**3GPP TSG- Meeting #S5-244894**

**Maastricht, The Netherlands, 19 - 23 August 2024 Revision of S5-244164**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  |  | **CR** |  **0089** | **rev** | **1** | **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:***  | Rel-18 CR TS 28.536 Correction of reference to Alarm Notification |
|  |  |
| ***Source to WG:*** | Ericsson-LG Co., LTD |
| ***Source to TSG:*** | S5 |
|  |  |
| ***Work item code:*** | eSBMA |  | ***Date:*** |  |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***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 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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
|  |  |
| ***Reason for change:*** | In release 18, Alarm notification is moved from TS 28.532 to TS 28.111. Further there are missing document numbers for some references. |
|  |  |
| ***Summary of change:*** | Remove non-valid references and update with correct reference in the document. Add relevant reference document. Remove abbreviation that exist in TR 21.905 |
|  |  |
| ***Consequences if not approved:*** | Error will remain in the document when reference to a document is not correct. Without the TS/TR number in the text, keeping track of the source documents is difficult.  |
|  |  |
| ***Clauses affected:*** | 3.3, 4.1.2.4.3, 4.1.2.5.1, Annex C |
|  |  |
|  | **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:*** |

|  |
| --- |
| Candidate for block approval |

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|  |  |
| ***This CR's revision history:*** |  |

***First change***

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] Void

[3] 3GPP TS 28.550: "Management and orchestration; Performance assurance".

[4] Void

[5] 3GPP TS 28.622: "Telecommunication management; Generic Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".

[6] 3GPP TS 28.541: "Management and orchestration; 5G Network Resource Model (NRM); Stage 2 and stage 3".

[7] 3GPP TS 28.532: "Management and orchestration; Generic management services".

[8] 3GPP TS 32.302: "Telecommunication management; Configuration Management (CM); Notification Integration Reference Point (IRP); Information Service (IS)".

[9] Void

[10] 3GPP TS 32.160: "Management and orchestration; Management service template".

[11] 3GPP TS 29.520: "5G System; Network Data Analytics Services; Stage 3".

[12] Void

[13] Void

[14] 3GPP TS 28.625: "State Management Data Definition Integration Reference Point (IRP); Information Service (IS)".

[15] ITU-T Recommendation X.731: "Information technology - Open Systems Interconnection - Systems Management: State management function".

[16] Void

[17] 3GPP TS 28.535: "Management and orchestration; Management services for communication service assurance; Requirements".

[18] Void

[A] 3GPP TS 28.111: "Fault management".

***Next change***

## 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in TR 21.905 [1].

COSLA Closed control loop SLS Assurance

CSC Communication Service Customer

CSP Communication Service Provider

IOC Information Object Class

JSON JavaScript Object Notation

YAML YAML Ain't Markup Language

MDAS Management Data Analytics Service

MnS Management Service

NF Network Function

NSSI NetworkSlice Subnet Instance

NWDAF NetWork Data Analytics Function

SLS Service Level Specification

***Next change***

##### 4.1.2.4.3 Notifications

This subclause presents a list of notifications, defined in TS 28.532 [7], that provisioning management service consumer can receive. The notification parameter objectClass/objectInstance, defined in TS 32.160 [10], would capture the DN of an instance of an IOC defined in the present document.

***Next change***

##### 4.1.2.5.1 Alarm notifications

This clause presents a list of notifications, defined in TS 28.111 [A], Sthat an MnS consumer may receive. The notification header attribute objectClass/objectInstance, defined in TS 32.302 [8], shall capture the DN of an instance of a class defined in the present document.

| Name | Qualifier | Notes |
| --- | --- | --- |
| notifyNewAlarm | M | -- |
| notifyClearedAlarm | M | -- |
| notifyAckStateChanged | M | -- |
| notifyAlarmListRebuilt | M | -- |
| notifyChangedAlarm | O | -- |
| notifyCorrelatedNotificationChanged | O | -- |
| notifyChangedAlarmGeneral | O | -- |
| notifyComments | O | -- |
| notifyPotentialFaultyAlarmList | O | -- |

***Next change***

Annex C (normative):
AssuranceClosedControlLoop state management

An AssuranceClosedControlLoop is a logical object in the management system that represents complex interaction between the assurance information and configuration information of a grouping of resources. At any time, the management system needs to know the state of an AssuranceClosedControlLoop.

The ITU-T X.731 [15], to which TS 28.625 [14] refers, has defined the inter-relation between the administrative state and operational state of systems in general. Figure X.1 shows the state diagram of an AssuranceClosedControlLoop, where the number in the Figure identify the state changes. The explanations for the state changes are described in Table C.1.



Figure C.1: AssuranceClosedControlLoop state diagram

In an AssuranceClosedControlLoop deployment scenario, the interactions between various management services allow the reconfiguration of the resources controlled by the AssuranceClosedControlLoop based on predefined goal(s). The interactions specified under the column "The state transition events and actions" of Table C.1 shall be present for the state transition.

Table C.1: The AssuranceClosedControlLoop state transition table

|  |  |  |
| --- | --- | --- |
| Trigger number | The state transition events and actions | State |
| 0 | The Assurance MnS producer responds positively to the “create ACCL" message, the ACCL is created and the state is set to Locked  | Locked & Disabled |
| 1 | The Assurance MnS producer has assurance goals to fulfil and starts or resumes operation by setting the operational state to Enabled | Locked & Enabled |
| 2 | The Assurance MnS consumer suspends operation of the ACCL by setting the adminstrative state to Locked  | Locked (Enabled or Disabled) |
| 3 | The Assurance MnS consumer resumes operation of the ACCL by setting the administrative state to Unlocked. | Unlocked(Enabled or Disabled) |
| 4 | The Assurance MnS producer does not have any assurance goals to fulfil and suspends operation by setting the operational state to Disabled  | Disabled(Locked or Unlocked) |
| 5 | The Assurance MnS producer responds positively to the “delete ACCL" message, the ACCL is deleted, and the state is set to NULL (the Initial and Final state) | NULL |

NOTE: The trigger numbers in the first column represent the state changes in Figure C.1

***End of changes***