**3GPP TSG-RAN WG3 Meeting #125 R3-24xxxx**

**Maastricht, NL, Aug 19 - Aug 23, 2024**

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
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|  | **38.473** | **CR** | **1478** | **rev** | **1** | **Current version:** | **18.2.0** |  |
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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 |  | Radio Access Network | **X** | Core Network |  |

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| ***Title:***  | Correction on Early Sync Information from DU to CU |
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| ***Source to WG:*** | CMCC, ZTE, NEC, CATT, Huawei |
| ***Source to TSG:*** | RAN3 |
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| ***Work item code:*** | NR\_Mob\_enh2-Core |  | ***Date:*** | 2024-08-20 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***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:*** | RAN3 already agreed to introduce the *Early Sync Information* IE. Once received from gNB-DU, gNB-CU shall consider it as the generated early sync information from the accepted candidate cell in the candidate gNB-DU. The *Early Sync Information* IE should be included in UE CONTEXT SETUP RESPONSE message and UE CONTEXT MODIFICATION RESPONSE message. However, the procedure text for the behaviour of gNB-CU when it receives the *Early Sync Information* IE in UE CONTEXT MODIFICATION RESPONSE message is missing. |
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| ***Summary of change:*** | Add the procedural text for the behaviour of gNB-CU when it receives the Early Sync Information IE in UE CONTEXT MODIFICATION RESPONSE message. Impact Analysis:Impact assessment towards the previous version of the specification (same release): This CR has an isolated impact towards the previous version of the specification (same release).This CR only has an impact on the LTM. |
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| ***Consequences if not approved:*** | The procedure text for the behaviour of gNB-CU in UE CONTEXT MODIFICATION RESPONSE message is not aligned with stage3 changes. |
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| ***Clauses affected:*** | 8.3.1.2, 8.3.4.2 |
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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:*** | Rev-1: Revision of R3-244582 |

--------------------------------------------------------------Start of the change-----------------------------------------------------------

8.3.1 UE Context Setup

8.3.1.1 General

The purpose of the UE Context Setup procedure is to establish the UE Context including, among others, SRB, DRB, BH RLC channel, Uu Relay RLC channel, PC5 Relay RLC channel, and SL DRB configuration. The procedure uses UE-associated signalling.

8.3.1.2 Successful Operation

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**Figure** **8.3.1.2-1: UE Context Setup Request procedure: Successful Operation**

The gNB-CU initiates the procedure by sending UE CONTEXT SETUP REQUEST message to the gNB-DU. If the gNB-DU succeeds to establish the UE context, it replies to the gNB-CU with UE CONTEXT SETUP RESPONSE. If no UE-associated logical F1-connection exists, the UE-associated logical F1-connection shall be established as part of the procedure. Except for RACH based SDT and UE configured with BWP specific ServingCellMO, the gNB-CU shall perform RRC Reconfiguration or RRC connection resume to send UE to the RRC\_CONNECTED state as described in TS 38.331 [8], and in this case, the *CellGroupConfig* IE shall transparently be signaled to the UE as specified in TS 38.331 [8]. In the cases of RACH based SDT procedure and UE configured with BWP specific ServingCellMO, the *CellGroupConfig* IE shall be ignored by the gNB-CU.

*/\*\*\*\*\*\*\* Unchanged part skipped \*\*\*\*\*\*/*

If the *LTM Configuration ID Mapping List* IE is contained in the UE CONTEXT SETUP REQUEST message, the gNB-DU shall, if supported, consider this as the mapping information for the LTM candidate cell(s).

If the *Early Sync Information Request* IE isincluded in the UE CONTEXT SETUP REQUEST message, the gNB-DU shall, if supported, include the *Early UL Sync Configuration* and/or *Early UL Sync Configuration* *for SUL* IE for early TA acquisition (early UL synchronisation), in the UE CONTEXT SETUP RESPONSE message. If the *Early Sync Information* IE is included in the UE CONTEXT SETUP RESPONSE message, the gNB-CU shall, if supported, consider it as the generated UL early sync information and UL early sync information for SUL from the accepted candidate cell in the candidate gNB-DU.

If the *LTM Configuration* IE is included in the UE CONTEXT SETUP RESPONSE message, the gNB-CU shall, if supported, consider it as the generated configuration for LTM from the accepted candidate cell in the candidate gNB-DU.

8.3.4 UE Context Modification (gNB-CU initiated)

8.3.4.1 General

The purpose of the UE Context Modification procedure is to modify the established UE Context, e.g., establishing, modifying and releasing radio resources or sidelink resources. This procedure is also used to command the gNB-DU to stop data transmission for the UE for mobility (see TS 38.401 [4]). The procedure uses UE-associated signalling.

8.3.4.2 Successful Operation

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**Figure 8.3.4.2-1: UE Context Modification procedure. Successful operation**

The UE CONTEXT MODIFICATION REQUEST message is initiated by the gNB-CU.

Upon reception of the UE CONTEXT MODIFICATION REQUEST message, the gNB-DU shall perform the modifications, and if successful reports the update in the UE CONTEXT MODIFICATION RESPONSE message.

*/\*\*\*\*\*\*\* Unchanged part skipped \*\*\*\*\*\*/*

If the *LTM Configuration ID Mapping List* IE is contained in the UE CONTEXT MODIFICATION REQUEST message, the gNB-DU shall, if supported, consider this as the mapping information for the LTM candidate cell(s).

If the *Early Sync Information Request* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the gNB-DU shall, if supported, take it into account for early TA acquisition, and include the *Early UL Sync Configuration* and/or *Early UL Sync Configuration* *for SUL* IE in the UE CONTEXT MODIFICATION RESPONSE message.

If the *Early Sync Candidate Cell Information List* IE is contained in the UE CONTEXT MODIFICATION REQUEST message, the gNB-DU shall, if supported, use it as specified in TS 38.401 [4]. If the *UE Based TA Measurement Configuration* IE is contained in the *Early Sync Candidate Cell Information List* IE for some candidate cell, the gNB-DU shall, if supported, take them into account for UE based TA measurement during LTM cell switch as specified in TS 38.331 [8].

If the *Early Sync Serving Cell Information* IE is contained in the UE CONTEXT MODIFICATION REQUEST message, the gNB-DU shall, if supported, use it as specified in TS 38.401 [4]. If the *UE Based TA Measurement Configuration* IE is contained in the *Early Sync Serving Cell Information* IE, the gNB-DU shall, if supported, take it into account for UE based TA measurement during LTM cell switch as specified in TS 38.331 [8].

If the *Early Sync Information Request* IE isincluded in the UE CONTEXT MODIFICATION REQUEST message, the gNB-DU shall, if supported, include the *Early UL Sync Configuration* and/or *Early UL Sync Configuration* *for SUL* IE for early TA acquisition (early UL synchronisation), in the UE CONTEXT MODIFICATION RESPONSE message. If the *Early Sync Information* IE is included in the UE CONTEXT MODIFICATION RESPONSE message, the gNB-CU shall, if supported, consider it as the generated early UL sync information and UL early sync information for SUL from the accepted candidate cell in the candidate gNB-DU.

-------------------------------------------------------------- The end of changes ---------------------------------------------------------