files as specified in clause 5.2.9 of 3GPP TS 29.122 [4] shall be applicable for NEF Northbound APIs.

NOTE: When 3GPP TS 29.122 [4] is referenced for the common protocol and interface aspects for API definition in this specification, the NEF takes the role of the SCEF and the service consumer (i.e., AF) takes the role of the SCS/AS.

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

5.30.1 Introduction

The Nnef\_DNAIMapping service shall use the DNAIMapping API.

The API URI of the DNAIMappingAPI 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-dnai-mapping".

- "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 root URI.

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

### 5.30.2 Resources

\* \* \* \* Next 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 | Retrieve all the active DNAI Mapping Subscriptions at the NEF. |
| POST | Create a new DNAI Mapping Subscription. |
| Individual DNAI Mapping Subscription | /{afId}/subscriptions/{subscriptionId} | GET | Retrieve an existing DNAI Mapping Subscription. |
| DELETE | Delete an existing DNAI Mapping Subscription. |

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

##### 5.30.2.2.1 Introduction

This resource represents all the active DNAI Mapping Subscribtions managed by the NEF.

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

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

##### 5.30.2.2.2 Resource Definition

Resource URI: **{apiRoot}/3gpp-dnai-mapping/<apiVersion>/{afId}/subscriptions**

This resource shall support the resource URI variables defined in table 5.30.2.2.2-1.

Table 5.30.2.2.2-1: Resource URI variables for this resource

|  |  |  |
| --- | --- | --- |
| Name | Data type | Definition |
| apiRoot | string | See clause 5.30.1. |
| afId | string | Represents the identifier of the AF. |

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

##### 5.30.2.2.3 Resource Standard Methods

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

###### 5.30.2.2.3.1 Void

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

###### 5.30.2.2.3.2 GET

The HTTP GET method allows to retrieve all the active DNAI Mapping Subscribtions managed by the NEF.

This method shall support the URI query parameters specified in table 5.30.2.2.3.2-1.

Table 5.30.2.2.3.2-1: URI query parameters supported by the GETmethod on this resource

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

This method shall support the request data structures specified in table 5.30.2.2.3.2-2 and the response data structures and response codes specified in table 5.30.2.2.3.2-3.

Table 5.30.2.2.3.2-2: Data structures supported by the GETRequest Body on this resource

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

Table 5.30.2.2.3.2-3: Data structures supported by theGET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response codes | Description |
| array(DnaiMapSub) | M | 0..N | 200 OK | Successful case. All the "Individual DNAI Mapping Subscribtion" resource(s) managed by the NEF are returned.If there are no active "Individual DNAI Mapping Subscribtion" 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 5.30.2.2.3.2-4: Headers supported by the 307 Response Code on this resource

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

Table 5.30.2.2.3.2-5: Headers supported by the 308 Response Code on this resource

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

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

###### 5.30.2.2.3.3 POST

The HTTP POST method allows to create a new DNAI Mapping Subscription at the NEF.

This method shall support the URI query parameters specified in table 5.30.2.2.3.3-1.

Table 5.30.2.2.3.3-1: 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 5.30.2.2.3.3-1 and the response data structures and response codes specified in table 5.30.2.2.3.3-2.

Table 5.30.2.2.3.3-1: Data structures supported by the POSTRequest Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| DnaiMapSub | M | 1 | Contains the parameters to request the creation of a DNAI Mapping Subscription at the NEF. |

Table 5.30.2.2.3.3-2: Data structures supported by thePOST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response codes | Description |
| DnaiMapSub | M | 1 | 201 Created | Successful case. A representation of the created "Individual DNAI Mapping Subscription" 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 5.30.2.2.3.3-3: 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-dnai-mapping/<apiVersion>/{afId}/subscriptions/{subscriptionId} |

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

##### 5.30.2.2.4 Resource Custom Operations

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

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

##### 5.30.2.3.1 Introduction

This resource represents an "Individual DNAI Mapping Subscription" resource managed by the NEF.

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

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

##### 5.30.2.3.2 Resource Definition

Resource URI: **{apiRoot}/3gpp-dnai-mapping/<apiVersion>/{afId}/subscriptions/{subscriptionId}**

This resource shall support the resource URI variables defined in table 5.30.2.3.2-1.

Table 5.30.2.3.2-1: Resource URI variables for this resource

|  |  |  |
| --- | --- | --- |
| Name | Data type | Definition |
| apiRoot | string | See clause 5.30.1. |
| afId | string | Represents the identifier of the AF. |
| subscriptionId | string | Represents the identifier of the "Individual DNAI Mapping Subscription" resource. |

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

##### 5.30.2.3.3 Resource Standard Methods

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

###### 5.30.2.3.3.1 Void

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

###### 5.30.2.3.3.2 GET

The HTTP GET method allows to retrieve an existing "Individual DNAI Mapping Subscribtion" resource at the NEF.

This method shall support the URI query parameters specified in table 5.30.2.3.3.2-1.

Table 5.30.2.3.3.2-1: URI query parameters supported by theGETmethod on this resource

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

This method shall support the request data structures specified in table 5.30.2.3.3.2-2 and the response data structures and response codes specified in table 5.30.2.3.3.2-3.

Table 5.30.2.3.3.2-2: Data structures supported by the GETRequest Body on this resource

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

Table 5.30.2.3.3.2-3: Data structures supported by theGET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response codes | Description |
| DnaiMapSub | M | 1 | 200 OK | Successful case. The requested "Individual DNAI Mapping Subscribtion" 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 5.30.2.3.3.2-4: Headers supported by the 307 Response Code on this resource

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

Table 5.30.2.3.3.2-5: Headers supported by the 308 Response Code on this resource

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

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

###### 5.30.2.3.3.3 DELETE

The HTTP DELETE method allows to delete an existing "Individual DNAI Mapping Subscribtion" resource at the NEF.

This method shall support the URI query parameters specified in table 5.30.2.3.3.3-1.

Table 5.30.2.3.3.3-1: URI query parameters supported by theDELETE method on this resource

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

This method shall support the request data structures specified in table 5.30.2.3.3.3-2 and the response data structures and response codes specified in table 5.30.2.3.3.3-3.

Table 5.30.2.3.3.3-2: Data structures supported by the DELETERequest Body on this resource

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

Table 5.30.2.3.3.3-3: Data structures supported by theDELETE Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response codes | Description |
| n/a |  |  | 204 No Content | Successful case. The "Individual DNAI Mapping Subscribtion" 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 5.30.2.3.3.3-4: Headers supported by the 307 Response Code on this resource

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

Table 5.30.2.3.3.3-5: Headers supported by the 308 Response Code on this resource

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

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

##### 5.30.2.3.4 Resource Custom Operations

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

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

#### 5.30.4.1 General

Notifications shall comply to clause 5.2.5 of 3GPP TS 29.122 [4].

Table 5.30.4.1-1: Notifications overview

|  |  |  |  |
| --- | --- | --- | --- |
| Notification | Callback URI | HTTP method or custom operation | Description(service operation) |
| DNAI Mapping Information Update Notification | {notifUri} | POST | Enbales the NEF to notify a previously subscribed AF on the updates of the DNAI-EAS address(es) information. |

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

##### 5.30.4.2.1 Description

This notification is used by the NEF to report the updates of the DNAI Mapping information to a previously subscribed AF.

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

##### 5.30.4.2.2 Target URI

The Callback URI **"{notifUri}"** shall be used with the callback URI variables defined in table 5.30.4.2.2-1.

Table 5.30.4.2.2-1: Callback URI variables

|  |  |
| --- | --- |
| Name | Definition |
| notifUri | Represents the callback URI encoded as a string formatted as a URI. |

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

###### 5.30.4.2.3.1 Notification via HTTP POST

This method shall support the request data structures specified in table 5.30.4.2.3.1-1 and the response data structures and response codes specified in table 5.30.4.2.3.1-2.

Table 5.30.4.2.3.1-1: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| DnaiMapUpdateNotif | M | 1 | Represents the DNAI Mapping Information Update Notification. |

Table 5.30.4.2.3.1-2: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Responsecodes | Description |
| n/a |  |  | 204 No Content | Successful case. The notification is successfully received and acknowledged. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection.The response shall include a Location header field containing an alternative URI representing the end point of an alternative AF towards which the notification should be sent.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 URI representing the end point of an alternative AF towards which the notification should be sent.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 POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [4] shall also apply. |

Table 5.30.4.2.3.1-3: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains an alternative URI representing the end point of an alternative AF towards which the notification should be redirected. |

Table 5.30.4.2.3.1-4: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains an alternative URI representing the end point of an alternative AF towards which the notification should be redirected. |

\* \* \* \* 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 API specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Clause defined | Description | Applicability |
| DnaiMapSub | 5.30.5.2.2 | Represents a DNAI Mapping Subscription. |  |
| DnaiMapUpdateNotif | 5.30.5.2.3 | Represents a DNAI Mapping Information Update Notification. |  |

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: DNAIMapping API re-used Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
| DateTime | 3GPP TS 29.122 [4] | Represents a date and a time. |  |
| Dnai | 3GPP TS 29.571 [8] | Represents a DNAI. |  |
| DnaiEasInfo | 3GPP TS 29.519 [23] | Represents EAS information for a DNAI. |  |
| Dnn | 3GPP TS 29.571 [8] | Represents a DNN. |  |
| Fqdn | 3GPP TS 29.571 [8] | Represents an FQDN. |  |
| IpAddr | 3GPP TS 29.571 [8] | Represents an IP address. |  |
| ReportingInformation | 3GPP TS 29.523 [22] | Represents the event reporting requirements. |  |
| Snssai | 3GPP TS 29.571 [8] | Represents an S-NSSAI. |  |
| SupportedFeatures | 3GPP TS 29.571 [8] | Represents the list of supported feature(s) and is used to negotiate the applicability of the optional features. |  |
| Uri | 3GPP TS 29.122 [4] | Represents a URI. |  |
| WebsockNotifConfig | 3GPP TS 29.122 [4] | Represents 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 | Contains 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 | Contains 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 | Contains an S-NSSAI. |  |
| immReports | array(DnaiEasInfo) | C | 1..N | Contains 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 | Contains the event reporting requirements. |  |
| notifUri | Uri | M | 1 | Contains the notification URI to be used for DNAI Mapping information reporting. |  |
| notifCorrId | string | M | 1 | Contains the 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 | Contains configuration parameters to set up notification delivery over Websocket protocol. | Notification\_websocket |
| suppFeat | SupportedFeatures | C | 0..1 | Contains the list of supported features used as defined in clause 5.30.6.This attribute shall be present only when feature negotiation needs to take place. |  |
| NOTE: These attributes are mutually exclusive. Either one of them shall be present. |

\* \* \* \* 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 | Contains the mapping information between DNAI(s) and EAS address(es). |  |
| notifCorrId | string | M | 1 | Contains the notification correlation identifier. |  |

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

#### 5.30.5.4 Data types describing alternative data types or combinations of data types

There are no data types describing alternative data types or combinations of data types defined for this API in this release of the specification.

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

### 5.30.6 Used Features

The optional features listed in table 5.30.6-1 are defined for the DNAIMapping API. They shall be negotiated using the extensibility mechanism defined in clause 5.2.7 of 3GPP TS 29.122 [4].

Table 5.30.6-1: Features used by DNAIMapping API

|  |  |  |
| --- | --- | --- |
| Feature number | Feature Name | Description |
| 1 | Notification\_websocket | The delivery of notifications over Websocket is supported as described in 3GPP TS 29.122 [4]. This feature requires that the "Notification\_test\_event" feature is also supported. |
| 2 | Notification\_test\_event | The testing of notification connection is supported as described in 3GPP TS 29.122 [4]. |

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

#### 5.30.7.1 General

For the DNAIMapping 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 DNAIMapping API.

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

#### 5.30.7.3 Application Errors

The application errors defined for the DNAIMapping API are listed in table 5.30.7.3-1.

Table 5.30.7.3-1: Application errors

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

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

# A.28 DNAIMapping API

openapi: 3.0.0

info:

 title: 3gpp-dnai-mapping

 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 active DNAI Mapping Subscribtions managed by the NEF.

 operationId: ReadDNAIMapSubscs

 tags:

 - DNAI Mapping Subscriptions (Collection)

 parameters:

 - name: afId

 in: path

 description: Represents the identifier of the AF.

 required: true

 schema:

 type: string

 responses:

 '200':

 description: >

 OK. All the Individual DNAI Mapping Subscribtion resource(s) managed by the NEF are

 returned.

 If there are no active Individual DNAI Mapping Subscribtion resources at the NEF, an

 empty array is returned.

 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 DNAI Mapping Subscription.

 operationId: CreateDNAIMapSubsc

 tags:

 - DNAI Mapping Subscriptions (Collection)

 parameters:

 - name: afId

 in: path

 description: Identifier of the AF

 required: true

 schema:

 type: string

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '201':

 description: >

 Created. A representation of the created Individual DNAI Mapping Subscription resource

 is returned in the response body.

 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'

 callbacks:

 DNAIMapInfoUpdateNotif:

 '{request.body#/notifUri}':

 post:

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: >

 No Content. The notification is successfully received and acknowledged.

 '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'

 /{afId}/subscriptions/{subscriptionId}:

 parameters:

 - name: afId

 in: path

 description: Represents the identifier of the AF.

 required: true

 schema:

 type: string

 - name: subscriptionId

 in: path

 description: Represents the identifier of the Individual DNAI Mapping Subscribtion resource.

 required: true

 schema:

 type: string

 get:

 summary: Retrieve an existing Individual DNAI Mapping Subscribtion resource.

 operationId: ReadIndDNAIMapSubsc

 tags:

 - Individual DNAI Mapping Subscription (Document)

 parameters:

 - name: afId

 in: path

 description: Identifier of the AF

 required: true

 schema:

 type: string

 responses:

 '200':

 description: >

 OK. The requested Individual DNAI Mapping Subscribtion resource is successfully returned

 in the response body.

 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: Delete an existing Individual DNAI Mapping Subscribtion resource.

 operationId: DeleteIndDNAIMapSubsc

 tags:

 - Individual Dnai Mapping Subscription (Document)

 responses:

 '204':

 description: >

 No Content. The Individual DNAI Mapping Subscribtion 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:

 DnaiMapSub:

 description: Represents a DNAI Mapping Subscription.

 type: object

 properties:

 easIpAddrs:

 type: array

 items:

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

 minItems: 1

 fqdns:

 type: array

 items:

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

 minItems: 1

 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: DNAI EAS mapping information.

 notifUri:

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

 notifCorrId:

 type: string

 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: [fqdns]

 required:

 - notifUri

 - notifCorrId

 DnaiMapUpdateNotif:

 description: Represents a DNAI Mapping Information Update Notification.

 type: object

 properties:

 dnaiEasAddrMap:

 type: array

 items:

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

 minItems: 1

 notifCorrId:

 type: string

 required:

 - dnaiEasAddrMap

 - notifCorrId

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