**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 canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
|  |  |
| ***Reason for change:*** | 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 1.2.0The 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 1.2.0The 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 1.2.0The 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 1.2.0The 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 1.2.0The 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 1.2.0The 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 1.2.0The 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 1.2.0The 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 1.2.0The 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 1.2.0The 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 1.2.0The 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 1.2.0The 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 1.2.0The 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 1.2.0The 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 1.2.0The 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 1.2.0The "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 \* \* \*