

Nsmf_PDUSession

The Nsmf_PDUSession service operates on the PDU Sessions. The service operations exposed by this service allows other NFs to establish, modify and release the PDU Sessions. The following are the key functionalities of this NF service:

- Creation, modification and deletion of SM contexts for PDU Sessions upon receiving N1 message notification from AMF carrying the NAS SM messages. An SM context represents an association between the NF Service Consumer (for example, AMF) and the SMF for a PDU session;
- Retrieval of SM contexts of PDU sessions, for example, to move PDU sessions towards the EPC using the N26 interface;
- Creation, modification and deletion of PDU sessions between the V-SMF and H-SMF, in HR roaming scenarios;
- Association of policy and charging rules with PDU Sessions and binding the policy and charging rules to flows;
- Interacting with the UPF over N4 for creating, modifying and releasing user plane sessions;
- Process user plane events from the UPF and apply the corresponding policy and charging rules.

Reference: 3GPP TS 29.502 version 15.0.0 Release 15

- OpenAPI, on page 1
- Info, on page 2
- Servers, on page 2
- Security, on page 2
- Paths, on page 2
- Components, on page 15

OpenAPI

OpenAPI Version: 3.0.0

Info

Version: '1.0.0'
Title: 'Nsmf_PDUSession'
Description: 'SMF PDU Session Service'

Servers

URL: '{apiRoot}/nsmf-pdusession/v1'
Variables:
API Root:
Default: https://example.com
Description: apiRoot as defined in subclause 4.4 of 3GPP TS 29.501. The sm-contexts and pdu-sessions resources can be distributed on different processing instances or hosts. Thus the authority and/or deployment-specific string of the apiRoot of the created individual sm context and pdu-session resources' URIs may differ from the authority and/or deployment-specific string of the apiRoot of the sm-contexts and pdu-sessions collections' URIs.

Security

- {}
- oAuth2Clientcredentials:
  - nsmf-pdusession

Paths

/sm-contexts

Method: Post
Summary: Create SM Context

Tags:
- SM contexts collection
Operation ID: PostSmContexts
Request Body:
Description: representation of the SM context to be created in the SMF
Required/Optional: true
Content:
Multipart/Related:
Schema:
Type: object
Properties: # Request parts

```
          JSON Data:
            Reference: '#/components/schemas/SmContextCreateData'
          binaryDataN1SmMessage:
            Type: string
            Format: binary
        Encoding:
          JSON Data:
            Content Type: application/json
          binaryDataN1SmMessage:
            Content Type: application/vnd.3gpp.5gnas
            Headers:
              Content ID:
                Schema:
                  Type: string
Callbacks:
  smContextStatusNotification:
    '{$request.body#/smContextStatusUri}':
      Method: Post
        Request Body: # contents of the callback message
          Required/Optional: true
          Content:
            Application/JSON:
              Schema:
                Reference: '#/components/schemas/SmContextStatusNotification'

        Responses:
          '204':
            Description: successful notification
          '307':
            Description: temporary redirect
          '400':
            Reference: 'TS29571_CommonData.yaml#/components/responses/400'
          '403':
            Reference: 'TS29571_CommonData.yaml#/components/responses/403'
          '404':
            Reference: 'TS29571_CommonData.yaml#/components/responses/404'
          '411':
            Reference: 'TS29571_CommonData.yaml#/components/responses/411'
          '413':
            Reference: 'TS29571_CommonData.yaml#/components/responses/413'
          '415':
            Reference: 'TS29571_CommonData.yaml#/components/responses/415'
          '429':
            Reference: 'TS29571_CommonData.yaml#/components/responses/429'
          '500':
            Reference: 'TS29571_CommonData.yaml#/components/responses/500'
          '503':
            Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Responses:
  '201':
    Description: successful creation of an SM context
```

```
        Content:
          Application/JSON: # message without binary body part
            Schema:
              Reference: '#/components/schemas/SmContextCreatedData'
          Multipart/Related: # message with binary body part(s)
            Schema:
              Type: object
              Properties: # Request parts
                JSON Data:
                  Reference: '#/components/schemas/SmContextCreatedData'
                binaryDataN2SmInformation:
                  Type: string
                  Format: binary
            Encoding:
              JSON Data:
                Content Type: application/json
              binaryDataN2SmInformation:
                Content Type: application/vnd.3gpp.ngap
                Headers:
                  Content ID:
                    Schema:
                      Type: string
      Headers:
        Location:
          description: 'Contains the URI of the newly created resource,
according to the structure: {apiRoot}/nsmf-pdusession/v1/sm-contexts/{smContextRef}'

          Required/Optional: true
          Schema:
            Type: string
    '307':
      Description: temporary redirect
    '308':
      Description: permanent redirect
    '400':
      Description: unsuccessful creation of an SM context - bad request
      Content:
        Application/JSON: # message without binary body part
          Schema:
            Reference: '#/components/schemas/SmContextCreateError'
        Multipart/Related: # message with binary body part(s)
          Schema:
            Type: object
            Properties: # Request parts
              JSON Data:
                Reference: '#/components/schemas/SmContextCreateError'
              binaryDataN1SmMessage:
                Type: string
                Format: binary
          Encoding:
            JSON Data:
              Content Type: application/json
```

```
      binaryDataN1SmMessage:
        Content Type: application/vnd.3gpp.5gnas
        Headers:
          Content ID:
            Schema:
              Type: string
'403':
  Description: unsuccessful creation of an SM context - forbidden
  Content:
    Application/JSON: # message without binary body part
      Schema:
        Reference: '#/components/schemas/SmContextCreateError'
    Multipart/Related: # message with binary body part(s)
      Schema:
        Type: object
        Properties: # Request parts
          JSON Data:
            Reference: '#/components/schemas/SmContextCreateError'
          binaryDataN1SmMessage:
            Type: string
            Format: binary
      Encoding:
        JSON Data:
          Content Type: application/json
        binaryDataN1SmMessage:
          Content Type: application/vnd.3gpp.5gnas
          Headers:
            Content ID:
              Schema:
                Type: string
'404':
  Description: unsuccessful creation of an SM context - not found
  Content:
    Application/JSON: # message without binary body part
      Schema:
        Reference: '#/components/schemas/SmContextCreateError'
    Multipart/Related: # message with binary body part(s)
      Schema:
        Type: object
        Properties: # Request parts
          JSON Data:
            Reference: '#/components/schemas/SmContextCreateError'
          binaryDataN1SmMessage:
            Type: string
            Format: binary
      Encoding:
        JSON Data:
          Content Type: application/json
        binaryDataN1SmMessage:
          Content Type: application/vnd.3gpp.5gnas
          Headers:
```

```
          Content ID:
            Schema:
              Type: string
'411':
  Reference: 'TS29571_CommonData.yaml#/components/responses/411'
'413':
  Reference: 'TS29571_CommonData.yaml#/components/responses/413'
'415':
  Reference: 'TS29571_CommonData.yaml#/components/responses/415'
'429':
  Reference: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  Description: unsuccessful creation of an SM context - internal server error
  Content:
    Application/JSON: # message without binary body part
      Schema:
        Reference: '#/components/schemas/SmContextCreateError'
    Multipart/Related: # message with binary body part(s)
      Schema:
        Type: object
        Properties: # Request parts
          JSON Data:
            Reference: '#/components/schemas/SmContextCreateError'
          binaryDataN1SmMessage:
            Type: string
            Format: binary
      Encoding:
        JSON Data:
          Content Type: application/json
        binaryDataN1SmMessage:
          Content Type: application/vnd.3gpp.5gnas
          Headers:
            Content ID:
              Schema:
                Type: string
'503':
  Description: unsuccessful creation of an SM context - service unavailable
  Content:
    Application/JSON: # message without binary body part
      Schema:
        Reference: '#/components/schemas/SmContextCreateError'
    Multipart/Related: # message with binary body part(s)
      Schema:
        Type: object
        Properties: # Request parts
          JSON Data:
            Reference: '#/components/schemas/SmContextCreateError'
          binaryDataN1SmMessage:
            Type: string
            Format: binary
      Encoding:
```

```
          JSON Data:
            Content Type: application/json
          binaryDataN1SmMessage:
            Content Type: application/vnd.3gpp.5gnas
            Headers:
              Content ID:
                Schema:
                  Type: string
    '504':
      Description: unsuccessful creation of an SM context - gateway timeout
      Content:
        Application/JSON: # message without binary body part
          Schema:
            Reference: '#/components/schemas/SmContextCreateError'
        Multipart/Related: # message with binary body part(s)
          Schema:
            Type: object
            Properties: # Request parts
              JSON Data:
                Reference: '#/components/schemas/SmContextCreateError'
              binaryDataN1SmMessage:
                Type: string
                Format: binary
          Encoding:
            JSON Data:
              Content Type: application/json
            binaryDataN1SmMessage:
              Content Type: application/vnd.3gpp.5gnas
              Headers:
                Content ID:
                  Schema:
                    Type: string
    Default:
      Reference: 'TS29571_CommonData.yaml#/components/responses/default'
```

/sm-contexts/{smContextRef}/retrieve

```
Method: Post
  Summary: Retrieve SM Context

  Tags:
    - Individual SM context
  Operation ID: RetrieveSmContext

  Parameters:
    - Name: smContextRef
      In: path
      Description: SM context reference
      Required/Optional: true
      Schema:
        Type: string
```

```
Request Body:
  Description: parameters used to retrieve the SM context
  Required/Optional: false
  Content:
    Application/JSON:
      Schema:
        Reference: '#/components/schemas/SmContextRetrieveData'

Responses:
  '200':
    Description: successful retrieval of an SM context
    Content:
      Application/JSON:
        Schema:
          Reference: '#/components/schemas/SmContextRetrievedData'
  '400':
    Reference: 'TS29571_CommonData.yaml#/components/responses/400'
  '403':
    Reference: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    Reference: 'TS29571_CommonData.yaml#/components/responses/404'
  '411':
    Reference: 'TS29571_CommonData.yaml#/components/responses/411'
  '413':
    Reference: 'TS29571_CommonData.yaml#/components/responses/413'
  '415':
    Reference: 'TS29571_CommonData.yaml#/components/responses/415'
  '429':
    Reference: 'TS29571_CommonData.yaml#/components/responses/429'
  '500':
    Reference: 'TS29571_CommonData.yaml#/components/responses/500'
  '503':
    Reference: 'TS29571_CommonData.yaml#/components/responses/503'
  Default:
    Reference: 'TS29571_CommonData.yaml#/components/responses/default'
```

/sm-contexts/{smContextRef}/modify

```
Method: Post
  Summary: Update SM Context

  Tags:
    - Individual SM context
  Operation ID: UpdateSmContext

  Parameters:
    - Name: smContextRef
      In: path
      Description: SM context reference
      Required/Optional: true
      Schema:
```

```
      Type: string
Request Body:
  Description: representation of the updates to apply to the SM context
  Required/Optional: true
  Content:
    Application/JSON: # message without binary body part
      Schema:
        Reference: '#/components/schemas/SmContextUpdateData'
    Multipart/Related: # message with binary body part(s)
        Schema:
          Type: object
          Properties: # Request parts
            JSON Data:
              Reference: '#/components/schemas/SmContextUpdateData'
            binaryDataN1SmMessage:
              Type: string
              Format: binary
            binaryDataN2SmInformation:
              Type: string
              Format: binary
        Encoding:
          JSON Data:
            Content Type: application/json
          binaryDataN1SmMessage:
            Content Type: application/vnd.3gpp.5gnas
            Headers:
              Content ID:
                Schema:
                  Type: string
          binaryDataN2SmInformation:
            Content Type: application/vnd.3gpp.ngap
            Headers:
              Content ID:
                Schema:
                  Type: string

Responses:
  '200':
    Description: successful update of an SM context with content in the response
    Content:
      Application/JSON: # message without binary body part
        Schema:
          Reference: '#/components/schemas/SmContextUpdatedData'
      Multipart/Related: # message with binary body part(s)
        Schema:
          Type: object
          Properties: # Request parts
            JSON Data:
              Reference: '#/components/schemas/SmContextUpdatedData'
            binaryDataN1SmMessage:
              Type: string
              Format: binary
```

```
          binaryDataN2SmInformation:
            Type: string
            Format: binary
        Encoding:
          JSON Data:
            Content Type: application/json
          binaryDataN1SmMessage:
            Content Type: application/vnd.3gpp.5gnas
            Headers:
              Content ID:
                Schema:
                  Type: string
          binaryDataN2SmInformation:
            Content Type: application/vnd.3gpp.ngap
            Headers:
              Content ID:
                Schema:
                  Type: string
'204':
  Description: successful update of an SM context without content in the response
'400':
  Description: unsuccessful update of an SM context - bad request
  Content:
    Application/JSON: # message without binary body part
      Schema:
        Reference: '#/components/schemas/SmContextUpdateError'
    Multipart/Related: # message with binary body part(s)
      Schema:
        Type: object
        Properties: # Request parts
          JSON Data:
            Reference: '#/components/schemas/SmContextUpdateError'
          binaryDataN1SmMessage:
            Type: string
            Format: binary
          binaryDataN2SmInformation:
            Type: string
            Format: binary
      Encoding:
        JSON Data:
          Content Type: application/json
        binaryDataN1SmMessage:
          Content Type: application/vnd.3gpp.5gnas
          Headers:
            Content ID:
              Schema:
                Type: string
        binaryDataN2SmInformation:
          Content Type: application/vnd.3gpp.ngap
          Headers:
            Content ID:
```

```
            Schema:
              Type: string
'403':
  Description: unsuccessful update of an SM context - forbidden
  Content:
    Application/JSON: # message without binary body part
      Schema:
        Reference: '#/components/schemas/SmContextUpdateError'
    Multipart/Related: # message with binary body part(s)
      Schema:
        Type: object
        Properties: # Request parts
          JSON Data:
            Reference: '#/components/schemas/SmContextUpdateError'
          binaryDataN1SmMessage:
            Type: string
            Format: binary
          binaryDataN2SmInformation:
            Type: string
            Format: binary
      Encoding:
        JSON Data:
          Content Type: application/json
        binaryDataN1SmMessage:
          Content Type: application/vnd.3gpp.5gnas
          Headers:
            Content ID:
              Schema:
                Type: string
        binaryDataN2SmInformation:
          Content Type: application/vnd.3gpp.ngap
          Headers:
            Content ID:
              Schema:
                Type: string
'404':
  Description: unsuccessful update of an SM context - not found
  Content:
    Application/JSON: # message without binary body part
      Schema:
        Reference: '#/components/schemas/SmContextUpdateError'
    Multipart/Related: # message with binary body part(s)
      Schema:
        Type: object
        Properties: # Request parts
          JSON Data:
            Reference: '#/components/schemas/SmContextUpdateError'
          binaryDataN1SmMessage:
            Type: string
            Format: binary
          binaryDataN2SmInformation:
```

```
            Type: string
            Format: binary
        Encoding:
          JSON Data:
            Content Type: application/json
          binaryDataN1SmMessage:
            Content Type: application/vnd.3gpp.5gnas
            Headers:
              Content ID:
                Schema:
                  Type: string
          binaryDataN2SmInformation:
            Content Type: application/vnd.3gpp.ngap
            Headers:
              Content ID:
                Schema:
                  Type: string
'411':
  Reference: 'TS29571_CommonData.yaml#/components/responses/411'
'413':
  Reference: 'TS29571_CommonData.yaml#/components/responses/413'
'415':
  Reference: 'TS29571_CommonData.yaml#/components/responses/415'
'429':
  Reference: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
  Description: unsuccessful update of an SM context - Internal server error
  Content:
    Application/JSON: # message without binary body part
      Schema:
        Reference: '#/components/schemas/SmContextUpdateError'
    Multipart/Related: # message with binary body part(s)
      Schema:
        Type: object
        Properties: # Request parts
          JSON Data:
            Reference: '#/components/schemas/SmContextUpdateError'
          binaryDataN1SmMessage:
            Type: string
            Format: binary
          binaryDataN2SmInformation:
            Type: string
            Format: binary
        Encoding:
          JSON Data:
            Content Type: application/json
          binaryDataN1SmMessage:
            Content Type: application/vnd.3gpp.5gnas
            Headers:
              Content ID:
                Schema:
```

```
                Type: string
            binaryDataN2SmInformation:
              Content Type: application/vnd.3gpp.ngap
              Headers:
                Content ID:
                  Schema:
                    Type: string
        '503':
          Description: unsuccessful update of an SM context - Service Unavailable
          Content:
            Application/JSON: # message without binary body part
              Schema:
                Reference: '#/components/schemas/SmContextUpdateError'
            Multipart/Related: # message with binary body part(s)
              Schema:
                Type: object
                Properties: # Request parts
                  JSON Data:
                    Reference: '#/components/schemas/SmContextUpdateError'
                  binaryDataN1SmMessage:
                    Type: string
                    Format: binary
                  binaryDataN2SmInformation:
                    Type: string
                    Format: binary
              Encoding:
                JSON Data:
                  Content Type: application/json
                binaryDataN1SmMessage:
                  Content Type: application/vnd.3gpp.5gnas
                  Headers:
                    Content ID:
                      Schema:
                        Type: string
                binaryDataN2SmInformation:
                  Content Type: application/vnd.3gpp.ngap
                  Headers:
                    Content ID:
                      Schema:
                        Type: string
        Default:
          Reference: 'TS29571_CommonData.yaml#/components/responses/default'
```

/sm-contexts/{smContextRef}/release

```
    Method: Post
      Summary: Release SM Context

      Tags:
        - Individual SM context
```

```
    Operation ID: ReleaseSmContext

    Parameters:
      - Name: smContextRef
        In: path
        Description: SM context reference
        Required/Optional: true
        Schema:
          Type: string
    Request Body:
      Description: representation of the data to be sent to the SMF when releasing the
SM context
      Required/Optional: false
      Content:
        Application/JSON: # message without binary body part
          Schema:
            Reference: '#/components/schemas/SmContextReleaseData'
        Multipart/Related: # message with binary body part(s)
            Schema:
              Type: object
              Properties: # Request parts
                JSON Data:
                  Reference: '#/components/schemas/SmContextReleaseData'
                binaryDataN2SmInformation:
                  Type: string
                  Format: binary
            Encoding:
              JSON Data:
                Content Type: application/json
              binaryDataN2SmInformation:
                Content Type: application/vnd.3gpp.ngap
                Headers:
                  Content ID:
                    Schema:
                      Type: string

    Responses:
      '204':
       Description: successful release of an SM context without content in the response

      '400':
        Reference: 'TS29571_CommonData.yaml#/components/responses/400'
      '403':
        Reference: 'TS29571_CommonData.yaml#/components/responses/403'
      '404':
        Reference: 'TS29571_CommonData.yaml#/components/responses/404'
      '411':
        Reference: 'TS29571_CommonData.yaml#/components/responses/411'
      '413':
        Reference: 'TS29571_CommonData.yaml#/components/responses/413'
      '415':
        Reference: 'TS29571_CommonData.yaml#/components/responses/415'
```

```
      '429':
        Reference: 'TS29571_CommonData.yaml#/components/responses/429'
      '500':
        Reference: 'TS29571_CommonData.yaml#/components/responses/500'
      '503':
        Reference: 'TS29571_CommonData.yaml#/components/responses/503'
      Default:
        Reference: 'TS29571_CommonData.yaml#/components/responses/default'
```

Components

```
securitySchemes:
  oAuth2ClientCredentials:
    Type: oauth2
    Flows:
      clientCredentials:
        tokenUrl: '{nrfApiRoot}/oauth2/token'
        scopes:
          nsmf-pdusession: Access to the nsmf-pdusession API

schemas:
# STRUCTURED DATA TYPES
  SmContextCreateData:
    Type: object
    Properties:
      supi:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      unauthenticatedSupi:
        Type: boolean
        Default: false
      pei:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'
      gpsi:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
      pduSessionId:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
      dnn:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
      sNssai:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
      hplmnSnssai:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
      servingNfId:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
      guami:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'
      serviceName:
        Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ServiceName'
      servingNetwork:
```

```
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
    requestType:
      Reference: '#/components/schemas/RequestType'
    n1SmMsg:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
    anType:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
    ratType:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'
    presenceInLadn:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PresenceState'
    ueLocation:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
    ueTimeZone:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/TimeZone'
    addUeLocation:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
    smContextStatusUri:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    hSmfUri:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    additionalHsmfUri:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
      minItems: 1
    oldPduSessionId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
    pduSessionsActivateList:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
      minItems: 1
    ueEpsPdnConnection:
      Reference: '#/components/schemas/EpsPdnCnxContainer'
    hoState:
      Reference: '#/components/schemas/HoState'
    pcfId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
    nrfUri:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    supportedFeatures:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    selMode:
      Reference: '#/components/schemas/DnnSelectionMode'
    backupAmfInfo:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/BackupAmfInfo'
      minItems: 1
    traceData:
```

```
      Reference: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
    udmGroupId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'
    routingIndicator:
      Type: string
    epsInterworkingInd:
      Reference: '#/components/schemas/EpsInterworkingIndication'
    indirectForwardingFlag:
      Type: boolean
  Required:
    - servingNfId
    - servingNetwork
    - anType
    - smContextStatusUri
SmContextCreatedData:
  Type: object
  Properties:
    hSmfUri:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    pduSessionId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
    sNssai:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    upCnxState:
      Reference: '#/components/schemas/UpCnxState'
    n2SmInfo:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
    n2SmInfoType:
      Reference: '#/components/schemas/N2SmInfoType'
    allocatedEbiList:
      Type: array
      Items:
        Reference: '#/components/schemas/EbiArpMapping'
      minItems: 1
    hoState:
      Reference: '#/components/schemas/HoState'
    smfServiceInstanceId:
      Type: string
    recoveryTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    supportedFeatures:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
SmContextUpdateData:
  Type: object
  Properties:
    pei:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'
    gpsi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
    servingNfId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
    guami:
```

```
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'
    servingNetwork:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
    backupAmfInfo:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/BackupAmfInfo'
      minItems: 1
      nullable: true
    anType:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
    ratType:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'
    presenceInLadn:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PresenceState'
    ueLocation:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
    ueTimeZone:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/TimeZone'
    addUeLocation:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
    upCnxState:
      Reference: '#/components/schemas/UpCnxState'
    hoState:
      Reference: '#/components/schemas/HoState'
    toBeSwitched:
      Type: boolean
      Default: false
    failedToBeSwitched:
      Type: boolean
    n1SmMsg:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
    n2SmInfo:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
    n2SmInfoType:
      Reference: '#/components/schemas/N2SmInfoType'
    targetServingNfId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
    smContextStatusUri:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    dataForwarding:
      Type: boolean
      Default: false
    epsBearerSetup:
      Type: array
      Items:
        Reference: '#/components/schemas/EpsBearerContainer'
      minItems: 0
    revokeEbiList:
      Type: array
      Items:
```

```
        Reference: '#/components/schemas/EpsBearerId'
      minItems: 1
    release:
      Type: boolean
      Default: false
    cause:
      Reference: '#/components/schemas/Cause'
    ngApCause:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NgApCause'
    5gMmCauseValue:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/5GMmCause'
    sNssai:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    traceData:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
    epsInterworkingInd:
      Reference: '#/components/schemas/EpsInterworkingIndication'
    anTypeCanBeChanged:
      Type: boolean
      Default: false
SmContextUpdatedData:
  Type: object
  Properties:
    upCnxState:
      Reference: '#/components/schemas/UpCnxState'
    hoState:
      Reference: '#/components/schemas/HoState'
    releaseEbiList:
      Type: array
      Items:
        Reference: '#/components/schemas/EpsBearerId'
      minItems: 1
    allocatedEbiList:
      Type: array
      Items:
        Reference: '#/components/schemas/EbiArpMapping'
      minItems: 1
    modifiedEbiList:
      Type: array
      Items:
        Reference: '#/components/schemas/EbiArpMapping'
      minItems: 1
    n1SmMsg:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
    n2SmInfo:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
    n2SmInfoType:
      Reference: '#/components/schemas/N2SmInfoType'
    epsBearerSetup:
      Type: array
      Items:
```

```
        Reference: '#/components/schemas/EpsBearerContainer'
      minItems: 1
    dataForwarding:
      Type: boolean
SmContextReleaseData:
  Type: object
  Properties:
    cause:
      Reference: '#/components/schemas/Cause'
    ngApCause:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NgApCause'
    5gMmCauseValue:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/5GMmCause'
    ueLocation:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
    ueTimeZone:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/TimeZone'
    addUeLocation:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
    vsmfReleaseOnly:
      Type: boolean
      Default: false
SmContextStatusNotification:
  Type: object
  Properties:
    statusInfo :
      Reference: '#/components/schemas/StatusInfo'
  Required:
    - statusInfo
PduSessionCreateData:
  Type: object
  Properties:
    supi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    unauthenticatedSupi:
      Type: boolean
      Default: false
    pei:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'
    pduSessionId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
    dnn:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
    sNssai:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    vsmfId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
    servingNetwork:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
    requestType:
      Reference: '#/components/schemas/RequestType'
    epsBearerId:
```

```
      Type: array
      Items:
        Reference: '#/components/schemas/EpsBearerId'
      minItems: 1
    pgwS8cFteid:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Bytes'
    vsmfPduSessionUri:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    vcnTunnelInfo:
      Reference: '#/components/schemas/TunnelInfo'
    anType:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
    ratType:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'
    ueLocation:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
    ueTimeZone:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/TimeZone'
    addUeLocation:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
    gpsi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
    n1SmInfoFromUe:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
    unknownN1SmInfo:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
    supportedFeatures:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    hPcfId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
    hoPreparationIndication:
      Type: boolean
    selMode:
      Reference: '#/components/schemas/DnnSelectionMode'
    alwaysOnRequested:
      Type: boolean
      Default: false
    udmGroupId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'
    routingIndicator:
      Type: string
    epsInterworkingInd:
      Reference: '#/components/schemas/EpsInterworkingIndication'
    vSmfServiceInstanceId:
      Type: string
    recoveryTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    roamingChargingProfile:
      Reference:
'TS32291_Nchf_ConvergedCharging.yaml#/components/schemas/RoamingChargingProfile'
    chargingId:
      Type: string
```

```
    oldPduSessionId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
  Required:
    - dnn
    - vsmfId
    - servingNetwork
    - vsmfPduSessionUri
    - vcnTunnelInfo
    - anType
PduSessionCreatedData:
  Type: object
  Properties:
    pduSessionType:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionType'
    sscMode:
      Type: string
      Pattern: '^[0-7]$'
    hcnTunnelInfo:
      Reference: '#/components/schemas/TunnelInfo'
    sessionAmbr:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ambr'
    qosFlowsSetupList:
      Type: array
      Items:
        Reference: '#/components/schemas/QosFlowSetupItem'
      minItems: 1
    hSmfInstanceId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
    pduSessionId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
    sNssai:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    enablePauseCharging:
      Type: boolean
      Default: false
    ueIpv4Address:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
    ueIpv6Prefix:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'
    n1SmInfoToUe:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
    epsPdnCnxInfo:
      Reference: '#/components/schemas/EpsPdnCnxInfo'
    epsBearerInfo:
      Type: array
      Items:
        Reference: '#/components/schemas/EpsBearerInfo'
      minItems: 1
    supportedFeatures:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    maxIntegrityProtectedDataRate:
      Reference: '#/components/schemas/MaxIntegrityProtectedDataRate'
    alwaysOnGranted:
```

```
        Type: boolean
        Default: false
      upSecurity:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/UpSecurity'
      roamingChargingProfile:
        Reference:
'TS32291_Nchf_ConvergedCharging.yaml#/components/schemas/RoamingChargingProfile'
      hSmfServiceInstanceId:
        Type: string
      recoveryTime:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    Required:
      - pduSessionType
      - sscMode
      - hcnTunnelInfo
      - sessionAmbr
      - qosFlowsSetupList
      - hSmfInstanceId
  HsmfUpdateData:
    Type: object
    Properties:
      requestIndication:
        Reference: '#/components/schemas/RequestIndication'
      pei:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'
      vcnTunnelInfo:
        Reference: '#/components/schemas/TunnelInfo'
      servingNetwork:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
      anType:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
      ratType:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'
      ueLocation:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
      ueTimeZone:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/TimeZone'
      addUeLocation:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
      pauseCharging:
        Type: boolean
      pti:
        Reference: '#/components/schemas/ProcedureTransactionId'
      n1SmInfoFromUe:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
      unknownN1SmInfo:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
      qosFlowsRelNotifyList:
        Type: array
        Items:
          Reference: '#/components/schemas/QosFlowItem'
        minItems: 1
      qosFlowsNotifyList:
```

```
      Type: array
      Items:
        Reference: '#/components/schemas/QosFlowNotifyItem'
      minItems: 1
    NotifyList:
      Type: array
      Items:
        Reference: '#/components/schemas/PduSessionNotifyItem'
      minItems: 1
    epsBearerId:
      Type: array
      Items:
        Reference: '#/components/schemas/EpsBearerId'
      minItems: 0
    hoPreparationIndication:
      Type: boolean
    revokeEbiList:
      Type: array
      Items:
        Reference: '#/components/schemas/EpsBearerId'
      minItems: 1
    cause:
      Reference: '#/components/schemas/Cause'
    ngApCause:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NgApCause'
    5gMmCauseValue:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/5GMmCause'
    alwaysOnRequested:
      Type: boolean
      Default: false
    epsInterworkingInd:
      Reference: '#/components/schemas/EpsInterworkingIndication'
    secondaryRatUsageReport:
      Type: array
      Items:
       Reference: 'TS29571_CommonData.yaml#/components/schemas/SecondaryRatUsageReport'

      minItems: 1
  Required:
    - requestIndication
HsmfUpdatedData:
  Type: object
  Properties:
    n1SmInfoToUe:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
ReleaseData:
  Type: object
  Properties:
    cause:
      Reference: '#/components/schemas/Cause'
    ngApCause:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NgApCause'
```

```
    5gMmCauseValue:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/5GMmCause'
    ueLocation:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
    ueTimeZone:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/TimeZone'
    addUeLocation:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
    secondaryRatUsageReport:
      Type: array
      Items:
       Reference: 'TS29571_CommonData.yaml#/components/schemas/SecondaryRatUsageReport'

      minItems: 1
ReleasedData:
  Type: object
VsmfUpdateData:
  Type: object
  Properties:
    requestIndication:
      Reference: '#/components/schemas/RequestIndication'
    sessionAmbr:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ambr'
    qosFlowsAddModRequestList:
      Type: array
      Items:
        Reference: '#/components/schemas/QosFlowAddModifyRequestItem'
      minItems: 1
    qosFlowsRelRequestList:
      Type: array
      Items:
        Reference: '#/components/schemas/QosFlowReleaseRequestItem'
      minItems: 1
    epsBearerInfo:
      Type: array
      Items:
        Reference: '#/components/schemas/EpsBearerInfo'
      minItems: 1
    assignEbiList:
      Type: array
      Items:
        Reference: '#/components/schemas/EpsBearerId'
      minItems: 1
    revokeEbiList:
      Type: array
      Items:
        Reference: '#/components/schemas/EpsBearerId'
      minItems: 1
    modifiedEbiList:
      Type: array
      Items:
        Reference: '#/components/schemas/EbiArpMapping'
```

```
      minItems: 1
    pti:
      Reference: '#/components/schemas/ProcedureTransactionId'
    n1SmInfoToUe:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
    alwaysOnGranted:
      Type: boolean
      Default: false
    cause:
      Reference: '#/components/schemas/Cause'
    n1smCause:
      Type: string
    backOffTimer:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DurationSec'
  Required:
    - requestIndication
VsmfUpdatedData:
  Type: object
  Properties:
    qosFlowsAddModList:
      Type: array
      Items:
        Reference: '#/components/schemas/QosFlowItem'
      minItems: 1
    qosFlowsRelList:
      Type: array
      Items:
        Reference: '#/components/schemas/QosFlowItem'
      minItems: 1
    qosFlowsFailedtoAddModList:
      Type: array
      Items:
        Reference: '#/components/schemas/QosFlowItem'
      minItems: 1
    qosFlowsFailedtoRelList:
      Type: array
      Items:
        Reference: '#/components/schemas/QosFlowItem'
      minItems: 1
    n1SmInfoFromUe:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
    unknownN1SmInfo:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
    ueLocation:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
    ueTimeZone:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/TimeZone'
    addUeLocation:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
    assignedEbiList:
      Type: array
      Items:
```

```
        Reference: '#/components/schemas/EbiArpMapping'
      minItems: 1
    failedToAssignEbiList:
      Type: array
      Items:
        Reference: '#/components/schemas/EpsBearerId'
      minItems: 1
    releasedEbiList:
      Type: array
      Items:
        Reference: '#/components/schemas/EpsBearerId'
      minItems: 1
    secondaryRatUsageReport:
      Type: array
      Items:
       Reference: 'TS29571_CommonData.yaml#/components/schemas/SecondaryRatUsageReport'

      minItems: 1
StatusNotification:
  Type: object
  Properties:
    statusInfo :
      Reference: '#/components/schemas/StatusInfo'
  Required:
    - statusInfo
QosFlowItem:
  Type: object
  Properties:
    qfi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Qfi'
    cause:
      Reference: '#/components/schemas/Cause'
  Required:
    - qfi
QosFlowSetupItem:
  Type: object
  Properties:
    qfi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Qfi'
    qosRules:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Bytes'
    ebi:
      Reference: '#/components/schemas/EpsBearerId'
    qosFlowDescription:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Bytes'
    qosFlowProfile:
      Reference: '#/components/schemas/QosFlowProfile'
  Required:
    - qfi
    - qosRules
QosFlowAddModifyRequestItem:
  Type: object
  Properties:
```

```
    qfi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Qfi'
    ebi:
      Reference: '#/components/schemas/EpsBearerId'
    qosRules:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Bytes'
    qosFlowDescription:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Bytes'
    qosFlowProfile:
      Reference: '#/components/schemas/QosFlowProfile'
  Required:
    - qfi
QosFlowReleaseRequestItem:
  Type: object
  Properties:
    qfi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Qfi'
    qosRules:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Bytes'
    qosFlowDescription:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Bytes'
  Required:
    - qfi
QosFlowProfile:
  Type: object
  Properties:
    5qi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/5Qi'
    nonDynamic5Qi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NonDynamic5Qi'
    dynamic5Qi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Dynamic5Qi'
    arp:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Arp'
    gbrQosFlowInfo:
      Reference: '#/components/schemas/GbrQosFlowInformation'
    rqa:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/ReflectiveQoSAttribute'
    additionalQosFlowInfo:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/AdditionalQosFlowInfo'
  Required:
    - 5qi
GbrQosFlowInformation:
  Type: object
  Properties:
    maxFbrDl:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
    maxFbrUl:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
    guaFbrDl:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
    guaFbrUl:
```

```
      Reference: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
    notifControl:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NotificationControl'
    maxPacketLossRateDl:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PacketLossRate'
    maxPacketLossRateUl:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PacketLossRate'
  Required:
    - maxFbrDl
    - maxFbrUl
    - guaFbrDl
    - guaFbrUl
QosFlowNotifyItem:
  Type: object
  Properties:
    qfi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Qfi'
    notificationCause:
      Reference: '#/components/schemas/NotificationCause'
  Required:
    - qfi
    - notificationCause
SmContextRetrieveData:
  Type: object
  Properties:
    targetMmeCap:
      Reference: '#/components/schemas/MmeCapabilities'
SmContextRetrievedData:
  Type: object
  Properties:
    ueEpsPdnConnection:
      Reference: '#/components/schemas/EpsPdnCnxContainer'
  Required:
    - ueEpsPdnConnection
MmeCapabilities:
  Type: object
  Properties:
    nonIpSupported:
      Type: boolean
      Default: false
TunnelInfo:
  Type: object
  Properties:
    ipv4Addr:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
    ipv6Addr:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'
    gtpTeid:
      Reference: '#/components/schemas/Teid'
  Required:
    - gtpTeid
StatusInfo:
  Type: object
```

```
    Properties:
      resourceStatus:
        Reference: '#/components/schemas/ResourceStatus'
      cause:
        Reference: '#/components/schemas/Cause'
    Required:
      - resourceStatus
  EpsPdnCnxInfo:
    Type: object
    Properties:
      pgwS8cFteid:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Bytes'
      pgwNodeName:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Bytes'
    Required:
      - pgwS8cFteid
  EpsBearerInfo:
    Type: object
    Properties:
      ebi:
        Reference: '#/components/schemas/EpsBearerId'
      pgwS8uFteid:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Bytes'
      bearerLevelQoS:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Bytes'
    Required:
      - ebi
      - pgwS8uFteid
      - bearerLevelQoS
  PduSessionNotifyItem:
    Type: object
    Properties:
      notificationCause:
        Reference: '#/components/schemas/NotificationCause'
    Required:
      - notificationCause
  EbiArpMapping:
    Type: object
    Properties:
      epsBearerId:
        Reference: '#/components/schemas/EpsBearerId'
      arp:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Arp'
    Required:
      - epsBearerId
      - arp
  SmContextCreateError:
    Type: object
    Properties:
      error:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      n1SmMsg:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
```

```
    recoveryTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  Required:
    - error
SmContextUpdateError:
  Type: object
  Properties:
    error:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
    n1SmMsg:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
    n2SmInfo:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
    n2SmInfoType:
      Reference: '#/components/schemas/N2SmInfoType'
    upCnxState:
      Reference: '#/components/schemas/UpCnxState'
    recoveryTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  Required:
    - error
PduSessionCreateError:
  Type: object
  Properties:
    error:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
    n1smCause:
      Type: string
      Pattern: '^[A-F0-9]{2}$'
    n1SmInfoToUe:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
    backOffTimer:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DurationSec'
    recoveryTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  Required:
    - error
HsmfUpdateError:
  Type: object
  Properties:
    error:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
    pti:
      Reference: '#/components/schemas/ProcedureTransactionId'
    n1smCause:
      Type: string
      Pattern: '^[A-F0-9]{2}$'
    n1SmInfoToUe:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
    backOffTimer:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DurationSec'
    recoveryTime:
```

```
        Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    Required:
      - error
  VsmfUpdateError:
    Type: object
    Properties:
      error:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      pti:
        Reference: '#/components/schemas/ProcedureTransactionId'
      n1smCause:
        Type: string
        Pattern: '^[A-F0-9]{2}$'
      n1SmInfoFromUe:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
      unknownN1SmInfo:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
      failedToAssignEbiList:
        Type: array
        Items:
          Reference: '#/components/schemas/EpsBearerId'
        minItems: 1
      ngApCause:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/NgApCause'
      5gMmCauseValue:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/5GMmCause'
      recoveryTime:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    Required:
      - error
# SIMPLE DATA TYPES
  ProcedureTransactionId:
    Type: integer
    Minimum: 0
    Maximum: 255
  EpsBearerId:
    Type: integer
    Minimum: 0
    Maximum: 15
  EpsPdnCnxContainer:
    Type: string
  EpsBearerContainer:
    Type: string
  Teid:
    Type: string
    Pattern: '^[A-F0-9]{8}$'
# ENUMERATIONS
  UpCnxState:
    anyOf:
    - type: string
      enum:
        - ACTIVATED
        - DEACTIVATED
```

```
      - ACTIVATING
  - type: string
    Description:
      This string provides forward-compatibility with future
      extensions to the enumeration but is not used to encode
      content defined in the present version of this API.
  Description:
    Possible values are
    - ACTIVATED
    - DEACTIVATED
    - ACTIVATING
HoState:
  anyOf:
  - type: string
    enum:
      - NONE
      - PREPARING
      - PREPARED
      - COMPLETED
      - CANCELLED
  - type: string
    Description:
      This string provides forward-compatibility with future
      extensions to the enumeration but is not used to encode
      content defined in the present version of this API.
  Description:
    Possible values are
    - NONE
    - PREPARING
    - PREPARED
    - COMPLETED
    - CANCELLED
RequestType:
  anyOf:
  - type: string
    enum:
      - INITIAL_REQUEST
      - EXISTING_PDU_SESSION
      - INITIAL_EMERGENCY_REQUEST
      - EXISTING_EMERGENCY_PDU_SESSION
  - type: string
    Description:
      This string provides forward-compatibility with future
      extensions to the enumeration but is not used to encode
      content defined in the present version of this API.
  Description:
    Possible values are
    - INITIAL_REQUEST
    - EXISTING_PDU_SESSION
    - INITIAL_EMERGENCY_REQUEST
    - EXISTING_EMERGENCY_PDU_SESSION
RequestIndication:
  anyOf:
  - type: string
    enum:
      - UE_REQ_PDU_SES_MOD
      - UE_REQ_PDU_SES_REL
      - PDU_SES_MOB
      - NW_REQ_PDU_SES_AUTH
      - NW_REQ_PDU_SES_MOD
      - NW_REQ_PDU_SES_REL
```

```
      - EBI_ASSIGNMENT_REQ
  - type: string
    Description:
      This string provides forward-compatibility with future
      extensions to the enumeration but is not used to encode
      content defined in the present version of this API.
  Description:
    Possible values are
    - UE_REQ_PDU_SES_MOD
    - UE_REQ_PDU_SES_REL
    - PDU_SES_MOB
    - NW_REQ_PDU_SES_AUTH
    - NW_REQ_PDU_SES_MOD
    - NW_REQ_PDU_SES_REL
    - EBI_ASSIGNMENT_REQ
NotificationCause:
  anyOf:
  - type: string
    enum:
      - QOS_FULFILLED
      - QOS_NOT_FULFILLED
      - UP_SEC_FULFILLED
      - UP_SEC_NOT_FULFILLED
  - type: string
    Description:
      This string provides forward-compatibility with future
      extensions to the enumeration but is not used to encode
      content defined in the present version of this API.
  Description:
    Possible values are
    - QOS_FULFILLED
    - QOS_NOT_FULFILLED
    - UP_SEC_FULFILLED
    - UP_SEC_NOT_FULFILLED
Cause:
  anyOf:
  - type: string
    enum:
      - REL_DUE_TO_HO
      - EPS_FALLBACK
      - REL_DUE_TO_UP_SEC
      - DNN_CONGESTION
      - S-NSSAI_CONGESTION
      - REL_DUE_TO_REACTIVATION
      - 5G_AN_NOT_RESPONDING
      - REL_DUE_TO_SLICE_NOT_AVAILABLE
      - REL_DUE_TO_DUPLICATE_SESSION_ID
      - PDU_SESSION_STATUS_MISMATCH
      - HO_FAILURE
  - type: string
    Description:
      This string provides forward-compatibility with future
      extensions to the enumeration but is not used to encode
      content defined in the present version of this API.
  Description:
    Possible values are
    - REL_DUE_TO_HO
    - EPS_FALLBACK
    - REL_DUE_TO_UP_SEC
    - DNN_CONGESTION
    - S-NSSAI_CONGESTION
```

```
    - REL_DUE_TO_REACTIVATION
    - 5G_AN_NOT_RESPONDING
    - REL_DUE_TO_SLICE_NOT_AVAILABLE
    - REL_DUE_TO_DUPLICATE_SESSION_ID
    - PDU_SESSION_STATUS_MISMATCH
    - HO_FAILURE
ResourceStatus:
  anyOf:
  - type: string
    enum:
      - RELEASED
  - type: string
    Description:
      This string provides forward-compatibility with future
      extensions to the enumeration but is not used to encode
      content defined in the present version of this API.
  Description:
    Possible values are
    - RELEASED
DnnSelectionMode:
  anyOf:
  - type: string
    enum:
      - VERIFIED
      - UE_DNN_NOT_VERIFIED
      - NW_DNN_NOT_VERIFIED
  - type: string
    Description:
      This string provides forward-compatibility with future
      extensions to the enumeration but is not used to encode
      content defined in the present version of this API.
  Description:
    Possible values are
    - VERIFIED
    - UE_DNN_NOT_VERIFIED
    - NW_DNN_NOT_VERIFIED
EpsInterworkingIndication:
  anyOf:
  - type: string
    enum:
      - NONE
      - WITH_N26
      - WITHOUT_N26
  - type: string
    Description:
      This string provides forward-compatibility with future
      extensions to the enumeration but is not used to encode
      content defined in the present version of this API.
  Description:
    Possible values are
    - NONE
    - WITH_N26
    - WITHOUT_N26
N2SmInfoType:
  anyOf:
  - type: string
    enum:
      - PDU_RES_SETUP_REQ
      - PDU_RES_SETUP_RSP
      - PDU_RES_SETUP_FAIL
```

```
        - PDU_RES_REL_CMD
        - PDU_RES_REL_RSP
        - PDU_RES_MOD_REQ
        - PDU_RES_MOD_RSP
        - PDU_RES_MOD_FAIL
        - PDU_RES_NTY
        - PDU_RES_NTY_REL
        - PDU_RES_MOD_IND
        - PDU_RES_MOD_CFM
        - PATH_SWITCH_REQ
        - PATH_SWITCH_SETUP_FAIL
        - PATH_SWITCH_REQ_ACK
        - PATH_SWITCH_REQ_FAIL
        - HANDOVER_REQUIRED
        - HANDOVER_CMD
        - HANDOVER_PREP_FAIL
        - HANDOVER_REQ_ACK
        - HANDOVER_RES_ALLOC_FAIL
    - type: string
      Description:
        This string provides forward-compatibility with future
        extensions to the enumeration but is not used to encode
        content defined in the present version of this API.
    Description:
      Possible values are
      - PDU_RES_SETUP_REQ
      - PDU_RES_SETUP_RSP
      - PDU_RES_SETUP_FAIL
      - PDU_RES_REL_CMD
      - PDU_RES_REL_RSP
      - PDU_RES_MOD_REQ
      - PDU_RES_MOD_RSP
      - PDU_RES_MOD_FAIL
      - PDU_RES_NTY
      - PDU_RES_NTY_REL
      - PDU_RES_MOD_IND
      - PDU_RES_MOD_CFM
      - PATH_SWITCH_REQ
      - PATH_SWITCH_SETUP_FAIL
      - PATH_SWITCH_REQ_ACK
      - PATH_SWITCH_REQ_FAIL
      - HANDOVER_REQUIRED
      - HANDOVER_CMD
      - HANDOVER_PREP_FAIL
      - HANDOVER_REQ_ACK
      - HANDOVER_RES_ALLOC_FAIL
  MaxIntegrityProtectedDataRate:
    anyOf:
    - type: string
      enum:
        - 64_KBPS
        - MAX_UE_RATE
    - type: string
      Description:
        This string provides forward-compatibility with future
        extensions to the enumeration but is not used to encode
        content defined in the present version of this API.
    Description:
      Possible values are
        - 64_KBPS
        - MAX_UE_RATE
# HTTP responses
```

```
responses:
  'PduSessionCreateError':
    Description: unsuccessful creation of a PDU session
    content:
      application/json: # message without binary body part
        schema:
          Reference: '#/components/schemas/PduSessionCreateError'
      multipart/related: # message with binary body part(s)
        schema:
          Type: object
          Properties: # Request parts
            jsonData:
              Reference: '#/components/schemas/PduSessionCreateError'
            binaryDataN1SmInfoToUe:
              Type: string
              format: binary
        encoding:
          jsonData:
            contentType: application/json
          binaryDataN1SmInfoToUe:
            contentType: application/vnd.3gpp.5gnas
            headers:
              Content-Id:
                schema:
                  Type: string
  'HsmfUpdateError':
    Description: unsuccessful update of a PDU session
    content:
      application/json: # message without binary body part
        schema:
          Reference: '#/components/schemas/HsmfUpdateError'
      multipart/related: # message with binary body part(s)
        schema:
          Type: object
          Properties: # Request parts
            jsonData:
              Reference: '#/components/schemas/HsmfUpdateError'
            binaryDataN1SmInfoToUe:
              Type: string
              format: binary
        encoding:
          jsonData:
            contentType: application/json
          binaryDataN1SmInfoToUe:
            contentType: application/vnd.3gpp.5gnas
            headers:
              Content-Id:
                schema:
                  Type: string
  'VsmfUpdateError':
    Description: unsuccessful update of a PDU session
```

```
content:
  application/json: # message without binary body part
    schema:
      Reference: '#/components/schemas/VsmfUpdateError'
  multipart/related: # message with binary body part(s)
    schema:
      Type: object
      Properties: # Request parts
        jsonData:
          Reference: '#/components/schemas/VsmfUpdateError'
        binaryDataN1SmInfoFromUe:
          Type: string
          format: binary
        binaryDataUnknownN1SmInfo:
          Type: string
          format: binary
    encoding:
      jsonData:
        contentType: application/json
      binaryDataN1SmInfoFromUe:
        contentType: application/vnd.3gpp.5gnas
        headers:
          Content-Id:
            schema:
              Type: string
      binaryDataUnknownN1SmInfo:
        contentType: application/vnd.3gpp.5gnas
        headers:
          Content-Id:
            schema:
              Type: string
```