**3GPP TSG-RAN WG3 Meeting #111-e *R3-21xxxx***

**Online, 25 January – 4 February 2021**

|  |
| --- |
| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **38.300** | **CR** | **draftCR** | **rev** | **-** | **Current version:** | **16.4.0** |  |
|  |
| *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)*.* |
|  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **x** | Core Network |  |

|  |
| --- |
|  |
| ***Title:***  | Clarification of 5GC Mobility Restriction List Container  |
|  |  |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell |
| ***Source to TSG:*** | R3 |
|  |  |
| ***Work item code:*** | NR\_newRAT-Core, TEI16 |  | ***Date:*** | 2021-01-14 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-16 |
|  | *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)* |
|  |  |
| ***Reason for change:*** | During Xn-based mobility, the target/new NG-RAN node may receive a Mobility Restriction List (MRL) in both the *5GC Mobility Restriction List Container* IE and the *Mobility Restriction List* IE. In this case, the target/new NG-RAN node shall “use” the information contained in the *5GC Mobility Restriction List Container* IE as the MRL (except for the Serving PLMN and the Equivalent PLMNs).However, if there is subsequent Xn-based mobility or S-Node addition, it is unclear whether the MRL propagated over Xn in the *Mobility Restriction List* IE is based on:1. information from the *Mobility Restriction List* IE previously received over Xn; or
2. information from the *5GC Mobility Restriction List Container* IE previously received over Xn.

This can impact dual connectivity operation at the SN for features that rely on extensions to the MRL, e.g. S-NPN and PNI-NPN. |
|  |  |
| ***Summary of change:*** | It is clarified that the information received in the *5GC* *Mobility Restriction List Container* IE replaces the information received in the *Mobility Restriction List* IE (except for the Serving PLMN and the Equivalent PLMNs).Impact analysis:Impact assessment towards the previous version of the specification (same release):This CR has an impact under functional point of view. The impact can be considered isolated because the change affects only the XnAP function responsible for providing Roaming and Access restriction between NG-RAN nodes. |
|  |  |
| ***Consequences if not approved:*** | The *Mobility Restriction List* IE propagated over the Xn interface may be missing information, which may cause problems (e.g. in S-Node addition which does not include the *5GC* *Mobility Restriction List Container* IE). For example, S-NPN or PNI-NPN may not operate as expected in the SN. |
|  |  |
| ***Clauses affected:*** | 9.4 |
|  |  |
|  | **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:*** |  |

*Beginning of Text Proposal for TS 38.300*

## 9.4 Roaming and Access Restrictions

The roaming and access restriction information for a UE includes information on restrictions to be applied for subsequent mobility action during CM-CONNECTED state. It may be provided by the AMF and also may be updated by the AMF later.

It includes the forbidden RAT, the forbidden area and the service area restrictions as specified in TS 23.501 [3]. It also includes serving PLMN and may include a list of equivalent PLMNs.

Upon receiving the roaming and access restriction information for a UE, if applicable, the gNB should use it to determine whether to apply restriction handling for subsequent mobility action, e.g., handover, redirection.

If the roaming and access restriction information is not available for a UE at the gNB, the gNB shall consider that there is no restriction for subsequent mobility actions.

Only if received over NG or Xn signalling, the roaming and access restriction information shall be propagated over Xn by the source gNB during Xn handover. If the Xn handover results in a change of serving PLMN (to an equivalent PLMN), the source gNB shall replace the serving PLMN with the identity of the target PLMN and move the serving PLMN to the equivalent PLMN list, before propagating the roaming and access restriction information.

If NG-RAN nodes with different versions of the XnAP or NGAP protocol are deployed, information provided by the 5GC within the NGAP Mobility Restriction List may be lost in the course of Xn mobility. In order to avoid such loss of information at Xn handover or UE context retrieval due to a source NG-RAN node or an old NG-RAN node not able to recognise the entire content, the source NG-RAN node or the old NG-RAN node may provide an 5GC Mobility Restriction List Container to the target NG-RAN node or the new NG-RAN node, containing the Mobility Restriction List as received from the 5GC. The target NG-RAN node or the new NG-RAN node shall use the information contained in the 5GC Mobility Restriction List Container to replace the information contained in the XnAP Mobility Restriction List, except for the Serving PLMN and the Equivalent PLMNs. The 5GC Mobility Restriction List Container may be propagated at future Xn handover and UE context retrieval.

*End of Text Proposal for TS 38.300*