**3GPP TSG-SA5 Meeting #135e *S5-211149***

**e-meeting 25th January - 3rd February 2021**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **28.535** | **CR** | **0023** | **rev** | **-** | **Current version:** | **17.0.0** |  |
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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 | **x** | Core Network | **x** |

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| ***Title:*** | MnSes for closed control loop | | | | | | | | | |
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| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
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| ***Work item code:*** | eCOSLA | | | | |  | ***Date:*** | | | 2021-01-08 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
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| ***Reason for change:*** | | There are different MnS which can be used to support closed control loops, as described in TS 28.535, e.g. performance measurements, KPIs, generic management services etc. Intent driven MnS and policy driven MnS can also be used for closed control loops, which have been captured in some other SDOs, e.g, ETSI ZSM, TMF etc. The management capabilities and services are different for different managementservices. Abstraction levels and interfaces are different, e.g. intent can be used as the goals for the closed-loop, and can be translated to policies and management tasks by MnS producer to execute the closed-loop automation. | | | | | | | | |
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| ***Summary of change:*** | | Introduce high level description of intent driven MnS and policy driven MnS types for closed control loops. | | | | | | | | |
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| ***Consequences if not approved:*** | | It is not clear how to apply different MnS to support closed control loops. | | | | | | | | |
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| ***Clauses affected:*** | | 4.2.x(new), 6.2 | | | | | | | | |
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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:*** | |  | | | | | | | | |

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| **1st of changes** |

### 4.2.x Different MnS for closed control loop

The management capability of different control loops may be different. The MnS producer exposes different management interfaces to the consumer according to different management capability. The characteristics of intent driven MnS and policy driven MnS are described as the following:

- Intent driven MnS: The MnS consumer specifies the intent as the goal of the closed control loop. The MnS producer translates the intent to detailed behavior and corresponding condition for different steps of the closed control loop. In order to satisfy the intent, the MnS producer may implement one or multiple control loop(s).

- Policy driven MnS: The MnS consumer specifies the policies for the closed control loop. The MnS producer uses the policies specified by the MnS consumer for governing of the closed control loop. In order to comply the policies, the MnS producer may implement one or multiple control loop(s).

Intent driven MnS and Policy driven MnS may be used simultaneously in support of a closed loop.

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| **2nd of changes** |

## 6.2 Requirements

**REQ-CSA-CON-01** The 3GPP management system shall have the capability to take actions for a set of communication services serving certain group of UEs based on the target SLS.

**REQ-CSA-CON-02** The 3GPP management system shall have the capability to collect service experience information.

**REQ-CSA-CON-03** The 3GPP management system shall have the capability to analyse the performance information related to the set of communication services serving certain group of UEs.

**REQ-CSA-CON-04** The 3GPP management system shall have the capability to modify the configuration parameters related to the set of communication services serving certain group of UEs.

**REQ-CSA-CON-05** The 3GPP management system shall have the capability to collect NSI related data from one or more 5GC NF(s).

NOTE 1: An example for NSI related data may be QoE data.

**REQ-CSA-CON-06** The 3GPP management system shall have the capability to derive which communication service is associated to the QoE data from the collected NSI related QoE data.

**REQ-CSA-CON-07** The 3GPP management system shall have the capability to ascertain SLS breach.

**REQ-CSA-CON-08** The 3GPP management system shall have the capability to perform the root cause analysis (e.g., identifying the underlying reason) for an SLS breach.

**REQ-CSA-CON-09** The 3GPP management system shall have the capability to take corrective actions against the root cause identified.

**REQ-CSA-CON-10** The 3GPP management system shall have the capability to translate communicate service requirements to cross domain SLS goal and single domain SLS goal.

**REQ-CSA-CON-11** The 3GPP management system shall have the capability to collect single domain SLS analysis as input to cross domain SLS analysis.

**REQ-CSA-CON-12** The 3GPP management system shall have the capability to allow its authorized consumer to control the SLS assurance (e.g. specify the SLS to be assured, enable/disable, specify the assurance time and update the SLS assurance requirements).

**REQ-CSA-CON-13** The 3GPP management system shall have the capability to allow its authorized consumer to obtain the SLS assurance progress information and fulfil information.

NOTE 2: The management system refers to the producer of management service for SLS assurance.

**REQ-CSA-CON-14** The 3GPP management system shall have the capability to do network prediction (e.g. network resource usage and network performance) by analysing the network operation information in special scenarios.

**REQ-CSA-CON-15** The 3GPP management system shall have the capability to take actions such asnetwork configuration and perform network resource reallocation according to the network prediction results.

**REQ-CSA-CON-16** The 3GPP management system shall have the capability to allow its authorized consumer to limit the set of action capabilities executable by an assurance closed loop.

**REQ-CSA-CON-17** The 3GPP management system shall allow an authorized consumer to set a condition to enable/disable an ACCL.

**REQ-CSA-CON-18** The 3GPP management system shall allow an authorized consumer to provide intent as assurance goal to an ACCL.

**REQ-CSA-CON-19** The 3GPP management system shall allow an authorized consumer to monitor intent fulfilment of an ACCL.

**REQ-CSA-CON-20** The 3GPP management system shall allow an authorized consumer to provide policies to drive operations of an ACCL.

**REQ-CSA-CON-21** The 3GPP management system shall allow an authorized consumer to monitor SLS fulfilment by the related policies of an ACCL.

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| **End of changes** |