**3GPP TSG-WG SA2 Meeting #164S2-2407653**

**Maastricht, Netherlands, 19 August – 23 August, 2024**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **23.502** | **CR** | **4857** | **rev** | **----** | **Current version:** | **17.13.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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| ***Title:*** | Mapping between NSAGs and S-NSSAIs – 23.502 R17 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Oracle | | | | | | | | | |
| ***Source to TSG:*** | SA2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eNS\_Ph2 | | | | |  | ***Date:*** | | | 2024-08-19 |
|  |  | | | |  | |  | | |  |
| ***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 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:*** | | Nnssf\_NSSAIAvailability\_Update service operation (23.502 5.2.16.3.2) is currently misaligned with 23.501 5.15.14.  DP S2-2407652 explains the problem(s) in a great detailed.  In short, the NSAG-NSSAI mapping exchanged between RAN-AMF-NSSF lacks the Element of whether the NSAG is used for Random Access (RA) or for Cell Reselection (CR). Consequently, the UE that receives this info (from the AMF/NSSF) may not know which RAN to select. | | | | | | | | |
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| ***Summary of change:*** | | This CR proposes to align Nnssf\_NSSAIAvailability\_Update service operation with 23.501 5.15.14. Specifically, the CR proposes to align it with the text “An S-NSSAI can be associated with at most one NSAG values for Random Access and at most one NSAG value for Cell Reselection within a Tracking Area”. | | | | | | | | |
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| ***Consequences if not approved:*** | | 1. Misalignment between 23.502 5.2.16.3.2 and 23.501 5.15.14.  2. UE’s operation of selecting RAN node based on Random Access (RA) or Cell Reselection (CR) Logic may fail due to ambigous information coming from the AMF/NSSF. | | | | | | | | |
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| ***Clauses affected:*** | | 5.2.16.3.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

\*\*\* 1st Change \*\*\*

##### 5.2.16.3.2 Nnssf\_NSSAIAvailability\_Update service operation

**Service operation name:** Nnssf\_NSSAIAvailability\_Update

**Description:** This service operation enables the AMF to update the NSSF with the S-NSSAIs the AMF supports per TA and get the availability of the S-NSSAIs and optionally NSI IDs per TA for the S-NSSAIs the AMF supports.

**Inputs, Required:** Supported S-NSSAIs per TAI.

The supported S-NSSAIs per TAI is a list of TAIs and for each TAI the S-NSSAIs supported by the AMF.

**Inputs, Optional:**, Mapping of the Supported S-NSSAIs per TAI to their respective NSAG~~s~~.

The supported NSAGs per TAI, is a list of TAIs and for each TAI the NSAGs and for each NSAG the associated S-NSSAIs supported by the AMF.~~A list of TAIs and for each TAI a list of S-NSSAIs. For each S-NSSAI in the list – at most one NSAG associated with it for Random Access, and at most one NSAG associated with it for Cell Reselection.~~

NOTE: The above mapping takes into account that for any S-NSSAI at most one NSAG is associated with it for Random Access, and at most one NSAG is associated with it for Cell Reselection as per clause 5.15.14 of TS 23.501 [2].

**Outputs, Required:** A list of TAIs and for each TAI, the S-NSSAIs and optionally NSI IDs supported by the AMF and 5G-AN and authorized by the NSSF for the TAI.

**~~Outputs, Conditional Required:~~** ~~A list of TAIs and for each TAI, the NSAGs authorized by the NSSF for the TAI.~~

~~The authorized NSAGs per TAI, is a list of TAIs and for each TAI the authorized NSAGs.~~

**Outputs, Optional:** For each TAI, a list of S-NSSAIs restricted per PLMN for the TAI*.*

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