**3GPP TSG-CT WG1 Meeting #141eC1-232079v1**

**Online 17– 21 April 2023**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **24.501** | **CR** | **5180** | **rev** | **1** | **Current version:** | **18.2.1** |  |
|  | | | | | | | | |
| *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:*** | Clarify AMF behaviour when S-NSSAI to be replaced is available | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | ZTE, Nokia, Nokia Shanghai Bell | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eNS\_Ph3 | | | | |  | ***Date:*** | | | 2023-04-10 |
|  |  | | | |  | |  | | |  |
| ***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 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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | In TS 23.501 clause 5.15.19, the AMF behavior when the S-NSSAI which has been replaced is available is specified as follows:  “*When the AMF is notified that the S-NSSAI is available again or the congestion of the S-NSSAI has been mitigated, if the AMF has configured the supporting UE with the Alternative S-NSSAI, and the AMF determines for the UE to use the S-NSSAI again, the AMF reconfigures the supporting UE (e.g. by using UE Configuration Update message) to use the S-NSSAI. If there is an existing PDU Session associated with the Alternative S-NSSAI, the AMF sends updates to the SMF of the PDU Session, e.g. triggering Nsmf\_PDUSession\_UpdateSMContext service operation, that the PDU Session is to be transferred to the S-NSSAI.*”  It should be specified in TS 24.501 that when the S-NSSAI which has been replaced is available, the AMF updates the UE with such information. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | When the S-NSSAI which has been replaced is available, the AMF provides updated alternative NSSAI excluding the S-NSSAI which has been replaced and corresponding alternative S-NSSAI to the UE. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The UE will never know when the S-NSSAI which has been replaced is available. | | | | | | | | |
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| ***Clauses affected:*** | | 4.6.2.7 | | | | | | | | |
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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:*** | |  | | | | | | | | |

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

#### 4.6.2.7 Mobility management based network slice replacement

If the UE and network support network slice replacement, and the AMF determines that an S-NSSAI included in the allowed NSSAI needs to be replaced with an alternative S-NSSAI, the AMF provides the alternative S-NSSAI in the allowed NSSAI (if not included yet) and in the configured NSSAI (if not included yet) and the mapping information between the S-NSSAI to be replaced and the alternative S-NSSAI to the UE during UE configuration update procedure as follows:

a) for non-roaming UE, the AMF provides the mapping information between the S-NSSAI included in the allowed NSSAI and the alternative S-NSSAI to the UE; and

b) for roaming UE:

1) if the S-NSSAI included in the allowed NSSAI needs to be replaced, the AMF provides the mapping information between the S-NSSAI included in the allowed NSSAI and the alternative S-NSSAI to the UE; and

2) if the S-NSSAI included in the mapped S-NSSAI(s) for the allowed NSSAI needs to be replaced, the AMF provides the mapping information between the S-NSSAI included in the mapped S-NSSAI(s) for the allowed NSSAI and the alternative S-NSSAI to the UE.

NOTE: The alternative S-NSSAI may be part of or not part of the subscribed S-NSSAI(s) in the UE subscription.

Editor's note: (WI: eNS\_Ph3, CR: 5069) Whether an S-NSSAI included in the allowed NSSAI can be replaced with more than one alternative S-NSSAI is FFS.

If the AMF determines that the S-NSSAI which has been replaced is available, the AMF provides the updated alternative NSSAI excluding the S-NSSAI which has been replaced and the corresponding alternative S-NSSAI to the UE during the UE configuration update procedure or during the registration procedure.

\* \* \* End of Change \* \* \* \*