**3GPP TSG-SA WG6 Meeting #48-e S6-220627**

**e-meeting, 5th – 14th April 2022 (revision of S6-22xxxx)**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **23.558** | **CR** | **0091** | **rev** | **-** | **Current version:** | **17.3.0** |  |
|  | | | | | | | | |
| *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:*** | Solve EN in UE ID API | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | S6 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | EDGEAPP | | | | |  | ***Date:*** | | | 2022-03-28 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | F |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | 1. **OMA ACR**   Currently in the UE ID request, EAS can include ACR (Anonymous Customer Reference) as user information. Clause 6 of [OMA-TS-REST\_NetAPI\_ACR](https://www.openmobilealliance.org/release/REST_NetAPI_ACR/V1_0-20151201-C/OMA-TS-REST_NetAPI_ACR-V1_0-20151201-C.pdf)mentions:  *To create an ACR, the user’s identity has to be known to the server through {userId} part of the resource URL. The following values are possible for the {userId}: 1) an identifier such as MSISDN 2) the “acr:auth” keyword. When the {userId} is set to “acr:auth” keyword, it implies user’s identity is known either through the OAuth access token (see [Autho4API\_10]) available in the HTTP Authorization header of the API request or if the user’s device is connected to the mobile network then MSISDN is known by the network and it is not necessary to be passed explicitly by the application in the API request.*  In ACR creation description defined by OMA, the requestor already knows MSISDN (e.g. in access token or as URL segment), it doesn’t align with purpose of EDGEAPP UE ID API where the EAS doesn’t know MSISDN.  Such ACR example is not appropriate for EDGEAPP.   1. **How EES determines Edge UE ID**   UE ID API in cl.8.6.5 has EN:  How the EES determines the Edge UE ID is FFS. This may be based on for e.g. pre-configurations, an interaction with the 3GPP core network, or the EEC.  cl.8.6.5 also mentions:  This identifier, called Edge UE ID, is used by the EAS to invoke capability APIs specific to UEs over EDGE-3.  In EDGE-3 APIs (e.g. cl.8.6.3.3.2), this (Edge) UE ID is a GPSI or a token (contains GPSI).  For UE IP address, using EDGE-1 interaction with EEC is not fully discussed, e.g. how EEC knows EAS specific UE ID needed for EDGE-3 interaction w/o CN help. Besides, EDGE-3 APIs (e.g. location API) need UE ID to interact with 3GPP CN so UE ID should be fetched from the 3GPP CN.  Local EES configuration is not an option since UDM manages GPSI as permanent subscription data and there is no need to have EES to manage the same. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Describe that EES uses 3GPP CN capability to retrieve UE ID which is specific to the EAS. And add EAS ID and ASP ID to enable the AF specific information sent from the EAS.  Remove ACR example from 8.6.5.3.2. Leave only the IP address as typical example within EAS knowledge.  Reword the description for User information in Table 8.6.5.3.2-1. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | EN for UE ID API remains.  Useless OMA ACR information remains which creates confusion. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 2, 8.6.5.1, 8.6.5.2, 8.6.5.3.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **N** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **N** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **N** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 23.501: "System architecture for the 5G System (5GS); Stage 2".

[3] 3GPP TS 23.502: "Procedure for the 5G System (5GS); Stage 2".

[4] 3GPP TS 29.522: "5G System; Network Exposure Function Northbound APIs; Stage 3".

[5] 3GPP TS 29.122: "T8 reference point for northbound Application Programming Interfaces (APIs)".

[6] 3GPP TS 23.222: "Functional architecture and information flows to support Common API Framework for 3GPP Northbound APIs; Stage 2".

[7] 3GPP TS 23.271: "Functional stage 2 description of Location Services (LCS)".

[8] 3GPP TS 36.305: "Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Stage 2 functional specification of User Equipment (UE) positioning in E-UTRAN".

[9] 3GPP TS 23.273: "5G System (5GS) Location Services (LCS); Stage 2".

[10] 3GPP TS 38.305: "NG Radio Access Network (NG-RAN); Stage 2 functional specification of User Equipment (UE) positioning in NG-RAN".

[11] 3GPP TS 23.401: "General Packet Radio Service (GPRS) enhancements for Evolved Universal Terrestrial Radio Access Network (E-UTRAN) access".

[12] 3GPP TS 23.503: "Policy and charging control framework for the 5G System (5GS); Stage 2".

[13] 3GPP TS 23.434: "Service enabler architecture layer for verticals; Functional architecture and information flows; Stage 2".

[14] 3GPP TS 23.286: "Application layer support for Vehicle-to-Everything (V2X) services; Functional architecture and information flows ".

[15] ETSI ISG MEC ETSI GS MEC 003 V2.1.1 (2019-01), "Multi-access Edge Computing (MEC); Framework and Reference Architecture".

[16] Void.

[17] 3GPP TS 23.682: "Architecture enhancements to facilitate communications with packet data networks and applications".

[18] 3GPP TS 23.288: "Architecture enhancements for 5G System (5GS) to support network data analytics services".

[19] GSMA Whitepaper OPG.01: "Operator Platform: Telco Edge Proposal", https://www.gsma.com/futurenetworks/wp-content/uploads/2020/10/GSMA-Operator-Platform-Proposal-Oct-2020.pdf

[20] 3GPP TS 23.548: "5G System Enhancements for Edge Computing".

[21] 3GPP TS 23.032: "Universal Geographical Area Description (GAD)".

[22] 3GPP TS 28.538: "Management and orchestration; Edge Computing Management".

[23] 3GPP TS 33.558: "Security aspects of enhancement of support for enabling edge applications".

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

#### 8.6.5.1 General

EES exposes UE Identifier API to the EAS in order to provide an identifier uniquely identifying a UE. This API is used by an EAS to obtain the identifier of the UE if the EAS does not have it. This identifier, called Edge UE ID (in short UE ID in other EDGE-3 APIs), is used by the EAS to invoke capability APIs specific to UEs over EDGE-3. The Edge UE ID is specific to the given EAS and it is represented as a GPSI assigned by the 3GPP Core Network.

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

#### 8.6.5.2 Procedure

Figure 8.6.5.2-1 illustrates the interactions between the EES and the EAS.

Pre-conditions:

1. The EAS is authorized to discover and to use UE Identifier API provided by the EES.



Figure 8.6.5.2-1: UE Identifier API

1. The EAS invokes UE Identifier API exposed by the EES.

2. The EES uses the received user information in the step 1 (e.g. IP address) and obtains the UE identifier by interacting with NEF as specified in clause 4.15.10 of 3GPP TS 23.502 [3].

NOTE: It is implementation specific (e.g. lookup in NAT log) for the EES to deal with NATed IP address received from the EAS before NEF interaction.

3. The EES provides the obtained UE identifier as Edge UE ID to the EAS.

Editor's note: [SA3] Whether and how user's consent is obtained to share the UE identifier with a particular EAS is SA3's responsibility.

4. The EAS uses the Edge UE ID received in step 3 to invoke capability exposure API(s) provided by the EES over EDGE-3.

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

##### 8.6.5.3.2 UE Identifier API request

Table 8.6.5.3.2-1: UE Identifier API request

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| User information | M | Information about the User or UE available in the EAS, e.g. the IP address. |
| EAS ID | M | Identifier of the EAS providing the application services. |
| ASP ID | O | Identifier of the application service provider. |
| Security Credentials | M | Security credentials of the EAS. |

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