



MonitoringEvent

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OpenAPI

OpenAPI Version: 3.0.0

Info

Title: 3gpp-monitoring-event
Version: "1.0.0"

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.

Security

- {}
- oAuth2ClientCredentials: []

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':
Description: OK (Successful get all of the active subscriptions for the SCS/AS)
Content:
Application/JSON:
Schema:
Type: array
Items:
Reference: '#/components/schemas/MonitoringEventSubscription'
Min Items: 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':

Description: 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':****Description:** 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

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    Required/Optional: true
    Schema:
      Type: string
- Name: subscriptionId
  In: path
  Description: Identifier of the subscription resource
  Required/Optional: true
  Schema:
    Type: string

Responses:
'200':
  Description: 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':
Description: 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':
    Description: No Content (Successful deletion of the existing subscription)
  '200':
    Description: OK (Successful deletion of the existing subscription)
    Content:
      Application/JSON:
        Schema:
          Type: array
          Items:
            Reference: '#/components/schemas/MonitoringEventReport'
            Min Items: 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'
  suggestedNumberOfDlPackets:
    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

suggestedNumberOfDlPackets:

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
enum:
- LOSS_OF_CONNECTIVITY
- UE_REACHABILITY
- LOCATION_REPORTING
- CHANGE_OF_IMSI_IMEI_ASSOCIATION
- ROAMING_STATUS
- COMMUNICATION_FAILURE
- AVAILABILITY_AFTER_DDN_FAILURE
- NUMBER_OF_UES_IN_AN_AREA
- type: string
Description:
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.

Description:
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

enum:

- SMS
- DATA

- type: string

Description:

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.

Description:

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

enum:

- CURRENT_LOCATION
- LAST_KNOWN_LOCATION

- type: string

Description:

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.

Description:

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

enum:

- IMEI
- IMEISV

- type: string

Description:

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.

Description:

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

enum:

- CGI_ECGI
- ENODEB
- TA_RA
- PLMN
- TWAN_ID
- GEO_AREA

- type: string

Description:

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.

Description:

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.