**3GPP TSG-S4 Meeting #133-e*****S4-251226r01***

**Electronic, Online, 18th–25th July 2025** revision of S4aI250095

|  |
| --- |
| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **26.510** | **CR** | **0021** | **rev** | **3** | **Current version:** | **18.4.0** |  |
|  |
| *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:***  |  |
|  |  |
| ***Source to WG:*** | BBC |
| ***Source to TSG:*** | S4 |
|  |  |
| ***Work item code:*** | AMD\_PRO-MED |  | ***Date:*** | 2025-07-11 |
|  |  |  |  |  |
| ***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 canbe 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:*** | Satisfy the objectives of Work Task 1 “Common Media Client Data” as documented in S4-250689. |
|  |  |
| ***Summary of change:*** | * Generic JSON-based document syntax for reporting of CMCD information by the 5GMS AS to the 5GMS AF at reference point M3.
* IANA registration of MIME media type for the above.
* Addition of content identifier to *createMediaDeliverySession()* method at reference point M6/M11 and internal data model of the Media Session Handler for use in both consumption reporting and metrics reporting of client data.
 |
|  |  |
| ***Consequences if not approved:*** | Objectives of the Work Item not completely satisfied. |
| ***Q*** |  |
| ***Clauses affected:*** | 5.3.5.1, 5.3.5.2, 9.5.3, 9.5.3.1 (new), 9.5.3.2 (new), 9.6.3.2, 11.2.2.1, 11.2.3, A.1, E (new) |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** | **Y** |  |  Other core specifications | TS 26.512 CR0089 |
| ***affected:*** |  | **X** |  Test specifications |  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications |  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** | CR [S4aI250075]: Submitted for WG *ad hoc* agreement.CRr1 [S4-250758]: Submitted for WG endorsement.* Refactoring of JSON-based metrics reporting envelope to push all CMCD-related information into TS 26.512.

CRr2 [S4aI250095]: Submitted for WG endorsement.* *version* parameter of MIME type signals 3GPP release number only.
* Add content identifier to MSH internal data structure and as parameter of *createMediaDeliverySession()* method at M6/M11.

CRr3 [S4-251226]: Submitted SWG-agreed content for WG agreement.* Rebaselined OpenAPI YAML against TSG#108.
* Renamed ClientData as MediaStreamingClientData for better future-proofing.
* Added contentId property to MetricsSession so that the 5GMS notion of content identifier doesn’t interfere with any external content identifier (e.g. declared in the client data reporting configuration of a DASH MPD).
	+ This now matches session identifier representation.
* Updated IANA MIME media type proforma on advice from 3GPP Specification Manager.

CR0021r4 [S4-25xxxx]: Resubmitted for WG agreement addressing review comments from Qualcomm:* Clarified mechanism to extend the new JSON-based metrics reporting envelope.
* Provided cross-reference to explanation of reporting client identifier.
* Added change at clause 9.6.3.2 specifying that the mediaConsumed property is populated from the content identifier currently set in the Media Session Handler state (amongst other things, potentially).
 |

# Code changes

The code changes associated with this Change Request are available for review at the following URLs on 3GPP Forge:

<https://forge.3gpp.org/rep/sa4/amd-pro-med/-/merge_requests/1/diffs?commit_id=50c85a84e0741c99e377028fb99001a2e854a231>

The proposed changes are reproduced below for posterity.

## TS26510\_Maf\_SessionHandling\_MetricsReporting.yaml

---a/TS26510\_Maf\_SessionHandling\_MetricsReporting.yaml
+++b/TS26510\_Maf\_SessionHandling\_MetricsReporting.yaml

@@ -1,7 +1,7 @@

1 1 openapi: 3.0.0

2 2 info:

3 3 title: Maf\_SessionHandling\_MetricsReporting

4 - version: 1.0.1

 4 + version: 1.0.2

5 5 description: |

6 6 Media Delivery: Metrics Reporting API

7 7 © 2025, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

@@ -12,7 +12,7 @@ tags:

12 12 description: 'Media Delivery: Metrics Reporting API'

13 13

14 14 externalDocs:

15 - description: 'TS 26.510 V18.4.0; Media Delivery; Interactions and APIs for media session handling'

 15 + description: 'TS 26.510 V19.0.0; Media Delivery; Interactions and APIs for media session handling'

16 16 url: 'https://www.3gpp.org/ftp/Specs/archive/26\_series/26.510/'

17 17

18 18 servers:

@@ -55,6 +55,10 @@ paths:

55 55 schema:

56 56 type: string

57 57 format: xml

 58 + application/3gpp-media-delivery-metrics-report+json:

 59 + schema:

 60 + $ref: '#/components/schemas/MetricsReport'

 61 + format: json

58 62 application/\*:

59 63 schema:

60 64 type: string

@@ -98,3 +102,61 @@ components:

98 102 tokenUrl: '{tokenUrl}'

99 103 scopes:

100 104 metrics-report\_submit: Submit a metrics report

 105 +

 106 + schemas:

 107 + MetricsReport:

 108 + description: 'A timestamped report of QoE metrics pertaining to one or more media delivery sessions'

 109 + type: object

 110 + required:

 111 + - reportTimestamp

 112 + - sessions

 113 + properties:

 114 + reportTimestamp:

 115 + $ref: 'TS29571\_CommonData.yaml#/components/schemas/DateTime'

 116 + sessions:

 117 + type: array

 118 + items:

 119 + $ref: '#/components/schemas/MetricsSession'

 120 + minItems: 0

 121 +

 122 + MetricsSession:

 123 + description: 'A set of metrics samples pertaining to a particular media delivery session'

 124 + type: object

 125 + required:

 126 + - clientId

 127 + - provisioingSessionId

 128 + - sessionId

 129 + properties:

 130 + clientId:

 131 + type: string

 132 + provisioningSessionId:

 133 + $ref: 'TS26510\_CommonData.yaml#/components/schemas/ResourceId'

 134 + sessionId:

 135 + $ref: 'TS26510\_CommonData.yaml#/components/schemas/MediaDeliverySessionId'

 136 + contentId:

 137 + type: string

 138 + description: 'Identifying the content currently being consumed in the media delivery session.'

 139 + samples:

 140 + type: array

 141 + items:

 142 + $ref: '#/components/schemas/MetricsSample'

 143 + minItems: 0

 144 +

 145 + MetricsSample:

 146 + description: 'An abstract timestamped sample of one or more metrics'

 147 + type: object

 148 + required:

 149 + - sampleTimestamp

 150 + anyOf:

 151 + - required: [mediaStreamingClientData]

 152 + properties:

 153 + sampleTimestamp:

 154 + $ref: 'TS29571\_CommonData.yaml#/components/schemas/DateTime'

 155 + sliceInfo:

 156 + $ref: 'TS29571\_CommonData.yaml#/components/schemas/Snssai'

 157 + dataNetworkName:

 158 + $ref: 'TS29571\_CommonData.yaml#/components/schemas/Dnn'

 159 + mediaStreamingClientData:

 160 + allOf:

 161 + - $ref: 'TS26512\_ClientData.yaml#/components/schemas/MediaStreamingClientData'

 162 + - description: 'Client data for the 5G Media Streaming System. See clause 11.4.3.3 of TS 26.512.'

Network Media Session Handling (M3, M5) interactions
Metrics Reporting

#### 5.3.5.1 Procedures

These procedures are used by the Media AS at reference point M3 or else by the Metrics Reporting functions of the Media Client and subsequently by the Media Session Handler at reference point M5 to submit a metrics report to one of the Media AF instances listed in the client metrics reporting configuration of the Service Access Information resource previously retrieved using the procedure in clause 5.3.2.3.

- When the metrics collection and reporting feature is provisioned for media delivery sessions using the operations specified in clause 5.2.11, one or more client metrics reporting configurations, each associated with a provisioned Metrics Reporting Configuration, shall be provided to the Media Session Handler and the Media AS (both acting in this case as metrics reporting entity) in the Service Access Information.

- When the metrics collection and reporting feature is provisioned for RTC sessions using the operations specified in clause 5.2.11, one or more client metrics reporting configurations, each associated with a provisioned Metrics Reporting Configuration, shall be provided to the Media Session Handler and the Media AS (both acting in this case as metrics reporting entity) in the Service Access Information.

A given client metrics reporting configuration contains information including:

1. The subset of metrics from the provisioned metrics scheme to be collected and reported by the metrics reporting entity;

2. The frequency at which these metrics are to be sampled by the metrics reporting entity;

2a. Thresholds for certain metrics, the crossing of which drives their reporting by the metrics reporting entity;

2b. The locations of the Media Client (or remote peer outside the Media Delivery System) where metrics collection is requested;

NOTE: When the metrics reporting entity is a Media AS, it may be aware of changes to the location of a remote peer outside the Media Delivery System.

3. The proportion of media delivery sessions for which metrics reports are to be sent by the metrics reporting entity;

4. The portion of the media session (represented by start offset and/or duration parameters) for which metrics reports are to be sent by the metrics reporting entity if reporting is enabled for that media delivery session;

5. The interval at which metrics reports are to be sent by the metrics reporting entity if reporting is enabled for a media delivery session; and

6. The Media AF address(es) to which metrics reports are to be sent.

Furthermore:

- Before a media delivery session is started, the metrics reporting entity shall check if the Service Access Information includes any Client Metrics Reporting Configurations. If any such configurations are present, the metrics reporting entity shall initiate the metrics reporting procedure for the media delivery session based on these configurations.

- During the course of the media delivery session, the metrics reporting entity shall periodically check if any Metrics Reporting Configurations have been added to or removed from the Service Access Information and shall activate or deactivate the metrics reporting procedure as appropriate for the media delivery session in question.

The data type of the Metrics Reporting Configuration signalled as part of the Service Access Information indicating at reference point M5 is specified in clause 9.2.3.

The metrics reporting entity shall decide whether to activate the metrics reporting procedure for a particular media delivery session at the start of that session and whenever any Client Metrics Reporting Configuration changes in the related Service Access Information.

- When the samplePercentage property in a Metrics Reporting Configuration has a value of 100 percent, the metrics reporting entity shall activate the metrics reporting procedure for that configuration.

- If the samplePercentage value in a Metrics Reporting Configuration is less than 100 percent, the metrics reporting entity shall generate a random number which is uniformly distributed in the range of 0 to 100, and the metrics reporting entity shall activate the metrics reporting procedure for the Metrics Reporting Configuration when the generated random number is of a lower value than the samplePercentage value.

If the metrics reporting procedure is activated for a particular Client Metrics Reporting Configuration, the metrics reporting entity shall produce and submit a metrics report to the Media AF using the procedure specified in clause 5.3.5.2 when any of the following conditions are met:

- On determining the need to report ongoing QoE metrics for a media delivery session at periodic intervals determined by the reportingInterval property in the Client Metrics Reporting Configuration, provided that both of the following hold:

- The time offset indicated in the reportingStartOffset property of the Client Metrics Reporting Configuration has passed since the start of the media delivery session; and

- The time offset indicated in the reportingDuration property of the Client Metrics Reporting Configuration has not yet passed since the time offset indicated in the reportingStartOffset property.

- At the end of the media delivery session.

Whenever a metrics report is produced for a given client metrics reporting configuration, the metrics reporting entity shall reset its reporting interval timer for that configuration to the value of the clientMetrics‌Reporting‌Configurations[].‌reportingInterval property and it shall begin countdown of the timer again. When the media delivery session comes to an end, the metrics reporting entity shall disable its reporting interval timer for all client metrics reporting configurations.

Details of the APIs supporting these procedures at reference points M3 and M5 are specified in clause 9.5.

HTTP responses for successful and operation-specific failure cases are specified in the following clauses. For all other failure cases, an HTTP response indicating a response code in accordance with clause 7.1.6 shall be returned to the API client. In all failure cases a message body in accordance with clause 7.1.7 shall be included in the response message.

#### 5.3.5.2 Submit metrics report operation

This operation is used by the Media Session Handler or Media AS (whichever is acting as metrics reporting entity) to submit a metrics report to the Media AF. If several Media AF addresses are listed in the serverAddresses array of the client metrics reporting configuration (see table 9.2.3.1-1), the metrics reporting entity shall choose one at random and shall send the metrics report to the selected server endpoint. The HTTP POST method shall be used for this purpose, citing the address of the chosen Media AF in the request URL. The request body shall be formatted according to the metrics scheme indicated in scheme property of one of the Client Metrics Reporting Configurations (see clause 5.3.2.3 and table 9.2.3.1-1) and the Content-Type HTTP request header set accordingly. Details of individual metrics reporting schemes and their corresponding metrics report formats are beyond the scope of the present document, but the JSON-based metrics reporting envelope specified in clause 9.5.3.2 should be extended in preference when specifying new metrics report formats by adding new properties to the MetricsSample data type.

A reporting client identifier should be included in the metrics report if the metrics scheme supports carriage of this data. Metrics schemes designed for use with this operation should specify a means to convey a reporting client identifier. If available to the metrics reporting entity, its value should be a GPSI value as defined by TS 23.003 [16]. Otherwise, the reporting client identifier should be represented by a stable and globally unique string.

If the HTTP request is acceptable but the Media AF has not yet fully processed the submitted metrics report, the Media AF may return a 202 (Accepted) HTTP response message with an empty body and process the report later.

If the operation is otherwise successful, the Media AF shall return a 200 (OK) HTTP response message with an empty body to acknowledge successful processing of the metrics report.

If metrics reporting is not provisioned for the Provisioning Session in question, the Media AF shall return a 403 (Forbidden) HTTP response message with an error message body per clause 7.1.7 and the Media AF shall not process the submitted report.

If the HTTP request message indicates a MIME content type in the Content-Type request header that is not consistent with one of the provisioned metrics reporting schemes, the Media AF shall return a 415 (Unsupported Media Type) HTTP response message with an error message body per clause 7.1.7 and shall not process the submitted metrics report.

If the target Media AF endpoint is temporarily unable to accept the submitted metrics report (e.g. because it is overloaded), it shall return a 503 (Service Unavailable) HTTP response message with an empty body. The optional HTTP response header Retry-After should be included in such a response, indicating when the Media AF expects to be able to accept new submissions. In this case, the metrics reporting entity should store outstanding metrics reports and reattempt submission when the endpoint later becomes available. Details are left to implementation.

METRICS REPORTING FORMAT

### 9.5.3 Report format

#### 9.5.3.1 General

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

Metrics schemes specified by 3GPP shall make provision to convey the media delivery session identifier in their metrics reports. For metrics reporting formats specified elsewhere, the 3GPP specification referencing the metrics scheme should specify a means to convey the media delivery session identifier in metrics reports where practicable.

#### 9.5.3.2 JSON-based metrics reporting envelope

A JSON-based reporting envelope is specified in table 9.5.3.2‑1 below. The OpenAPI YAML syntax of the MetricsReport data type and its subordinate data types is specified in clause A.4.4. QoE metrics reports following the syntax of this reporting envelope shall be identified with the MIME media type application/3gpp-media-delivery-metrics-report+json as registered in clause E.2.

- The version parameter of the MIME media type shall be set to the value "TSG109-Rel19" to indicate compliance with this version of the present document.

Table 9.5.3.2-1: Definition of *MetricsReport* data type

| Property name | Type | Cardinality | Description |
| --- | --- | --- | --- |
| reportTimestamp | DateTime | 1..1 | Date–time (see NOTE) at which this metrics report was compiled by the metrics reporting entity. |
| sessions | array(MetricsSession) | 1..1 | An array whose members (see table 9.5.3.2‑2) convey metrics for one media delivery session each.An empty array indicates that there are no active media delivery sessions to report. |
| NOTE: Data type DateTime is specified in TS 29.571 [33]. |

The MetricsSession data type describes a set of metrics samples pertaining to a single active media delivery session.

Table 9.5.3.2-2: Definition of *MetricsSession* data type

| Property name | Type | Cardinality | Description |
| --- | --- | --- | --- |
| clientId | string | 1..1 | Reporting client identifier, as specified in clause 5.3.5.2. |
| provisioningSessionId | ResourceId | 1..1 | Uniquely identifies the parent Provisioning Session, which is linked to the Application Service Provider. |
| session‌Id | MediaDelivery‌SessionId | 1..1 | Unique identifier of the current media delivery session. |
| content‌Id | string | 0..1 | Identifying the content currently being consumed in the media delivery session, if known.Populated from the createMediaDeliverySession() method (see clause 11.2.2.1‑1) or from a query parameter of the 3GPP Service URL (see clause 6). |
| samples | array(MetricsSample) | 1..1 | An array whose members (see table 9.5.3.2‑3) convey metrics for this media delivery session.An empty array indicates that there are currently no samples to report for this media delivery session. |

The MetricsSample data type describes a set of metrics sampled at a particular point in time. This data type is intended to be extended by other specifications.

Table 9.5.3.2-3: Definition of *MetricsSample* data type

| Property name | Type | Cardinality | Description |
| --- | --- | --- | --- |
| sampleTimestamp | DateTime | 1..1 | Date–time (see NOTE 1) at which the set of metrics was sampled. |
| sliceInfo | Snssai | 0..1 | Identifying the network slice in which the set of metrics were sampled, if applicable |
| dataNetworkName | Dnn | 0..1 | The name of the Data Network in which the set of metrics were sampled, if applicable. |
| mediaStreaming‌ClientData | MediaStreaming‌ClientData | 0..1 | Client data for 5G Media Streaming (see NOTE 2 and below). |
| NOTE 1: Data type DateTime is specified in TS 29.571 [33].NOTE 2 Data type MediaStreamingClientData is specified in clause 11.4.3.3 of TS 26.512 [6]. |

At least one of the following properties shall be present in a MetricsSample object: mediaStreaming‌ClientData.

Consumption Reportng API (M5)

#### 9.6.3.2 ConsumptionReportingUnit type

This data type represents a single consumption reporting unit.

Table 9.6.3.2-1: Definition of type ConsumptionReportingUnit

|  |  |  |  |
| --- | --- | --- | --- |
| Property name | Data type | Cardinality | Description |
| mediaConsumed | string | 1..1 | Identifies the media consumed.Populated from the current content identifier currently, if set in the Media Session Handler (see table 11.2.3-1 and clause 11.2.2.1) and/or additional identifiers specified outside the present document. |
| clientEndpointAddress | EndpointAddress | 0..1 | The IP address and port number of the Media Access Function endpoint used to access the media consumed (see clause 7.3.3.11).Present only if access reporting is enabled in the Consumption Reporting Configuration. |
| serverEndpointAddress | EndpointAddress | 0..1 | The IP address, port number and host name of the Media AS endpoint used to access the media consumed (see clause 7.3.3.11).Present only if access reporting is enabled in the Consumption Reporting Configuration. |
| startTime | DateTime | 1..1 | The time when this consumption reporting unit started. |
| duration | DurationSec | 1..1 | The duration of this consumption reporting unit relative to startTime. The value shall not be negative. Media consumed for less than 1 second should be reported with duration = 0.For consumption reporting units describing the currently consumed media, this shall indicate the duration so far. |
| sliceInfo | Snssai | 0..1 | Identifying the network slice in which the media was consumed. |
| dataNetworkName | Dnn | 0..1 | The name of the Data Network in which the media was consumed. |
| locations | array(TypedLocation) | 0..1 | A time-ordered list of one or more UE location(s) where the media was consumed during the period of this consumption reporting unit (see clause 7.3.3.8).Present only if location reporting is enabled in the Consumption Reporting Configuration (only for trusted Media AF). |

Media Session Handler client API (M6/M11)

#### 11.2.2.1 Create a media delivery session

A 3GPP Service URL (see clause 6) may be used to implicitly trigger the creation of a new media delivery session with the Media Session Handler.

The Media Session Handler also offers the explicit createMediaDeliverySession() method, which is used to create a new media delivery session in the Media Session Handler.

The input parameters of the method are specified in table 11.2.2.1‑1:

Table 11.2.2.1‑1: Input parameters for createMediaDeliverySession() method

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | O | Description |
| serviceId | string | M | The external service identifier (see table 8.2.3.1‑1) of the Provisioning Session that this media delivery session pertains to. |
| contentId | string | O | A content identifier for the media to be consumed in this media delivery session. |
| entryPoint | Url | O | The location of a Media Entry Point document or media resource. |
| domainNames | array(string) | O | A set of Fully-Qualified Domain Name (FQDN) of the Media AS endpoint(s) supporting the media delivery session at reference point M4. |
| accessToken | string | O | An access token that the Media Session Handler presents to the Media AF to authorise invocation of media session handling operations at reference point M5. |

If it does not already have a fresh copy cached, the Media Session Handler shall attempt to retrieve a copy of the full Service Access Information from the Media AF at reference point M5 using the procedure specified in clause 5.3.2.

If successful, the Media Session Handler shall assign a new media delivery session identifier to the media delivery session and shall create an entry in its *\_status* array indexed by the media delivery session identifier.

If the entryPoint input parameter is provided, the Media Session Handler shall attempt to initialise the Media Access Function using an appropriate method, and shall pass the Media Entry Point URL to it (as well as the media delivery session identifier) in order to initiate media access.

If the entryPoint input parameter is provided, and indicates a Service Operation Point, the Media Session Handler shall create a Dynamic Policy Instance using the procedure specified in clause 5.3.3 using the Service Operation Point reference as the external reference. The Dynamic Policy Instance shall include a Policy Template binding for each of the domain names listed in the domainNames input parameter, if present.

If all of the above actions are successful, the Media Session Handler shall set sessionHandlingState to ACTIVE (see table 11.2.3‑1) and shall send a SESSION\_‌HANDLING\_‌ACTIVATED notification (see table 11.2.3‑2). If any of the above actions fail, the Media Session Handler shall set sessionHandlingState to ERRORED (see table 11.2.3‑1).

The return value of the method is specified in table 11.2.2.1‑2.

Table 11.2.2.1‑2: Return value for createMediaDeliverySession() method

|  |  |
| --- | --- |
| Type | Description |
| string | The media delivery session identifier. |

### 11.2.3 General Media Session Handler information

Table 11.2.3-1 specifies the status information that can be obtained from the Media Session Handler for a particular media delivery session it is managing.

Table 11.2.3-1: General Media Session Handler Status Information

|  |  |  |  |
| --- | --- | --- | --- |
| Status | Type | Parameter | Definition |
| contentIdentifier | string |  | The content identifier currently associated with this media delivery session. |
| sessionHandlingState | string enum |  | The status of this media delivery session:ACTIVE: The media delivery session is being handled by the Media Session Handler.ERRORED: An error has occurred, and the Media Session Handler is no longer able to handle it. |

Table 11.2.3-2 provides a list of general notification events exposed by the Media Session Handler through reference points M6 and M11.

Table 11.2.3-2: General Media Session Handler Notification Events

|  |  |  |
| --- | --- | --- |
| Event | Definition | Payload |
| SESSION\_HANDLING\_ACTIVATED | Triggered when media session handling was activated for a specific Media Entry Point. | Media delivery session identifier,Media Entry Point URL. |
| SESSION\_HANDLING\_TERMINATED | Triggered when media session handling is terminated for a specific Media Entry Point. | Media delivery session identifier,Media Entry Point URL. |
| STREAMING\_ACCESS\_UPDATED | Triggered when an update to the stream access is available for the Provisioning Session associated with the external service identifier supplied when the media delivery session was created (see clause 10.2.2.1). | Media delivery session identifier,Streaming access. |
| RTC\_CLIENT\_CONFIGURATION\_UPDATED | Triggered when an update to the RTC Client configuration is available for the Provisioning Session associated with the external service identifier supplied when the media delivery session was created (see clause 10.2.2.1). | Media delivery session identifier,RTC Client configuration. |

Table 11.3.3-3 provides a list of general error events exposed by the Media Session Handler through reference points M6 and M11.

Table 11.2.3-3: General Media Session Handler Error Events

|  |  |  |
| --- | --- | --- |
| Status | Definition | Payload |
| ERROR\_SESSION\_HANDLING | Triggered when there is an error in the media session handling. | Media delivery session identifier. |

3GPP Forge Tag bump

# A.1 General

The normative code specifying the APIs defined in clauses 7.3, 8, 9 and 10 of the present document, including JSON Schema [38] representations of HTTP message bodies to be used with these APIs, is published on 3GPP Forge according to the OpenAPI 3.0.0 specification [32]. The YAML files corresponding to this version of the present document shall be published to the following location:

https://forge.3gpp.org/rep/all/5G\_APIs/-/tags/TSG109-Rel19

Informative copies of these YAML files shall be distributed with the present document for convenience only. Where any discrepancy exists, the version on 3GPP Forge shall be considered definitive.

IANA registration

Annex E (normative):
IANA registrations

# E.1 General

This annex provides the formal registrations of MIME media types for different resources specified in the present document. Each registration is referenced from the registry at <http://www.iana.org/assignments/media-types>.

# E.2 Registration of MIME media type for JSON-based media delivery metrics reporting envelope

## E.2.1 General

The MIME media type specified in table E.2.1-1 below denotes that the message body is a JSON instance document compliant with the JSON-based media delivery metrics reporting envelope, the syntax of which is specified in clause 9.5.3.2.

Table E.2.1‑1: MIME media type registration for
JSON-based media delivery metrics reporting envelope

|  |  |
| --- | --- |
| Parameter | Value |
| MIME media type name | application |
| MIME subtype name | 3gpp-media-delivery-metrics-report+json |
| Required parameters | version (see clause E.2.2 of 3GPP TS 26.510). |
| Optional parameters | None. |
| Encoding considerations | This is a JSON document, and the encoding considerations are the same as for media type application/json defined in IETF RFC 8259. |
| Security considerations | This media format is used to report Quality of Experience metrics in 3GPP Media Delivery Systems such as the 5G Media Streaming (5GMS) System.This format is highly susceptible to manipulation or spoofing for attacks designed to inject fake metrics. Both integrity protection and source authentication are recommended to prevent misleading of the recipient. |
| Interoperability considerations | The specification defines a platform-independent metrics reporting document format, and it is intended that wide interoperability can be achieved. |
| Published specification | 3GPP TS 26.510 clause 9.5.3.2 |
| Applications which use this media type | 3GPP 5GMS-based applications and services |
| Fragment identifier considerations | The provisions of RFC 6901 (JSON Pointer) apply. |
| Restrictions on usage | None |
| Provisional registration? | No |
| Additional information | Deprecated alias names | None |
| Magic number(s) | None |
| File extension(s) | json |
| Macintosh File Type Code(s) | None |
| Object Identifier(s) of OID(s) | None |
| Intended usage | COMMON |
| Other information and comments | None |
| Contact person | Contact name | Dongwook Kim |
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| Author/Change controller | 3GPP TSG SA WG4 |

## E.2.2 Version parameter

Table E.2.2-1 specifies the version parameter to be used with the MIME media type registration in clause E.2.1.

Table E.2.2‑1: Specification of version parameter

|  |  |
| --- | --- |
| Parameter | Value |
| Parameter name | version |
| Parameter value | A comma-separated list of versions of the Metrics Report schema to which the document conforms. The value is specified in clause 9.5.3.2 of 3GPP TS 26.510 and encodes the last 3GPP release in which a change to the document schema was approved.The purpose of the parameter is to allow schema conformance to be assessed by a recipient before attempting to parse the contents of a received document. |

EXAMPLE: application/3gpp-media-delivery-metrics-report+json;version="**Rel19**"

End of changes