**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%22%20%5Cl%20%22_blank)******[LP](http://www.3gpp.org/3G_Specs/CRs.htm%22%20%5Cl%20%22_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 |
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| ***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 canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-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 types2. Extend the IMSChargingInformation with media resource3. Introduce a new feature, IDC\_AVATAR\_CH4. Update the bindings for IMS charging5. Update the Forge |
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| ***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 | 6.1.6.2.1.16.1.6.2.2.1 | Describes the attributes of Charging Data Request to CHF for initial, update and termination of the charging session. |  |
| ChargingDataResponse | 6.1.6.2.1.26.1.6.2.2.2 | 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 |

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| **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. |  |

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| **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. |  |

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| **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).

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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** |