**3GPP TSG-SA5 Meeting #132e *S5-204357rev3***

**e-meeting 17th 28th August 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **28.535** | **CR** |  | **rev** |  | **Current version:** | **16.0.0** |  |
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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:*** | Add use case for limiting actions of an assurance loop | | | | | | | | | |
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| ***Source to WG:*** | Lenovo, Motorola Mobility | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
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| ***Work item code:*** | eCOSLA | | | | |  | ***Date:*** | | | 7 Aug 2020 |
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| ***Category:*** | B |  | | | | | ***Release:*** | | |  |
|  | *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:*** | | Operators must be offered various capabilities to manage the closed loops running in the operator environment. One such capability is the ability to disable or limit the set of action a closed loop can execute. | | | | | | | | |
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| ***Summary of change:*** | | Add new use case and requirement to disable execution of as set of actions of a closed loop | | | | | | | | |
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| ***Consequences if not approved:*** | | The capability of an operator to disable and coordinate actions across a closed loop across vendors may not be available. | | | | | | | | |
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| ***Clauses affected:*** | | 6.1.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 XXX | | |
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| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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| **1st Modified Section** |

# 6 Specification level use cases and requirements

## 6.1 Use cases

## 6.1.x Limiting the actions of an assurance closed loop

The goal of this use case is to provide the consumer of an assurance closed loop the ability to limit actions the assurance closed loop can execute. This renders the assurance closed loop taking actions that are within the limits of the scope as defined by the consumer.

Assurance closed loops have a defined assurance goal related to a communication service SLS may execute various actions in the deployed operator network. There may be cases in which two or more assurance closed loops can execute the same or related set of actions on a managed entity. For example, assurance closed loops ACL1 and ACL2 for coverage optimization running in neighbouring gNB may take independent decision on the radio signal strength and azimuth to optimize the coverage. These assurance closed loops therefore may have the capability to cause a conflict with both simultaneously changing the azimuth to address a coverage-hole thereby causing an unnecessary coverage-overlap instead.

An authorized coordinating entity (authorized common consumer of the two ACL), for example, another closed loop or operator, should be able to configure the closed loops in a way that such occurrences are minimized. To coordinate the execution of multiple such assurance closed loops in the system the common authorized consumer of the assurance closed loop limits the set of actions of the assurance closed loops to avoid possible conflicts between the two or more assurance closed loops. In the example above: The authorized consumer of an assurance closed loops may limit the coverage optimization configurations signal strength and azimuth configurations to be done only by ACL1.

The 3GPP management system shall therefore provide the ability to limit actions that an assurance closed loop can take, this can be for example via operational policy configurations.

The MnS consumer obtains the allowed actions of assurance closed loops from the MnS producer. The MnS consumer may then internally compare the actions allowed that can be taken by a set of assurance closed loops to determine if possible conflicts exist. Then if conflicts are found, and the MnS consumer determines a possible resolution by limiting the actions of a set of assurance closed loops, then it requests the MnS producer to limit the set of action for example: by configuring new operational policies.

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| **2nd Modified Section** |

## 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-X** The 3GPP management system shall have the capability to allow its authorized consumer to limit the set of actions executable by an assurance closed loop.

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| **End of modifications** |