**3GPP TSG CT WG3 Meeting #136 *C3-244166***

**Maastricht, NL, 19 - 23 August, 2024**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.549** | **CR** | **0304** | **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)*.* | | | | | | | | |
|  | | | | | | | | |

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

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Termination indication in the SS\_NetworkResourceMonitoring API | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI19, SEAL\_Ph3 | | | | |  | ***Date:*** | | | 2024-07-25 |
|  |  | | | |  | |  | | |  |
| ***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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19) Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Clause 14.3.2.22 of 3GPP TS 23.434 defines the termination cause that indicates the subscription termination in the SS\_NetworkResourceMonitoring API. This functionality was defined in SA6 under TEI19 WI.  This CR introduces the stage 2 defined functionality to 3GPP TS 29.549. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The subscription termination indication with the related cause and feature is introduced in the SS\_NetworkResourceMonitoring API. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Misalignment with Stage 2 requirements. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 7.4.2.4.2.2, 7.4.2.6, A.10 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 provides a backward compatible feature for the SS\_NetworkResourceMonitoring API. | | | | | | | | |
| ***()*** | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**Additional discussion(if needed):**

**Proposed changes:**

\* \* \* First Change \* \* \* \*

###### 7.4.2.4.2.2 Type: MonitoringReport

Table 7.4.2.4.2.2-1: Definition of type MonitoringReport

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| valUeIds | array(ValTargetUe) | C | 1..N | List of VAL UEs whose measurement data is provided (NOTE). |  |
| valGroupId | string | C | 0..1 | The group ID used for the VAL group for which measurement data is provided (NOTE). |  |
| valStreamIds | array(string) | C | 1..N | List of VAL stream IDs whose measurement data (NOTE). |  |
| measData | MeasurementData | M | 1 | The aggregated measurement data. |  |
| termCause | TerminationMode | O | 0..1 | Indicates that the subscription is terminated with the termination cause. | SEAL\_Ext |
| timestamp | DateTime | M | 1 | The timestamp of the measurement. |  |
| failureRep | array(FailureReport) | C | 1..N | The failure report from the NRM server indicating the VAL UE(s) or VAL Stream ID(s) whose measurement data is not obtained successfully and is not provided in the monitoring report.  This attribute shall be provided by the NRM server when the requested measurement data is not obtained successfully for all the requested VAL UE(s) or VAL Stream ID(s). |  |
| NOTE: Only one of these attributes shall be provided. | | | | | |

\* \* \* Next change \* \* \* \*

#### 7.4.2.6 Feature negotiation

General feature negotiation procedures are defined in clause 6.8. Table 7.4.2.6-1 lists the supported features for SS\_NetworkResourceMonitoring API.

Table 7.4.2.6-1: Supported Features

|  |  |  |
| --- | --- | --- |
| **Feature number** | **Feature Name** | **Description** |
| 1 | Notification\_test\_event | The testing of notification connection is supported according to clause 6.6. |
| 2 | Notification\_websocket | The delivery of notifications over Websocket is supported according to clause 6.6. This feature requires that the Notification\_test\_event feature is also supported. |
| 3 | UpdateSupport | Indicates the support of the Update\_Unicast\_QoS\_Monitoring\_Subscription service operation. This feature enables the support of both HTTP PUT and HTTP PATCH methods for the SS\_NetworkResourceMonitoring API. |
| 4 | SEAL\_Ext | Indicates the support of the SEAL enhancements in Release-19.  Within this feature, the following enhancements are covered:  - Support of the monitoring profiles.  - Support of the subscription termination indication. |

\* \* \* Next change \* \* \* \*

# A.10 SS\_NetworkResourceMonitoring API

openapi: 3.0.0

info:

title: SS\_NetworkResourceMonitoring

description: |

API for SEAL Network Resource Monitoring.

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version: "1.1.0"

externalDocs:

description: >

3GPP TS 29.549 V18.6.0 Service Enabler Architecture Layer for Verticals (SEAL);

Application Programming Interface (API) specification; Stage 3.

url: https://www.3gpp.org/ftp/Specs/archive/29\_series/29.549/

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/ss-nrm/v1'

variables:

apiRoot:

default: https://example.com

description: apiRoot as defined in clause 6.5 of 3GPP TS 29.549

paths:

/subscriptions:

post:

summary: Create individual unicast monitoring subscription resource or obtain unicast QoS monitoring data for VAL UEs, VAL Group, or VAL Streams.

operationId: SubscribeUnicastMonitoring

tags:

- Unicast Monitoring Subscriptions (Collection)

requestBody:

required: true

content:

application/json:

schema:

$ref: '#/components/schemas/MonitoringSubscription'

responses:

'201':

description: >

The requested individual monitoring subscription resource is successfully created

and a representation of the created resource is returned in the response body.

content:

application/json:

schema:

$ref: '#/components/schemas/MonitoringSubscription'

headers:

Location:

description: Contains the URI of the newly created individual monitoring resource.

required: true

schema:

type: string

'200':

description: The requested unicast QoS monitoring data is returned.

content:

application/json:

schema:

$ref: '#/components/schemas/MonitoringReport'

'400':

$ref: 'TS29122\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29122\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29122\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29122\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29122\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29122\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29122\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29122\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

callbacks:

NotifyUnicastMonitoringData:

'{$request.body#/notifUri}':

post:

summary: Notify on updates of the individual monitoring resorce accoring the requested reporting settings.

requestBody:

required: true

content:

application/json:

schema:

$ref: '#/components/schemas/MonitoringReport'

responses:

'204':

description: The notification is successfully received.

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29122\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29122\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29122\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29122\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29122\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29122\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29122\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29122\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

/subscriptions/{subscriptionId}:

delete:

summary: Remove an existing individual unicast monitoring subscription resource according to the subscriptionId.

operationId: UnsubscribeUnicastMonitoring

tags:

- Individual Unicast Monitoring Subscription (Document)

parameters:

- name: subscriptionId

in: path

description: >

Represents the identifier of an individual unicast monitoring subscription resource.

required: true

schema:

type: string

responses:

'204':

description: >

The Individual Unicast Monitoring Subscription resource matching the

subscriptionId is deleted.

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29122\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29122\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_CommonData.yaml#/components/responses/404'

'429':

$ref: 'TS29122\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29122\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29122\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

get:

summary: Read an existing individual unicast monitoring subscription resource according to the subscriptionId.

operationId: ReadUnicastMonitoringSubscription

tags:

- Individual Unicast Monitoring Subscription (Document)

parameters:

- name: subscriptionId

in: path

description: >

Represents the identifier of an individual unicast monitoring subscription resource.

required: true

schema:

type: string

responses:

'200':

description: The requested individual unicast monitoring subscription returned.

content:

application/json:

schema:

$ref: '#/components/schemas/MonitoringSubscription'

'400':

$ref: 'TS29122\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29122\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_CommonData.yaml#/components/responses/404'

'406':

$ref: 'TS29122\_CommonData.yaml#/components/responses/406'

'429':

$ref: 'TS29122\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29122\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29122\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

put:

summary: >

Update an individual unicast monitoring subscription identified by the subscriptionId.

operationId: UpdateUnicastMonitoring

tags:

- Individual Unicast Monitoring Subscription (Document)

parameters:

- name: subscriptionId

in: path

description: >

Represents the identifier of an individual unicast monitoring subscription resource.

required: true

schema:

type: string

requestBody:

description: Updated details of the unicast QoS monitoring subscription.

required: true

content:

application/json:

schema:

$ref: '#/components/schemas/MonitoringSubscription'

responses:

'200':

description: >

The subscription is updated successfully, and the updated subscription

information returned in the response.

content:

application/json:

schema:

$ref: '#/components/schemas/MonitoringSubscription'

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29122\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29122\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29122\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29122\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29122\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29122\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29122\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29122\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

patch:

summary: >

Modify an individual unicast monitoring subscription identified

by the subscriptionId.

operationId: ModifyUnicastMonitoring

tags:

- Individual Unicast Monitoring Subscription (Document)

parameters:

- name: subscriptionId

in: path

description: >

Represents the identifier of an individual unicast monitoring subscription resource.

required: true

schema:

type: string

requestBody:

required: true

content:

application/merge-patch+json:

schema:

$ref: '#/components/schemas/MonitoringSubscriptionPatch'

responses:

'200':

description: >

Individual individual unicast QoS monitoring subscription resource is modified

successfully and representation of the modified individual unicast QoS monitoring

subscription resource is returned.

content:

application/json:

schema:

$ref: '#/components/schemas/MonitoringSubscription'

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29122\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29122\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29122\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29122\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29122\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29122\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29122\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29122\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

MonitoringReport:

description: Indicates the monitoring information for VAL UEs list, VAL Group, or VAL Stream.

type: object

properties:

valUeIds:

type: array

minItems: 1

items:

$ref: 'TS29549\_SS\_UserProfileRetrieval.yaml#/components/schemas/ValTargetUe'

description: List of VAL UEs whose QoS monitoring data is requested.

valGroupId:

type: string

description: The VAL Group Id which QoS monitoring data is requested.

valStreamIds:

type: array

minItems: 1

items:

type: string

description: List of VAL streams for which QoS monitoring data is requested.

measData:

$ref: '#/components/schemas/MeasurementData'

termCause:

$ref: '#/components/schemas/TerminationMode'

failureRep:

type: array

items:

$ref: '#/components/schemas/FailureReport'

description: >

The failure report indicating the VAL UE(s) or VAL Stream ID(s) whose measurement

data is not obtained successfully.

timestamp:

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

required:

- measData

- timestamp

oneOf:

- required: [valUeIds]

- required: [valGroupId]

- required: [valStreamIds]

MeasurementData:

description: Presents the aggregated measurement data.

type: object

properties:

dlDelay:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uinteger'

ulDelay:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uinteger'

rtDelay:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uinteger'

avgPlr:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/PacketLossRate'

avgDataRate:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/BitRate'

maxDataRate:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/BitRate'

avrDlTrafficVol:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uinteger'

avrUlTrafficVol:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uinteger'

anyOf:

- required: [dlDelay]

- required: [ulDelay]

- required: [rtDelay]

- required: [avgPlr]

- required: [avgDataRate]

- required: [maxDataRate]

- required: [avrDlTrafficVol]

- required: [avrUlTrafficVol]

MeasurementPeriod:

description: >

Indicates the measurement time period.

type: object

properties:

measStartTime:

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

measDuration:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/DurationSec'

required:

- measStartTime

- measDuration

ReportingRequirements:

description: Indicates the requested frequency of reporting.

type: object

properties:

reportingMode:

$ref: 'TS29508\_Nsmf\_EventExposure.yaml#/components/schemas/NotificationMethod'

reportingPeriod:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/DurationSec'

reportingThrs:

type: array

items:

$ref: '#/components/schemas/ReportingThreshold'

minItems: 1

immRep:

type: boolean

repTerminMode:

$ref: '#/components/schemas/TerminationMode'

expirationTimer:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/DurationSec'

maxNumRep:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uinteger'

termThr:

$ref: '#/components/schemas/MeasurementData'

termThrMode:

$ref: '#/components/schemas/ThresholdHandlingMode'

required:

- reportingMode

FailureReport:

description: >

Represents the failure report indicating the VAL UE(s) or VAL Stream ID(s)

for which the NRM server failed to obtain the requested data.

type: object

properties:

valUeIds:

type: array

minItems: 1

items:

$ref: 'TS29549\_SS\_UserProfileRetrieval.yaml#/components/schemas/ValTargetUe'

description: >

List of VAL UE(s) whose measurement data is not obtained successfully.

valStreamIds:

type: array

minItems: 1

items:

type: string

description: >

List of VAL stream ID(s) whose measurement data is not obtained successfully.

failureReason:

$ref: '#/components/schemas/FailureReason'

measDataType:

$ref: '#/components/schemas/MeasurementDataType'

required:

- measDataType

MeasurementRequirements:

description: Indicates the measurement requirements.

type: object

properties:

measDataTypes:

type: array

items:

$ref: '#/components/schemas/MeasurementDataType'

minItems: 1

description: Indicates the required the QoS measurement data types.

measAggrGranWnd:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/AverWindow'

measPeriod:

$ref: '#/components/schemas/MeasurementPeriod'

required:

- measDataTypes

MonitoringSubscription:

description: The unicast monitoring subscription request.

type: object

properties:

valUeIds:

description: List of VAL UEs whose QoS monitoring data is requested.

type: array

minItems: 1

items:

$ref: 'TS29549\_SS\_UserProfileRetrieval.yaml#/components/schemas/ValTargetUe'

valGroupId:

type: string

description: The VAL Group Id which QoS monitoring data is requested.

valStreamIds:

type: array

minItems: 1

items:

type: string

description: List of VAL streams for which QoS monitoring data is requested.

measReqs:

$ref: '#/components/schemas/MeasurementRequirements'

monRep:

$ref: '#/components/schemas/MonitoringReport'

reportReqs:

$ref: '#/components/schemas/ReportingRequirements'

notifUri:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

reqTestNotif:

type: boolean

wsNotifCfg:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/WebsockNotifConfig'

suppFeat:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

oneOf:

- required: [valUeIds]

- required: [valGroupId]

- required: [valStreamIds]

ReportingThreshold:

description: >

Indicates the requested reporting termination threshold for the measurement index(es).

type: object

properties:

measThrValues:

$ref: '#/components/schemas/MeasurementData'

thrDirection:

$ref: 'TS29520\_Nnwdaf\_EventsSubscription.yaml#/components/schemas/MatchingDirection'

required:

- measThrValues

- thrDirection

MonitoringSubscriptionPatch:

description: Represents the monitoring subscription modification request.

type: object

properties:

measReqs:

$ref: '#/components/schemas/MeasurementRequirements'

reportReqs:

$ref: '#/components/schemas/ReportingRequirements'

notifUri:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

# Simple data types and Enumerations

MeasurementDataType:

anyOf:

- type: string

enum:

- DL\_DELAY

- UL\_DELAY

- RT\_DELAY

- AVG\_PLR

- AVG\_DATA\_RATE

- MAX\_DATA\_RATE

- AVG\_DL\_TRAFFIC\_VOLUME

- AVG\_UL\_TRAFFIC\_VOLUME

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration and is not used to encode

content defined in the present version of this API.

description: |

Indicates the requested measurement data type.

Possible values are:

- DL\_DELAY: Downlink packet delay.

- UL\_DELAY: Uplink packet delay.

- RT\_DELAY: Round trip packet delay.

- AVG\_PLR: Average packet loss rate.

- AVG\_DATA\_RATE: Average data rate.

- MAX\_DATA\_RATE: Maximum data rate.

- AVG\_DL\_TRAFFIC\_VOLUME: Average downlink traffic volume.

- AVG\_UL\_TRAFFIC\_VOLUME: Average uplink traffic volume.

TerminationMode:

anyOf:

- type: string

enum:

- TIME\_TRIGGERED

- EVENT\_TRIGGERED\_NUM\_REPORTS\_REACHED

- EVENT\_TRIGGERED\_MEAS\_THR\_REACHED

- USER\_TRIGGERED

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration and is not used to encode

content defined in the present version of this API.

description: |

Indicates the termination mode.

Possible values are:

- TIME\_TRIGGERED: Time-triggered termination mode.

- EVENT\_TRIGGERED\_NUM\_REPORTS\_REACHED: Event-triggered termination number of reports

reached mode.

- EVENT\_TRIGGERED\_MEAS\_THR\_REACHED: The event-triggered termination measurement index

threshold reached mode.

- USER\_TRIGGERED: User-triggered termination mode.

FailureReason:

anyOf:

- type: string

enum:

- USER\_NOT\_FOUND

- STREAM\_NOT\_FOUND

- DATA\_NOT\_AVAILABLE

- OTHER\_REASON

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration and is not used to encode

content defined in the present version of this API.

description: |

Represents the failure reason.

Possible values are:

- USER\_NOT\_FOUND: The user is not found.

- STREAM\_NOT\_FOUND: The stream is not found.

- DATA\_NOT\_AVAILABLE: The requested data is not available.

- OTHER\_REASON: Other reason (unspecified).

ThresholdHandlingMode:

anyOf:

- type: string

enum:

- ALL\_REACHED

- ANY\_REACHED

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration and is not used to encode

content defined in the present version of this API.

description: |

Indicates the multi-parameter threshold handling mode.

Possible values are:

- ALL\_REACHED: The decision criterion is met when all the provided thresholds are reached.

- ANY\_REACHED: The decision criterion is met when any of the provided threshold(s)

is reached.

\* \* \* End of changes \* \* \* \*