**3GPP TSG-CT3 Meeting #136 *C3-244077***

**Maastricht, The Netherlands, 19th – 23rd August 2024**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **29.507** | **CR** | **0310** | **rev** | **-** | **Current version:** | **18.6.0** |  |
|  | | | | | | | | |
| *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:*** | Correction to Network slice replacement functionality | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eNS\_Ph3 | | | | |  | ***Date:*** | | | 2024-08-12 |
|  |  | | | |  | |  | | |  |
| ***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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | As per TS 23.503, clause 6.1.2.5:  - in Case i) when AMF cannot determine the Alternative S-NSSAI for the S-NSSAI(s), e.g. NSSF doesn't provide Alternative S-NSSAI and there is no Alternative S-NSSAI in the AMF local configuration. The reporting includes that the trigger is met, the S-NSSAI(s) that requires slice replacement, as described in clause 6.1.2.1.  - in Case ii) if the AMF can determine the Alternative S-NSSAI for the S-NSSAI(s) when network slice replacement applies for some S-NSSAIs, or if the AMF determines to stop the network slice replacement for some S-NSSAI(s) after receiving the Alternative S-NSSAI from OAM or network slice availability notification from NSSF. The reporting includes the trigger is met and S-NSSAI(s) that requires slice replacement and the corresponding Alternative S-NSSAI. If no corresponding Alternative S-NSSAI is provided, the PCF is informed no Alternative S-NSSAI is mapped to the replaced S-NSSAI(s) any longer.  This aspect is not fully captured in the clauses 4.2.2.3.8 and 5.6.3.3, hence these clause are updated to capture the complete feature. | | | | | | | | |
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| ***Summary of change:*** | | 1. Clauses 4.2.2.3.8 and 5.6.3.3 are updated to capture the complete "Network slice replacement" feature requirements as per TS 23.503, cl 6.1.2.5. | | | | | | | | |
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| ***Consequences if not approved:*** | | 1. Non-compliant with stage-2 specifications. 2. If updates to clauses 4.2.2.3.8, and 5.6.3.3 are not accepted, this would lead to incomplete feature implemenations and may further result field issues. | | | | | | | | |
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| ***Clauses affected:*** | | 4.2.2.3.8, 5.6.3.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 does not impact the open API defined in this specification. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

4.2.2.3.8 Network Slice Replacement

When the "NetSliceRepl" feature is supported, Network Slice Replacement may take place to enable to replace an S-NSSAI of the Allowed NSSAI and/or the Partially Allowed NSSAI with an Alternative S-NSSAI when this S-NSSAI is not available or congested. When the replaced S-NSSAI is available again (e.g. no longer congested), then replace the Alternative S-NSSAI with it.

The Alternative S-NSSAI shall be encoded using the SnssaiReplaceInfo data type as defined in 3GPP TS 29.571 [11].



\*\*\* Next Change \*\*\*

#### 5.6.3.3 Enumeration: RequestTrigger

The enumeration RequestTrigger represents the possible Policy Control Request Triggers. It shall comply with the provisions defined in table 5.6.3.3-1.

Table 5.6.3.3-1: Enumeration RequestTrigger

|  |  |  |
| --- | --- | --- |
| Enumeration value | Description | Applicability |
| LOC\_CH | Location change (tracking area): the tracking area of the UE has changed.  (NOTE 1) |  |
| PRA\_CH | Change of UE presence in PRA: the NF service consumer reports the current presence status of the UE in a Presence Reporting Area, and notifies that the UE enters/leaves the Presence Reporting Area. |  |
| SERV\_AREA\_CH | Service Area Restriction change: the UDM notifies the NF service consumer that the subscribed service area restriction information has changed.  (NOTE 2) |  |
| RFSP\_CH | RFSP index change: the UDM notifies the NF service consumer that the subscribed RFSP index has changed.  (NOTE 2) |  |
| ALLOWED\_NSSAI\_CH | Allowed NSSAI change: the NF service consumer notifies that the set of UE allowed S-NSSAIs has changed.  (NOTE 1) | SliceSupport, DNNReplacementControl, NetSliceRepl |
| UE\_AMBR\_CH | UE-AMBR change: the UDM notifies the NF service consumer that the subscribed UE-AMBR has changed.  (NOTE 2) | UE-AMBR\_Authorization |
| SMF\_SELECT\_CH | SMF selection information change: UE request for an unsupported DNN or UE request for a DNN within the list of DNN candidates for replacement per S-NSSAI. | DNNReplacementControl |
| ACCESS\_TYPE\_CH | Access Type change: the NF service consumer notifies that the access type and the RAT type for a UE has changed.  (NOTE 1) | MultipleAccessTypes |
| UE\_SLICE\_MBR\_CH | UE-Slice-MBR change: the NF service consumer notifies any changes in the subscribed UE-Slice-MBR for each subscribed S-NSSAI of the home PLMN mapping to a S-NSSAI of the serving PLMN. | UE-Slice-MBR\_Authorization |
| NWDAF\_DATA\_CH | Indicates that the NWDAF instance IDs used for the UE and/or associated Analytics IDs have changed.  (NOTE 2) | EneNA |
| TARGET\_NSSAI | Generation of Target NSSAI: the NF service consumer notifies that the Target NSSAI was generated. | TargetNSSAI |
| SLICE\_REPLACE\_MGMT | Indicates that network slice replacement is needed for one or more S-NSSAI(s) of the UE's Allowed NSSAI and/or Partially Allowed NSSAI. | NetSliceRepl |
| FEAT\_RENEG | The NF service consumer notifies that the target AMF is requesting feature re-negotiation.  (NOTE 2) | FeatureRenegotation |
| PARTIALLY\_ALLOWED\_NSSAI\_CH | Change of the Partially Allowed NSSAI: the NF service consumer notifies that the set of Partially Allowed S-NSSAI(s) of the UE has changed.  (NOTE 1) | PartNetSliceSupport, NetSliceRepl |
| SNSSAIS\_PARTIALLY\_REJECTED\_CH | Change of the S-NSSAI(s) rejected partially in the RA: the NF service consumer notifies that the set of S-NSSAI(s) rejected partially in the RA for the UE has changed.  (NOTE 1) | PartNetSliceSupport |
| REJECTED\_SNSSAIS\_CH | Change of the Rejected S-NSSAI(s) in the RA: the NF service consumer notifies that the set of the Rejected S-NSSAI(s) in the RA for the UE has changed.  (NOTE 1) | PartNetSliceSupport |
| PENDING\_NSSAI\_CH | Change of the Pending NSSAI: the NF service consumer notifies that the set of Pending S-NSSAI(s) of the UE has changed.  (NOTE 1) | PartNetSliceSupport |
| RAT\_TYPE\_CH | RAT Type change: the NF service consumer notifies that the RAT type within same Access type for a UE has changed. (NOTE 1) | RatTypeChange |
| NOTE 1: This includes reporting the current value at the time the trigger is provisioned during the update or update notification of the policy association.  NOTE 2: The NF service consumer always reports to the PCF. | | |

\*\*\* End of Changes \*\*\*