



Monitoring Event

API for Monitoring Event.

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OpenAPI

OpenAPI Version: 3.0.0

info

Title: 3gpp-monitoring-event

Version: "1.0.0"

externalDocs

Description: 3GPP TS 29.122 V15.2.0 T8 reference point for Northbound APIs

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.122/'

security

- {}

- oAuth2ClientCredentials: []

servers

URL: '{apiRoot}/3gpp-monitoring-event/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 5.2.4 of 3GPP TS 29.122.

paths

{scsAsId}/subscriptions

get:

Summary: read all of the active subscriptions for the SCS/AS

Tags:

- MonitoringEvent API SCS/AS level GET Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK (Successful get all of the active subscriptions for the SCS/AS)

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/MonitoringEventSubscription'

minItems: 0

Description: Monitoring event subscriptions

'400': Reference 'TS29122_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29122_CommonData.yaml#/components/responses/401'
'403': Reference 'TS29122_CommonData.yaml#/components/responses/403'
'404': Reference 'TS29122_CommonData.yaml#/components/responses/404'
'406': Reference 'TS29122_CommonData.yaml#/components/responses/406'
'429': Reference 'TS29122_CommonData.yaml#/components/responses/429'
'500': Reference 'TS29122_CommonData.yaml#/components/responses/500'
'503': Reference 'TS29122_CommonData.yaml#/components/responses/503'
default: Reference 'TS29122_CommonData.yaml#/components/responses/default'

Method: Post

Summary: Creates a new subscription resource for monitoring event notification

Tags:

- MonitoringEvent API Subscription level POST Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

Request Body:

Description: Subscription for notification about monitoring event

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/MonitoringEventSubscription'

Callbacks:

notificationDestination:

'{request.body#/notificationDestination}':

Method: Post

Request Body: # contents of the callback message

Required/Optional: true

Content:

Application/JSON:

Schema:**Reference:** '#/components/schemas/MonitoringNotification'**Responses:****'204'** No Content (successful notification)**'400'**: Reference 'TS29122_CommonData.yaml#/components/responses/400'**'401'**: Reference 'TS29122_CommonData.yaml#/components/responses/401'**'403'**: Reference 'TS29122_CommonData.yaml#/components/responses/403'**'404'**: Reference 'TS29122_CommonData.yaml#/components/responses/404'**'411'**: Reference 'TS29122_CommonData.yaml#/components/responses/411'**'413'**: Reference 'TS29122_CommonData.yaml#/components/responses/413'**'415'**: Reference 'TS29122_CommonData.yaml#/components/responses/415'**'429'**: Reference 'TS29122_CommonData.yaml#/components/responses/429'**'500'**: Reference 'TS29122_CommonData.yaml#/components/responses/500'**'503'**: Reference 'TS29122_CommonData.yaml#/components/responses/503'**default**: Reference 'TS29122_CommonData.yaml#/components/responses/default'**Responses:****'201'** Created (Successful creation of subscription)**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/MonitoringEventSubscription'**Headers:****Location:****Description:** 'Contains the URI of the newly created resource'**Required/Optional:** true**Schema:****Type:** string**'400'**: Reference 'TS29122_CommonData.yaml#/components/responses/400'**'401'**: Reference 'TS29122_CommonData.yaml#/components/responses/401'**'403'**: Reference 'TS29122_CommonData.yaml#/components/responses/403'**'404'**: Reference 'TS29122_CommonData.yaml#/components/responses/404'**'411'**: Reference 'TS29122_CommonData.yaml#/components/responses/411'**'413'**: Reference 'TS29122_CommonData.yaml#/components/responses/413'**'415'**: Reference 'TS29122_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29122_CommonData.yaml#/components/responses/429'
'500': Reference 'TS29122_CommonData.yaml#/components/responses/500'
'503': Reference 'TS29122_CommonData.yaml#/components/responses/503'
default: Reference 'TS29122_CommonData.yaml#/components/responses/default'

scsAsId subscriptions subscriptionId

get:

Summary: read an active subscriptions for the SCS/AS and the subscription Id

Tags:

- MonitoringEvent API Subscription level GET Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

- name: subscriptionId

In: path

Description: Identifier of the subscription resource

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK (Successful get the active subscription)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/MonitoringEventSubscription'

'400': Reference 'TS29122_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29122_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29122_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29122_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29122_CommonData.yaml#/components/responses/406'

'429': Reference 'TS29122_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29122_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29122_CommonData.yaml#/components/responses/503'

default: Reference 'TS29122_CommonData.yaml#/components/responses/default'

put:

Summary: Updates/replaces an existing subscription resource

Tags:

- MonitoringEvent API subscription level PUT Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

- name: subscriptionId

In: path

Description: Identifier of the subscription resource

Required/Optional: true

Schema:

Type: string

Request Body:

Description: Parameters to update/replace the existing subscription

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/MonitoringEventSubscription'

Responses:

'200' OK (Successful update of the subscription)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/MonitoringEventSubscription'

'400': Reference 'TS29122_CommonData.yaml#/components/responses/400'
'401': Reference 'TS29122_CommonData.yaml#/components/responses/401'
'403': Reference 'TS29122_CommonData.yaml#/components/responses/403'
'404': Reference 'TS29122_CommonData.yaml#/components/responses/404'
'411': Reference 'TS29122_CommonData.yaml#/components/responses/411'
'413': Reference 'TS29122_CommonData.yaml#/components/responses/413'
'415': Reference 'TS29122_CommonData.yaml#/components/responses/415'
'429': Reference 'TS29122_CommonData.yaml#/components/responses/429'
'500': Reference 'TS29122_CommonData.yaml#/components/responses/500'
'503': Reference 'TS29122_CommonData.yaml#/components/responses/503'
default: Reference 'TS29122_CommonData.yaml#/components/responses/default'

delete:

Summary: Deletes an already existing monitoring event subscription

Tags:

- MonitoringEvent API Subscription level DELETE Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

- name: subscriptionId

In: path

Description: Identifier of the subscription resource

Required/Optional: true

Schema:

Type: string

Responses:

'204' No Content (Successful deletion of the existing subscription)

'200' OK (Successful deletion of the existing subscription)

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/MonitoringEventReport'

minItems: 1

Description: The subscription was terminated successfully, the monitoring event report(s) shall be included if received.

'400': Reference 'TS29122_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29122_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29122_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29122_CommonData.yaml#/components/responses/404'

'429': Reference 'TS29122_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29122_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29122_CommonData.yaml#/components/responses/503'

default: Reference 'TS29122_CommonData.yaml#/components/responses/default'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas

MonitoringEventSubscription

Type: object

Properties:

self:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

supportedFeatures:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

externalId:**Reference:** 'TS29122_CommonData.yaml#/components/schemas/ExternalId'**msisdn:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/Msisdn'**externalGroupId:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/ExternalGroupId'**addExtGroupId:****Type:** array**Items:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/ExternalGroupId'**minItems:** 2**ipv4Addr:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/Ipv4Addr'

ipv6Addr :

Reference: 'TS29122_CommonData.yaml#/components/schemas/Ipv6Addr'**notificationDestination:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/Link'**requestTestNotification:****Type:** boolean**Description:** Set to true by the SCS/AS to request the SCEF to send a test notification as defined in subclause 5.2.5.3. Set to false or omitted otherwise.**websockNotifConfig:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/WebsockNotifConfig'**monitoringType:****Reference:** '#/components/schemas/MonitoringType'**maximumNumberOfReports:****Type:** integer**Minimum:** 1**Description:** Identifies the maximum number of event reports to be generated by the HSS, MME/SGSN as specified in subclause 5.6.0 of 3GPP TS 23.682 [2].**monitorExpireTime:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/DateTime'**groupReportGuardTime:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/DurationSec'**maximumDetectionTime:**

Reference: 'TS29122_CommonData.yaml#/components/schemas/DurationSec'

reachabilityType:

Reference: '#/components/schemas/ReachabilityType'

maximumLatency:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DurationSec'

maximumResponseTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DurationSec'

suggestedNumberOfDIPackets:

Type: integer

Minimum: 0

Description: If "monitoringType" is "UE_REACHABILITY", this parameter may be included to identify the number of packets that the serving gateway shall buffer in case that the UE is not reachable.

idleStatusIndication:

Type: boolean

Description: If "monitoringType" is set to "UE_REACHABILITY" or "AVAILABILITY_AFTER_DDN_FAILURE", this parameter may be included to indicate the notification of when a UE, for which PSM is enabled, transitions into idle mode. - "true" indicate enabling of notification - "false" indicate no need to notify Default "false".

locationType:

Reference: '#/components/schemas/LocationType'

accuracy:

Reference: '#/components/schemas/Accuracy'

minimumReportInterval:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DurationSec'

associationType:

Reference: '#/components/schemas/AssociationType'

plmnIndication:

Type: boolean

Description: If "monitoring-Type" is "ROAMING_STATUS", this parameter may be included to indicate the notification of UE's Serving PLMN ID. - "true" The value shall be used to indicate enabling of notification; - "false" The value shall be used to indicate disabling of notification. Default "false".

locationArea:

Reference: 'TS29122_CommonData.yaml#/components/schemas/LocationArea'

LocationArea5G:

Reference: 'TS29122_CommonData.yaml#/components/schemas/LocationArea5G'

monitoringEventReport:

Reference: '#/components/schemas/MonitoringEventReport'

Required:

- notificationDestination
- monitoringType

anyOf:

- required: [maximumNumberOfReports]
- required: [monitorExpireTime]

MonitoringNotification

Type: object

Properties:

subscription:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

configResults:

Type: array

Items:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ConfigResult'

minItems: 1

Description: Each element identifies a notification of grouping configuration result.

monitoringEventReports:

Type: array

Items:

Reference: '#/components/schemas/MonitoringEventReport'

minItems: 1

Description: Monitoring event reports.

cancelInd:

Type: boolean

Description: Indicates whether to request to cancel the corresponding monitoring subscription. Set to false or omitted otherwise.

Required: subscription

MonitoringEventReport

Type: object

Properties:

imeiChange:

Reference: '#/components/schemas/AssociationType'

externalId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalId'

idleStatusInfo:

Reference: '#/components/schemas/IdleStatusInfo'

locationInfo:

Reference: '#/components/schemas/LocationInfo'

lossOfConnectReason:

Type: integer

Description: If "monitoring-Type" is "LOSS_OF_CONNECTIVITY", this parameter shall be included if available to identify the reason why loss of connectivity is reported. Refer to 3GPP TS 29.336 [11] Subclause 8.4.58.

maxUEAvailabilityTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTime'

msisdn:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Msisdn'

monitoringType:

Reference: '#/components/schemas/MonitoringType'

uePerLocationReport:

Reference: '#/components/schemas/UePerLocationReport'

plmnId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/PlmnId'

reachabilityType:

Reference: '#/components/schemas/ReachabilityType'

roamingStatus:

Type: boolean

Description: If "monitoringType" is "ROAMING_STATUS", this parameter shall be set to "true" if the UE is on roaming status. Set to false or omitted otherwise.

failureCause:

Reference: '#/components/schemas/FailureCause'

eventTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTime'

Required: monitoringType

IdleStatusInfo

Type: object

Properties:**activeTime:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/DurationSec'**edrxCycleLength:****format:** float**Type:** number**Minimum:** 0**suggestedNumberOfDIpackets:****Type:** integer**Minimum:** 0**Description:** Identifies the number of packets shall be buffered in the serving gateway. It shall be present if the idle status indication is requested by the SCS/AS with "idleStatusIndication" in the "monitoringEventSubscription" sets to "true".**idleStatusTimestamp:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/DateTime'**periodicAUTimer:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/DurationSec'

UePerLocationReport

Type: object**Properties:****ueCount:****Type:** integer**Minimum:** 0**Description:** Identifies the number of UEs.**externalIds:****Type:** array**Items:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/ExternalId'**minItems:** 1**Description:** Each element uniquely identifies a user.**msisdns:****Type:** array**Items:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/Msisdn'

minItems: 1

Description: Each element identifies the MS internal PSTN/ISDN number allocated for a UE.

Required: ueCount

LocationInfo

Type: object

Properties:

ageOfLocationInfo:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DurationMin'

cellId:

Type: string

Description: Indicates the Cell Global Identification of the user which identifies the cell the UE is registered.

enodeBId:

Type: string

Description: Indicates the eNodeB in which the UE is currently located.

routingAreaId:

Type: string

Description: Identifies the Routing Area Identity of the user where the UE is located.

trackingAreaId:

Type: string

Description: Identifies the Tracking Area Identity of the user where the UE is located.

plmnId:

Type: string

Description: Identifies the PLMN Identity of the user where the UE is located.

twanId:

Type: string

Description: Identifies the TWAN Identity of the user where the UE is located.

geographicArea:

Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/GeographicArea'

FailureCause

Type: object

Properties:

bssgpCause:

Type: integer

Description: Identifies a non-transparent copy of the BSSGP cause code. Refer to 3GPP TS 29.128 [12].

causeType:

Type: integer

Description: Identify the type of the S1AP-Cause. Refer to 3GPP TS 29.128 [12].

gmmCause:

Type: integer

Description: Identifies a non-transparent copy of the GMM cause code. Refer to 3GPP TS 29.128 [12].

ranapCause:

Type: integer

Description: Identifies a non-transparent copy of the RANAP cause code. Refer to 3GPP TS 29.128 [12].

ranNasCause:

Type: string

Description: Indicates RAN and/or NAS release cause code information, TWAN release cause code information or untrusted WLAN release cause code information. Refer to 3GPP TS 29.214 [10].

s1ApCause:

Type: integer

Description: Identifies a non-transparent copy of the S1AP cause code. Refer to 3GPP TS 29.128 [12].

smCause:

Type: integer

Description: Identifies a non-transparent copy of the SM cause code. Refer to 3GPP TS 29.128 [12].

MonitoringType

anyOf: type: string

This string provides forward-compatibility with future extensions to the enumeration but is not used to encode content defined in the present version of this API.

Possible values are

- **LOSS_OF_CONNECTIVITY:** The SCS/AS requests to be notified when the 3GPP network detects that the UE is no longer reachable for signalling or user plane communication
- **UE_REACHABILITY:** The SCS/AS requests to be notified when the UE becomes reachable for sending either SMS or downlink data to the UE
- **LOCATION_REPORTING:** The SCS/AS requests to be notified of the current location or the last known location of the UE
- **CHANGE_OF_IMSI_IMEI_ASSOCIATION:** The SCS/AS requests to be notified when the association of an ME (IMEI(SV)) that uses a specific subscription (IMSI) is changed
- **ROAMING_STATUS:** The SCS/AS queries the UE's current roaming status and requests to get notified when the status changes
- **COMMUNICATION_FAILURE:** The SCS/AS requests to be notified of communication failure events

- **AVAILABILITY_AFTER_DDN_FAILURE**: The SCS/AS requests to be notified when the UE has become available after a DDN failure
- **NUMBER_OF_UES_IN_AN_AREA**: The SCS/AS requests to be notified the number of UEs in a given geographic area

ReachabilityType

anyOf: type: string

This string provides forward-compatibility with future extensions to the enumeration but is not used to encode content defined in the present version of this API.

Possible values are

- **SMS** : The SCS/AS requests to be notified when the UE becomes reachable for sending SMS to the UE
- **DATA**: The SCS/AS requests to be notified when the UE becomes reachable for sending downlink data to the UE

LocationType

anyOf: type: string

This string provides forward-compatibility with future extensions to the enumeration but is not used to encode content defined in the present version of this API.

Possible values are

- **CURRENT_LOCATION**: The SCS/AS requests to be notified for current location
- **LAST_KNOWN_LOCATION**: The SCS/AS requests to be notified for last known location

AssociationType

anyOf: type: string

This string provides forward-compatibility with future extensions to the enumeration but is not used to encode content defined in the present version of this API.

Possible values are

- **IMEI**: The value shall be used when the change of IMSI-IMEI association shall be detected
- **IMEISV**: The value shall be used when the change of IMSI-IMEISV association shall be detected

Accuracy

anyOf: type: string

This string provides forward-compatibility with future extensions to the enumeration but is not used to encode content defined in the present version of this API.

Possible values are

- **CGI_ECGI**: The SCS/AS requests to be notified at cell level location accuracy.
- **ENODEB**: The SCS/AS requests to be notified at eNodeB level location accuracy.

- TA_RA: The SCS/AS requests to be notified at TA/RA level location accuracy.
- PLMN: The SCS/AS requests to be notified at PLMN level location accuracy.
- TWAN_ID: The SCS/AS requests to be notified at TWAN identifier level location accuracy.
- GEO_AREA: The SCS/AS requests to be notified of the geographical area accuracy.

