



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

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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

```

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        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'

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'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'

```

/pdu-sessions

Method: Post

Summary: Create

Tags:

- PDU sessions collection

Operation ID: PostPduSessions

Request Body:

Description: representation of the PDU session to be created in the H-SMF

Required/Optional: true

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/PduSessionCreateData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/PduSessionCreateData'

binaryDataN1SmInfoFromUe:

Type: string

Format: binary

binaryDataUnknownN1SmInfo:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmInfoFromUe:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

binaryDataUnknownN1SmInfo:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

```

        Type: string
    Callbacks:
        statusNotification:
            '{$request.body#/vsmfPduSessionUri}':
                Method: Post
                Summary: Notify Status

                Tags:
                    - Individual PDU session (V-SMF)
                Operation ID: NotifyStatus
                Request Body:
                    Description: representation of the status notification
                    Required/Optional: true
                    Content:
                        Application/JSON:
                            Schema:
                                Reference: '#/components/schemas/StatusNotification'

                Responses:
                    '204':
                        Description: successful notification of the status change
                    '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'

    update:
        '{$request.body#/vsmfPduSessionUri}/modify':
            Method: Post
            Summary: Update (initiated by H-SMF)

            Tags:
                - Individual PDU session (V-SMF)
            Operation ID: ModifyPduSession
            Request Body:
                Description: representation of updates to apply to the PDU session
                Required/Optional: true

```


Content:**application/+json:** # message without binary body part**Schema:****Reference:** '#/components/schemas/VsmfUpdateData'**Multipart/Related:** # message with binary body part(s)**Schema:****Type:** object**Properties:** # Request parts**JSON Data:****Reference:** '#/components/schemas/VsmfUpdateData'**binaryDataN1SmInfoToUe:****Type:** string**Format:** binary**Encoding:****JSON Data:****Content Type:** application/json**binaryDataN1SmInfoToUe:****Content Type:** application/vnd.3gpp.5gnas**Headers:****Content ID:****Schema:****Type:** string**Responses:****'200':****Description:** successful update of a PDU session with content in the

response

Content:**Application/JSON:** # message without binary body part**Schema:****Reference:** '#/components/schemas/VsmfUpdatedData'**Multipart/Related:** # message with binary body part(s)**Schema:****Type:** object**Properties:** # Request parts**JSON Data:****Reference:** '#/components/schemas/VsmfUpdatedData'**binaryDataN1SmInfoFromUe:****Type:** string**Format:** binary**binaryDataUnknownN1SmInfo:****Type:** string**Format:** binary**Encoding:****JSON Data:****Content Type:** application/json**binaryDataN1SmInfoFromUe:****Content Type:** application/vnd.3gpp.5gnas**Headers:****Content ID:****Schema:****Type:** string

```

        binaryDataUnknownN1SmInfo:
          Content Type: application/vnd.3gpp.5gnas
          Headers:
            Content ID:
              Schema:
                Type: string
      '204':
        Description: successful update of a PDU session without content in the
response
      '400':
        Reference: '#/components/responses/VsmfUpdateError'
      '403':
        Reference: '#/components/responses/VsmfUpdateError'
      '404':
        Reference: '#/components/responses/VsmfUpdateError'
      '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: '#/components/responses/VsmfUpdateError'
      '503':
        Reference: '#/components/responses/VsmfUpdateError'
      '504':
        Reference: '#/components/responses/VsmfUpdateError'
    Default:
      Reference: 'TS29571_CommonData.yaml#/components/responses/default'

```

Responses:

```

'201':
  Description: successful creation of a PDU session
  Content:
    Application/JSON: # message without binary body part
    Schema:
      Reference: '#/components/schemas/PduSessionCreatedData'
    Multipart/Related: # message with binary body part(s)
    Schema:
      Type: object
      Properties: # Request parts
      JSON Data:
        Reference: '#/components/schemas/PduSessionCreatedData'
      binaryDataN1SmInfoToUe:
        Type: string
        Format: binary
    Encoding:
      JSON Data:
        Content Type: application/json
      binaryDataN1SmInfoToUe:

```

```

    Content Type: application/vnd.3gpp.5gnas
    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/pdu-sessions/{pduSessionRef}'

    Required/Optional: true
    Schema:
      Type: string
'307':
  Description: temporary redirect
'308':
  Description: permanent redirect
'400':
  Reference: '#/components/responses/PduSessionCreateError'
'403':
  Reference: '#/components/responses/PduSessionCreateError'
'404':
  Reference: '#/components/responses/PduSessionCreateError'
'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: '#/components/responses/PduSessionCreateError'
'503':
  Reference: '#/components/responses/PduSessionCreateError'
Default:
  Reference: 'TS29571_CommonData.yaml#/components/responses/default'

```

/pdu-sessions/{pduSessionRef}/modify

Method: Post

Summary: Update (initiated by V-SMF)

Tags:

- Individual PDU session (H-SMF)

Operation ID: UpdatePduSession

Parameters:

- **Name:** pduSessionRef

In: path

Description: PDU session reference

Required/Optional: true
Schema:
Type: string

Request Body:
Description: representation of the updates to apply to the PDU session
Required/Optional: true
Content:
Application/JSON: # message without binary body part
Schema:
Reference: '#/components/schemas/HsmfUpdateData'
Multipart/Related: # message with binary body part(s)
Schema:
Type: object
Properties: # Request parts
JSON Data:
Reference: '#/components/schemas/HsmfUpdateData'
binaryDataN1SmInfoFromUe:
Type: string
Format: binary
binaryDataUnknownN1SmInfo:
Type: string
Format: binary

Encoding:
JSON Data:
Content Type: application/json
binaryDataN1SmInfoFromUe:
Content Type: application/vnd.3gpp.5gnas
Headers:
Content ID:
Schema:
Type: string
binaryDataUnknownN1SmInfo:
Content Type: application/vnd.3gpp.5gnas
Headers:
Content ID:
Schema:
Type: string

Responses:
'200':
Description: successful update of a PDU session with content in the response
Content:
Application/JSON: # message without binary body part
Schema:
Reference: '#/components/schemas/HsmfUpdatedData'
Multipart/Related: # message with binary body part(s)
Schema:
Type: object
Properties: # Request parts
JSON Data:
Reference: '#/components/schemas/HsmfUpdatedData'
binaryDataN1SmInfoToUe:

```

        Type: string
        Format: binary
    Encoding:
        JSON Data:
            Content Type: application/json
        binaryDataN1SmInfoToUe:
            Content Type: application/vnd.3gpp.5gnas
        Headers:
            Content ID:
                Schema:
                    Type: string
    '204':
        Description: successful update of a PDU session without content in the response
    '400':
        Reference: '#/components/responses/HsmfUpdateError'
    '403':
        Reference: '#/components/responses/HsmfUpdateError'
    '404':
        Reference: '#/components/responses/HsmfUpdateError'
    '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: '#/components/responses/HsmfUpdateError'
    '503':
        Reference: '#/components/responses/HsmfUpdateError'
    Default:
        Reference: 'TS29571_CommonData.yaml#/components/responses/default'

```

/pdu-sessions/{pduSessionRef}/release

```

Method: Post
Summary: Release

Tags:
- Individual PDU session (H-SMF)
Operation ID: ReleasePduSession

Parameters:
- Name: pduSessionRef
  In: path
  Description: PDU session reference
  Required/Optional: true
  Schema:
    Type: string
Request Body:

```

Description: representation of the data to be sent to H-SMF when releasing the PDU session

Required/Optional: false

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ReleaseData'

Responses:

'204':

Description: successful release of a PDU session

'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/5GmCause'
    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
```