**3GPP TSG-CT WG1 Meeting #127-eC1-20XXXX**

**Electronic meeting, 13-20 Novermber 2020 *was C1-207275***

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
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|  | **24.501** | **CR** | **2890** | **rev** | **1** | **Current version:** | **17.0.0** |  |
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| *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 | **x** | Radio Access Network |  | Core Network |  |

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| ***Title:***  | Provide different UE IDs for trusted and untrusted non-3GPP access |
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| ***Source to WG:*** | Huawei, HiSilicon |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | 5GProtoc17-non-3GPP |  | ***Date:*** | 2020-11-XXX |
|  |  |  |  |  |
| ***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 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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)* |
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| ***Reason for change:*** | According to the following text quoted from TS 23.502 specified, the UE ID of AN parameters via untrusted non-3GPP is GUAMI, while the UE ID of AN parameters via trusted non-3GPP is 5G-GUTI if available.*The UE shall send an IKE\_AUTH request, which includes an EAP-Response/5G-NAS packet that contains the Access Network parameters (AN parameters) and a Registration Request message. The AN parameters contain information that is used by the N3IWF for selecting an AMF in the 5G core network. This information includes e.g. the GUAMI, the Selected PLMN ID, the Requested NSSAI and the Establishment cause. The Establishment cause provides the reason for requesting a signalling connection with 5GC.* **[quoted from clause 4.12.2.2 Registration procedure for untrusted non-3GPP access]**and*In step 5 the UE shall include the Requested NSSAI in the AN parameters only if allowed, according to the conditions defined in TS 23.501 [2], clause 5.15.9, for the trusted non-3GPP access. The UE shall also include a UE Id in the AN parameters, e.g. a 5G-GUTI if available from a prior registration to the same PLMN.* **[quoted from clause 4.12a.2.2 Registration procedure for trusted non-3GPP access]**Futhermore, as the following text quoted from TS 24.502, if 5G-GUTI if not available, the UE ID of AN parameters via trusted non-3GPP is SUCI.*The UE identity shall be 5GS mobile identity of type 5G-GUTI, if available, otherwise it shall be the 5GS mobile identity of type SUCI. The 5GS mobile identities of type 5G-GUTI and of type SUCI are specified in 3GPP TS 24.501 [4].* **[quoted from 7.3A.2, about trusted non-3GPP access]**Above conclusion should also be captured by TS 24.501. |
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| ***Summary of change:*** | Clarify that the UE provides lower layer with GUAMI for untrusted non-3GPP access, and provides lower layer with 5G-GUTI or SUCI for trusted non-3GPP access |
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| ***Consequences if not approved:*** | Unaligned with stage 2 specification |
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| ***Clauses affected:*** | 5.3.1.1 |
|  |  |
|  | **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 ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

\*\*\*\*\* start of change\*\*\*\*\*

#### 5.3.1.1 Establishment of the N1 NAS signalling connection

When the UE is in 5GMM-IDLE mode over 3GPP access and needs to transmit an initial NAS message, the UE shall request the lower layer to establish an RRC connection. Upon indication from the lower layers that the RRC connection has been established, the UE shall consider that the N1 NAS signalling connection over 3GPP access is established and enter 5GMM-CONNECTED mode over 3GPP access.

When the UE is in 5GMM-IDLE mode over non-3GPP access, and the UE receives an indication from the lower layers of access stratum connection establishment, the UE shall consider the N1 NAS signalling connection established enter 5GMM-CONNECTED mode over non-3GPP access and send an initial NAS message.

Initial NAS messages are:

a) REGISTRATION REQUEST message;

b) DEREGISTRATION REQUEST message;

c) SERVICE REQUEST message; and

d) CONTROL PLANE SERVICE REQUEST.

If the UE is capable of both N1 mode and S1 mode and lower layers provide an indication that the current E-UTRA cell is connected to both EPC and 5GCN, for the routing of the REGISTRATION REQUEST message during the initial registration procedure to the appropriate core network (EPC or 5GCN), the UE NAS provides the lower layers with the selected core network type information.

For the routing of the initial NAS message to the appropriate AMF, if the UE holds a 5G-GUTI or 4G-GUTI, the UE NAS provides the lower layers with the UE identity according to the following rules:

a) if the registration procedure for mobility and periodic update was triggered due to the last CONFIGURATION UPDATE COMMAND message containing the Configuration update indication IE with the Registration bit set to "registration requested" and including:

1) no other parameters;

2) one or both of the Allowed NSSAI IE and the Configured NSSAI IE; or

3) the Network slicing indication IE with the Network slicing subscription change indication set to "Network slicing subscription changed";

 the UE NAS shall not provide the lower layers with the 5G-S-TMSI or the registered GUAMI;

b) if the service request procedure was initiated over non-3GPP access, the UE NAS shall provide the lower layers with the registered GUAMI, but shall not provide the lower layers with the 5G-S-TMSI;

c) if the initial NAS message other than the SERVICE REQUEST or CONTROL PLANE SERVICE REQUEST message was initiated over untrusted non-3GPP access, the UE NAS shall provide the lower layers with the GUAMI of the 5G-GUTI that the UE NAS has selected as specified in the subclause 5.5.1.2.2 and 5.5.1.3.2, but shall not provide the lower layers with the 5G-S-TMSI;

if the initial NAS message other than the SERVICE REQUEST or CONTROL PLANE SERVICE REQUEST message was initiated over trusted non-3GPP access, the UE NAS shall provide the lower layers with the 5G-GUTI, if available, otherwise shall provide the lower layers with the SUCI;

d) if the UE does not hold a 5G-GUTI that was previously assigned by the same PLMN with which the UE is performing the registration procedure and if:

1) the UE operating in the single-registration mode performs a registration procedure for mobility and periodic update indicating "mobility registration updating" following an inter-system change from S1 mode to N1 mode; or

2) the UE which was previously registered in S1 mode before entering state EMM-DEREGISTERED, performs an initial registration procedure, the UE has received the interworking without N26 interface indicator set to "interworking without N26 interface not supported" from the network, and the UE holds a 4G-GUTI;

 then the UE NAS provides the lower layers with a GUAMI part of the 5G-GUTI mapped from 4G-GUTI as specified in 3GPP TS 23.003 [4] with an indication that the GUAMI is mapped from EPS; or

e) otherwise:

1) if the tracking area of the current cell is in the registration area, the UE NAS shall provide the lower layers with the 5G-S-TMSI, but shall not provide the registered GUAMI to the lower layers; or

2) if the tracking area of the current cell is not in the registration area, the UE NAS shall provide the lower layers with the GUAMI of the 5G-GUTI that the UE NAS has selected as specified in the subclauses 5.5.1.2.2 and 5.5.1.3.2, but shall not provide the lower layers with the 5G-S-TMSI.

For 3GPP access and untrusted non-3GPP access, if the UE does not hold a 5G-GUTI and the UE does not hold a 4G-GUTI, the UE NAS does not provide the lower layers with the 5G-S-TMSI or the registered GUAMI. For trusted non-3GPP access, if the UE does not hold a 5G-GUTI and the UE does not hold a 4G-GUTI, the UE NAS provides the lower layers with the SUCI.

The UE NAS also provides the lower layers with the identity of the selected PLMN (see 3GPP TS 38.331 [30]) if the UE is not operating in SNPN access mode. If the UE is operating in SNPN access mode, the UE NAS provides the lower layers with the SNPN identity of the selected SNPN. In a shared network, the UE shall choose one of the PLMN identity(ies) or SNPN identity(ies) as specified in 3GPP TS 23.122 [5].

The UE NAS layer may provide the lower layers with an NSSAI as specified in subclause 4.6.2.3.

\*\*\*\*\*end of change\*\*\*\*\*