**3GPP TSG-CT3 Meeting #122e C3-223701**

**E-Meeting, 12th – 20th May 2022**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.122** | **CR** | **0591** | **rev** | **-** | **Current version:** | **17.5.0** |  |
|  | | | | | | | | |
| *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:*** | Update of info and externalDocs fields | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI17 | | | | |  | ***Date:*** | | | 2022-05-20 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | During this plenary cycle (2022-Q2), there have been some backwards compatible changes / corrections / addition of new features to the following SCEF T8 APIs defined in TS 29.122. In addition, since the stage 3 of the current 3GPP release, i.e. Rel-17, will be frozen for OpenAPI descriptions, the API version needs to be updated as per the guidelines defined in clause 4.3.1 of TS 29.501, i.e. the "-alpha.n" suffix should be removed.  The following agreed CRs update the OpenAPI file of the **CommonData API** for the present release:   * TS 29.122 CR#0581 introduces a backwards compatible correction   The API version needs to be updated from 1.2.0-alpha.**4** to 1.2.0  The following agreed CRs update theOpenAPI file for **MonitoringEvent API** for the present release:   * TS 29.122 CR#0576 introduces a backwards compatible correction * TS 29.122 CR#0585 introduces a backwards compatible feature * TS 29.122 CR#0590 introduces a backwards compatible correction   The API version needs to be updated from 1.2.0-alpha.**5** to 1.2.0  The following agreed CRs update theOpenAPI file for **ResourceManagementOfBdt API** for the present release:   * None.   The API version need to be updated from 1.2.0-alpha.**2** to 1.2.0  The following agreed CRs update theOpenAPI file of the **ChargeableParty API** for the present release:   * None.   The API version needs to be updated from 1.2.0-alpha.**6** to 1.2.0  The following agreed CRs update theOpenAPI file of the **NIDD API** for the present release:   * None.   The API version needs to be updated from 1.2.0-alpha.**5** to 1.2.0  The following agreed CRs update theOpenAPI file of the **DeviceTriggering API** for the present release:   * None.   The API version needs to be updated from 1.2.0-alpha.**4** to 1.2.0  The following agreed CRs update theOpenAPI file for **GMDviaMBMSbyMB2 API** for the present release:   * None.   The API version need to be updated from 1.2.0-alpha.**3** to 1.2.0  The following agreed CRs update theOpenAPI file of the **GMDviaMBMSbyxMB API** for the present release:   * None.   The API version need to be updated from 1.2.0-alpha.**3** to 1.2.0  The following agreed CRs update theOpenAPI file of the **ReportingNetworkStatus API** for the present release:   * None.   The API version needs to be updated from 1.2.0-alpha.**4** to 1.2.0  The following agreed CRs update theOpenAPI file of the **CpProvisioning API** for the present release:   * None.   The API version needs to be updated from 1.2.0-alpha.**4** to 1.2.0  The following agreed CRs update theOpenAPI file of the **PfdManagement API** for the present release:   * None.   The API version needs to be updated from 1.2.0-alpha.**4** to 1.2.0  The following agreed CRs update the OpenAPI file of the **ECRControl API** for the present release:   * None.   The API version needs to be updated from 1.2.0-alpha.**1** to 1.2.0  The following agreed CRs update theOpenAPI file of the **NpConfiguration API** for the present release:   * None.   The API version needs to be updated from 1.2.0-alpha.**4** to 1.2.0  The following agreed CRs update theOpenAPI file of the **AsSessionWithQoS API** for the present release:   * None.   The API version needs to be updated from 1.2.0-alpha.**4** to 1.2.0  The following agreed CRs update theOpenAPI file of the **MsisdnLessMoSms API** for the present release:   * None.   The API version needs to be updated from 1.2.0-alpha.**2** to 1.2.0  The following agreed CRs update theOpenAPI file of the **RacsParameterProvisioning API** for the present release:   * None.   The API version needs to be updated from 1.1.0-alpha.**4** to 1.2.0  The "externalDocs" object description field is also be updated to "v17.**6**.0" for these APIs. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The CR proposes the following changes:   * Update the pre-release version number from "a.b.c-alpha.**n**" to "a.b.c" for the above listed APIs. * Update the TS version number in "externalDocs" object description field to "v17.**6**.0". | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | OpenAPI version and the "externalDocs" object description field are not updated in the OpenAPI files impacted by the agreed CRs during Q2-2022 plenary cycle in CT3. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | A.2, A.3, A.4, A.5, A.6, A.7, A.8.1, A.8.2, A.9, A.10, A.11, A.12, A.13, A.14, A.15, A.16 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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's revision history:*** | |  | | | | | | | | |

\* \* \* \* Start of changes \* \* \* \*

## A.2 Data Types applicable to several APIs

For the purpose of referencing entities in the Open API file defined in this Annex, it shall be assumed that this Open API file is contained in a physical file named "TS29122\_CommonData.yaml".

NOTE: For the purpose of referencing the error status codes in the Open API file defined in this Annex, this Open API file contains all the mandatory status codes as defined in table 5.2.6-1, all the API specific error status codes defined for T8 APIs, in addition, some error status codes not used in the current release of this specification but for the purpose of referencing by other specifications.

openapi: 3.0.0

info:

title: TS 29.122 Common Data Types

version: 1.2.0

description: |

Data types applicable to several APIs.

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externalDocs:

description: 3GPP TS 29.122 V17.6.0 T8 reference point for Northbound APIs

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.122/'

paths: {}

components:

schemas:

SponsorInformation:

description: Represents a sponsor information.

type: object

properties:

sponsorId:

type: string

description: It indicates Sponsor ID.

aspId:

type: string

description: It indicates Application Service Provider ID.

required:

- sponsorId

- aspId

UsageThreshold:

description: Represents a usage threshold.

type: object

properties:

duration:

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

totalVolume:

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

downlinkVolume:

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

uplinkVolume:

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

UsageThresholdRm:

description: Represents the same as the UsageThreshold data type but with the nullable:true property.

type: object

properties:

duration:

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

totalVolume:

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

downlinkVolume:

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

uplinkVolume:

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

nullable: true

TimeWindow:

description: Represents a time window identified by a start time and a stop time.

type: object

properties:

startTime:

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

stopTime:

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

required:

- startTime

- stopTime

Acknowledgement:

description: Represents a successful acknowledgement of a notification.

type: object

properties:

details:

type: string

description: A human-readable explanation specific to this successful acknowledgement

required:

- details

NotificationData:

description: Represents the information to be conveyed in a bearer level event(s) notification.

type: object

properties:

transaction:

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

eventReports:

type: array

items:

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

minItems: 1

description: Contains the reported event and applicable information

required:

- transaction

- eventReports

EventReport:

description: Represents an event report.

type: object

properties:

event:

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

accumulatedUsage:

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

flowIds:

type: array

items:

type: integer

minItems: 1

description: Identifies the IP flows that were sent during event subscription

required:

- event

AccumulatedUsage:

description: Represents an accumulated usage.

type: object

properties:

duration:

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

totalVolume:

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

downlinkVolume:

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

uplinkVolume:

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

FlowInfo:

description: Represents flow information.

type: object

properties:

flowId:

type: integer

description: Indicates the IP flow.

flowDescriptions:

type: array

items:

type: string

description: Indicates the packet filters of the IP flow. Refer to subclause 5.3.8 of 3GPP TS 29.214 for encoding. It shall contain UL and/or DL IP flow description.

minItems: 1

maxItems: 2

required:

- flowId

TestNotification:

description: Represents a notification that can be sent to test whether a chosen notification mechanism works.

type: object

properties:

subscription:

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

required:

- subscription

WebsockNotifConfig:

description: Represents the configuration information for the delivery of notifications over Websockets.

type: object

properties:

websocketUri:

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

requestWebsocketUri:

type: boolean

description: Set by the SCS/AS to indicate that the Websocket delivery is requested.

LocationArea:

description: Represents a user location area.

type: object

properties:

cellIds:

type: array

items:

type: string

minItems: 1

description: Indicates a list of Cell Global Identities of the user which identifies the cell the UE is registered.

enodeBIds:

type: array

items:

type: string

minItems: 1

description: Indicates a list of eNodeB identities in which the UE is currently located.

routingAreaIds:

type: array

items:

type: string

minItems: 1

description: Identifies a list of Routing Area Identities of the user where the UE is located.

trackingAreaIds:

type: array

items:

type: string

minItems: 1

description: Identifies a list of Tracking Area Identities of the user where the UE is located.

geographicAreas:

type: array

items:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/GeographicArea'

minItems: 1

description: Identifies a list of geographic area of the user where the UE is located.

civicAddresses:

type: array

items:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/CivicAddress'

minItems: 1

description: Identifies a list of civic addresses of the user where the UE is located.

LocationArea5G:

description: Represents a user location area when the UE is attached to 5G.

type: object

properties:

geographicAreas:

type: array

items:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/GeographicArea'

minItems: 0

description: Identifies a list of geographic area of the user where the UE is located.

civicAddresses:

type: array

items:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/CivicAddress'

minItems: 0

description: Identifies a list of civic addresses of the user where the UE is located.

nwAreaInfo:

$ref: 'TS29554\_Npcf\_BDTPolicyControl.yaml#/components/schemas/NetworkAreaInfo'

ProblemDetails:

description: Represents additional information and details on an error response.

type: object

properties:

type:

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

title:

type: string

description: A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem.

status:

type: integer

description: The HTTP status code for this occurrence of the problem.

detail:

type: string

description: A human-readable explanation specific to this occurrence of the problem.

instance:

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

cause:

type: string

description: A machine-readable application error cause specific to this occurrence of the problem. This IE should be present and provide application-related error information, if available.

invalidParams:

type: array

items:

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

minItems: 1

description: Description of invalid parameters, for a request rejected due to invalid parameters.

supportedFeatures:

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

InvalidParam:

description: Represents the description of invalid parameters, for a request rejected due to invalid parameters.

type: object

properties:

param:

type: string

description: Attribute's name encoded as a JSON Pointer, or header's name.

reason:

type: string

description: A human-readable reason, e.g. "must be a positive integer".

required:

- param

PlmnId:

description: Represents the identifier of a PLMN.

type: object

properties:

mcc:

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

mnc:

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

required:

- mcc

- mnc

ConfigResult:

description: Represents one configuration processing result for a group's members.

type: object

properties:

externalIds:

type: array

items:

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

minItems: 1

description: Each element indicates an external identifier of the UE.

msisdns:

type: array

items:

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

minItems: 1

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

resultReason:

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

required:

- resultReason

oneOf:

- required: [externalIds]

- required: [msisdns]

Bandwidth:

type: integer

minimum: 0

description: integer indicating a bandwidth in bits per second.

BdtReferenceId:

type: string

description: string identifying a BDT Reference ID as defined in subclause 5.3.3 of 3GPP TS 29.154.

BdtReferenceIdRm:

type: string

description: This data type is defined in the same way as the BdtReferenceId data type, but with the nullable property set to true.

nullable: true

Binary:

type: string

description: string with format "binary" as defined in OpenAPI Specification.

Bytes:

type: string

description: String with format "byte" as defined in OpenAPI Specification, i.e, base64-encoded characters.

DayOfWeek:

type: integer

minimum: 1

maximum: 7

description: integer between and including 1 and 7 denoting a weekday. 1 shall indicate Monday, and the subsequent weekdays shall be indicated with the next higher numbers. 7 shall indicate Sunday.

DateTime:

format: date-time

type: string

description: string with format "date-time" as defined in OpenAPI.

DateTimeRm:

format: date-time

type: string

description: string with format "date-time" as defined in OpenAPI with "nullable=true" property.

nullable: true

DateTimeRo:

format: date-time

type: string

description: string with format "date-time" as defined in OpenAPI with "readOnly=true" property.

readOnly: true

DurationSec:

type: integer

minimum: 0

description: Unsigned integer identifying a period of time in units of seconds.

DurationSecRm:

type: integer

minimum: 0

description: Unsigned integer identifying a period of time in units of seconds with "nullable=true" property.

nullable: true

DurationSecRo:

type: integer

minimum: 0

description: Unsigned integer identifying a period of time in units of seconds with "readOnly=true" property.

readOnly: true

DurationMin:

type: integer

format: int32

minimum: 0

description: Unsigned integer identifying a period of time in units of minutes.

ExternalId:

type: string

description: string containing a local identifier followed by "@" and a domain identifier. Both the local identifier and the domain identifier shall be encoded as strings that do not contain any "@" characters. See Clause 4.6.2 of 3GPP TS 23.682 for more information.

ExternalGroupId:

type: string

description: string containing a local identifier followed by "@" and a domain identifier. Both the local identifier and the domain identifier shall be encoded as strings that do not contain any "@" characters. See Clauses 4.6.2 and 4.6.3 of 3GPP TS 23.682 for more information.

Ipv4Addr:

type: string

description: string identifying a Ipv4 address formatted in the "dotted decimal" notation as defined in IETF RFC 1166.

Ipv6Addr:

type: string

description: string identifying a Ipv6 address formatted according to clause 4 in IETF RFC 5952. The mixed Ipv4 Ipv6 notation according to clause 5 of IETF RFC 5952 shall not be used.

Ipv4AddrRo:

type: string

description: string identifying a Ipv4 address formatted in the "dotted decimal" notation as defined in IETF RFC 1166, with "readOnly=true" property.

readOnly: true

Ipv6AddrRo:

type: string

description: string identifying a Ipv6 address formatted according to clause 4 in IETF RFC 5952, with "readOnly=true" property. The mixed Ipv4 Ipv6 notation according to clause 5 of IETF RFC 5952 shall not be used.

readOnly: true

Link:

type: string

description: string formatted according to IETF RFC 3986 identifying a referenced resource.

Mcc:

type: string

description: String encoding a Mobile Country Code part of the PLMN, comprising 3 digits, as defined in 3GPP TS 38.413.

Mnc:

type: string

description: String encoding a Mobile Network Code part of the PLMN, comprising 2 or 3 digits, as defined in 3GPP TS 38.413.

Msisdn:

type: string

description: string formatted according to subclause 3.3 of 3GPP TS 23.003 that describes an MSISDN.

Port:

type: integer

description: Unsigned integer with valid values between 0 and 65535.

minimum: 0

maximum: 65535

PortRo:

type: integer

description: Unsigned integer with valid values between 0 and 65535, with "readOnly=true" property.

minimum: 0

maximum: 65535

readOnly: true

ResourceId:

type: string

description: string chosen by the SCEF to serve as identifier in a resource URI.

ScsAsId:

type: string

description: string that identifies an SCS/AS.

TimeOfDay:

type: string

description: String with format partial-time or full-time as defined in subclause 5.6 of IETF RFC 3339. Examples, 20:15:00, 20:15:00-08:00 (for 8 hours behind UTC).

Uri:

type: string

description: string providing an URI formatted according to IETF RFC 3986.

Volume:

type: integer

format: int64

minimum: 0

description: Unsigned integer identifying a volume in units of bytes.

VolumeRm:

type: integer

format: int64

minimum: 0

description: Unsigned integer identifying a volume in units of bytes with "nullable=true" property.

nullable: true

Event:

anyOf:

- type: string

enum:

- SESSION\_TERMINATION

- LOSS\_OF\_BEARER

- RECOVERY\_OF\_BEARER

- RELEASE\_OF\_BEARER

- USAGE\_REPORT

- FAILED\_RESOURCES\_ALLOCATION

- SUCCESSFUL\_RESOURCES\_ALLOCATION

- 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

- SESSION\_TERMINATION: Indicates that Rx session is terminated.

- LOSS\_OF\_BEARER : Indicates a loss of a bearer.

- RECOVERY\_OF\_BEARER: Indicates a recovery of a bearer.

- RELEASE\_OF\_BEARER: Indicates a release of a bearer.

- USAGE\_REPORT: Indicates the usage report event.

- FAILED\_RESOURCES\_ALLOCATION: Indicates the resource allocation is failed.

- SUCCESSFUL\_RESOURCES\_ALLOCATION: Indicates the resource allocation is successful.

ResultReason:

anyOf:

- type: string

enum:

- ROAMING\_NOT\_ALLOWED

- OTHER\_REASON

- type: string

description: >

This string provides a failure reason.

description: >

Possible values are

- ROAMING\_NOT\_ALLOWED: Identifies the configuration parameters are not allowed by roaming agreement.

- OTHER\_REASON: Identifies the configuration parameters are not configured due to other reason.

#

# HTTP responses

#

responses:

'307':

description: Temporary Redirect

headers:

Location:

description: 'An alternative URI of the resource.'

required: true

schema:

type: string

'308':

description: Permanent Redirect

headers:

Location:

description: 'An alternative URI of the resource.'

required: true

schema:

type: string

'400':

description: Bad request

content:

application/problem+json:

schema:

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

'401':

description: Unauthorized

content:

application/problem+json:

schema:

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

'403':

description: Forbidden

content:

application/problem+json:

schema:

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

'404':

description: Not Found

content:

application/problem+json:

schema:

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

'406':

description: Not Acceptable

content:

application/problem+json:

schema:

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

'409':

description: Conflict

content:

application/problem+json:

schema:

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

'411':

description: Length Required

content:

application/problem+json:

schema:

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

'412':

description: Precondition Failed

content:

application/problem+json:

schema:

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

'413':

description: Payload Too Large

content:

application/problem+json:

schema:

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

'414':

description: URI Too Long

content:

application/problem+json:

schema:

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

'415':

description: Unsupported Media Type

content:

application/problem+json:

schema:

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

'429':

description: Too Many Requests

content:

application/problem+json:

schema:

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

'500':

description: Internal Server Error

content:

application/problem+json:

schema:

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

'503':

description: Service Unavailable

content:

application/problem+json:

schema:

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

default:

description: Generic Error

\* \* \* \* Next changes \* \* \* \*

## A.3 MonitoringEvent API

openapi: 3.0.0

info:

title: 3gpp-monitoring-event

version: 1.2.0

description: |

API for Monitoring Event.

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externalDocs:

description: 3GPP TS 29.122 V17.6.0 T8 reference point for Northbound APIs

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.122/'

security:

- {}

- oAuth2ClientCredentials: []

servers:

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

variables:

apiRoot:

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 or queried active subscriptions for the SCS/AS.

operationId: FetchAllMonitoringEventSubscriptions

tags:

- Monitoring Event Subscriptions

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

type: string

- name: ip-addrs

in: query

description: The IP address(es) of the requested UE(s).

required: false

content:

application/json:

schema:

type: array

items:

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

minItems: 1

- name: ip-domain

in: query

description: The IPv4 address domain identifier. The attribute may only be provided if IPv4 address is included in the ip-addrs query parameter.

required: false

schema:

type: string

- name: mac-addrs

in: query

description: The MAC address(es) of the requested UE(s).

required: false

schema:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MacAddr48'

minItems: 1

responses:

'200':

description: OK (Successful get all or queried active subscriptions for the SCS/AS)

content:

application/json:

schema:

type: array

items:

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

minItems: 0

description: Monitoring event subscriptions

'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'

'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'

post:

summary: Creates a new subscription resource for monitoring event notification.

operationId: CreateMonitoringEventSubscription

tags:

- Monitoring Event Subscriptions

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

type: string

requestBody:

description: Subscription for notification about monitoring event

required: true

content:

application/json:

schema:

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

callbacks:

notificationDestination:

'{request.body#/notificationDestination}':

post:

requestBody: # contents of the callback message

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content (successful notification)

'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'

responses:

'201':

description: Created (Successful creation of subscription)

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

'200':

description: The operation is successful and immediate report is included.

content:

application/json:

schema:

oneOf:

- $ref: '#/components/schemas/MonitoringEventReport'

- $ref: '#/components/schemas/MonitoringEventReports'

'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'

/{scsAsId}/subscriptions/{subscriptionId}:

get:

summary: Read an active subscriptions for the SCS/AS and the subscription Id.

operationId: FetchIndMonitoringEventSubscription

tags:

- Individual Monitoring Event Subscription

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

type: string

- name: subscriptionId

in: path

description: Identifier of the subscription resource

required: true

schema:

type: string

responses:

'200':

description: OK (Successful get the active subscription)

content:

application/json:

schema:

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

'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'

'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: Updates/replaces an existing subscription resource.

operationId: UpdateIndMonitoringEventSubscription

tags:

- Individual Monitoring Event Subscription

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

type: string

- name: subscriptionId

in: path

description: Identifier of the subscription resource

required: true

schema:

type: string

requestBody:

description: Parameters to update/replace the existing subscription

required: true

content:

application/json:

schema:

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

responses:

'200':

description: OK (Successful update of the subscription)

content:

application/json:

schema:

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

'204':

description: No Content (Successful update of the subscription)

'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: Modifies an existing subscription of monitoring event.

operationId: ModifyIndMonitoringEventSubscription

tags:

- Individual Monitoring Event Subscription

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS.

required: true

schema:

type: string

- name: subscriptionId

in: path

description: Identifier of the subscription resource.

required: true

schema:

type: string

requestBody:

description: This is used for PATCH request for partial cancellation and/or partial addition of certain UE(s) within an active group.

required: true

content:

application/json-patch+json:

schema:

type: array

items:

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

minItems: 1

responses:

'204':

description: The resource was modified successfully.

'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'

delete:

summary: Deletes an already existing monitoring event subscription.

operationId: DeleteIndMonitoringEventSubscription

tags:

- Individual Monitoring Event Subscription

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

type: string

- name: subscriptionId

in: path

description: Identifier of the subscription resource

required: 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:

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

minItems: 1

description: The subscription was terminated successfully, the monitoring event report(s) shall be included if 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'

'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:

MonitoringEventSubscription:

description: Represents a subscription to event(s) monitoring.

type: object

properties:

self:

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

supportedFeatures:

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

mtcProviderId:

type: string

description: Identifies the MTC Service Provider and/or MTC Application.

externalId:

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

msisdn:

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

addedExternalIds:

type: array

items:

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

minItems: 1

description: Indicates the added external Identifier(s) within the active group.

addedMsisdns:

type: array

items:

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

minItems: 1

description: Indicates the added MSISDN(s) within the active group.

excludedExternalIds:

type: array

items:

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

minItems: 1

description: Indicates cancellation of the external Identifier(s) within the active group.

excludedMsisdns:

type: array

items:

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

minItems: 1

description: Indicates cancellation of the MSISDN(s) within the active group.

externalGroupId:

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

addExtGroupId:

type: array

items:

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

minItems: 2

ipv4Addr:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/Ipv4Addr'

ipv6Addr:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/Ipv6Addr'

dnn:

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

notificationDestination:

$ref: '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:

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

monitoringType:

$ref: '#/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.

monitorExpireTime:

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

repPeriod:

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

groupReportGuardTime:

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

maximumDetectionTime:

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

reachabilityType:

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

maximumLatency:

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

maximumResponseTime:

$ref: '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" indicates enabling of notification; "false" indicate no need to notify. Default value is "false".

locationType:

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

accuracy:

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

minimumReportInterval:

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

maxRptExpireIntvl:

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

samplingInterval:

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

reportingLocEstInd:

type: boolean

description: Indicates whether to request the location estimate for event reporting.

linearDistance:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/LinearDistance'

locQoS:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/LocationQoS'

svcId:

$ref: 'TS29515\_Ngmlc\_Location.yaml#/components/schemas/ServiceIdentity'

ldrType:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/LdrType'

velocityRequested:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/VelocityRequested'

maxAgeOfLocEst:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/AgeOfLocationEstimate'

locTimeWindow:

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

supportedGADShapes:

type: array

items:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/SupportedGADShapes'

codeWord:

$ref: 'TS29515\_Ngmlc\_Location.yaml#/components/schemas/CodeWord'

associationType:

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

plmnIndication:

type: boolean

description: If "monitoringType" is "ROAMING\_STATUS", this parameter may be included to indicate the notification of UE's Serving PLMN ID. Value "true" indicates enabling of notification; "false" indicates disabling of notification. Default value is "false".

locationArea:

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

locationArea5G:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/LocationArea5G'

dddTraDescriptors:

type: array

items:

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

minItems: 1

dddStati:

type: array

items:

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

minItems: 1

apiNames:

type: array

items:

type: string

minItems: 1

monitoringEventReport:

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

snssai:

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

tgtNsThreshold:

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

nsRepFormat:

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

immediateRep:

type: boolean

uavPolicy:

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

sesEstInd:

type: boolean

description: Set to true by the SCS/AS so that only UAV’s with “PDU session established for DNN(s) subject to aerial service” are to be listed in the Event report. Set to false or omitted otherwise.

subType:

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

addnMonTypes:

type: array

items:

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

addnMonEventReports:

type: array

items:

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

ueIpAddr:

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

ueMacAddr:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MacAddr48'

required:

- notificationDestination

- monitoringType

anyOf:

- required: [maximumNumberOfReports]

- required: [monitorExpireTime]

MonitoringNotification:

description: Represents an event monitoring notification.

type: object

properties:

subscription:

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

configResults:

type: array

items:

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

minItems: 1

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

monitoringEventReports:

type: array

items:

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

minItems: 1

description: Monitoring event reports.

addedExternalIds:

type: array

items:

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

minItems: 1

description: Identifies the added external Identifier(s) within the active group via the "externalGroupId" attribute within the MonitoringEventSubscription data type.

addedMsisdns:

type: array

items:

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

minItems: 1

description: Identifies the added MSISDN(s) within the active group via the "externalGroupId" attribute within the MonitoringEventSubscription data type.

cancelExternalIds:

type: array

items:

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

minItems: 1

description: Identifies the cancelled external Identifier(s) within the active group via the "externalGroupId" attribute within the MonitoringEventSubscription data type.

cancelMsisdns:

type: array

items:

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

minItems: 1

description: Identifies the cancelled MSISDN(s) within the active group via the "externalGroupId" attribute within the MonitoringEventSubscription data type.

appliedParam:

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

required:

- subscription

MonitoringEventReport:

description: Represents an event monitoring report.

type: object

properties:

imeiChange:

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

externalId:

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

idleStatusInfo:

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

locationInfo:

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

locFailureCause:

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

lossOfConnectReason:

type: integer

description: If "monitoringType" 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 subclause 8.4.58.

maxUEAvailabilityTime:

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

msisdn:

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

monitoringType:

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

uePerLocationReport:

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

plmnId:

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

reachabilityType:

$ref: '#/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:

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

eventTime:

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

pdnConnInfoList:

type: array

items:

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

minItems: 1

dddStatus:

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

dddTrafDescriptor:

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

maxWaitTime:

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

apiCaps:

type: array

items:

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

minItems: 0

nSStatusInfo:

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

servLevelDevId:

type: string

description: If "monitoringType" is "AREA\_OF\_INTEREST", this parameter may be included to identify the UAV.

uavPresInd:

type: boolean

description: If "monitoringType" is "AREA\_OF\_INTEREST", this parameter shall be set to true if the specified UAV is in the monitoring area. Set to false or omitted otherwise.

required:

- monitoringType

MonitoringEventReports:

description: Represents a set of event monitoring reports.

type: object

properties:

monitoringEventReports:

type: array

items:

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

minItems: 1

required:

- monitoringEventReports

IdleStatusInfo:

description: Represents the information relevant to when the UE transitions into idle mode.

type: object

properties:

activeTime:

$ref: '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:

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

periodicAUTimer:

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

UePerLocationReport:

description: Represents the number of UEs found at the indicated location.

type: object

properties:

ueCount:

type: integer

minimum: 0

description: Identifies the number of UEs.

externalIds:

type: array

items:

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

minItems: 1

description: Each element uniquely identifies a user.

msisdns:

type: array

items:

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

minItems: 1

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

servLevelDevIds:

type: array

items:

type: string

minItems: 1

description: Each element uniquely identifies a UAV.

required:

- ueCount

LocationInfo:

description: Represents the user location information.

type: object

properties:

ageOfLocationInfo:

$ref: '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:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/GeographicArea'

civicAddress:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/CivicAddress'

positionMethod:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/PositioningMethod'

qosFulfilInd:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/AccuracyFulfilmentIndicator'

ueVelocity:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/VelocityEstimate'

ldrType:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/LdrType'

achievedQos:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/MinorLocationQoS'

FailureCause:

description: Represents the reason of communication failure.

type: object

properties:

bssgpCause:

type: integer

description: Identifies a non-transparent copy of the BSSGP cause code. Refer to 3GPP TS 29.128.

causeType:

type: integer

description: Identify the type of the S1AP-Cause. Refer to 3GPP TS 29.128.

gmmCause:

type: integer

description: Identifies a non-transparent copy of the GMM cause code. Refer to 3GPP TS 29.128.

ranapCause:

type: integer

description: Identifies a non-transparent copy of the RANAP cause code. Refer to 3GPP TS 29.128.

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.

s1ApCause:

type: integer

description: Identifies a non-transparent copy of the S1AP cause code. Refer to 3GPP TS 29.128.

smCause:

type: integer

description: Identifies a non-transparent copy of the SM cause code. Refer to 3GPP TS 29.128.

PdnConnectionInformation:

description: Represents the PDN connection information of the UE.

type: object

properties:

status:

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

apn:

type: string

description: Identify the APN, it is depending on the SCEF local configuration whether or not this attribute is sent to the SCS/AS.

pdnType:

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

interfaceInd:

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

ipv4Addr:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/Ipv4Addr'

ipv6Addrs:

type: array

items:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/Ipv6Addr'

minItems: 1

macAddrs:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MacAddr48'

minItems: 1

required:

- status

- pdnType

AppliedParameterConfiguration:

description: Represents the parameter configuration applied in the network.

type: object

properties:

externalIds:

type: array

items:

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

minItems: 1

description: Each element uniquely identifies a user.

msisdns:

type: array

items:

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

minItems: 1

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

maximumLatency:

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

maximumResponseTime:

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

maximumDetectionTime:

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

ApiCapabilityInfo:

description: Represents the availability information of supported API.

type: object

properties:

apiName:

type: string

suppFeat:

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

required:

- apiName

- suppFeat

UavPolicy:

description: Represents the policy information included in the UAV presence monitoring request.

type: object

properties:

uavMoveInd:

type: boolean

revokeInd:

type: boolean

required:

- uavMoveInd

- revokeInd

#

# ENUMS

#

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

- PDN\_CONNECTIVITY\_STATUS

- DOWNLINK\_DATA\_DELIVERY\_STATUS

- API\_SUPPORT\_CAPABILITY

- NUM\_OF\_REGD\_UES

- NUM\_OF\_ESTD\_PDU\_SESSIONS

- AREA\_OF\_INTEREST

- 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

- PDN\_CONNECTIVITY\_STATUS: The SCS/AS requests to be notified when the 3GPP network detects that the UE’s PDN connection is set up or torn down

- DOWNLINK\_DATA\_DELIVERY\_STATUS: The AF requests to be notified when the 3GPP network detects that the downlink data delivery status is changed.

- API\_SUPPORT\_CAPABILITY: The SCS/AS requests to be notified of the availability of support of service APIs.

- NUM\_OF\_REGD\_UES: The AF requests to be notified of the current number of registered UEs for a network slice.

- NUM\_OF\_ESTD\_PDU\_SESSIONS: The AF requests to be notified of the current number of established PDU Sessions for a network slice.

- AREA\_OF\_INTEREST: The SCS/AS requests to be notified when the UAV moves in or out of the 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

- CURRENT\_OR\_LAST\_KNOWN\_LOCATION

- INITIAL\_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

- CURRENT\_OR\_LAST\_KNOWN\_LOCATION: The AF requests the current or last known location

- INITIAL\_LOCATION: The AF requests the initial 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

- CIVIC\_ADDR

- 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 using cell level location accuracy.

- ENODEB: The SCS/AS requests to be notified using eNodeB level location accuracy.

- TA\_RA: The SCS/AS requests to be notified using TA/RA level location accuracy.

- PLMN: The SCS/AS requests to be notified using PLMN level location accuracy.

- TWAN\_ID: The SCS/AS requests to be notified using TWAN identifier level location accuracy.

- GEO\_AREA: The SCS/AS requests to be notified using the geographical area accuracy.

- CIVIC\_ADDR: The SCS/AS requests to be notified using the civic address accuracy.

PdnConnectionStatus:

anyOf:

- type: string

enum:

- CREATED

- RELEASED

- 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

- CREATED: The PDN connection is created.

- RELEASED: The PDN connection is released.

PdnType:

anyOf:

- type: string

enum:

- IPV4

- IPV6

- IPV4V6

- NON\_IP

- ETHERNET

- 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

- IPV4: PDN connection of IPv4 type.

- IPV6: PDN connection of IPv6 type.

- IPV4V6: PDN connection of IPv4v6 type.

- NON\_IP: PDN connection of non-IP type.

- ETHERNET: PDN connection of Ethernet type.

InterfaceIndication:

anyOf:

- type: string

enum:

- EXPOSURE\_FUNCTION

- PDN\_GATEWAY

- 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

- EXPOSURE\_FUNCTION: SCEF is used for the PDN connection towards the SCS/AS.

- PDN\_GATEWAY: PDN gateway is used for the PDN connection towards the SCS/AS.

LocationFailureCause:

anyOf:

- type: string

enum:

- POSITIONING\_DENIED

- UNSUPPORTED\_BY\_UE

- NOT\_REGISTED\_UE

- UNSPECIFIED

- type: string

description: >

This string Indicates the location positioning failure cause.

Possible values are

- POSITIONING\_DENIED: Positioning is denied.

- UNSUPPORTED\_BY\_UE: Positioning is not supported by UE.

- NOT\_REGISTED\_UE: UE is not registered.

- UNSPECIFIED: Unspecified.

SubType:

anyOf:

- type: string

enum:

- AERIAL\_UE

- 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

- AERIAL\_UE: The UE has Aerial subscription.

SACRepFormat:

anyOf:

- type: string

enum:

- NUMERICAL

- PERCENTAGE

- type: string

description: Indicates the NSAC reporting format.

\* \* \* \* Next changes \* \* \* \*

## A.4 ResourceManagementOfBdt API

openapi: 3.0.0

info:

title: 3gpp-bdt

version: 1.2.0

description: |

API for BDT resouce management.

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externalDocs:

description: 3GPP TS 29.122 V17.6.0 T8 reference point for Northbound APIs

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.122/'

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/3gpp-bdt/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/{scsAsId}/subscriptions:

parameters:

- name: scsAsId

description: String identifying the SCS/AS.

in: path

required: true

schema:

type: string

get:

summary: Fetch all active background data transfer subscription resources for a given SCS/AS.

operationId: FetchAllActiveBDTSubscriptions

tags:

- BDT Subscription

responses:

'200':

description: all BDT policy subscriptions.

content:

application/json:

schema:

type: array

items:

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

minItems: 0

description: individual BDT policy subscription.

'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'

'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'

post:

summary: Creates a new background data transfer subscription resource.

operationId: CreateBDTSubscription

tags:

- BDT Subscription

requestBody:

description: Contains the data to create a BDT subscription.

required: true

content:

application/json:

schema:

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

callbacks:

bDTWarningNotification:

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

post:

requestBody: # contents of the callback message

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content (successful notification)

'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'

responses:

'201':

description: Background data transfer policies offered to the SCS/AS.

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

'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'

'409':

$ref: 'TS29122\_CommonData.yaml#/components/responses/409'

'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'

/{scsAsId}/subscriptions/{subscriptionId}:

parameters:

- name: scsAsId

description: String identifying the SCS/AS.

in: path

required: true

schema:

type: string

- name: subscriptionId

description: String identifying the individual BDT policy resource in the SCEF.

in: path

required: true

schema:

type: string

get:

summary: Read a background data transfer subscription resource.

operationId: FetchIndBDTSubscription

tags:

- Individual BDT Subscription

responses:

'200':

description: Background data transfer policies offered to and selected by the SCEF.

content:

application/json:

schema:

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

'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'

'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 a background data transfer subscription resource for negotiation of background data transfer policy.

operationId: UpdateBDTSubscription

tags:

- Individual BDT Subscription

requestBody:

description: Parameters to update/replace the existing BDT subscription

required: true

content:

application/json:

schema:

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

responses:

'200':

description: OK (Successful update of the BDT subscription)

content:

application/json:

schema:

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

'204':

description: No Content. The Individual BDT Subscription resource was updated successfully.

'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 a background data transfer subscription resource to select one of the transfer policies offered by the SCEF.

operationId: ModifyBDTSubscription

tags:

- Individual BDT Subscription

requestBody:

description: Contains information to be performed on the Bdt data structure to select a transfer policy.

required: true

content:

application/merge-patch+json:

schema:

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

responses:

'200':

description: The Individual BDT Policy resource is modified with a selected policy and a representation of that resource is returned.

content:

application/json:

schema:

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

'204':

description: The Individual BDT Policy resource is modified with a selected policy.

'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'

delete:

summary: Delete a background data transfer resource.

operationId: DeleteBDTSubscription

tags:

- Individual BDT Subscription

responses:

'204':

description: The Individual BDT Policy resource 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'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

Bdt:

description: Represents a Background Data Transfer subscription.

type: object

properties:

self:

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

supportedFeatures:

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

volumePerUE:

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

numberOfUEs:

type: integer

minimum: 1

description: Identifies the number of UEs.

desiredTimeWindow:

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

locationArea:

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

locationArea5G:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/LocationArea5G'

referenceId:

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

transferPolicies:

type: array

items:

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

minItems: 1

description: Identifies an offered transfer policy.

readOnly: true

selectedPolicy:

type: integer

description: Identity of the selected background data transfer policy. Shall not be present in initial message exchange, can be provided by NF service consumer in a subsequent message exchange.

externalGroupId:

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

notificationDestination:

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

warnNotifEnabled:

type: boolean

description: Indicates whether the BDT warning notification is enabled or not.

trafficDes:

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

required:

- volumePerUE

- numberOfUEs

- desiredTimeWindow

BdtPatch:

description: Represents a Background Data Transfer subscription modification request.

type: object

properties:

selectedPolicy:

type: integer

description: Identity of the selected background data transfer policy.

warnNotifEnabled:

type: boolean

description: Indicates whether the BDT warning notification is enabled or not.

notificationDestination:

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

required:

- selectedPolicy

TransferPolicy:

description: Represents an offered transfer policy sent from the SCEF to the SCS/AS, or a selected transfer policy sent from the SCS/AS to the SCEF.

type: object

properties:

bdtPolicyId:

type: integer

description: Identifier for the transfer policy

maxUplinkBandwidth:

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

maxDownlinkBandwidth:

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

ratingGroup:

type: integer

minimum: 0

description: Indicates the rating group during the time window.

timeWindow:

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

required:

- bdtPolicyId

- ratingGroup

- timeWindow

ExNotification:

description: Represents a Background Data Transfer notification.

type: object

properties:

bdtRefId:

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

locationArea5G:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/LocationArea5G'

timeWindow:

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

candPolicies:

type: array

items:

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

minItems: 1

description: This IE indicates a list of the candidate transfer policies from which the AF may select a new transfer policy due to network performance degradation.

required:

- bdtRefId

TrafficDescriptor:

type: string

description: Identify a traffic descriptor as defined in Figure 5.2.2 of 3GPP TS 24.526, octets v+5 to w.

\* \* \* \* Next changes \* \* \* \*

## A.5 ChargeableParty API

openapi: 3.0.0

info:

title: 3gpp-chargeable-party

version: 1.2.0

description: |

API for Chargeable Party management.

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externalDocs:

description: 3GPP TS 29.122 V17.6.0 T8 reference point for Northbound APIs

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.122/'

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/3gpp-chargeable-party/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/{scsAsId}/transactions:

get:

summary: Read all or queried chargeable party transaction resources for a given SCS/AS.

operationId: FetchAllChargeablePartyTransactions

tags:

- Chargeable Party Transaction Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: ip-addrs

in: query

description: The IP address(es) of the requested UE(s).

required: false

content:

application/json:

schema:

type: array

items:

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

minItems: 1

- name: ip-domain

in: query

description: The IPv4 address domain identifier. The attribute may only be provided if IPv4 address is included in the ip-addrs query parameter.

required: false

schema:

type: string

- name: mac-addrs

in: query

description: The MAC address(es) of the requested UE(s).

required: false

schema:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MacAddr48'

minItems: 1

responses:

'200':

description: OK (successful query of Chargeable Party resource)

content:

application/json:

schema:

type: array

items:

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

minItems: 0

description: individual BDT policy subscription.

'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'

'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'

post:

summary: Create a new chargeable party transaction resource.

operationId: CreateChargeablePartyTransaction

tags:

- Chargeable Party Transaction Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

requestBody:

description: representation of the Chargeable Party resource to be Created in the SCEF

required: true

content:

application/json:

schema:

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

callbacks:

eventNotification:

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

post:

requestBody: # contents of the callback message

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content (The successful acknowledgement of the notification)

'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'

responses:

'201':

description: successful creation of a chargeable party resource

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

'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'

/{scsAsId}/transactions/{transactionId}:

get:

summary: Read a chargeable party resource for a given SCS/AS and a transaction Id.

operationId: FetchIndChargeablePartyTransaction

tags:

- Individual chargeable party resource Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: transactionId

in: path

description: Identifier of transaction

required: true

schema:

type: string

responses:

'200':

description: OK (successful query of a chargeable party resource)

content:

application/json:

schema:

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

'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'

'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'

patch:

summary: Updates a existing chargeable party resource for a given SCS/AS and transaction Id.

operationId: UpdateChargeablePartyTransaction

tags:

- Individual chargeable party resource Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: transactionId

in: path

description: Identifier of transaction

required: true

schema:

type: string

requestBody:

description: representation of the chargeable party resource to be udpated in the SCEF

required: true

content:

application/merge-patch+json:

schema:

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

responses:

'200':

description: successful update of a chargeable party resource

content:

application/json:

schema:

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

'204':

description: No Content

'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'

delete:

summary: Deletes a chargeable party resource for a given SCS/AS and a transcation Id.

operationId: DeleteChargeablePartyTransaction

tags:

- Individual chargeable party resource Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: transactionId

in: path

description: Identifier of transaction

required: true

schema:

type: string

responses:

'204':

description: successful deletion of an resouce of chargeable party

'200':

description: OK (Successful deletion of the existing subscription)

content:

application/json:

schema:

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

'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'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

ChargeableParty:

description: Represents the configuration of a chargeable party.

type: object

properties:

self:

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

supportedFeatures:

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

dnn:

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

snssai:

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

notificationDestination:

$ref: '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:

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

exterAppId:

type: string

description: Identifies the external Application Identifier.

ipv4Addr:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/Ipv4Addr'

ipDomain:

type: string

ipv6Addr :

$ref: 'TS29122\_CommonData.yaml#/components/schemas/Ipv6Addr'

macAddr:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MacAddr48'

flowInfo:

type: array

items:

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

minItems: 1

description: Describes the application flows.

ethFlowInfo:

type: array

items:

$ref: 'TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/EthFlowDescription'

minItems: 1

description: Identifies Ethernet packet flows.

sponsorInformation:

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

sponsoringEnabled:

type: boolean

description: Indicates sponsoring status.

referenceId:

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

servAuthInfo:

$ref: 'TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/ServAuthInfo'

usageThreshold:

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

events:

type: array

items:

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

minItems: 1

description: Represents the list of event(s) to which the SCS/AS requests to subscribe to.

required:

- notificationDestination

- sponsorInformation

- sponsoringEnabled

ChargeablePartyPatch:

description: Represents a modification request of a chargeable party resource.

type: object

properties:

flowInfo:

type: array

items:

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

minItems: 1

description: Describes the IP flows.

exterAppId:

type: string

description: Identifies the external Application Identifier.

ethFlowInfo:

type: array

items:

$ref: 'TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/EthFlowDescription'

minItems: 1

description: Identifies Ethernet packet flows.

sponsoringEnabled:

type: boolean

description: Indicates sponsoring status.

referenceId:

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

usageThreshold:

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

notificationDestination:

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

events:

description: Represents the list of event(s) to which the SCS/AS requests to subscribe to.

type: array

items:

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

minItems: 1

\* \* \* \* Next changes \* \* \* \*

## A.6 NIDD API

openapi: 3.0.0

info:

title: 3gpp**-**nidd

version: 1.2.0

description: |

API for non IP data delivery.

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externalDocs:

description: 3GPP TS 29.122 V17.6.0 T8 reference point for Northbound APIs

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.122/'

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/3gpp**-**nidd/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/{scsAsId}/configurations:

parameters:

- name: scsAsId

description: String identifying the SCS/AS.

in: path

required: true

schema:

type: string

get:

summary: Read all NIDD configuration resources for a given SCS/AS.

operationId: FetchAllNIDDConfigurations

tags:

- NIDD configurations

responses:

'200':

description: all NIDD configurations.

content:

application/json:

schema:

type: array

items:

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

minItems: 0

description: individual NIDD configuration.

'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'

'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'

post:

summary: Create a new NIDD configuration resource.

operationId: CreateNIDDConfiguration

tags:

- NIDD configurations

requestBody:

description: Contains the data to create a NIDD configuration.

required: true

content:

application/json:

schema:

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

responses:

'201':

description: NIDD configuration is successfully created.

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

'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:

niddNotifications:

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

post:

requestBody:

description: Notification for NIDD configuration status, MO NIDD, MT NIDD delivery report.

required: true

content:

application/json:

schema:

oneOf:

- $ref: '#/components/schemas/NiddConfigurationStatusNotification'

- $ref: '#/components/schemas/NiddUplinkDataNotification'

- $ref: '#/components/schemas/NiddDownlinkDataDeliveryStatusNotification'

- $ref: '#/components/schemas/GmdNiddDownlinkDataDeliveryNotification'

- $ref: '#/components/schemas/ManagePortNotification'

responses:

'204':

description: Expected response to a successful callback processing without a body

'200':

description: Expected response to a successful callback processing with a body

content:

application/json:

schema:

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

'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'

/{scsAsId}/configurations/{configurationId}:

parameters:

- name: scsAsId

description: String identifying the SCS/AS.

in: path

required: true

schema:

type: string

- name: configurationId

description: String identifying the individual NIDD configuration resource in the SCEF.

in: path

required: true

schema:

type: string

get:

summary: Read an NIDD configuration resource.

operationId: FetchIndNIDDConfiguration

tags:

- Individual NIDD configuration

responses:

'200':

description: The individual NIDD configuration is successfully retrieved.

content:

application/json:

schema:

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

'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'

'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'

patch:

summary: Modify an existing NIDD configuration resource.

operationId: ModifyNIDDConfiguration

tags:

- Individual NIDD configuration

requestBody:

description: Contains information to be applied to the individual NIDD configuration.

required: true

content:

application/merge-patch+json:

schema:

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

responses:

'200':

description: The Individual NIDD configuration is modified successfully and a representation of that resource is returned.

content:

application/json:

schema:

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

'204':

description: The Individual NIDD configuration is modified successfully and no content is to be sent in the response message body.

'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'

delete:

summary: Delete an existing NIDD configuration resource.

operationId: DeleteNIDDConfiguration

tags:

- Individual NIDD configuration

responses:

'204':

description: The Individual NIDD configuration 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'

/{scsAsId}/configurations/{configurationId}/downlink-data-deliveries:

parameters:

- name: scsAsId

description: String identifying the SCS/AS.

in: path

required: true

schema:

type: string

- name: configurationId

description: String identifying the individual NIDD configuration resource in the SCEF.

in: path

required: true

schema:

type: string

get:

summary: Read all pending NIDD downlink data delivery resources related to a particular NIDD configuration resource.

operationId: FetchAllDownlinkDataDeliveries

tags:

- NIDD downlink data deliveries

responses:

'200':

description: all NIDD downlink data deliveries.

content:

application/json:

schema:

type: array

items:

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

minItems: 0

description: individual NIDD downlink data delivery.

'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'

'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'

post:

summary: Create an NIDD downlink data delivery resource related to a particular NIDD configuration resource.

operationId: CreateDownlinkDataDelivery

tags:

- NIDD downlink data deliveries

requestBody:

description: Contains the data to create a NIDD downlink data delivery.

required: true

content:

application/json:

schema:

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

responses:

'200':

description: NIDD downlink data delivery is successful.

content:

application/json:

schema:

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

'201':

description: NIDD downlink data delivery is pending.

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

'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':

description: The NIDD downlink data delivery request was not successful.

content:

application/json:

schema:

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

'503':

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

default:

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

/{scsAsId}/configurations/{configurationId}/downlink-data-deliveries/{downlinkDataDeliveryId}:

parameters:

- name: scsAsId

description: String identifying the SCS/AS.

in: path

required: true

schema:

type: string

- name: configurationId

description: String identifying the individual NIDD configuration resource in the SCEF.

in: path

required: true

schema:

type: string

- name: downlinkDataDeliveryId

description: String identifying the individual NIDD downlink data delivery in the SCEF.

in: path

required: true

schema:

type: string

get:

summary: Read pending NIDD downlink data delivery resource.

operationId: FetchIndDownlinkDataDelivery

tags:

- Individual NIDD downlink data delivery

responses:

'200':

description: The individual NIDD downlink data delivery is successfully retrieved.

content:

application/json:

schema:

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

'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'

'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: Replace an NIDD downlink data delivery resource.

operationId: UpdateIndDownlinkDataDelivery

tags:

- Individual NIDD downlink data delivery

requestBody:

description: Contains information to be applied to the individual NIDD downlink data delivery.

required: true

content:

application/json:

schema:

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

responses:

'200':

description: The pending NIDD downlink data is replaced sucessfully but delivery is pending.

content:

application/json:

schema:

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

'204':

description: The NIDD downlink data delivery has been replaced successfully and no content is to be sent in the response message body.

'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'

'409':

$ref: 'TS29122\_CommonData.yaml#/components/responses/409'

'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':

description: The NIDD downlink data replacement request was not successful.

content:

application/json:

schema:

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

'503':

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

default:

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

patch:

summary: Modify an existing Individual NIDD downlink data delivery resource.

operationId: ModifyIndDownlinkDataDelivery

tags:

- Individual NIDD downlink data delivery

requestBody:

description: Contains the parameters to update an individual NIDD downlink data delivery resource.

required: true

content:

application/json:

schema:

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

responses:

'200':

description: OK. The modification of the Individual NIDD downlink data delivery resource was successful and an updated representation of the resource within the NiddDownlinkDataTransfer data structure in the response message body is returned by the SCEF.

content:

application/json:

schema:

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

'204':

description: No Content. The modification of the Individual NIDD downlink data delivery resource was successful and no content is to be sent in the response message body.

'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'

'409':

$ref: 'TS29122\_CommonData.yaml#/components/responses/409'

'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':

description: Internal Server Error. The NIDD downlink data modification request was not successful.

content:

application/json:

schema:

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

'503':

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

default:

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

delete:

summary: Delete an NIDD downlink data delivery resource.

operationId: DeleteIndDownlinkDataDelivery

tags:

- Individual NIDD downlink data delivery

responses:

'204':

description: The pending NIDD downlink data 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'

'409':

$ref: 'TS29122\_CommonData.yaml#/components/responses/409'

'429':

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

'500':

description: The NIDD downlink data cancellation request was not successful.

content:

application/json:

schema:

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

'503':

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

default:

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

/{scsAsId}/configurations/{configurationId}/rds-ports:

parameters:

- name: scsAsId

description: String identifying the SCS/AS.

in: path

required: true

schema:

type: string

- name: configurationId

description: String identifying the individual NIDD configuration resource in the SCEF.

in: path

required: true

schema:

type: string

get:

summary: Read all RDS ManagePort Configurations.

operationId: FetchAllManagePortConfigurations

tags:

- ManagePort Configurations

responses:

'200':

description: all ManagePort configurations.

content:

application/json:

schema:

type: array

items:

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

minItems: 0

description: individual ManagePort configuration.

'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'

'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'

/{scsAsId}/configurations/{configurationId}/rds-ports/{portId}:

parameters:

- name: scsAsId

description: String identifying the SCS/AS.

in: path

required: true

schema:

type: string

- name: configurationId

description: String identifying the individual NIDD configuration resource in the SCEF.

in: path

required: true

schema:

type: string

- name: portId

description: The UE port number.

in: path

required: true

schema:

type: string

pattern: '^(ue([0-9]|(1[0-5]))-ef([0-9]|(1[0-5])))$'

get:

summary: Read an Individual ManagePort Configuration resource to query port numbers.

operationId: FetchIndManagePortConfiguration

tags:

- Individual ManagePort Configuration

responses:

'200':

description: The individual ManagePort configuration is successfully retrieved.

content:

application/json:

schema:

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

'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'

'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: Create a new Individual ManagePort Configuration resource to reserve port numbers.

operationId: UpdateIndManagePortConfiguration

tags:

- Individual ManagePort Configuration

requestBody:

description: Contains information to be applied to the individual ManagePort configuration.

required: true

content:

application/json:

schema:

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

responses:

'201':

description: The individual ManagePort configuration is created.

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

'202':

description: The request is accepted and under processing.

'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'

'409':

$ref: 'TS29122\_CommonData.yaml#/components/responses/409'

'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':

description: The request was not successful.

content:

application/problem+json:

schema:

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

'503':

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

default:

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

delete:

summary: Delete an Individual ManagePort Configuration resource to release port numbers.

operationId: DeleteIndManagePortConfiguration

tags:

- Individual ManagePort Configuration

responses:

'202':

description: The request is accepted and under processing.

'204':

description: The individual ManagePort configuration 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'

'409':

$ref: 'TS29122\_CommonData.yaml#/components/responses/409'

'429':

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

'500':

description: The request was not successful.

content:

application/problem+json:

schema:

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

'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:

NiddConfiguration:

description: Represents the configuration for NIDD.

type: object

properties:

self:

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

supportedFeatures:

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

mtcProviderId:

type: string

description: Identifies the MTC Service Provider and/or MTC Application.

externalId:

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

msisdn:

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

externalGroupId:

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

duration:

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

reliableDataService:

type: boolean

description: The reliable data service (as defined in subclause 4.5.15.3 of 3GPP TS 23.682) to indicate if a reliable data service acknowledgment is enabled or not.

rdsPorts:

type: array

items:

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

minItems: 1

description: Indicates the static port configuration that is used for reliable data transfer between specific applications using RDS (as defined in subclause 5.2.4 and 5.2.5 of 3GPP TS 24.250).

pdnEstablishmentOption:

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

notificationDestination:

$ref: '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:

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

maximumPacketSize:

type: integer

minimum: 1

description: The Maximum Packet Size is the maximum NIDD packet size that was transferred to the UE by the SCEF in the PCO, see subclause 4.5.14.1 of 3GPP TS 23.682. If no maximum packet size was provided to the UE by the SCEF, the SCEF sends a default configured max packet size to SCS/AS. Unit bit.

readOnly: true

niddDownlinkDataTransfers:

type: array

items:

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

minItems: 1

description: The downlink data deliveries that needed to be executed by the SCEF. The cardinality of the property shall be 0..1 in the request and 0..N in the response (i.e. response may contain multiple buffered MT NIDD).

status:

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

required:

- notificationDestination

oneOf:

- required: [externalId]

- required: [msisdn]

- required: [externalGroupId]

NiddDownlinkDataTransfer:

description: Represents the received NIDD downlink data from the SCS/AS.

type: object

properties:

externalId:

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

externalGroupId:

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

msisdn:

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

self:

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

data:

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

reliableDataService:

type: boolean

description: The reliable data service (as defined in subclause 4.5.15.3 of 3GPP TS 23.682) to indicate if a reliable data service acknowledgment is enabled or not.

rdsPort:

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

maximumLatency:

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

priority:

type: integer

description: It is used to indicate the priority of the non-IP data packet relative to other non-IP data packets.

pdnEstablishmentOption:

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

deliveryStatus:

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

requestedRetransmissionTime:

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

required:

- data

oneOf:

- required: [externalId]

- required: [msisdn]

- required: [externalGroupId]

NiddUplinkDataNotification:

description: Represents NIDD uplink data to be notified to the SCS/AS.

type: object

properties:

niddConfiguration:

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

externalId:

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

msisdn:

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

data:

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

reliableDataService:

type: boolean

description: Indicates whether the reliable data service is enabled.

rdsPort:

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

required:

- niddConfiguration

- data

oneOf:

- required: [externalId]

- required: [msisdn]

NiddDownlinkDataDeliveryStatusNotification:

description: Represents the delivery status of a specific NIDD downlink data delivery.

type: object

properties:

niddDownlinkDataTransfer:

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

deliveryStatus:

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

requestedRetransmissionTime:

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

required:

- niddDownlinkDataTransfer

- deliveryStatus

NiddConfigurationStatusNotification:

description: Represents an NIDD configuration status notification.

type: object

properties:

niddConfiguration:

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

externalId:

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

msisdn:

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

status:

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

rdsCapIndication:

type: boolean

description: It indicates whether the network capability for the reliable data service is enabled or not.

rdsPort:

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

required:

- niddConfiguration

- status

oneOf:

- required: [externalId]

- required: [msisdn]

GmdNiddDownlinkDataDeliveryNotification:

description: Represents the delivery status of a specific group NIDD downlink data delivery.

type: object

properties:

niddDownlinkDataTransfer:

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

gmdResults:

type: array

items:

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

minItems: 1

description: Indicates the group message delivery result.

required:

- niddDownlinkDataTransfer

- gmdResults

RdsPort:

description: Represents the port configuration for Reliable Data Transfer.

type: object

properties:

portUE:

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

portSCEF:

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

required:

- portUE

- portSCEF

GmdResult:

description: Represents the group message delivery result.

type: object

properties:

externalId:

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

msisdn:

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

deliveryStatus:

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

requestedRetransmissionTime:

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

required:

- deliveryStatus

oneOf:

- required: [externalId]

- required: [msisdn]

NiddDownlinkDataDeliveryFailure:

description: Represents information related to a failure delivery result.

type: object

properties:

problemDetail:

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

requestedRetransmissionTime:

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

required:

- problemDetail

ManagePort:

description: Represents the configuration of a RDS dynamic port management.

type: object

properties:

self:

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

appId:

type: string

description: Identifies the application.

manageEntity:

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

skipUeInquiry:

type: boolean

description: Indicate whether to skip UE inquiry.

supportedFormats:

type: array

items:

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

minItems: 1

description: Indicates the serialization format(s) that are supported by the SCS/AS on the associated RDS port.

configuredFormat:

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

required:

- appId

ManagePortNotification:

description: Represents a ManagePort notification of port numbers that are reserved.

type: object

properties:

niddConfiguration:

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

externalId:

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

msisdn:

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

managedPorts:

type: array

items:

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

minItems: 1

description: Indicates the reserved RDS port configuration information.

required:

- niddConfiguration

oneOf:

- required: [externalId]

- required: [msisdn]

RdsDownlinkDataDeliveryFailure:

description: Represents the failure delivery result for RDS.

allOf:

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

- type: object

properties:

requestedRetransmissionTime:

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

supportedUeFormats:

type: array

items:

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

minItems: 1

description: Indicates the serialization format(s) that are supported by the UE on the associated RDS port.

NiddDownlinkDataTransferPatch:

description: Represents the parameters to request the modification of an Individual NIDD Downlink Data Delivery resource.

type: object

properties:

data:

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

reliableDataService:

type: boolean

description: The reliable data service (as defined in subclause 4.5.15.3 of 3GPP TS 23.682) to indicate if a reliable data service acknowledgment is enabled or not.

rdsPort:

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

maximumLatency:

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

priority:

type: integer

description: It is used to indicate the priority of the non-IP data packet relative to other non-IP data packets.

pdnEstablishmentOption:

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

PdnEstablishmentOptions:

anyOf:

- type: string

enum:

- WAIT\_FOR\_UE

- INDICATE\_ERROR

- SEND\_TRIGGER

- 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

- WAIT\_FOR\_UE: wait for the UE to establish the PDN connection

- INDICATE\_ERROR: respond with an error cause

- SEND\_TRIGGER: send a device trigger

PdnEstablishmentOptionsRm:

description: Represents the same information as the PdnEstablishmentOptions data type with the difference that it allows also the null value.

anyOf:

- $ref: '#/components/schemas/PdnEstablishmentOptions'

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

DeliveryStatus:

anyOf:

- type: string

enum:

- SUCCESS

- SUCCESS\_NEXT\_HOP\_ACKNOWLEDGED

- SUCCESS\_NEXT\_HOP\_UNACKNOWLEDGED

- SUCCESS\_ACKNOWLEDGED

- SUCCESS\_UNACKNOWLEDGED

- TRIGGERED

- BUFFERING

- BUFFERING\_TEMPORARILY\_NOT\_REACHABLE

- SENDING

- FAILURE

- FAILURE\_RDS\_DISABLED

- FAILURE\_NEXT\_HOP

- FAILURE\_TIMEOUT

- FAILURE\_TEMPORARILY\_NOT\_REACHABLE

- 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

- SUCCESS: Success but details not provided

- SUCCESS\_NEXT\_HOP\_ACKNOWLEDGED: Successful delivery to the next hop with acknowledgment.

- SUCCESS\_NEXT\_HOP\_UNACKNOWLEDGED: Successful delivery to the next hop without acknowledgment

- SUCCESS\_ACKNOWLEDGED: Reliable delivery was acknowledged by the UE

- SUCCESS\_UNACKNOWLEDGED: Reliable delivery was not acknowledged by the UE

- TRIGGERED: The SCEF triggered the device and is buffering the data.

- BUFFERING: The SCEF is buffering the data due to no PDN connection established.

- BUFFERING\_TEMPORARILY\_NOT\_REACHABLE: The SCEF has been informed that the UE is temporarily not reachable but is buffering the data

- SENDING: The SCEF has forwarded the data, but they may be stored elsewhere

- FAILURE: Delivery failure but details not provided

- FAILURE\_RDS\_DISABLED: RDS was disabled

- FAILURE\_NEXT\_HOP: Unsuccessful delivery to the next hop.

- FAILURE\_TIMEOUT: Unsuccessful delivery due to timeout.

- FAILURE\_TEMPORARILY\_NOT\_REACHABLE: The SCEF has been informed that the UE is temporarily not reachable without buffering the data.

readOnly: true

NiddStatus:

anyOf:

- type: string

enum:

- ACTIVE

- TERMINATED\_UE\_NOT\_AUTHORIZED

- TERMINATED

- RDS\_PORT\_UNKNOWN

- 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

- ACTIVE: The NIDD configuration is active.

- TERMINATED\_UE\_NOT\_AUTHORIZED: The NIDD configuration was terminated because the UE´s authorisation was revoked.

- TERMINATED: The NIDD configuration was terminated.

- RDS\_PORT\_UNKNOWN: The RDS port is unknown.

readOnly: true

ManageEntity:

anyOf:

- type: string

enum:

- UE

- AS

- 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

- UE: Representing the UE.

- AS: Representing the Application Server.

readOnly: true

SerializationFormat:

anyOf:

- type: string

enum:

- CBOR

- JSON

- XML

- 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

- CBOR: The CBOR Serialzition format

- JSON: The JSON Serialzition format

- XML: The XML Serialzition format

NiddConfigurationPatch:

description: Represents the parameters to update a NIDD configuration.

type: object

properties:

duration:

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

reliableDataService:

type: boolean

description: The reliable data service (as defined in subclause 4.5.15.3 of 3GPP TS 23.682) to indicate if a reliable data service acknowledgment is enabled or not.

nullable: true

rdsPorts:

type: array

items:

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

minItems: 1

description: Indicates the static port configuration that is used for reliable data transfer between specific applications using RDS (as defined in subclause 5.2.4 and 5.2.5 of 3GPP TS 24.250).

pdnEstablishmentOption:

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

notificationDestination:

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

\* \* \* \* Next changes \* \* \* \*

## A.7 DeviceTriggering API

openapi: 3.0.0

info:

title: 3gpp-device-triggering

version: 1.2.0

description: |

API for device trigger.

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externalDocs:

description: 3GPP TS 29.122 V17.6.0 T8 reference point for Northbound APIs

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.122/'

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/3gpp-device-triggering/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/{scsAsId}/transactions:

get:

summary: read all active device triggering transactions for a given SCS/AS.

operationId: FetchAllDeviceTriggeringTransactions

tags:

- Device Triggering Transactions

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

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

responses:

'200':

description: OK (Successful get all of the active device triggering transactions for the SCS/AS)

content:

application/json:

schema:

type: array

items:

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

'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'

'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'

post:

summary: Create a long-term transaction for a device triggering.

operationId: CreateDeviceTriggeringTransaction

tags:

- Device Triggering API Transactions

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

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

requestBody:

description: Parameters to request a device triggering delivery.

required: true

content:

application/json:

schema:

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

callbacks:

notificationDestination:

'{request.body#/notificationDestination}':

post:

requestBody: # contents of the callback message

required: true

content:

application/json:

schema:

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

responses:

'200':

description: OK (successful notification)

content:

application/json:

schema:

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

'204':

description: No Content (successful notification)

'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'

responses:

'201':

description: Created (Successful creation of subscription)

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

'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'

/{scsAsId}/transactions/{transactionId}:

get:

summary: Read a device triggering transaction resource.

operationId: FetchIndDeviceTriggeringTransaction

tags:

- Individual Device Triggering Transaction

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

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

- name: transactionId

in: path

description: Identifier of the transaction resource

required: true

schema:

type: string

responses:

'200':

description: OK (Successful get the active subscription)

content:

application/json:

schema:

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

'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'

'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: Replace an existing device triggering transaction resource and the corresponding device trigger request.

operationId: UpdateIndDeviceTriggeringTransaction

tags:

- Individual Device Triggering Transaction

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

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

- name: transactionId

in: path

description: Identifier of the transaction resource

required: true

schema:

type: string

requestBody:

description: Parameters to update/replace the existing device triggering

required: true

content:

application/json:

schema:

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

responses:

'200':

description: OK (Successful update of the device triggering)

content:

application/json:

schema:

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

'204':

description: No Content (Successful update of the device triggering)

'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 existing Individual Device Triggering Transaction resource and the corresponding device triggering request.

operationId: ModifyIndDeviceTriggeringTransaction

tags:

- Individual Device Triggering Transaction

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

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

- name: transactionId

in: path

description: Identifier of the transaction resource

required: true

schema:

type: string

requestBody:

description: Parameters to request the modification of the existing Individual Device Triggering Transaction resource.

required: true

content:

application/json:

schema:

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

responses:

'200':

description: OK. The Individual Device Triggering Transaction resource was successfully modified and a representation of the modified Individual Device Triggering Transaction resource within the DeviceTriggering data structure including the "deliveryResult" attribute is returned by the SCEF.

content:

application/json:

schema:

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

'204':

description: No Content. The Individual Device Triggering Transaction resource was successfully modified no content is returned in the response message body.

'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'

delete:

summary: Deletes an already existing device triggering transaction.

operationId: DeleteIndDeviceTriggeringTransaction

tags:

- Individual Device Triggering Transaction

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

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

- name: transactionId

in: path

description: Identifier of the transaction resource

required: 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:

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

'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'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

DeviceTriggering:

description: Represents device triggering related information.

type: object

properties:

self:

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

externalId:

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

msisdn:

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

supportedFeatures:

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

validityPeriod:

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

priority:

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

applicationPortId:

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

appSrcPortId:

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

triggerPayload:

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

notificationDestination:

$ref: '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:

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

deliveryResult:

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

required:

- validityPeriod

- priority

- applicationPortId

- triggerPayload

- notificationDestination

oneOf:

- required: [externalId]

- required: [msisdn]

DeviceTriggeringDeliveryReportNotification:

description: Represents a device triggering delivery report notification.

type: object

properties:

transaction:

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

result:

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

required:

- transaction

- result

DeviceTriggeringPatch:

description: Represents device triggering related information.

type: object

properties:

validityPeriod:

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

priority:

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

applicationPortId:

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

appSrcPortId:

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

triggerPayload:

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

notificationDestination:

$ref: '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:

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

DeliveryResult:

anyOf:

- type: string

enum:

- SUCCESS

- UNKNOWN

- FAILURE

- TRIGGERED

- EXPIRED

- UNCONFIRMED

- REPLACED

- TERMINATE

- 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

- SUCCESS: This value indicates that the device action request was successfully completed.

- UNKNOWN: This value indicates any unspecified errors.

- FAILURE: This value indicates that this trigger encountered a delivery error and is deemed permanently undeliverable.

- TRIGGERED: This value indicates that device triggering request is accepted by the SCEF.

- EXPIRED: This value indicates that the validity period expired before the trigger could be delivered.

- UNCONFIRMED: This value indicates that the delivery of the device action request is not confirmed.

- REPLACED: This value indicates that the device triggering replacement request is accepted by the SCEF.

- TERMINATE: This value indicates that the delivery of the device action request is terminated by the SCS/AS.

readOnly: true

Priority:

anyOf:

- type: string

enum:

- NO\_PRIORITY

- PRIORITY

- 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

- NO\_PRIORITY: This value indicates that the device trigger has no priority.

- PRIORITY: This value indicates that the device trigger has priority.

\* \* \* \* Next changes \* \* \* \*

### A.8.1 GMDviaMBMSbyMB2 API

openapi: 3.0.0

info:

title: GMDviaMBMSbyMB2

description: |

API for Group Message Delivery via MBMS by MB2

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version: 1.2.0

externalDocs:

description: 3GPP TS 29.122 V17.6.0 T8 reference point for Northbound APIs

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.122/'

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/3gpp-group-message-delivery-mb2/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/{scsAsId}/tmgi-allocation:

get:

summary: read all TMGI Allocation resource for a given SCS/AS

operationId: FetchAllTMGIAllocations

tags:

- TMGI Allocation Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

responses:

'200':

description: OK (successful query of TMGI Allocation resource)

content:

application/json:

schema:

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

'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'

'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'

post:

summary: Creates a new TMGI Allocation resource for a given SCS/AS.

operationId: CreateTMGIAllocation

tags:

- TMGI Allocation Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

requestBody:

description: representation of the TMGI Allocation to be created in the SCEF

required: true

content:

application/json:

schema:

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

responses:

'201':

description: successful creation of an TMGI Allocation

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

'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'

/{scsAsId}/tmgi-allocation/{tmgi}:

get:

summary: Read a TMGI Allocation resource for a given SCS/AS and a TMGI.

operationId: FetchIndTMGIAllocation

tags:

- Individual TMGI Allocation Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: tmgi

in: path

description: TMGI

required: true

schema:

type: string

responses:

'200':

description: OK (successful query of TMGI Allocation resource)

content:

application/json:

schema:

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

'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'

'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: Updates an existing TMGI Allocation resource for a given SCS/AS and a TMGI.

operationId: UpdateIndTMGIAllocation

tags:

- Individual TMGI Allocation Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: tmgi

in: path

description: TMGI

required: true

schema:

type: string

requestBody:

description: representation of the TMGI Allocation to be updated in the SCEF

required: true

content:

application/json:

schema:

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

responses:

'200':

description: successful creation of an TMGI Allocation

content:

application/json:

schema:

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

'204':

description: The TMGI expiration time renewal is successful, and no content is to be sent in the response message body.

'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: Updates an existing TMGI Allocation resource for a given SCS/AS and a TMGI.

operationId: ModifyIndTMGIAllocation

tags:

- Individual TMGI Allocation Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: tmgi

in: path

description: TMGI

required: true

schema:

type: string

requestBody:

description: representation of the TMGI Allocation to be updated in the SCEF

required: true

content:

application/merge-patch+json:

schema:

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

responses:

'200':

description: successful creation of an TMGI Allocation

content:

application/json:

schema:

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

'204':

description: The TMGI expiration time renewal is successful, and no content is to be sent in the response message body.

'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'

delete:

summary: Deletes an existing TMGI Allocation resource for a given SCS/AS and a TMGI.

operationId: DeleteTMGIAllocation

tags:

- Individual TMGI Allocation Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: tmgi

in: path

description: TMGI

required: true

schema:

type: string

responses:

'204':

description: No Content, successful deletion of an TMGI Allocation

'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'

/{scsAsId}/tmgi-allocation/{tmgi}/delivery-via-mbms:

get:

summary: Read all group message delivery via MBMS resource for a given SCS/AS and a TMGI.

operationId: FecthAllGMDViaMBMSByMB2

tags:

- Delivery via MBMS Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: tmgi

in: path

description: TMGI

required: true

schema:

type: string

responses:

'200':

description: OK (successful query of Delivery via MBMS resource)

content:

application/json:

schema:

$ref: '#/components/schemas/GMDViaMBMSByMb2'

'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'

'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'

post:

summary: Creates a new delivery via MBMS for a given SCS/AS and a TMGI.

operationId: CreateGMDViaMBMSByMB2

tags:

- Delivery via MBMS Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: tmgi

in: path

description: TMGI

required: true

schema:

type: string

requestBody:

description: representation of the GMD via MBMS by MB2 resource to be Created in the SCEF

required: true

content:

application/json:

schema:

$ref: '#/components/schemas/GMDViaMBMSByMb2'

callbacks:

gMDByMb2Notification:

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

post:

requestBody: # contents of the callback message

required: true

content:

application/json:

schema:

$ref: '#/components/schemas/GMDByMb2Notification'

responses:

'200':

description: OK (The successful acknowledgement of the notification with a body)

content:

application/json:

schema:

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

'204':

description: successful notification

'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'

responses:

'201':

description: successful creation of an GMD via MBMS by MB2 resource

content:

application/json:

schema:

$ref: '#/components/schemas/GMDViaMBMSByMb2'

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

'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'

/{scsAsId}/tmgi-allocation/{tmgi}/delivery-via-mbms/{transactionId}:

get:

summary: Read all group message delivery via MBMS resource for a given SCS/AS and a TMGI.

operationId: FetchIndDeliveryViaMBMS

tags:

- Individual Delivery via MBMS resource Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: tmgi

in: path

description: TMGI

required: true

schema:

type: string

- name: transactionId

in: path

description: Identifier of transaction

required: true

schema:

type: string

responses:

'200':

description: OK (successful query of an Delivery via MBMS resource)

content:

application/json:

schema:

$ref: '#/components/schemas/GMDViaMBMSByMb2'

'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'

'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: Updates a existing delivery via MBMS for a given SCS/AS, a TMGI and transaction Id.

operationId: UpdateIndDeliveryViaMBMS

tags:

- Individual Delivery via MBMS resource Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: tmgi

in: path

description: TMGI

required: true

schema:

type: string

- name: transactionId

in: path

description: Identifier of transaction

required: true

schema:

type: string

requestBody:

description: representation of the GMD via MBMS by MB2 resource to be udpated in the SCEF

required: true

content:

application/json:

schema:

$ref: '#/components/schemas/GMDViaMBMSByMb2'

responses:

'200':

description: successful update of an individual GMD via MBMS by MB2 resource

content:

application/json:

schema:

$ref: '#/components/schemas/GMDViaMBMSByMb2'

'204':

description: The group message delivery is replaced successfully, and no content is to be sent in the response message body.

'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: Updates a existing delivery via MBMS for a given SCS/AS, a TMGI and transaction Id.

operationId: ModifyIndDeliveryViaMBMS

tags:

- Individual Delivery via MBMS resource Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: tmgi

in: path

description: TMGI

required: true

schema:

type: string

- name: transactionId

in: path

description: Identifier of transaction

required: true

schema:

type: string

requestBody:

description: representation of the GMD via MBMS by MB2 resource to be udpated in the SCEF

required: true

content:

application/merge-patch+json:

schema:

$ref: '#/components/schemas/GMDViaMBMSByMb2Patch'

responses:

'200':

description: successful update of an individual GMD via MBMS by MB2 resource

content:

application/json:

schema:

$ref: '#/components/schemas/GMDViaMBMSByMb2'

'204':

description: The group message delivery is modified successfully, and no content is to be sent in the response message body.

'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'

delete:

summary: Deletes a delivery via MBMS resource for a given SCS/AS, a TMGI and a transcation Id.

operationId: DeleteIndDeliveryViaMBMS

tags:

- Individual Delivery via MBMS resource Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: tmgi

in: path

description: TMGI

required: true

schema:

type: string

- name: transactionId

in: path

description: Identifier of transaction

required: true

schema:

type: string

responses:

'204':

description: No Content, successful deletion of an resouce of deliery via MBMS

'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'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

TMGIAllocation:

description: Represents an individual TMGI Allocation resource.

type: object

properties:

self:

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

supportedFeatures:

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

externalGroupId:

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

mbmsLocArea:

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

tmgiExpiration:

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

GMDViaMBMSByMb2:

description: Represents a group message delivery via MBMS by MB2.

type: object

properties:

self:

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

notificationDestination:

$ref: '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:

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

externalGroupId:

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

mbmsLocArea:

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

messageDeliveryStartTime:

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

groupMessagePayload:

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

scefMessageDeliveryIPv4:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/Ipv4AddrRo'

scefMessageDeliveryIPv6:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/Ipv6AddrRo'

scefMessageDeliveryPort:

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

required:

- notificationDestination

GMDByMb2Notification:

description: Represents a group message delivery notification.

type: object

properties:

transaction:

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

deliveryTriggerStatus:

type: boolean

description: Indicates whether delivery of group message payload corresponding to the TMGI was successful (TRUE) or not (FALSE)

required:

- transaction

- deliveryTriggerStatus

TMGIAllocationPatch:

description: Represents the parameters to request the modification of a TMGI Allocation resource.

type: object

properties:

externalGroupId:

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

mbmsLocArea:

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

GMDViaMBMSByMb2Patch:

description: Represents a modification request of a group message delivery via MBMS by MB2.

type: object

properties:

externalGroupId:

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

mbmsLocArea:

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

messageDeliveryStartTime:

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

groupMessagePayload:

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

notificationDestination:

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

MbmsLocArea:

description: Represents a user location area whithin which is sent a group message delivery via MBMS request.

type: object

properties:

cellId:

type: array

items:

type: string

minItems: 1

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

enodeBId:

type: array

items:

type: string

minItems: 1

description: Indicates an eNodeB in which the UE is currently located.

geographicArea:

type: array

items:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/GeographicArea'

minItems: 1

description: Identifies a geographic area of the user where the UE is located.

mbmsServiceAreaId:

type: array

items:

type: string

minItems: 1

description: Identifies an MBMS Service Area Identity of the user where the UE is located.

civicAddress:

type: array

items:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/CivicAddress'

minItems: 1

description: Identifies a civic address of the user where the UE is located.

\* \* \* \* Next changes \* \* \* \*

### A.8.2 GMDviaMBMSbyxMB API

openapi: 3.0.0

info:

title: GMDviaMBMSbyxMB

description: |

API for Group Message Delivery via MBMS by xMB

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version: 1.2.0

externalDocs:

description: 3GPP TS 29.122 V17.6.0 T8 reference point for Northbound APIs

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.122/'

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/3gpp-group-message-delivery-xmb/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/{scsAsId}/services:

get:

summary: Read all service resources for a given SCS/AS.

operationId: FetchAllxMBServices

tags:

- Service Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

responses:

'200':

description: OK (successful query of service creation resource)

content:

application/json:

schema:

type: array

items:

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

minItems: 0

description: The service resource for the SCS/AS in the request URI is returned.

'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'

'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'

post:

summary: Creates a new service creation resource for a given SCS/AS.

operationId: CreatexMBService

tags:

- Service Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

requestBody:

description: representation of the service to be created in the SCEF

required: true

content:

application/json:

schema:

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

responses:

'201':

description: successful creation of a service

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

'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'

/{scsAsId}/services/{serviceId}:

get:

summary: Read a service resource for a given SCS/AS and a Service Id.

operationId: FetchIndxMBService

tags:

- Individual Service Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: serviceId

in: path

description: Service Id

required: true

schema:

type: string

responses:

'200':

description: OK (successful query of service resource)

content:

application/json:

schema:

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

'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'

'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'

delete:

summary: Deletes an existing service resource for a given SCS/AS and a service id.

operationId: DeletexMBService

tags:

- Individual Service Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: serviceId

in: path

description: Service Id

required: true

schema:

type: string

responses:

'204':

description: No Content, successful deletion of a service resource

'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'

/{scsAsId}/services/{serviceId}/delivery-via-mbms:

get:

summary: Read all group message delivery via MBMS resource for a given SCS/AS and a service id.

operationId: FetchAllGMDViaMBMS

tags:

- Delivery via MBMS Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: serviceId

in: path

description: Service Id

required: true

schema:

type: string

responses:

'200':

description: OK (successful query of Delivery via MBMS resource)

content:

application/json:

schema:

type: array

items:

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

minItems: 0

'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'

'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'

post:

summary: Creates a new delivery via MBMS for a given SCS/AS and a service Id.

operationId: CreateGMDViaMBMS

tags:

- Delivery via MBMS Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: serviceId

in: path

description: Service Id

required: true

schema:

type: string

requestBody:

description: representation of the GMD via MBMS by xMB resource to be Created in the SCEF

required: true

content:

application/json:

schema:

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

callbacks:

gMDByxMBNotification:

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

post:

requestBody: # contents of the callback message

required: true

content:

application/json:

schema:

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

responses:

'200':

description: OK (The successful acknowledgement of the notification with a body)

content:

application/json:

schema:

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

'204':

description: successful notification

'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'

responses:

'201':

description: successful creation of an GMD via MBMS by xMB resource

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

'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'

/{scsAsId}/services/{serviceId}/delivery-via-mbms/{transactionId}:

get:

summary: Read all group message delivery via MBMS resource for a given SCS/AS and a service Id.

operationId: FetchIndGMDViaMBMS

tags:

- Individual Delivery via MBMS resource Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: serviceId

in: path

description: Service Id

required: true

schema:

type: string

- name: transactionId

in: path

description: Identifier of transaction

required: true

schema:

type: string

responses:

'200':

description: OK (successful query of an Delivery via MBMS resource)

content:

application/json:

schema:

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

'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'

'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: Updates an existing delivery via MBMS for a given SCS/AS, a service Id and transaction Id.

operationId: UpdateIndGMDViaMBMS

tags:

- Individual Delivery via MBMS resource Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: serviceId

in: path

description: Service Id

required: true

schema:

type: string

- name: transactionId

in: path

description: Identifier of transaction

required: true

schema:

type: string

requestBody:

description: representation of the GMD via MBMS by xMB resource to be udpated in the SCEF

required: true

content:

application/json:

schema:

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

responses:

'200':

description: successful update of an individual GMD via MBMS by xMB resource

content:

application/json:

schema:

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

'204':

description: The group message delivery was modified successfully, and no content is to be sent in the response message body.

'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: Updates an existing delivery via MBMS for a given SCS/AS, a service Id and transaction Id.

operationId: ModifyIndGMDViaMBMS

tags:

- Individual Delivery via MBMS resource Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: serviceId

in: path

description: Service Id

required: true

schema:

type: string

- name: transactionId

in: path

description: Identifier of transaction

required: true

schema:

type: string

requestBody:

description: representation of the GMD via MBMS by xMB resource to be udpated in the SCEF

required: true

content:

application/merge-patch+json:

schema:

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

responses:

'200':

description: successful update of an individual GMD via MBMS by xMB resource

content:

application/json:

schema:

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

'204':

description: The group message delivery was modified successfully, and no content is to be sent in the response message body.

'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'

delete:

summary: Deletes a delivery via MBMS resource for a given SCS/AS, a service Id and a transcation Id.

operationId: DeleteIndGMDViaMBMS

tags:

- Individual Delivery via MBMS resource Operation

parameters:

- name: scsAsId

in: path

description: Identifier of SCS/AS

required: true

schema:

type: string

- name: serviceId

in: path

description: Service Id

required: true

schema:

type: string

- name: transactionId

in: path

description: Identifier of transaction

required: true

schema:

type: string

responses:

'204':

description: No Content, successful deletion of an resouce of deliery via MBMS

'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'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

ServiceCreation:

description: Represents an individual xMB Service resource.

type: object

properties:

self:

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

supportedFeatures:

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

externalGroupId:

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

userServiceId:

type: string

description: Identifies the MBMS User Service supplied by the SCEF.

readOnly: true

serviceClass:

type: string

description: The service class that service belongs to supplied by the SCEF.

readOnly: true

serviceLanguages:

type: array

items:

type: string

minItems: 1

description: List of language of the service content supplied by the SCEF.

readOnly: true

serviceNames:

type: array

items:

type: string

minItems: 1

description: List of Service Names supplied by the SCEF.

readOnly: true

receiveOnlyMode:

type: boolean

description: When set to 'true', the Content Provider indicates that the service is a Receive Only Mode service. This parameter is supplied by the SCEF.

readOnly: true

serviceAnnouncementMode:

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

GMDViaMBMSByxMB:

description: Represents a group message delivery via MBMS by xMB.

type: object

properties:

self:

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

notificationDestination:

$ref: '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:

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

mbmsLocArea:

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

messageDeliveryStartTime:

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

messageDeliveryStopTime:

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

groupMessagePayload:

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

scefMessageDeliveryIPv4:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/Ipv4AddrRo'

scefMessageDeliveryIPv6:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/Ipv6AddrRo'

scefMessageDeliveryPort:

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

required:

- notificationDestination

GMDByxMBNotification:

description: Represents a group message delivery notification.

type: object

properties:

transaction:

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

deliveryTriggerStatus:

type: boolean

description: Indicates whether delivery of group message payload was successful(TRUE) or not (FALSE)

required:

- transaction

- deliveryTriggerStatus

GMDViaMBMSByxMBPatch:

description: Represents a modification request of a group message delivery via MBMS by xMB.

type: object

properties:

mbmsLocArea:

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

messageDeliveryStartTime:

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

messageDeliveryStopTime:

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

groupMessagePayload:

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

notificationDestination:

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

MbmsLocArea:

description: Represents a user location area whithin which is sent a group message delivery via MBMS request.

type: object

properties:

cellId:

type: array

items:

type: string

minItems: 1

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

enodeBId:

type: array

items:

type: string

minItems: 1

description: Indicates an eNodeB in which the UE is currently located.

geographicArea:

type: array

items:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/GeographicArea'

minItems: 1

description: Identifies a geographic area of the user where the UE is located.

mbmsServiceAreaId:

type: array

items:

type: string

minItems: 1

description: Identifies an MBMS Service Area Identity of the user where the UE is located.

civicAddress:

type: array

items:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/CivicAddress'

minItems: 1

description: Identifies a civic address of the user where the UE is located.

ServiceAnnouncementMode:

anyOf:

- type: string

enum:

- SACH

- CONTENT\_PROVIDER

- 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

- SACH: BM-SC performs the service announcement for the current service using the SACH channel.

- CONTENT\_PROVIDER: BM-SC provides the necessary service access information used by the Content Provider to create the service announcement information.

readOnly: true

\* \* \* \* Next changes \* \* \* \*

## A.9 ReportingNetworkStatus API

openapi: 3.0.0

info:

title: 3gpp-network-status-reporting

version: 1.2.0

description: |

API for reporting network status.

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externalDocs:

description: 3GPP TS 29.122 V17.6.0 T8 reference point for Northbound APIs

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.122/'

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/3gpp-net-stat-report/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/{scsAsId}/subscriptions:

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

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

get:

summary: Read all network status reporting subscription resources for a given SCS/AS.

operationId: FetchAllNwStatusReportSubscriptions

tags:

- Network Status Reporting Subscriptions

responses:

'200':

description: The requested information was returned successfully.

content:

application/json:

schema:

type: array

items:

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

minItems: 0

'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'

'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'

post:

summary: Create a new network status reporting subscription resource.

operationId: CreateNwStatusReportSubscription

tags:

- Network Status Reporting Subscriptions

requestBody:

required: true

content:

application/json:

schema:

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

callbacks:

notificationDestination:

'{request.body#/notificationDestination}':

post:

requestBody: # contents of the callback message

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content (successful notification)

'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'

responses:

'201':

description: The subscription was created successfully. The URI of the created resource shall be returned in the "Location" HTTP header.

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

'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'

/{scsAsId}/subscriptions/{subscriptionId}:

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

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

- name: subscriptionId

in: path

description: Identifier of the subscription resource of type string

required: true

schema:

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

get:

summary: Read an active network status reporting subscription resource.

operationId: FetchIndNwStatusReportSubscription

tags:

- Individual Network Status Reporting subscription

responses:

'200':

description: The requested information was returned successfully.

content:

application/json:

schema:

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

'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'

'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: Modify an existing subscription resource to update a subscription.

operationId: UpdateIndNwStatusReportSubscription

tags:

- Individual Network Status Reporting subscription

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: The subscription was updated successfully.

content:

application/json:

schema:

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

'204':

description: No Content. The subscription was updated successfully.

'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 existing Individual Network Status Reporting Subscription resource.

operationId: ModifyIndNwStatusReportSubscription

tags:

- Individual Network Status Reporting Subscription

requestBody:

description: Contains the parameters to modify an existing Individual Network Status Reporting Subscription resource.

required: true

content:

application/merge-patch+json:

schema:

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

responses:

'200':

description: OK. The modification of the Individual Network Status Reporting Subscription resource was successfull. The SCEF shall return an updated representation of the resource within the NetworkStatusReportingSubscription data structure in the response message body.

content:

application/json:

schema:

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

'204':

description: No Content. The modification of the Individual Network Status Reporting Subscription resource was successfull and no content is to be sent in the response message body.

'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'

delete:

summary: Delete an existing continuous network status reporting subscription resource.

operationId: DeleteIndNwStatusReportSubscription

tags:

- Individual Network Status Reporting subscription

responses:

'204':

description: The subscription was updated successfully.

'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'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

NetworkStatusReportingSubscription:

description: Represents a subscription to network status information reporting.

type: object

properties:

self:

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

supportedFeatures:

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

notificationDestination:

$ref: '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:

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

locationArea:

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

timeDuration:

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

thresholdValues:

type: array

items:

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

minItems: 1

description: Identifies a list of congestion level(s) with exact value that the SCS/AS requests to be informed of when reached.

thresholdTypes:

type: array

items:

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

minItems: 1

description: Identifies a list of congestion level(s) with abstracted value that the SCS/AS requests to be informed of when reached.

required:

- notificationDestination

- locationArea

not:

required: [thresholdValues, thresholdTypes]

NetStatusRepSubsPatch:

description: Represents the parameters to request the modification of network status reporting subscription.

type: object

properties:

notificationDestination:

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

locationArea:

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

timeDuration:

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

thresholdValues:

type: array

items:

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

minItems: 1

thresholdTypes:

type: array

items:

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

minItems: 1

not:

required: [thresholdValues, thresholdTypes]

NetworkStatusReportingNotification:

description: Represents a network status reporting notification.

type: object

properties:

subscription:

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

nsiValue:

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

nsiType:

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

required:

- subscription

not:

required: [nsiValue, nsiType]

CongestionValue:

type: integer

minimum: 0

maximum: 31

description: Unsigned integer with valid values between 0 and 31. The value 0 indicates that there is no congestion. The value 1 is the lowest congestion level and value 31 is the highest congestion level.

CongestionType:

anyOf:

- type: string

enum:

- HIGH

- MEDIUM

- LOW

- 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

- HIGH: The congestion status is high.

- MEDIUM: The congestion status is medium.

- LOW: The congestion status is low.

\* \* \* \* Next changes \* \* \* \*

## A.10 CpProvisioning API

openapi: 3.0.0

info:

title: 3gpp-cp-parameter-provisioning

version: 1.2.0

description: |

API for provisioning communication pattern parameters.

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externalDocs:

description: 3GPP TS 29.122 V17.6.0 T8 reference point for Northbound APIs

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.122/'

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/3gpp-cp-parameter-provisioning/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/{scsAsId}/subscriptions:

get:

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

required: true

schema:

type: string

summary: Read all active CP parameter provisioning subscription resources for a given SCS/AS.

operationId: FetchAllCPProvisioningSubscriptions

tags:

- CP provisioning Subscriptions

responses:

'200':

description: OK. The subscription information related to the request URI is returned.

content:

application/json:

schema:

type: array

items:

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

minItems: 0

'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'

'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'

post:

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

required: true

schema:

type: string

summary: Create a new subscription resource of provisioning CP parameter set(s).

operationId: CreateCPProvisioningSubscription

tags:

- CP provisioning Subscriptions

requestBody:

description: create new subscriptions for a given SCS/AS and the provisioning CP parameter sets.

required: true

content:

application/json:

schema:

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

responses:

'201':

description: Created. The subscription was created successfully. The SCEF shall return the created subscription in the response payload body.

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

'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':

description: The CP parameters for all sets were not created successfully. CpReport may be included with detailed information.

content:

application/json:

schema:

type: array

items:

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

minItems: 1

application/problem+json:

schema:

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

'503':

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

default:

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

/{scsAsId}/subscriptions/{subscriptionId}:

get:

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

required: true

schema:

type: string

- name: subscriptionId

in: path

description: Subscription ID

required: true

schema:

type: string

summary: Read a CP parameter provisioning subscription resource.

operationId: FetchIndCPProvisioningSubscription

tags:

- Individual CP Provisioning Subscription

responses:

'200':

description: OK. The subscription information related to the request URI is returned.

content:

application/json:

schema:

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

'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'

'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: Modify a CP parameter provisioning subscription resource.

operationId: UpdateIndCPProvisioningSubscription

tags:

- Individual CP Provisioning Subscription

requestBody:

description: Modify a CP parameter provisioning subscription resource.

required: true

content:

application/json:

schema:

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

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

required: true

schema:

type: string

- name: subscriptionId

in: path

description: Subscription ID

required: true

schema:

type: string

responses:

'200':

description: OK. The subscription was modified successfully. The SCEF shall return an updated subscription in the response payload body.

content:

application/json:

schema:

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

'204':

description: No Content. The subscription was modified successfully and no content is to be sent in the response message body.

'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':

description: The CP parameters for all sets were not updated successfully. CpReport may be included with detailed information.

content:

application/json:

schema:

type: array

items:

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

minItems: 1

application/problem+json:

schema:

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

'503':

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

default:

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

delete:

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

required: true

schema:

type: string

- name: subscriptionId

in: path

description: Subscription ID

required: true

schema:

type: string

summary: Delete a CP parameter provisioning subscription resource.

operationId: DeleteIndCPProvisioningSubscription

tags:

- Individual CP Provisioning Subscription

responses:

'204':

description: No Content. The subscription was deleted successfully. The payload body shall be empty.

'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'

/{scsAsId}/subscriptions/{subscriptionId}/cpSets/{setId}:

get:

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

required: true

schema:

type: string

- name: subscriptionId

in: path

description: Subscription ID

required: true

schema:

type: string

- name: setId

in: path

description: Identifier of the CP parameter set

required: true

schema:

type: string

summary: Read CP at individual CP set(s) level associated with a CP parameter set Id.

operationId: FetchIndCPSetProvisioning

tags:

- Individual CP set Provisioning

responses:

'200':

description: OK. The subscription information related to the request URI is returned.

content:

application/json:

schema:

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

'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'

'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 CP at individual CP set(s) level associated with a CP parameter set Id.

operationId: UpdateIndCPSetProvisioning

tags:

- Individual CP set Provisioning

requestBody:

description: Change information for a CP parameter set.

required: true

content:

application/json:

schema:

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

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

required: true

schema:

type: string

- name: subscriptionId

in: path

description: Subscription ID

required: true

schema:

type: string

- name: setId

in: path

description: Identifier of the CP parameter set

required: true

schema:

type: string

responses:

'200':

description: OK. The CP parameter set resource was modified successfully. The SCEF shall return an updated CP parameter set resource in the response payload body.

content:

application/json:

schema:

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

'204':

description: No Content. The CP parameter set resource was modified successfully and no content is to be sent in the response message body.

'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'

'409':

description: The CP parameters for the CP set were not updated successfully.

content:

application/json:

schema:

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

application/problem+json:

schema:

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

'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':

description: The CP parameters for the CP set were not updated successfully.

content:

application/json:

schema:

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

application/problem+json:

schema:

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

'503':

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

default:

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

delete:

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

required: true

schema:

type: string

- name: subscriptionId

in: path

description: Subscription ID

required: true

schema:

type: string

- name: setId

in: path

description: Identifier of the CP parameter set

required: true

schema:

type: string

summary: Delete CP at individual CP set(s) level associated with a CP parameter set Id.

operationId: DeleteIndCPSetProvisioning

tags:

- Individual CP set Provisioning

responses:

'204':

description: No Content. The subscription was deleted successfully. The payload body shall be empty.

'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'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

CpInfo:

description: Represents the resources for communication pattern parameter provisioning.

type: object

properties:

self:

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

supportedFeatures:

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

mtcProviderId:

type: string

description: Identifies the MTC Service Provider and/or MTC Application.

dnn:

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

externalId:

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

msisdn:

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

externalGroupId:

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

cpParameterSets:

type: object

additionalProperties:

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

minProperties: 1

description: Identifies a set of CP parameter information that may be part of this CpInfo structure. Any string value can be used as a key of the map.

cpReports:

type: object

additionalProperties:

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

minProperties: 1

description: Supplied by the SCEF and contains the CP set identifiers for which CP parameter(s) are not added or modified successfully. The failure reason is also included. Each element provides the related information for one or more CP set identifier(s) and is identified in the map via the failure identifier as key.

readOnly: true

snssai:

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

ueIpAddr:

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

ueMacAddr:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MacAddr48'

required:

- cpParameterSets

oneOf:

- required: [externalId]

- required: [msisdn]

- required: [externalGroupId]

CpParameterSet:

description: Represents an offered communication pattern parameter set.

type: object

properties:

setId:

type: string

description: SCS/AS-chosen correlator provided by the SCS/AS in the request to create a resource fo CP parameter set(s).

self:

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

validityTime:

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

periodicCommunicationIndicator:

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

communicationDurationTime:

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

periodicTime:

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

scheduledCommunicationTime:

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

scheduledCommunicationType:

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

stationaryIndication:

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

batteryInds:

type: array

items:

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

minItems: 1

trafficProfile:

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

expectedUmts:

type: array

items:

$ref: '#/components/schemas/UmtLocationArea5G'

minItems: 1

description: Identifies the UE's expected geographical movement. The attribute is only applicable in 5G.

expectedUmtDays:

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

required:

- setId

ScheduledCommunicationTime:

description: Represents an offered scheduled communication time.

type: object

properties:

daysOfWeek:

type: array

items:

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

minItems: 1

maxItems: 6

description: Identifies the day(s) of the week. If absent, it indicates every day of the week.

timeOfDayStart:

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

timeOfDayEnd:

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

CpReport:

description: Represents a CP report indicating the CP set identifier(s) which CP parameter(s) are not added or modified successfully and the corresponding failure cause(s).

type: object

properties:

setIds:

type: array

items:

type: string

minItems: 1

description: Identifies the CP set identifier(s) which CP parameter(s) are not added or modified successfully

failureCode:

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

required:

- failureCode

UmtLocationArea5G:

description: Represents the user location area describing the UE moving trajectory.

allOf:

- $ref: 'TS29122\_CommonData.yaml#/components/schemas/LocationArea5G'

- type: object

properties:

umtTime:

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

umtDuration:

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

CommunicationIndicator:

anyOf:

- type: string

enum:

- PERIODICALLY

- ON\_DEMAND

- 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

- PERIODICALLY: Identifies the UE communicates periodically

- ON\_DEMAND: Identifies the UE communicates on demand

StationaryIndication:

anyOf:

- type: string

enum:

- STATIONARY

- MOBILE

- 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

- STATIONARY: Identifies the UE is stationary

- MOBILE: Identifies the UE is mobile

CpFailureCode:

anyOf:

- type: string

enum:

- MALFUNCTION

- SET\_ID\_DUPLICATED

- OTHER\_REASON

- 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

- MALFUNCTION: This value indicates that something functions wrongly in CP parameter provisioning or the CP parameter provisioning does not function at all.

- SET\_ID\_DUPLICATED: The received CP set identifier(s) are already provisioned.

- OTHER\_REASON: Other reason unspecified.

BatteryIndication:

anyOf:

- type: string

enum:

- BATTERY\_RECHARGE

- BATTERY\_REPLACE

- BATTERY\_NO\_RECHARGE

- BATTERY\_NO\_REPLACE

- NO\_BATTERY

- 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

- BATTERY\_RECHARGE: UE powered with rechargeable battery.

- BATTERY\_REPLACE: UE powered with replaceable battery.

- BATTERY\_NO\_RECHARGE: UE powered with no rechargeable battery.

- BATTERY\_NO\_REPLACE: UE powered with no replaceable battery.

- NO\_BATTERY: UE not battery powered.

TrafficProfile:

anyOf:

- type: string

enum:

- SINGLE\_TRANS\_UL

- SINGLE\_TRANS\_DL

- DUAL\_TRANS\_UL\_FIRST

- DUAL\_TRANS\_DL\_FIRST

- MULTI\_TRANS

- 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

- SINGLE\_TRANS\_UL: Uplink single packet transmission.

- SINGLE\_TRANS\_DL: Downlink single packet transmission.

- DUAL\_TRANS\_UL\_FIRST: Dual packet transmission, firstly uplink packet transmission with subsequent downlink packet transmission.

- DUAL\_TRANS\_DL\_FIRST: Dual packet transmission, firstly downlink packet transmission with subsequent uplink packet transmission.

- MULTI\_TRANS: Multiple packet transmission.

ScheduledCommunicationType:

anyOf:

- type: string

enum:

- DOWNLINK

- UPLINK

- BIDIRECTIONAL

- 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

- DOWNLINK: Downlink only.

- UPLINK: Uplink only.

- BIDIRECTIONAL: Bi-directional.

\* \* \* \* Next changes \* \* \* \*

## A.11 PfdManagement API

openapi: 3.0.0

info:

title: 3gpp-pfd-management

version: 1.2.0

description: |

API for PFD management.

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externalDocs:

description: 3GPP TS 29.122 V17.6.0 T8 reference point for Northbound APIs

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.122/'

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/3gpp-pfd-management/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/{scsAsId}/transactions:

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

required: true

schema:

type: string

get:

summary: Read all or queried PFDs for a given SCS/AS.

operationId: FetchAllPFDManagementTransactions

tags:

- PFD Management Transactions

parameters:

- name: external-app-ids

in: query

description: The external application identifier(s) of the requested PFD data.

required: false

schema:

type: array

items:

type: string

minItems: 1

responses:

'200':

description: OK. All or queried transactions related to the request URI are returned.

content:

application/json:

schema:

type: array

items:

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

'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'

'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'

post:

summary: Create PFDs for a given SCS/AS and one or more external Application Identifier(s).

operationId: CreatePFDManagementTransaction

tags:

- PFD Management Transactions

requestBody:

required: true

content:

application/json:

schema:

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

description: Create a new transaction for PFD management.

responses:

'201':

description: Created. The transaction was created successfully. The SCEF shall return the created transaction in the response payload body. PfdReport may be included to provide detailed failure information for some applications.

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

'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':

description: The PFDs for all applications were not created successfully. PfdReport is included with detailed information.

content:

application/json:

schema:

type: array

items:

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

minItems: 1

application/problem+json:

schema:

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

'503':

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

default:

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

callbacks:

notificationDestination:

'{request.body#/notificationDestination}':

post:

requestBody: # contents of the callback message

required: true

content:

application/json:

schema:

type: array

items:

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

minItems: 1

responses:

'204':

description: No Content (successful notification)

'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'

/{scsAsId}/transactions/{transactionId}:

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

required: true

schema:

type: string

- name: transactionId

in: path

description: Transaction ID

required: true

schema:

type: string

get:

summary: Read all PFDs for a given SCS/AS and a transaction for one or more external Application Identifier(s).

operationId: FetchIndPFDManagementTransaction

tags:

- Individual PFD Management Transaction

responses:

'200':

description: OK. The transaction information related to the request URI is returned.

content:

application/json:

schema:

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

'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'

'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 PFDs for a given SCS/AS and a transaction for one or more external Application Identifier(s).

operationId: UpdateIndPFDManagementTransaction

tags:

- Individual PFD Management Transaction

requestBody:

required: true

content:

application/json:

schema:

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

description: Change information in PFD management transaction.

responses:

'200':

description: OK. The transaction was modified successfully. The SCEF shall return an updated transaction in the response payload body.

content:

application/json:

schema:

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

'204':

description: No Content.

'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':

description: The PFDs for all applications were not updated successfully. PfdReport is included with detailed information.

content:

application/json:

schema:

type: array

items:

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

minItems: 1

application/problem+json:

schema:

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

'503':

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

default:

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

patch:

summary: Modify an existing PFD Management Transaction resource.

operationId: ModifyIndPFDManagementTransaction

tags:

- Individual PFD Management Transaction

requestBody:

required: true

content:

application/merge-patch+json:

schema:

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

responses:

'200':

description: OK. The PFD Management Transaction was modified successfully. The SCEF shall return an updated representation of the resource in the response body.

content:

application/json:

schema:

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

'204':

description: No Content.

'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':

description: The PFDs for all applications were not modified successfully. A set of PFD Report(s) is included with detailed information.

content:

application/json:

schema:

type: array

items:

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

minItems: 1

application/problem+json:

schema:

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

'503':

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

default:

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

delete:

summary: Delete PFDs for a given SCS/AS and a transaction for one or more external Application Identifier(s).

operationId: DeleteIndPFDManagementTransaction

tags:

- Individual PFD Management Transaction

responses:

'204':

description: No Content. The transaction was deleted successfully. The payload body shall be empty.

'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'

/{scsAsId}/transactions/{transactionId}/applications/{appId}:

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

required: true

schema:

type: string

- name: transactionId

in: path

description: Transaction ID

required: true

schema:

type: string

- name: appId

in: path

description: Identifier of the application

required: true

schema:

type: string

get:

summary: Read PFDs at individual application level.

operationId: FetchIndApplicationPFDManagement

tags:

- Individual Application PFD Management

responses:

'200':

description: OK. The application information related to the request URI is returned.

content:

application/json:

schema:

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

'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'

'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 PFDs at individual application level.

operationId: UpdateIndApplicationPFDManagement

tags:

- Individual Application PFD Management

requestBody:

required: true

content:

application/json:

schema:

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

description: Change information in application.

responses:

'200':

description: OK. The application resource was modified successfully. The SCEF shall return an updated application resource in the response payload body.

content:

application/json:

schema:

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

'204':

description: No Content.

'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':

description: The PFDs for the application were not updated successfully.

content:

application/json:

schema:

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

application/problem+json:

schema:

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

'404':

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

'409':

description: The PFDs for the application were not updated successfully.

content:

application/json:

schema:

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

application/problem+json:

schema:

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

'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':

description: The PFDs for the application were not updated successfully.

content:

application/json:

schema:

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

application/problem+json:

schema:

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

'503':

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

default:

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

patch:

summary: Update PFDs at individual application level.

operationId: ModifyIndApplicationPFDManagement

tags:

- Individual Application PFD Management

requestBody:

required: true

content:

application/merge-patch+json:

schema:

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

description: Change information in PFD management transaction.

responses:

'200':

description: OK. The transaction was modified successfully. The SCEF shall return an updated transaction in the response payload body.

content:

application/json:

schema:

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

'204':

description: No Content

'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':

description: The PFDs for the application were not updated successfully.

content:

application/json:

schema:

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

application/problem+json:

schema:

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

'404':

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

'409':

description: The PFDs for the application were not updated successfully.

content:

application/json:

schema:

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

application/problem+json:

schema:

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

'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':

description: The PFDs for the application were not updated successfully.

content:

application/json:

schema:

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

application/problem+json:

schema:

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

'503':

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

default:

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

delete:

summary: Delete PFDs at individual application level.

operationId: DeleteIndApplicationPFDManagement

tags:

- Individual Application PFD Management

responses:

'204':

description: No Content. The application was deleted successfully. The payload body shall be empty.

'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'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

PfdManagement:

description: Represents a PFD management resource for a PFD management request.

type: object

properties:

self:

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

supportedFeatures:

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

pfdDatas:

type: object

additionalProperties:

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

minProperties: 1

description: Each element uniquely identifies the PFDs for an external application identifier. Each element is identified in the map via an external application identifier as key. The response shall include successfully provisioned PFD data of application(s).

pfdReports:

type: object

additionalProperties:

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

minProperties: 1

description: Supplied by the SCEF and contains the external application identifiers for which PFD(s) are not added or modified successfully. The failure reason is also included. Each element provides the related information for one or more external application identifier(s) and is identified in the map via the failure identifier as key.

readOnly: true

notificationDestination:

$ref: '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:

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

required:

- pfdDatas

PfdData:

description: Represents a PFD request to add, update or remove PFD(s) for one external application identifier.

type: object

properties:

externalAppId:

type: string

description: Each element uniquely external application identifier

self:

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

pfds:

type: object

additionalProperties:

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

description: Contains the PFDs of the external application identifier. Each PFD is identified in the map via a key containing the PFD identifier.

allowedDelay:

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

cachingTime:

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

required:

- externalAppId

- pfds

Pfd:

description: Represents a PFD for an external Application Identifier.

type: object

properties:

pfdId:

type: string

description: Identifies a PDF of an application identifier.

flowDescriptions:

type: array

items:

type: string

minItems: 1

description: Represents a 3-tuple with protocol, server ip and server port for UL/DL application traffic. The content of the string has the same encoding as the IPFilterRule AVP value as defined in IETF RFC 6733.

urls:

type: array

items:

type: string

minItems: 1

description: Indicates a URL or a regular expression which is used to match the significant parts of the URL.

domainNames:

type: array

items:

type: string

minItems: 1

description: Indicates an FQDN or a regular expression as a domain name matching criteria.

dnProtocol:

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

required:

- pfdId

PfdReport:

description: Represents a PFD report indicating the external application identifier(s) which PFD(s) are not added or modified successfully and the corresponding failure cause(s).

type: object

properties:

externalAppIds:

type: array

items:

type: string

minItems: 1

description: Identifies the external application identifier(s) which PFD(s) are not added or modified successfully

failureCode:

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

cachingTime:

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

locationArea:

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

required:

- externalAppIds

- failureCode

UserPlaneLocationArea:

description: Represents location area(s) of the user plane functions which are unable to enforce the provisioned PFD(s) successfully.

type: object

properties:

locationArea:

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

locationArea5G:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/LocationArea5G'

dnais:

type: array

items:

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

minItems: 0

description: Identifies a list of DNAI which the user plane functions support.

PfdManagementPatch:

description: Represents the parameters to request the modification of a PFD management transaction resource.

type: object

properties:

pfdDatas:

type: object

additionalProperties:

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

minProperties: 1

notificationDestination:

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

FailureCode:

anyOf:

- type: string

enum:

- MALFUNCTION

- RESOURCE\_LIMITATION

- SHORT\_DELAY

- APP\_ID\_DUPLICATED

- PARTIAL\_FAILURE

- OTHER\_REASON

- 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

- MALFUNCTION: This value indicates that something functions wrongly in PFD provisioning or the PFD provisioning does not function at all.

- RESOURCE\_LIMITATION: This value indicates there is resource limitation for PFD storage.

- SHORT\_DELAY: This value indicates that the allowed delay is too short and PFD(s) are not stored.

- APP\_ID\_DUPLICATED: The received external application identifier(s) are already provisioned.

- PARTIAL\_FAILURE: The PFD(s) are not provisioned to all PCEFs/TDFs/SMFs.

- OTHER\_REASON: Other reason unspecified.

DomainNameProtocol:

anyOf:

- type: string

enum:

- DNS\_QNAME

- TLS\_SNI

- TLS\_SAN

- TSL\_SCN

- 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

- DNS\_QNAME: Identifies the DNS protocol and the question name in DNS query.

- TLS\_SNI: Identifies the Server Name Indication in TLS ClientHello message.

- TLS\_SAN: Identifies the Subject Alternative Name in TLS ServerCertificate message.

- TLS\_SCN: Identifies the Subject Common Name in TLS ServerCertificate message.

\* \* \* \* Next changes \* \* \* \*

## A.12 ECRControl API

openapi: 3.0.0

info:

title: 3gpp-ecr-control

version: 1.2.0

description: |

API for enhanced converage restriction control.

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externalDocs:

description: 3GPP TS 29.122 V17.6.0 T8 reference point for Northbound APIs

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.122/'

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/3gpp-ecr-control/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/query:

post:

summary: Query the status of enhanced converage restriction for a UE.

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: The requested information was returned successfully.

content:

application/json:

schema:

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

'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'

/configure:

post:

summary: Configure the enhanced converage restriction for a UE.

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: The Enhanced Coverage Restriction setting was configured successfully..

content:

application/json:

schema:

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

'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:

ECRControl:

description: Represents the parameters to request Enhanced Coverage Restriction control.

type: object

properties:

supportedFeatures:

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

mtcProviderId:

type: string

description: Identifies the MTC Service Provider and/or MTC Application.

scsAsId:

type: string

description: Identifier of the SCS/AS.

externalId:

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

msisdn:

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

ecrDataWbs:

type: array

items:

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

minItems: 0

restrictedPlmnIds:

type: array

items:

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

minItems: 0

description: Indicates a complete list (and possibly empty) of serving PLMNs where Enhanced Coverage shall be restricted. This attribute shall not be present for the query custom operation.

allowedPlmnIds:

type: array

items:

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

minItems: 0

description: Indicates a complete list (and possibly empty) of serving PLMNs where Enhanced Coverage shall be allowed. This attribute shall not be present for the query custom operation.

required:

- supportedFeatures

oneOf:

- required: [externalId]

- required: [msisdn]

not:

required: [restrictedPlmnIds, allowedPlmnIds]

ECRData:

description: Represents the current visited PLMN (if any) and the current settings of enhanced coverage restriction.

type: object

properties:

supportedFeatures:

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

visitedPlmnId:

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

ecrDataWbs:

type: array

items:

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

minItems: 0

restrictedPlmnIds:

type: array

items:

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

minItems: 0

description: Indicates a complete list (and possibly empty) of serving PLMNs where Enhanced Coverage shall be restricted.

allowedPlmnIds:

type: array

items:

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

minItems: 0

description: Indicates a complete list (and possibly empty) of serving PLMNs where Enhanced Coverage shall be allowed.

required:

- supportedFeatures

not:

required: [restrictedPlmnIds, allowedPlmnIds]

PlmnEcRestrictionDataWb:

description: Indicates whether enhanced coverage mode is restricted or not for a PLMN ID.

type: object

properties:

plmnId:

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

plmnEcrDataWb:

$ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/EcRestrictionDataWb'

required:

- plmnId

\* \* \* \* Next changes \* \* \* \*

## A.13 NpConfiguration API

openapi: 3.0.0

info:

title: 3gpp-network-parameter-configuration

version: 1.2.0

description: |

API for network parameter configuration.

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externalDocs:

description: 3GPP TS 29.122 V17.6.0 T8 reference point for Northbound APIs

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.122/'

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/3gpp-network-parameter-configuration/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/{scsAsId}/configurations:

get:

summary: Read all of the active configurations for the SCS/AS.

operationId: FetchAllNPConfigurations

tags:

- Np Configurations

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

type: string

responses:

'200':

description: OK (Successful get all of the active NpConfigurations for the SCS/AS)

content:

application/json:

schema:

type: array

items:

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

minItems: 0

description: Network Parameter configurations

'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'

'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'

post:

summary: Creates a new configuration resource for network parameter configuration.

operationId: CreateNPConfiguration

tags:

- Np Configurations

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

type: string

requestBody:

description: new configuration creation

required: true

content:

application/json:

schema:

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

callbacks:

notificationDestination:

'{request.body#/notificationDestination}':

post:

requestBody: # contents of the callback message

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content (successful notification)

'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'

responses:

'201':

description: Created (Successful creation of configuration)

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

'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'

/{scsAsId}/configurations/{configurationId}:

get:

summary: Read an active configuration for the SCS/AS and the configuration Id.

operationId: FetchIndNPConfiguration

tags:

- Individual Np Configuration

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

type: string

- name: configurationId

in: path

description: Identifier of the configuration resource

required: true

schema:

type: string

responses:

'200':

description: OK (Successful get the active configuration)

content:

application/json:

schema:

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

'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'

'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: Updates/replaces an existing configuration resource.

operationId: UpdateIndNPConfiguration

tags:

- Individual Np Configuration

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

type: string

- name: configurationId

in: path

description: Identifier of the configuration resource

required: true

schema:

type: string

requestBody:

description: Parameters to update/replace the existing configuration

required: true

content:

application/json:

schema:

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

responses:

'200':

description: OK (Successful update of the existing configuration)

content:

application/json:

schema:

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

'204':

description: No Content (Successful update of the configuration)

'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: Updates/replaces an existing configuration resource.

operationId: ModifyIndNPConfiguration

tags:

- Individual Np Configuration

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

type: string

- name: configurationId

in: path

description: Identifier of the configuration resource

required: true

schema:

type: string

requestBody:

required: true

content:

application/merge-patch+json:

schema:

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

responses:

'200':

description: OK. The configuration was modified successfully.

content:

application/json:

schema:

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

'204':

description: No Content. The configuration was modified successfully.

'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'

delete:

summary: Deletes an already existing configuration.

operationId: DeleteIndNPConfiguration

tags:

- Individual Np Configuration

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

type: string

- name: configurationId

in: path

description: Identifier of the configuration resource

required: true

schema:

type: string

responses:

'204':

description: No Content (Successful deletion of the existing configuration)

'200':

description: OK. (Successful deletion of the existing configuration)

content:

application/json:

schema:

type: array

items:

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

minItems: 1

description: The configuration was terminated successfully, the configuration failure information for group members shall be included if 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'

'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:

NpConfiguration:

description: Represents a network parameters configuration.

type: object

properties:

self:

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

supportedFeatures:

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

mtcProviderId:

type: string

description: Identifies the MTC Service Provider and/or MTC Application.

dnn:

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

externalId:

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

msisdn:

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

externalGroupId:

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

maximumLatency:

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

maximumResponseTime:

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

suggestedNumberOfDlPackets:

type: integer

minimum: 0

description: 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.

groupReportingGuardTime:

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

notificationDestination:

$ref: '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:

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

validityTime:

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

snssai:

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

ueIpAddr:

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

ueMacAddr:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MacAddr48'

oneOf:

- required: [externalId]

- required: [msisdn]

- required: [externalGroupId]

NpConfigurationPatch:

description: Represents parameters used to request the modification of a network parameters configuration resource.

type: object

properties:

maximumLatency:

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

maximumResponseTime:

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

suggestedNumberOfDlPackets:

type: integer

minimum: 0

description: 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.

nullable: true

groupReportGuardTime:

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

validityTime:

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

notificationDestination:

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

ConfigurationNotification:

description: Represents a configuration result notification.

type: object

properties:

configuration:

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

configResults:

type: array

items:

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

minItems: 1

description: The grouping configuration result notification provided by the SCEF.

appliedParam:

$ref: 'TS29122\_MonitoringEvent.yaml#/components/schemas/AppliedParameterConfiguration'

required:

- configuration

\* \* \* \* Next changes \* \* \* \*

## A.14 AsSessionWithQoS API

openapi: 3.0.0

info:

title: 3gpp-as-session-with-qos

version: 1.2.0

description: |

API for setting us an AS session with required QoS.

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externalDocs:

description: 3GPP TS 29.122 V17.6.0 T8 reference point for Northbound APIs

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.122/'

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/3gpp-as-session-with-qos/v1'

variables:

apiRoot:

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 or queried active subscriptions for the SCS/AS.

operationId: FetchAllASSessionWithQoSSubscriptions

tags:

- AS Session with Required QoS Subscriptions

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

type: string

- name: ip-addrs

in: query

description: The IP address(es) of the requested UE(s).

required: false

content:

application/json:

schema:

type: array

items:

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

minItems: 1

- name: ip-domain

in: query

description: The IPv4 address domain identifier. The attribute may only be provided if IPv4 address is included in the ip-addrs query parameter.

required: false

schema:

type: string

- name: mac-addrs

in: query

description: The MAC address(es) of the requested UE(s).

required: false

schema:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MacAddr48'

minItems: 1

responses:

'200':

description: OK.

content:

application/json:

schema:

type: array

items:

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

'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'

'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'

post:

summary: Creates a new subscription resource.

operationId: CreateASSessionWithQoSSubscription

tags:

- AS Session with Required QoS Subscriptions

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

type: string

requestBody:

description: Request to create a new subscription resource

required: true

content:

application/json:

schema:

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

callbacks:

notificationDestination:

'{request.body#/notificationDestination}':

post:

requestBody: # contents of the callback message

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content (successful notification)

'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'

responses:

'201':

description: Created (Successful creation of subscription)

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

'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'

/{scsAsId}/subscriptions/{subscriptionId}:

get:

summary: Read an active subscriptions for the SCS/AS and the subscription Id.

operationId: FetchIndASSessionWithQoSSubscription

tags:

- Individual AS Session with Required QoS Subscription

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

type: string

- name: subscriptionId

in: path

description: Identifier of the subscription resource

required: true

schema:

type: string

responses:

'200':

description: OK (Successful get the active subscription)

content:

application/json:

schema:

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

'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'

'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: Updates/replaces an existing subscription resource.

operationId: UpdateIndASSessionWithQoSSubscription

tags:

- Individual AS Session with Required QoS Subscription

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

type: string

- name: subscriptionId

in: path

description: Identifier of the subscription resource

required: true

schema:

type: string

requestBody:

description: Parameters to update/replace the existing subscription

required: true

content:

application/json:

schema:

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

responses:

'200':

description: OK (Successful update of the subscription)

content:

application/json:

schema:

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

'204':

description: No Content (Successful update of the subscription)

'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: Updates/replaces an existing subscription resource.

operationId: ModifyIndASSessionWithQoSSubscription

tags:

- Individual AS Session with Required QoS Subscription

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

type: string

- name: subscriptionId

in: path

description: Identifier of the subscription resource

required: true

schema:

type: string

requestBody:

required: true

content:

application/merge-patch+json:

schema:

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

responses:

'200':

description: OK. The subscription was modified successfully.

content:

application/json:

schema:

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

'204':

description: No Content. The subscription was modified successfully.

'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'

delete:

summary: Deletes an already existing subscription.

operationId: DeleteIndASSessionWithQoSSubscription

tags:

- Individual AS Session with Required QoS Subscription

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS

required: true

schema:

type: string

- name: subscriptionId

in: path

description: Identifier of the subscription resource

required: 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:

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

'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'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

AsSessionWithQoSSubscription:

description: Represents an individual AS session with required QoS subscription resource.

type: object

properties:

self:

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

supportedFeatures:

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

dnn:

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

snssai:

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

notificationDestination:

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

exterAppId:

type: string

description: Identifies the external Application Identifier.

flowInfo:

type: array

items:

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

minItems: 1

description: Describe the data flow which requires QoS.

ethFlowInfo:

type: array

items:

$ref: 'TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/EthFlowDescription'

minItems: 1

description: Identifies Ethernet packet flows.

qosReference:

type: string

description: Identifies a pre-defined QoS information

altQoSReferences:

type: array

items:

type: string

minItems: 1

description: Identifies an ordered list of pre-defined QoS information. The lower the index of the array for a given entry, the higher the priority.

altQosReqs:

type: array

items:

$ref: 'TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/AlternativeServiceRequirementsData'

minItems: 1

description: Identifies an ordered list of alternative service requirements that include individual QoS parameter sets. The lower the index of the array for a given entry, the higher the priority.

disUeNotif:

type: boolean

ueIpv4Addr:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/Ipv4Addr'

ipDomain:

type: string

ueIpv6Addr:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/Ipv6Addr'

macAddr:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MacAddr48'

usageThreshold:

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

sponsorInfo:

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

qosMonInfo:

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

directNotifInd:

type: boolean

tscQosReq:

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

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:

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

events:

description: Represents the list of user plane event(s) to which the SCS/AS requests to subscribe to.

type: array

items:

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

minItems: 1

required:

- notificationDestination

AsSessionWithQoSSubscriptionPatch:

description: Represents parameters to modify an AS session with specific QoS subscription.

type: object

properties:

exterAppId:

type: string

description: Identifies the external Application Identifier.

flowInfo:

type: array

items:

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

minItems: 1

description: Describe the data flow which requires QoS.

ethFlowInfo:

type: array

items:

$ref: 'TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/EthFlowDescription'

minItems: 1

description: Identifies Ethernet packet flows.

qosReference:

type: string

description: Pre-defined QoS reference

altQoSReferences:

type: array

items:

type: string

minItems: 1

description: Identifies an ordered list of pre-defined QoS information. The lower the index of the array for a given entry, the higher the priority.

altQosReqs:

type: array

items:

$ref: 'TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/AlternativeServiceRequirementsData'

minItems: 1

description: Identifies an ordered list of alternative service requirements that include individual QoS parameter sets. The lower the index of the array for a given entry, the higher the priority.

disUeNotif:

type: boolean

usageThreshold:

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

qosMonInfo:

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

directNotifInd:

type: boolean

notificationDestination:

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

tscQosReq:

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

events:

description: Represents the updated list of user plane event(s) to which the SCS/AS requests to subscribe to.

type: array

items:

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

minItems: 1

QosMonitoringInformation:

description: Represents QoS monitoring information.

type: object

properties:

reqQosMonParams:

type: array

items:

$ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/RequestedQosMonitoringParameter'

minItems: 1

repFreqs:

type: array

items:

$ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/ReportingFrequency'

minItems: 1

repThreshDl:

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

repThreshUl:

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

repThreshRp:

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

waitTime:

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

repPeriod:

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

required:

- reqQosMonParams

- repFreqs

QosMonitoringInformationRm:

description: Represents the same as the QosMonitoringInformation data type but with the nullable:true property.

type: object

properties:

reqQosMonParams:

type: array

items:

$ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/RequestedQosMonitoringParameter'

minItems: 1

repFreqs:

type: array

items:

$ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/ReportingFrequency'

minItems: 1

repThreshDl:

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

repThreshUl:

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

repThreshRp:

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

waitTime:

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

repPeriod:

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

QosMonitoringReport:

description: Represents a QoS monitoring report.

type: object

properties:

ulDelays:

type: array

items:

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

minItems: 1

dlDelays:

type: array

items:

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

minItems: 1

rtDelays:

type: array

items:

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

minItems: 1

UserPlaneNotificationData:

description: Represents the parameters to be conveyed in a user plane event(s) notification.

type: object

properties:

transaction:

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

eventReports:

type: array

items:

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

minItems: 1

description: Contains the reported event and applicable information

required:

- transaction

- eventReports

UserPlaneEventReport:

description: Represents an event report for user plane.

type: object

properties:

event:

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

accumulatedUsage:

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

flowIds:

type: array

items:

type: integer

minItems: 1

description: Identifies the IP flows that were sent during event subscription

appliedQosRef:

type: string

description: The currently applied QoS reference. Applicable for event QOS\_NOT\_GUARANTEED or SUCCESSFUL\_RESOURCES\_ALLOCATION.

qosMonReports:

type: array

items:

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

minItems: 1

description: Contains the QoS Monitoring Reporting information

required:

- event

TscQosRequirement:

description: Represents QoS requirements for time sensitive communication.

type: object

properties:

reqGbrDl:

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

reqGbrUl:

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

reqMbrDl:

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

reqMbrUl:

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

maxTscBurstSize:

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

req5Gsdelay:

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

priority:

$ref: 'TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/TscPriorityLevel'

tscaiTimeDom:

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

tscaiInputDl:

$ref: 'TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/TscaiInputContainer'

tscaiInputUl:

$ref: 'TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/TscaiInputContainer'

TscQosRequirementRm:

description: Represents the same as the TscQosRequirement data type but with the nullable:true property.

type: object

properties:

reqGbrDl:

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

reqGbrUl:

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

reqMbrDl:

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

reqMbrUl:

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

maxTscBurstSize:

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

req5Gsdelay:

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

priority:

$ref: 'TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/TscPriorityLevelRm'

tscaiTimeDom:

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

tscaiInputDl:

$ref: 'TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/TscaiInputContainer'

tscaiInputUl:

$ref: 'TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/TscaiInputContainer'

UserPlaneEvent:

anyOf:

- type: string

enum:

- SESSION\_TERMINATION

- LOSS\_OF\_BEARER

- RECOVERY\_OF\_BEARER

- RELEASE\_OF\_BEARER

- USAGE\_REPORT

- FAILED\_RESOURCES\_ALLOCATION

- QOS\_GUARANTEED

- QOS\_NOT\_GUARANTEED

- QOS\_MONITORING

- SUCCESSFUL\_RESOURCES\_ALLOCATION

- 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

- SESSION\_TERMINATION: Indicates that Rx session is terminated.

- LOSS\_OF\_BEARER : Indicates a loss of a bearer.

- RECOVERY\_OF\_BEARER: Indicates a recovery of a bearer.

- RELEASE\_OF\_BEARER: Indicates a release of a bearer.

- USAGE\_REPORT: Indicates the usage report event.

- FAILED\_RESOURCES\_ALLOCATION: Indicates the resource allocation is failed.

- QOS\_GUARANTEED: The QoS targets of one or more SDFs are guaranteed again.

- QOS\_NOT\_GUARANTEED: The QoS targets of one or more SDFs are not being guaranteed.

- QOS\_MONITORING: Indicates a QoS monitoring event.

- SUCCESSFUL\_RESOURCES\_ALLOCATION: Indicates the resource allocation is successful.

\* \* \* \* Next changes \* \* \* \*

## A.15 MsisdnLessMoSms API

openapi: 3.0.0

info:

title: 3gpp-msisdn-less-mo-sms

version: 1.2.0

description: |

API for MSISDN-less Mobile Originated SMS.

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externalDocs:

description: 3GPP TS 29.122 V17.6.0 T8 reference point for Northbound APIs

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.122/'

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}'

variables:

apiRoot:

default: https://example.com

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

paths:

/:

post:

summary: Deliver a received MSIDN-less MO SMS from the SCEF to the SCS/AS.

operationId: DeliverMSISDNlessMOSMSNotification

tags:

- MSISDN-less MO SMS Notification

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: Success

content:

application/json:

schema:

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

'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:

MsisdnLessMoSmsNotification:

description: Represents a MSISDN-less MO SMS notification.

type: object

properties:

supportedFeatures:

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

sms:

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

externalId:

type: string

description: External identifier has the form username@realm.

applicationPort:

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

required:

- supportedFeatures

- sms

- externalId

- applicationPort

MsisdnLessMoSmsNotificationReply:

description: Represents a reply to a MSISDN-less MO SMS notification.

type: object

properties:

supportedFeatures:

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

required:

- supportedFeatures

\* \* \* \* Next changes \* \* \* \*

## A.16 RacsParameterProvisioning API

openapi: 3.0.0

info:

title: 3gpp-racs-parameter-provisioning

version: 1.1.0

description: |

API for provisioning UE radio capability parameters.

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externalDocs:

description: 3GPP TS 29.122 V17.6.0 T8 reference point for Northbound APIs

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.122/'

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/3gpp-racs-pp/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/{scsAsId}/provisionings:

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

required: true

schema:

type: string

get:

summary: Read all RACS parameter provisionings for a given AF.

operationId: FetchAllRACSParameterProvisionings

tags:

- RACS Parameter Provisionings

responses:

'200':

description: OK. The provisioning information related to the request URI is returned.

content:

application/json:

schema:

type: array

items:

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

minItems: 0

'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'

'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'

post:

summary: Create a new RACS parameter provisioning.

operationId: CreateRACSParameterProvisioning

tags:

- RACS Parameter Provisionings

requestBody:

description: create new provisionings for a given SCS/AS.

required: true

content:

application/json:

schema:

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

responses:

'201':

description: Created. The provisioning was created successfully.

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

'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':

description: The RACS data for all RACS IDs were not provisioned successfully.

content:

application/json:

schema:

type: array

items:

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

minItems: 1

application/problem+json:

schema:

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

'503':

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

default:

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

/{scsAsId}/provisionings/{provisioningId}:

parameters:

- name: scsAsId

in: path

description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

required: true

schema:

type: string

- name: provisioningId

in: path

description: Provisioning ID

required: true

schema:

type: string

get:

summary: Read an existing RACS parameter provisioning.

operationId: FetchIndRACSParameterProvisioning

tags:

- Individual RACS Parameter Provisioning

responses:

'200':

description: OK. The provisioning information related to the request URI is returned.

content:

application/json:

schema:

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

'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'

'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'

patch:

summary: Modify some properties in an existing RACS parameter provisioning.

operationId: ModifyIndRACSParameterProvisioning

tags:

- Individual RACS Parameter Provisioning

requestBody:

description: update an existing parameter provisioning.

required: true

content:

application/merge-patch+json:

schema:

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

responses:

'200':

description: OK. The provisioning data was updated successfully. The SCEF shall return an updated provisioning information in the response.

content:

application/json:

schema:

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

'204':

description: The provisioning data was updated successfully, and no content is to be sent in the response message body.

'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':

description: The RACS data for all RACS IDs were not provisioned successfully.

content:

application/json:

schema:

type: array

items:

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

minItems: 1

application/problem+json:

schema:

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

'503':

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

default:

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

put:

summary: Modify all properties in an existing RACS parameter provisioning.

operationId: UpdateIndRACSParameterProvisioning

tags:

- Individual RACS Parameter Provisioning

requestBody:

description: update an existing parameter provisioning.

required: true

content:

application/json:

schema:

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

responses:

'200':

description: OK. The provisioning data was updated successfully. The SCEF shall return an updated provisioning information in the response.

content:

application/json:

schema:

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

'204':

description: The provisioning data was updated successfully, and no content is to be sent in the response message body.

'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':

description: The RACS data for all RACS IDs were not provisioned successfully.

content:

application/json:

schema:

type: array

items:

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

minItems: 1

application/problem+json:

schema:

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

'503':

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

default:

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

delete:

summary: Delete a RACS parameter provisioning.

operationId: DeleteIndRACSParameterProvisioning

tags:

- Individual RACS Parameter Provisioning

responses:

'204':

description: No Content. The provisioning was terminated successfully. The payload body shall be empty.

'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'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

RacsProvisioningData:

description: Represents a UE's radio capability data.

type: object

properties:

self:

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

supportedFeatures:

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

racsConfigs:

type: object

additionalProperties:

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

minProperties: 1

description: Identifies the configuration related to manufacturer specific UE radio capability. Each element uniquely identifies an RACS configuration for an RACS ID and is identified in the map via the RACS ID as key. The response shall include successfully provisioned RACS data.

racsReports:

type: object

additionalProperties:

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

minProperties: 1

description: Supplied by the SCEF. Contains the RACS IDs for which the RACS data are not provisioned successfully. Any string value can be used as a key of the map.

readOnly: true

required:

- racsConfigs

RacsFailureReport:

description: Represents a radio capability data provisioning failure report.

type: object

properties:

racsIds:

type: array

items:

type: string

minItems: 1

description: Identifies the RACS ID(s) for which the RACS data are not provisioned successfully.

failureCode:

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

required:

- racsIds

- failureCode

RacsConfiguration:

description: Represents a single UE radio capability configuration data.

type: object

properties:

racsId:

type: string

description: The UE radio capability ID provided by the SCS/AS to identify the UE radio capability data. See 3GPP TS 23.003 for the encoding.

racsParamEps:

type: string

description: The UE radio capability data in EPS.

racsParam5Gs:

type: string

description: The UE radio capability data in 5GS.

imeiTacs:

type: array

items:

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

minItems: 1

description: Related UE model's IMEI-TAC values.

anyOf:

- required: [racsParamEps]

- required: [racsParam5Gs]

required:

- racsId

- imeiTacs

RacsProvisioningDataPatch:

description: Represents parameters to request the modification of a UE's radio capability data.

type: object

properties:

racsConfigs:

type: object

additionalProperties:

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

minProperties: 1

description: Identifies the configuration related to manufactuer specific UE radio capability. Each element uniquely identifies an RACS configuration for an RACS ID and is identified in the map via the RACS ID as key.

RacsConfigurationRm:

description: Represents the same as the RacsConfiguration data type but with the nullable:true property.

type: object

properties:

racsParamEps:

type: string

description: The UE radio capability data in EPS.

nullable: true

racsParam5Gs:

type: string

description: The UE radio capability data in 5GS.

nullable: true

imeiTacs:

type: array

items:

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

minItems: 1

description: Related UE model's IMEI-TAC values.

nullable: true

RacsFailureCode:

anyOf:

- type: string

enum:

- MALFUNCTION

- RESOURCE\_LIMITATION

- RACS\_ID\_DUPLICATED

- OTHER\_REASON

- 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

- MALFUNCTION: This value indicates that something functions wrongly in RACS provisioning or the RACS provisioning does not function at all.

- RESOURCE\_LIMITATION: This value indicates there is resource limitation for RACS data storage.

- RACS\_ID\_DUPLICATED: The received RACS identifier(s) are already provisioned.

- OTHER\_REASON: Other reason unspecified.

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