**3GPP TSG-CT3 Meeting #137 *C3-245339r1***

**, China, 14th Oct 2024 - 18th Oct 2024**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.591** | **CR** | **0216** | **rev** | **-** | **Current version:** | **19.0.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | UEId feature negotiation | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | SBIProtoc19 | | | | |  | ***Date:*** | | | 2024-10-07 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-19 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories 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:*** | | Feature negotiation is not enabled for the UEId API. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Specified the SupportedFeatures attribute. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | API not complying to the SBI guidelines. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.6.6.1, 5.6.6.2.2, 5.6.6.2.3, 5.6.6.2.4, A.7 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 UEId API. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

5.6.6.1 General

This clause specifies the application data model supported by the API.

Table 5.6.6.1-1 specifies the data types defined for the Nnef\_UEId service-based interface protocol.

**Table 5.6.6.1-1: Nnef\_UEId specific Data Types**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data type** | **Section defined** | **Description** | **Applicability** |
| MapUeIdInfo | 5.6.6.2.4 | Contains the UE ID mapping information. |  |
| UeIdReq | 5.6.6.2.2 | Contains the UE ID request information. |  |
| UeIdInfo | 5.6.6.2.3 | Contains the UE ID information. |  |

Table 5.6.6.1-2 specifies data types re-used by the Nnef\_UEId service based interface protocol from other specifications, including a reference to their respective specifications and when needed, a short description of their use within the Nnef\_UEId service based interface.

**Table 5.6.6.1-2: Nnef\_UEId re-used Data Types**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Data type** | | **Reference** | | **Comments** | | **Applicability** | |
| ApplicationlayerId | | 3GPP TS 29.571 [16] | | Identifies an Application Layer ID. | |  | |
| DnnSnssaiInformation | | 3GPP TS 29.522 [15] | | Identifies a combination of (DNN, S-NSSAI). | |  | |
| Gpsi | | 3GPP TS 29.571 [16] | | Identifies the GPSI of an UE. | |  | |
| IpAddr | | 3GPP TS 29.571 [16] | | Identifes an UE IP address. | |  | |
| Supi | | 3GPP TS 29.571 [16] | | Identifies the SUPI of an UE. | |  | |
| SupportedFeatures | | 3GPP TS 29.571 [16] | | Indicates the supported features. | |  | |

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

5.6.6.2.2 Type: UeIdReq

**Table 5.6.6.2.2-1: Definition of type UeIdReq**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Attribute name** | | **Data type** | **P** | **Cardinality** | **Description** | **Applicability** |
| gpsi | | Gpsi | C | 0..1 | The GPSI of an UE.  (NOTE) |  |
| uePubIpAddr | | IpAddr | C | 0..1 | Identifies a UE public IP address.  (NOTE) |  |
| suppFeat | | SupportedFeatures | C | 0..1 | Used to negotiate the applicability of the optional features as defined in clause 5.6.8. This attribute shall be provided when feature negotiation needs to take place. |  |
| NOTE: Only one of the "gpsi" or "uePubIpAddr" attribute shall be present. | | | | | | |

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

##### 5.6.6.2.3 Type: UeIdInfo

Table 5.6.6.2.3-1: Definition of type UeIdInfo

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Attribute name** | | **Data type** | **P** | **Cardinality** | **Description** | **Applicability** |
| hPlmnDnnSnssai | | DnnSnssaiInformation | O | 0..1 | Identifies the HPLMN DNN and S-NSSAI information of the HR-SBO Session.  This attribute may be provided if the "uePvtIpAddr" attribute is present. |  |
| supi | | Supi | C | 0..1 | The SUPI of an UE.  (NOTE) |  |
| uePvtIpAddr | | IpAddr | C | 0..1 | Identifies a UE private IP address.  (NOTE) |  |
| suppFeat | | SupportedFeatures | C | 0..1 | Used to negotiate the applicability of the optional features as defined in clause 5.6.8.  This attribute shall be provided when feature negotiation needs to take place. |  |
| NOTE: Only one of the "supi" or "uePvtIpAddr" attribute shall be present. | | | | | | |

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

5.6.6.2.4 Type: MapUeIdInfo

**Table 5.6.6.2.4-1: Definition of type MapUeIdInfo**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute name** | **Data type** | **P** | **Cardinality** | **Description** | **Applicability** |
| appLayerId | ApplicationlayerId | C | 0..1 | Identifies a Ranging/Sidelink Positioning-enabled UE within the context of a specific application.  This attribute shall be present in the UE ID mapping information retrieval response only if the "gpsi" attribute was present in the corresponding request.  (NOTE) |  |
| gpsi | Gpsi | C | 0..1 | Contains the GPSI of a UE.  This attribute shall be present in the UE ID mapping information retrieval response only if the "appLayerId" attribute was present in the corresponding request.  (NOTE) |  |
| suppFeat | SupportedFeatures | C | 0..1 | Used to negotiate the applicability of the optional features as defined in clause 5.6.8. This attribute shall be provided when feature negotiation needs to take place. |  |
| NOTE: These attributes are mutually exclusive. Either one of them shall be present. | | | | | |

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

A.7 Nnef\_UEId API

openapi: 3.0.0

info:

title: Nnef\_UEId

version: 1.0.1

description: |

NEF Traffic Correlation Service.

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externalDocs:

description: >

3GPP TS 29.591 V18.7.0; 5G System; Network Exposure Function Southbound Services; Stage 3.

url: https://www.3gpp.org/ftp/Specs/archive/29\_series/29.591/

servers:

- url: '{apiRoot}/nnef-ueid/v1'

variables:

apiRoot:

default: https://example.com

description: apiRoot as defined in clause 4.4 of 3GPP TS 29.501

security:

- {}

- oAuth2ClientCredentials:

- nnef-ueid

paths:

/fetch:

post:

summary: fetch the Internal UE Identifier for roaming UE(s).

operationId: FetchUEId

tags:

- UE ID (Document)

security:

- {}

- oAuth2ClientCredentials:

- nnef-ueid

- oAuth2ClientCredentials:

- nnef-ueid

- nnef-ueid:fetch:read

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: The requested information was returned successfully.

content:

application/json:

schema:

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

'204':

description: No Content (The requested Internal UE Identifier does not exist.)

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29571\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29571\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

/get-ueid-mapping:

post:

summary: Retrieve the UE ID mapping information.

operationId: UEIDMappingInfoRetrieval

tags:

- UE ID Mapping Info Retrieval Request

security:

- {}

- oAuth2ClientCredentials:

- nnef-ueid

- oAuth2ClientCredentials:

- nnef-ueid

- nnef-ueid:get-ueid-mapping:read

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: Successful case. The requested UE ID mapping information is returned.

content:

application/json:

schema:

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

'204':

description: No Content (The requested UE ID mapping information does not exist.)

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29571\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29571\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

nnef-ueid: Access to the UE ID API

nnef-ueid:fetch:read: >

Access to service operation applying to retrieve the internal UE identifier from the

H-NEF for the roaming UE.

nnef-ueid:get-ueid-mapping:read: >

Access to service operation applying to retrieve the UE ID.

schemas:

UeIdReq:

description: Contains parameters to request to fetch the Internal UE Identifier.

type: object

properties:

gpsi:

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

uePubIpAddr:

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

suppFeat:

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

oneOf:

- required: [gpsi]

- required: [uePubIpAddr]

UeIdInfo:

description: Contains the UE ID Information.

type: object

properties:

hPlmnDnnSnssai:

$ref: 'TS29522\_AMInfluence.yaml#/components/schemas/DnnSnssaiInformation'

supi:

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

uePvtIpAddr:

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

suppFeat:

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

oneOf:

- required: [supi]

- required: [uePvtIpAddr]

MapUeIdInfo:

description: Contains the UE ID mapping information.

type: object

properties:

appLayerId:

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

gpsi:

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

suppFeat:

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

oneOf:

- required: [appLayerId]

- required: [gpsi]

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