**3GPP TSG-CT WG1 Meeting #133-eC1-21XXXX**

**E-meeting, 11-19 November 2021**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
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|  | **24.501** | **CR** | **3805** | **rev** | **1** | **Current version:** | **17.4.1** |  |
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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:***  | Clarification for UE parameters update data handling |
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| ***Source to WG:*** | MediaTek Inc., Ericsson |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | 5GProtoc17 |  | ***Date:*** | 2021-11-16 |
|  |  |  |  |  |
| ***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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
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| ***Reason for change:*** | For sc 5.4.5.3.3 bullet bulle i) 1) i), clarify:* the UE does not trigger other actions until emergency services are completed
* If a 5G-GUTI is only used by one access (registered to differnt PLMN or SNPN on two accesses, or registered to only one access), then after the access is deregistered, the 5G-GUTI can be deleted
* If a 5G-GUTI is shared by two accesses (registered to same PLMN or SNPN on two access), then
	+ 5G-GUTI can not be deleted before both accesses are de-regsitered. (If one access is deregistered but anohter access is not yet, the 5G-GUTI need to be kept to be used in the deregistration procedure on another access)
	+ 5G-GUTI needs to be deleted after both accesses are de-regsitered.
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| ***Summary of change:*** | * UE does not trigger other actions until emergency services are completed
* If a 5G-GUTI is only used by one access (registered to differnt PLMN or SNPN on two accesses, or registered to only one access), then after the access is deregistered, the 5G-GUTI can be deleted
* If a 5G-GUTI is shared by two accesses (registered to same PLMN or SNPN on two access), then
	+ 5G-GUTI can not be deleted before both accesses are de-regsitered. (If one access is deregistered but anohter access is not yet, the 5G-GUTI need to be kept to be used in the deregistration procedure on another access)
	+ 5G-GUTI needs to be deleted after both accesses are de-regsitered.
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| ***Consequences if not approved:*** | * UE deregister when emergency services are not completed.
* UE delete 5G-GUTI when the 5G-GUTI is shared by 3GPP and non-3GPP access and non-3GPP access is still in registered state.
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| ***Clauses affected:*** | 5.4.5.3.3 |
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|  | **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's revision history:*** |  |

\*\*\* change \*\*\*

##### 5.4.5.3.3 Network-initiated NAS transport of messages

Upon reception of a DL NAS TRANSPORT message, the UE shall stop the timer T3346 if running.

Upon reception of a DL NAS TRANSPORT message, if the Payload container type IE is set to:

a) "N1 SM information" and the 5GMM cause IE is not included in the DL NAS TRANSPORT message, the 5GSM message in the Payload container IE and the PDU session ID are handled in the 5GSM procedures specified in clause 6;

b) "SMS", the UE shall forward the content of the Payload container IE to the SMS stack entity;

c) "LTE Positioning Protocol (LPP) message container", the UE shall forward the payload container type, the content of the Payload container IE and the routing information included in the Additional information IE to the upper layer location services application;

d) "SOR transparent container" and if the Payload container IE:

1) successfully passes the integrity check (see 3GPP TS 33.501 [24]), the ME shall store the received SOR counter as specified in annex C and proceed as follows:

i) If the Payload container IE indicates a list of preferred PLMN/access technology combinations is provided and the list type indicates "PLMN ID and access technology list", then the ME shall replace the highest priority entries in the "Operator Controlled PLMN Selector with Access Technology" list stored in the ME.

 If the SOR-CMCI is present and the Store SOR-CMCI in ME indicator is set to "Store SOR-CMCI in ME" then the UE shall store or delete the SOR-CMCI in the non-volatile memory of the ME as described in annex C.1; or

ii) If the list type indicates "secured packet", then the ME shall behave as if a SMS is received with protocol identifier set to SIM data download, data coding scheme set to class 2 message and SMS payload as secured packet contents of SOR transparent container IE. The SMS payload is forwarded to UICC as specified in 3GPP TS 23.040 [4A]

 If the ACK bit of the SOR header for SOR data type in the SOR transparent container is set to "acknowledgement requested", the ME shall send an acknowledgement in the Payload container IE of an UL NAS TRANSPORT message with Payload type IE set to "SOR transparent container" as specified in subclause 5.4.5.2.2. In the Payload container IE carrying the acknowledgement, the UE shall set the ME support of SOR-CMCI indicator to "SOR-CMCI supported by the ME".

 The UE shall proceed with the behaviour as specified in 3GPP TS 23.122 [5] annex C; or

2) does not successfully pass the integrity check (see 3GPP TS 33.501 [24]) then the UE shall discard the content of the payload container IE and proceed with the behaviour as specified in 3GPP TS 23.122 [5] annex C.

e) Void;

f) Void;

g) "N1 SM information" and:

1) the 5GMM cause IE is set to the 5GMM cause #22 "Congestion", the UE passes to the 5GSM sublayer an indication that the 5GSM message was not forwarded due to DNN based congestion control along with the 5GSM message from the Payload container IE of the DL NAS TRANSPORT message, and the time value from the Back-off timer value IE;

2) the 5GMM cause IE is set to the 5GMM cause #28 "Restricted service area", the UE passes to the 5GSM sublayer an indication that the 5GSM message was not forwarded due to service area restrictions along with the 5GSM message from the Payload container IE of the DL NAS TRANSPORT message, enters the state 5GMM-REGISTERED.NON-ALLOWED-SERVICE and, if the DL NAS TRANSPORT message is received over 3GPP access, performs the registration procedure for mobility and periodic registration update without waiting for the release of the N1 NAS signalling connection (see subclauses 5.3.5 and 5.5.1.3);

3) the 5GMM cause IE is set to the 5GMM cause #65 "maximum number of PDU sessions reached", the UE passes to the 5GSM sublayer an indication that the 5GSM message was not forwarded because the PLMN's maximum number of PDU sessions has been reached, along with the 5GSM message from the Payload container IE of the DL NAS TRANSPORT message;

4) the 5GMM cause IE is set to the 5GMM cause #67 "insufficient resources for specific slice and DNN", the UE passes to the 5GSM sublayer an indication that the 5GSM message was not forwarded due to S-NSSAI and DNN based congestion control along with the 5GSM message from the Payload container IE of the DL NAS TRANSPORT message, and the time value from the Back-off timer value IE;

5) the 5GMM cause IE is set to the 5GMM cause #69 "insufficient resources for specific slice", the UE passes to the 5GSM sublayer an indication that the 5GSM message was not forwarded due to S-NSSAI only based congestion control along with the 5GSM message from the Payload container IE of the DL NAS TRANSPORT message, and the time value from the Back-off timer value IE;

5a) the 5GMM cause IE is set to the 5GMM cause #78 "PLMN not allowed to operate at the present UE location", the UE passes to the 5GSM sublayer an indication that the 5GSM message was not forwarded because the UE is registered to a PLMN via a satellite NG-RAN cell that is not allowed to operate at the present UE location along with the 5GSM message from the Payload container IE of the DL NAS TRANSPORT message;

6) the 5GMM cause IE is set to the 5GMM cause #90 "payload was not forwarded", the UE passes to the 5GSM sublayer an indication that the 5GSM message was not forwarded due to routing failure along with the 5GSM message from the Payload container IE of the DL NAS TRANSPORT message;

7) the 5GMM cause IE is set to the 5GMM cause #91 "DNN not supported or not subscribed in the slice", the UE passes to the 5GSM sublayer an indication that the 5GSM message was not forwarded because the DNN is not supported or not subscribed in a slice along with the 5GSM message from the Payload container IE of the DL NAS TRANSPORT message, and the time value from the Back-off timer value IE, if any;

8) the 5GMM cause IE is set to the 5GMM cause #92 "insufficient user-plane resources for the PDU session", the UE passes to the 5GSM sublayer an indication that the 5GSM message was not forwarded due to insufficient user-plane resources along with the 5GSM message from the Payload container IE of the DL NAS TRANSPORT message.

h) "UE policy container", the UE policy container in the Payload container IE is handled in the UE policy delivery procedures specified in Annex D;

i) "UE parameters update transparent container" and if the Payload container IE

1) successfully passes the integrity check (see 3GPP TS 33.501 [24]), the ME shall store the received UE parameter update counter as specified in annex C and proceed as follows:

i) if the UE parameters update list includes a UE parameters update data set with UE parameters update data set type indicating "Routing indicator update data",

A) the ME shall behave as if an SMS is received with protocol identifier set to SIM data download, data coding scheme set to class 2 message and SMS payload as secured packet contents of UE parameters update transparent container IE. The SMS payload is forwarded to UICC as specified in 3GPP TS 23.040 [4A]; and

B) if the ACK bit of the UE parameters update header in the UE parameters update transparent container is set to "acknowledgment requested" and if the ME receives status bytes from the UICC indicating that the UICC has received the secured packet successfully, the ME shall send an acknowledgement in the Payload container IE of an UL NAS TRANSPORT message with Payload type IE set to "UE parameters update transparent container" as specified in subclause 5.4.5.2.2; and

C) if the ME receives a REFRESH command from the UICC as specified in 3GPP TS 31.111 [22A] and if the REG bit of the UE parameters update header in the UE parameters update transparent container IE is set to "re-registration requested", and:

C1) the UE is registered over 3GPP access, then the UE shall wait until the emergency services over 3GPP access, if any, are completed, enter 5GMM-IDLE mode over 3GPP access or 5GMM-CONNECTED mode with RRC inactive indication, perform a de-registration procedure, and then delete its 5G-GUTI if the UE is registered to different PLMN or SNPN on non-3GPP access or the UE is not registered over non-3GPP access, or wait until the de-registration procedure over non-3GPP access specified in case C2) or C3) is completed before deleting its 5G-GUTI if the UE is registered to same PLMN or SNPN on non-3GPP access, and then initiate a registration procedure for initial registration as specified in subclause 5.5.1.2;

C2) the UE is registered over non-3GPP access and does not have emergency services ongoing over non-3GPP access, then the UE shall locally release the N1 NAS signalling connection and enter 5GMM-IDLE mode over non-3GPP access, perform a de-registration procedure, and then delete its 5G-GUTI if the UE is registered to different PLMN or SNPN on 3GPP access or the UE is not registered over 3GPP access, or wait until the de-registration procedure over 3GPP access specified in case C1) is completed before deleting its 5G-GUTI if the UE is registered to same PLMN or SNPN on 3GPP access, and then initiate a registration procedure for initial registration as specified in subclause 5.5.1.2; and

C3) the UE is registered over non-3GPP access and has an emergency services ongoing over non-3GPP access, then the UE shall wait until the emergency services are completed before locally releasing the N1 NAS signalling connection and enter 5GMM-IDLE mode over non-3GPP access, perform a de-registration procedure, and then delete its 5G-GUTI if the UE is registered to different PLMN or SNPN on 3GPP access or if the UE is not registered over 3GPP access, or wait until the de-registration procedure over 3GPP access specified in case C1) is completed before deleting its 5G-GUTI if the UE is registered to same PLMN or SNPN on 3GPP access, and then initiate a registration procedure for initial registration as specified in subclause 5.5.1.2.

ii) if the UE parameters update list includes a UE parameters update data set with UE parameters update data set type indicating "Default configured NSSAI update data",

A) if the ACK bit of the UE parameters update header in the UE parameters update transparent container is set to "acknowledgment requested" and if the UE parameters update list does not include a UE parameters update data set with UE parameters update data set type indicating "Routing indicator update data", the ME shall send an acknowledgement in the Payload container IE of an UL NAS TRANSPORT message with Payload type IE set to "UE parameters update transparent container" as specified in subclause 5.4.5.2.2

B) the ME shall replace the stored default configured NSSAI with the default configured NSSAI included in the default configured NSSAI update data. In case of SNPN, the ME shall replace the stored default configured NSSAI associated with the selected entry of the "list of subscriber data" or the PLMN subscription with the default configured NSSAI included in the default configured NSSAI update data; and

C) if the REG bit of the UE parameters update header in the UE parameters update transparent container is set to "re-registration requested" and the UE parameters update list does not include a UE parameters update data set with UE parameters update data set type indicating "Routing indicator update data", the UE shall wait until it enters 5GMM-IDLE mode and then the UE shall initiate a registration procedure for mobility registration update as specified in subclause 5.5.1.3.

 if the UE parameters update list does not include a UE parameters update data set with UE parameters update data set type indicating "Routing indicator update data", the UE used the old default configured NSSAI to create the requested NSSAI in a REGISTRATION REQUEST message, the UE does not have a configured NSSAI for the current PLMN and the UE has an allowed NSSAI for the current PLMN which contains one or more S-NSSAIs that are not included in the new default configured NSSAI, the UE shall wait until it enters 5GMM-IDLE mode and then the UE shall initiate a registration procedure for mobility and periodic registration update as specified in subclause 5.5.1.3; and

2) does not successfully pass the integrity check (see 3GPP TS 33.501 [24]) then the UE shall discard the content of the payload container IE;

j) "Location services message container" and the 5GMM cause IE is not included in the DL NAS TRANSPORT message, the UE shall forward the payload container type, the content of the Payload container IE and the routing information in the Additional information IE if included to the upper layer location services application;

k) "CIoT user data container", the UE shall forward the content of the Payload container IE and the PDU session ID to the 5GSM sublayer;

l) "CIoT user data container" and:

1) the 5GMM cause IE is set to the 5GMM cause #22 "Congestion", the UE passes to the 5GSM sublayer an indication that the CIoT user data was not forwarded due to DNN based congestion control along with the CIoT user data from the Payload container IE of the DL NAS TRANSPORT message, and the time value from the Back-off timer value IE.

2) the 5GMM cause IE is set to the 5GMM cause #90 "payload was not forwarded", the UE passes to the 5GSM sublayer an indication that the user data container was not forwarded due to routing failure along with the user data container from the Payload container IE and the PDU session ID from the PDU session ID IE of the DL NAS TRANSPORT message.

m) "Service-level-AA container" and the Service-level device ID included in the Service-level-AA container is set to a CAA-level UAV ID, the UE shall forward the content of the Payload container IE to the upper layer application for UAS corresponding to the CAA-level UAV ID; and

n) "Multiple payloads", the UE shall first decode the content of the Payload container IE (see subclause 9.11.3.39) to obtain the number of payload container entries and for each payload container entry, the UE shall:

1) decode the payload container type field;

2) decode the optional IE fields and the payload container contents field in the payload container entry; and

3) handle the content of each payload container entry the same as the content of the Payload container IE and the associated optional IEs as specified in bullets a) to m) above according to the payload container type field.

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