**3GPP TSG-SA5 Meeting #155 *S5-242615***

**Jeju, South Korea, 27 - 31 May 2024**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **536** | **CR** |  | **rev** |  | **Current version:** |  |  |
|  |
| *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:***  | Clarify assurance procedure |
|  |  |
| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | S5 |
|  |  |
| ***Work item code:*** | 6 |  | ***Date:*** | 2024-05-15 |
|  |  |  |  |  |
| ***Category:*** | **A** |  | ***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 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)* |
|  |  |
| ***Reason for change:*** | The procedure for SLS assurance is described in clause 4.1.3.1. According to the diagram the consumer is informed about the fulfilment of the assurance goal after the second loop (with cycle time of the observation period) is completed. However the consumer should be informed after each cycle as the loop is continuosly operational.After the SLS assurance is not required any longer i.e. the second loop has completed the last cycle, the data which was subscribed to is no longer needed and can be unsubscribed, this part of the procedure is missing.  |
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| ***Summary of change:*** | - update Figure 4.1.3.1.1 SLS assurance procedure bring last step into the loop- update Figure 4.1.3.1.1 adding unscribe from Fault and Performance MnS providers- update Figure 4.1.3.1.1 adding unscribe from the Analytic data providers- add new steps 12 and13 reflecting the unsubscribe from providers |
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| ***Consequences if not approved:*** | Incorrect procedure not aligned with stage 2 model for SLS assurance. |
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| ***Clauses affected:*** | 4.1.3.1, Annex X (new) |
|  |  |
|  | **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:*** | No stage 3 impacts |
|  |  |
| ***This CR's revision history:*** |  |

**First change**

### 4.1.3 Procedures

#### 4.1.3.1 SLS Assurance Procedure



Figure 4.1.3.1.1 SLS assurance procedure

For the purpose of the procedure shown in Figure 4.1.3.1.1 "entities participating in the loop" refers to any entity in the 3GPP management system responsible for the functioning of an ACCL to ensure the AssuranceControlLoopGoal required by an AssuranceControlLoop\_Consumer.

1. AssuranceControlLoop\_consumer derives AssuranceControlLoopGoal from the ServiceProfile or SliceProfile.

2. AssuranceControlLoop\_consumer provides the AssuranceControlLoopGoal to Entities\_Participating\_in\_loop by utilizing the provision management services defined in as defined in clause 11.1.1.3 of TS 28.532 [7].

NOTE 1: In case the Entities\_Participating\_in\_loop represents CrossDomain\_Entities\_Participating\_in\_loop, the AssuranceControlLoopGoal is the attribute(s) of the ServiceProfile. In case the Entities\_Participating\_in\_loop represents Domain\_Entities\_Participating\_in\_loop, the AssuranceControlLoopGoal is the attribute(s) of the SliceProfile.

3. Entities\_Participating\_in\_loop subscribes the related performance data (e.g., the packet delay related measurements), fault data, QoE data (e.g., buffer level) and MDT data from respective sources by utilizing the Operation establishStreamingConnection as defined in clause 6.2.1 of TS 28.550 [3].

4. Entities\_Participating\_in\_loop, optionally, subscribes the related analytical data from MDAS producer or network functions, e.g., NWDAF. In case of NWDAF as a provider, Nnwdaf\_EventsSubscription Service as defined in clause 4.2 of TS 29.520 [11] is used.

5. Entities\_Participating\_in\_loop collects the related performance, fault, QoE and MDT data (e.g., the packet delay related measurements), fault data, QoE data (e.g., buffer level) and MDT data from respective sources by utilizing the Operation establishStreamingConnection as defined in clause 6.2.1 of TS 28.550 [3].

6. Entities\_Participating\_in\_loop, optionally, collects the related analytical data from MDAS producer or network functions, e.g., NWDAF. In case of NWDAF as a provider, Nnwdaf\_EventsSubscription Service as defined in clause 4.2 of TS 29.520 [11] is used.

7. Entities\_Participating\_in\_loop assesses if the AssuranceControlLoopGoal has been fulfilled.

8. Entities\_Participating\_in\_loop assesses if and which action to take in case the AssuranceControlLoopGoal has not been fulfilled.

9. As per the mitigation action (e.g., scale out) resources are changed, the generic provisioning management service as defined in clause 11.1 of TS 28.532 [7] is utilized for the same.

10. Action completed.

NOTE 2: The Entities\_Participating\_in\_loop continues to monitor and analyse the performance and perform the adjustment if needed after an observation period.

11. AssuranceControlLoop\_consumer receives assurance fulfilment information from Entities\_Participating\_in\_loop by utilizing the provision management services defined in clause 11.1.1.3 of TS 28.532 [7].

12. AssuranceControlLoop\_consumer removes the AssuranceControlLoopGoal

13. Entities\_Participating\_in\_loop, (if subscribed), unsubscribes from receiving the related analytical data from MDAS producer or network functions, e.g., NWDAF.

14. Entities\_Participating\_in\_loop unsubscribe from receiving he related performance data (e.g., the packet delay related measurements), fault data, QoE data (e.g., buffer level) and MDT data from respective sources.

15. Entities\_Participating\_in\_loop informs the MnS consumer the AssuranceControlLoopGoal is no longer assured

**Second change**

Annex X (informative):
Appendix with UML code for the procedure diagram

@startuml

actor MnS\_Consumer #White

participant Ent\_PiL as "Entities participating\nin Loop" #White

participant Prov as "Provisioning MnS\nprovider" #White

participant PmFm as "Performance and\nFault MnS provider" #White

participant ADP as "Analytics data\nprovider" #White

autonumber

MnS\_Consumer -> MnS\_Consumer: derive assurance control\nloop goals from serviceProfile\nor sliceProfile

MnS\_Consumer -> Ent\_PiL: assurance control loop goal

activate Ent\_PiL #lightgrey

loop for each data source

  Ent\_PiL -> PmFm: Subscribe for PM/FM/QoE/MDT data

  activate PmFm #lightgrey

  Ent\_PiL -> ADP: Subscribe for Analytical data

  activate ADP #lightgrey

  end loop

loop for each observation period

 PmFm -> Ent\_PiL: Receive PM/FM/QoE/MDT data

 ADP -> Ent\_PiL: Receive Analytical data

  Ent\_PiL -> Ent\_PiL:Analyze assurance\nfulfilment

  Ent\_PiL -> Ent\_PiL:Decide action

  Ent\_PiL -> Prov:Execute action

  Ent\_PiL <- Prov:Action completed

  Ent\_PiL -> MnS\_Consumer: inform assurance control\nloop goal fulfilment

  end loop

MnS\_Consumer --> Ent\_PiL: remove assurance control loop goal

loop for each data source

  Ent\_PiL -> ADP: Unsubscribe from Analytical data

  deactivate ADP #lightgrey

  Ent\_PiL -> PmFm: Unsubscribe from PM/FM/QoE/MDT data

  deactivate PmFm #lightgrey

  end loop

Ent\_PiL --> MnS\_Consumer:assurance control loop\ngoal is no longer assured

deactivate Ent\_PiL

hide footbox

@enduml

**End of changes**