**3GPP TSG-SA5 Meeting #143-e *S5-223133***

**Online, , 9th May 2022 - 17th May 2022**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **28.537** | **CR** | **0009** | **rev** | **-** | **Current version:** | **17.2.0** |  |
|  | | | | | | | | |
| *For* ***[HE](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)******[LP](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)*** *on using this form: comprehensive instructions can be found at  <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-17 CR for TS28.537 editorialCorrections | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | ZTE Corporation | | | | | | | | | |
| ***Source to TSG:*** | SA5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI17 | | | | |  | ***Date:*** | | | 2022-04-28 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Corrections on spelling | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Editorial corrections | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Some editorial errors | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.2.1.2, 4.2.1.3, 6.1.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

#### Start of changes

### 4.2.1 Use cases

#### 4.2.1.1 Configuring heartbeat notification periodicity

| Use case stage | Evolution/Specification | <<Uses>> Related use |
| --- | --- | --- |
| **Goal** | To configure the periodicity at which the management service producer shall emit heartbeat notifications to its authorized management service consumer. |  |
| **Actors and Roles** | An authorized consumer of the management service. |  |
| **Telecom resources** | The management service producer. |  |
| **Assumptions** | N/A |  |
| **Pre-conditions** | The periodicity requested by the management service consumer has a valid value. |  |
| **Begins when** | The management service consumer sends a request to the management service producer to set the periodicity at which it shall emit heartbeat notifications. |  |
| **Step 1** | The management service producer receives the request and sets its internal countdown timer to a value (which can be zero) equal to the periodicity requested by the management service consumer. |  |
| **Step 2** | The management service producer sends a heartbeat notification to all authorized management service consumer(s), provided they previously subscribed to heartbeat notifications. |  |
| **Ends when** | All the steps identified above are successfully completed. |  |
| **Exceptions** | One of the steps identified above fails. |  |
| **Post-conditions** | The notification periodicity has been configured according to the management service consumer request.  A heartbeat notification is sent out to all authorized management service consumer(s). |  |
| **Traceability** | REQ-HB-CTRL-FUN-2. |  |

#### 4.2.1.2 Requesting immediate heartbeat notification

| Use case stage | Evolution/Specification | <<Uses>> Related use |
| --- | --- | --- |
| **Goal** | To trigger the emission of an immediate heartbeat notification by the management service producer. |  |
| **Actors and Roles** | An authorized consumer of the management service. |  |
| **Telecom resources** | The management service producer. |  |
| **Assumptions** | N/A |  |
| **Pre-conditions** | N/A |  |
| **Begins when** | The soliciting management service consumer sends a request to the management service producer to emit immediately a heartbeat notification. |  |
| **Step 1** | The management service producer receives the request and sends immediately a heartbeat notification to all authorized management service consumer(s) who had previously subscribed to heartbeat notifications.  The management service producer countdown timer is not impacted. |  |
| **Ends when** | All the steps identified above are successfully completed. |  |
| **Exceptions** | One of the steps identified above fails. |  |
| **Post-conditions** | The immediate heartbeat notification has been emitted according to the soliciting management service consumer request. |  |
| **Traceability** | REQ-HB-CTRL-FUN-3, REQ-HB-NOTIF-FUN-2. |  |

#### 4.2.1.3 Emitting periodic heartbeat notifications

| Use case stage | Evolution/Specification | <<Uses>> Related use |
| --- | --- | --- |
| **Goal** | To send periodic heartbeat notifications at the periodicity requested by the management service consumer. |  |
| **Actors and Roles** | An authorized producer of the management service. |  |
| **Telecom resources** | The management service consumer. |  |
| **Assumptions** | The heartbeat notification periodicity has been configured according to the management service consumer request. | Configuring heartbeat notification periodicity |
| **Pre-conditions** | N/A |  |
| **Begins when** | The internal countdown timer managed by the management service producer has reached the value 0. |  |
| **Step 1** | The management service producer sends a heartbeat notification to all authorized management service consumer(s), provided they previously subscribed to heartbeat notifications. |  |
| **Step 2** | The management service producer resets its internal countdown timer to the value of the heartbeat notification periodicity. | Configuring heartbeat notification periodicity |
| **Ends when** | All the steps identified above are successfully completed. |  |
| **Exceptions** | One of the steps identified above fails. |  |
| **Post-conditions** | The periodic heartbeat notification has been emitted to all authorized management service consumer(s) at the requested periodicity. |  |
| **Traceability** | REQ-HB-NOTIF-FUN-1. |  |

#### Second change

### 

### 6.1.1 Description

Management data is referring to data produced by radio access network functions, core network functions or management functions and used for management purposes. Management data specified by 3GPP for 5G management is classified into 5G performance measurements as defined by TS 28.552 [4], 5G end to end key performance indicators as defined by TS 28.554 [5] and Trace/MDT data as defined by TS 32.422 [6]. The combined performance measurements and key performance indicators are also called performance metrics.

Management data is produced on request. Therefore, the 3GPP management system needs to enable a data consumer to request management data to be produced. The data requester must specify the type of data to be produced as well as the radio access network functions, core network functions and management functions where the data shall be produced. The target managed object instances can be identified in multiple ways:

- The requester can specify the target managed object instances based on the managed object tree (as defined in the 3GPP Network Resource Models) representing the network and management functions. The simplest approach is to directly identify the managed object instances where data shall be produced. More sophisticated approaches allow to specify one or more subtrees where data shall be produced and may specify also managed object classes.

- The requester can specify a geographical area or a tracking area. The system needs to translate this information into the target managed object instances.

After production the data needs to be reported to the data consumers. Reporting can be based on multiple reporting methods such as file or streaming. Data reporting needs to be requested by the data consumer. The requestor needs to specify the control parameters for reporting such as the reporting method and the address the data shall be delivered to.

Depending on access rights and security settings, data consumers may be subject to restrictions regarding the data they can access.

#### End of changes