**3GPP TSG-SA5 Meeting #132e *S5-204302***

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

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **28.535** | **CR** | **0002** | **rev** | **1** | **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 and requirements for close loop execution supervision | | | | | | | | | |
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| ***Source to WG:*** | Lenovo ,Motorola Mobility,Huawei, China Mobile | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
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| ***Work item code:*** | eCOSLA | | | | |  | ***Date:*** | | | 2020-08-04 |
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| ***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:*** | | Beside set the closed loop goal, MnS consumer may need to supervise the network optimization closed loop(s) provided by the MnS producer (e.g. set the supervision point, resume the supervision point and obtain supervision information information). | | | | | | | | |
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| ***Summary of change:*** | | Add use case and requirements for close loop execution supervision | | | | | | | | |
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| ***Consequences if not approved:*** | |  | | | | | | | | |
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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 ... | | |
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| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Revision of S5-204302 and S5-204354 | | | | | | | | |

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| **1st Change** |

### 6.1.X Assurance closed loop execution supervision

Assurance closed loops have a defined goal related to a communication service SLS may execute various actions in the deployed operator network. To fully understand and trust the execution of such an assurance closed loop in the system, The MnS consumer of the assurance closed loop may want to supervise the execution of the assurance closed loop at “supervision point(s)” during the Execute step of the closed loop. At these supervision points the consumer is enabled to review the available information. MnS consumer can set the supervision point before the closed loop is running or when the closed loop is de-activated.

The 3GPP management system provides the ability to enable or disable such “supervision points” during the Execute step of the assurance closed loop. At a supervision point the consumer of the control loop can enable at least one of

- Sending available monitoring information to the specified MnS consumer when the supervision point in the execution of assurance closed loop is reached.

- Pausing the execution of the control loop when a supervision point in the execution of the assurance closed loop is reached and a notification is sent to the MnS consumer.

In general, the assurance closed loop supervision point can be defined by the assurance closed loop and set for “Execute” step.

The MnS consumer obtain the supervision capabilities (i.e. which supervision point(s) are supported to be set, the features for the supported supervision point (i.e. monitor and/or pause) for assurance closed loop(s) from the MnS producer. For example, for NR coverage optimization closed loop, the supervision point can be coverage adjustment action execution supervision point.

Based on the supervision capabilities and its supervision requirements, MnS consumer requests the MnS producer to enable one or multiple supported supervision point(s) for an assurance closed loop.

When a supervision point is reached,

- In case of a supervision point for monitoring is enabled, the monitoring information (including which supervision point is reached and corresponding supervision information in this supervision point) is informed to the MnS consumer. For example, when a supervision point at monitoring coverage adjustment execute step is enabled, the authorized MnS consumer will be informed about the coverage adjustment information (e.g. which Antenna tilt is adjusted).

- In case of a supervision point for pausing is enabled, that particular flow of the assurance closed loop is paused and the authorized MnS consumer is informed with the pause information (including which supervision point is reached and corresponding supervision information). When the notified MnS consumer sends a resume request, the assurance closed loop flow will continue to execute to the next step of the assurance closed loop. For example, when a supervision point at coverage adjustment execute step is enabled, the MnS producer will not execute coverage adjustment action and instead inform the authorized MnS consumer that coverage adjustment action is determined and wait for approval.

- If the coverage adjustment action is approved by the MnS consumer, the MnS consumer will request the MnS producer to resume. Then MnS producer can continue to execute the coverage adjustment action.

- If the coverage adjustment action is not approved by the MnS consumer, the MnS consumer requests MnS producer to reject execution of the coverage adjustment action.

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## 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 enable/disable the supervision point(s) for a particular assurance closed loop.

**REQ-CSA-CON-Y** The 3GPP management system shall have the capability to allow its authorized consumer to obtain supervision capabilities (including the supervision point can be set) for assurance closed loop (s).

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| **End of Change** |