**3GPP TSG-SA4 Meeting #113e *S4-210440***

**Electronic meeting, Telco, Apr 06-14, 2021**

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| *CR-Form-v12.0* | | | | | | | | |
| **Draft CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **26.512** | **CR** | **-** | **rev** | **-** | **Current version:** | **16.2.0** |  |
|  | | | | | | | | |
| *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 | **X** | Radio Access Network |  | Core Network | **X** |

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| ***Title:*** | ClientId for Consumption and Metrics Reporting, and Dynamic Policy and Network Assistance Access | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Qualcomm Incorporated | | | | | | | | | |
| ***Source to TSG:*** | SA4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GMS3 | | | | |  | ***Date:*** | | | 2020-03-31 |
|  |  | | | |  | |  | | |  |
| ***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:*** | | 5GMSd Client identification during incidences of consumption or QoE metrics reporting is not fully specified in TS 26.512. More complete definition of “clientId” and ensuring its inclusion during the occurrence of these events via M5 interaction is necessary to enable unambigous identification of the subscriber device generating the information associated with these events, for collection and correlation by upstream network function such as the Application Service Provider, as well as OAM or data analytics servers in the operator’s network. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Specification of the type and format of the “ClientId” parameter to be included in consumption reporting and metrics reporting sent by the 5GMS Client to the 5GMS AF. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Inability to ensure UE data available at the 5GMS AF can be properly utilized by Network Function consumers of such information in the form of AF Event Exposure services. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 3.3, 4.7.2, 4.7.4, 4.7.5, 7.7.1, 11.3.3.1, 11.4 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |
| ***56*** | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

1st CHANGE: Added new abbreviations to clause 3.3

## 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

5GMS 5G Media Streaming

*---- <snipped> ----*

GPSI Generic Public Subscription Identifier

*---- <snipped> ----*

MSISDN Mobile Subscriber ISDN number

*---- <snipped> ----*

END OF 1st CHANGE

2nd CHANGE: Editorial correction to clause 4.7.2

### 4.7.2 Procedures for Service Access Information

#### 4.7.2.1 General

Service Access Information is the set of parameters and addresses needed by the 5GMS Client to activate reception of a downlink media streaming session or to activate an uplink media streaming session for contribution. The data model of the ServiceAccessInformtion resource acquired by the Media Session Handler of the 5GMS Client is shown in clause 11.2.3. Typically, the 5GMSd Client receives via M8 a media entry point (e.g. a URL to a DASH MPD or a URL to a progressive download file) that can be consumed by the Media Player and is handed to the Media Player through M7. In addition, the media entry point URL may trigger the Media Session Handler to fetch the Service Access information from the 5GMS AF for this media streaming session.

This clause specifies the procedures whereby the 5GMS Client fetches the Service Access Information from the 5GMS AF.

END OF 2nd CHANGE

3rd CHANGE: Changes to clause 4.7.4

### 4.7.4 Procedures for consumption reporting

These procedures are used by the Media Session Handler and the Consumption Reporting functions of the 5GMSd Client to submit a consumption report via the M5d interface if Consumption Reporting is applied for a downlink streaming session.

The Service Access Information indicating whether Consumption Reporting is provisioned for downlink streaming sessions is described in clause 11.2.3. When the ClientConsumptionReportingConfiguration.samplePercentage value is 100, the Media Session Handler shall activate the consumption reporting procedure. If the samplePercentage is less than 100, the Media Session Handler shall generate a random number which is uniformly distributed in the range of 0 to 100, and the Media Session Handler shall activate the consumption report procedure when the generated random number is of a lower value than the samplePercentage value.

If the consumption reporting procedure is activated, the Media Session Handler shall submit a consumption report to the 5GMSd AF when any of the following conditions occur:

* Start of consumption of a downlink streaming session;
* Stop of consumption of a downlink streaming session;
* Upon determining the need to report ongoing 5GMS consumption at periodic intervals determined by the ClientConsumptionReportingConfiguration.reportingInterval property.
* Upon determining a location change, if the ClientConsumptionReportingConfiguration.locationReporting property is set to True.

Whenever a consumption report is sent, the Media Session Handler shall reset its reporting interval timer to the value of the reportingInterval property and it shall begin countdown of the timer again. Whenever the Media Session Handler stops the consumption of a downlink streaming session, it shall disable its reporting interval timer.

In order to submit a consumption report, the Media Session Handler shall send an HTTP POST message to the 5GMSd AF. If several 5GMSd AF addresses are listed in the ClientConsumptionReportingConfiguration.‌serverAddresses array (see table 11.2.3.1-1), the Media Session Handler shall choose one and send the message to the selected. The request body shall be a ConsumptionReport structure, as specified in clause 11.3.3.1.The server shall respond with a 200 (OK) message to acknowledge successful processing of the consumption report.

The Consumption Reporting API, defining the data formats and structures and related procedures for consumption reporting, is described in clause 11.3.

A 5GMS Client identifier shall be included in the consumption report. Its value shall be a GPSI value [7], if available to the Media Session Handler, or else a stable and globally unique string.

END OF 3rd CHANGE

4th CHANGE: Changes to clause 4.7.5

### 4.7.5 Procedures for metrics reporting

The M5 procedures for QoE metrics reporting pertain to the combination of the provisioning of metrics collection and reporting in the Media Session Handler using relevant Service Access Information, and the sending of collected metrics by the Media Session Handler to the 5GMS AF in accordance with the configured metrics scheme(s). A metrics scheme may be 3GPP-defined or non-3GPP-defined.

When the metrics collection and reporting feature is activated for a downlink media streaming session, one or more metrics configuration sets, each associated with a metrics scheme, may be provided to the 5GMS Client. A given metrics configuration set contains information such as the 5GMS AF address(es) to which metrics are to be sent by the Media Session Handler, metrics reporting interval, target percentage of media streaming sessions for which reports should be sent, and the set of metrics to be collected and reported. See TS 26.501 [2] for additional details.

For progressive download and DASH streaming services, the listed metrics in a given metrics configuration set are associated with the 3GPP metrics scheme and shall correspond to one or more of the metrics as specified in clauses 10.3 and 10.4, respectively, of TS 26.247 [4].

Details of the metrics reporting API are provided in clause 11.4, and for 3GP-DASH based downlink media streaming services, the 3GPP-defined metrics reporting scheme and metrics report format are defined in clause 11.4.3.

A 5GMS Client identifier may be included in the metrics report. Its value shall be a GPSI value [7], if available to the Media Session Handler, or else a stable and globally unique string.

END OF 4th CHANGE

5th CHANGE: Editorial correction to clause 7.7.1

## 7.7 Consumption Reporting Provisioning API

### 7.7.1 Overview

The Consumption Reporting Provisioning API is a RESTful API that allows a 5GMSd Application Provider to configure the Consumption Reporting Procedure for a particular downlink media sreaming Provisioning Session at interface M1d. The different procedures are described in clause 4.3.8. The Consumption Reporting Configuration is represented by a ConsumptionReportingConfiguration, the data model for which is specified in clause 7.7.3 below. The RESTful resources for managing the Consumption Reporting Configuration are specified in clause 7.7.2.

END OF 5th CHANGE

6th CHANGE: Changes to clause 11.3.3.1

#### 11.3.3.1 ConsumptionReport format

This type represents the format of a consumption report instance. This structure is used by the Media Session Handler to report the consumption.

Table 11.3.3.1-1: Definition of ConsumptionReport format

|  |  |  |  |
| --- | --- | --- | --- |
| Property name | Data type | Cardinality | Description |
| mediaPlayerEntry | string | 1..1 | Identifies the Media player entry.  In the case of DASH, the media player entry pointer shall be the URL of the MPD. |
| reportingClientId | string | 1..1 | Identifier of the 5GMSd Client that consumed the streaming media service associated with this consumption report.  A GPSI value (see clause 28.8 of TS 23.003 [7]), if available to the Media Session Handler, or else a stable and globally unique string. |
| consumptionReportingUnits | Array(Consumption‌Reporting‌Unit) | 1..1 | An array of consumption reporting units. |

END OF 6th CHANGE

7th CHANGE: Changes to clause 11.4

## 11.4 Metrics Reporting API

### 11.4.1 General

The Metrics Reporting API allows the Media Session Handler to send QoE metrics reports to the 5GMS AF. This procedure is configured by the ServiceAccessInformation resource, as defined in clause 11.2.3. Note that multiple metrics configurations can be active at the same time, each identified by a unique metricsReportingConfigurationId.

### 11.4.2 Reporting procedure

Metrics reports related to a specific metricsReportingConfigurationId shall be submitted to one of the URLs selected from the ClientMetricsReportingConfiguration.serverAddresses array of the ServiceAccessInformation resource (see clause 11.2.3). The path of the URL should conform to the following general format:

{apiRoot}/3gpp-m5/v1/metrics-reporting/{provisioningSessionId}/{metricsReportingConfigurationId}

where {provisioningSessionId} shall be substituted by the 5GMS Client with the relevant Provisioning Session identifier and {metricsReportingConfigurationId} shall be substituted with the relevant Metrics Reporting Configuration identifier.

The only HTTP method supported by this endpoint is POST.

### 11.4.3 Report format

Metrics reports shall be submitted by the Media Session Handler in a format specified by the metrics reporting scheme in question. The Content-Type HTTP request header shall be set in accordance with the relevant metrics reporting scheme specification.

NOTE: For downlink media streaming, TS 26.247 [7] clauses 10.6.1 and 10.6.2 specify the required MIME content type and metrics report format for the 3GPP urn:‌3GPP:‌ns:‌PSS:‌DASH:‌QM10 metrics reporting scheme.

In XML documents representing metrics reports for 3GP-DASH downlink media streaming services, the **ReceptionReport**@clientID attribute, if present, shall be a GPSI value, if available to the Media Session Handler, or else a stable and globally unique string.

END OF 7th CHANGE