**3GPP TSG-SA5 Meeting #162 *S5-253768***

Goteborg, Sweden, 25 - 29 August 2025

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **32.291** | **CR** | **0627** | **rev** | **1** | **Current version:** | **19.3.0** |  |
|  | | | | | | | | |
| *For* ***[HE](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)******[LP](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)*** *on using this form: comprehensive instructions can be found at  <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:*** | Rel-19 CR 32.291 Charging information for Avatar communication charging | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | China Mobile | | | | | | | | | |
| ***Source to TSG:*** | SA5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NG\_RTC\_Ph2-CH | | | | |  | ***Date:*** | | | 2025-08-29 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-19 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | IMS AS based charging for Avatar communication is a new charging scenario to support Avatar communication, but Avatar communication charging has not been considered in this specification.  The CR is related to solution #5.1 of TR 28.851. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | 1. Import re-used data types  2. Extend the IMSChargingInformation with media resource  3. Introduce a new feature, IDC\_AVATAR\_CH  4. Update the bindings for IMS charging  5. Update the Forge | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Charging for Avatar communication is not supported. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.1.6.1, 6.1.6.2.8.3, 6.1.6.2.8.x (new), 6.1.6.2.8.y (new), 6.1.8, 7.8, Forge | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 32.298 ... CR 1044 | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | Forge MR link: <https://forge.3gpp.org/rep/sa5/CH/-/merge_requests/81> at commit 8e2c28ade53a98b8163594b350eccc76c01e6cca | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | This is the revision of S5-253310. | | | | | | | | |

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| **First change** |

#### 6.1.6.1 General

This subclause specifies the application data model supported by the API.

The Nchf\_ConvergedCharging Service API allows the NF consumer to consume the converged charging service from the CHF as defined in 3GPP TS 32.290 [58].

Table 6.1.6.1-1 specifies the data types defined for the ConvergedCharging service based interface protocol.

Table 6.1.6.1-1: Nchf\_ ConvergedCharging specific Data Types

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Data type | | Section defined | | Description | | Applicability | |
| ChargingDataRequest | | 6.1.6.2.1.1  6.1.6.2.2.1 | | Describes the attributes of Charging Data Request to CHF for initial, update and termination of the charging session. | |  | |
| ChargingDataResponse | | 6.1.6.2.1.2  6.1.6.2.2.2 | | Describes the attributes of Charging Data Response from CHF on charging session initial, update and termination. | |  | |
| ChargingNotifyRequest | | 6.1.6.2.1.3 | | Describes Notifications about events that occurred in request message. | |  | |
| ChargingNotifyResponse | | 6.1.6.2.1.16 | | Describes the response of notification. | |  | |

Table 6.1.6.1-2 specifies data types re-used by the Nchf\_ConvergedCharging service based interface protocol from other specifications, including a reference to their respective specifications and when needed, a short description of their use within the Nchf\_ConvergedCharging service based interface.

Table 6.1.6.1-2: Nchf\_ConvergedCharging re-used Data Types

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Data type | | Reference | | Comments | | Applicability | |
| Supi | | 3GPP TS 29.571 [371] | | The identification of the user (i.e. IMSI, NAI, GLI, GCI).  (NOTE 1) | |  | |
| Uinteger | | 3GPP TS 29.571 [371] | | Unsigned integers | |  | |
| Uint16 | | 3GPP TS 29.571 [371] | | Unsigned 16-bit integers | |  | |
| Uint32 | | 3GPP TS 29.571 [371] | | Unsigned 32-bit integers | |  | |
| Uint64 | | 3GPP TS 29.571 [371] | | Unsigned 64-bit integers | |  | |
| PduSessionId | | 3GPP TS 29.571 [371] | | The identification of the PDU session. | |  | |
| PduSessionType | | 3GPP TS 29.571 [371] | | the type of a PDU session | |  | |
| Uri | | 3GPP TS 29.571 [371] | | String providing an URI | |  | |
| AccessType | | 3GPP TS 29.571 [371] | | The identification of the type of access network. | |  | |
| DateTime | | 3GPP TS 29.571 [371] | | The time. | |  | |
| ChargingId | | 3GPP TS 29.571 [371] | | Charging identifier allowing correlation of charging information | |  | |
| RatType | | 3GPP TS 29.571 [371] | | The identification of the RAT type. | |  | |
| RatingGroup | | 3GPP TS 29.571 [371] | | The identification of the rating group | |  | |
| IpAddr | | 3GPP TS 29.571 [371] | | Ipv4 address, Ipv6 address, or Ipv6Prefix | |  | |
| Ipv4Addr | | 3GPP TS 29.571 [371] | | Ipv4 address. | |  | |
| Ipv6Prefix | | 3GPP TS 29.571 [371] | | The Ipv6 prefix allocated for the user. | |  | |
| Ipv6Addr | | 3GPP TS 29.571 [371] | | Ipv6 Address. | |  | |
| Pei | | 3GPP TS 29.571 [371] | | The Identification of a Permanent Equipment. | |  | |
| TimeZone | | 3GPP TS 29.571 [371] | | Time zone information | |  | |
| NfInstanceId | | 3GPP TS 29.571 [371] | | String uniquely identifying a NF instance. | |  | |
| Gpsi | | 3GPP TS 29.571 [371] | | String identifying a Gpsi | |  | |
| DefaultQosInformation | | 3GPP TS 29.571 [371] | | Identifies the information of the default QoS. | |  | |
| SubscribedDefaultQos | | 3GPP TS 29.571 [371] | | subscribed default QoS. | |  | |
| AuthorizedDefaultQos | | 3GPP TS 29.512 [302] | | Authorized default QoS. | |  | |
| Ambr | | 3GPP TS 29.571 [371] | | Aggregate Maximum Bit rate | |  | |
| QosData | | 3GPP TS 29.512 [302] | | Contains QoS parameters | |  | |
| UserLocation | | 3GPP TS 29.571 [371] | | User location information | |  | |
| PlmnId | | 3GPP TS 29.571 [371] | | PLMN id | |  | |
| Guami | | 3GPP TS 29.571 [371] | | Globally Unique AMF Identifier | |  | |
| DurationSec | | 3GPP TS 29.571 [371] | | Identifies a period of time in units of seconds. | |  | |
| Snssai | | 3GPP TS 29.571 [371] | | SNSSAI | |  | |
| ProblemDetails | | 3GPP TS 29.571 [371] | | additional details of the error | |  | |
| ServiceId | | 3GPP TS 29.571 [371] | | Identifier of service | |  | |
| SscMode | | 3GPP TS 29.571 [371] | | SSC Mode type | |  | |
| PresenceInfo | | 3GPP TS 29.571 [371] | | PRA information including PRAId, PRA element list and PRA status | |  | |
| Qfi | | 3GPP TS 29.571 [371] | | QoS flow identifier designated as "Qfi". | |  | |
| AmfId | | 3GPP TS 29.571 [371] | | AMF identifier | |  | |
| Dnn | | 3GPP TS 29.571 [371] | | Data Network Name | |  | |
| GroupId | | 3GPP TS 29.571 [371] | | Network internal Identifier for a group of IMSIs | |  | |
| ExternalGroupId | | 3GPP TS 29.571 [371] | | External Group Identifier for one or more subscriptions associated to a group of IMSIs | |  | |
| Bytes | | 3GPP TS 29.571 [371] | | String with format "byte" | |  | |
| Tai | | 3GPP TS 29.571 [371] | | Tracking Area Identifier | |  | |
| Area | | 3GPP TS 29.571 [371] | | List of TACs or Operator specific codes | |  | |
| CoreNetworkType | | 3GPP TS 29.571 [371] | | 5GC or EPC | |  | |
| ServiceAreaRestriction | | 3GPP TS 29.571 [371] | | Service Area restriction | |  | |
| GlobalRanNodeId | | 3GPP TS 29.571 [371] | | Global RAN Node Id | |  | |
| QosCharacteristics | | 3GPP TS 29.512 [302] | | Map of QoS characteristics for non standard 5QIs and non-preconfigured 5QIs. | |  | |
| SupportedFeatures | | 3GPP TS 29.571 [371] | | See TS 29.500 [299] clause 6.6 | |  | |
| NsiLoadLevelInfo | | 3GPP TS 29.520 [306] | | Represents the load level information for an S-NSSAI and the associated network slice instance | |  | |
| ServiceExperienceInfo | | 3GPP TS 29.520 [306] | | ServiceExperience | |  | |
| ApplicationChargingId | | 3GPP TS 29.571 [371] | | Application provided charging identifier allowing correlation of charging information. | | AF\_Charging\_Identifier | |
| SharingLevel | | 3GPP TS 28.541 [254] | | Ressources sharing level | |  | |
| MobilityLevel | | 3GPP TS 28.541 [254] | | UE mobility Level | |  | |
| SsT | | 3GPP TS 28.541 [254] | | Slice Service type (SST) | |  | |
| Support | | 3GPP TS 28.541 [254] | | Supported, Not Supported indicator | |  | |
| EEPerfReq | | 3GPP TS 28.541 [254] | | EnergyEfficiency.performance | | EE\_NS\_CH | |
| Float | | 3GPP TS 29.571 [371] | | Number with format "float" | |  | |
| MaPduIndication | | 3GPP TS 29.512 [302] | | MA PDU session indication | | ATSSS | |
| AtsssCapability | | 3GPP TS 29.571 [371] | | ATSSS capabilities | | ATSSS | |
| SteeringFunctionality | | 3GPP TS 29.571 [371] | | Steering functionalities for MA PDU session | | ATSSS | |
| SteeringMode | | 3GPP TS 29.512 [302] | | Steering mode for MA PDU session | | ATSSS | |
| OperationalState | | 3GPP TS 28.623 [257] | | Operational state | |  | |
| AdministrativeState | | 3GPP TS 28.623 [257] | | Administrative state | |  | |
| RanNasRelCause | | 3GPP TS 29.512 [302] | | Indicates the RAN or NAS release cause code information. | | EnhancedDiagnostics | |
| Ecgi | | 3GPP TS 29.571 [371] | | E-UTRA Cell Id | |  | |
| Ncgi | | 3GPP TS 29.571 [371] | | NR Cell Id | |  | |
| ServingLocation | | 3GPP TS 28.538 [310] | | Serving location | | Edge Computing | |
| SoftwareImageInfo | | 3GPP TS 28.538 [310] | | Software image information | | Edge Computing | |
| AffinityAntiAffinity | | 3GPP TS 28.538 [310] | | Affinity and anti-requirements | | Edge Computing | |
| VirtualResource | | 3GPP TS 28.538 [310] | | Virtual resource requirements | | Edge Computing | |
| PlmnIdNid | | 3GPP TS 29.571 [371] | | PLMN Identity and, for SNPN, Network Identity | | SNPN | |
| Fqdn | | 3GPP TS 29.571 [371] | | Fully Qualified Domain Name | |  | |
| CagId | | 3GPP TS 29.571 [371] | | Closed Access Group Identifier | |  | |
| CallInfo | | 3GPP TS 29.512 [302] | | Caller and callee information | | IDC\_CH | |
| MbsSessionId | | 3GPP TS 29.571 [371] | | MBS Session Identifier | | 5MBS\_CH | |
| MbsServiceType | | 3GPP TS 29.571 [371] | | Type of MBS session | | 5MBS\_CH | |
| MbsServiceArea | | 3GPP TS 29.571 [371] | | MBS Service Area | | 5MBS\_CH | |
| MbsSessionActivityStatus | | 3GPP TS 29.571 [371] | | MBS session's activity status | | 5MBS\_CH | |
| SynchronizationState | | 3GPP TS 29.571 [371] | | Synchronization state of the node | | TSN | |
| ClockQuality | | 3GPP TS 29.571 [371] | | Quality information of the clock | | TSN | |
| TimeSource | | 3GPP TS 29.571 [371] | | Source of the node | | TSN | |
| SatelliteBackhaulCategory | | 3GPP TS 29.571 [371] | | The type of the satellite used in the backhaul | | 5GSATB | |
| GeoSatelliteId | | 3GPP TS 29.571 [371] | | Unique identifier of a GEO satellite | | 5GSATB | |
| SmfChargingId | | 3GPP TS 29.571 [371] | | SMF Charging Identifier | | SMF\_Charging\_Id | |
| AuthStatus | | 3GPP TS 29.571 [371] | | NSSAA status | | NSSAA | |
| ServerAddressingInfo | | 3GPP TS 29.571 [371] | | Addressing information (IP addresses and/or FQDNs) of a server | |  | |
| ApplicationId | | 3GPP TS 29.571 [371] | | Identifies the IMS DC application | | IDC\_APP\_CH | |
| ReplaceHttpUrl | | 3GPP TS 29.571 [371] | | Represents the replacement HTTP URL per stream ID allocated by the application layer for the specific IMS subscriber when requesting the application list. | | IDC\_APP\_CH | |
| MediaId | | 3GPP TS 29.571 [371] | | Identifies the IMS media flow | | IDC\_AVATAR\_CH | |
| MediaResourceType | | 3GPP TS 29.571 [371] | | Indicates the type of media resource | | IDC\_AVATAR\_CH | |
| NOTE 1: A SUPI containing GLI or GCI is used to support 5G-RG and FN-RG in scenarios of wireline network. | | | | | | | |

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| **2nd Change** |

###### 6.1.6.2.8.3 Type IMSChargingInformation

Table 6.1.6.2.8.3-1: Definition of type IMSChargingInformation

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| eventType | SIPEventType | OC | 0..1 | This field holds the SIP Method, the content of the SIP "Event" header and the content of the SIP "expires" header when present in the SIP request. |  |
| iMSNodeFunctionality | IMSNodeFunctionality | OM | 1 | This field contains the function of the IMS node. |  |
| roleOfNode | RoleOfIMSNode | OM | 1 | This field specifies whether the IMS node is serving the Originating or the Terminating party. |  |
| userInformation | UserInformation | OM | 1 | Group of user information. |  |
| userLocationInfo | UserLocation | OC | 0..1 | This field indicates details of where the UE is currently located (access-specific user location information).  For |  |
| ueTimeZone | TimeZone | OC | 0..1 | This field holds the Time Zone of where the UE is located, if available where the UE currently resides. |  |
| 3gppPSDataOffStatus | 3GPPPSDataOffStatus | OC | 0..1 | This field holds the 3GPP Data off Status when UE's 3GPP Data Off status is Activated or Deactivated. |  |
| isupCause | ISUPCause | OC | 0..1 | This indicates the reason a circuit switch call was released. |  |
| controlPlaneAddress | IMSAddress | OC | 0..1 | This identifies the control plane IP address i.e., GGSN, PGW, or SMF, that handles one or more media component(s) of a IMS session. |  |
| vlrNumber | E164 | OC | 0..1 | This identifies the international E.164 address of the VLR serving the user. |  |
| mscAddress | E164 | OC | 0..1 | This identifies the international E.164 address of the MSC that generated the network call reference number. |  |
| userSessionID | string | OM | 1 | This field holds the session identifier. For a SIP session the *Session-ID* contains the SIP Call ID. When the AS acts as B2BUA, the incoming session is identified. |  |
| outgoingSessionID | string | OC | 0..1 | When the AS acts as B2BUA, the outgoing side session is identified by the Outgoing Session ID which contains the SIP Call ID. |  |
| sessionPriority | IMSSessionPriority | OC | 0..1 | This field contains the priority of the session. |  |
| callingPartyAddresses | array(Uri) | OM | 1..N | This field holds the addresses (SIP URI or Tel URI) URI of the party (Public User Identity or Public Service Identity) initiating a session or requesting a service. |  |
| calledPartyAddress | string | OM | 1 | For SIP transactions, except for registration, this field holds the address of the party (Public User ID or Public Service ID) to whom the SIP transaction is posted.  For registration transactions, this field holds the Public User ID under registration. |  |
| numberPortabilityRoutinginformation | string | OC | 0..1 | This field includes information on number portability after DNS/ENUM request from IMS node in the calling user's home network. |  |
| carrierSelectRoutingInformation | string | OC | 0..1 | This field includes information on carrier select after DNS/ENUM request from IMS node in the calling user's home network. |  |
| alternateChargedPartyAddress | string | OC | 0..1 | The address of an alternate party that is identified by the AS at session initiation and is charged in place of the calling party. |  |
| requestedPartyAddress | array(string) | OC | 1..N | For SIP transactions this field initially holds the address of the party (Public User ID or Public Service ID) to whom the SIP transaction was originally posted.  This field is only present if different from the Called Party Address parameter. |  |
| calledAssertedIdentities | array(string) | OC | 1..N | The addresses of the final asserted identity. Present if the final asserted identity is available in the SIP 2xx response. |  |
| calledIdentityChanges | array(CalledIdentityChange) | OC | 1..N | Terminating identity address change and associated time stamp. |  |
| associatedURI | array(Uri) | OC | 1..N | This field holds a non-barred public user identity (SIP URI or Tel URI) associated to the public user identity under registration and is present for registration transactions. |  |
| timeStamps | DateTime | OC | 0..1 | This field holds either the time of the SIP Request or the time of the response to the SIP Request. |  |
| applicationServerInformation | array(string) | OC | 1..N | This field holds the SIP URI(s) of the AS(s) addressed during the session and the called party number (SIP URI, E.164), if an AS determines it. |  |
| interOperatorIdentifier | array(InterOperatorIdentifier) | OC | 1..N | This field holds the identification of the network neighbours (originating and terminating) as exchanged via SIP signalling if available. This field may occur several times. |  |
| imsChargingIdentifier | string | OM | 1 | This field holds the IMS Charging Identifier (ICID) as generated by a IMS node for a SIP session. |  |
| relatedICID | string | OC | 0..1 | This field holds the Related IMS charging identifier when the session is the target access leg in case of access transfer. |  |
| relatedICIDGenerationNode | IMSAddress | OC | 0..1 | This field holds the identifier of the server that generated the Related IMS charging identifier. |  |
| transitIOIList | array(string) | OC | 1..N | This field holds the identification of the involved transit networks as exchanged via SIP signalling if available. This field may occur several times. When received from the AS, each occurrence of this field represents transit networks inbound to or outbound from the S-CSCF. |  |
| earlyMediaDescription | array (EarlyMediaDescription) | OC | 1..N | This field holds session and media parameters related to media components set to active during the SIP session establishment and before a final successful or unsuccessful SIP answer to the initial SIP INVITE request is received. Once a media component is set to active, subsequent status changes shall be registered. Since several SDP negotiations may occur during the SIP session establishment, this field may occur several times. |  |
| sdpSessionDescription | array(string) | OC | 1..N | This field holds the content of an "attribute-line" (i=, c=, b=, k=, a=, etc.) related to a session. |  |
| sdpMediaComponent | array(SDPMediaComponent) | OC | 1..N | This is a grouped field comprising several sub-fields associated with one media component. Since several media components may exist for a session in parallel these sub-fields may occur several times. |  |
| servedPartyIPAddress | IMSAddress | OC | 0..1 | This field holds the IP address of either the calling or called party, depending on whether the P-CSCF is in touch with the calling or the called party. |  |
| serverCapabilities | ServerCapabilities | OC | 0..1 | This field contains the server capabilities as described in 3GPP TS 29.229 [205]. |  |
| trunkGroupID | TrunkGroupID | OC | 0..1 | This field identifies the incoming and outgoing PSTN legs. |  |
| bearerService | string | OC | 0..1 | This field holds the used bearer service for the PSTN leg. |  |
| imsServiceId | string | OC | 0..1 | This field identifies the service the MRFC is hosting. For conferences the conference ID is used as the value of this parameter. |  |
| messageBodies | array(MessageBody) | OC | 1..N | This field holds information about the Message body, Content-Type, Content-Length, Content-Disposition and Originator if available. |  |
| accessNetworkInformation | array(string) | OC | 1..N | This field contains the content of the first P-header P-Access-Network-Info, if available. |  |
| additionalAccessNetworkInformation | string | OC | 0..1 | This field contains the content of an additional SIP P-header "P-Access-Network-Info", if available. |  |
| cellularNetworkInformation | string | OC | 0..1 | This field contains the content of one SIP "Cellular-Network-Info" header, when the UE supporting one or more cellular radio access technologies but using a non-cellular IP-CAN, such as untrusted WLAN access, provides this header field to relay information to its service provider about the radio cell identity of the cellular radio access network on which the UE most recently camped. |  |
| accessTransferInformation | array(AccessTransferInformation) | OC | 1..N | This field contains information related to the session transfer. |  |
| accessNetworkInfoChange | array(AccessNetworkInfoChange) | OC | 1..N | This field is a grouped field describing the subsequent SIP P-header "P-Access-Network-Info" changes and associated time stamp. |  |
| imsCommunicationServiceID | string | OC | 0..1 | This field contains the IMS communication service identifier if received in the P-Asserted-Service header in the SIP request for all applicable IMS nodes downstream from the S‑CSCF serving the Originating party. This field contains the IMS communication service identifier if received in the "+g.3gpp.icsi-ref" header field parameter of the Feature-Caps header in the SIP response for all applicable IMS nodes upstream from the S‑CSCF serving the Originating party. |  |
| imsApplicationReferenceID | string | OC | 0..1 | This field contains the IMS application reference identifier if received in the SIP Request. |  |
| causeCode | Uint32 | OC | 0..1 | This field contains the cause value. |  |
| reasonHeader | array(string) | OC | 1..N | This field contains SIP reason header included in BYE or CANCEL method,  Reliability of this information is not guaranteed if the SIP or CANCEL is originated outside of the trust domain which is determined by the Operator on a "per parameter basis".  Since several Reason Header may exist for a SIP message, these sub-fields may occur several times |  |
| initialIMSChargingIdentifier | string | OC | 0..1 | This field holds the Initial IMS charging identifier (ICID) as generated by the IMS node for the initial SIP session created for IMS service continuity. |  |
| nniInformation | array(NNIInformation) | OC | 1..N | This field holds information about the NNI used for interconnection and roaming. |  |
| fromAddress | string | OM | 1 | Contains the information from the SIP From header. |  |
| imsEmergencyIndication | boolean | OC | 0..1 | This field indicates the registration is an emergency registration or the IMS session is an IMS emergency session |  |
| imsVisitedNetworkIdentifier | string | OC | 0..1 | Contains the information from the SIP P-Visited-Network-ID header. |  |
| sipRouteHeaderReceived | string | OC | 0..1 | Contains the information in the topmost route header in a received initial SIP INVITE or non-session related SIP MESSAGE request. |  |
| sipRouteHeaderTransmitted | string | OC | 0..1 | Contains the information in the route header representing the destination in a transmitted initial SIP INVITE or non-session related SIP MESSAGE request. |  |
| tadIdentifier | TADIdentifier | OC | 0..1 | This field indicates the type of access network (CS or PS) through which the session shall be terminated. |  |
| feIdentifierList | string | OC | 0..1 | This element contains one or more IM CN subsystem functional entity addresses and/or AS and application identifiers where the IM CN subsystem functional entity does create charging information for the related CDR of this IM CN subsystem functional entity. |  |
| imsDCAppInfo | IMSDCAppInfo | OC | 0..1 | This field holds the IMS DC application information. | IDC\_APP\_CH |
| satelliteIdList | array(SatelliteID) | OC | 1..N | This field holds the satellite IDs that used for the UE-satellite-UE communication |  |
| mediaResource | MediaResource | OC | 1..N | This field holds the list of media resources for one or multiple media. | IDC\_AVATAR\_CH |

|  |
| --- |
| **3rd Change** |

###### 6.1.6.2.8.x Type MediaResource

Table 6.1.6.2.8.x-1: Definition of type MediaResource

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| mediaID | MediaId | M | 1 | This field holds the identifier of the IMS media flow. |  |
| mediaResourceCapability | MediaResourceType | M | 1 | This field holds the media resource type. |  |
| avatarMedia | AvatarMedia | OC | 0..1 | This field holds the media specifications needed for Avatar communication services. |  |

|  |
| --- |
| **4th Change** |

###### 6.1.6.2.8.y Type AvatarMedia

Table 6.1.6.2.8.y-1: Definition of type AvatarMedia

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| resourceURL | Uri | OC | 1 | This field holds the URL that MF to retrieve the avatar representation to perform network rendering. |  |
| mediaProcessingSpecification | string | OC | 1 | This field specifies how media should be processed. |  |

|  |
| --- |
| **5th Change** |

### 6.1.8 Feature negotiation

The optional features in table 6.1.8-1 are defined for the Nchf\_ConvergedCharging API. They shall be negotiated using the extensibility mechanism defined in subclause 6.6 of 3GPP TS 29.500 [299].

Table 6.1.8-1: Supported Features

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Feature number | | Feature Name | | Description | | |
| 1 | | CHFCQM | | CHF-controlled quota management i.e. support for temporary offline. | | |
| 2 | | AF\_Charging\_Identifier | | Indicates the support of long character strings as charging identifiers. | | |
| 3 | | 5GIEPC\_CH | | 5GS interworking with EPC. | | |
| 4 | | ATSSS | | This feature indicates support of Access Traffic Steering, Switching, Splitting (ATSSS). | | |
| 5 | | ETSUN | | This feature indicates support of Enhancing Topology of SMF and UPF in 5G Networks (ETSUN). | | |
| 6 | | EnhancedDiagnostics | | Support the enhanced diagnostics. | | |
| 7 | | AMF\_subs\_PRA | | PRA(s) subscription by CHF in AMF. | | |
| 8 | | FilterRuleList | | Support of multiple filter rules in the final unit indication. | | |
| 9 | | TEI17\_NIESGU | | This feature indicates support of GERAN/UTRAN access. | | |
| 10 | | IMS | | This feature indicates support of IP Multimedia Subsystem (IMS). (NOTE 1). | | |
| 11 | | QoSMonitoring | | This feature indicates support of QoS Monitoring. | | |
| 12 | | Announcement | | This feature indicates support of announcements. (NOTE 1) | | |
| 13 | | 5GLAN | | This feature indicates support of 5G LAN-type services. | | |
| 14 | | URLLC | | This feature indicates support of URLLC. | | |
| 15 | | NotifyInfoResponse | | This feature indicates support of response with information for a notification. | | |
| 16 | | ES4xx | | Extended Support of HTTP 400, 403, 404 allowing use of either ChargingDataResponse or ProblemDetails in the response. | | |
| 17 | | ES3xx | | Extended Support of HTTP 307 and 308 redirections, an NF that does not support this feature does only support HTTP redirection as specified for 3GPP Release 15 and 16. | | |
| 18 | | EdgeComputing | | This feature indicates support of edge computing domain charging. (NOTE 1) | | |
| 19 | | 5GSCIoT | | This feature indicates support of 5GS control plane CIoT optimization. | | |
| 20 | | SMF\_Charging\_Id | | Indicates the support of strings as SMF charging identifiers. | | |
| 21 | | SNPN | | This feature indicates support of Stand-alone Non-Public Network. | | |
| 22 | | IDC\_CH | | This feature indicates support of IMS Data Channel charging. | | |
| 23 | | 5MBS\_CH | | This feature indicates 5G multicast-broadcast services charging. (NOTE 1) | | |
| 24 | | SatelliteAccess | | This feature indicates support of NR satellite access. | | |
| 25 | | NSREP | | This feature indicates support of Network slice replacement charging. | | |
| 26 | | TSN | | This feature indicates support of time sensitive networking. (NOTE 1) | | |
| 27 | | 5GSATB | | This feature indicates support of satellite backhaul. | | |
| 28 | | NSAC\_CH | | This feature indicates support of Network slice admission control charging. (NOTE 1) | | |
| 29 | | NSSAA | | This feature indicates support of Network slice-specific authentication and authorization charging. (NOTE 1) | | |
| 30 | | ProSe | | This feature indicates support of 5G ProSe. (NOTE 1) | | |
| 31 | | INTER\_CHF | | This feature indicates support of inter-CHF communication. | | |
| 32 | | RangingSL | | This feature indicates support of Ranging and Sidelink Positioning. | | |
| 33 | | EE\_NS\_CH | | This feature indicates support of energy information for network slice. | | |
| 34 | | AIOT\_API\_CH | | This feature indicates support of Ambient IoT service charging, allowing AIOTF as an API target network function in the northbound API exposure charging. | | |
| 35 | | IDC\_APP\_CH | | This feature indicates support of IMS data channel application donwload charging from DCSF. | | |
| 36 | | CCF | | This feature indicated support of CAPIF Framework | | |
| 37 | | IDC\_AVATAR\_CH | | This feature indicates support of Avatar communication charging. | | |
| NOTE 1: The feature is used to indicate a charging domain or subsystem. | | | | | | |
| **6th Change** | | | | | | |

## 7.8 Bindings for IMS charging

Table 7.8-1: Bindings of CDR field, Information Element and Resource Attribute for IMS charging

| Information Element | CDR Field | Resource Attribute |
| --- | --- | --- |
|  |  | **ChargingDataRequest** |
| IMS Charging Information | IMS Charging Information | /iMSChargingInformation |
| Event Type | Event Type | /iMSChargingInformation/eventType |
| IMS Node Functionality | IMS Node Functionality | /iMSChargingInformation/iMSNodeFunctionality |
| Role of Node | Role of Node | /iMSChargingInformation/roleOfNode |
| User Information | - | /iMSChargingInformation/userInformation |
| User Identifier | User Identifier | /iMSChargingInformation/userInformation/servedGPSI |
| User Equipment Info | User Equipment Info | /iMSChargingInformation/userInformation/servedPEI |
| User Location Info | User Location Info | /iMSChargingInformation/userLocationInfo |
| UE Time Zone | UE Time Zone | /iMSChargingInformation/ueTimeZone |
| 3GPP PS Data Off Status | 3GPP PS Data Off Status | /iMSChargingInformation/3gppPSDataOffStatus |
| ISUP Cause | ISUP Cause | /iMSChargingInformation/isupCause |
| Serving Node Address | Control Plane Address | /iMSChargingInformation/controlPlaneAddress |
| VLR Number | VLR Number | /iMSChargingInformation/vlrNumber |
| MSC Address | MSC Address | /iMSChargingInformation/mscAddress |
| User Session ID | User Session ID | /iMSChargingInformation/userSessionID |
| Outgoing Session ID | Outgoing Session ID | /iMSChargingInformation/outgoingSessionID |
| Session Priority | Session Priority | /iMSChargingInformation/sessionPriority |
| Calling Party Addresses | Calling Party Addresses | /iMSChargingInformation/callingPartyAddresses |
| Called Party Address | Called Party Address | /iMSChargingInformation/calledPartyAddress |
| Number Portability Routing Information | Number Portability Routing | /iMSChargingInformation/numberPortabilityRoutinginformation |
| Carrier Select Routing Information | Carrier Select routing information | /iMSChargingInformation/carrierSelectRoutingInformation |
| Alternate Charged Party Address | Alternate Charged Party Address | /iMSChargingInformation/alternateChargedPartyAddress |
| Requested Party Address | Requested Party Addresses | /iMSChargingInformation/requestedPartyAddress |
| Called Asserted Identities | Called Asserted Identities | /iMSChargingInformation/calledAssertedIdentities |
| Called Identity Change | Called Identity Changes | /iMSChargingInformation/calledIdentityChange/calledIdentityChanges |
| Called Identity | Called Identity | /iMSChargingInformation/calledIdentityChange/changeTime |
| Called Identity Change Time Stamp | Change Time | /iMSChargingInformation/calledIdentityChange |
| Associated URI | Associated URI | /iMSChargingInformation/associatedURI |
| Time Stamps | Time Stamps | /iMSChargingInformation/timeStamps |
| Application Server Information | Application Server Information | /iMSChargingInformation/applicationServerInformation |
| Inter Operator Identifier | Inter Operator Identifier | /iMSChargingInformation/interOperatorIdentifier |
| IMS Charging Identifier | IMS Charging Identifier | /iMSChargingInformation/imsChargingIdentifier |
| Related IMS Charging Identifier | Related ICID | /iMSChargingInformation/relatedICID |
| Related IMS Charging Identifier Generation Node | Related ICID Generation Node | /iMSChargingInformation/relatedICIDGenerationNode |
| Transit IOI List | Transit IOI List | /iMSChargingInformation/transitIOIList |
| Early Media Description | Early Media Description | /iMSChargingInformation/earlyMediaDescription |
| SDP Session Description | SDP Session Description | /iMSChargingInformation/sdpSessionDescription |
| SDP Media Component | SDP Media Component | /iMSChargingInformation/sdpMediaComponent |
| Served Party IP Address | Served Party IP Address | /iMSChargingInformation/servedPartyIPAddress |
| Server Capabilities | Server Capabilities | /iMSChargingInformation/serverCapabilities |
| Trunk Group ID | Trunk Group ID | /iMSChargingInformation/trunkGroupID |
| Bearer Service | Bearer Service | /iMSChargingInformation/bearerService |
| Service Id | Service Id | /iMSChargingInformation/imsServiceId |
| Message Bodies | Message Bodies | /iMSChargingInformation/messageBodies |
| Access Network Information | Access Network Information | /iMSChargingInformation/accessNetworkInformation |
| Additional Access Network Information | Additional Access Network Information | /iMSChargingInformation/additionalAccessNetworkInformation |
| Cellular Network Information | Cellular Network Information | /iMSChargingInformation/cellularNetworkInformation |
| Access Transfer Information | Access Transfer Information | /iMSChargingInformation/accessTransferInformation |
| Access Network Info Change | Access Network Info Change | /iMSChargingInformation/accessNetworkInfoChange |
| IMS Communication Service ID | IMS Communication Service ID | /iMSChargingInformation/imsCommunicationServiceID |
| IMS Application Reference ID | IMS Application Reference ID | /iMSChargingInformation/imsApplicationReferenceID |
| Cause Code | Cause Code | /iMSChargingInformation/causeCode |
| Reason Header | Reason Header | /iMSChargingInformation/reasonHeader |
| Initial IMS Charging Identifier | Initial IMS Charging Identifier | /iMSChargingInformation/initialIMSChargingIdentifier |
| NNI Information | NNI Information | /iMSChargingInformation/nniInformation |
| From Address | From Address | /iMSChargingInformation/fromAddress |
| IMS Emergency Indication | IMS Emergency Indication | /iMSChargingInformation/imsEmergencyIndication |
| IMS Visited Network Identifier | IMS Visited Network Identifier | /iMSChargingInformation/imsVisitedNetworkIdentifier |
| SIP Route Header Received | SIP Route Header Received | /iMSChargingInformation/sipRouteHeaderReceived |
| SIP Route Header Transmitted | SIP Route Header Transmitted | /iMSChargingInformation/sipRouteHeaderTransmitted |
| TAD Identifier | TAD Identifier | /iMSChargingInformation/tadIdentifier |
| FE Identifier List | FE Identifier List | /iMSChargingInformation/feIdentifierList |
| IMS DC App Info | IMS DC App Info | /iMSChargingInformation/imsDCAppInfo |
| Application ID | Application ID | /iMSChargingInformation/imsDCAppInfo/applicationId |
| HTTP URL | HTTP URL | /iMSChargingInformation/imsDCAppInfo/httpUrl |
| Media Resource | Media Resource | /iMSChargingInformation/mediaResource |
| Media ID | Media ID | /iMSChargingInformation/mediaResource/mediaID |
| Media Resource Capability | Media Resource Capability | /iMSChargingInformation/mediaResource/mediaResourceCapability |
| Avatar Media | Avatar Media | /iMSChargingInformation/mediaResource/avatarMedia |
| Resource URL | Resource URL | /iMSChargingInformation/mediaResource/avatarMedia/resourceURL |
| Media Processing Specification | Media Processing Specification | /iMSChargingInformation/mediaResource/avatarMedia/mediaProcessingSpecification |
|  |  | **ChargingDataResponse** |

|  |
| --- |
| **7th Change** |

\*\*\* START OF CHANGE 1 \*\*\*

\*\*\* OpenAPI/TS32291\_Nchf\_ConvergedCharging.yaml \*\*\*

<CODE BEGINS>

openapi: 3.0.0

info:

title: Nchf\_ConvergedCharging

version: 3.3.0-alpha.3

description: |

ConvergedCharging Service © 2025, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

All rights reserved.

externalDocs:

description: >

3GPP TS 32.291 V19.3.0: 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'

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

description: Bad request

content:

application/problem+json:

schema:

oneOf:

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

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

'401':

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

'403':

description: Forbidden

content:

application/problem+json:

schema:

oneOf:

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

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

'404':

description: Not Found

content:

application/problem+json:

schema:

oneOf:

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

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

'405':

$ref: 'TS29571\_CommonData.yaml#/components/responses/405'

'408':

$ref: 'TS29571\_CommonData.yaml#/components/responses/408'

'410':

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

'411':

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

'413':

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

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

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

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

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

'504':

$ref: 'TS29571\_CommonData.yaml#/components/responses/504'

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:

'200':

description: OK.

content:

application/ json:

schema:

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

'204':

description: 'No Content, Notification was succesfull'

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

description: Bad request

content:

application/problem+json:

schema:

oneOf:

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

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

'401':

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

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

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

'413':

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

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

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

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

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

'504':

$ref: 'TS29571\_CommonData.yaml#/components/responses/504'

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'

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

description: Bad request

content:

application/problem+json:

schema:

oneOf:

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

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

'401':

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

'403':

description: Forbidden

content:

application/problem+json:

schema:

oneOf:

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

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

'404':

description: Not Found

content:

application/problem+json:

schema:

oneOf:

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

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

'405':

$ref: 'TS29571\_CommonData.yaml#/components/responses/405'

'408':

$ref: 'TS29571\_CommonData.yaml#/components/responses/408'

'410':

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

'411':

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

'413':

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

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

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

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

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

'504':

$ref: 'TS29571\_CommonData.yaml#/components/responses/504'

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.

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

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

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

description: Not Found

content:

application/problem+json:

schema:

oneOf:

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

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

'410':

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

'411':

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

'413':

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

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

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

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

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

'504':

$ref: 'TS29571\_CommonData.yaml#/components/responses/504'

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

easid:

type: string

ednid:

type: string

eASProviderIdentifier:

type: string

aMFId:

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

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'

mMTelChargingInformation:

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

iMSChargingInformation:

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

edgeInfrastructureUsageChargingInformation:

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

eASDeploymentChargingInformation:

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

directEdgeEnablingServiceChargingInformation:

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

exposedEdgeEnablingServiceChargingInformation:

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

proSeChargingInformation:

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

mMSChargingInformation:

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

mBSSessionChargingInformation:

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

tSNChargingInformation:

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

interCHFInformation:

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

nSACFChargingInformation:

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

nSSAAChargingInformation:

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

rangingSLChargingInformation:

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

lCSInformation:

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

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'

locationReportingChargingInformation:

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

mBSSessionChargingInformation:

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

interCHFInformation:

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

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'

allocateUnit:

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

usedUnitContainer:

type: array

items:

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

minItems: 0

allocatedUnit:

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

uPFID:

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

multihomedPDUAddress:

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

mBUPFID:

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

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:

- triggerCategory

MultipleUnitInformation:

type: object

properties:

resultCode:

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

ratingGroup:

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

grantedUnit:

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

allocatedUnit:

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

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'

announcementInformation:

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

mBUPFID:

$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

pDUContainerInformation:

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

nSPAContainerInformation:

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

pC5ContainerInformation:

$ref: '#/components/schemas/PC5ContainerInformation'

mBSContainerInformation:

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

required:

- localSequenceNumber

AllocateUnit:

type: object

properties:

allocateUnitIndicator:

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

nSACContainerInformation:

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

AllocatedUnit:

type: object

properties:

quotaManagementIndicator:

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

triggers:

type: array

items:

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

minItems: 0

triggerTimestamp:

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

localSequenceNumber:

type: integer

nSACContainerInformation:

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

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'

restrictionFilterRuleList:

type: array

items:

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

minItems: 1

filterId:

type: string

filterIdList:

type: array

items:

type: string

minItems: 1

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'

sMFchargingId:

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

homeProvidedChargingId:

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

sMFHomeProvidedChargingId:

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

userInformation:

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

userLocationinfo:

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

iMSSessionInformation:

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

mAPDUNon3GPPUserLocationInfo:

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

non3GPPUserLocationTime:

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

mAPDUNon3GPPUserLocationTime:

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

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'

redundantTransmissionType:

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

pDUSessionPairID:

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

cpCIoTOptimisationIndicator:

type: boolean

5GSControlPlaneOnlyIndicator:

type: boolean

smallDataRateControlIndicator:

type: boolean

5GLANTypeService:

$ref: '#/components/schemas/5GLANTypeService'

sNPNInformation:

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

5GMulticastService:

$ref: '#/components/schemas/5GMulticastService'

5GSBridgeInformation:

$ref: '#/components/schemas/5GSBridgeInformation'

satelliteAccessIndicator:

type: boolean

satelliteBackhaulInformation:

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

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'

trafficForwardingWay:

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

qosMonitoringReport:

type: array

items:

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

minItems: 0

mBSSessionID:

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

mBSDeliveryMethod:

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

NSPAContainerInformation:

type: object

properties:

uplinkLatency:

type: integer

downlinkLatency:

type: integer

uplinkThroughput:

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

downlinkThroughput:

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

maximumPacketLossRateUL:

type: integer

maximumPacketLossRateDL:

type: integer

serviceExperienceStatisticsData:

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

theNumberOfPDUSessions:

type: integer

theNumberOfRegisteredSubscribers:

type: integer

loadLevel:

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

estimatedEnergyConsumption:

type: integer

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'

hPlmnSNSSAI:

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

alternativeSNSSAI:

$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

addIpv6AddrPrefixes:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Prefix'

addIpv6AddrPrefixList:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Prefix'

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: # Included for backwards compatibility and

# can be included based on operators requirement

$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

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

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

sMStatus:

type: string

pattern: '^[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: # Included for backwards compatibility, shall not be used

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

recipientOtherAddresses:

type: array

items:

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

minItems: 0

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'

5GLANTypeService:

type: object

properties:

internalGroupIdentifier:

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

5GSBridgeInformation:

type: object

properties:

bridgeId:

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

nWTTPortNumber:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint16'

dSTTPortNumber:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint16'

required:

- bridgeId

NEFChargingInformation:

type: object

properties:

externalIndividualIdentifier:

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

externalIndividualIdList:

type: array

items:

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

minItems: 1

internalIndividualIdentifier:

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

internalIndividualIdList:

type: array

items:

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

minItems: 1

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'

aPIOperation:

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

aPIContent:

type: string

required:

- aPIName

SNPNInformation:

type: object

properties:

sNPNID:

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

accessType:

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

n3IwfFqdn:

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

required:

- sNPNID

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

alternativeNSSAIMap:

type: array

items:

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

minItems: 0

amfUeNgapId:

type: integer

ranUeNgapId:

type: integer

ranNodeId:

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

sNPNID:

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

cAGIDList:

type: array

items:

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

minItems: 0

satelliteAccessIndicator:

type: boolean

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

AlternativeNSSAIMap:

type: object

properties:

snssai:

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

alternativeSnssai:

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

required:

- snssai

- alternativeSnssai

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

nSSAIMapList:

type: array

items:

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

minItems: 0

rrcEstCause:

type: string

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

satelliteAccessIndicator:

type: boolean

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

satelliteAccessIndicator:

type: boolean

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'

managementOperationalState:

$ref: 'TS28623\_ComDefs.yaml#/components/schemas/OperationalState'

managementAdministrativeState:

$ref: 'TS28623\_ComDefs.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

sST:

$ref: 'TS28541\_NrNrm.yaml#/components/schemas/Sst'

latency:

type: integer

availability:

type: number

resourceSharingLevel:

$ref: 'TS28541\_SliceNrm.yaml#/components/schemas/SharingLevel'

jitter:

type: integer

reliability:

type: string

maxNumberofUEs:

type: integer

coverageArea:

type: string

uEMobilityLevel:

$ref: 'TS28541\_SliceNrm.yaml#/components/schemas/MobilityLevel'

delayToleranceIndicator:

$ref: 'TS28541\_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

v2XCommunicationModeIndicator:

$ref: 'TS28541\_SliceNrm.yaml#/components/schemas/Support'

energyEfficiency:

$ref: 'TS28541\_SliceNrm.yaml#/components/schemas/EEPerfReq'

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'

QosMonitoringReport:

description: Contains reporting information on QoS monitoring.

type: object

properties:

ulDelays:

type: array

items:

type: integer

minItems: 0

dlDelays:

type: array

items:

type: integer

minItems: 0

rtDelays:

type: array

items:

type: integer

minItems: 0

AnnouncementInformation:

type: object

properties:

announcementIdentifier:

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

announcementReference:

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

variableParts:

type: array

items:

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

minItems: 0

timeToPlay:

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

quotaConsumptionIndicator:

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

announcementPriority:

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

playToParty:

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

announcementPrivacyIndicator:

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

Language:

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

VariablePart:

type: object

properties:

variablePartType:

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

variablePartValue:

type: array

items:

type: string

minItems: 1

variablePartOrder:

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

required:

- variablePartType

- variablePartValue

Language:

type: string

MMTelChargingInformation:

type: object

properties:

supplementaryServices:

type: array

items:

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

minItems: 1

SupplementaryService:

type: object

properties:

supplementaryServiceType:

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

supplementaryServiceMode:

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

numberOfDiversions:

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

associatedPartyAddress:

type: string

conferenceId:

type: string

participantActionType:

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

changeTime:

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

numberOfParticipants:

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

cUGInformation:

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

IMSChargingInformation:

type: object

properties:

eventType:

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

iMSNodeFunctionality:

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

roleOfNode:

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

userInformation:

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

userLocationInfo:

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

ueTimeZone:

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

3gppPSDataOffStatus:

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

isupCause:

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

controlPlaneAddress:

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

vlrNumber:

$ref: '#/components/schemas/E164'

mscAddress:

$ref: '#/components/schemas/E164'

userSessionID:

type: string

outgoingSessionID:

type: string

sessionPriority:

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

callingPartyAddresses:

type: array

items:

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

minItems: 1

calledPartyAddress:

type: string

numberPortabilityRoutinginformation:

type: string

carrierSelectRoutingInformation:

type: string

alternateChargedPartyAddress:

type: string

requestedPartyAddress:

type: array

items:

type: string

minItems: 1

calledAssertedIdentities:

type: array

items:

type: string

minItems: 1

calledIdentityChanges:

type: array

items:

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

minItems: 1

associatedURI:

type: array

items:

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

minItems: 1

timeStamps:

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

applicationServerInformation:

type: array

items:

type: string

minItems: 1

interOperatorIdentifier:

type: array

items:

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

minItems: 1

imsChargingIdentifier:

type: string

relatedICID:

type: string

relatedICIDGenerationNode:

type: string

transitIOIList:

type: array

items:

type: string

minItems: 1

earlyMediaDescription:

type: array

items:

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

minItems: 1

sdpSessionDescription:

type: array

items:

type: string

minItems: 1

sdpMediaComponent:

type: array

items:

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

minItems: 1

servedPartyIPAddress:

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

serverCapabilities:

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

trunkGroupID:

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

bearerService:

type: string

imsServiceId:

type: string

messageBodies:

type: array

items:

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

minItems: 1

accessNetworkInformation:

type: array

items:

type: string

minItems: 1

additionalAccessNetworkInformation:

type: string

cellularNetworkInformation:

type: string

accessTransferInformation:

type: array

items:

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

minItems: 1

accessNetworkInfoChange:

type: array

items:

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

minItems: 1

imsCommunicationServiceID:

type: string

imsApplicationReferenceID:

type: string

causeCode:

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

reasonHeader:

type: array

items:

type: string

minItems: 1

initialIMSChargingIdentifier:

type: string

nniInformation:

type: array

items:

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

minItems: 1

fromAddress:

type: string

imsEmergencyIndication:

type: boolean

imsVisitedNetworkIdentifier:

type: string

sipRouteHeaderReceived:

type: string

sipRouteHeaderTransmitted:

type: string

tadIdentifier:

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

feIdentifierList:

type: string

imsDCAppInfo:

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

satelliteIdList:

type: array

items:

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

minItems: 1

mediaResource:

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

MediaResource:

type: object

required:

- mediaID

- mediaResourceCapability

properties:

mediaID:

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

mediaResourceCapability:

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

avatarMedia:

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

AvatarMedia:

type: object

properties:

resourceURL:

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

mediaProcessingSpecification:

type: string

IMSDCAppInfo:

type: object

properties:

applicationId:

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

httpUrl:

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

EdgeInfrastructureUsageChargingInformation:

type: object

properties:

meanVirtualCPUUsage:

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

meanVirtualMemoryUsage:

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

meanVirtualDiskUsage:

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

measuredInBytes:

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

measuredOutBytes:

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

durationStartTime:

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

durationEndTime:

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

EASDeploymentChargingInformation:

type: object

properties:

eEASDeploymentRequirements:

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

lCMEventType:

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

lCMStartTime:

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

lCMEndTime:

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

satelliteBackhaulInformation:

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

MMSChargingInformation:

type: object

properties:

mmOriginatorInfo:

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

mmRecipientInfoList:

type: array

items:

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

minItems: 0

userLocationinfo:

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

uetimeZone:

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

rATType:

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

correlationInformation:

type: string

submissionTime:

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

mmContentType:

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

mmPriority:

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

messageID:

type: string

messageType:

type: string

messageSize:

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

messageClass:

type: string

deliveryReportRequested:

type: boolean

readReplyReportRequested:

type: boolean

applicID:

type: string

replyApplicID:

type: string

auxApplicInfo:

type: string

contentClass:

type: string

dRMContent:

type: boolean

adaptations:

type: boolean

vasID:

type: string

vaspID:

type: string

MMOriginatorInfo:

type: object

properties:

originatorSUPI:

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

originatorGPSI:

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

originatorOtherAddress:

type: array

items:

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

minItems: 0

MMRecipientInfo:

type: object

properties:

recipientSUPI:

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

recipientGPSI:

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

recipientOtherAddress:

type: array

items:

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

TSNChargingInformation:

type: object

properties:

dNN:

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

sNSSAI:

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

internalGroupIdentifier:

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

externalIndividualIdList:

type: array

items:

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

minItems: 0

5GSBridgeInformation:

$ref: '#/components/schemas/5GSBridgeInformation'

tSNQoSInformation:

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

tSCAssistanceInformation:

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

timeSynchronizationInformation:

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

TSNQoSInformation:

type: object

properties:

priority:

type: integer

bridgeDelay:

type: array

items:

type: integer

minItems: 0

TSCAssistanceInformation:

type: object

properties:

flowDirection:

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

periodicity:

type: integer

TimeSynchronizationInformation:

type: object

properties:

distributionMethod:

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

tSNtimeDomainNumber:

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

temporalValidityInformation:

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

spatialValidityInformation:

type: array

items:

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

minItems: 0

timeSynchronizationErrorBudget:

type: integer

synchronizationState:

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

clockQuality:

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

parentTimeSource:

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

PC5ContainerInformation:

type: object

properties:

coverageInfoList:

type: array

items:

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

radioParameterSetInfoList:

type: array

items:

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

transmitterInfoList:

type: array

items:

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

minItems: 0

timeOfFirstTransmission:

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

timeOfFirstReception:

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

CoverageInfo:

type: object

properties:

coverageStatus:

type: boolean

changeTime:

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

locationInfo:

type: array

items:

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

minItems: 0

RadioParameterSetInfo:

type: object

properties:

radioParameterSetValues:

type: array

items:

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

minItems: 0

changeTimestamp:

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

TransmitterInfo:

type: object

properties:

proseSourceIPAddress:

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

proseSourceL2Id:

type: string

ProseChargingInformation:

type: object

properties:

announcingPlmnID:

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

announcingUeHplmnIdentifier:

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

announcingUeVplmnIdentifier:

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

monitoringUeHplmnIdentifier:

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

monitoringUeVplmnIdentifier:

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

discovererUeHplmnIdentifier:

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

discovererUeVplmnIdentifier:

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

discovereeUeHplmnIdentifier:

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

discovereeUeVplmnIdentifier:

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

monitoredPlmnIdentifier:

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

proseApplicationID:

type: string

ApplicationId:

type: string

applicationSpecificDataList:

type: array

items:

type: string

minItems: 0

proseFunctionality:

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

proseEventType:

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

directDiscoveryModel:

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

validityPeriod:

type: integer

roleOfUE:

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

proseRequestTimestamp:

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

pC3ProtocolCause:

type: integer

monitoringUEIdentifier:

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

requestedPLMNIdentifier:

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

timeWindow:

type: integer

rangeClass:

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

proximityAlertIndication:

type: boolean

proximityAlertTimestamp:

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

proximityCancellationTimestamp:

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

hopCount:

type: integer

intermediateRelayInformationContainer:

type: array

items:

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

minItems: 0

relayIPAddress:

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

proseUEToNetworkRelayUEID :

type: string

proseDestinationLayer2ID:

type: string

pFIContainerInformation:

type: array

items:

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

minItems: 0

transmissionDataContainer:

type: array

items:

$ref: '#/components/schemas/PC5DataContainer'

minItems: 0

receptionDataContainer:

type: array

items:

$ref: '#/components/schemas/PC5DataContainer'

minItems: 0

required:

- aPIName

InterCHFInformation:

type: object

properties:

remoteCHFResource:

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

originalNFConsumerId:

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

NSACFChargingInformation:

type: object

properties:

nSACChargingIndicator:

type: boolean

NSACContainerInformation:

type: object

properties:

numberOfUEs:

type: integer

numberOfPDUs:

type: integer

NSSAAChargingInformation:

type: object

properties:

nSSAAMessageType:

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

userIdentification:

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

aAAPAddress:

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

aAASAddress:

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

eAPIDResponse:

type: string

eAPauthstatus:

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

aMFId:

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

required:

- nSSAAMessageType

- userIdentification

RangingSLChargingInformation:

type: object

properties:

targetUEID:

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

sLReferenceUEID:

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

sLPositioningServerUEID:

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

locatedUEID:

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

locationType:

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

locationEstimate:

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

LCSInformation:

type: object

properties:

lCSClientID:

type: string

locationType:

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

locationEstimate:

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

positioningData:

type: string

targetUEID:

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

LocationEstimate:

type: object

properties:

userLocationInformation:

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

horizontalAccuracy:

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

verticalAccuracy:

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

IntermediateRelayInformationContainer:

type: object

properties:

intermediateRelayIPAddress:

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

proseUEToNetworkIntermediateRelayUEID:

type: string

PFIContainerInformation:

type: object

properties:

pFI:

type: string

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

PC5DataContainer:

type: object

properties:

localSequenceNumber:

type: string

changeTime:

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

coverageStatus:

type: boolean

userLocationInformation:

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

dataVolume:

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

changeCondition:

type: string

radioResourcesId:

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

radioFrequency:

type: string

pC5RadioTechnology:

type: string

OctetString:

type: string

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

E164:

type: string

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

IMSAddress:

type: object

properties:

ipv4Addr:

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

ipv6Addr:

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

e164:

$ref: '#/components/schemas/E164'

anyOf:

- required: [ ipv4Addr ]

- required: [ ipv6Addr ]

- required: [ e164 ]

ServingNodeAddress:

type: object

properties:

ipv4Addr:

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

ipv6Addr:

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

anyOf:

- required: [ ipv4Addr ]

- required: [ ipv6Addr ]

SIPEventType:

type: object

properties:

sIPMethod:

type: string

eventHeader:

type: string

expiresHeader:

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

ISUPCause:

type: object

properties:

iSUPCauseLocation:

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

iSUPCauseValue:

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

iSUPCauseDiagnostics:

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

enhancedDiagnostics:

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

CalledIdentityChange:

type: object

properties:

calledIdentity:

type: string

changeTime:

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

InterOperatorIdentifier:

type: object

properties:

originatingIOI:

type: string

terminatingIOI:

type: string

EarlyMediaDescription:

type: object

properties:

sDPTimeStamps:

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

sDPMediaComponent:

type: array

items:

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

minItems: 0

sDPSessionDescription:

type: array

items:

type: string

minItems: 0

SDPTimeStamps:

type: object

properties:

sDPOfferTimestamp:

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

sDPAnswerTimestamp:

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

SDPMediaComponent:

type: object

properties:

sDPMediaName:

type: string

SDPMediaDescription:

type: array

items:

type: string

minItems: 0

localGWInsertedIndication:

type: boolean

ipRealmDefaultIndication:

type: boolean

transcoderInsertedIndication:

type: boolean

mediaInitiatorFlag:

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

mediaInitiatorParty:

type: string

threeGPPChargingId:

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

accessNetworkChargingIdentifierValue:

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

sDPType:

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

ServerCapabilities:

type: object

properties:

mandatoryCapability:

type: array

items:

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

minItems: 0

optionalCapability :

type: array

items:

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

minItems: 0

serverName:

type: array

items:

type: string

minItems: 0

TrunkGroupID:

type: object

properties:

incomingTrunkGroupID:

type: string

outgoingTrunkGroupID:

type: string

MessageBody:

type: object

properties:

contentType:

type: string

contentLength:

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

contentDisposition:

type: string

originator:

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

required:

- contentType

- contentLength

AccessTransferInformation:

type: object

properties:

accessTransferType:

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

accessNetworkInformation:

type: array

items:

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

minItems: 0

cellularNetworkInformation:

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

interUETransfer:

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

userEquipmentInfo:

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

instanceId:

type: string

relatedIMSChargingIdentifier:

type: string

relatedIMSChargingIdentifierNode:

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

changeTime:

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

AccessNetworkInfoChange:

type: object

properties:

accessNetworkInformation:

type: array

items:

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

minItems: 0

cellularNetworkInformation:

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

changeTime:

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

NNIInformation:

type: object

properties:

sessionDirection:

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

nNIType:

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

relationshipMode:

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

neighbourNodeAddress:

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

SatelliteId:

type: string

EASRequirements:

type: object

properties:

requiredEASservingLocation:

$ref: 'TS28538\_EdgeNrm.yaml#/components/schemas/ServingLocation'

softwareImageInfo:

$ref: 'TS28538\_EdgeNrm.yaml#/components/schemas/SoftwareImageInfo'

affinityAntiAffinity:

$ref: 'TS28538\_EdgeNrm.yaml#/components/schemas/AffinityAntiAffinity'

serviceContinuity:

type: boolean

virtualResource:

$ref: 'TS28538\_EdgeNrm.yaml#/components/schemas/VirtualResource'

MMContentType:

type: object

properties:

typeNumber:

type: string

addtypeInfo:

type: string

contentSize:

type: integer

mmAddContentInfo:

type: array

items:

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

minItems: 0

MMAddContentInfo:

type: object

properties:

typeNumber:

type: string

addtypeInfo:

type: string

contentSize:

type: integer

APIOperation:

type: object

properties:

name:

type: string

description:

type: string

5GMulticastService:

type: object

properties:

mBSSessionIdList:

type: array

items:

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

minItems: 1

MBSSessionChargingInformation:

type: object

properties:

mBSSessionID:

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

mBSServiceType:

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

serviceArea:

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

mBSStartTime:

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

mBSEndTime:

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

mBSServiceActivityStatus:

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

servingNetworkFunctionID:

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

required:

- mBSSessionID

- mBSServiceType

ServiceArea:

type: object

properties:

mBSServiceArea:

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

uPFIDs:

type: array

items:

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

minItems: 0

ranNodeIDs:

type: array

items:

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

minItems: 0

MBSContainerInformation:

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'

establishedConnectionInfo:

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

EstablishedConnectionInfo:

type: object

properties:

uPFIDs:

type: array

items:

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

minItems: 0

ranNodeIDs:

type: array

items:

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

minItems: 0

SatelliteBackhaulInformation:

type: object

properties:

satelliteBackhaulCategory:

type: array

items:

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

minItems: 0

gEOSatelliteID:

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

NotificationType:

anyOf:

- type: string

enum:

- REAUTHORIZATION

- ABORT\_CHARGING

- type: string

NodeFunctionality:

anyOf:

- type: string

enum:

- AMF

- SMF

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

- SMSF

- PGW\_C\_SMF

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

- SGW

- I\_SMF

- ePDG

- CEF

- NEF

- MnS\_Producer

- SGSN

- V\_SMF

- 5G\_DDNMF

- IMS\_Node

- MMS\_Node

- EES

- PCF

- UDM

- UPF

- TSN\_AF

- TSCTSF

- MB\_SMF

- CHF

- GMLC

- AIOTF

- CCF

- type: string

ChargingCharacteristicsSelectionMode:

anyOf:

- type: string

enum:

- HOME\_DEFAULT

- ROAMING\_DEFAULT

- VISITING\_DEFAULT

- type: string

TriggerType:

anyOf:

- type: string

enum:

# SMF TriggerType

- 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

- REDUNDANT\_TRANSMISSION\_CHANGE

- CGI\_SAI\_CHANGE

- RAI\_CHANGE

- JOIN\_MULTICAST

- MBS\_DELIVERY\_METHOD\_CHANGE

- LEAVE\_MULTICAST

- VSMF\_CHANGE

- SNSSAI\_REPLACEMENT

- SATELLITE\_BACKHAUL\_CATEGORY\_CHANGE

- GEO\_SATELLITE\_ID\_CHANGE

# IMS TriggerType

- SIP\_INVITE

- SIP\_RE-INVITE\_OR\_UPDATE

- SIP\_2XX\_ACKNOWLEDGING

- SIP\_1XX\_PROVISIONAL\_RESPONSE

- SIP\_4XX\_5XX\_OR\_6XX\_RESPONSE

- ANY\_OTHER\_SIP\_MESSAGE - SIP\_BYE\_MESSAGE

- SIP\_2XX\_ACKNOWLEDGING\_A\_SIP\_BYE

- ABORTING\_A\_SIP\_SESSION\_SET-UP

- SIP\_3XX\_FINAL\_OR\_REDIRECTION\_RESPONSE

- SIP\_4XX\_5XX\_OR\_6XX\_FINAL\_RESPONSE

# MB-SMF TriggerType

- MBS\_CONNECTION\_ESTABLISHED\_WITH\_NG-RAN

- MBS\_CONNECTION\_RELEASED\_WITH\_NG-RAN

- MBS\_CONNECTION\_ESTABLISHED\_WITH\_UPF

- MBS\_CONNECTION\_RELEASED\_WITH\_UPF

- MBS\_SESSION\_ACTIVITY\_STATUS\_CHANGE\_TO\_ACTIVE

- MBS\_SESSION\_ACTIVITY\_STATUS\_CHANGE\_TO\_INACTIVE

- MBS\_SESSION\_CONTEXT\_UPDATE

# NSAC TriggerType

- NSAC\_THRESHOLD\_INITIAL

- NSAC\_THRESHOLD\_UPWARDS\_REACHED

- NSAC\_THRESHOLD\_UPWARDS\_CROSSED

- NSAC\_THRESHOLD\_DOWNWARDS\_CROSSED

- NSAC\_QUOTA\_THRESHOLD

- NSAC\_QUOTA\_EXHAUSTED

- NSAC\_VALIDITY\_TIME

- NSAC\_QHT

- NSAC\_THRESHOLD\_TERMINATION

- NS\_TERMINATION

FinalUnitAction:

anyOf:

- type: string

enum:

- TERMINATE

- REDIRECT

- RESTRICT\_ACCESS

- type: string

RedirectAddressType:

anyOf:

- type: string

enum:

- IPV4

- IPV6

- URL

- URI

- 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

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 #Included for backwards compatibility, shall not be used

- 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 # Included for backwards compatibility, shall not be used

- IPV4\_ADDRESS

- IPV6\_ADDRESS

- NUMERIC\_SHORTCODE

- ALPHANUMERIC\_SHORTCODE

- OTHER

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

- 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 #Included for backwards compatibility, shall not be used

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

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

- CREATE\_MOI

- MODIFY\_MOI\_ATTR

- DELETE\_MOI

- NOTIFY\_MOI\_CREATION

- NOTIFY\_MOI\_ATTR\_CHANGE

- NOTIFY\_MOI\_DELETION

- type: string

ManagementOperationStatus:

anyOf:

- type: string

enum:

- OPERATION\_SUCCEEDED

- OPERATION\_FAILED

- type: string

RedundantTransmissionType:

anyOf:

- type: string

enum:

- NON\_TRANSMISSION

- END\_TO\_END\_USER\_PLANE\_PATHS

- N3\_N9

- TRANSPORT\_LAYER

- type: string

VariablePartType:

anyOf:

- type: string

enum:

- INTEGER

- NUMBER

- TIME

- DATE

- CURRENCY

- type: string

QuotaConsumptionIndicator:

anyOf:

- type: string

enum:

- QUOTA\_NOT\_USED

- QUOTA\_IS\_USED

- type: string

PlayToParty:

anyOf:

- type: string

enum:

- SERVED

- REMOTE

- type: string

AnnouncementPrivacyIndicator:

anyOf:

- type: string

enum:

- NOT\_PRIVATE

- PRIVATE

- type: string

SupplementaryServiceType:

anyOf:

- type: string

enum:

- OIP

- OIR

- TIP

- TIR

- HOLD

- CB

- CDIV

- CW

- MWI

- CONF

- FA

- CCBS

- CCNR

- MCID

- CAT

- CUG

- PNM

- CRS

- ECT

- type: string

SupplementaryServiceMode:

anyOf:

- type: string

enum:

- CFU

- CFB

- CFNR

- CFNL

- CD

- CFNRC

- ICB

- OCB

- ACR

- BLIND\_TRANFER

- CONSULTATIVE\_TRANFER

- type: string

ParticipantActionType:

anyOf:

- type: string

enum:

- CREATE

- JOIN

- INVITE\_INTO

- QUIT

- type: string

TrafficForwardingWay:

anyOf:

- type: string

enum:

- N6

- N19

- LOCAL\_SWITCH

- type: string

IMSNodeFunctionality:

anyOf:

- type: string

enum:

# The applicable IMS Nodes are MRFC, IMS-GWF (connected to S-CSCF using ISC), SIP AS and DCSF.

- S\_CSCF

- P\_CSCF

- I\_CSCF

- MRFC

- MGCF

- BGCF

- AS

- IBCF

- S-GW

- P-GW

- HSGW

- E-CSCF

- MME

- TRF

- TF

- ATCF

- PROXY

- EPDG

- TDF

- TWAG

- SCEF

- IWK\_SCEF

- IMS\_GWF

- DCSF

- type: string

RoleOfIMSNode:

anyOf:

- type: string

enum:

- ORIGINATING

- TERMINATING

- FORWARDING

- type: string

IMSSessionPriority:

anyOf:

- type: string

enum:

- PRIORITY\_0

- PRIORITY\_1

- PRIORITY\_2

- PRIORITY\_3

- PRIORITY\_4

- type: string

MediaInitiatorFlag:

anyOf:

- type: string

enum:

- CALLED\_PARTY

- CALLING\_PARTY

- UNKNOWN

- type: string

SDPType:

anyOf:

- type: string

enum:

- OFFER

- ANSWER

- type: string

OriginatorPartyType:

anyOf:

- type: string

enum:

- CALLING

- CALLED

- type: string

AccessTransferType:

anyOf:

- type: string

enum:

- PS\_TO\_CS

- CS\_TO\_PS

- PS\_TO\_PS

- CS\_TO\_CS

- type: string

UETransferType:

anyOf:

- type: string

enum:

- INTRA\_UE

- INTER\_UE

- type: string

NNISessionDirection:

anyOf:

- type: string

enum:

- INBOUND

- OUTBOUND

- type: string

NNIType:

anyOf:

- type: string

enum:

- NON\_ROAMING

- ROAMING\_NO\_LOOPBACK

- ROAMING\_LOOPBACK

- type: string

NNIRelationshipMode:

anyOf:

- type: string

enum:

- TRUSTED

- NON\_TRUSTED

- type: string

TADIdentifier:

anyOf:

- type: string

enum:

- CS

- PS

- type: string

ProseFunctionality:

anyOf:

- type: string

enum:

- DIRECT\_DISCOVERY

- DIRECT\_COMMUNICATION

- type: string

ProseEventType:

anyOf:

- type: string

enum:

- ANNOUNCING

- MONITORING

- MATCH\_REPORT

- type: string

DirectDiscoveryModel:

anyOf:

- type: string

enum:

- MODEL\_A

- MODEL\_B

- type: string

RoleOfUE:

anyOf:

- type: string

enum:

- ANNOUNCING\_UE

- MONITORING\_UE

- REQUESTOR\_UE

- REQUESTED\_UE

- type: string

RangeClass:

anyOf:

- type: string

enum:

- RESERVED

- 50\_METER

- 100\_METER

- 200\_METER

- 500\_METER

- 1000\_METER

- UNUSED

- type: string

RadioResourcesIndicator:

anyOf:

- type: string

enum:

- OPERATOR\_PROVIDED

- CONFIGURED

- type: string

MbsDeliveryMethod:

anyOf:

- type: string

enum:

- SHARED

- INDIVIDUAL

- type: string

TSCFlowDirection:

anyOf:

- type: string

enum:

- UPLINK

- DOWNLINK

- type: string

TimeDistributionMethod:

anyOf:

- type: string

enum:

- GPTP

- ASTI

- type: string

AllocateUnitIndicator:

anyOf:

- type: string

enum:

- CHF\_DETERMINED

- CTF\_DETERMINED

- type: string

NSSAAMessageType:

anyOf:

- type: string

enum:

- Authenticate

- Re-Authentication-Notification

- Revocation Notification

- type: string

LocationType:

anyOf:

- type: string

enum:

- CURRENT\_LOCATION

- LAST\_KNOWN\_LOCATION

- INITIAL\_LOCATION

- DEFERRED\_LOCATION

- NOTIFICATION\_VERIFICATION

- type: string

<CODE ENDS>

\*\*\* END OF CHANGE 1 \*\*\*

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