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

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

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

|  |
| --- |
|  |
| ***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 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:*** | 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 \*\*\*