**3GPP TSG-SA5 Meeting #162 *S5-254014***

**Goteborg, Sweden, 25 - 29 August 2025**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **28.533** | **CR** | **0170** | **rev** | **1** | **Current version:** | **19.2.0** |  |
|  | | | | | | | | |
| *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-19 CR TS 28.533 Update on Annex F | | | | | | | | | |
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| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | SA5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | SBMA\_Ph3 | | | | |  | ***Date:*** | | | 2025-08-15 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | F |  | | | | | ***Release:*** | | | Rel-19 |
|  | *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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
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| ***Reason for change:*** | | * Network slicing provisioning MnS is missing in table F-1 * Relation of Management Capability and MnS is unclear in annex F | | | | | | | | |
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| ***Summary of change:*** | | * Add the missing network slicing provisioning MnS in table F-1 * Add the description on the relation of Management Capability and MnS in annex F | | | | | | | | |
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| ***Consequences if not approved:*** | | * Network slicing provisioning MnS is missing in table F-1 * Relation of Management Capability and MnS is unclear | | | | | | | | |
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| ***Clauses affected:*** | | Annex F | | | | | | | | |
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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 Change** |

Annex F (informative):  
Overview of management capabilities and corresponding solution sets in SBMA

The model driven approach (i.e. usage of CRUD operations specified in TS 28.532 [9] and NRM fragments) can be used to support various types of management capabilities in SBMA. In addition, there are also several management capabilities which are implemented by non-CRUD operations. In the context of SBMA, Management Capability refers to the functional abilities that a management system can offer to monitor, control, and optimize network and service. These management capabilities are offered via standardized service interfaces called MnS. MnS allows these management capabilities to be consumed by internal and external consumers through well-defined APIs. Each MnS instance can combine these SBMA MnS component types A, B and C to deliver a specific management capability (see clause 4.3 combination of MnS components). Table F-1 shows an overview of management capabilities, MnS and corresponding solution sets.

**Table F-1: Overview of management capabilities and corresponding solution sets**

| **Management Feature** | **Management Capability** | **MnS definition** | **Solution Sets** |
| --- | --- | --- | --- |
| Network and network slicing management | NR Provisioning | CRUD operations/notifications (3GPP TS 28.532 [9]) + NR NRM fragment (3GPP TS 28.541 [4]) | RESTFUL |
| NETCONF/YANG |
| 5GC Provisioning | CRUD operations/notifications (TS 28.532 [9]) + 5GC NRM fragment (3GPP TS 28.541 [4]) | RESTFUL |
| NETCONF/YANG |
| Network Slicing Provisioning | CRUD operations/notifications (3GPP TS 28.532 [9]) + Network Slicing NRM fragment (3GPP TS 28.541 [4]) | RESTFUL |
| NETCONF/YANG |
| Network slicing provisioning service (3GPP TS 28.531 [8]) | RESTFUL |
| Edge Computing Management | Edge Computing Provisioning | CRUD operations/notifications (3GPP TS 28.532 [9]) + Edge NRM fragment (3GPP TS 28.538 [40]) | RESTFUL |
| Performance Assurance | Performance Metric Collection Control | CRUD operations/notifications (3GPP TS 28.532 [9]) + PM control NRM fragment (3GPP TS 28.622 [32]) | RESTFUL |
| NETCONF/YANG |
| CRUD operations/notifications (3GPP TS 28.532 [9]) + ManagementDataCollection control NRM fragment (3GPP TS 28.622 [32]) | RESTFUL |
| NETCONF/YANG |
| Performance measurement job control (3GPP TS 28.550 [42]) | RESTFUL |
| Performance Metric Data Report | Streaming data reporting service (3GPP TS 28.532 [9]) + Performance data stream units (3GPP TS 28.550 [42]) | RESTFUL+WebSocket+(GPB/ASN.1)  (also used by the NETCONF/YANG solution set) |
| File data reporting service (3GPP TS 28.532 [9]) + Performance data file format (3GPP TS 28.532 [9]) | RESTFUL+( SFTP/FTPES/HTTPS)+XML |
| Performance Metric Threshold Monitor Control | CRUD operations/notifications (3GPP TS 28.532 [9]) + Threshold monitoring control NRM fragment (3GPP TS 28.622 [32]) | RESTFUL |
| NETCONF/YANG |
| Performance Metric Threshold Notification | notifyThresholdCrossing notification (3GPP TS 28.532 [9]) | RESTFUL (also used by the NETCONF/YANG solution set) |
| Fault Management | Fault control | CRUD operations/notifications (3GPP TS 28.532 [9]) + FM control NRM fragment (3GPP TS 28.111 [68]) | RESTFUL |
| NETCONF/YANG |
| Fault Notification | Fault Notifications (3GPP TS 28.111 [68]) | RESTFUL  (also used by NETCONF/YANG) |
| Trace and MDT management | Trace/MDT data collection control | CRUD operations/notifications (3GPP TS 28.532 [9]) + Trace control NRM fragment (3GPP TS 28.622 [32]) | RESTFUL |
| NETCONF/YANG |
| CRUD operations/notifications (3GPP TS 28.532 [9]) + ManagementDataCollection control NRM fragment (3GPP TS 28.622 [32]) | RESTFUL |
| NETCONF/YANG |
| Trace/MDT data report | Streaming data reporting service (3GPP TS 28.532 [9]) + Trace/MDT stream date schema definition (3GPP TS 32.423 [45]) | RESTFUL+WebSocket+(GPB/ASN.1) (also used by the NETCONF/YANG solution set) |
| File data reporting service (3GPP TS 28.532 [9]) + Trace/MDT file date format definition (TS 32.423 [45]) | RESTFUL+( SFTP/FTPES/HTTPS)+XML |
| QoE management | QoE data collection control | CRUD operations/notifications (3GPP TS 28.532 [9]) + QoE Measurement Collection control NRM fragment (3GPP TS 28.622 [32]) | RESTFUL |
| NETCONF/YANG |
| QoE data report | File data reporting service (3GPP TS 28.532 [9]) + QoE data file format (3GPP TS 26.247 [X]) | RESTFUL+XML |
| File Management | File Retrieval | CRUD operations/notifications (3GPP TS 28.532 [9]) + File retrieval NRM fragment (3GPP TS 28.622 [32]) | RESTFUL |
| NETCONF/YANG |
| File Download | CRUD operations/notifications (3GPP TS 28.532 [9]) + File download NRM fragment (3GPP TS 28.622 [32]) | RESTFUL |
| NETCONF/YANG |
| Notification subscription and Heartbeat notification control | Subscription Control | CRUD operations/notifications (3GPP TS 28.532 [9]) + Notification subscription and heartbeat notification control NRM fragment (3GPP TS 28.622 [32) | RESTFUL |
| NETCONF/YANG |
| Heartbeat Control | CRUD operations/notifications (3GPP TS 28.532 [9]) + Heartbeat notification control NRM fragment (3GPP TS 28.622[32]) | RESTFUL |
| NETCONF/YANG |
| Heartbeat Notification | notifyHeartbeat notification (3GPP TS 28.532 [9]) | RESTFUL |
| MDA | Management Data Analytic | CRUD operations/notifications (3GPP TS 28.532 [9]) + NRM fragment for MDA request and MDA report (3GPP TS 28.104 [57]) | RESTFUL |
| SON | RANSC Management | CRUD operations/notifications (3GPP TS 28.532 [9]) + RANSC NRM Fragment 3GPP TS 28.317 [67]) | RESTFUL |
| SON policy | CRUD operations/notifications (3GPP TS 28.532 [9]) + NRM Fragment for DANR/DES/DRACH/DMRO/DPCI/CES/CPCI/DLMO/CCO Management (3GPP TS 28.541 [4]) | RESTFUL |
| NETCONF/YANG |
| Closed-loop SLS | Communication Service Assurance Control | CRUD operations/notifications (3GPP TS 28.532 [9]) + Assurance management NRM fragment (3GPP TS 28.536 [38]) | RESTFUL |
| Intent driven management | Intent Driven Management | CRUD operations/notifications (3GPP TS 28.532 [9]) + NRM fragment for intent driven management (3GPP TS 28.312 [46]) | RESTFUL |
| AI/ML management | ML model Management | CRUD operations/notifications (3GPP TS 28.532 [9]) + NRM fragment for ML model training/testing/ inference emulation control/ ML model loading / inference (3GPP TS 28.105 [66]) | RESTFUL |
| MnS Registry and Discovery | MnS Registry and Discovery | CRUD operations/notifications (3GPP TS 28.532 [9]) + MnS Registry NRM fragment (TS 28.622 [32]) | RESTFUL |
| NETCONF/YANG |
| MSAC | MnS Access Control | CRUD operations/notifications (3GPP TS 28.532 [9]) + Information model for role based access control (3GPP TS 28.319 [70]) | RESTFUL |
| NSOEU | DSO Rapid Recovery and Threshold Monitoring | CRUD operations/notifications (3GPP TS 28.532 [9])+ DSO Rapid Recovery NRM fragment (3GPP TS 28.318 [12]) + DSO Rapid Recovery NRM fragment(3GPP TS 28.318 [69]) | RESTFUL |

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| **End of change** |