3GPP TSG SA WG5 Meeting 137-e TDoc S5-213343

electronic meeting, online, 10 - 19 May 2021

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| --- |
| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **32.291** | **CR** | **0326** | **rev** | **-** | **Current version:** | **16.7.0** |  |
|  |
| *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)*.* |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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|  |
| ***Title:***  | Correcting of local sequence number handling |
|  |  |
| ***Source to WG:*** | Ericsson LM |
| ***Source to TSG:*** | S5 |
|  |  |
| ***Work item code:*** | TEI16 |  | ***Date:*** | 2021-05-17 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-16 |
|  | *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:*** | The applicability of the local sequence number, i.e. within what is should be stepped is undefined. |
|  |  |
| ***Summary of change:*** | Adding a type so that it can be conveyed what it is counting. |
|  |  |
| ***Consequences if not approved:*** | The interpretation will be undefined which may lead to incorrect charging. |
|  |  |
| ***Clauses affected:*** | 6.1.6.2.1.10, 6.1.6.2.2.14, 6.1.6.3.x (new), A.2 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** | **X** |  |  Other core specifications  | TS 32.255 CR 0315 TS 32.290 CR 0163  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** | Revision of S5-213343 |

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| **First change** |

###### 6.1.6.2.1.10 Type UsedUnitContainer

Table 6.1.6.2.1.10-1: Definition of type UsedUnitContainer

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| serviceId | ServiceId | OC | 0..1 | This field identity of the used service |  |
| quotaManagementIndicator | QuotaManagementIndicator | OC | 0..1 | an indicator on whether the reported used units are with or without quota management control. If the attribute is not present, it indicates the used unit is without quota management applied. |  |
| triggers | array (Trigger) | OC | 0..N | This field specifies the reason for usage reporting for one or more types of unit associated to the rating group. |  |
| triggerTimestamp | DateTime | Oc | 0..1 | This field holds the timestamp when the reporting trigger occur. |  |
| time | Uint32 | OC | 0..1 | This field holds the amount of used time. |  |
| totalVolume | Uint64 | OC | 0..1 | This field holds the amount of used volume in both uplink and downlink directions. |  |
| uplinkVolume | Uint64 | OC | 0..1 | This field holds the amount of used volume in uplink direction. |  |
| downlinkVolume | Uint64 | OC | 0..1 | This field holds the amount of used volume in downlink direction. |  |
| serviceSpecific Units | Uint64 | OC | 0..1 | This field holds the amount of used service specific units. |  |
| eventTimeStamps | Array(DateTime) | OC | 0..N | This field holds the timestamps of the event reported in the Service Specific Units, if the reported units are event based |  |
| localSequenceNumber | integer | M | 1 | holds the Used Unit sequence number, i.e. the order when charging event occurs. It starts from 1 and increased by 1 for each Used Unit generation. |  |
| localSequenceNumberType | LocalSequenceNumberType | OC | 0..1 | holds the type of Used Unit sequence number, and indicates when it is reset |  |

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| **First change** |

###### 6.1.6.2.2.14 Type MultipleQFIcontainer

Table 6.1.6.2.1.14-1: Definition of type MultipleQFIcontainer

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| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| triggers | array (Trigger) | Oc | 0..N | This field holds reason for closing the QFI unit container. |  |
| triggerTimestamp | DateTime | Oc | 0..1 | This field holds the UTC time indicating timestamp when the reporting trigger occur.  |  |
| time | Uint32 | OC | 0..1 | This field holds the amount of time. |  |
| totalVolume | Uint64 | OC | 0..1 | This field holds the amount of volume in both uplink and downlink directions. |  |
| uplinkVolume | Uint64 | OC | 0..1 | This field holds the amount of volume in uplink direction. |  |
| downlinkVolume | Uint64 | OC | 0..1 | This field holds the amount of volume in downlink direction. |  |
| localSequenceNumber | integer | M | 1 | QFI data container sequence number. It starts from 1 and increased by 1 for each container generation |  |
| localSequenceNumberType | LocalSequenceNumberType | OC | 0..1 | holds the type of QFI data container sequence number, and indicates when it is reset |  |
| qFIContainerInformation | QFIContainerInformation | OC | 0..1 | This field holds the QFI data container information |  |

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| **Second change** |

##### 6.1.6.3.x Enumeration: LocalSequenceNumberType

Table 6.1.6.3.x-1: Enumeration LocalSequenceNumberType

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| --- | --- | --- |
| Enumeration value | Description | Applicability |
|  |  |  |
| CHARGING\_REQUEST | the local sequence number is started from 1 for each charging requests, i.e. at every charging data request initial, update, termination or event |  |
| CHARGING\_SESSION | the local sequence number is started from 1 for each charging session, i.e. at every charging data request initial or event |  |
|  |  |  |
|  |  |  |

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| **Third change** |

## A.2 Nchf\_ConvergedCharging API

openapi: 3.0.0

info:

 title: Nchf\_ConvergedCharging

 version: 3.0.2

 description: |

 ConvergedCharging Service © 2020, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

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externalDocs:

 description: >

 3GPP TS 32.291 V16.7.0: Telecommunication management; Charging management;

 5G system, charging service; Stage 3.

 url: 'http://www.3gpp.org/ftp/Specs/archive/32\_series/32.291/'

servers:

 - url: '{apiRoot}/nchf-convergedcharging/v3'

 variables:

 apiRoot:

 default: https://example.com

 description: apiRoot as defined in subclause 4.4 of 3GPP TS 29.501.

security:

 - {}

 - oAuth2ClientCredentials:

 - nchf-convergedcharging

paths:

 /chargingdata:

 post:

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '201':

 description: Created

 content:

 application/json:

 schema:

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

 '400':

 description: Bad request

 content:

 application/problem+json:

 schema:

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

 '403':

 description: Forbidden

 content:

 application/problem+json:

 schema:

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

 '404':

 description: Not Found

 content:

 application/problem+json:

 schema:

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

 '401':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/401'

 '410':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/410'

 '411':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/413'

 '500':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29571\_CommonData.yaml#/components/responses/default'

 callbacks:

 chargingNotification:

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

 post:

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: 'No Content, Notification was succesfull'

 '400':

 description: Bad request

 content:

 application/problem+json:

 schema:

 $ref: >-

 TS29571\_CommonData.yaml#/components/schemas/ProblemDetails

 default:

 $ref: 'TS29571\_CommonData.yaml#/components/responses/default'

 '/chargingdata/{ChargingDataRef}/update':

 post:

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 parameters:

 - name: ChargingDataRef

 in: path

 description: a unique identifier for a charging data resource in a PLMN

 required: true

 schema:

 type: string

 responses:

 '200':

 description: OK. Updated Charging Data resource is returned

 content:

 application/json:

 schema:

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

 '400':

 description: Bad request

 content:

 application/problem+json:

 schema:

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

 '403':

 description: Forbidden

 content:

 application/problem+json:

 schema:

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

 '404':

 description: Not Found

 content:

 application/problem+json:

 schema:

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

 '401':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/401'

 '410':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/410'

 '411':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/413'

 '500':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29571\_CommonData.yaml#/components/responses/default'

 '/chargingdata/{ChargingDataRef}/release':

 post:

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 parameters:

 - name: ChargingDataRef

 in: path

 description: a unique identifier for a charging data resource in a PLMN

 required: true

 schema:

 type: string

 responses:

 '204':

 description: No Content.

 '404':

 description: Not Found

 content:

 application/problem+json:

 schema:

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

 '401':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/401'

 '410':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/410'

 '411':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/413'

 '500':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29571\_CommonData.yaml#/components/responses/default'

components:

 securitySchemes:

 oAuth2ClientCredentials:

 type: oauth2

 flows:

 clientCredentials:

 tokenUrl: '{nrfApiRoot}/oauth2/token'

 scopes:

 nchf-convergedcharging: Access to the Nchf\_ConvergedCharging API

 schemas:

 ChargingDataRequest:

 type: object

 properties:

 subscriberIdentifier:

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

 tenantIdentifier:

 type: string

 chargingId:

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

 mnSConsumerIdentifier:

 type: string

 nfConsumerIdentification:

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

 invocationTimeStamp:

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

 invocationSequenceNumber:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

 retransmissionIndicator:

 type: boolean

 oneTimeEvent:

 type: boolean

 oneTimeEventType:

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

 notifyUri:

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

 supportedFeatures:

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

 serviceSpecificationInfo:

 type: string

 multipleUnitUsage:

 type: array

 items:

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

 minItems: 0

 triggers:

 type: array

 items:

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

 minItems: 0

 pDUSessionChargingInformation:

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

 roamingQBCInformation:

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

 sMSChargingInformation:

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

 nEFChargingInformation:

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

 registrationChargingInformation:

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

 n2ConnectionChargingInformation:

 $ref: '#/components/schemas/N2ConnectionChargingInformation'

 locationReportingChargingInformation:

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

 nSPAChargingInformation:

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

 nSMChargingInformation:

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

 required:

 - nfConsumerIdentification

 - invocationTimeStamp

 - invocationSequenceNumber

 ChargingDataResponse:

 type: object

 properties:

 invocationTimeStamp:

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

 invocationSequenceNumber:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

 invocationResult:

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

 sessionFailover:

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

 supportedFeatures:

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

 multipleUnitInformation:

 type: array

 items:

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

 minItems: 0

 triggers:

 type: array

 items:

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

 minItems: 0

 pDUSessionChargingInformation:

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

 roamingQBCInformation:

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

 required:

 - invocationTimeStamp

 - invocationSequenceNumber

 ChargingNotifyRequest:

 type: object

 properties:

 notificationType:

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

 reauthorizationDetails:

 type: array

 items:

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

 minItems: 0

 required:

 - notificationType

 ChargingNotifyResponse:

 type: object

 properties:

 invocationResult:

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

 NFIdentification:

 type: object

 properties:

 nFName:

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

 nFIPv4Address:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 nFIPv6Address:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Addr'

 nFPLMNID:

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

 nodeFunctionality:

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

 nFFqdn:

 type: string

 required:

 - nodeFunctionality

 MultipleUnitUsage:

 type: object

 properties:

 ratingGroup:

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

 requestedUnit:

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

 usedUnitContainer:

 type: array

 items:

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

 minItems: 0

 uPFID:

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

 multihomedPDUAddress:

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

 required:

 - ratingGroup

 InvocationResult:

 type: object

 properties:

 error:

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

 failureHandling:

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

 Trigger:

 type: object

 properties:

 triggerType:

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

 triggerCategory:

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

 timeLimit:

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

 volumeLimit:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

 volumeLimit64:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint64'

 eventLimit:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

 maxNumberOfccc:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

 tariffTimeChange:

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

 required:

 - triggerType

 - triggerCategory

 MultipleUnitInformation:

 type: object

 properties:

 resultCode:

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

 ratingGroup:

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

 grantedUnit:

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

 triggers:

 type: array

 items:

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

 minItems: 0

 validityTime:

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

 quotaHoldingTime:

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

 finalUnitIndication:

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

 timeQuotaThreshold:

 type: integer

 volumeQuotaThreshold:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint64'

 unitQuotaThreshold:

 type: integer

 uPFID:

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

 required:

 - ratingGroup

 RequestedUnit:

 type: object

 properties:

 time:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

 totalVolume:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint64'

 uplinkVolume:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint64'

 downlinkVolume:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint64'

 serviceSpecificUnits:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint64'

 UsedUnitContainer:

 type: object

 properties:

 serviceId:

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

 quotaManagementIndicator:

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

 triggers:

 type: array

 items:

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

 minItems: 0

 triggerTimestamp:

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

 time:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

 totalVolume:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint64'

 uplinkVolume:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint64'

 downlinkVolume:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint64'

 serviceSpecificUnits:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint64'

 eventTimeStamps:

 type: array

 items:

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

 minItems: 0

 localSequenceNumber:

 type: integer

 localSequenceNumberType:

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

 pDUContainerInformation:

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

 nSPAContainerInformation:

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

 required:

 - localSequenceNumber

 GrantedUnit:

 type: object

 properties:

 tariffTimeChange:

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

 time:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

 totalVolume:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint64'

 uplinkVolume:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint64'

 downlinkVolume:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint64'

 serviceSpecificUnits:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint64'

 FinalUnitIndication:

 type: object

 properties:

 finalUnitAction:

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

 restrictionFilterRule:

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

 filterId:

 type: string

 redirectServer:

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

 required:

 - finalUnitAction

 RedirectServer:

 type: object

 properties:

 redirectAddressType:

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

 redirectServerAddress:

 type: string

 required:

 - redirectAddressType

 - redirectServerAddress

 ReauthorizationDetails:

 type: object

 properties:

 serviceId:

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

 ratingGroup:

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

 quotaManagementIndicator:

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

 PDUSessionChargingInformation:

 type: object

 properties:

 chargingId:

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

 homeProvidedChargingId:

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

 userInformation:

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

 userLocationinfo:

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

 mAPDUNon3GPPUserLocationInfo:

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

 presenceReportingAreaInformation:

 type: object

 additionalProperties:

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

 minProperties: 0

 uetimeZone:

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

 pduSessionInformation:

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

 unitCountInactivityTimer:

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

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

 UserInformation:

 type: object

 properties:

 servedGPSI:

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

 servedPEI:

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

 unauthenticatedFlag:

 type: boolean

 roamerInOut:

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

 PDUSessionInformation:

 type: object

 properties:

 networkSlicingInfo:

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

 pduSessionID:

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

 pduType:

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

 sscMode:

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

 hPlmnId:

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

 servingNetworkFunctionID:

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

 ratType:

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

 mAPDUNon3GPPRATType:

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

 dnnId:

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

 dnnSelectionMode:

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

 chargingCharacteristics:

 type: string

 pattern: '^[0-9a-fA-F]{1,4}$'

 chargingCharacteristicsSelectionMode:

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

 startTime:

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

 stopTime:

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

 3gppPSDataOffStatus:

 $ref: '#/components/schemas/3GPPPSDataOffStatus'

 sessionStopIndicator:

 type: boolean

 pduAddress:

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

 diagnostics:

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

 authorizedQoSInformation:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/AuthorizedDefaultQos'

 subscribedQoSInformation:

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

 authorizedSessionAMBR:

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

 subscribedSessionAMBR:

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

 servingCNPlmnId:

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

 mAPDUSessionInformation:

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

 enhancedDiagnostics:

 $ref: '#/components/schemas/EnhancedDiagnostics5G'

 required:

 - pduSessionID

 - dnnId

 PDUContainerInformation:

 type: object

 properties:

 timeofFirstUsage:

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

 timeofLastUsage:

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

 qoSInformation:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/QosData'

 qoSCharacteristics:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/QosCharacteristics'

 afChargingIdentifier:

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

 afChargingIdString:

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

 userLocationInformation:

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

 uetimeZone:

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

 rATType:

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

 servingNodeID:

 type: array

 items:

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

 minItems: 0

 presenceReportingAreaInformation:

 type: object

 additionalProperties:

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

 minProperties: 0

 3gppPSDataOffStatus:

 $ref: '#/components/schemas/3GPPPSDataOffStatus'

 sponsorIdentity:

 type: string

 applicationserviceProviderIdentity:

 type: string

 chargingRuleBaseName:

 type: string

 mAPDUSteeringFunctionality:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/SteeringFunctionality'

 mAPDUSteeringMode:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/SteeringMode'

 NSPAContainerInformation:

 type: object

 properties:

 latency:

 type: integer

 throughput:

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

 maximumPacketLossRate:

 type: string

 serviceExperienceStatisticsData:

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

 theNumberOfPDUSessions:

 type: integer

 theNumberOfRegisteredSubscribers:

 type: integer

 loadLevel:

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

 NSPAChargingInformation:

 type: object

 properties:

 singleNSSAI:

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

 required:

 - singleNSSAI

 NetworkSlicingInfo:

 type: object

 properties:

 sNSSAI:

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

 required:

 - sNSSAI

 PDUAddress:

 type: object

 properties:

 pduIPv4Address:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

 pduIPv6AddresswithPrefix:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Addr'

 pduAddressprefixlength:

 type: integer

 iPv4dynamicAddressFlag:

 type: boolean

 iPv6dynamicPrefixFlag:

 type: boolean

 ServingNetworkFunctionID:

 type: object

 properties:

 servingNetworkFunctionInformation:

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

 aMFId:

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

 required:

 - servingNetworkFunctionInformation

 RoamingQBCInformation:

 type: object

 properties:

 multipleQFIcontainer:

 type: array

 items:

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

 minItems: 0

 uPFID:

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

 roamingChargingProfile:

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

 MultipleQFIcontainer:

 type: object

 properties:

 triggers:

 type: array

 items:

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

 minItems: 0

 triggerTimestamp:

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

 time:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

 totalVolume:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint64'

 uplinkVolume:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint64'

 downlinkVolume:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint64'

 localSequenceNumber:

 type: integer

 localSequenceNumberType:

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

 qFIContainerInformation:

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

 required:

 - localSequenceNumber

 QFIContainerInformation:

 type: object

 properties:

 qFI:

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

 reportTime:

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

 timeofFirstUsage:

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

 timeofLastUsage:

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

 qoSInformation:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/QosData'

 qoSCharacteristics:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/QosCharacteristics'

 userLocationInformation:

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

 uetimeZone:

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

 presenceReportingAreaInformation:

 type: object

 additionalProperties:

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

 minProperties: 0

 rATType:

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

 servingNetworkFunctionID:

 type: array

 items:

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

 minItems: 0

 3gppPSDataOffStatus:

 $ref: '#/components/schemas/3GPPPSDataOffStatus'

 3gppChargingId:

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

 diagnostics:

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

 enhancedDiagnostics:

 type: array

 items:

 type: string

 required:

 - reportTime

 RoamingChargingProfile:

 type: object

 properties:

 triggers:

 type: array

 items:

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

 minItems: 0

 partialRecordMethod:

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

 SMSChargingInformation:

 type: object

 properties:

 originatorInfo:

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

 recipientInfo:

 type: array

 items:

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

 minItems: 0

 userEquipmentInfo:

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

 roamerInOut:

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

 userLocationinfo:

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

 uetimeZone:

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

 rATType:

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

 sMSCAddress:

 type: string

 sMDataCodingScheme:

 type: integer

 sMMessageType:

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

 sMReplyPathRequested:

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

 sMUserDataHeader:

 type: string

 sMStatus:

 type: string

 pattern: '^[0-7]?[0-9a-fA-F]$'

 sMDischargeTime:

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

 numberofMessagesSent:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

 sMServiceType:

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

 sMSequenceNumber:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

 sMSresult:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

 submissionTime:

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

 sMPriority:

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

 messageReference:

 type: string

 messageSize:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

 messageClass:

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

 deliveryReportRequested:

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

 OriginatorInfo:

 type: object

 properties:

 originatorSUPI:

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

 originatorGPSI:

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

 originatorOtherAddress:

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

 originatorReceivedAddress:

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

 originatorSCCPAddress:

 type: string

 sMOriginatorInterface:

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

 sMOriginatorProtocolId:

 type: string

 RecipientInfo:

 type: object

 properties:

 recipientSUPI:

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

 recipientGPSI:

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

 recipientOtherAddress:

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

 recipientReceivedAddress:

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

 recipientSCCPAddress:

 type: string

 sMDestinationInterface:

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

 sMrecipientProtocolId:

 type: string

 SMAddressInfo:

 type: object

 properties:

 sMaddressType:

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

 sMaddressData:

 type: string

 sMaddressDomain:

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

 RecipientAddress:

 type: object

 properties:

 recipientAddressInfo:

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

 sMaddresseeType:

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

 MessageClass:

 type: object

 properties:

 classIdentifier:

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

 tokenText:

 type: string

 SMAddressDomain:

 type: object

 properties:

 domainName:

 type: string

 3GPPIMSIMCCMNC:

 type: string

 SMInterface:

 type: object

 properties:

 interfaceId:

 type: string

 interfaceText:

 type: string

 interfacePort:

 type: string

 interfaceType:

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

 RANSecondaryRATUsageReport:

 type: object

 properties:

 rANSecondaryRATType:

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

 qosFlowsUsageReports:

 type: array

 items:

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

 Diagnostics:

 type: integer

 IPFilterRule:

 type: string

 QosFlowsUsageReport:

 type: object

 properties:

 qFI:

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

 startTimestamp:

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

 endTimestamp:

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

 uplinkVolume:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint64'

 downlinkVolume:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint64'

 NEFChargingInformation:

 type: object

 properties:

 externalIndividualIdentifier:

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

 externalGroupIdentifier:

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

 groupIdentifier:

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

 aPIDirection:

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

 aPITargetNetworkFunction:

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

 aPIResultCode:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

 aPIName:

 type: string

 aPIReference:

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

 aPIContent:

 type: string

 required:

 - aPIName

 RegistrationChargingInformation:

 type: object

 properties:

 registrationMessagetype:

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

 userInformation:

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

 userLocationinfo:

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

 pSCellInformation:

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

 uetimeZone:

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

 rATType:

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

 5GMMCapability:

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

 mICOModeIndication:

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

 smsIndication:

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

 taiList:

 type: array

 items:

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

 minItems: 0

 serviceAreaRestriction:

 type: array

 items:

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

 minItems: 0

 requestedNSSAI:

 type: array

 items:

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

 minItems: 0

 allowedNSSAI:

 type: array

 items:

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

 minItems: 0

 rejectedNSSAI:

 type: array

 items:

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

 minItems: 0

 nSSAIMapList:

 type: array

 items:

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

 minItems: 0

 amfUeNgapId:

 type: integer

 ranUeNgapId:

 type: integer

 ranNodeId:

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

 required:

 - registrationMessagetype

 PSCellInformation:

 type: object

 properties:

 nrcgi:

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

 ecgi:

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

 NSSAIMap:

 type: object

 properties:

 servingSnssai:

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

 homeSnssai:

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

 required:

 - servingSnssai

 - homeSnssai

 N2ConnectionChargingInformation:

 type: object

 properties:

 n2ConnectionMessageType:

 $ref: '#/components/schemas/N2ConnectionMessageType'

 userInformation:

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

 userLocationinfo:

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

 pSCellInformation:

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

 uetimeZone:

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

 rATType:

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

 amfUeNgapId:

 type: integer

 ranUeNgapId:

 type: integer

 ranNodeId:

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

 restrictedRatList:

 type: array

 items:

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

 minItems: 0

 forbiddenAreaList:

 type: array

 items:

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

 minItems: 0

 serviceAreaRestriction:

 type: array

 items:

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

 minItems: 0

 restrictedCnList:

 type: array

 items:

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

 minItems: 0

 allowedNSSAI:

 type: array

 items:

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

 minItems: 0

 rrcEstCause:

 type: string

 pattern: '^[0-9a-fA-F]+$'

 required:

 - n2ConnectionMessageType

 LocationReportingChargingInformation:

 type: object

 properties:

 locationReportingMessageType:

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

 userInformation:

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

 userLocationinfo:

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

 pSCellInformation:

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

 uetimeZone:

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

 rATType:

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

 presenceReportingAreaInformation:

 type: object

 additionalProperties:

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

 minProperties: 0

 required:

 - locationReportingMessageType

 N2ConnectionMessageType:

 type: integer

 LocationReportingMessageType:

 type: integer

 NSMChargingInformation:

 type: object

 properties:

 managementOperation:

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

 idNetworkSliceInstance:

 type: string

 listOfserviceProfileChargingInformation:

 type: array

 items:

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

 minItems: 0

 managementOperationStatus:

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

# To be introduced once the reference to 'generic.yaml is resolved

# managementOperationalState:

# $ref: 'genericNrm.yaml#/components/schemas/OperationalState'

# managementAdministrativeState:

# $ref: 'genericNrm.yaml#/components/schemas/AdministrativeState'

 required:

 - managementOperation

 ServiceProfileChargingInformation:

 type: object

 properties:

 serviceProfileIdentifier:

 type: string

 sNSSAIList:

 type: array

 items:

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

 minItems: 0

# To be introduced once the reference to 'nrNrm.yaml is resolved

# sST:

# $ref: 'nrNrm.yaml#/components/schemas/Sst'

 latency:

 type: integer

 availability:

 type: number

# To be introduced once the reference to sliceNrm.yaml is resolved

# resourceSharingLevel:

# $ref: 'sliceNrm.yaml#/components/schemas/SharingLevel'

 jitter:

 type: integer

 reliability:

 type: string

 maxNumberofUEs:

 type: integer

 coverageArea:

 type: string

# To be introduced once the reference to sliceNrm.yaml is resolved

# uEMobilityLevel:

# $ref: 'sliceNrm.yaml#/components/schemas/MobilityLevel'

# delayToleranceIndicator:

# $ref: 'sliceNrm.yaml#/components/schemas/Support'

 dLThptPerSlice:

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

 dLThptPerUE:

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

 uLThptPerSlice:

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

 uLThptPerUE:

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

 maxNumberofPDUsessions:

 type: integer

 kPIMonitoringList:

 type: string

 supportedAccessTechnology:

 type: integer

# To be introduced once the reference to sliceNrm.yaml is resolved

# v2XCommunicationModeIndicator:

# $ref: 'sliceNrm.yaml#/components/schemas/Support'

 addServiceProfileInfo:

 type: string

 Throughput:

 type: object

 properties:

 guaranteedThpt:

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

 maximumThpt:

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

 MAPDUSessionInformation:

 type: object

 properties:

 mAPDUSessionIndicator:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/MaPduIndication'

 aTSSSCapability:

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

 EnhancedDiagnostics5G:

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

 RanNasCauseList:

 type: array

 items:

 $ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/RanNasRelCause'

 NotificationType:

 anyOf:

 - type: string

 enum:

 - REAUTHORIZATION

 - ABORT\_CHARGING

 - type: string

 NodeFunctionality:

 anyOf:

 - type: string

 enum:

 - AMF

 - SMF

 - SMS

 - PGW\_C\_SMF

 - NEFF # Included for backwards compatibility, shall not be used

 - SGW

 - I\_SMF

 - ePDG

 - CEF

 - NEF

 - MnS\_Producer

 - type: string

 ChargingCharacteristicsSelectionMode:

 anyOf:

 - type: string

 enum:

 - HOME\_DEFAULT

 - ROAMING\_DEFAULT

 - VISITING\_DEFAULT

 - type: string

 TriggerType:

 anyOf:

 - type: string

 enum:

 - QUOTA\_THRESHOLD

 - QHT

 - FINAL

 - QUOTA\_EXHAUSTED

 - VALIDITY\_TIME

 - OTHER\_QUOTA\_TYPE

 - FORCED\_REAUTHORISATION

 - UNUSED\_QUOTA\_TIMER # Included for backwards compatibility, shall not be used

 - UNIT\_COUNT\_INACTIVITY\_TIMER

 - ABNORMAL\_RELEASE

 - QOS\_CHANGE

 - VOLUME\_LIMIT

 - TIME\_LIMIT

 - EVENT\_LIMIT

 - PLMN\_CHANGE

 - USER\_LOCATION\_CHANGE

 - RAT\_CHANGE

 - SESSION\_AMBR\_CHANGE

 - UE\_TIMEZONE\_CHANGE

 - TARIFF\_TIME\_CHANGE

 - MAX\_NUMBER\_OF\_CHANGES\_IN\_CHARGING\_CONDITIONS

 - MANAGEMENT\_INTERVENTION

 - CHANGE\_OF\_UE\_PRESENCE\_IN\_PRESENCE\_REPORTING\_AREA

 - CHANGE\_OF\_3GPP\_PS\_DATA\_OFF\_STATUS

 - SERVING\_NODE\_CHANGE

 - REMOVAL\_OF\_UPF

 - ADDITION\_OF\_UPF

 - INSERTION\_OF\_ISMF

 - REMOVAL\_OF\_ISMF

 - CHANGE\_OF\_ISMF

 - START\_OF\_SERVICE\_DATA\_FLOW

 - ECGI\_CHANGE

 - TAI\_CHANGE

 - HANDOVER\_CANCEL

 - HANDOVER\_START

 - HANDOVER\_COMPLETE

 - GFBR\_GUARANTEED\_STATUS\_CHANGE

 - ADDITION\_OF\_ACCESS

 - REMOVAL\_OF\_ACCESS

 - START\_OF\_SDF\_ADDITIONAL\_ACCESS

 - type: string

 FinalUnitAction:

 anyOf:

 - type: string

 enum:

 - TERMINATE

 - REDIRECT

 - RESTRICT\_ACCESS

 - type: string

 RedirectAddressType:

 anyOf:

 - type: string

 enum:

 - IPV4

 - IPV6

 - URL

 - type: string

 TriggerCategory:

 anyOf:

 - type: string

 enum:

 - IMMEDIATE\_REPORT

 - DEFERRED\_REPORT

 - type: string

 QuotaManagementIndicator:

 anyOf:

 - type: string

 enum:

 - ONLINE\_CHARGING

 - OFFLINE\_CHARGING

 - QUOTA\_MANAGEMENT\_SUSPENDED

 - type: string

 FailureHandling:

 anyOf:

 - type: string

 enum:

 - TERMINATE

 - CONTINUE

 - RETRY\_AND\_TERMINATE

 - type: string

 SessionFailover:

 anyOf:

 - type: string

 enum:

 - FAILOVER\_NOT\_SUPPORTED

 - FAILOVER\_SUPPORTED

 - type: string

 LocalSequenceNumberType:

 anyOf:

 - type: string

 enum:

 - CHARGING\_REQUEST

 - CHARGING\_SESSION

 - type: string

 3GPPPSDataOffStatus:

 anyOf:

 - type: string

 enum:

 - ACTIVE

 - INACTIVE

 - type: string

 ResultCode:

 anyOf:

 - type: string

 enum:

 - SUCCESS

 - END\_USER\_SERVICE\_DENIED

 - QUOTA\_MANAGEMENT\_NOT\_APPLICABLE

 - QUOTA\_LIMIT\_REACHED

 - END\_USER\_SERVICE\_REJECTED

 - USER\_UNKNOWN

 - RATING\_FAILED

 - QUOTA\_MANAGEMENT

 - type: string

 PartialRecordMethod:

 anyOf:

 - type: string

 enum:

 - DEFAULT

 - INDIVIDUAL

 - type: string

 RoamerInOut:

 anyOf:

 - type: string

 enum:

 - IN\_BOUND

 - OUT\_BOUND

 - type: string

 SMMessageType:

 anyOf:

 - type: string

 enum:

 - SUBMISSION

 - DELIVERY\_REPORT

 - SM\_SERVICE\_REQUEST

 - DELIVERY

 - type: string

 SMPriority:

 anyOf:

 - type: string

 enum:

 - LOW

 - NORMAL

 - HIGH

 - type: string

 DeliveryReportRequested:

 anyOf:

 - type: string

 enum:

 - YES

 - NO

 - type: string

 InterfaceType:

 anyOf:

 - type: string

 enum:

 - UNKNOWN

 - MOBILE\_ORIGINATING

 - MOBILE\_TERMINATING

 - APPLICATION\_ORIGINATING

 - APPLICATION\_TERMINATING

 - type: string

 ClassIdentifier:

 anyOf:

 - type: string

 enum:

 - PERSONAL

 - ADVERTISEMENT

 - INFORMATIONAL

 - AUTO

 - type: string

 SMAddressType:

 anyOf:

 - type: string

 enum:

 - EMAIL\_ADDRESS

 - MSISDN

 - IPV4\_ADDRESS

 - IPV6\_ADDRESS

 - NUMERIC\_SHORTCODE

 - ALPHANUMERIC\_SHORTCODE

 - OTHER

 - IMSI

 - type: string

 SMAddresseeType:

 anyOf:

 - type: string

 enum:

 - TO

 - CC

 - BCC

 - type: string

 SMServiceType:

 anyOf:

 - type: string

 enum:

 - VAS4SMS\_SHORT\_MESSAGE\_CONTENT\_PROCESSING

 - VAS4SMS\_SHORT\_MESSAGE\_FORWARDING

 - VAS4SMS\_SHORT\_MESSAGE\_FORWARDING\_MULTIPLE\_SUBSCRIPTIONS

 - VAS4SMS\_SHORT\_MESSAGE\_FILTERING

 - VAS4SMS\_SHORT\_MESSAGE\_RECEIPT

 - VAS4SMS\_SHORT\_MESSAGE\_NETWORK\_STORAGE

 - VAS4SMS\_SHORT\_MESSAGE\_TO\_MULTIPLE\_DESTINATIONS

 - VAS4SMS\_SHORT\_MESSAGE\_VIRTUAL\_PRIVATE\_NETWORK(VPN)

 - VAS4SMS\_SHORT\_MESSAGE\_AUTO\_REPLY

 - VAS4SMS\_SHORT\_MESSAGE\_PERSONAL\_SIGNATURE

 - VAS4SMS\_SHORT\_MESSAGE\_DEFERRED\_DELIVERY

 - type: string

 ReplyPathRequested:

 anyOf:

 - type: string

 enum:

 - NO\_REPLY\_PATH\_SET

 - REPLY\_PATH\_SET

 - type: string

 oneTimeEventType:

 anyOf:

 - type: string

 enum:

 - IEC

 - PEC

 - type: string

 dnnSelectionMode:

 anyOf:

 - type: string

 enum:

 - VERIFIED

 - UE\_DNN\_NOT\_VERIFIED

 - NW\_DNN\_NOT\_VERIFIED

 - type: string

 APIDirection:

 anyOf:

 - type: string

 enum:

 - INVOCATION

 - NOTIFICATION

 - type: string

 RegistrationMessageType:

 anyOf:

 - type: string

 enum:

 - INITIAL

 - MOBILITY

 - PERIODIC

 - EMERGENCY

 - DEREGISTRATION

 - type: string

 MICOModeIndication:

 anyOf:

 - type: string

 enum:

 - MICO\_MODE

 - NO\_MICO\_MODE

 - type: string

 SmsIndication:

 anyOf:

 - type: string

 enum:

 - SMS\_SUPPORTED

 - SMS\_NOT\_SUPPORTED

 - type: string

 ManagementOperation:

 anyOf:

 - type: string

 enum:

 - CreateMOI

 - ModifyMOIAttributes

 - DeleteMOI

 - type: string

 ManagementOperationStatus:

 anyOf:

 - type: string

 enum:

 - OPERATION\_SUCCEEDED

 - OPERATION\_FAILED

 - type: string

|  |
| --- |
| **End of changes** |