**3GPP TSG CT WG3 Meeting #135 *C3-243302r1***

**Hyderabad, IN, 27 - 31 May, 2024 (Revision of C3-242427)**

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **29.591** | **CR** | **0182** | **rev** | **2** | **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)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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|  |
| ***Title:***  | Updates to Service Descriptions in Nnef\_UEId API |
|  |  |
| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | CT3 |
|  |  |
| ***Work item code:*** | Ranging\_SL, EDGE\_Ph2 |  | ***Date:*** | 2024-05-16 |
|  |  |  |  |  |
| ***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)* |
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| ***Reason for change:*** | TS 23.586 clause 4.3.7 defined NEF provide the GMLC with the GPSI of the UE based on Application Layer ID mapping information stored in UDR application data. Also provide the GMLC with the Application Layer ID based on GPSI of the UE mapping information stored in UDR application data. Hence needs to be implented in this TS.TS 23.502 clause 5.2.6.27.2 Nnef\_UEId\_Get service operation has been defined for HR-SBO to retrieve not only internal UE Identifier, but also extended with UE private IP address and other information, hence the related service descriptions need to be updated to be generic cover these, not limited only to UE identifier.SA2 has the related LS reply for LS out S2-2405863 (C3-242616) and TS 23.502 CR 4812 adding GMLC as service consumer to retrieve Ranging\_SL UE Id mapping information in Nnef\_UEId API. |
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| ***Summary of change:*** | Adding GMLC as NF service consumer of Nnef\_UEId API, update the related abbreviations, overview and service descriptions.Update the HR-SBO related Nnef\_UEId service descriptions with generic UE information description not limited to UE identifier retrieval, also updates the service operation naming. |
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| ***Consequences if not approved:*** | Not implemented stage 2 requirement and not aligned service descriptions. |
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| ***Clauses affected:*** | 3.3, 4.7.1.1, 4.7.1.2, 4.7.1.3.1, 4.7.1.3.2, 4.7.2.1, 4.7.2.2.1 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** | **X** |  |  Other core specifications  | TS 23.502 CR 4812  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** | This CR does not impact the OpenAPI file. |
|  |  |
| ***This CR's revision history:*** | **Rev 1 provides additional update:**Adding the related TS 23.502 CR 4812 in cover page and removed trusted AF as service consumer related changes, updated the WI TEI18, EDGEAPP as EDGE\_Ph2. Also updated custom operation descriptions.**Rev 3 provides additional update:**Updated upon the service operation naming changed in the agreed TS 23.502 CR 4812. |

**Additional discussion(if needed):**

**Proposed changes:**

\*\*\* 1st Change \*\*\*

## 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

5GMS 5G Media Streaming

AF Application Function

API Application Programming Interface

ASP Application Service Provider

DCCF Data Collection Coordination Function

EAS Edge Application Server

EHE Edge Hosting Environment

GMLC Gateway Mobile Location Centre

GPSI Generic Public Subscription Identifier

LCS LoCation Services

LMF Location Management FunctionMFAF Messaging Framework Adaptor Function

NEF Network Exposure Function

NF Network Function

NWDAF Network Data Analytics Function

SMF Session Management Function

SUPI Subscription Permanent Identifier

URI Uniform Resource Identifier

\*\*\* 2nd Change \*\*\*

#### 4.7.1.1 Overview

The Nnef\_UEId service is provided by the Network Exposure Function (NEF). This service allows the NF service consumer (e.g. V-NEF) providing the external UE information to fetch the internal UE information used for e.g. the V-NEF to fetch the SUPI from the H-NEF for the roaming UE under the roaming agreement with the roaming partner(s), or allows the NF service consumer (e.g. GMLC) to get the UE ID mapping information (e.g., GPSI or Application Layer ID mapping information of Ranging Sidelink position enabled UE) stored in UDR application data.

\*\*\* 3rd Change \*\*\*

#### 4.7.1.2 Service Architecture

The 5G System Architecture is defined in 3GPP TS 23.501 [2].

The Nnef\_UEId service is part of the Nnef service-based interface exhibited by the Network Exposure Function (NEF).

Known consumer of the Nnef\_UEId service is:

- Visited Network Exposure Function (V-NEF)

- Gateway Mobile Location Centre (GMLC)

NOTE: V-NEF is the known consumer in the "Fetch Roaming" custom operation, GMLC is the known consumer in the "Get UeId Mapping" custom operation.



Figure 4.7.1.2-1: Reference Architecture for the Nnef\_UEId Service; SBI representation



Figure 4.7.1.2-2: Reference Architecture for the Nnef\_UEId Service: reference point representation

\*\*\* 5th Change \*\*\*

##### 4.7.1.3.1 Network Exposure Function (NEF)

The Network Exposure Function (NEF) allows the NF service consumer (e.g. V-NEF) providing the external UE information to fetch the internal UE information from theH-NEF for the roaming UE under the roaming agreement with the roaming partner(s), or allows the NF service consumer (e.g. GMLC) to get the UE ID mapping information (e.g., UE ID mapping information between GPSI and Application Layer ID of Ranging Sidelink position enabled UE stored) in UDR application data.

\*\*\* 6th Change \*\*\*

##### 4.7.1.3.2 NF Service Consumers

The known NF service consumers are as follows:

The Visited Network Exposure Function (V-NEF):

- providing the external UE information to fetch the internal UE information from the H-NEF for the roaming UE under the roaming agreement with the roaming partner(s).

The Gateway Mobile Location Centre (GMLC):

- providing the GPSI or Application Layer ID of the Ranging Sidelink position enabled UE to retrieve the mapped Application Layer ID or GPSI stored in UDR application data.

\*\*\* 7th Change \*\*\*

#### 4.7.2.1 Introduction

Service operations defined for the Nnef\_UEId Service are shown in table 4.7.2.1-1.

Table 4.7.2.1-1: Nnef\_UEId Custom Operations

|  |  |  |
| --- | --- | --- |
| Custom Operation Name | Description | Initiated by |
| Fetch Roaming | This custom operation is used by the V-NEF providing the external UE information to fetch the internal UE information from the H-NEF for the roaming UE under the roaming agreement with the roaming partner(s). | V-NEF |
| Get UeId Mapping | This custom operation is used by the NF service consumer (e.g., GMLC) to get UE ID mapping information (e.g., the GMLC providing the GPSI or Application Layer ID of the UE to retrieve the mapped Application Layer ID or GPSI) stored in UDR application data. | GMLC |

\*\*\* 8th Change \*\*\*

##### 4.7.2.2.1 General

The Nnef\_UEId\_Get service operation with NEF as service consumer as defined in 3GPP TS 23.502 [2] is implemented as "Fetch Roaming" custom operation to enable the V-NEF provisioning the external UE information to fetch the internal UE information from the H-NEF for roaming UE under the roaming agreement with the roaming partner(s).

The following procedure using the "Fetch Roaming" custom operation is supported:

- to fetch the internal UE information for the roaming UE.

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