**3GPP TSG-SA4 Meeting #111e  *S4-201363***

**Electronic meeting, Telco, Nov 11-20, 2020**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **26.512** | **CR** | **0002** | **rev** | **0** | **Current version:** | **16.0.0** |  |
|  | | | | | | | | |
| *For* [***HELP***](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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Additions and Modifications to M1 API on Metrics Reporting Configuration | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Qualcomm Incorporated | | | | | | | | | |
| ***Source to TSG:*** | S4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GMS3 | | | | |  | ***Date:*** | | | 2020-11-09 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *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-12 (Release 12) Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The M1 Metrics Reporting Configuration API is currently missing basic description of the associated procedures under clause 4.3 which currently contains such description text for all the other M1d provisioning interfaces. There are some existing bugs in clause 7.8 and its sub-clauses which should be corrected.  It should be noted that during the 01-Oct 2020 MBS telco on 5GMS3 Maintenance, a Draft CR in S4al201067 which proposed similar modifications was agreed. The original intent of this CR was simply to formalize the agreed changes in that dCR. However, upon further consideration, the author believes that it is desirable and logical to align Rel-16 TS 26.512 functionality regarding the configuration and reporting of metrics between the 5GMS AF and 5GMS Application Provider with the AF Event Exposure Service framework and procedures as defined by SA2 and CT3. This matter is further elaborated in a companion Discussion Paper, S4-201358. To attain such alignment, it is necessary to withdraw some of the changes in that dCR with regards to metrics configuration and reporting operations between 5GMS AF and 5GMS Application Provider. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Addition of new clause 4.3.9 on metrics reporting configuration procedures. Various corrections to clause 7.8 (M1 Metrics Reporting Configuration API) and its sub-clauses. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Missing stage 3 text, mistakes, and lack of clarity and consistency in current sections pertaining to the M1 Metrics Reporting Configuration API. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | New clause 4.3.9 and its sub-clauses, clause 7.8 and its sub-clauses | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

1st CHANGE: New clause 4.3.9

### 4.3.9 Metrics Reporting Configuration procedures

#### 4.3.9.1 General

These procedures are used by the 5GMSd Application Provider to configure QoE metrics reporting functionality associated with downlink streaming. This clause defines the basic procedures. More details are provided in clause 7.8.

A given instance of a Metrics Reporting Configuration is identified by the metricsReportingConfigurationId property of the MetricsReportingConfiguration resource, The properties of that resource, as described in clause 7.3.8.1, pertain to metrics collection and reporting by the Media Session Handler to the 5GMS AF.

#### 4.3.9.2 Create Metrics Reporting Configuration

This procedure is used by the 5GMSd Application Provider to create a Metrics Reporting Configuration for a particular Provisioning Session. The 5GMSd Application Provider shall use the HTTP POST method for this purpose and the request message body may include a MetricsReportingConfiguration resource, as specified in clause 7.8.3.1. Upon successful operation, the 5GMSd AF shall respond with a 201 (Created) response message and the resource URL for the newly-created Metrics Reporting Configuration shall be returned in the Location header field. If the procedure is unsuccessful, the 5GMSd AF shall provide a response code as defined in clause 6.3.

This procedure may be perfomed multiple times to provision different Metrics Reporting Configurations in the scope of a particular Provisioning Session. Each such configuration is represented by a different value of metricsReportingConfigurationId.

#### 4.3.9.3 Read Metrics Reporting Configuration

This procedure is used by the 5GMSd Application Provider to obtain the properties of an existing Metrics Reporting Configuration resource from the 5GMSd AF. The 5GMSd Application Provider shall use the GET method for this purpose. If successful, the 5GMSd AF shall respond with a 200 (OK) and the requested MetricsReportingConfiguration resource (see clause 7.8.3.1) shall be returned in the body of the HTTP response message. If the procedure is unsuccessful, the 5GMSd AF shall provide a response code as defined in clause 6.3.

#### 4.3.9.4 Update Metrics Reporting Configuration

The update operation is invoked by the 5GMSd Application Provider to initially upload the Metrics Reporting Configuration resource, or in the case of an existing Metrics Reporting Configuration resource, to entirely replace or modify certain properties of that resource. All available properties may be updated. The HTTP PATCH or HTTP PUT methods shall be used for the update operation.

If the procedure is successful, the 5GMSd AF shall respond with a 200 (OK) reflecting the successful update operation. If the procedure is unsuccessful, the 5GMSd AF shall provide a response code as defined in clause 6.3.

#### 4.3.9.5 Delete Metrics Reporting Configuration

This operation is used by the 5GMSd Application Provider to destroy a Metrics Reporting Configuration resource and to terminate the related metrics reporting procedure. The HTTP DELETE method shall be used for this purpose. As a result, the 5GMSd AF should release any associated resources, discard any pending metrics reports, and delete any corresponding configurations.

If the procedure is successful, the 5GMSd AF shall respond with a 200 (OK) response message. If the procedure is unsuccessful, the 5GMSd AF shall provide a response code as defined in clause 6.3.

END OF 1st CHANGE

2nd CHANGE: Modification to clause 7.8 andf its sub-clauses

## 7.8 Metrics Reporting Configuration API

### 7.8.1 Overview

The Metrics Reporting Configuration API allows an 5GMS System operator or a 5GMSd Application Provider to configure the Metrics Collection and Reporting procedure for a particular Provisioning Session at interface M1d.

### 7.8.2 Resource structure

The Metrics Reporting Configuration API is accessible through the following URL base path:

{apiRoot}/3gpp-m1d/v1/provisioning-sessions/{provisioningSessionId}/

Table 7.8.2‑1 below specifies the operations and the corresponding HTTP methods that are supported by this API. In each case, the Provisioning Session identifier shall be substituted into {provisioningSessionId} in the above URL template and the sub-resource path specified in the second column of the table shall be appended to the URL base path.

Table 7.8.2-1: Metrics Reporting Configuration resource

|  |  |  |  |
| --- | --- | --- | --- |
| Operation | Sub‑resource path | Allowed HTTP method(s) | Description |
| Create Metrics Reporting Configuration | metrics‑reporting‑configuration | POST | Create and optionally provide a configuration; returns the *{metricsReportingConfigurationId}*. |
| Read Metrics Reporting Configuration | metrics‑reporting‑configuration/  {metricsReportingConfigurationId} | GET | Retrieve an existing Metrics Reporting Configuration. |
| Update Metrics Reporting Configuration | PUT,  PATCH | Provide initial upload of a new configuration, or either the modification of, or replacement to, an existing configuration. |
| Delete Metrics Configuration | DELETE | Delete a configuration, disables reporting. |

### 7.8.3 Data model

#### 7.8.3.1 MetricsReportingConfiguration resource

The data model for the MetricsReportingConfiguration resource is specified in Table 7.8.3-1 below:

Table 7.8.3.1‑1: Definition of MetricsReportingConfiguration resource

|  |  |  |  |
| --- | --- | --- | --- |
| Property name | Type | Cardinality | Description |
| metricsReportingConfigurationId | String | 1..1 | An identifier for this Metrics Reporting Configuration that is unique within the scope of the enclosing Provisioning Session. |
| scheme | URI String | 0..1 | The scheme associated with this Metrics Reporting Configuration. A scheme may be associated with 3GPP or with a non-3GPP entity.  If not specified, the 3GPP metrics scheme urn:‌3GPP:‌ns:‌PSS:‌DASH:‌QM10 from TS 26.247 shall apply. |
| dataNetworkName | String | 0..1 | The Data Network Name (DNN) which shall be used when sending metrics reports.  If not specified, the default DNN shall be used. |
| reportingInterval | DurationSec | 0..1 | The time interval between successive metrics reports.  If not specified, a single final report shall be sent after the streaming session has ended. |
| samplePercentage | Percentage | 0..1 | The proportion of streaming sessions for which metrics shall be reported.  If not specified, reports shall be sent for all sessions. |
| urlFilters | Array(String) | 0..N | A list of content URL patterns for which metrics shall be reported.  If not specified, reporting shall be done for all URLs. |
| metrics | Array(String) | 0.1 | A non-empty list of metrics which shall be collected and reported.  For the 3GPP scheme urn:‌3GPP:‌ns:‌PSS:‌DASH:‌QM10 the listed metrics shall correspond to one or more of the metrics as specified in clauses 10.3 and 10.4, respectively, of TS 26.247 [7], and the quality reporting scheme and quality reporting protocol as defined in clauses 10.5 and 10.6, respectively, of [7] shall be used.  If not specified, the complete (or default if applicable) set of metrics associated with the specified scheme shall be collected and reported. |

END OF 2nd CHANGE