**3GPP TSG- Meeting #**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  |  | **CR** |  | **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:*** |  | | | | | | | | | |
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| ***Source to WG:*** |  | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
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| ***Work item code:*** |  | | | | |  | ***Date:*** | | |  |
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| ***Category:*** |  |  | | | | | ***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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
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| ***Reason for change:*** | | The following management capabilities related to data management are defined in R19:  - MgmtData Registry and Discovery  - External Data Discovery and Request  However, they are missing in the Table F-1: Overview of management capabilities and corresponding solution sets in Annex F in TS 28.533. | | | | | | | | |
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| ***Summary of change:*** | | Add missing management capabilities related to data management in the Table F-1: Overview of management capabilities and corresponding solution sets in Annex F in TS 28.533. | | | | | | | | |
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| ***Consequences if not approved:*** | |  | | | | | | | | |
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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 ... | | |
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| ***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.

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 |
| 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 |
| MgmtData Registry and Discovery | CRUD operations/notifications (3GPP TS 28.532 [9]) + MnS Registry NRM fragment (TS 28.622 [32]) | RESTFUL |
| 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 |
| External Data Management | External Data Discovery and Request | CRUD operations/notifications (3GPP TS 28.532 [9]) + External data type NRM fragment (TS 28.622 [32]) | RESTFUL |

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| **End of Changes** |