3GPP TSG SA WG5 Meeting 137-e TDoc S5-213231d2

electronic meeting, online, 10 - 19 May 2021

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
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|  | **28.531** | **CR** | **0066** | **rev** | **<Rev#>** | **Current version:** | **16.9.0** |  |
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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 |  | Core Network |  |

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| ***Title:***  |  Add the SLA management related requirements and procedure |
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| ***Source to WG:*** | S5 |
| ***Source to TSG:*** |  China Mobile |
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| ***Work item code:*** |  EMA5SLA |  | ***Date:*** | 2021-4-30 |
|  |  |  |  |  |
| ***Category:*** | B |  | ***Release:*** | Release 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 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)* |
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| ***Reason for change:*** | After discussing the translating of SLA requirements and updating the related NRM in TS 28.541. It is important to update the procedure of translation once SLA has been introduced to the management system and document SLA effects on existing and new procedures. |
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| ***Summary of change:*** | The existing procedure and requirements are updated. |
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| ***Consequences if not approved:*** | The SLA management part is missing. |
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| ***Clauses affected:*** | 5.1.1, 5.2.1 |
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|  | **Y** | **N** |  |  |
| ***Other specs*** |  |  |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  |  |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  |  |  O&M Specifications | TS/TR ... CR ...  |
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| ***Other comments:*** |  |
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| ***This CR's revision history:*** |  |

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| **1st Modified Section** |

5.1.1 Network slice instance creation

| **Use case stage** | **Evolution/Specification** | **<<Uses>>Related use** |
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| **Goal**  | To satisfy request for allocation of a network slice instance with certain characteristics, by creation of new or using existing network slice instance; the request includes the network slice related requirements. |  |
| **Actors and Roles** | A network slice provisioniong management service consumer.NOP (Network Operator) |  |
| **Telecom resources** | Network slice instanceNetwork slice subnet instanceTransport networkA network slice provisioning management service provider.A network slice subnet provisioning management service provider. |  |
| **Assumptions** | N/A |  |
| **Pre-conditions** | N/A |  |
| **Begins when**  | The network slice provisioning management service provider receives the request for allocation of the network slice instance with certain characteristics; the request contains network slice related requirements and the information indicating whether the requested NSI could be shared with other consumers.This information is captured in the  ServiceProfile (see 'AllocateNsi' operation in TS 28.531’). The translation of NEST attribute values into ServiceProfile is done by the network slice provisioning management service consumer. |  |
| **Step 1 (M)** | If the requested NSI can be shared and if an existing NSI can be used, the network slice provisioning management service provider decides to use the existing NSI.Modification of the existing NSI may be needed to satisfy the network slice instance related requirements. Use case is completed go to “Step 8".Otherwise, the network slice provisioning management service provider triggers to create a new NSI, for which the following steps 2 – 8 are needed.  |  |
| **Step 2 (M)** | The network slice provisioning management service provider decides on the constituent NSSIs and the topology of the NSI to be created using the information from service profile [6]. For the constituent NSSIs, the network slice provisioning management service provider derives network slice subnet related requirements from the network slice related requirements. If reconfiguration of the transport network is needed, the network slice provisioning management service provider derives transport network related requirements (e.g. latency, bandwidth) from the network slice related requirements. |  |
| **Step 3 (M)** | For the required NSSI(s), the network slice provisioning management service provider sends network slice subnet related requirements to the network slice subnet provisioning management service provider to request allocation of the required NSSI(s). | Network slice subnet instance creation use case |
| **Step 4 (M)** | The network slice provisioning management service provider receives the information of the allocated NSSI(s) (e.g. the management identifier of NSSI, service access point information of NSSI, external connection point information of NSSI) from NSSMF. |  |
| **Step 5 (M)** | The network slice provisioning management service provider, via the network slice subnet provisioning management service provider, sends the transport network related requirements (e.g. external connection point, latency and bandwidth) to the TN Manager. The TN manager reconfigures the TN accordingly and responds to the network slice provisioning management service provider via the network slice subnet provisioning management service provider. |  |
| **Step 6 (M)** | The network slice provisioning management service provider receives the response from TN Manager via the network slice subnet provisioning management service provider. |  |
| **Step 7 (M)** | The network slice provisioning management service provider associates the NSSI(s) with the corresponding NSI (e.g. allocation of the management identifier of NSI and mapping the management identifier of NSI with the received management Identifier of NSSI(s)) and triggers to establish the links between the service access points of the NSSI(s).  |  |
| **Step 8 (M)** | The network slice provisioning management service provider notifies the network slice instance information of NSI (e.g., the management identifier of NSI). |  |
| **Ends when**  | All the steps identified above are successfully completed. |  |
| **Exceptions** | One of the steps identified above fails. |  |
| **Post-conditions** | An NSI is ready to satisfy the network slice related requirements. |  |
| **Traceability**  | REQ-PRO\_NSSI-FUN-1, REQ-PRO\_NSI-FUN-3. |  |

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| **Next Modified Section** |

5.2 Requirements

5.2.1 Requirements for network slice provisioning service

**REQ-PRO\_NSI-FUN-1** The network slice provisioning service provider shall have the capability allowing its authorized consumer to request a network slice instance.

**REQ-PRO\_NSI-FUN-2** The network slice provisioning service provider shall have the capability allowing its authorized consumer to send the network slice related requirements.

NOTE 1: The network slice related requirements include requirements such as area traffic capacity, charging, coverage area, isolation, end-to-end latency, mobility, overall user density, priority, service availability, service reliability, UE speed; see TS 22.261 [5] where these parameters are defined for end user services.

NOTE 2:The network slice related requirements also include requirements derived from theNEST defined by GSMA.

NOTE 3: The NEST attributes can be translated to ServiceProfile.

NOTE 4: The ServiceProfile can be translated to corresponding requirements for dedicated domains/NSSI.**REQ-PRO\_NSI-FUN-3** The network slice provisioning service provider shall have the capability allowing its authorized consumer to request the deallocation of a network slice instance.

**REQ-PRO\_NSI–FUN-4** The network slice provisioning service provider shall have the capability allowing its authorized consumer to request activation of a network slice instance.

**REQ-PRO\_NSI–FUN-5** The network slice provisioning service provider shall have the capability allowing its authorized consumer to request deactivation of a network slice instance.

**REQ-PRO\_NSI-FUN-6** The network slice provisioning service provider shall have the capability allowing its authorized consumer to request the modification of a network slice instance.

**REQ-PRO\_NSI-FUN-7** The network slice provisioning service provider shall have the capability allowing its consumer to obtain the network slice management data.

**REQ-PRO\_NSI-FUN-8** The network slice provisioning service provider shall have the capability allowing its authorized consumer to obtain the feasibility of provisioning the requested network slice instance  at a particular point of time.

**REQ-PRO\_NSI-FUN-9** The network slice management service provider shall have the capability allowing its authorized consumer to request the capacity planning of a network slice instance.

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| **End of Change** |