**3GPP TSG-SA5 Meeting #154 *S5-242090***

Changsha, China, 15 - 19 April 2024

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| **CR-Form-v12.1** | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **2** | **CR** | Input to draft CR | **rev** | **-** | **Current version:** | **18.6.0** |  |
|  | | | | | | | | |
| *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 |  | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | Rel-19 TS 28.622 Retrieval of stored management data using managementDataCollection IOC | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Microsoft | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | MADCOL\_ph2 | | | | |  | ***Date:*** | | | 2024-04-04 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | B |  | | | | | ***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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The proposed chnages are based on the recommendation and conclusion of TR 28.842 for key issue #1 to enable use of managementDataCollection for retrieval of stored management data. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Description in clause 4.3.47 is update to indicate applicability of managemetnDataCollection to request historical data. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | There is no mechanism for retrival of historical management data. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.3.47 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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** |

### 4.3.47 ManagementDataCollection

#### 4.3.47.1 Definition

This IOC represents a management data collection request job. The requested data could be of kind Trace, MDT (Minimization of Drive Test), RLF (Radio Link Failure) report, RCEF (RRC Connection Establishment Failure) report, PM (performance measurements), KPI (end-to-end key performance indicators), stored (historical) data or a combination of these.

The attribute "managementData" defines the management data which shall be reported. This may either include a list of data categories or a list of management data identified with their name. For further details see clause 4.3.50. The "targetNodeFilter" attribute can be used to target object instance(s) producing the required management data. It is assumed that the consumer may not have detailed knowledge of the network and hence may not identify the exact object instance producing the required management data. In this case consumer can request management data, specified by 3GPP, produced by certain object instance (s) based on a particular location, the domain (CN or RAN) of theobject instances, and the handled traffic (CP or UP) of the object instances.

To activate the production of the requested data, a MnS consumer has to create a "ManagementDataCollection" object instance on the MnS producer.

The MnS producer may derive multiple jobs ("PerfMetricJob", "TraceJob") from a single "ManagementDataCollection" job for collecting the required management data If the MnS producer receives the collected data from multiple sources, it consolidate the data into a set of management data for reporting.

The attribute "collectionTimeWindow" specifies the time window for which the management data should be reported. A “collectionTimeWindow” with startTime in the past indicates historical management data.

The attribute "reportingCtrl" specifies the method and associated control parameters for reporting the produced management data to MnS consumers. Three methods are available: file-based reporting with selection of the file location by the MnS producer, file-based reporting with selection of the file location by the MnS consumer and stream-based reporting.

Editors note: Changes to enable one time reporting are TBD.

The attribute "dataScope" configures, whether the management data should be reported per S-NSSAI or per 5QI or per PLMN, if applicable.

#### 4.3.47.2 Attributes

The ManagementDataCollection IOC includes the attributes inherited from Top IOC (defined in clause 4.3.29) and the following attributes:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **S** | **isReadable** | **isWritable** | **isInvariant** | **isNotifyable** |
| managementData | M | T | T | T | N/A |
| targetNodeFilter | M | T | T | T | N/A |
| collectionTimeWindow | M | T | T | T | N/A |
| reportingCtrl | M | T | T | T | N/A |
| dataScope | O | T | T | T | N/A |

#### 4.3.47.3 Attribute constraints

None.

#### 4.3.47.4 Notifications

The common notifications defined in clause 4.5 are valid for this IOC. In addition, the following set of notifications is also valid.

| **Name** | **S** | **Notes** |
| --- | --- | --- |
| notifyFileReady | M | -- |
| notifyFilePreparationError | M | -- |

### 4.3.48 TimeWindow <<choice>>

#### 4.3.48.1 Definition

This choice defines a time window.

It is a choice between the control parameters required to define the time window as follows:

When startTime and endTime is present (CHOICE\_1), the time window starts when startTime is reached and ends when endTime is reached.

When only the startTime attribute is present (CHOICE\_2), the time window starts when startTime is reached and runs until deletion of the managed object instance including this timeWindow.

When only the endTime attribute is present (CHOICE\_3), the time window starts when the managed object instance including this timeWindow is created and ends when endTime is reached.

#### 4.3.48.2 Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute name** | **S** | **isReadable** | **isWritable** | **isInvariant** | **isNotifyable** |
| CHOICE\_1.1 startTime | CM | T | T | T | T |
| CHOICE\_1.2 endTime | CM | T | T | T | T |
| CHOICE\_2.1 startTime | CM | T | T | T | T |
| CHOICE\_3.1 endTime | CM | T | T | T | T |

#### 4.3.48.3 Attribute constraints

|  |  |
| --- | --- |
| Name | Definition |
| CHOICE\_1.1 startTime  CHOICE\_1.2 endTime | These attributes shall be supported, when the MnS consumer configures the start and end time of the time window.  These attributes are supported for "ManagementDataCollection" IOC. A startTime value in the past indicates historical management data. |
| CHOICE\_2.1 startTime | This attribute shall be supported, if the MnS consumer indicates only the start time of a time window and the end time is defined by the deletion of the managed object instance.  This attribute is not supported for "ManagementDataCollection" IOC. |
| CHOICE\_3.1 endTime | This attribute shall be supported, if the MnS consumer indicates only the end time of a time window and the start time is defined by the creation of the managed object instance.  This attribute is not supported for "ManagementDataCollection" IOC. |

#### 4.3.48.4 Notifications

The clause 4.5 of the <<IOC>> using this <<dataType>> as one of its attributes, shall be applicable.

### 4.3.49 NodeFilter <<dataType>>

#### 4.3.49.1 Definition

This data type defines several selection criteria for the target node(s) i.e., the node(s) producing the requested management data.

The attribute "areaOfInterest" determines the location for which the management data is collected. The system translates the area into the target managed objects. The location is either configured by a list of TAI, a list of cells (identified either by NG-RAN CGI, E-UTRAN CGI or UTRAN CGI) or by a geographical area. The geographical area will be mapped to the cells providing coverage for this area. The cell coverage status at the time of the request is used for the mapping. Managed objects providing service to these cells are considered as target managed objects. Furthermore, an object which name contains or is associated to a managed object providing service to the considered cell, is considered as target managed object as well.

The attribute "networkDomain" is used to select a particular domain (e.g. RAN, CN) for which the management data is collected. The system translates this information into the target managed objects. Managed objects from this selected particular domain (e.g RAN, CN) are considered as target managed objects. Furthermore, an object which name contains or is associated to a managed object of that domain, is considered as target managed object as well.

The attribute "cpUpType" is used to select the traffic type (CP, UP) for which the management data is collected. The system translates this information into the target managed objects. Managed objects catering particular traffic type (CP, UP) are considered as target managed objects. Furthermore, an object which name contains or is associated to a managed object of that traffic type, shall be considered as target managed object as well.

The attribute "sst" is used to select the SST (Slice/Service Type)[22] for which the management data is collected. The system translates this information into the target managed objects. Managed objects related to particular SST will be considered as target managed objects.

The attribute objectInstances is used to select one or more exact managed objects for which management data is collected.

If it is not possible to select the target node(s) (based on a particular selection criteria) deterministically, the selection criteria should not be used.

#### 4.3.49.2 Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute name** | **S** | **isReadable** | **isWritable** | **isInvariant** | **isNotifyable** |
| areaOfInterest | O | T | T | T | N/A |
| networkDomain | O | T | T | T | N/A |
| cpUpType | O | T | T | T | N/A |
| sst | O | T | T | T | N/A |
| objectInstances | O | T | T | T | N/A |

#### 4.3.49.3 Attribute constraints

None.

#### 4.3.49.4 Notifications

The subclause 4.5 of the <<IOC>> using this <<dataType>> as one of its attributes, shall be applicable.