



Ultra Cloud Core 5G Access and Mobility Management Function, Release 2022.03 - API Reference

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About this Guide



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This preface describes the *Ultra Cloud Core 5G Access and Mobility Management Function - API Reference*, the document conventions, and the customer support details.

- [Conventions Used, on page ix](#)
- [Contacting Customer Support, on page x](#)

Conventions Used

The following tables describe the conventions used throughout this documentation.

Notice Type	Description
Information Note	Provides information about important features or instructions.
Caution	Alerts you of potential damage to a program, device, or system.
Warning	Alerts you of potential personal injury or fatality. May also alert you of potential electrical hazards.

Typeface Conventions	Description
Text represented as a screen display	This typeface represents displays that appear on your terminal screen, for example: Login:

Typeface Conventions	Description
Text represented as commands	<p>This typeface represents commands that you enter, for example:</p> <p>show ip access-list</p> <p>This document always gives the full form of a command in lowercase letters. Commands are not case sensitive.</p>
Text represented as a command <i>variable</i>	<p>This typeface represents a variable that is part of a command, for example:</p> <p>show card <i>slot_number</i></p> <p><i>slot_number</i> is a variable representing the applicable chassis slot number.</p>
Text represented as menu or sub-menu names	<p>This typeface represents menus and sub-menus that you access within a software application, for example:</p> <p>Click the File menu, then click New</p>

Contacting Customer Support

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CHAPTER 1

Namf_Communication

This service enables an NF to communicate with the UE through N1 NAS messages or with the AN (both UE and non UE specific). The service operations defined below allow the NF to communicate with the UE and the AN. The following are the key functionalities of this NF service.

- Provide service operations for transporting N1 messages to the UE;
- Allow NFs to subscribe and unsubscribe for notifications of specific N1 messages from the UE;
- Allow NFs to subscribe and unsubscribe for notifications about specific information from AN;
- Provide service operations for initiating N2 messages towards the AN;
- Security Context Management; and
- UE information management and transfer (including its security context).

Reference: 3GPP TS 29.518 [14]

- [OpenAPI, on page 1](#)
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OpenAPI

OpenAPI Version: 3.0.0

Info

Version: 1.0.0

Title: Namf_Communication

Description: AMF Communication Service

Servers

URL: '{apiRoot}/namf-comm/v1'

Variables:

API Root:

Default: https://example.com

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

Security

```
- {}
- oAuth2Clientcredentials:
  - namf-comm
```

Paths

/ue-contexts/{ueContextId}

put:

Summary: Namf_Communication CreateUEContext service Operation

Tags:

- Individual ueContext (Document)

Operation ID: CreateUEContext

Parameters:

- **Name:** ueContextId

In: path

Description: UE Context Identifier

Required/Optional: true

Schema:

Type: string

pattern:

'^ (5g-guti-[0-9]{5,6}[0-9a-fA-F]{14}|imsi-[0-9]{5,15}|nai-.+|imei-[0-9]{15}|imeisv-[0-9]{16}|.+)\$'

Request Body:

Content:

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

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/UeContextCreateData'

binaryDataN1Message:

Type: string

```

    Format: binary
  binaryDataN2Information:
    Type: string
    Format: binary
  binaryDataN2InformationExt1:
    Type: string
    Format: binary
Encoding:
  JSON Data:
    Content Type: application/json
  binaryDataN1Message:
    Content Type: application/vnd.3gpp.5gnas
  Headers:
    Content ID:
      Schema:
        Type: string
  binaryDataN2Information:
    Content Type: application/vnd.3gpp.ngap
  Headers:
    Content ID:
      Schema:
        Type: string
  binaryDataN2InformationExt1:
    Content Type: application/vnd.3gpp.ngap
  Headers:
    Content ID:
      Schema:
        Type: string
Required/Optional: true

Responses:
'201':
  Description: UE context successfully created.
  Headers:
    Location:
      description: 'Contains the URI of the newly created resource,
according to the structure: {apiRoot}/namf-comm/v1/ue-contexts/{ueContextId}'
      Required/Optional: true
      Schema:
        Type: string
  Content:
    Application/JSON:
      Schema:
        Reference: '#/components/schemas/UeContextCreatedData'
      Multipart/Related: # message with binary body part(s)
      Schema:
        Type: object
        Properties: # Request parts
        JSON Data:
          Reference: '#/components/schemas/UeContextCreatedData'
        binaryDataN1Message:
          Type: string

```

```

        Format: binary
    binaryDataN2Information:
        Type: string
        Format: binary
    Encoding:
    JSON Data:
        Content Type: application/json
    binaryDataN1Message:
        Content Type: application/vnd.3gpp.5gnas
    Headers:
        Content ID:
        Schema:
            Type: string
    binaryDataN2Information:
        Content Type: application/vnd.3gpp.ngap
    Headers:
        Content ID:
        Schema:
            Type: string
'400':
    Description: Bad Request
    Content:
    Application/JSON:
    Schema:
        Reference: '#/components/schemas/UeContextCreateError'
'403':
    Description: Forbidden
    Content:
    Application/JSON:
    Schema:
        Reference: '#/components/schemas/UeContextCreateError'
'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: Internal Server Error
    Content:
    Application/JSON:
    Schema:
        Reference: '#/components/schemas/UeContextCreateError'
'503':
    Reference: 'TS29571_CommonData.yaml#/components/responses/503'
Default:
    Description: Unexpected error

```

/ue-contexts/{ueContextId}/release

Method: Post

Summary: Namf_Communication ReleaseUEContext service Operation

Tags:

- Individual ueContext (Document)

Operation ID: ReleaseUEContext

Parameters:

- **Name:** ueContextId

In: path

Description: UE Context Identifier

Required/Optional: true

Schema:

Type: string

pattern:

^(5g-guti-[0-9]{5,6}[0-9a-fA-F]{14}|imsi-[0-9]{5,15}|nai-.+|imei-[0-9]{15}|imeisv-[0-9]{16}|.+)\$

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/UEContextRelease'

Required/Optional: true

Responses:

'204':

Description: UE Context successfully released

'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:

Description: Unexpected error

/ue-contexts/{ueContextId}/assign-ebi

Method: Post

Summary: Namf_Communication EBI Assignment service Operation

Tags:

- Individual ueContext (Document)

Operation ID: EBIAssignment

Parameters:

- **Name:** ueContextId

In: path

Description: UE Context Identifier

Required/Optional: true

Schema:

Type: string

pattern:

'^ (5g-guti-[0-9]{5,6}[0-9a-fA-F]{14}|imsi-[0-9]{5,15}|nai-+|imei-[0-9]{15}|imeisv-[0-9]{16}|.+)\$'

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AssignEbiData'

Required/Optional: true

Responses:

'200':

Description: EBI Assignment successfully performed.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AssignedEbiData'

'400':

Description: Bad Request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AssignEbiError'

'403':

Description: Forbidden

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AssignEbiError'

'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: Internal Server Error
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/AssignEbiError'
'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'
Default:
Description: Unexpected error

/ue-contexts/{ueContextId}/transfer

Method: Post

Summary: Namf_Communication UEContextTransfer service Operation

Tags:

- Individual ueContext (Document)

Operation ID: UEContextTransfer

Parameters:

- **Name:** ueContextId

In: path

Description: UE Context Identifier

Required/Optional: true

Schema:

Type: string

pattern:

'^(5g-guti-[0-9]{5,6}[0-9a-fA-F]{14}|imsi-[0-9]{5,15}|nai-+|imei-[0-9]{15}|imeisv-[0-9]{16}|.+)\$'

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/UeContextTransferReqData'

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

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/UeContextTransferReqData'

binaryDataN1Message:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1Message:

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

Headers:

```

    Content ID:
      Schema:
        Type: string
    Required/Optional: true

Responses:
  '200':
    Description: UE context transfer successfully initiated.
    Content:
      Application/JSON:
        Schema:
          Reference: '#/components/schemas/UeContextTransferRspData'
        Multipart/Related: # message with binary body part(s)
        Schema:
          Type: object
          Properties: # Request parts
          JSON Data:
            Reference: '#/components/schemas/UeContextTransferRspData'
          binaryDataN2Information:
            Type: string
            Format: binary
        Encoding:
          JSON Data:
            Content Type: application/json
          binaryDataN2Information:
            Content Type: application/vnd.3gpp.ngap
        Headers:
          Content ID:
            Schema:
              Type: string
  '400':
    Reference: 'TS29571_CommonData.yaml#/components/responses/400'
  '403':
    Reference: 'TS29571_CommonData.yaml#/components/responses/403'
  '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:
  Description: Unexpected error

```

/ue-contexts/{ueContextId}/transfer-update

Method: Post

Summary: Namf_Communication RegistrationStatusUpdate service Operation

Tags:

- Individual ueContext (Document)

Operation ID: RegistrationStatusUpdate

Parameters:

- **Name:** ueContextId

In: path

Description: UE Context Identifier

Required/Optional: true

Schema:

Type: string

pattern:

^(5g-guti-[0-9]{5,6}[0-9a-fA-F]{14}|imsi-[0-9]{5,15}|nai-.+|imei-[0-9]{15}|imeisv-[0-9]{16}|.+)\$'

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/UeRegStatusUpdateReqData'

Required/Optional: true

Responses:

'200':

Description: UE context transfer status successfully updated.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/UeRegStatusUpdateRspData'

'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'

/ue-contexts/{ueContextId}/n1-n2-messages

Method: Post

Summary: Namf_Communication N1N2 Message Transfer (UE Specific) service Operation

Tags:

- n1N2Message collection (Document)

Operation ID: N1N2MessageTransfer

Parameters:

- **Name:** ueContextId

In: path

Description: UE Context Identifier

Required/Optional: true

Schema:

Type: string

pattern:

'^(imsi-[0-9]{5,15}|nai-.*|imei-[0-9]{15}|imeisv-[0-9]{16}|cid-.{1,255}|.+)\$'

Request Body:**Content:****Application/JSON:****Schema:**

Reference: '#/components/schemas/N1N2MessageTransferReqData'

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

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/N1N2MessageTransferReqData'

binaryDataN1Message:

Type: string

Format: binary

binaryDataN2Information:

Type: string

Format: binary

Encoding:**JSON Data:**

Content Type: application/json

binaryDataN1Message:

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

Headers:

Content ID:

Schema:

Type: string

binaryDataN2Information:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:
Type: string
Required/Optional: true

Responses:

'202':
Description: N1N2 Message Transfer accepted.
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/N1N2MessageTransferRspData'

'200':
Description: N1N2 Message Transfer successfully initiated.
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/N1N2MessageTransferRspData'

'307':
Description: Temporary Redirect
Content:
application/problem+json:
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'403':
Reference: 'TS29571_CommonData.yaml#/components/responses/403'

'404':
Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'409':
Description: Conflicts
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/N1N2MessageTransferError'

'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'

'504':
Description: Gateway Timeout
Content:
Application/JSON:
Schema:

Reference: '#/components/schemas/N1N2MessageTransferError'

Default:

Description: Unexpected error

Callbacks:

onN1N2TransferFailure:

'{\$request.body#/n1n2FailureTxfrNotifURI}':

Method: Post

Summary: Namf_Communication N1N2Transfer Failure Notification service Operation

Tags:

- N1N2 Transfer Failure Notification

Operation ID: N1N2TransferFailureNotification

Request Body:

Description: N1N2Transfer Failure Notification

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/N1N2MsgTxfrFailureNotification'

Responses:

'204':

Description: Expected response to a successful callback processing

'400':

Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'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'

/ue-contexts/{ueContextId}/n1-n2-messages/subscriptions

Method: Post

Summary: Namf_Communication N1N2 Message Subscribe (UE Specific) service Operation

Tags:

- N1N2 Subscriptions Collection for Individual UE Contexts (Document)

Operation ID: N1N2MessageSubscribe

Parameters:

- **Name:** ueContextId
- In:** path
- Description:** UE Context Identifier

```

    Required/Optional: true
    Schema:
      Type: string
      pattern:
'^ (5g-guti-[0-9]{5,6}[0-9a-fA-F]{14}|imsi-[0-9]{5,15}|nai-+|imei-[0-9]{15}|imeisv-[0-9]{16}|.+)$'

Request Body:
Content:
  Application/JSON:
    Schema:
      Reference: '#/components/schemas/UeN1N2InfoSubscriptionCreateData'
    Required/Optional: true

Responses:
'201':
  Description: N1N2 Message Subscription successfully created.
  Headers:
    Location:
      description: 'Contains the URI of the newly created resource,
according to the structure:
{apiRoot}/namf-comm/v1/{ueContextId}/n1-n2-messages/subscriptions/{subscriptionId}'
      Required/Optional: true
      Schema:
        Type: string
      Content:
        Application/JSON:
          Schema:
            Reference: '#/components/schemas/UeN1N2InfoSubscriptionCreatedData'
'400':
  Reference: 'TS29571_CommonData.yaml#/components/responses/400'
'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:
  Description: Unexpected error
Callbacks:
onN1N2MessageNotify:
  '{$request.body#/n1NotifyCallbackUri}':
    Method: Post
    Summary: Namf_Communication N1 Message Notify service Operation

    Tags:
      - N1 Message Notify
    Operation ID: N1MessageNotify

```

Request Body:
Description: N1 Message Notification
Content:
Multipart/Related: # message with binary body part(s)
Schema:
Type: object
Properties: # Request parts
JSON Data:
Reference: '#/components/schemas/N1MessageNotification'
binaryDataN1Message:
Type: string
Format: binary
Encoding:
JSON Data:
Content Type: application/json
binaryDataN1Message:
Content Type: application/vnd.3gpp.5gnas
Headers:
Content ID:
Schema:
Type: string

Responses:
'204':
Description: Expected response to a successful callback processing
'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'
'403':
Reference: 'TS29571_CommonData.yaml#/components/responses/403'
'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'
'{\$request.body#/n2NotifyCallbackUri}':

Method: Post
Summary: Namf_Communication N2 Info Notify (UE Specific) service Operation

Tags:
- N2 Info Notify
Operation ID: N2InfoNotify
Request Body:
Description: UE Specific N2 Informaiton Notification
Content:
Multipart/Related: # message with binary body part(s)

Schema:

Type: object
Properties: # Request parts
JSON Data:
Reference: '#/components/schemas/N2InformationNotification'
binaryDataN1Message:
Type: string
Format: binary
binaryDataN2Information:
Type: string
Format: binary

Encoding:

JSON Data:
Content Type: application/json
binaryDataN1Message:
Content Type: application/vnd.3gpp.5gnas
Headers:
Content ID:
Schema:
Type: string
binaryDataN2Information:
Content Type: application/vnd.3gpp.ngap
Headers:
Content ID:
Schema:
Type: string

Responses:

'204':
Description: Expected response to a successful callback processing
'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'
'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'

/ue-contexts/{ueContextId}/n1-n2-messages/subscriptions/{subscriptionId}**delete:**

Summary: Namf_Communication N1N2 Message UnSubscribe (UE Specific) service Operation

Tags:

- N1N2 Individual Subscription (Document)

Operation ID: N1N2MessageUnSubscribe

Parameters:

- **Name:** ueContextId
 - In:** path
 - Description:** UE Context Identifier
 - Required/Optional:** true
 - Schema:**
 - Type:** string
 - pattern:**

^(5g-guti-[0-9]{5,6}[0-9a-fA-F]{14}|imsi-[0-9]{5,15}|nai-+|imei-[0-9]{15}|imeisv-[0-9]{16}|.+)\$'

- **Name:** subscriptionId
 - In:** path
 - Description:** Subscription Identifier
 - Required/Optional:** true
 - Schema:**
 - Type:** string

Responses:

- '204':
 - Description:** N1N2 Message Subscription successfully removed.
- '400':
 - Reference:** 'TS29571_CommonData.yaml#/components/responses/400'
- '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'

/non-ue-n2-messages/transfer

Method: Post

Summary: Namf_Communication Non UE N2 Message Transfer service Operation

Tags:

- Non UE N2Messages collection (Document)

Operation ID: NonUeN2MessageTransfer

Request Body:

Content:

Application/JSON:

Schema:

```

    Reference: '#/components/schemas/N2InformationTransferReqData'
Multipart/Related: # message with binary body part(s)
Schema:
  Type: object
  Properties: # Request parts
    JSON Data:
      Reference: '#/components/schemas/N2InformationTransferReqData'
      binaryDataN2Information:
        Type: string
        Format: binary
    Encoding:
      JSON Data:
        Content Type: application/json
      binaryDataN2Information:
        Content Type: application/vnd.3gpp.ngap
    Headers:
      Content ID:
        Schema:
          Type: string
Required/Optional: true

Responses:
'200':
  Description: Non UE N2 Message Transfer successfully initiated.
  Content:
    Application/JSON:
      Schema:
        Reference: '#/components/schemas/N2InformationTransferRspData'
'400':
  Description: Bad Request
  Content:
    Application/JSON:
      Schema:
        Reference: '#/components/schemas/N2InformationTransferError'
'403':
  Description: Forbidden
  Content:
    Application/JSON:
      Schema:
        Reference: '#/components/schemas/N2InformationTransferError'
'404':
  Description: Not Found
  Content:
    Application/JSON:
      Schema:
        Reference: '#/components/schemas/N2InformationTransferError'
'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: Internal Server Error
  Content:
    Application/JSON:
      Schema:
        Reference: '#/components/schemas/N2InformationTransferError'
'503':
  Description: Service Unavailable
  Content:
    Application/JSON:
      Schema:
        Reference: '#/components/schemas/N2InformationTransferError'
Default:
  Description: Unexpected error

```

/non-ue-n2-messages/subscriptions

Method: Post

Summary: Namf_Communication Non UE N2 Info Subscribe service Operation

Tags:

- Non UE N2Messages Subscriptions collection (Document)

Operation ID: NonUeN2InfoSubscribe

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NonUeN2InfoSubscriptionCreateData'

Required/Optional: true

Responses:

'201':

Description: Non UE N2 Info Subscription successfully created.

Headers:

Location:

description: 'Contains the URI of the newly created resource, according to the structure:

{apiRoot}/namf-comm/v1/non-ue-n2-messages/subscriptions/{n2NotifySubscriptionId}'

Required/Optional: true

Schema:

Type: string

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NonUeN2InfoSubscriptionCreatedData'

'400':

Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'403':

Reference: 'TS29571_CommonData.yaml#/components/responses/403'

```

'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:
  Description: Unexpected error
Callbacks:
  onN2InfoNotify:
    '{$request.body#/n2NotifyCallbackUri}':
      Method: Post
      Summary: Namf_Communication Non UE N2 Info Notify service Operation

      Tags:
        - Non UE N2 Info Notify
      Operation ID: NonUeN2InfoNotify
      Request Body:
        Description: Non UE N2 Informaiton Notification
        Content:
          Application/JSON:
            Schema:
              Reference: '#/components/schemas/N2InformationNotification'
            Multipart/Related: # message with binary body part(s)
            Schema:
              Type: object
              Properties: # Request parts
                JSON Data:
                  Reference: '#/components/schemas/N2InformationNotification'
                binaryDataN2Information:
                  Type: string
                  Format: binary
            Encoding:
              JSON Data:
                Content Type: application/json
                binaryDataN2Information:
                  Content Type: application/vnd.3gpp.ngap
              Headers:
                Content ID:
                  Schema:
                    Type: string

      Responses:
        '204':
          Description: Expected response to a successful callback processing
        '400':

```

/non-ue-n2-messages/subscriptions/{n2NotifySubscriptionId}

Reference: 'TS29571_CommonData.yaml#/components/responses/400'
'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'

/non-ue-n2-messages/subscriptions/{n2NotifySubscriptionId}

delete:

Summary: Namf_Communication Non UE N2 Info UnSubscribe service Operation

Tags:

- Non UE N2 Message Notification Individual Subscription (Document)

Operation ID: NonUeN2InfoUnSubscribe

Parameters:

- **Name:** n2NotifySubscriptionId
In: path
Description: N2 info Subscription Identifier
Required/Optional: true
Schema:
Type: string

Responses:

'204':
Description: Non UE N2 INfo Subscription successfully removed.
'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'
'429':
Reference: 'TS29571_CommonData.yaml#/components/responses/429'
'500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'
'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'

/subscriptions

Method: Post

Summary: Namf_Communication AMF Status Change Subscribe service Operation

Tags:

- subscriptions collection (Document)

Operation ID: AMFStatusChangeSubscribe

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SubscriptionData'

Required/Optional: true

Responses:

'201':

Description: N1N2 Message Subscription successfully created.

Headers:

Location:

description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/namf-comm/v1/subscriptions/{subscriptionId}'

Required/Optional: true

Schema:

Type: string

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SubscriptionData'

'400':

Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'403':

Reference: 'TS29571_CommonData.yaml#/components/responses/403'

'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:

Description: Unexpected error

Callbacks:

onAmfStatusChange:

'{\$request.body#/amfStatusUri}':

Method: Post

Summary: Amf Status Change Notify service Operation

Tags:

- Amf Status Change Notify

Operation ID: AmfStatusChangeNotify

Request Body:

Description: Amf Status Change Notification

Content:

Application/JSON:**Schema:****Reference:** '#/components/schemas/AmfStatusChangeNotification'**Responses:****'204':****Description:** Expected response to a successful callback processing**'400':****Reference:** 'TS29571_CommonData.yaml#/components/responses/400'**'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'

/subscriptions/{subscriptionId}

delete:**Summary:** Namf_Communication AMF Status Change UnSubscribe service Operation**Tags:**

- individual subscription (Document)

Operation ID: AMFStatusChangeUnSubscribe**Parameters:**- **Name:** subscriptionId**In:** path**Description:** AMF Status Change Subscription Identifier**Required/Optional:** true**Schema:****Type:** string**Responses:****'204':****Description:** N1N2 Message Subscription successfully removed.**'400':****Reference:** 'TS29571_CommonData.yaml#/components/responses/400'**'404':****Reference:** 'TS29571_CommonData.yaml#/components/responses/404'**'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:
Description: Unexpected error

put:
Summary: Namf_Communication AMF Status Change Subscribe Modify service Operation

Tags:
- individual subscription (Document)

Operation ID: AMFStatusChangeSubscribeModify

Parameters:
- **Name:** subscriptionId
In: path
Description: AMF Status Change Subscription Identifier
Required/Optional: true
Schema:
Type: string

Request Body:
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/SubscriptionData'
Required/Optional: true

Responses:
'202':
Description: N1N2 Message Subscription successfully updated.
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/SubscriptionData'

'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'403':
Reference: 'TS29571_CommonData.yaml#/components/responses/403'

'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:
Description: Unexpected error

Callbacks:

```

OnAmfStatusChange:
  '{$request.body#/amfStatusUri}':
    Method: Post
    Summary: Amf Status Change Notify service Operation

    Tags:
      - Amf Status Change Notify
    Operation ID: AmfStatusChangeNOtify
    Request Body:
      Description: Amf Status Change Notification
      Content:
        Application/JSON:
          Schema:
            Reference: '#/components/schemas/AmfStatusChangeNotification'

    Responses:
      '204':
        Description: Expected response to a successful callback processing
      '400':
        Reference: 'TS29571_CommonData.yaml#/components/responses/400'
      '403':
        Reference: 'TS29571_CommonData.yaml#/components/responses/403'
      '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'

```

Components

```

securitySchemes:
  oAuth2ClientCredentials:
    Type: oauth2
    Flows:
      clientCredentials:
        tokenUrl: '{nrfApiRoot}/oauth2/token'
        scopes:
          namf-comm: Access to the Namf_Communication API

schemas:
  # STRUCTURED DATA TYPES
  SubscriptionData:
    Type: object

```

```
Properties:
  amfStatusUri:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  guamiList:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'
    minItems: 1
Required:
- amfStatusUri
AmfStatusChangeNotification:
Type: object
Properties:
  amfStatusInfoList:
    Type: array
    Items:
      Reference: '#/components/schemas/AmfStatusInfo'
    minItems: 1
Required:
- amfStatusInfo
AmfStatusInfo:
Type: object
Properties:
  guamiList:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'
    minItems: 1
  statusChange:
    Reference: '#/components/schemas/StatusChange'
  targetAmfRemoval:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/AmfName'
  targetAmfFailure:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/AmfName'
Required:
- guamis
- statusChange
AssignEbiData:
Type: object
Properties:
  pduSessionId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
  arpList:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Arp'
    minItems: 1
  releasedEbiList:
    Type: array
    Items:
      Reference: '#/components/schemas/EpsBearerId'
    minItems: 1
```

```

Required:
  - pduSessionId
AssignedEbiData:
Type: object
Properties:
  pduSessionId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
  assignedEbiList:
    Type: array
    Items:
      Reference: 'TS29502_Nsmf_PDUSession.yaml#/components/schemas/EbiArpMapping'
    minItems: 0
  failedArpList:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Arp'
    minItems: 1
  releasedEbiList:
    Type: array
    Items:
      Reference: '#/components/schemas/EpsBearerId'
    minItems: 1
Required:
  - pduSessionId
  - assignedEbis
AssignEbiFailed:
Type: object
Properties:
  pduSessionId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
  failedArpList:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Arp'
    minItems: 1
Required:
  - pduSessionId
UEContextRelease:
Type: object
Properties:
  supi:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
  unauthenticatedSupi:
    Type: boolean
    Default: false
  ngapCause:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NgapCause'
Required:
  - ngapCause
N2InformationTransferReqData:
Type: object
Properties:

```

```

tailList:
  Type: array
  Items:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Tai'
  minItems: 1
ratSelector:
  Reference: '#/components/schemas/RatSelector'
ecgiList:
  Type: array
  Items:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Ecgi'
  minItems: 1
ncgiList:
  Type: array
  Items:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Ncgi'
  minItems: 1
globalRanNodeList:
  Type: array
  Items:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/GlobalRanNodeId'
  minItems: 1
n2Information:
  Reference: '#/components/schemas/N2InfoContainer'
supportedFeatures:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
Required:
  - n2Information
NonUeN2InfoSubscriptionCreateData:
Type: object
Properties:
  globalRanNodeList:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/GlobalRanNodeId'
    minItems: 1
  anTypeList:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
    minItems: 1
  n2InformationClass:
    Reference: '#/components/schemas/N2InformationClass'
  n2NotifyCallbackUri:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  nfId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
  supportedFeatures:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
Required:
  - n2InformationClass
  - n2NotifyCallbackUri

```

```

NonUeN2InfoSubscriptionCreatedData:
  Type: object
  Properties:
    n2NotifySubscriptionId:
      Type: string
    supportedFeatures:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  Required:
    - n2NotifySubscriptionId
UeN1N2InfoSubscriptionCreateData:
  Type: object
  Properties:
    n2InformationClass:
      Reference: '#/components/schemas/N2InformationClass'
    n2NotifyCallbackUri:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    n1MessageClass:
      Reference: '#/components/schemas/N1MessageClass'
    n1NotifyCallbackUri:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    nfId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
    supportedFeatures:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
UeN1N2InfoSubscriptionCreatedData:
  Type: object
  Properties:
    n1n2NotifySubscriptionId:
      Type: string
    supportedFeatures:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  Required:
    - n1n2NotifySubscriptionId
N2InformationNotification:
  Type: object
  Properties:
    n2NotifySubscriptionId:
      Type: string
    n2InfoContainer:
      Reference: '#/components/schemas/N2InfoContainer'
    toReleaseSessionList:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
      minItems: 1
    lcsCorrelationId:
      Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/CorrelationID'
    notifyReason:
      Reference: '#/components/schemas/N2InfoNotifyReason'
  Required:
    - n2NotifySubscriptionId
N2InfoContainer:

```

```

Type: object
Properties:
  n2InformationClass:
    Reference: '#/components/schemas/N2InformationClass'
  smInfo:
    Reference: '#/components/schemas/N2SmInformation'
  ranInfo:
    Reference: '#/components/schemas/N2RanInformation'
  nrppaInfo:
    Reference: '#/components/schemas/NrppaInformation'
  pwsInfo:
    Reference: '#/components/schemas/PwsInformation'
Required:
  - n2InformationClass
N1MessageNotification:
Type: object
Properties:
  n1NotifySubscriptionId:
    Type: string
  n1MessageContainer:
    Reference: '#/components/schemas/N1MessageContainer'
  lcsCorrelationId:
    Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/CorrelationID'
  registrationCtxtContainer:
    Reference: '#/components/schemas/RegistrationContextContainer'
Required:
  - n1MessageContainer
N1MessageContainer:
Type: object
Properties:
  n1MessageClass:
    Reference: '#/components/schemas/N1MessageClass'
  n1MessageContent:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
  nfId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
Required:
  - n1MessageClass
  - n1MessageContent
N1N2MessageTransferReqData:
Type: object
Properties:
  n1MessageContainer:
    Reference: '#/components/schemas/N1MessageContainer'
  n2InfoContainer:
    Reference: '#/components/schemas/N2InfoContainer'
  skipInd:
    Type: boolean
    Default: false
  lastMsgIndication:
    Type: boolean
  pduSessionId:

```

```

    Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
  lcsCorrelationId:
    Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/CorrelationID'
  ppi:
    Reference: '#/components/schemas/Ppi'
  arp:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Arp'
  5qi:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/5Qi'
  nln2FailureTxfNotifURI:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  smfReallocationInd:
    Type: boolean
    Default: false
  areaOfValidity:
    Reference: '#/components/schemas/AreaOfValidity'
  supportedFeatures:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
N1N2MessageTransferRspData:
  Type: object
  Properties:
    cause:
      Reference: '#/components/schemas/N1N2MessageTransferCause'
    supportedFeatures:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  Required:
    - cause
RegistrationContextContainer:
  Type: object
  Properties:
    ueContext:
      Reference: '#/components/schemas/UeContext'
    localTimeZone:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/TimeZone'
    anType:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
    anN2ApId:
      Type: integer
    ranNodeId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/GlobalRanNodeId'
    initialAmfName:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/AmfName'
    userLocation:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
    rrcEstCause:
      Type: string
      Pattern: '^[0-9a-fA-F]+$'
    ueContextRequest:
      Type: boolean
      Default: false
    anN2IPv4Addr:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/IPv4Addr'

```



```

anN2IPv6Addr:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'
allowedNssai:
  Reference: 'TS29531_Nnssf_NSSelection.yaml#/components/schemas/AllowedNssai'
configuredNssai:
  Type: array
  Items:
    Reference: 'TS29531_Nnssf_NSSelection.yaml#/components/schemas/ConfiguredSnssai'

  minItems: 1
rejectedNssaiInPlmn:
  Type: array
  Items:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
  minItems: 1
rejectedNssaiInTa:
  Type: array
  Items:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
  minItems: 1
Required:
- ueContext
- anType
- anN2ApId
- ranNodeId
- initialAmfName
- userLocation
AreaOfValidity:
Type: object
Properties:
  tailList:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Tai'
    minItems: 0
Required:
- taList
UeContextTransferReqData:
Type: object
Properties:
  reason:
    Reference: '#/components/schemas/TransferReason'
  accessType:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
  plmnId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
  regRequest:
    Reference: '#/components/schemas/N1MessageContainer'
  supportedFeatures:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
Required:
- reason
- accessType

```

UeContextTransferRspData:**Type:** object**Properties:****ueContext:****Reference:** '#/components/schemas/UeContext'**ueRadioCapability:****Reference:** '#/components/schemas/N2InfoContent'**supportedFeatures:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Required:**

- ueContext

UeContext:**Type:** object**Properties:****supi:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Supi'**supiUnauthInd:****Type:** boolean**gpsiList:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Gpsi'**minItems:** 1**pei:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Pei'**udmGroupId:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'**ausfGroupId:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'**routingIndicator:****Type:** string**groupList:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/GroupId'**minItems:** 1**drxParameter:****Reference:** '#/components/schemas/DrxParameter'**subRfsp:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/RfspIndex'**usedRfsp:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/RfspIndex'**subUeAmbr:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ambr'**smsSupport:****Reference:** '#/components/schemas/SmsSupport'**smsfId:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'**seafData:****Reference:** '#/components/schemas/SeafData'**5gMmCapability:****Reference:** '#/components/schemas/5GMmCapability'

```

pcfId:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
pcfAmPolicyUri:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
amPolicyReqTriggerList:
  Type: array
  Items:
    Reference: '#/components/schemas/AMPolicyReqTrigger'
  minItems: 1
hpcfId:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
restrictedRatList:
  Type: array
  Items:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'
  minItems: 1
forbiddenAreaList:
  Type: array
  Items:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Area'
  minItems: 1
serviceAreaRestriction:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/ServiceAreaRestriction'
restrictedCoreNwTypeList:
  Type: array
  Items:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/CoreNetworkType'
  minItems: 1
eventSubscriptionList:
  Type: array
  Items:
    Reference:
'TS29518_Namf_EventExposure.yaml#/components/schemas/AmfEventSubscription'
  minItems: 1
mmContextList:
  Type: array
  Items:
    Reference: '#/components/schemas/MmContext'
  minItems: 1
  maxItems: 2
sessionContextList:
  Type: array
  Items:
    Reference: '#/components/schemas/PduSessionContext'
  minItems: 1
traceData:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
N2SmInformation:
  Type: object
  Properties:
    pduSessionId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'

```

```

n2InfoContent:
  Reference: '#/components/schemas/N2InfoContent'
sNssai:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
subjectToHo:
  Type: boolean
Required:
  - pduSessionId
N2InfoContent:
Type: object
Properties:
  ngapMessageType:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/UInteger'
  ngapIeType:
    Reference: '#/components/schemas/NgapIeType'
  ngapData:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
Required:
  - ngapIeType
  - ngapData
NrppaInformation:
Type: object
Properties:
  nfId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
  nrppaPdu:
    Reference: '#/components/schemas/N2InfoContent'
Required:
  - nfId
  - nrppaPdu
PwsInformation:
Type: object
Properties:
  messageIdentifier:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint16'
  serialNumber:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint16'
  pwsContainer:
    Reference: '#/components/schemas/N2InfoContent'
  sendRanResponse:
    Type: boolean
    Default: false
  omcId:
    Reference: '#/components/schemas/OmcIdentifier'
Required:
  - messageIdentifier
  - serialNumber
  - pwsContainer
N1N2MsgTxfrFailureNotification:
Type: object
Properties:
  cause:
    Reference: '#/components/schemas/N1N2MessageTransferCause'

```

```

    n1n2MsgDataUri:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    Required:
      - cause
      - n1n2MsgDataUri
  N1N2MessageTransferError:
    Type: object
    Properties:
      error:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      errInfo:
        Reference: '#/components/schemas/N1N2MsgTxfrErrDetail'
    Required:
      - error
  N1N2MsgTxfrErrDetail:
    Type: object
    Properties:
      retryAfter:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/UInteger'
      highestPrioArp:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Arp'
  N2InformationTransferRspData:
    Type: object
    Properties:
      result:
        Reference: '#/components/schemas/N2InformationTransferResult'
      pwsRspData:
        Reference: '#/components/schemas/PWSResponseData'
      supportedFeatures:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    Required:
      - result
  MmContext:
    Type: object
    Properties:
      accessType:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
      nasSecurityMode:
        Reference: '#/components/schemas/NasSecurityMode'
      nasDownlinkCount:
        Reference: '#/components/schemas/NasCount'
      nasUplinkCount:
        Reference: '#/components/schemas/NasCount'
      ueSecurityCapability:
        Reference: '#/components/schemas/UeSecurityCapability'
      s1UeNetworkCapability:
        Reference: '#/components/schemas/S1UeNetworkCapability'
      allowedNssai:
        Type: array
        Items:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
        minItems: 1

```

```

nssaiMappingList:
  Type: array
  Items:
    Reference: '#/components/schemas/NssaiMapping'
  minItems: 1
nsInstanceList:
  Type: array
  Items:
    Reference: 'TS29531_Nnssf_NSSelection.yaml#/components/schemas/NsiId'
  minItems: 1
expectedUEbehavior:
  Reference: '#/components/schemas/ExpectedUeBehavior'
Required:
  - accessType
SeafData:
Type: object
Properties:
  ngKsi:
    Reference: '#/components/schemas/NgKsi'
  keyAmf:
    Reference: '#/components/schemas/KeyAmf'
  nh:
    Type: string
    Pattern: '^ [A-Za-f0-9]+ $'
  ncc:
    Type: integer
    Minimum: 0
    Maximum: 7
  keyAmfChangeInd:
    Type: boolean
  keyAmfHDerivationInd:
    Type: boolean
Required:
  - ngKsi
  - keyAmf
NasSecurityMode:
Type: object
Properties:
  integrityAlgorithm:
    Reference: '#/components/schemas/IntegrityAlgorithm'
  cipheringAlgorithm:
    Reference: '#/components/schemas/CipheringAlgorithm'
Required:
  - integrityAlgorithm
  - cipheringAlgorithm
PduSessionContext:
Type: object
Properties:
  pduSessionId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
  smContextRef:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'

```

```

sNssai:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
dnn:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
accessType:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
allocatedEbiList:
  Type: array
  Items:
    Reference: 'TS29502_Nsmf_PDUSession.yaml#/components/schemas/EbiArpMapping'
  minItems: 1
hsmfId:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
vsmfId:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
nsInstance:
  Reference: 'TS29531_Nnssf_NSSElection.yaml#/components/schemas/NsiId'
Required:
- pduSessionId
- smContextRef
- sNssai
- dnn
- accessType
- allocatedEbiList
NssaiMapping:
Type: object
Properties:
  mappedSnssai:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
  hSnssai:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
Required:
- mappedSnssai
- hSnssai
UeRegStatusUpdateReqData:
Type: object
Properties:
  transferStatus:
    Reference: '#/components/schemas/UeContextTransferStatus'
  toReleaseSessionList:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
    minItems: 1
  pcfReselectedInd:
    Type: boolean
Required:
- transferStatus
UeRegStatusUpdateRspData:
Type: object
Properties:
  regStatusTransferComplete:
    Type: boolean

```

```

Required:
  - regStatusTransferComplete
AssignEbiError:
Type: object
Properties:
  error:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
  failureDetails:
    Reference: '#/components/schemas/AssignEbiFailed'
Required:
  - error
  - failureDetails
UeContextCreateData:
Type: object
Properties:
  ueContext:
    Reference: '#/components/schemas/UeContext'
  targetId:
    Reference: '#/components/schemas/NgRanTargetId'
  sourceToTargetData:
    Reference: '#/components/schemas/N2InfoContent'
  pduSessionList:
    Type: array
    Items:
      Reference: '#/components/schemas/N2SmInformation'
    minItems: 1
  n2NotifyUri:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  ueRadioCapability:
    Reference: '#/components/schemas/N2InfoContent'
  ngapCause:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NgApCause'
  supportedFeatures:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
Required:
  - ueContext
  - targetId
  - sourceToTargetData
  - pduSessions
UeContextCreatedData:
Type: object
Properties:
  ueContext:
    Reference: '#/components/schemas/UeContext'
  targetToSourceData:
    Reference: '#/components/schemas/N2InfoContent'
  pduSessionList:
    Type: array
    Items:
      Reference: '#/components/schemas/N2SmInformation'
    minItems: 1
  ngapCause:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NgApCause'

```



```

failedSessionList:
  Type: array
  Items:
    Reference: '#/components/schemas/N2SmInformation'
  minItems: 1
  supportedFeatures:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  pcfReselectedInd:
    Type: boolean
Required:
  - ueContext
  - targetToSourceData
  - pduSessions
UeContextCreateError:
  Type: object
  Properties:
    error:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
    ngapCause:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NgapCause'
  Required:
  - error
NgRanTargetId:
  Type: object
  Properties:
    ranNodeId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/GlobalRanNodeId'
    tai:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Tai'
  Required:
  - ranNodeId
  - tai
PWSResponseData:
  Type: object
  Properties:
    ngapMessageType:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uinteger'
    serialNumber:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint16'
    messageIdentifier:
      Type: integer
    unknownTaiList:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Tai'
      minItems: 1
  Required:
  - ngapMessageType
  - serialNumber
  - messageIdentifier
PWSErrorData:
  Type: object
  Properties:

```

```
    namfCause:
      Type: integer
    Required:
      - namfCause
  N2InformationTransferError:
    Type: object
    Properties:
      error:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      pwdErrorInfo:
        Reference: '#/components/schemas/PWSErrorData'
    Required:
      - error
  NgKsi:
    Type: object
    Properties:
      tsc:
        Reference: '#/components/schemas/ScType'
      ksi:
        Type: integer
        Minimum: 0
        Maximum: 6
    Required:
      - tsc
      - ksi
  KeyAmf:
    Type: object
    Properties:
      keyType:
        Reference: '#/components/schemas/KeyAmfType'
      keyVal:
        Type: string
    Required:
      - keyType
      - keyVal
  ExpectedUeBehavior:
    Type: object
    Properties:
      expMoveTrajectory:
        Type: array
        Items:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
        minItems: 1
      validityTime:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    Required:
      - expMoveTrajectory
      - validityTime
  N2RanInformation:
    Type: object
    Properties:
      n2InfoContent:
        Reference: '#/components/schemas/N2InfoContent'
```

```

    Required:
      - n2InfoContent
# SIMPLE DATA TYPES
EpsBearerId:
  Type: integer
  Minimum: 0
  Maximum: 15
Ppi:
  Type: integer
  Minimum: 0
  Maximum: 7
NasCount:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/UInteger'
5GmCapability:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/Bytes'
UeSecurityCapability:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/Bytes'
S1UeNetworkCapability:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/Bytes'
DrxParameter:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/Bytes'
OmcIdentifier:
  Type: string
# ENUMERATIONS
StatusChange:
  anyOf:
    - type: string
      enum:
        - AMF_UNAVAILABLE
        - AMF_AVAILABLE
    - type: string
N2InformationClass:
  anyOf:
    - type: string
      enum:
        - SM
        - NRPPa
        - PWS
        - PWS-BCAL
        - PWS-RF
        - RAN
    - type: string
N1MessageClass:
  anyOf:
    - type: string
      enum:
        - 5GMM
        - SM
        - LPP
        - SMS
        - UPDP
    - type: string
N1N2MessageTransferCause:
  anyOf:
    - type: string
      enum:

```

- ATTEMPTING_TO_REACH_UE
- N1_N2_TRANSFER_INITIATED
- WAITING_FOR_ASYNCHRONOUS_TRANSFER
- UE_NOT_RESPONDING
- N1_MSG_NOT_TRANSFERRED
- UE_NOT_REACHABLE_FOR_SESSION

- type: string

UeContextTransferStatus:

anyOf:

- type: string

enum:

- TRANSFERRED
- NOT_TRANSFERRED

- type: string

N2InformationTransferResult:

anyOf:

- type: string

enum:

- N2_INFO_TRANSFER_INITIATED

- type: string

CipheringAlgorithm:

anyOf:

- type: string

enum:

- NEA0
- NEA1
- NEA2
- NEA3

- type: string

IntegrityAlgorithm:

anyOf:

- type: string

enum:

- NIA0
- NIA1
- NIA2
- NIA3

- type: string

SmsSupport:

anyOf:

- type: string

enum:

- 3GPP
- NON_3GPP
- BOTH
- NONE

- type: string

ScType:

anyOf:

- type: string

enum:

- NATIVE
- MAPPED

- type: string

KeyAmfType:

anyOf:

- type: string

enum:

- KAMF

```

    - KPRIMEAMF
  - type: string
TransferReason:
  anyOf:
  - type: string
    enum:
    - INIT_REG
    - MOBI_REG
    - MOBI_REG_UE_VALIDATED
  - type: string
AMPolicyReqTrigger:
  anyOf:
  - type: string
    enum:
    - LOCATION_CHANGE
    - PRA_CHANGE
    - SARI_CHANGE
    - RFSP_INDEX_CHANGE
  - type: string
RatSelector:
  anyOf:
  - type: string
    enum:
    - E-UTRA
    - NR
  - type: string
NgapIeType:
  anyOf:
  - type: string
    enum:
    - PDU_RES_SETUP_REQ
    - PDU_RES_REL_CMD
    - PDU_RES_MOD_REQ
    - HANDOVER_CMD
    - HANDOVER_REQUIRED
    - HANDOVER_PREP_FAIL
    - SRC_TO_TAR_CONTAINER
    - TAR_TO_SRC_CONTAINER
    - RAN_STATUS_TRANS_CONTAINER
    - SON_CONFIG_TRANSFER
    - NRPPA_PDU
    - UE_RADIO_CAPABILITY
  - type: string
N2InfoNotifyReason:
  anyOf:
  - type: string
    enum:
    - HANDOVER_COMPLETED
  - type: string

```

External Docs

Description: 3GPP TS 29.518 V15.2.0; 5G System; Access and Mobility Management Services
URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.518/'



CHAPTER 2

Namf_MT

Namf_MT service allows a NF to request information related to capabilities to send MT signaling or data to a target UE. The following are the key functionalities of this NF service.

- Paging UE if UE is in IDLE state and respond other NF after the UE enters CM-CONNECTED state.
- Response to the requester NF if UE is in CONNECTED state.
- Providing the terminating domain selection information for IMS voice to the consumer NF
- [OpenAPI, on page 45](#)
- [Info, on page 45](#)
- [Servers, on page 45](#)
- [Security, on page 46](#)
- [Paths, on page 46](#)
- [Components, on page 48](#)
- [External Docs, on page 50](#)

OpenAPI

OpenAPI Version: 3.0.0

Info

Version: 1.0.2

Title: Namf_MT

Description: |

AMF Mobile Termination Service

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Servers

URL: '{apiRoot}/namf-mt/v1'

Variables:**API Root:****Default:** https://example.com**Description:** apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501

Security

```

- {}
- oAuth2ClientCredentials:
  - namf-mt

```

Paths

```

'/ue-contexts/{ueContextId}':

```

get:**Summary:** Namf_MT Provide Domain Selection Info service Operation**Tags:**

- ueContext (Document)

Operation ID: Provide Domain Selection Info**Parameters:**- **Name:** ueContextId**In:** path**Description:** UE Context Identifier**Required/Optional:** true**Schema:****Type:** string**pattern:** '^(imsi-[0-9]{5,15}|nai-.+|.+)\$'- **Name:** info-class**In:** query**Description:** UE Context Information Class**Schema:****Reference:** '#/components/schemas/UeContextInfoClass'- **Name:** supported-features**In:** query**Description:** Supported Features**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Responses:**

'200':

Description: Requested UE Context Information returned**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/UeContextInfo'

'307':

Description: Temporary Redirect

Content:
application/problem+json:
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

Headers:
Location:
Description: 'The URI of the resource located on the target NF Service Consumer (e.g. AMF) to which the request is redirected'
Required/Optional: true
Schema:
Type: string

'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'403':
Reference: 'TS29571_CommonData.yaml#/components/responses/403'

'404':
Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'414':
Reference: 'TS29571_CommonData.yaml#/components/responses/414'

'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:
Description: Unexpected error

/ue-contexts/{ueContextId}/ue-reachind

put:

Summary: Namf_MT EnableUERachability service Operation

Tags:
- ueReachInd (Document)

Operation ID: EnableUeReachability

Parameters:
- **Name:** ueContextId
In: path
Description: UE Context Identifier
Required/Optional: true
Schema:
Type: string

Request Body:
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/EnableUeReachabilityReqData'
Required/Optional: true

```

Responses:
  '200':
    Description: UE has become reachable as desired
    Content:
      Application/JSON:
        Schema:
          Reference: '#/components/schemas/EnableUeReachabilityRspData'
  '307':
    Description: Temporary Redirect
    Content:
      application/problem+json:
        Schema:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
    Headers:
      Location:
        Description: 'The URI of the resource located on the target NF Service Consumer
(e.g. AMF) to which the request is redirected'
        Required/Optional: true
        Schema:
          Type: string
  '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'
  '504':
    Reference: 'TS29571_CommonData.yaml#/components/responses/504'
Default:
  Description: Unexpected error

```

Components

```

securitySchemes:
  oAuth2ClientCredentials:
    Type: oauth2

```

```
Flows:
  clientCredentials:
    tokenUrl: '{nrfApiRoot}/oauth2/token'
    scopes:
      namf-mt: Access to the Namf_MT API

schemas:
  EnableUeReachabilityReqData:
    Type: object
    Properties:
      reachability:
        Reference: 'TS29518_Namf_EventExposure.yaml#/components/schemas/UeReachability'
      supportedFeatures:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    Required:
      - reachability
  EnableUeReachabilityRspData:
    Type: object
    Properties:
      reachability:
        Reference: 'TS29518_Namf_EventExposure.yaml#/components/schemas/UeReachability'
      supportedFeatures:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    Required:
      - reachability
  UeContextInfo:
    Type: object
    Properties:
      supportVoPS:
        Type: boolean
      supportVoPSn3gpp:
        Type: boolean
      lastActTime:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
      accessType:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
      ratType:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'
      supportedFeatures:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  UeContextInfoClass:
    anyOf:
      - type: string
    enum:
      - TADS
    - type: string
```

External Docs

Description: 3GPP TS 29.518 V15.3.0; 5G System; Access and Mobility Management Services

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.518/'



CHAPTER 3

Nausf_UEAuthentication

The Authentication Server Function (AUSF) acts as NF Service Producer. It provides UE authentication service to the requester NF. The NF Service Consumer is the AMF.

For this service, the following service operations are defined

- Authenticate

This service permits to authenticate the UE and to provide one or more master keys which are used by the AMF to derived subsequent keys.

Reference: 3GPP TS 33.501 v15.5.0

- [OpenAPI, on page 51](#)
- [Info, on page 51](#)
- [Servers, on page 51](#)
- [Security, on page 52](#)
- [Paths, on page 52](#)
- [Components, on page 55](#)
- [External Docs, on page 57](#)

OpenAPI

OpenAPI Version: 3.0.0

Info

Version: 1.0.0

Title: AUSF API

Description: OpenAPI specification for AUSF

Servers

URL: '{apiRoot}/nausf-auth/v1'

Variables:**API Root:****Default:** https://example.com**Description:** apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501.

Security

```

- {}
- oAuth2ClientCredentials:
  - nausf-auth

```

Paths

/ue-authentications

Method: Post**Request Body:****Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/AuthenticationInfo'**Required/Optional:** true**Responses:****'201':****Description:** UEAuthenticationCtx**Content:****application/3gppHal+json:****Schema:****Reference:** '#/components/schemas/UEAuthenticationCtx'**Headers:****Location:****description:** 'Contains the URI of the newly created resource according to the structure: {apiRoot}/nausf-auth/v1/ue-authentications/{authCtxId}'**Required/Optional:** true**Schema:****Type:** string**'400':****Description:** Bad Request from the AMF**Content:****application/problem+json:****Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'**'403':****Description:** Forbidden due to serving network not authorized**Content:**

```

    application/problem+json:
      Schema:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
  '500':
    Description: Internal Server Error
    Content:
      application/problem+json:
        Schema:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

```

/ue-authentications/{authCtxId}/5g-aka-confirmation

put:

Parameters:

```

- Name: authCtxId
  In: path
  Required/Optional: true
  Schema:
    Type: string

```

Request Body:

```

Content:
  Application/JSON:
    Schema:
      Reference: '#/components/schemas/ConfirmationData'

```

Responses:

```

'200':
  Description: Request processed (EAP success or Failure)
  Content:
    Application/JSON:
      Schema:
        Reference: '#/components/schemas/ConfirmationDataResponse'
'400':
  Description: Bad Request
  Content:
    application/problem+json:
      Schema:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
'500':
  Description: Internal Server Error
  Content:
    application/problem+json:
      Schema:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

```

/ue-authentications/{authCtxId}/eap-session

Method: Post

Operation ID: EapAuthMethod

Parameters:

- **Name:** authCtxId
 - In:** path
 - Required/Optional:** true
 - Schema:**
 - Type:** string

Request Body:

- Content:**
 - Application/JSON:**
 - Schema:**
 - Reference:** '#/components/schemas/EapSession'

Responses:

- '200':
 - Description:** Use to handle or close the EAP session
 - Content:**
 - Application/JSON:**
 - Schema:**
 - Reference:** '#/components/schemas/EapSession'
 - application/3gppHal+json:**
 - Schema:**
 - Type:** object
 - Properties:**
 - eapPayload:**
 - Reference:** '#/components/schemas/EapPayload'
 - _links:**
 - Type:** object
 - description:** 'URI : /{eapSessionUri}'
 - additionalProperties:**
 - Reference:**
 - 'TS29571_CommonData.yaml#/components/schemas/LinksValueSchema'
 - minProperties:** 1
 - Required/Optional:**
 - eapPayload
 - _links

- '400':
 - Description:** Bad Request
 - Content:**
 - application/problem+json:**
 - Schema:**
 - Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

- '500':
 - Description:** Internal Server Error
 - Content:**
 - application/problem+json:**
 - Schema:**
 - Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

Components

```

securitySchemes:
  oAuth2ClientCredentials:
    Type: oauth2
    Flows:
      clientCredentials:
        tokenUrl: '{nrfApiRoot}/oauth2/token'
        scopes:
          nausf-auth: Access to Nausf_UEAuthentication API

schemas:
  AuthenticationInfo:
    Type: object
    Properties:
      supiOrSuci:
        Reference: 'TS29503_Nudm_UEAU.yaml#/components/schemas/SupiOrSuci'
      servingNetworkName:
        Reference: 'TS29503_Nudm_UEAU.yaml#/components/schemas/ServingNetworkName'
      resynchronizationInfo:
        Reference: 'TS29503_Nudm_UEAU.yaml#/components/schemas/ResynchronizationInfo'
      traceData:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
    Required:
      - supiOrSuci
      - servingNetworkName
  UEAuthenticationCtx:
    Type: object
    Properties:
      authType:
        Reference: '#/components/schemas/AuthType'
      5gAuthData:
        oneOf:
          - $ref: '#/components/schemas/Av5gAka'
          - $ref: '#/components/schemas/EapPayload'
      _links:
        Type: object
        additionalProperties:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/LinksValueSchema'
      servingNetworkName:
        Reference: 'TS29503_Nudm_UEAU.yaml#/components/schemas/ServingNetworkName'
    Required:
      - authType
      - 5gAuthData
      - _links
  Av5gAka:
    Type: object
    Required:
      - rand
      - hxresStar
      - autn

```

```

Properties:
  rand:
    Reference: 'TS29503_Nudm_UEAU.yaml#/components/schemas/Rand'
  hxresStar:
    Reference: '#/components/schemas/HxresStar'
  autn:
    Reference: 'TS29503_Nudm_UEAU.yaml#/components/schemas/Autn'
ConfirmationData:
  Type: object
  Required:
    - resStar
  Properties:
    resStar:
      Reference: '#/components/schemas/ResStar'
ConfirmationDataResponse:
  Type: object
  Properties:
    authResult:
      Reference: '#/components/schemas/AuthResult'
    supi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    kseaf:
      Reference: '#/components/schemas/Kseaf'
  Required:
    - authResult
EapSession:
  Type: object
  Properties:
    eapPayload:
      Reference: '#/components/schemas/EapPayload'
    kSeaf:
      Reference: '#/components/schemas/Kseaf'
    _links:
      Type: object
      additionalProperties:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/LinksValueSchema'
    authResult:
      Reference: '#/components/schemas/AuthResult'
    supi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
  Required:
    - eapPayload
AuthResult:
  Type: string
  enum:
    - AUTHENTICATION_SUCCESS
    - AUTHENTICATION_FAILURE
    - AUTHENTICATION_ONGOING
EapPayload:
  Type: string
  format: base64
  Description: contains an EAP packet
Kseaf:

```

```
    Type: string
    Pattern: '[A-Fa-f0-9]{64}'
  ResStar:
    Type: string
    Pattern: '[A-Fa-f0-9]{32}'
  HxresStar:
    Type: string
    Pattern: "[A-Fa-f0-9]{32}"
  AuthType:
    anyOf:
      - type: string
        enum:
          - 5G_AKA
          - EAP_AKA_PRIME
          - EAP_TLS
      - type: string
```

External Docs

Description: 3GPP TS 29.509 V15.2.0; 5G System; 3GPP TS Authentication Server services.

URL: http://www.3gpp.org/ftp/Specs/archive/29_series/29.509



CHAPTER 4

Nnrf_NFDiscovery

The Nnrf_NFDiscovery service allows a Network Function Instance to discover services offered by other Network Function Instances, by querying the local NRF.

It also allows an NRF in a PLMN to re-issue a discovery request towards an NRF in another PLMN (e.g., the HPLMN of a certain UE).

Reference: 3GPP TS 29.510 version 15.0.0 Release 15

- [OpenAPI, on page 59](#)
- [Info, on page 59](#)
- [Servers, on page 59](#)
- [Security, on page 60](#)
- [Paths, on page 60](#)
- [Components, on page 65](#)
- [External Docs, on page 68](#)

OpenAPI

OpenAPI Version: 3.0.0

Info

Version: '1.0.0'
Title: 'NRF NFDiscovery Service'
Description: 'NRF NFDiscovery Service'

Servers

URL: '{apiRoot}/nnrf-disc/v1'
Variables:
 API Root:

Default: https://example.com

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

Security

```
- {}
- oAuth2ClientCredentials:
  - nnrf-disc
```

Paths

/nf-instances

get:

Summary: Search a collection of NF Instances

Operation ID: SearchNFInstances

Tags:

- NF Instances (Store)

Parameters:

- **Name:** target-nf-type
In: query
Description: Type of the target NF
Required/Optional: true
Schema:
Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/NFType'
- **Name:** requester-nf-type
In: query
Description: Type of the requester NF
Required/Optional: true
Schema:
Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/NFType'
- **Name:** service-names
In: query
Description: Name of the service offered by the NF
Schema:
Type: array
Items:
Type: string
Min Items: 1
Style: form
Explode: false
- **Name:** requester-nf-instance-fqdn
In: query
Description: FQDN of the requester NF
Schema:

```

    Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'
- Name: target-plmn-list
  In: query
  Description: Id of the PLMN where the target NF is located
  Content:
    Application/JSON:
      Schema:
        Type: array
        Items:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
          Min Items: 1
- Name: requester-plmn-list
  In: query
  Description: Id of the PLMN where the NF issuing the Discovery request is located

  Content:
    Application/JSON:
      Schema:
        Type: array
        Items:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
          Min Items: 1
- Name: target-nf-instance-id
  In: query
  Description: Identity of the NF instance being discovered
  Schema:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
- Name: target-nf-fqdn
  In: query
  Description: FQDN of the NF instance being discovered
  Schema:
    Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'
- Name: hnrfs-uri
  In: query
  Description: Uri of the home NRF
  Schema:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
- Name: snssais
  In: query
  Description: Slice info of the target NF
  Content:
    Application/JSON:
      Schema:
        Type: array
        Items:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
          Min Items: 1
- Name: dnn
  In: query
  Description: Dnn supported by the BSF, SMF or UPF
  Schema:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'

```

- **Name:** nsi-list
In: query
Description: NSI IDs that are served by the services being discovered
Schema:
Type: array
Items:
Type: string
Min Items: 1
Style: form
Explode: false
- **Name:** smf-serving-area
In: query
Schema:
Type: string
- **Name:** tai
In: query
Description: Tracking Area Identity
Content:
Application/JSON:
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Tai'
- **Name:** amf-region-id
In: query
Description: AMF Region Identity
Schema:
Type: string
- **Name:** amf-set-id
In: query
Description: AMF Set Identity
Schema:
Type: string
- **Name:** guami
In: query
Description: Guami used to search for an appropriate AMF
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'
- **Name:** supi
In: query
Description: SUPI of the user
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
- **Name:** ue-ipv4-address
In: query
Description: IPv4 address of the UE
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
- **Name:** ip-domain
In: query
Description: IP domain of the UE, which supported by BSF
Schema:
Type: string

- **Name:** ue-ipv6-prefix
 - In:** query
 - Description:** IPv6 prefix of the UE
 - Schema:**
 - Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'
- **Name:** pgw-ind
 - In:** query
 - Description:** Combined PGW-C and SMF or a standalone SMF
 - Schema:**
 - Type:** boolean
- **Name:** pgw
 - In:** query
 - Description:** PGW FQDN of a combined PGW-C and SMF
 - Schema:**
 - Reference:** 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'
- **Name:** gpsi
 - In:** query
 - Description:** GPSI of the user
 - Schema:**
 - Reference:** 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
- **Name:** external-group-identity
 - In:** query
 - Description:** external group identifier of the user
 - Schema:**
 - Type:** string
- **Name:** data-set
 - In:** query
 - Description:** data set supported by the NF
 - Schema:**
 - Reference:** 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/DataSetId'
- **Name:** routing-indicator
 - In:** query
 - Description:** routing indicator in SUCI
 - Schema:**
 - Type:** string
 - pattern:** '^ [0-9]{1,4}\$'
- **Name:** group-id-list
 - In:** query
 - Description:** Group IDs of the NFs being discovered
 - Schema:**
 - Type:** array
 - Items:**
 - Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'
 - Min Items:** 1
 - Style:** form
 - Explode:** false
- **Name:** dnai-list
 - In:** query
 - Description:** Data network access identifiers of the NFs being discovered
 - Schema:**
 - Type:** array

```

    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnai'
      Min Items: 1
      Style: form
      Explode: false
- Name: supported-features
  In: query
  Description: Features required to be supported by the target NF
  Schema:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
- Name: upf-iwk-eps-ind
  In: query
  Description: UPF supporting interworking with EPS or not
  Schema:
    Type: boolean
- Name: chf-supported-plmn
  In: query
  Description: PLMN ID supported by a CHF
  Content:
    Application/JSON:
      Schema:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
- Name: preferred-locality
  In: query
  Description: preferred target NF location
  Schema:
    Type: string
- Name: access-type
  In: query
  Description: AccessType supported by the target NF
  Schema:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
- Name: If-None-Match
  In: header
  Description: Validator for conditional requests, as described in IETF RFC 7232,
3.2
  Schema:
    Type: string

Responses:
  '200':
    Description: Expected response to a valid request
    Content:
      Application/JSON:
        Schema:
          Reference: '#/components/schemas/SearchResult'
    Headers:
      Cache-Control:
        Description: Cache-Control containing max-age, described in IETF RFC 7234,
5.2
        Schema:
          Type: string

```

```

      ETag:
        Description: Entity Tag containing a strong validator, described in IETF RFC
7232, 2.3
        Schema:
          Type: string
    '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'
    '500':
      Reference: 'TS29571_CommonData.yaml#/components/responses/500'
    '501':
      Reference: 'TS29571_CommonData.yaml#/components/responses/501'
    '503':
      Reference: 'TS29571_CommonData.yaml#/components/responses/503'
    Default:
      Reference: 'TS29571_CommonData.yaml#/components/responses/default'

```

Components

```

securitySchemes:
  oAuth2ClientCredentials:
    Type: oauth2
    Flows:
      clientCredentials:
        tokenUrl: '/oauth2/token'
        scopes:
          nnrf-disc: Access to the Nnrf_NFDDiscovery API

schemas:
  SearchResult:
    Type: object
    Required:
      - nfInstances
    Properties:
      validityPeriod:
        Type: integer
      nfInstances:
        Type: array
        Items:

```

```

    Reference: '#/components/schemas/NFProfile'
  NfProfile:
    Type: object
    Required:
      - nfInstanceId
      - nfType
      - nfStatus
    Properties:
      nfInstanceId:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
      nfType:
        Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/NFType'
      nfStatus:
        Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/NFStatus'
      plmnList:
        Type: array
        Items:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
        minItems: 1
      sNssais:
        Type: array
        Items:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
        minItems: 1
      nsiList:
        Type: array
        Items:
          Type: string
        minItems: 1
      fqdn:
        Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'
      ipv4Addresses:
        Type: array
        Items:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
        minItems: 1
      ipv6Addresses:
        Type: array
        Items:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'
        minItems: 1
      capacity:
        Type: integer
        Minimum: 0
        Maximum: 65535
      load:
        Type: integer
        Minimum: 0
        Maximum: 100
      locality:
        Type: string
      priority:

```

```

    Type: integer
    Minimum: 0
    Maximum: 65535
udrInfo:
    Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/UdrInfo'
udmInfo:
    Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/UdmInfo'
ausfInfo:
    Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/AusfInfo'
amfInfo:
    Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/AmfInfo'
smfInfo:
    Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/SmfInfo'
upfInfo:
    Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/UpfInfo'
pcfInfo:
    Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/PcfInfo'
bsfInfo:
    Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/BsfInfo'
chfInfo:
    Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ChfInfo'
customInfo:
    Type: object
recoveryTime:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
nfServicePersistence:
    Type: boolean
    Default: false
nfServices:
    Type: array
    Items:
      Reference: '#/components/schemas/NFService'
    minItems: 1
NFService:
Type: object
Required:
  - serviceInstanceId
  - serviceName
  - versions
  - scheme
  - nfServiceStatus
Properties:
serviceInstanceId:
  Type: string
serviceName:
  Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ServiceName'
versions:
  Type: array
  Items:
    Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/NFServiceVersion'

  minItems: 1
scheme:

```

```

    Reference: 'TS29571_CommonData.yaml#/components/schemas/UriScheme'
  nfServiceStatus:
    Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/NFServiceStatus'
  fqdn:
    Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'
  ipEndPoints:
    Type: array
    Items:
      Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/IpEndPoint'
    minItems: 1
  apiPrefix:
    Type: string
  defaultNotificationSubscriptions:
    Type: array
    Items:
      Reference:
'TS29510_Nnrf_NFManagement.yaml#/components/schemas/DefaultNotificationSubscription'
    minItems: 1
  capacity:
    Type: integer
    Minimum: 0
    Maximum: 65535
  load:
    Type: integer
    Minimum: 0
    Maximum: 100
  priority:
    Type: integer
    Minimum: 0
    Maximum: 65535
  recoveryTime:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  chfServiceInfo:
    Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ChfServiceInfo'
  supportedFeatures:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

```

External Docs

Description: 3GPP TS 29.510 V15.2.0; 5G System; Network Function Repository Services; Stage 3

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.510/'



CHAPTER 5

Nnrf_NFManagement

The Nnrf_NFManagement service allows a Network Function instance in the serving PLMN to register, update or deregister its profile in the NRF.

It also allows an NF to subscribe to be notified of newly registered NF instances along with their NF services.

The NF profile consists of NF instance parameters. It also consists of different services parameters exposed by the NF Instance.

Reference: 3GPP TS 29.510 version 15.1.0 Release 15

- [OpenAPI, on page 69](#)
- [Info, on page 69](#)
- [Servers, on page 69](#)
- [Security, on page 70](#)
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OpenAPI

OpenAPI Version: 3.0.0

Info

Version: '1.0.0'
Title: 'NRF NFManagement Service'
Description: 'NRF NFManagement Service'

Servers

URL: '{apiRoot}/nnrf-nfm/v1'
Variables:
 API Root:

Default: https://example.com

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

Security

```
- {}
- oAuth2ClientCredentials:
  - nnrf-nfm
```

Paths

/nf-instances

get:

Summary: Retrieves a collection of NF Instances

Operation ID: GetNFInstances

Tags:

- NF Instances (Store)

Parameters:

- **Name:** nf-type

In: query

Description: Type of NF

Required/Optional: false

Schema:

Reference: '#/components/schemas/NFType'

- **Name:** limit

In: query

Description: How many items to return at one time

Required/Optional: false

Schema:

Type: integer

Responses:

'200':

Description: Expected response to a valid request

Content:

application/3gppHal+json:

Schema:

Type: object

Properties:

_links:

Type: object

Description: 'List of the URI of NF instances. It has two members whose names are item and self. The item one contains an array of URIs.'

additionalProperties:

Reference:

```
'TS29571_CommonData.yaml#/components/schemas/LinksValueSchema'
  minProperties: 1
  '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'
  '500':
    Reference: 'TS29571_CommonData.yaml#/components/responses/500'
  '501':
    Reference: 'TS29571_CommonData.yaml#/components/responses/501'
  '503':
    Reference: 'TS29571_CommonData.yaml#/components/responses/503'
  Default:
    Reference: 'TS29571_CommonData.yaml#/components/responses/default'
```

/nf-instances/{nfInstanceId}**get:****Summary:** Read the profile of a given NF Instance**Operation ID:** GetNFInstance**Tags:**

- NF Instance ID (Document)

Parameters:- **Name:** nfInstanceId**In:** path**Description:** Unique ID of the NF Instance**Required/Optional:** true**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'**Responses:**

'200':

Description: Expected response to a valid request**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/NFProfile'

'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'
  '500':
    Reference: 'TS29571_CommonData.yaml#/components/responses/500'
  '501':
    Reference: 'TS29571_CommonData.yaml#/components/responses/501'
  '503':
    Reference: 'TS29571_CommonData.yaml#/components/responses/503'
  Default:
    Reference: 'TS29571_CommonData.yaml#/components/responses/default'
put:
  Summary: Register a new NF Instance
  Operation ID: RegisterNFInstance

  Tags:
    - NF Instance ID (Document)

  Parameters:
    - Name: nfInstanceId
      In: path
      Required/Optional: true
      Description: Unique ID of the NF Instance to register
      Schema:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
  Request Body:
    Content:
      Application/JSON:
        Schema:
          Reference: '#/components/schemas/NFProfile'
      Required/Optional: true

  Responses:
    '200':
      Description: OK (Profile Replacement)
      Content:
        Application/JSON:
          Schema:
            Reference: '#/components/schemas/NFProfile'
    '201':
      Description: Expected response to a valid request
      Content:
        Application/JSON:
          Schema:
            Reference: '#/components/schemas/NFProfile'
  Headers:

```

Location:
description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nnrf-nfm/v1/nf-instances/{nfInstanceId}'
Required/Optional: true
Schema:
Type: string

'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'

'500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'501':
Reference: 'TS29571_CommonData.yaml#/components/responses/501'

'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:
Reference: 'TS29571_CommonData.yaml#/components/responses/default'

patch:
Summary: Update NF Instance profile
Operation ID: UpdateNFInstance

Tags:
- NF Instance ID (Document)

Parameters:
- **Name:** nfInstanceId
In: path
Required/Optional: true
Description: Unique ID of the NF Instance to update
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'

Request Body:
Content:
application/json-patch+json:
Schema:
Type: array
Items:
Reference: 'TS29571_CommonData.yaml#/components/schemas/PatchItem'
Min Items: 1
Required/Optional: true

Responses:
'200':

Description: Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NFProfile'

'204':

Description: Expected response with empty body

'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'

'500':

Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'501':

Reference: 'TS29571_CommonData.yaml#/components/responses/501'

'503':

Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:

Reference: 'TS29571_CommonData.yaml#/components/responses/default'

delete:

Summary: Deregisters a given NF Instance

Operation ID: DeregisterNFInstance

Tags:

- NF Instance ID (Document)

Parameters:

- **Name:** nfInstanceID
- In:** path
- Required/Optional:** true
- Description:** Unique ID of the NF Instance to deregister
- Schema:**
- Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'

Responses:

'204':

Description: Expected response to a successful deregistration

/subscriptions

Method: Post

Summary: Create a new subscription

Operation ID: CreateSubscription

```

Tags:
  - Subscriptions (Collection)
Request Body:
  Content:
    Application/JSON:
      Schema:
        Reference: '#/components/schemas/SubscriptionData'
      Required/Optional: true

Responses:
  '201':
    Description: Expected response to a valid request
    Content:
      Application/JSON:
        Schema:
          Reference: '#/components/schemas/SubscriptionData'
    Headers:
      Location:
        description: 'Contains the URI of the newly created resource,
        according to the structure: {apiRoot}/nnrf-nfm/v1/subscriptions/{subscriptionId}'
        Required/Optional: true
        Schema:
          Type: string
  '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'
  '500':
    Reference: 'TS29571_CommonData.yaml#/components/responses/500'
  '501':
    Reference: 'TS29571_CommonData.yaml#/components/responses/501'
  '503':
    Reference: 'TS29571_CommonData.yaml#/components/responses/503'
  Default:
    Reference: 'TS29571_CommonData.yaml#/components/responses/default'

Callbacks:
  onNFStatusEvent:
    '{$request.body#/nfStatusNotificationUri}':
      Method: Post
      Request Body:
        Description: Notification Payload
        Content:
          Application/JSON:

```

Schema:**Reference:** '#/components/schemas/NotificationData'**Responses:****'204':****Description:** Expected response to a successful callback processing**'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'**'500':****Reference:** 'TS29571_CommonData.yaml#/components/responses/500'**'501':****Reference:** 'TS29571_CommonData.yaml#/components/responses/501'**'503':****Reference:** 'TS29571_CommonData.yaml#/components/responses/503'**Default:****Reference:** 'TS29571_CommonData.yaml#/components/responses/default'

/subscriptions/{subscriptionID}

patch:**Summary:** Updates a subscription**Operation ID:** UpdateSubscription**Tags:**

- Subscription ID (Document)

Parameters:- **Name:** subscriptionID**In:** path**Required/Optional:** true**Description:** Unique ID of the subscription to update**Schema:****Type:** string**pattern:** '^([0-9]{5,6}-)?[^-]+\$'**Request Body:****Content:****application/json-patch+json:****Schema:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PatchItem'

Required/Optional: true

Responses:

'200':

Description: Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SubscriptionData'

'204':

Description: No Content

'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'

'500':

Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'501':

Reference: 'TS29571_CommonData.yaml#/components/responses/501'

'503':

Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:

Reference: 'TS29571_CommonData.yaml#/components/responses/default'

delete:

Summary: Deletes a subscription

Operation ID: RemoveSubscription

Tags:

- Subscription ID (Document)

Parameters:

- **Name:** subscriptionID

In: path

Required/Optional: true

Description: Unique ID of the subscription to remove

Schema:

Type: string

pattern: '^([0-9]{5,6}-)?[^-]+\$'

Responses:

'204':

Description: Expected response to a successful subscription removal

'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'
'500':
  Reference: 'TS29571_CommonData.yaml#/components/responses/500'
'501':
  Reference: 'TS29571_CommonData.yaml#/components/responses/501'
'503':
  Reference: 'TS29571_CommonData.yaml#/components/responses/503'
Default:
  Reference: 'TS29571_CommonData.yaml#/components/responses/default'

```

Components

```

securitySchemes:
  oAuth2ClientCredentials:
    Type: oauth2
    Flows:
      clientCredentials:
        tokenUrl: '/oauth2/token'
        scopes:
          nnrf-nfm: Access to the Nnrf_NFManagement API

schemas:
  NFProfile:
    Type: object
    Required:
      - nfInstanceId
      - nfType
      - nfStatus
    anyOf:
      - required: [ fqdn ]
      - required: [ ipv4Addresses ]
      - required: [ ipv6Addresses ]
    Properties:
      nfInstanceId:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
      nfType:
        Reference: '#/components/schemas/NFType'
      nfStatus:
        Reference: '#/components/schemas/NFStatus'
      heartBeatTimer:
        Type: integer

```



```
plmnList:
  Type: array
  Items:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
  minItems: 1
sNssais:
  Type: array
  Items:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
  minItems: 1
nsiList:
  Type: array
  Items:
    Type: string
  minItems: 1
fqdn:
  Reference: '#/components/schemas/Fqdn'
interPlmnFqdn:
  Reference: '#/components/schemas/Fqdn'
ipv4Addresses:
  Type: array
  Items:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
  minItems: 1
ipv6Addresses:
  Type: array
  Items:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'
  minItems: 1
allowedPlmns:
  Type: array
  Items:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
  minItems: 1
allowedNfTypes:
  Type: array
  Items:
    Reference: '#/components/schemas/NFType'
  minItems: 1
allowedNfDomains:
  Type: array
  Items:
    Type: string
  minItems: 1
allowedNssais:
  Type: array
  Items:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
  minItems: 1
priority:
  Type: integer
```

```

    Minimum: 0
    Maximum: 65535
  capacity:
    Type: integer
    Minimum: 0
    Maximum: 65535
  load:
    Type: integer
    Minimum: 0
    Maximum: 100
  locality:
    Type: string
  udrInfo:
    Reference: '#/components/schemas/UdrInfo'
  udmInfo:
    Reference: '#/components/schemas/UdmInfo'
  ausfInfo:
    Reference: '#/components/schemas/AusfInfo'
  amfInfo:
    Reference: '#/components/schemas/AmfInfo'
  smfInfo:
    Reference: '#/components/schemas/SmfInfo'
  upfInfo:
    Reference: '#/components/schemas/UpfInfo'
  pcfInfo:
    Reference: '#/components/schemas/PcfInfo'
  bsfInfo:
    Reference: '#/components/schemas/BsfInfo'
  chfInfo:
    Reference: '#/components/schemas/ChfInfo'
  nrfInfo:
    Reference: '#/components/schemas/NrfInfo'
  customInfo:
    Type: object
  recoveryTime:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  nfServicePersistence:
    Type: boolean
    Default: false
  nfServices:
    Type: array
    Items:
      Reference: '#/components/schemas/NFService'
    minItems: 1
  NFService:
    Type: object
  Required:
    - serviceInstanceId
    - serviceName
    - versions
    - scheme
    - nfServiceStatus

```

```
Properties:
  serviceInstanceId:
    Type: string
  serviceName:
    Reference: '#/components/schemas/ServiceName'
  versions:
    Type: array
    Items:
      Reference: '#/components/schemas/NFServiceVersion'
    minItems: 1
  scheme:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/UriScheme'
  nfServiceStatus:
    Reference: '#/components/schemas/NFServiceStatus'
  fqdn:
    Reference: '#/components/schemas/Fqdn'
  interPlmnFqdn:
    Reference: '#/components/schemas/Fqdn'
  ipEndPoints:
    Type: array
    Items:
      Reference: '#/components/schemas/IpEndPoint'
    minItems: 1
  apiPrefix:
    Type: string
  defaultNotificationSubscriptions:
    Type: array
    Items:
      Reference: '#/components/schemas/DefaultNotificationSubscription'
    minItems: 1
  allowedPlmns:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
    minItems: 1
  allowedNfTypes:
    Type: array
    Items:
      Reference: '#/components/schemas/NFType'
    minItems: 1
  allowedNfDomains:
    Type: array
    Items:
      Type: string
    minItems: 1
  allowedNssais:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    minItems: 1
  priority:
```

```

    Type: integer
    Minimum: 0
    Maximum: 65535
  capacity:
    Type: integer
    Minimum: 0
    Maximum: 65535
  load:
    Type: integer
    Minimum: 0
    Maximum: 100
  recoveryTime:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  chfServiceInfo:
    Reference: '#/components/schemas/ChfServiceInfo'
  supportedFeatures:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
NFType:
  anyOf:
    - type: string
      enum:
        - NRF
        - UDM
        - AMF
        - SMF
        - AUSF
        - NEF
        - PCF
        - SMSF
        - NSSF
        - UDR
        - LMF
        - GMLC
        - 5G_EIR
        - SEPP
        - UPF
        - N3IWF
        - AF
        - UDSE
        - BSF
        - CHF
        - NWDAF
    - type: string
Fqdn:
  Type: string
IpEndPoint:
  Type: object
  Properties:
    ipv4Address:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
    ipv6Address:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'
    transport:
      Reference: '#/components/schemas/TransportProtocol'
    port:
      Type: integer

```

```

    Minimum: 0
    Maximum: 65535
SubscriptionData:
  Type: object
  Required:
    - nfStatusNotificationUri
    - subscriptionId
  Properties:
    nfStatusNotificationUri:
      Type: string
    subscrCond:
      oneOf:
        - $ref: '#/components/schemas/NfInstanceIdCond'
        - $ref: '#/components/schemas/NfTypeCond'
        - $ref: '#/components/schemas/ServiceNameCond'
        - $ref: '#/components/schemas/AmfCond'
        - $ref: '#/components/schemas/GuamiListCond'
        - $ref: '#/components/schemas/NetworkSliceCond'
        - $ref: '#/components/schemas/NfGroupCond'
    subscriptionId:
      Type: string
      Pattern: '^[0-9]{5,6}-?[^-]+$'
      readOnly: true
    validityTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    reqNotifEvents:
      Type: array
      Items:
        Reference: '#/components/schemas/NotificationEventType'
      minItems: 1
    plmnId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
    notifCondition:
      Reference: '#/components/schemas/NotifCondition'
    reqNfType:
      Reference: '#/components/schemas/NFType'
    reqNfFqdn:
      Reference: '#/components/schemas/Fqdn'
NfInstanceIdCond:
  Type: object
  Required:
    - nfInstanceId
  Properties:
    nfInstanceId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
NfTypeCond:
  Type: object
  Required:
    - nfType
  Properties:
    nfType:
      Reference: '#/components/schemas/NFType'
ServiceNameCond:
  Type: object

```

```

Required:
  - serviceName
Properties:
  serviceName:
    Reference: '#/components/schemas/ServiceName'
AmfCond:
Type: object
anyOf:
  - required: [ amfSetId ]
  - required: [ amfRegionId ]
Properties:
  amfSetId:
    Type: string
  amfRegionId:
    Type: string
GuamiListCond:
Type: object
Required:
  - guamiList
Properties:
  guamiList:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'
NetworkSliceCond:
Type: object
Required:
  - snssaiList
Properties:
  snssaiList:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
  nsiList:
    Type: array
    Items:
      Type: string
NfGroupCond:
Type: object
Required:
  - nfType
  - nfGroupId
Properties:
  nfType:
    Type: string
    enum:
      - UDM
      - AUSF
      - UDR
  nfGroupId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'
NotifCondition:
Type: object

```

```
not:
  Required: [ monitoredAttributes, unmonitoredAttributes ]
Properties:
  monitoredAttributes:
    Type: array
    Items:
      Type: string
    minItems: 1
  unmonitoredAttributes:
    Type: array
    Items:
      Type: string
    minItems: 1
UdrInfo:
  Type: object
  Properties:
    groupId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'
    supiRanges:
      Type: array
      Items:
        Reference: '#/components/schemas/SupiRange'
      minItems: 1
    gpsiRanges:
      Type: array
      Items:
        Reference: '#/components/schemas/IdentityRange'
      minItems: 1
    externalGroupIdentifiersRanges:
      Type: array
      Items:
        Reference: '#/components/schemas/IdentityRange'
      minItems: 1
    supportedDataSets:
      Type: array
      Items:
        Reference: '#/components/schemas/DataSetId'
      minItems: 1
SupiRange:
  Type: object
  Properties:
    start:
      Type: string
      Pattern: '^[0-9]+$'
    end:
      Type: string
      Pattern: '^[0-9]+$'
    Pattern:
      Type: string
IdentityRange:
  Type: object
```

```

Properties:
  start:
    Type: string
    Pattern: '^[0-9]+$'
  end:
    Type: string
    Pattern: '^[0-9]+$'
  Pattern:
    Type: string
DataSetId:
  anyOf:
    - type: string
    enum:
      - SUBSCRIPTION
      - POLICY
      - EXPOSURE
      - APPLICATION
    - type: string
UdmInfo:
  Type: object
  Properties:
    groupId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'
    supiRanges:
      Type: array
      Items:
        Reference: '#/components/schemas/SupiRange'
      minItems: 1
    gpsiRanges:
      Type: array
      Items:
        Reference: '#/components/schemas/IdentityRange'
      minItems: 1
    externalGroupIdentifiersRanges:
      Type: array
      Items:
        Reference: '#/components/schemas/IdentityRange'
      minItems: 1
    routingIndicators:
      Type: array
      Items:
        Type: string
        Pattern: '^[0-9]{1,4}$'
      minItems: 1
AusfInfo:
  Type: object
  Properties:
    groupId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'
    supiRanges:
      Type: array
      Items:
        Reference: '#/components/schemas/SupiRange'

```



```

    minItems: 1
  routingIndicators:
    Type: array
    Items:
      Type: string
      Pattern: '^[0-9]{1,4}$'
    minItems: 1
AmfInfo:
  Type: object
  Required:
    - amfSetId
    - amfRegionId
    - guamiList
  Properties:
    amfSetId:
      Type: string
    amfRegionId:
      Type: string
    guamiList:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'
      minItems: 1
    taiList:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Tai'
      minItems: 1
    taiRangeList:
      Type: array
      Items:
        Reference: '#/components/schemas/TaiRange'
      minItems: 1
    backupInfoAmfFailure:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'
      minItems: 1
    backupInfoAmfRemoval:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'
      minItems: 1
    n2InterfaceAmfInfo:
      Reference: '#/components/schemas/N2InterfaceAmfInfo'
SmfInfo:
  Type: object
  Required:
    - sNssaiSmfInfoList
  Properties:
    sNssaiSmfInfoList:
      Type: array

```

```

    Items:
      Reference: '#/components/schemas/SnssaiSmfInfoItem'
    minItems: 1
  taiList:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Tai'
    minItems: 1
  taiRangeList:
    Type: array
    Items:
      Reference: '#/components/schemas/TaiRange'
    minItems: 1
  pgwFqdn:
    Reference: '#/components/schemas/Fqdn'
  accessType:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
    minItems: 1
SnssaiSmfInfoItem:
  Type: object
  Required:
    - sNssai
    - dnnSmfInfoList
  Properties:
    sNssai:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    dnnSmfInfoList:
      Type: array
      Items:
        Reference: '#/components/schemas/DnnSmfInfoItem'
      minItems: 1
DnnSmfInfoItem:
  Type: object
  Required:
    - dnn
  Properties:
    dnn:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
UpfInfo:
  Type: object
  Required:
    - sNssaiUpfInfoList
  Properties:
    sNssaiUpfInfoList:
      Type: array
      Items:
        Reference: '#/components/schemas/SnssaiUpfInfoItem'
      minItems: 1
    smfServingArea:
      Type: array

```

```

    Items:
      Type: string
    minItems: 1
  interfaceUpfInfoList:
    Type: array
    Items:
      Reference: '#/components/schemas/InterfaceUpfInfoItem'
    minItems: 1
  iwkEpsInd:
    Type: boolean
    Default: false
  SnssaiUpfInfoItem:
    Type: object
    Required:
      - sNssai
      - dnnUpfInfoList
    Properties:
      sNssai:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
      dnnUpfInfoList:
        Type: array
        Items:
          Reference: '#/components/schemas/DnnUpfInfoItem'
        minItems: 1
  DnnUpfInfoItem:
    Type: object
    Required:
      - dnn
    Properties:
      dnn:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
      dnaiList:
        Type: array
        Items:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnai'
        minItems: 1
  InterfaceUpfInfoItem:
    Type: object
    Required:
      - interfaceType
    Properties:
      interfaceType:
        Reference: '#/components/schemas/UPInterfaceType'
      ipv4EndpointAddresses:
        Type: array
        Items:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
        minItems: 1
      ipv6EndpointAddresses:
        Type: array
        Items:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'

```

```

    minItems: 1
    endpointFqdn:
      Reference: '#/components/schemas/Fqdn'
    networkInstance:
      Type: string
UPInterfaceType:
  anyOf:
    - type: string
      enum:
        - N3
        - N6
        - N9
    - type: string
PcfInfo:
  Type: object
  Properties:
    dnnList:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
      minItems: 1
    supiRanges:
      Type: array
      Items:
        Reference: '#/components/schemas/SupiRange'
      minItems: 1
    rxDiamHost:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DiameterIdentity'
    rxDiamRealm:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DiameterIdentity'
BsfInfo:
  Type: object
  Properties:
    dnnList:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
      minItems: 1
    ipDomainList:
      Type: array
      Items:
        Type: string
      minItems: 1
    ipv4AddressRanges:
      Type: array
      Items:
        Reference: '#/components/schemas/Ipv4AddressRange'
      minItems: 1
    ipv6PrefixRanges:
      Type: array
      Items:
        Reference: '#/components/schemas/Ipv6PrefixRange'

```

```

    minItems: 1
ChfInfo:
  Type: object
  Properties:
    supiRangeList:
      Type: array
      Items:
        Reference: '#/components/schemas/SupiRange'
        minItems: 1
    gpsiRangeList:
      Type: array
      Items:
        Reference: '#/components/schemas/IdentityRange'
        minItems: 1
    plmnRangeList:
      Type: array
      Items:
        Reference: '#/components/schemas/PlmnRange'
        minItems: 1
Ipv4AddressRange:
  Type: object
  Properties:
    start:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
    end:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
Ipv6PrefixRange:
  Type: object
  Properties:
    start:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'
    end:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'
DefaultNotificationSubscription:
  Type: object
  Required:
    - notificationType
    - callbackUri
  Properties:
    notificationType:
      Reference: '#/components/schemas/NotificationType'
    callbackUri:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    n1MessageClass:
      Reference: 'TS29518_Namf_Communication.yaml#/components/schemas/N1MessageClass'
    n2InformationClass:
      Reference: 'TS29518_Namf_Communication.yaml#/components/schemas/N2InformationClass'

NotificationType:
  anyOf:
    - type: string
    enum:

```

```

    - N1_MESSAGES
    - N2_INFORMATION
    - LOCATION_NOTIFICATION
    - DATA_REMOVAL_NOTIFICATION
    - DATA_CHANGE_NOTIFICATION
  - type: string
TransportProtocol:
  anyOf:
    - type: string
      enum:
        - TCP
    - type: string
NotificationEventType:
  anyOf:
    - type: string
      enum:
        - NF_REGISTERED
        - NF_DEREGISTERED
        - NF_PROFILE_CHANGED
    - type: string
NotificationData:
  Type: object
  Required:
    - event
    - nfInstanceUri
  allOf:
    - anyOf:
      - not:
          Properties:
            event:
              Type: string
              enum:
                - NF_PROFILE_CHANGED
            - oneOf:
              - required: [ nfProfile ]
              - required: [ profileChanges ]
    - anyOf:
      - not:
          Properties:
            event:
              Type: string
              enum:
                - NF_REGISTERED
            - required: [ nfProfile ]
  Properties:
    event:
      Reference: '#/components/schemas/NotificationEventType'
    nfInstanceUri:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    nfProfile:
      allOf:
        - $ref: '#/components/schemas/NFProfile'
        - not:
            Required: [ interPlmnFqdn ]
      - properties:
          nfServices:
            Type: array

```

```

    Items:
      allOf:
        - $ref: '#/components/schemas/NFService'
        - not:
            Required: [ interPlmnFqdn ]
        - not:
            Required: [ allowedPlmns ]
        - not:
            Required: [ allowedNfTypes ]
        - not:
            Required: [ allowedNfDomains ]
        - not:
            Required: [ allowedNssais ]
  profileChanges:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/ChangeItem'
    minItems: 1
  NFStatus:
    anyOf:
      - type: string
        enum:
          - REGISTERED
          - SUSPENDED
      - type: string
  NFServiceVersion:
    Type: object
    Required:
      - apiVersionInUri
      - apiFullVersion
    Properties:
      apiVersionInUri:
        Type: string
      apiFullVersion:
        Type: string
      expiry:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  ServiceName:
    anyOf:
      - type: string
        enum:
          - nnrnf-nfm
          - nnrnf-disc
          - nudm-sdm
          - nudm-uecm
          - nudm-ueau
          - nudm-ee
          - nudm-pp
          - namf-comm
          - namf-evts
          - namf-mt
          - namf-loc
          - nsmf-pdusession
          - nsmf-event-exposure
          - nausf-auth
          - nausf-sorprotection
          - nnef-pfdmanagement

```

```

- npcf-am-policy-control
- npcf-smpolicycontrol
- npcf-policyauthorization
- npcf-bdtpolicycontrol
- npcf-eventexposure
- npcf-ue-policy-control
- nsmsf-sms
- nssf-nssselection
- nssf-nssaiavailability
- nudr-dr
- nlmf-loc
- n5g-eir-eic
- nbsf-management
- nchf-spendinglimitcontrol
- nchf-convergedcharging
- nnwdaf-eventssubscription
- nnwdaf-analyticsinfo
- type: string

```

N2InterfaceAmfInfo:

Type: object

Properties:

ipv4EndpointAddress:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

minItems: 1

ipv6EndpointAddress:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'

minItems: 1

amfName:

Reference: 'TS29571_CommonData.yaml#/components/schemas/AmfName'

NFServiceStatus:

anyOf:

- type: string
- enum:**
 - REGISTERED
 - SUSPENDED
- type: string

TaiRange:

Type: object

Required:

- plmnId
- tacRangeList

Properties:

plmnId:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

tacRangeList:

Type: array

Items:

Reference: '#/components/schemas/TacRange'

minItems: 1

TacRange:

Type: object

Properties:


```

    start:
      Type: string
      Pattern: '^[A-Za-f0-9]{4}|[A-Za-f0-9]{6}$'
    end:
      Type: string
      Pattern: '^[A-Za-f0-9]{4}|[A-Za-f0-9]{6}$'
    Pattern:
      Type: string
  ChfServiceInfo:
    Type: object
    not:
      Required: [ primaryChfServiceInstance, secondaryChfServiceInstance ]
    Properties:
      primaryChfServiceInstance:
        Type: string
      secondaryChfServiceInstance:
        Type: string
  PlmnRange:
    Type: object
    Properties:
      start:
        Type: string
        Pattern: '^[0-9]{3}[0-9]{2,3}$'
      end:
        Type: string
        Pattern: '^[0-9]{3}[0-9]{2,3}$'
      Pattern:
        Type: string
  NrfInfo:
    Type: object
    Properties:
      servedUdrInfo:
        Type: object
        additionalProperties:
          Reference: '#/components/schemas/UdrInfo'
        minProperties: 1
      servedUdmInfo:
        Type: object
        additionalProperties:
          Reference: '#/components/schemas/UdmInfo'
        minProperties: 1
      servedAusfInfo:
        Type: object
        additionalProperties:
          Reference: '#/components/schemas/AusfInfo'
        minProperties: 1
      servedAmfInfo:
        Type: object
        additionalProperties:
          Reference: '#/components/schemas/AmfInfo'
        minProperties: 1

```

```
servedSmfInfo:
  Type: object
  additionalProperties:
    Reference: '#/components/schemas/SmfInfo'
  minProperties: 1
servedUpfInfo:
  Type: object
  additionalProperties:
    Reference: '#/components/schemas/UpfInfo'
  minProperties: 1
servedPcfInfo:
  Type: object
  additionalProperties:
    Reference: '#/components/schemas/PcfInfo'
  minProperties: 1
servedBsfInfo:
  Type: object
  additionalProperties:
    Reference: '#/components/schemas/BsfInfo'
  minProperties: 1
servedChfInfo:
  Type: object
  additionalProperties:
    Reference: '#/components/schemas/ChfInfo'
  minProperties: 1
```

External Docs

Description: 3GPP TS 29.510 V15.2.0; 5G System; Network Function Repository Services; Stage 3

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.510/'



CHAPTER 6

Nnssf_NSSelection

The Nnssf_NSSelection service is used by an NF Service Consumer (e.g. AMF or NSSF in a different PLMN) to retrieve the information related to network slice in the non-roaming and roaming case. It also enables the NSSF to provide to the AMF the Allowed NSSAI and the Configured NSSAI for the Serving PLMN. The NF service consumer discovers the NSSF based on the local configuration. The NSSF in a different PLMN is discovered based on the selfconstructed FQDN as specified in 3GPP TS 23.003[9].

- [OpenAPI, on page 97](#)
- [Info, on page 97](#)
- [Servers, on page 97](#)
- [Security, on page 98](#)
- [Paths, on page 98](#)
- [Components, on page 100](#)
- [External Docs, on page 104](#)

OpenAPI

OpenAPI Version: 3.0.0

Info

Version: '2.0.1'

Title: 'NSSF NS Selection'

Description: |

NSSF Network Slice Selection Service.

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Servers

URL: '{apiRoot}/nnssf-nselection/v2'

Variables:

API Root:

Default: https://example.com

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

Security

```
- {}
- oAuth2ClientCredentials:
  - nssf-nselection
```

Paths

/network-slice-information

get:

Summary: Retrieve the Network Slice Selection Information

Tags:

- Network Slice Information (Document)

Operation ID: NSSelectionGet

Parameters:

- **Name:** nf-type

In: query

Description: NF type of the NF service consumer

Required/Optional: true

Schema:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/NFType'

- **Name:** nf-id

In: query

Description: NF Instance ID of the NF service consumer

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'

- **Name:** slice-info-request-for-registration

In: query

Description: Requested network slice information during Registration procedure

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SliceInfoForRegistration'

- **Name:** slice-info-request-for-pdu-session

In: query

Description: Requested network slice information during PDU session establishment procedure

Content:

Application/JSON:

Schema:

```

        Reference: '#/components/schemas/SliceInfoForPDUSession'
- Name: slice-info-request-for-ue-cu
  In: query
  Description: Requested network slice information during UE configuration update
procedure
  Content:
    Application/JSON:
      Schema:
        Reference: '#/components/schemas/SliceInfoForUEConfigurationUpdate'
- Name: home-plmn-id
  In: query
  Description: PLMN ID of the HPLMN
  Content:
    Application/JSON:
      Schema:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
- Name: tai
  In: query
  Description: TAI of the UE
  Content:
    Application/JSON:
      Schema:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Tai'
- Name: supported-features
  In: query
  Description: Features required to be supported by the NFs in the target slice
instance
  Schema:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

```

Responses:

```

'200':
  Description: OK (Successful Network Slice Selection)
  Content:
    Application/JSON:
      Schema:
        Reference: '#/components/schemas/AuthorizedNetworkSliceInfo'
'400':
  Reference: 'TS29571_CommonData.yaml#/components/responses/400'
'401':
  Reference: 'TS29571_CommonData.yaml#/components/responses/401'
'403':
  Reference: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  Reference: 'TS29571_CommonData.yaml#/components/responses/404'
'406':
  Reference: 'TS29571_CommonData.yaml#/components/responses/406'
'414':
  Reference: 'TS29571_CommonData.yaml#/components/responses/414'
'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:
Description: Unexpected error

Components

```

securitySchemes:
  oAuth2ClientCredentials:
    Type: oauth2
    Flows:
      clientCredentials:
        tokenUrl: '{nrfApiRoot}/oauth2/token'
        scopes:
          nnssf-nsselection: Access to the Nnssf_NSSelection API

schemas:
  AuthorizedNetworkSliceInfo:
    Type: object
    Properties:
      allowedNssaiList:
        Type: array
        Items:
          Reference: '#/components/schemas/AllowedNssai'
        minItems: 1
      configuredNssai:
        Type: array
        Items:
          Reference: '#/components/schemas/ConfiguredSnssai'
        minItems: 1
      targetAmfSet:
        Type: string
        Pattern: '^([0-9]{3})-([0-9]{2-3})-[A-Fa-f0-9]{2}-[0-3][A-Fa-f0-9]{2}$'
      candidateAmfList:
        Type: array
        Items:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
        minItems: 1
      rejectedNssaiInPlmn:
        Type: array
        Items:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
        minItems: 1
      rejectedNssaiInTa:
        Type: array
        Items:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
        minItems: 1

```

```

nsiInformation:
  Reference: '#/components/schemas/NsiInformation'
supportedFeatures:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
nrfAmfSet:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
nrfAmfSetNfmgtUri:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
nrfAmfSetAccessTokenUri:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
SubscribedSnssai:
  Type: object
  Required:
  - subscribedSnssai
  Properties:
    subscribedSnssai:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    defaultIndication:
      Type: boolean
AllowedSnssai:
  Type: object
  Required:
  - allowedSnssai
  Properties:
    allowedSnssai:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    nsiInformationList:
      Type: array
      Items:
        Reference: '#/components/schemas/NsiInformation'
      minItems: 1
    mappedHomeSnssai:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
AllowedNssai:
  Type: object
  Required:
  - allowedSnssaiList
  - accessType
  Properties:
    allowedSnssaiList:
      Type: array
      Items:
        Reference: '#/components/schemas/AllowedSnssai'
      minItems: 1
    accessType:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
NsiInformation:
  Type: object
  Required:
  - nrfId
  Properties:
    nrfId:

```

```

    Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  nsiId:
    Reference: '#/components/schemas/NsiId'
  nrfNfMgtUri:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  nrfAccessTokenUri:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
MappingOfSnssai:
  Type: object
  Required:
    - servingSnssai
    - homeSnssai
  Properties:
    servingSnssai:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    homeSnssai:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
SliceInfoForRegistration:
  Type: object
  Properties:
    subscribedNssai:
      Type: array
      Items:
        Reference: '#/components/schemas/SubscribedSnssai'
      minItems: 1
    allowedNssaiCurrentAccess:
      Reference: '#/components/schemas/AllowedNssai'
    allowedNssaiOtherAccess:
      Reference: '#/components/schemas/AllowedNssai'
    sNssaiForMapping:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
      minItems: 1
    requestedNssai:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
      minItems: 1
    defaultConfiguredSnssaiInd:
      Type: boolean
    mappingOfNssai:
      Type: array
      Items:
        Reference: '#/components/schemas/MappingOfSnssai'
      minItems: 1
    requestMapping:
      Type: boolean
SliceInfoForPDUSession:
  Type: object
  Required:
    - sNssai

```



```

- roamingIndication
Properties:
  sNssai:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
  roamingIndication:
    Reference: '#/components/schemas/RoamingIndication'
  homeSnssai:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
SliceInfoForUEConfigurationUpdate:
Type: object
Properties:
  subscribedNssai:
    Type: array
    Items:
      Reference: '#/components/schemas/SubscribedSnssai'
    minItems: 1
  allowedNssaiCurrentAccess:
    Reference: '#/components/schemas/AllowedNssai'
  allowedNssaiOtherAccess:
    Reference: '#/components/schemas/AllowedNssai'
  defaultConfiguredSnssaiInd:
    Type: boolean
  requestedNssai:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    minItems: 1
  mappingOfNssai:
    Type: array
    Items:
      Reference: '#/components/schemas/MappingOfSnssai'
    minItems: 1
ConfiguredSnssai:
Type: object
Required:
- configuredSnssai
Properties:
  configuredSnssai:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
  mappedHomeSnssai:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
RoamingIndication:
anyOf:
- type: string
  enum:
- NON_ROAMING
- LOCAL_BREAKOUT
- HOME_ROUTED_ROAMING
- type: string
NsiId:
Type: string

```

External Docs

Description: 3GPP TS 29.531 V15.3.0; 5G System; Network Slice Selection Services; Stage 3

URL: http://www.3gpp.org/ftp/Specs/archive/29_series/29.531/



CHAPTER 7

Npcf_AMPolicyControl

The Access and Mobility Policy Control Service (Npcf_AMPolicyControl) is part of the Npcf service-based interface exhibited by the Policy Control Function (PCF).

The known consumers of the Npcf_AMPolicyControl service are the Access and Mobility Management Function (AMF) and the Visited Policy Control Function (V-PCF).

Reference: 3GPP TS 29.507 version 15.0.0 Release 15

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OpenAPI

OpenAPI Version: 3.0.0

Info

Description: Access and Mobility Policy Control Service API

Version: "1.0.0"

Title: Npcf_AMPolicyControl

Servers

URL: '{apiRoot}/npcf-am-policy-control/v1'

Variables:

API Root:

Default: <https://example.com>

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

Security

```
- {}
- oAuth2ClientCredentials:
  - npcf-am-policy-control
```

Paths

/policies

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PolicyAssociationRequest'

Responses:

'201':

Description: Created

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PolicyAssociation'

Headers:

Location:

description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/npcf-am-policy-control/v1/policies/{polAssoId}'

Required/Optional: true

Schema:

Type: string

'400':

Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'401':

Reference: 'TS29571_CommonData.yaml#/components/responses/401'

'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'
Callbacks:
  policyUpdateNotification:
    '{$request.body#/notificationUri}/update':
      Method: Post
      Request Body:
        Required/Optional: true
        Content:
          Application/JSON:
            Schema:
              Reference: '#/components/schemas/PolicyUpdate'

      Responses:
        '204':
          Description: No Content, Notification was succesfull
        '307':
          Description: temporary redirect
        '400':
          Reference: 'TS29571_CommonData.yaml#/components/responses/400'
        '401':
          Reference: 'TS29571_CommonData.yaml#/components/responses/401'
        '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'
  policyAssociationTerminationRequestNotification:
    '{$request.body#/notificationUri}/terminate':
      Method: Post
      Request Body:
        Required/Optional: true
        Content:

```

Application/JSON:**Schema:****Reference:** '#/components/schemas/TerminationNotification'**Responses:****'204':****Description:** No Content, Notification was succesfull**'307':****Description:** temporary redirect**'400':****Reference:** 'TS29571_CommonData.yaml#/components/responses/400'**'401':****Reference:** 'TS29571_CommonData.yaml#/components/responses/401'**'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'

/policies/{polAssold}

get:**Parameters:****- Name:** polAssoId**In:** path**Description:** Identifier of a policy association**Required/Optional:** true**Schema:****Type:** string**Responses:****'200':****Description:** OK. Resource representation is returned**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/PolicyAssociation'

```
'400':  
  Reference: 'TS29571_CommonData.yaml#/components/responses/400'  
'401':  
  Reference: 'TS29571_CommonData.yaml#/components/responses/401'  
'403':  
  Reference: 'TS29571_CommonData.yaml#/components/responses/403'  
'404':  
  Reference: 'TS29571_CommonData.yaml#/components/responses/404'  
'406':  
  Reference: 'TS29571_CommonData.yaml#/components/responses/406'  
'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'  
delete:
```

Parameters:

```
- Name: polAssoid  
  In: path  
  Description: Identifier of a policy association  
  Required/Optional: true  
  Schema:  
    Type: string
```

Responses:

```
'204':  
  Description: No Content. Resource was succesfully deleted  
'400':  
  Reference: 'TS29571_CommonData.yaml#/components/responses/400'  
'401':  
  Reference: 'TS29571_CommonData.yaml#/components/responses/401'  
'403':  
  Reference: 'TS29571_CommonData.yaml#/components/responses/403'  
'404':  
  Reference: 'TS29571_CommonData.yaml#/components/responses/404'  
'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'
```

/policies/{polAssold}/update

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PolicyAssociationUpdateRequest'

Parameters:

- **Name:** polAssoId

In: path

Description: Identifier of a policy association

Required/Optional: true

Schema:

Type: string

Responses:

'200':

Description: OK. Updated policies are returned

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PolicyUpdate'

'400':

Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'401':

Reference: 'TS29571_CommonData.yaml#/components/responses/401'

'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:
          npcf-am-policy-control: Access to the Npcf_AMPolicyControl API

schemas:
  PolicyAssociation:
    Type: object
    Properties:
      request:
        Reference: '#/components/schemas/PolicyAssociationRequest'
      triggers:
        Type: array
        Items:
          Reference: '#/components/schemas/RequestTrigger'
        minItems: 1
        Description: Request Triggers that the PCF subscribes. Only values "LOC_CH" and
"PRA_CH" are permitted.
      servAreaRes:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/ServiceAreaRestriction'
      rfsp:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/RfspIndex'
      pras:
        Type: object
        additionalProperties:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/PresenceInfo'
        minProperties: 1
      suppFeat:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    Required:
      - suppFeat
  PolicyAssociationRequest:
    Type: object
    Properties:
      notificationUri:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
      altNotifIpv4Addrs:
        Type: array
        Items:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
        minItems: 1
        Description: Alternate or backup IPv4 Address(es) where to send Notifications.
      altNotifIpv6Addrs:

```

```

    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'
    minItems: 1
    Description: Alternate or backup IPv6 Address(es) where to send Notifications.
  supi:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
  gpsi:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
  accessType:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
  pei:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'
  userLoc:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
  timeZone:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/TimeZone'
  servingPlmn:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NetworkId'
  ratType:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'
  groupIds:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
    minItems: 1
  servAreaRes:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/ServiceAreaRestriction'
  rfsp:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/RfspIndex'
  guami:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'
  serviveName:
    Type: string
    Description: If the NF service consumer is an AMF, it should provide the name of
    a service produced by the AMF that makes use of information received within the
    Npcf_AMPolicyControl_UpdateNotify service operation.
  traceReq:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
  suppFeat:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  Required:
    - notificationUri
    - suppFeat
    - supi
PolicyAssociationUpdateRequest:
  Type: object
  Properties:
    notificationUri:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    altNotifIpv4Addrs:
      Type: array

```

```

    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
    minItems: 1
    Description: Alternate or backup IPv4 Address(es) where to send Notifications.
  altNotifIpv6Addrs:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'
    minItems: 1
    Description: Alternate or backup IPv6 Address(es) where to send Notifications.
  triggers:
    Type: array
    Items:
      Reference: '#/components/schemas/RequestTrigger'
    minItems: 1
    Description: Request Triggers that the NF service consumer observes.
  servAreaRes:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/ServiceAreaRestriction'
  rfsp:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/RfspIndex'
  praStatuses:
    Type: object
    additionalProperties:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PresenceInfo'
    minProperties: 1
    Description: Map of PRA status information.
  userLoc:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
  traceReq:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
PolicyUpdate:
  Type: object
  Properties:
    resourceUri:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    triggers:
      Type: array
      Items:
        Reference: '#/components/schemas/RequestTrigger'
      minItems: 1
      nullable: true
      Description: Request Triggers that the PCF subscribes. Only values "LOC_CH" and
"PRA_CH" are permitted.
    servAreaRes:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/ServiceAreaRestriction'
    rfsp:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RfspIndex'
  pras:
    Type: object
    additionalProperties:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PresenceInfoRm'
    Description: Map of PRA information.

```

```

    minProperties: 1
    nullable: true
  Required:
    - resourceUri
  TerminationNotification:
    Type: object
  Properties:
    resourceUri:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    cause:
      Reference: '#/components/schemas/PolicyAssociationReleaseCause'
  Required:
    - resourceUri
    - cause
  RequestTrigger:
    anyOf:
    - type: string
      enum:
        - LOC_CH
        - PRA_CH
        - SERV_AREA_CH
        - RFSP_CH
    - 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
        - LOC_CH: Location change (tracking area). The tracking area of the UE has changed.
        - PRA_CH: Change of UE presence in PRA. The UE is entering/leaving a Presence Reporting
        Area.
        - SERV_AREA_CH: Service Area Restriction change. The UDM notifies the AMF that the
        subscribed service area restriction information has changed.
        - RFSP_CH: RFSP index change. The UDM notifies the AMF that the subscribed RFSP index
        has changed.
    PolicyAssociationReleaseCause:
      anyOf:
      - type: string
        enum:
          - UNSPECIFIED
          - UE_SUBSCRIPTION
          - INSUFFICIENT_RES
      - 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
          - UNSPECIFIED: This value is used for unspecified reasons.
          - UE_SUBSCRIPTION: This value is used to indicate that the session needs to be
          terminated because the subscription of UE has changed (e.g. was removed).
          - INSUFFICIENT_RES: This value is used to indicate that the server is overloaded and
          needs to abort the session.

```



CHAPTER 8

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

```

        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'

```

/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:

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:

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
```



CHAPTER 9

Nudm_SDM

This service is used by Consumer NFs (AMF, SMF, SMSF) to retrieve the UE's individual subscription data relevant to the consumer NF from the UDM.

Reference: 3GPP TS 29.503 Unified Data Management Services, version 15.3.0

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- [External Docs, on page 216](#)

OpenAPI

OpenAPI Version: 3.0.0

Info

Version: '2.1.0.alpha-4'

Title: 'Nudm_SDM'

Description: |

Nudm Subscriber Data Management Service.

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Servers

URL: '{apiRoot}/nudm-sdm/v2'

Variables:

API Root:

Default: `https://example.com`

Description: apiRoot as defined in clause 4.4 of 3GPP TS 29.501.

Security

```
- oAuth2ClientCredentials:
  - nudm-sdm
- {}
```

Paths

{supi}

get:

Summary: retrieve multiple data sets

Operation ID: GetDataSets

Tags:

- Retrieval of multiple data sets

Parameters:

- **Name:** supi
 - In:** path
 - Description:** Identifier of the UE
 - Required/Optional:** true
 - Schema:**
 - Reference:** 'TS29571_CommonData.yaml#/components/schemas/Supi'
- **Name:** dataset-names
 - In:** query
 - Style:** form
 - Explode:** false
 - Description:** List of dataset names
 - Required/Optional:** true
 - Schema:**
 - Reference:** '#/components/schemas/DatasetNames'
- **Name:** plmn-id
 - In:** query
 - Description:** serving PLMN ID
 - Content:**
 - Application/JSON:**
 - Schema:**
 - Reference:** 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
- **Name:** supported-features
 - In:** query
 - Description:** Supported Features
 - Schema:**
 - Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
- **Name:** If-None-Match
 - In:** header
 - Description:** Validator for conditional requests, as described in RFC 7232, 3.2

Schema:
Type: string

- **Name:** If-Modified-Since
In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.3
Schema:
Type: string

Responses:

'200':
Description: Expected response to a valid request
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/SubscriptionDataSets'

Headers:
Cache-Control:
Description: Cache-Control containing max-age, as described in RFC 7234, 5.2
Schema:
Type: string

ETag:
Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
Schema:
Type: string

Last-Modified:
Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2
Schema:
Type: string

'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'404':
Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:
Description: Unexpected error

/{supi}/nssai

get:
Summary: retrieve a UE's subscribed NSSAI
Operation ID: GetNSSAI

Tags:
- Slice Selection Subscription Data Retrieval

Parameters:

- **Name:** supi
In: path
Description: Identifier of the UE
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
- **Name:** supported-features
In: query
Description: Supported Features
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
- **Name:** plmn-id
In: query
Description: serving PLMN ID
Content:
Application/JSON:
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
- **Name:** If-None-Match
In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.2
Schema:
Type: string
- **Name:** If-Modified-Since
In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.3
Schema:
Type: string

Responses:

- '200':
Description: Expected response to a valid request
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/Nssai'
- Headers:**
Cache-Control:
Description: Cache-Control containing max-age, as described in RFC 7234, 5.2
Schema:
Type: string
- ETag:**
Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
Schema:
Type: string
- Last-Modified:**
Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2
Schema:

Type: string

'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'404':
Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:
Description: Unexpected error

/{supi}/am-data

get:

Summary: retrieve a UE's Access and Mobility Subscription Data
Operation ID: GetAmData

Tags:

- Access and Mobility Subscription Data Retrieval

Parameters:

- **Name:** supi
In: path
Description: Identifier of the UE
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
- **Name:** supported-features
In: query
Description: Supported Features
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
- **Name:** plmn-id
In: query
Description: serving PLMN ID
Content:
Application/JSON:
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
- **Name:** If-None-Match
In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.2
Schema:
Type: string
- **Name:** If-Modified-Since
In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.3
Schema:
Type: string

Responses:**'200':****Description:** Expected response to a valid request**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/AccessAndMobilitySubscriptionData'**Headers:****Cache-Control:****Description:** Cache-Control containing max-age, as described in RFC 7234, 5.2**Schema:****Type:** string**ETag:****Description:** Entity Tag, containing a strong validator, as described in RFC 7232, 2.3**Schema:****Type:** string**Last-Modified:****Description:** Timestamp for last modification of the resource, as described in RFC 7232, 2.2**Schema:****Type:** string**'400':****Reference:** 'TS29571_CommonData.yaml#/components/responses/400'**'404':****Reference:** 'TS29571_CommonData.yaml#/components/responses/404'**'500':****Reference:** 'TS29571_CommonData.yaml#/components/responses/500'**'503':****Reference:** 'TS29571_CommonData.yaml#/components/responses/503'**Default:****Description:** Unexpected error

/{supi}/am-data/ecr-data

get:**Summary:** retrieve a UE's subscribed Enhanced Coverage Restriction Data**Operation ID:** GetEcrData**Tags:**

- Enhanced Coverage Restriction Data Retrieval

Parameters:- **Name:** supi**In:** path**Description:** Identifier of the UE**Required/Optional:** true**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Supi'- **Name:** supported-features

In: query
Description: Supported Features
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

- **Name:** If-None-Match
In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.2
Schema:
Type: string

- **Name:** If-Modified-Since
In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.3
Schema:
Type: string

Responses:

'200':
Description: Expected response to a valid request
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/EnhancedCoverageRestrictionData'

Headers:

Cache-Control:
Description: Cache-Control containing max-age, as described in RFC 7234, 5.2
Schema:
Type: string

ETag:
Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
Schema:
Type: string

Last-Modified:
Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2
Schema:
Type: string

'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'404':
Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:
Description: Unexpected error

/{supi}/smf-select-data

get:

Summary: retrieve a UE's SMF Selection Subscription Data

Operation ID: GetSmfSelData

Tags:

- SMF Selection Subscription Data Retrieval

Parameters:

- **Name:** supi
In: path
Description: Identifier of the UE
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
- **Name:** supported-features
In: query
Description: Supported Features
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
- **Name:** plmn-id
In: query
Description: serving PLMN ID
Content:
Application/JSON:
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
- **Name:** If-None-Match
In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.2
Schema:
Type: string
- **Name:** If-Modified-Since
In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.3
Schema:
Type: string

Responses:

'200':

Description: Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmfSelectionSubscriptionData'

Headers:

Cache-Control:

Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

Schema:

Type: string

ETag:

Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

Schema:

Type: string

Last-Modified:

Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

Schema:

Type: string

'400':

Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'404':

Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'500':

Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':

Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:

Description: Unexpected error

/{supi}/ue-context-in-smf-data

get:

Summary: retrieve a UE's UE Context In SMF Data

Operation ID: GetUeCtxInSmfData

Tags:

- UE Context In SMF Data Retrieval

Parameters:

- **Name:** supi
In: path
Description: Identifier of the UE
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
- **Name:** supported-features
In: query
Description: Supported Features
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Responses:

- '200':**
Description: Expected response to a valid request
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/UeContextInSmfData'

'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'
 '404':
Reference: 'TS29571_CommonData.yaml#/components/responses/404'
 '500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'
 '503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'
Default:
Description: Unexpected error

/{supi}/ue-context-in-smsf-data

get:

Summary: retrieve a UE's UE Context In SMSF Data

Operation ID: GetUeCtxInSmsfData

Tags:

- UE Context In SMSF Data Retrieval

Parameters:

- **Name:** supi

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

- **Name:** supported-features

In: query

Description: Supported Features

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Responses:

'200':

Description: Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/UeContextInSmsfData'

'400':

Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'404':

Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'500':

Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':

Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:

Description: Unexpected error

/{supi}/trace-data

get:

Summary: retrieve a UE's Trace Configuration Data

Operation ID: GetTraceConfigData

Tags:

- Trace Configuration Data Retrieval

Parameters:

- **Name:** supi

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

- **Name:** supported-features

In: query

Description: Supported Features

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

- **Name:** plmn-id

In: query

Description: serving PLMN ID

Content:

Application/JSON:

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

- **Name:** If-None-Match

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.2

Schema:

Type: string

- **Name:** If-Modified-Since

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.3

Schema:

Type: string

Responses:

'200':

Description: Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TraceDataResponse'

Headers:

Cache-Control:

Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

Schema:

Type: string

ETag:
Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

Schema:
Type: string

Last-Modified:
Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

Schema:
Type: string

'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'404':
Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:
Description: Unexpected error

/supi/sm-data

get:

Summary: retrieve a UE's Session Management Subscription Data

Operation ID: GetSmData

Tags:

- Session Management Subscription Data Retrieval

Parameters:

- **Name:** supi

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

- **Name:** supported-features

In: query

Description: Supported Features

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

- **Name:** single-nssai

In: query

Content:

Application/JSON:

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'

- **Name:** dnn

In: query

Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'

- **Name:** plmn-id
In: query
Content:
Application/JSON:
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
- **Name:** If-None-Match
In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.2
Schema:
Type: string
- **Name:** If-Modified-Since
In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.3
Schema:
Type: string

Responses:

'200':
Description: Expected response to a valid request
Content:
Application/JSON:
Schema:
Type: array
Items:
Reference: '#/components/schemas/SessionManagementSubscriptionData'
Min Items: 1

Headers:

Cache-Control:
Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

Schema:
Type: string

ETag:
Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

Schema:
Type: string

Last-Modified:
Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

Schema:
Type: string

'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'404':
Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':

Reference: 'TS29571_CommonData.yaml#/components/responses/503'
Default:
Description: Unexpected error

/{supi}/sms-data

get:

Summary: retrieve a UE's SMS Subscription Data

Operation ID: GetSmsData

Tags:

- SMS Subscription Data Retrieval

Parameters:

- **Name:** supi
In: path
Description: Identifier of the UE
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
- **Name:** supported-features
In: query
Description: Supported Features
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
- **Name:** plmn-id
In: query
Content:
Application/JSON:
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
- **Name:** If-None-Match
In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.2
Schema:
Type: string
- **Name:** If-Modified-Since
In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.3
Schema:
Type: string

Responses:

- '200':
Description: Expected response to a valid request
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/SmsSubscriptionData'
Headers:
Cache-Control:

Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

Schema:
Type: string

ETag:
Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

Schema:
Type: string

Last-Modified:
Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

Schema:
Type: string

'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'404':
Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:
Description: Unexpected error

/{supi}/sms-mng-data

get:

Summary: retrieve a UE's SMS Management Subscription Data

Operation ID: GetSmsMngtData

Tags:

- SMS Management Subscription Data Retrieval

Parameters:

- **Name:** supi

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

- **Name:** supported-features

In: query

Description: Supported Features

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

- **Name:** plmn-id

In: query

Content:

Application/JSON:

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

- **Name:** If-None-Match
 - In:** header
 - Description:** Validator for conditional requests, as described in RFC 7232, 3.2
 - Schema:**
 - Type:** string
- **Name:** If-Modified-Since
 - In:** header
 - Description:** Validator for conditional requests, as described in RFC 7232, 3.3
 - Schema:**
 - Type:** string

Responses:

'200':

- Description:** Expected response to a valid request
- Content:**
 - Application/JSON:**
 - Schema:**
 - Reference:** '#/components/schemas/SmsManagementSubscriptionData'
 - Headers:**
 - Cache-Control:**
 - Description:** Cache-Control containing max-age, as described in RFC 7234, 5.2
 - Schema:**
 - Type:** string
 - ETag:**
 - Description:** Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
 - Schema:**
 - Type:** string
 - Last-Modified:**
 - Description:** Timestamp for last modification of the resource, as described in RFC 7232, 2.2
 - Schema:**
 - Type:** string
- '400':**
 - Reference:** 'TS29571_CommonData.yaml#/components/responses/400'
- '404':**
 - Reference:** 'TS29571_CommonData.yaml#/components/responses/404'
- '500':**
 - Reference:** 'TS29571_CommonData.yaml#/components/responses/500'
- '503':**
 - Reference:** 'TS29571_CommonData.yaml#/components/responses/503'
- Default:**
 - Description:** Unexpected error

/ueid/lcs-privacy-data

get:

Summary: retrieve a UE's LCS Privacy Subscription Data
Operation ID: GetLcsPrivacyData

Tags:

- LCS Privacy Data Retrieval

Parameters:

- **Name:** ueId
In: path
Description: Identifier of the UE
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
- **Name:** supported-features
In: query
Description: Supported Features
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
- **Name:** If-None-Match
In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.2
Schema:
Type: string
- **Name:** If-Modified-Since
In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.3
Schema:
Type: string

Responses:**'200':****Description:** Expected response to a valid request**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/LcsPrivacyData'**Headers:****Cache-Control:****Description:** Cache-Control containing max-age, as described in RFC 7234, 5.2**Schema:****Type:** string**ETag:****Description:** Entity Tag, containing a strong validator, as described in RFC 7232, 2.3**Schema:****Type:** string**Last-Modified:****Description:** Timestamp for last modification of the resource, as described in RFC 7232, 2.2**Schema:****Type:** string**'400':****Reference:** 'TS29571_CommonData.yaml#/components/responses/400'**'404':**

Reference: 'TS29571_CommonData.yaml#/components/responses/404'
'500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'
'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'
Default:
Description: Unexpected error

/{supi}/lcs-mo-data

get:

Summary: retrieve a UE's LCS Mobile Originated Subscription Data

Operation ID: GetLcsMoData

Tags:

- LCS Mobile Originated Data Retrieval

Parameters:

- **Name:** supi
In: path
Description: Identifier of the UE
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
- **Name:** supported-features
In: query
Description: Supported Features
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
- **Name:** plmn-id
In: query
Content:
Application/JSON:
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
- **Name:** If-None-Match
In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.2
Schema:
Type: string
- **Name:** If-Modified-Since
In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.3
Schema:
Type: string

Responses:

- **'200':**
Description: Expected response to a valid request
Content:
Application/JSON:

```

    Schema:
      Reference: '#/components/schemas/LcsMoData'
  Headers:
    Cache-Control:
      Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

    Schema:
      Type: string
    ETag:
      Description: Entity Tag, containing a strong validator, as described in RFC
7232, 2.3
    Schema:
      Type: string
    Last-Modified:
      Description: Timestamp for last modification of the resource, as described
in RFC 7232, 2.2
    Schema:
      Type: string
  '400':
    Reference: 'TS29571_CommonData.yaml#/components/responses/400'
  '404':
    Reference: 'TS29571_CommonData.yaml#/components/responses/404'
  '500':
    Reference: 'TS29571_CommonData.yaml#/components/responses/500'
  '503':
    Reference: 'TS29571_CommonData.yaml#/components/responses/503'
  Default:
    Description: Unexpected error

```

/{ueId}/sdm-subscriptions

```

Method: Post
Summary: subscribe to notifications
Operation ID: Subscribe

Tags:
- Subscription Creation

Parameters:
- Name: ueId
  In: path
  Description: Identity of the user
  Required/Optional: true
  Schema:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
Request Body:
Content:
  Application/JSON:
    Schema:
      Reference: '#/components/schemas/SdmSubscription'
  Required/Optional: true

```

Responses:**'201':****Description:** Expected response to a valid request**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/SdmSubscription'**Headers:****Location:****description:** 'Contains the URI of the newly created resource, according to the structure:`{apiRoot}/nudm-sdm/<apiVersion>/{supi}/sdm-subscriptions/{subscriptionId}'`**Required/Optional:** true**Schema:****Type:** string**'400':****Reference:** 'TS29571_CommonData.yaml#/components/responses/400'**'404':****Reference:** 'TS29571_CommonData.yaml#/components/responses/404'**'500':****Reference:** 'TS29571_CommonData.yaml#/components/responses/500'**'501':****Reference:** 'TS29571_CommonData.yaml#/components/responses/501'**'503':****Reference:** 'TS29571_CommonData.yaml#/components/responses/503'**Default:****Description:** Unexpected error**Callbacks:****datachangeNotification:****'{request.body#/callbackReference}':****Method:** Post**Request Body:****Required/Optional:** true**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/ModificationNotification'**Responses:****'204':****Description:** Successful Notification response**'307':****Description:** Temporary Redirect**Content:****application/problem+json:****Schema:****Reference:**`'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'`**Headers:****Location:****Description:** 'Contains the new Callback URI of the target NF Service

Consumer (e.g. AMF) to which the request is redirected'

Required/Optional: true

Schema:

Type: string

'308':

Description: Permanent Redirect

Content:

application/problem+json:

Schema:

Reference:

'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

Headers:

Location:

Description: 'Contains the new Callback URI of the target NF Service Consumer (e.g. AMF) to which the request is redirected'

Required/Optional: true

Schema:

Type: string

'400':

Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'404':

Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'500':

Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':

Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:

Description: Unexpected error

/{ueId}/sdm-subscriptions/{subscriptionId}

delete:

Summary: unsubscribe from notifications

Operation ID: Unsubscribe

Tags:

- Subscription Deletion

Parameters:

- **Name:** ueId
In: path
Description: Identity of the user
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
- **Name:** subscriptionId
In: path
Description: Id of the SDM Subscription
Required/Optional: true
Schema:
Type: string

Responses:

- '204':
 - Description:** Successful response
- '400':
 - Reference:** 'TS29571_CommonData.yaml#/components/responses/400'
- '404':
 - Reference:** 'TS29571_CommonData.yaml#/components/responses/404'
- '500':
 - Reference:** 'TS29571_CommonData.yaml#/components/responses/500'
- '503':
 - Reference:** 'TS29571_CommonData.yaml#/components/responses/503'
- Default:**
 - Description:** Unexpected error

patch:

- Summary:** modify the subscription
- Operation ID:** Modify

Tags:

- Subscription Modification

Parameters:

- **Name:** ueId
 - In:** path
 - Description:** Identity of the user
 - Required/Optional:** true
 - Schema:**
 - Reference:** 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
- **Name:** subscriptionId
 - In:** path
 - Description:** Id of the SDM Subscription
 - Required/Optional:** true
 - Schema:**
 - Type:** string
- **Name:** supported-features
 - In:** query
 - Description:** Features required to be supported by the target NF
 - Schema:**
 - Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Request Body:

- Content:**
 - application/merge-patch+json:**
 - Schema:**
 - Reference:** '#/components/schemas/SdmSubsModification'
- Required/Optional:** true

Responses:

- '200':
 - Description:** Expected response to a valid request
 - Content:**
 - Application/JSON:**
 - Schema:**


```

    oneOf:
      - $ref: '#/components/schemas/SdmSubscription'
      - $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
  '400':
    Reference: 'TS29571_CommonData.yaml#/components/responses/400'
  '403':
    Reference: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    Reference: 'TS29571_CommonData.yaml#/components/responses/404'
  '500':
    Reference: 'TS29571_CommonData.yaml#/components/responses/500'
  '503':
    Reference: 'TS29571_CommonData.yaml#/components/responses/503'
  Default:
    Description: Unexpected error

```

/{ueId}/id-translation-result

get:

Summary: retrieve a UE's SUPI or GPSI

Operation ID: GetSupiOrGpsi

Tags:

- GPSI to SUPI Translation

Parameters:

- **Name:** ueId
 - In:** path
 - Description:** Identifier of the UE
 - Required/Optional:** true
 - Schema:**
 - Reference:** 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
- **Name:** supported-features
 - In:** query
 - Description:** Supported Features
 - Schema:**
 - Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
- **Name:** app-port-id
 - In:** query
 - Description:** Application port identifier
 - Content:**
 - Application/JSON:**
 - Schema:**
 - Reference:** '#/components/schemas/AppPortId'
- **Name:** If-None-Match
 - In:** header
 - Description:** Validator for conditional requests, as described in RFC 7232, 3.2
 - Schema:**
 - Type:** string
- **Name:** If-Modified-Since
 - In:** header

Description: Validator for conditional requests, as described in RFC 7232, 3.3

Schema:

Type: string

Responses:

'200':

Description: Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/IdTranslationResult'

Headers:

Cache-Control:

Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

Schema:

Type: string

ETag:

Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

Schema:

Type: string

Last-Modified:

Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

Schema:

Type: string

'400':

Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'404':

Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'500':

Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':

Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:

Description: Unexpected error

/{supi}/am-data/sor-ack

put:

Summary: Nudm_Sdm Info service operation

Operation ID: SorAckInfo

Tags:

- Providing acknowledgement of Steering of Roaming

Parameters:

- **Name:** supi

In: path

Description: Identifier of the UE

```

    Required/Optional: true
    Schema:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
Request Body:
  Content:
    Application/JSON:
      Schema:
        Reference: '#/components/schemas/AcknowledgeInfo'

Responses:
  '204':
    Description: Successful acknowledgement
  '400':
    Reference: 'TS29571_CommonData.yaml#/components/responses/400'
  '500':
    Reference: 'TS29571_CommonData.yaml#/components/responses/500'
  '503':
    Reference: 'TS29571_CommonData.yaml#/components/responses/503'
Default:
  Description: Unexpected error

```

/{supi}/am-data/upu-ack

```

put:
  Summary: Nudm_Sdm Info for UPU service operation
  Operation ID: UpuAck

Tags:
  - Providing acknowledgement of UE Parameters Update

Parameters:
  - Name: supi
    In: path
    Description: Identifier of the UE
    Required/Optional: true
    Schema:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
Request Body:
  Content:
    Application/JSON:
      Schema:
        Reference: '#/components/schemas/AcknowledgeInfo'

Responses:
  '204':
    Description: Successful acknowledgement
  '400':
    Reference: 'TS29571_CommonData.yaml#/components/responses/400'
  '500':
    Reference: 'TS29571_CommonData.yaml#/components/responses/500'
  '503':

```

Reference: 'TS29571_CommonData.yaml#/components/responses/503'
Default:
Description: Unexpected error

/{supi}/am-data/subscribed-snssais-ack

put:

Summary: Nudm_Sdm Info operation for S-NSSAIs acknowledgement
Operation ID: S-NSSAIs Ack

Tags:

- Providing acknowledgement of S-NSSAIs Update

Parameters:

- **Name:** supi
In: path
Description: Identifier of the UE
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

Request Body:

Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/AcknowledgeInfo'

Responses:

'204':
Description: Successful acknowledgement
'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'
'500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'
'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'
Default:
Description: Unexpected error

/{supi}/am-data/cag-ack

put:

Summary: Nudm_Sdm Info operation for CAG acknowledgement
Operation ID: CAG Ack

Tags:

- Providing acknowledgement of CAG Update

Parameters:

- **Name:** supi
In: path

Description: Identifier of the UE
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
Request Body:
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/AcknowledgeInfo'
Responses:
'204':
Description: Successful acknowledgement
'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'
'500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'
'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'
Default:
Description: Unexpected error

/{supi}/am-data/update-sor

Method: Post
Summary: Nudm_Sdm custom operation to trigger SOR info update
Operation ID: Update SOR Info
Tags:
 - Trigger SOR info update
Parameters:
 - **Name:** supi
In: path
Description: Identifier of the UE
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
Request Body:
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/SorUpdateInfo'
Responses:
'200':
Description: Expected response to a valid request
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/SorInfo'

```

'400':
  Reference: 'TS29571_CommonData.yaml#/components/responses/400'
'404':
  Reference: 'TS29571_CommonData.yaml#/components/responses/404'
'500':
  Reference: 'TS29571_CommonData.yaml#/components/responses/500'
'503':
  Reference: 'TS29571_CommonData.yaml#/components/responses/503'
Default:
  Description: Unexpected error

```

/shared-data

get:

Summary: retrieve shared data

Operation ID: GetSharedData

Tags:

- Retrieval of shared data

Parameters:

- **Name:** shared-data-ids
In: query
Description: List of shared data ids
Required/Optional: true
Style: form
Explode: false
Schema:
Reference: '#/components/schemas/SharedDataIds'
- **Name:** supportedFeatures
In: query
Description: Supported Features
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
- **Name:** If-None-Match
In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.2
Schema:
Type: string
- **Name:** If-Modified-Since
In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.3
Schema:
Type: string

Responses:

```

'200':
  Description: Expected response to a valid request
  Content:
    Application/JSON:
      Schema:

```

```

    Type: array
    Items:
      Reference: '#/components/schemas/SharedData'
    Min Items: 1
  Headers:
    Cache-Control:
      Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

    Schema:
      Type: string
    ETag:
      Description: Entity Tag, containing a strong validator, as described in RFC
7232, 2.3
    Schema:
      Type: string
    Last-Modified:
      Description: Timestamp for last modification of the resource, as described
in RFC 7232, 2.2
    Schema:
      Type: string
  '400':
    Reference: 'TS29571_CommonData.yaml#/components/responses/400'
  '404':
    Reference: 'TS29571_CommonData.yaml#/components/responses/404'
  '500':
    Reference: 'TS29571_CommonData.yaml#/components/responses/500'
  '503':
    Reference: 'TS29571_CommonData.yaml#/components/responses/503'
  Default:
    Description: Unexpected error

```

/shared-data-subscriptions

```

Method: Post
Summary: subscribe to notifications for shared data
Operation ID: SubscribeToSharedData

Tags:
- Subscription Creation for shared data
Request Body:
Content:
  Application/JSON:
    Schema:
      Reference: '#/components/schemas/SdmSubscription'
  Required/Optional: true

Responses:
  '201':
    Description: Expected response to a valid request
    Content:
      Application/JSON:

```

```

    Schema:
      Reference: '#/components/schemas/SdmSubscription'
  Headers:
    Location:
      description: 'Contains the URI of the newly created resource,
according to the structure:
{apiRoot}/nudm-sdm/<apiVersion>/shared-data-subscriptions/{subscriptionId}'
      Required/Optional: true
    Schema:
      Type: string
  '400':
    Reference: 'TS29571_CommonData.yaml#/components/responses/400'
  '404':
    Reference: 'TS29571_CommonData.yaml#/components/responses/404'
  Default:
    Description: Unexpected error
  Callbacks:
    datachangeNotification:
      '{request.body#/callbackReference}':
        Method: Post
        Request Body:
          Required/Optional: true
          Content:
            Application/JSON:
              Schema:
                Reference: '#/components/schemas/ModificationNotification'

  Responses:
    '204':
      Description: Successful Notification response
    '400':
      Reference: 'TS29571_CommonData.yaml#/components/responses/400'
    '404':
      Reference: 'TS29571_CommonData.yaml#/components/responses/404'
    '500':
      Reference: 'TS29571_CommonData.yaml#/components/responses/500'
    '503':
      Reference: 'TS29571_CommonData.yaml#/components/responses/503'
  Default:
    Description: Unexpected error

```

/shared-data-subscriptions/{subscriptionId}

```

delete:
  Summary: unsubscribe from notifications for shared data
  Operation ID: UnsubscribeForSharedData

  Tags:
    - Subscription Deletion for shared data

  Parameters:

```


- **Name:** subscriptionId
In: path
Description: Id of the Shared data Subscription
Required/Optional: true
Schema:
Type: string

Responses:

'204':
Description: Successful response
'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'
'404':
Reference: 'TS29571_CommonData.yaml#/components/responses/404'
'500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'
'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'
Default:
Description: Unexpected error

patch:

Summary: modify the subscription
Operation ID: ModifySharedDataSubs

Tags:

- Subscription Modification

Parameters:

- **Name:** subscriptionId
In: path
Description: Id of the SDM Subscription
Required/Optional: true
Schema:
Type: string
- **Name:** supported-features
In: query
Description: Features required to be supported by the target NF
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Request Body:

Content:
application/merge-patch+json:
Schema:
Reference: '#/components/schemas/SdmSubsModification'
Required/Optional: true

Responses:

'200':
Description: Expected response to a valid request
Content:
Application/JSON:
Schema:

```

      oneOf:
        - $ref: '#/components/schemas/SdmSubscription'
        - $ref: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
    '400':
      Reference: 'TS29571_CommonData.yaml#/components/responses/400'
    '403':
      Reference: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      Reference: 'TS29571_CommonData.yaml#/components/responses/404'
    '500':
      Reference: 'TS29571_CommonData.yaml#/components/responses/500'
    '503':
      Reference: 'TS29571_CommonData.yaml#/components/responses/503'
  Default:
    Description: Unexpected error

```

/group-data/group-identifiers

get:

Summary: Mapping of Group Identifiers

Operation ID: GetGroupIdentifiers

Tags:

- Group Identifiers

Parameters:

- **Name:** ext-group-id
In: query
Description: External Group Identifier
Required/Optional: false
Schema:
Reference: '#/components/schemas/ExtGroupId'
- **Name:** int-group-id
In: query
Description: Internal Group Identifier
Required/Optional: false
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
- **Name:** ue-id-ind
In: query
Description: Indication whether UE identifiers are required or not
Required/Optional: false
Schema:
Type: boolean
Default: false
- **Name:** supported-features
In: query
Description: Supported Features
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
- **Name:** If-None-Match

In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.2
Schema:
Type: string

- **Name:** If-Modified-Since
In: header
Description: Validator for conditional requests, as described in RFC 7232, 3.3
Schema:
Type: string

Responses:

'200':
Description: Expected response to a valid request
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/GroupIdentifiers'

Headers:

Cache-Control:
Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

Schema:
Type: string

ETag:
Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3
Schema:
Type: string

Last-Modified:
Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2
Schema:
Type: string

'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'404':
Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:
Description: Unexpected error

Components

securitySchemes:

- oAuth2ClientCredentials:
 - Type:** oauth2
 - Flows:**

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    clientCredentials:
      tokenUrl: '{nrfApiRoot}/oauth2/token'
      scopes:
        nudm-sdm: Access to the nudm-sdm API

schemas:
# COMPLEX TYPES:
DatasetNames:
  Type: array
  Items:
    Reference: '#/components/schemas/DataSetName'
  minItems: 2
  uniqueItems: true
SubscriptionDataSets:
  Type: object
  Properties:
    amData:
      Reference: '#/components/schemas/AccessAndMobilitySubscriptionData'
    smfSelData:
      Reference: '#/components/schemas/SmfSelectionSubscriptionData'
    uecSmfData:
      Reference: '#/components/schemas/UeContextInSmfData'
    uecSmsfData:
      Reference: '#/components/schemas/UeContextInSmsfData'
    smsSubsData:
      Reference: '#/components/schemas/SmsSubscriptionData'
    smData:
      Type: array
      Items:
        Reference: '#/components/schemas/SessionManagementSubscriptionData'
      minItems: 1
    traceData:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
    smsMngData:
      Reference: '#/components/schemas/SmsManagementSubscriptionData'
    lcsPrivacyData:
      Reference: '#/components/schemas/LcsPrivacyData'
    lcsMoData:
      Reference: '#/components/schemas/LcsMoData'
UeContextInSmsfData:
  Type: object
  Properties:
    smsfInfo3GppAccess:
      Reference: '#/components/schemas/SmsfInfo'
    smsfInfoNon3GppAccess:
      Reference: '#/components/schemas/SmsfInfo'
SmsfInfo:
  Type: object
  Required:
    - smsfInstanceId
    - plmnId
  Properties:

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smsfInstanceId:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
plmnId:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
AccessAndMobilitySubscriptionData:
Type: object
Properties:
  supportedFeatures:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  gpsis:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
  internalGroupIds:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
    minItems: 1
  vnGroupInfo:
    Type: object
    additionalProperties:
      Reference: '#/components/schemas/VnGroupData'
    minProperties: 1
  sharedVnGroupDataIds:
    Type: object
    additionalProperties:
      Reference: '#/components/schemas/SharedDataId'
    minProperties: 1
  subscribedUeAmbr:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/AmbrRm'
  nssai:
    Reference: '#/components/schemas/Nssai'
  ratRestrictions:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'
  forbiddenAreas:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Area'
  serviceAreaRestriction:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/ServiceAreaRestriction'
  coreNetworkTypeRestrictions:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/CoreNetworkType'
  rfspIndex:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/RfspIndexRm'
  subsRegTimer:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/DurationSecRm'
  ueUsageType:

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    Reference: '#/components/schemas/UeUsageType'
  mpsPriority:
    Reference: '#/components/schemas/MpsPriorityIndicator'
  mcsPriority:
    Reference: '#/components/schemas/McsPriorityIndicator'
  activeTime:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/DurationSecRm'
  dlPacketCount:
    Reference: '#/components/schemas/DlPacketCount'
  sorInfo:
    Reference: '#/components/schemas/SorInfo'
  sorInfoExpectInd:
    Type: boolean
  sorafRetrieval:
    Type: boolean
    Default: false
  sorUpdateIndicatorList:
    Type: array
    Items:
      Reference: '#/components/schemas/SorUpdateIndicator'
    minItems: 1
  upuInfo:
    Reference: '#/components/schemas/UpuInfo'
  micoAllowed:
    Reference: '#/components/schemas/MicoAllowed'
  sharedAmDataIds:
    Type: array
    Items:
      Reference: '#/components/schemas/SharedDataId'
    minItems: 1
  odbPacketServices:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/OdbPacketServices'
  subscribedDnnList:
    Type: array
    Items:
      anyOf:
        - $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
        - $ref: 'TS29571_CommonData.yaml#/components/schemas/WildcardDnn'
  serviceGapTime:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/DurationSec'
  traceData:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
  cagData:
    Reference: '#/components/schemas/CagData'
  stnSr:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/StnSr'
  cMsisdn:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/CMsisdn'
  nbIoTUEPriority:
    Reference: '#/components/schemas/NbIoTUEPriority'
  nssaiInclusionAllowed:
    Type: boolean

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    Default: false
rgWirelineCharacteristics:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/RgWirelineCharacteristics'

rgTMBR:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Tmbr'
ecRestrictionData:
    Reference: '#/components/schemas/EcRestrictionData'
expectedUeBehaviourList:
    Reference: '#/components/schemas/ExpectedUeBehaviourData'
maximumResponseTimeList:
    Type: array
    Items:
    Reference: '#/components/schemas/MaximumResponseTime'
    minItems: 1
maximumLatencyList:
    Type: array
    Items:
    Reference: '#/components/schemas/MaximumLatency'
    minItems: 1
primaryRatRestrictions:
    Type: array
    Items:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'
secondaryRatRestrictions:
    Type: array
    Items:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'
edrxParametersList:
    Type: array
    Items:
    Reference: '#/components/schemas/EdrxParameters'
    minItems: 1
ptwParametersList:
    Type: array
    Items:
    Reference: '#/components/schemas/PtwParameters'
    minItems: 1
iabOperationAllowed:
    Type: boolean
    Default: false
nrV2xServicesAuth:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NrV2xAuth'
lteV2xServicesAuth:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/LteV2xAuth'
nrUePc5Ambr:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
ltePc5Ambr:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/BitRate'
CagData:
    Type: object
    Required:

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- cagInfos
Properties:
  cagInfos:
    Description: A map (list of key-value pairs where PlmnId serves as key) of CagInfo

    Type: object
    additionalProperties:
      Reference: '#/components/schemas/CagInfo'
    provisioningTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
CagInfo:
  Type: object
  Required:
  - allowedCagList
  Properties:
    allowedCagList:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/CagId'
    cagOnlyIndicator:
      Type: boolean
SmfSelectionSubscriptionData:
  Type: object
  Properties:
    supportedFeatures:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    subscribedSnssaiInfos:
      Type: object
      additionalProperties:
        Reference: '#/components/schemas/SnssaiInfo'
    sharedSnssaiInfosId:
      Reference: '#/components/schemas/SharedDataId'
SnssaiInfo:
  Type: object
  Required:
  - dnnInfos
  Properties:
    dnnInfos:
      Type: array
      Items:
        Reference: '#/components/schemas/DnnInfo'
      minItems: 1
DnnInfo:
  Type: object
  Required:
  - dnn
  Properties:
    dnn:
      anyOf:
        - $ref: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
        - $ref: 'TS29571_CommonData.yaml#/components/schemas/WildcardDnn'
    defaultDnnIndicator:
      Reference: '#/components/schemas/DnnIndicator'

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lboRoamingAllowed:
  Reference: '#/components/schemas/LboRoamingAllowed'
iwkEpsInd:
  Reference: '#/components/schemas/IwkEpsInd'
dnnBarred:
  Type: boolean
Nssai:
  Type: object
  Required:
  - defaultSingleNssais
  Properties:
    supportedFeatures:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    defaultSingleNssais:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
      minItems: 1
    singleNssais:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
      minItems: 1
    provisioningTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    additionalSnssaiData:
      Type: object
      additionalProperties:
        Reference: '#/components/schemas/AdditionalSnssaiData'
      minProperties: 1
  nullable: true
UeContextInSmfData:
  Type: object
  Properties:
    pduSessions:
      Description: A map (list of key-value pairs where PduSessionId serves as key) of
      PduSessions
      Type: object
      additionalProperties:
        Reference: '#/components/schemas/PduSession'
    pgwInfo:
      Type: array
      Items:
        Reference: '#/components/schemas/PgwInfo'
      minItems: 1
    emergencyInfo:
      Reference: '#/components/schemas/EmergencyInfo'
EmergencyInfo:
  Type: object
  oneOf:
  - required:
    - pgwFqdn

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- required:
  - pgwIpAddress
Properties:
  pgwFqdn:
    Type: string
  pgwIpAddress:
    Reference: '#/components/schemas/IpAddress'
  smfInstanceId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
PduSession:
  Type: object
  Required:
  - dnn
  - smfInstanceId
  - plmnId
  Properties:
  dnn:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
  smfInstanceId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
  plmnId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
PgwInfo:
  Type: object
  Required:
  - dnn
  - pgwFqdn
  Properties:
  dnn:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
  pgwFqdn:
    Type: string
  plmnId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
SessionManagementSubscriptionData:
  Type: object
  Required:
  - singleNssai
  Properties:
  singleNssai:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
  dnnConfigurations:
    Description: A map (list of key-value pairs where Dnn, or optionally the Wildcard
    DNN, serves as key) of DnnConfigurations
    Type: object
    additionalProperties:
      Reference: '#/components/schemas/DnnConfiguration'
  internalGroupIds:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
    minItems: 1
  vnGroupInfo:

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    Type: object
    additionalProperties:
      Reference: '#/components/schemas/VnGroupData'
    minProperties: 1
  sharedVnGroupDataIds:
    Type: object
    additionalProperties:
      Reference: '#/components/schemas/SharedDataId'
    minProperties: 1
  sharedDnnConfigurationsId:
    Reference: '#/components/schemas/SharedDataId'
  odbPacketServices:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/OdbPacketServices'
  traceData:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
  sharedTraceDataId:
    Reference: '#/components/schemas/SharedDataId'
  expectedUeBehavioursList:
    Type: object
    additionalProperties:
      Reference: '#/components/schemas/ExpectedUeBehaviourData'
    minProperties: 1
  suggestedPacketNumDlList:
    Type: object
    additionalProperties:
      Reference: '#/components/schemas/SuggestedPacketNumDl'
    minProperties: 1
  3gppChargingCharacteristics:
    Reference: '#/components/schemas/3GppChargingCharacteristics'
DnnConfiguration:
  Type: object
  Required:
    - pduSessionTypes
    - sscModes
  Properties:
    pduSessionTypes:
      Reference: '#/components/schemas/PduSessionTypes'
    sscModes:
      Reference: '#/components/schemas/SscModes'
    iwkEpsInd:
      Reference: '#/components/schemas/IwkEpsInd'
    5gQosProfile:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SubscribedDefaultQos'
    sessionAmbr:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ambr'
    3gppChargingCharacteristics:
      Reference: '#/components/schemas/3GppChargingCharacteristics'
  staticIpAddress:
    Type: array
    Items:
      Reference: '#/components/schemas/IpAddress'
    minItems: 1

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    maxItems: 2
  upSecurity:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/UpSecurity'
  pduSessionContinuityInd:
    Reference: '#/components/schemas/PduSessionContinuityInd'
  invokeNefSelection:
    Type: boolean
  niddNefId:
    Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/NefId'
  niddInfo:
    Reference: '#/components/schemas/NiddInformation'
  redundantSessionAllowed:
    Type: boolean
  acsInfo:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/AcsInfo'
  ipv4FrameRouteList:
    Type: array
    Items:
      Reference: '#/components/schemas/FrameRouteInfo'
    minItems: 1
  ipv6FrameRouteList:
    Type: array
    Items:
      Reference: '#/components/schemas/FrameRouteInfo'
    minItems: 1
  atsssAllowed:
    Type: boolean
    Default: false
NiddInformation:
  Type: object
  Required:
    - afId
  Properties:
    afId:
      Type: string
    gpsi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
    extGroupId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/ExternalGroupId'
IpAddress:
  Type: object
  oneOf:
    - required:
      - ipv4Addr
    - required:
      - ipv6Addr
    - required:
      - ipv6Prefix
  Properties:
    ipv4Addr:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
    ipv6Addr:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'

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    ipv6Prefix:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'
PduSessionTypes:
  Type: object
  Required:
    - defaultSessionType
  Properties:
    defaultSessionType:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionType'
    allowedSessionTypes:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionType'
      minItems: 1
SscModes:
  Type: object
  Required:
    - defaultSscMode
  Properties:
    defaultSscMode:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SscMode'
    allowedSscModes:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/SscMode'
      minItems: 1
      maxItems: 2
SmsSubscriptionData:
  Type: object
  Properties:
    smsSubscribed:
      Reference: '#/components/schemas/SmsSubscribed'
    sharedSmsSubsDataId:
      Reference: '#/components/schemas/SharedDataId'
SmsManagementSubscriptionData:
  Type: object
  Properties:
    supportedFeatures:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    mtSmsSubscribed:
      Type: boolean
    mtSmsBarringAll:
      Type: boolean
    mtSmsBarringRoaming:
      Type: boolean
    moSmsSubscribed:
      Type: boolean
    moSmsBarringAll:
      Type: boolean
    moSmsBarringRoaming:
      Type: boolean
    sharedSmsMngDataIds:

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    Type: array
    Items:
      Reference: '#/components/schemas/SharedDataId'
    minItems: 1
  traceData:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
SdmSubscription:
  Type: object
  Required:
    - nfInstanceId
    - callbackReference
    - monitoredResourceUris
  Properties:
    nfInstanceId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
    implicitUnsubscribe:
      Type: boolean
    expires:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    callbackReference:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    amfServiceName:
      Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ServiceName'
    monitoredResourceUris:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
      minItems: 1
    singleNssai:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    dnn:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
    subscriptionId:
      Type: string
    plmnId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
    immediateReport:
      Type: boolean
      Default: false
    report:
      Reference: '#/components/schemas/SubscriptionDataSets'
SdmSubsModification:
  Type: object
  Properties:
    expires:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    monitoredResourceUris:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
      minItems: 1
  ModificationNotification:

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Type: object
Required:
  - notifyItems
Properties:
  notifyItems:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NotifyItem'
    minItems: 1
IdTranslationResult:
Type: object
Required:
  - supi
Properties:
  supportedFeatures:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  supi:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
  gpsi:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
AcknowledgeInfo:
Type: object
Required:
  - provisioningTime
Properties:
  sorMacIue:
    Reference: 'TS29509_Nausf_SoRProtection.yaml#/components/schemas/SorMac'
  upuMacIue:
    Reference: 'TS29509_Nausf_UPUProtection.yaml#/components/schemas/UpuMac'
  securedPacket:
    Reference: '#/components/schemas/SecuredPacket'
  provisioningTime:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
SorInfo:
Type: object
Properties:
  steeringContainer:
    Reference: '#/components/schemas/SteeringContainer'
  ackInd:
    Reference: 'TS29509_Nausf_SoRProtection.yaml#/components/schemas/AckInd'
  sorMacIausf:
    Reference: 'TS29509_Nausf_SoRProtection.yaml#/components/schemas/SorMac'
  countersor:
    Reference: 'TS29509_Nausf_SoRProtection.yaml#/components/schemas/CounterSor'
  provisioningTime:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
Required:
  - ackInd
  - provisioningTime
SharedDataIds:
Type: array
Items:

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    Reference: '#/components/schemas/SharedDataId'
  minItems: 1
  uniqueItems: true
UpuInfo:
  Type: object
  Properties:
    upuDataList:
      Type: array
      Items:
        Reference: 'TS29509_Nausf_UPUProtection.yaml#/components/schemas/UpuData'
        minItems: 1
    upuRegInd:
      Reference: '#/components/schemas/UpuRegInd'
    upuAckInd:
      Reference: 'TS29509_Nausf_UPUProtection.yaml#/components/schemas/UpuAckInd'
    upuMacIausf:
      Reference: 'TS29509_Nausf_UPUProtection.yaml#/components/schemas/UpuMac'
    counterUpu:
      Reference: 'TS29509_Nausf_UPUProtection.yaml#/components/schemas/CounterUpu'
    provisioningTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  Required:
    - upuDataList
    - upuAckInd
    - upuRegInd
    - provisioningTime
SharedData:
  Type: object
  Required:
    - sharedDataId
  Properties:
    sharedDataId:
      Reference: '#/components/schemas/SharedDataId'
    sharedAmData:
      Reference: '#/components/schemas/AccessAndMobilitySubscriptionData'
    sharedSmsSubsData:
      Reference: '#/components/schemas/SmsSubscriptionData'
    sharedSmsMngSubsData:
      Reference: '#/components/schemas/SmsManagementSubscriptionData'
    sharedDnnConfigurations:
      Type: object
      additionalProperties:
        Reference: '#/components/schemas/DnnConfiguration'
    sharedTraceData:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
    sharedSnssaiInfos:
      Type: object
      additionalProperties:
        Reference: '#/components/schemas/SnssaiInfo'
    sharedVnGroupDatAs:
      Type: object
      additionalProperties:

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        Reference: '#/components/schemas/VnGroupData'
      minProperties: 1
    TraceDataResponse:
      Type: object
      Properties:
        traceData:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
        sharedTraceDataId:
          Reference: '#/components/schemas/SharedDataId'
    SteeringContainer:
      oneOf:
        - type: array
          Items:
            Reference: 'TS29509_Nausf_SoRProtection.yaml#/components/schemas/SteeringInfo'

      minItems: 1
      - $ref: '#/components/schemas/SecuredPacket'
    GroupIdentifiers:
      Type: object
      Properties:
        extGroupId:
          Reference: '#/components/schemas/ExtGroupId'
        intGroupId:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
        ueIdList:
          Type: array
          Items:
            Reference: '#/components/schemas/UeId'
          minItems: 1
    VnGroupData:
      Type: object
      Properties:
        pduSessionTypes:
          Reference: '#/components/schemas/PduSessionTypes'
        dnn:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
        singleNssai:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
        appDescriptors:
          Type: array
          Items:
            Reference: '#/components/schemas/AppDescriptor'
          minItems: 1
    AppDescriptor:
      Type: object
      Properties:
        osId:
          Reference: 'TS29519_Policy_Data.yaml#/components/schemas/OsId'
        appId:
          Type: string
    AdditionalSnssaiData:
      Type: object

```

```

Properties:
  requiredAuthnAuthz:
    Type: boolean
AppPortId:
  Type: object
  Properties:
    destinationPort:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint16'
    originatorPort:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint16'
LcsPrivacyData:
  Type: object
  Properties:
    lpi:
      Reference: '#/components/schemas/Lpi'
    unrelatedClasses:
      Type: array
      Items:
        Reference: '#/components/schemas/UnrelatedClass'
      minItems: 1
    plmnOperatorClasses:
      Type: array
      Items:
        Reference: '#/components/schemas/PlmnOperatorClass'
      minItems: 1
Lpi:
  Type: object
  Required:
    - locationPrivacyInd
  Properties:
    locationPrivacyInd:
      Reference: '#/components/schemas/LocationPrivacyInd'
    validTimePeriod:
      Reference: '#/components/schemas/ValidTimePeriod'
UnrelatedClass:
  Type: object
  Required:
    - nonExternalUnrelatedClass
  Properties:
    nonExternalUnrelatedClass:
      Reference: '#/components/schemas/NonExternalUnrelatedClass'
    externalUnrelatedClass:
      Reference: '#/components/schemas/ExternalUnrelatedClass'
    serviceTypeUnrelatedClasses:
      Type: array
      Items:
        Reference: '#/components/schemas/ServiceTypeUnrelatedClass'
      minItems: 1
PlmnOperatorClass:
  Type: object
  Required:
    - lcsClientClass

```

```

- lcsClientIds
Properties:
  lcsClientClass:
    Reference: '#/components/schemas/LcsClientClass'
  lcsClientIds:
    Type: array
    Items:
      Reference: '#/components/schemas/LcsClientId'
    minItems: 1
ValidTimePeriod:
Type: object
Properties:
  startTime:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  endTime:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
NonExternalUnrelatedClass:
Properties:
  lcsClientNonExternals:
    Type: array
    Items:
      Reference: '#/components/schemas/LcsClientNonExternal'
    minItems: 1
  afNonExternals:
    Type: array
    Items:
      Reference: '#/components/schemas/AfNonExternal'
    minItems: 1
LcsClientNonExternal:
Type: object
Required:
- lcsClientId
Properties:
  lcsClientId:
    Reference: '#/components/schemas/LcsClientId'
  allowedGeographicArea:
    Type: array
    Items:
      Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/GeographicArea'
    minItems: 1
  privacyCheckRelatedAction:
    Reference: '#/components/schemas/PrivacyCheckRelatedAction'
  codeWordInd:
    Reference: '#/components/schemas/CodeWordInd'
  validTimePeriod:
    Reference: '#/components/schemas/ValidTimePeriod'
AfNonExternal:
Type: object
Required:
- afId
Properties:
  afId:

```

```

    Type: string
  allowedGeographicArea:
    Type: array
    Items:
      Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/GeographicArea'
    minItems: 1
  privacyCheckRelatedAction:
    Reference: '#/components/schemas/PrivacyCheckRelatedAction'
  codeWordInd:
    Reference: '#/components/schemas/CodeWordInd'
  validTimePeriod:
    Reference: '#/components/schemas/ValidTimePeriod'
ExternalUnrelatedClass:
Properties:
  lcsClientExternals:
    Type: array
    Items:
      Reference: '#/components/schemas/LcsClientExternal'
    minItems: 1
  afExternals:
    Type: array
    Items:
      Reference: '#/components/schemas/AfExternal'
    minItems: 1
  lcsClientGroupExternals:
    Type: array
    Items:
      Reference: '#/components/schemas/LcsClientGroupExternal'
    minItems: 1
AfExternal:
Type: object
Properties:
  afId:
    Type: string
  allowedGeographicArea:
    Type: array
    Items:
      Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/GeographicArea'
    minItems: 1
  privacyCheckRelatedAction:
    Reference: '#/components/schemas/PrivacyCheckRelatedAction'
  validTimePeriod:
    Reference: '#/components/schemas/ValidTimePeriod'
LcsClientExternal:
Type: object
Properties:
  allowedGeographicArea:
    Type: array
    Items:
      Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/GeographicArea'
    minItems: 1

```

```

    privacyCheckRelatedAction:
      Reference: '#/components/schemas/PrivacyCheckRelatedAction'
    validTimePeriod:
      Reference: '#/components/schemas/ValidTimePeriod'
LcsClientGroupExternal:
  Type: object
  Properties:
    lcsClientGroupId:
      Reference: '#/components/schemas/ExtGroupId'
    allowedGeographicArea:
      Type: array
      Items:
        Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/GeographicArea'
      minItems: 1
    privacyCheckRelatedAction:
      Reference: '#/components/schemas/PrivacyCheckRelatedAction'
    validTimePeriod:
      Reference: '#/components/schemas/ValidTimePeriod'
ServiceTypeUnrelatedClass:
  Type: object
  Required:
    - serviceType
  Properties:
    serviceType:
      Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/LcsServiceType'
    allowedGeographicArea:
      Type: array
      Items:
        Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/GeographicArea'
      minItems: 1
    privacyCheckRelatedAction:
      Reference: '#/components/schemas/PrivacyCheckRelatedAction'
    codeWordInd:
      Reference: '#/components/schemas/CodeWordInd'
    validTimePeriod:
      Reference: '#/components/schemas/ValidTimePeriod'
LcsMoData:
  Type: object
  Required:
    - allowedServiceClasses
  Properties:
    allowedServiceClasses:
      Type: array
      Items:
        Reference: '#/components/schemas/LcsMoServiceClass'
      minItems: 1
EcRestrictionData:
  Type: object
  Properties:
    ecModeARestricted:
      Type: boolean
    ecModeBRestricted:

```

```

    Type: boolean
ExpectedUeBehaviourData:
  Type: object
  Properties:
    stationaryIndication:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/StationaryIndication'
    communicationDurationTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DurationSec'
    periodicTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DurationSec'
    scheduledCommunicationTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/ScheduledCommunicationTime'

    scheduledCommunicationType:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/ScheduledCommunicationType'

    expectedUmts:
      Type: array
      Items:
        Reference: 'TS29503_Nudm_PP.yaml#/components/schemas/LocationArea'
      minItems: 1
      Description: Identifies the UE's expected geographical movement. The attribute
is only applicable in 5G.
    trafficProfile:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/TrafficProfile'
    batteryIndication:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/BatteryIndication'
    validityTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
MaximumResponseTime:
  Type: object
  Required:
    - maximumResponseTime
  Properties:
    maximumResponseTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DurationSec'
    snssai:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    dnn:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
    validityTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
MaximumLatency:
  Type: object
  Required:
    - maximumLatency
  Properties:
    maximumLatency:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DurationSec'
    snssai:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    dnn:

```

```

    Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
  validityTime:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
SuggestedPacketNumDl:
  Type: object
  Required:
    - suggestedPacketNumDl
  Properties:
    suggestedPacketNumDl:
      Type: integer
      Minimum: 1
    validityTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
FrameRouteInfo:
  Type: object
  Properties:
    ipv4Mask:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4AddrMask'
    ipv6Prefix:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'
SorUpdateInfo:
  Type: object
  Required:
    - vplmnId
  Properties:
    vplmnId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
EnhancedCoverageRestrictionData:
  Type: object
  Properties:
    plmnEcInfoList:
      Type: array
      Items:
        Reference: 'TS29503_Nudm_PP.yaml#/components/schemas/PlmnEcInfo'
      minItems: 1
EdrxParameters:
  Type: object
  Required:
    - ratType
    - edrxValue
  Properties:
    ratType:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'
    edrxValue:
      Type: string
      Pattern: '^([0-1]{4})$'
PtwParameters:
  Type: object
  Required:
    - operationMode
    - ptwValue
  Properties:
    operationMode:

```

```

    Reference: '#/components/schemas/OperationMode'
  ptwValue:
    Type: string
    Pattern: '^([0-1]{4})$'
  UeId:
    Type: object
    Required:
      - supi
    Properties:
      supi:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      gpsiList:
        Type: array
        Items:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
        minItems: 1
# SIMPLE TYPES:
  UeUsageType:
    Type: integer
  MpsPriorityIndicator:
    Type: boolean
  McsPriorityIndicator:
    Type: boolean
  DnnIndicator:
    Type: boolean
  LboRoamingAllowed:
    Type: boolean
  SmsSubscribed:
    Type: boolean
  3GppChargingCharacteristics:
    Type: string
  DlPacketCount:
    Type: integer
    Minimum: -1
  MicoAllowed:
    Type: boolean
  SharedDataId:
    Type: string
    Pattern: '^([0-9]{5,6})-.[+}$'
  IwkEpsInd:
    Type: boolean
  SecuredPacket:
    Type: string
    format: base64
  UpuRegInd:
    Type: boolean
  ExtGroupId:
    Type: string
    Pattern: '^extgroupid-[@]+@[^@]+}$'
  NbIoTUePriority:
    Type: integer
  CodeWord:

```



```

    Type: string
AfId:
    Type: string
LcsClientId:
    Type: string
# ENUMS:
DataSetName:
  anyOf:
    - type: string
      enum:
        - AM
        - SMF_SEL
        - UEC_SMF
        - UEC_SMSF
        - SMS_SUB
        - SM
        - TRACE
        - SMS_MNG
        - LCS_PRIVACY
        - LCS_MO
    - type: string
PduSessionContinuityInd:
  anyOf:
    - type: string
      enum:
        - MAINTAIN_PDUSESSION
        - RECONNECT_PDUSESSION
        - RELEASE_PDUSESSION
    - type: string
LocationPrivacyInd:
  anyOf:
    - type: string
      enum:
        - LOCATION_DISALLOWED
        - LOCATION_ALLOWED
    - type: string
PrivacyCheckRelatedAction:
  anyOf:
    - type: string
      enum:
        - LOCATION_NOT_ALLOWED
        - LOCATION_ALLOWED_WITH_NOTIFICATION
        - LOCATION_ALLOWED_WITHOUT_NOTIFICATION
        - LOCATION_ALLOWED_WITHOUT_RESPONSE
        - LOCATION_RESTRICTED_WITHOUT_RESPONSE
    - type: string
LcsClientClass:
  anyOf:
    - type: string
      enum:
        - BROADCAST_SERVICE
        - OM_IN_HPLMN
        - OM_IN_VPLMN
        - ANONYMOUS_LOCATION_SERVICE
        - SPECIFIC_SERVICE
    - type: string
LcsMoServiceClass:
  anyOf:
    - type: string

```

```
    enum:
      - BASIC_SELF_LOCATION
      - AUTONOMOUS_SELF_LOCATION
      - TRANSFER_TO_THIRD_PARTY
    - type: string
  OperationMode:
    anyOf:
      - type: string
      enum:
        - WB_S1
        - NB_S1
        - WB_N1
        - NB_N1
      - type: string
  SorUpdateIndicator:
    anyOf:
      - type: string
      enum:
        - INITIAL_REGISTRATION
        - EMERGENCY_REGISTRATION
      - type: string
  CodeWordInd:
    anyOf:
      - type: string
      enum:
        - CODEWORD_CHECK_IN_UE
        - CODEWORD_CHECK_IN_GMLC
      - type: string
```

External Docs

Description: 3GPP TS 29.503 Unified Data Management Services, version 16.3.0

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.503/'



CHAPTER 10

Nudm_UECM

The Nudm Context Management Service provides the NF consumer of the information related to UE's transaction information, allows the NF consumer to register and deregister its information for the serving UE in the UDM, and allows the NF consumer to update some UE context information in the UDM.

Reference: 3GPP TS 29.503 Unified Data Management Services, version 15.3.0

- [OpenAPI, on page 217](#)
- [Info, on page 217](#)
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OpenAPI

OpenAPI Version: 3.0.0

Info

Version: '1.1.0.alpha-3'

Title: 'Nudm_UECM'

Description: |

Nudm Context Management Service.

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Servers

URL: '{apiRoot}/nudm-uecm/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in clause 4.4 of 3GPP TS 29.501.

Security

- oAuth2ClientCredentials:
 - nudm-uecm
- {}

Paths

{ueId}/registrations/amf-3gpp-access

put:

Summary: register as AMF for 3GPP access

Operation ID: 3GppRegistration

Tags:

- AMF registration for 3GPP access

Parameters:

- **Name:** ueId

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/Amf3GppAccessRegistration'

Required/Optional: true

Responses:

'201':

Description: Created

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/Amf3GppAccessRegistration'

Headers:

Location:

description: 'Contains the URI of the newly created resource, according to the structure:

{apiRoot}/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access'

Required/Optional: true

```

    Schema:
      Type: string
  '200':
    Description: OK
    Content:
      Application/JSON:
        Schema:
          Reference: '#/components/schemas/Amf3GppAccessRegistration'
  '204':
    Description: No content
  '400':
    Reference: 'TS29571_CommonData.yaml#/components/responses/400'
  '403':
    Reference: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    Reference: 'TS29571_CommonData.yaml#/components/responses/404'
  '500':
    Reference: 'TS29571_CommonData.yaml#/components/responses/500'
  '503':
    Reference: 'TS29571_CommonData.yaml#/components/responses/503'
  Default:
    Description: Unexpected error
  Callbacks:
    deregistrationNotification:
      '{request.body#/deregCallbackUri}':
        Method: Post
        Request Body:
          Required/Optional: true
          Content:
            Application/JSON:
              Schema:
                Reference: '#/components/schemas/DeregistrationData'

  Responses:
    '204':
      Description: Successful Notification response
    '400':
      Reference: 'TS29571_CommonData.yaml#/components/responses/400'
    '404':
      Reference: 'TS29571_CommonData.yaml#/components/responses/404'
    '500':
      Reference: 'TS29571_CommonData.yaml#/components/responses/500'
    '503':
      Reference: 'TS29571_CommonData.yaml#/components/responses/503'
  Default:
    Description: Unexpected error
  pcscfRestorationNotification:
    '{request.body#/pcscfRestorationCallbackUri}':
      Method: Post
      Request Body:
        Required/Optional: true
        Content:

```

Application/JSON:**Schema:****Reference:** '#/components/schemas/PcscfRestorationNotification'**Responses:****'204':****Description:** Successful Notification response**'400':****Reference:** 'TS29571_CommonData.yaml#/components/responses/400'**'404':****Reference:** 'TS29571_CommonData.yaml#/components/responses/404'**'500':****Reference:** 'TS29571_CommonData.yaml#/components/responses/500'**'503':****Reference:** 'TS29571_CommonData.yaml#/components/responses/503'**Default:****Description:** Unexpected error**patch:****Summary:** Update a parameter in the AMF registration for 3GPP access**Operation ID:** Update3GppRegistration**Tags:**

- Parameter update in the AMF registration for 3GPP access

Parameters:

- **Name:** ueId

In: path**Description:** Identifier of the UE**Required/Optional:** true**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Supi'

- **Name:** supported-features

In: query**Description:** Features required to be supported by the target NF**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Request Body:****Content:****application/merge-patch+json:****Schema:****Reference:** '#/components/schemas/Amf3GppAccessRegistrationModification'**Required/Optional:** true**Responses:****'200':****Description:** Expected response to a valid request**Content:****Application/JSON:****Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PatchResult'**'204':****Description:** Expected response to a valid request

```

'400':
  Reference: 'TS29571_CommonData.yaml#/components/responses/400'
'403':
  Reference: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  Reference: 'TS29571_CommonData.yaml#/components/responses/404'
'422':
  Description: Unprocessable Request
  Content:
    application/problem+json:
      Schema:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
'500':
  Reference: 'TS29571_CommonData.yaml#/components/responses/500'
'503':
  Reference: 'TS29571_CommonData.yaml#/components/responses/503'
Default:
  Description: Unexpected error
get:
  Summary: retrieve the AMF registration for 3GPP access information
  Operation ID: Get3GppRegistration

Tags:
  - AMF 3Gpp-access Registration Info Retrieval

Parameters:
- Name: ueId
  In: path
  Description: Identifier of the UE
  Required/Optional: true
  Schema:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
- Name: supported-features
  In: query
  Schema:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Responses:
'200':
  Description: Expected response to a valid request
  Content:
    Application/JSON:
      Schema:
        Reference: '#/components/schemas/Amf3GppAccessRegistration'
'400':
  Reference: 'TS29571_CommonData.yaml#/components/responses/400'
'403':
  Reference: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
  Reference: 'TS29571_CommonData.yaml#/components/responses/404'
'500':
  Reference: 'TS29571_CommonData.yaml#/components/responses/500'

```

'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'
Default:
Description: Unexpected error

/{ueid}/registrations/amf-3gpp-access/dereg-amf

Method: Post

Summary: trigger AMF for 3GPP access deregistration

Operation ID: deregAMF

Tags:

- Trigger AMF for 3GPP access deregistration

Parameters:

- **Name:** ueId

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AmfDeregInfo'

Required/Optional: true

Responses:

'204':

Description: No content

'400':

Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'403':

Reference: 'TS29571_CommonData.yaml#/components/responses/403'

'404':

Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'500':

Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':

Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:

Description: Unexpected error

/{ueid}/registrations/amf-3gpp-access/pei-update

Method: Post

Summary: Updates the PEI in the 3GPP access registration context

Operation ID: PeiUpdate

Tags:

- PEI Update

Parameters:

- **Name:** ueId
 - In:** path
 - Description:** Identifier of the UE
 - Required/Optional:** true
 - Schema:**
 - Reference:** 'TS29571_CommonData.yaml#/components/schemas/Supi'

Request Body:

Content:

Application/JSON:

Schema:

- Reference:** '#/components/schemas/PeiUpdateInfo'

Required/Optional: true

Responses:

- '204':
 - Description:** No content
- '400':
 - Reference:** 'TS29571_CommonData.yaml#/components/responses/400'
- '403':
 - Reference:** 'TS29571_CommonData.yaml#/components/responses/403'
- '404':
 - Reference:** 'TS29571_CommonData.yaml#/components/responses/404'
- '500':
 - Reference:** 'TS29571_CommonData.yaml#/components/responses/500'
- '503':
 - Reference:** 'TS29571_CommonData.yaml#/components/responses/503'

Default:

- Description:** Unexpected error

/{ueld}/registrations/amf-non-3gpp-access

put:

Summary: register as AMF for non-3GPP access

Operation ID: Non3GppRegistration

Tags:

- AMF registration for non-3GPP access

Parameters:

- **Name:** ueId
 - In:** path
 - Description:** Identifier of the UE
 - Required/Optional:** true
 - Schema:**
 - Reference:** 'TS29571_CommonData.yaml#/components/schemas/Supi'

Request Body:

Content:

```

    Application/JSON:
      Schema:
        Reference: '#/components/schemas/AmfNon3GppAccessRegistration'
    Required/Optional: true

Responses:
  '201':
    Description: Created
    Content:
      Application/JSON:
        Schema:
          Reference: '#/components/schemas/AmfNon3GppAccessRegistration'
      Headers:
        Location:
          description: 'Contains the URI of the newly created resource,
according to the structure:
{apiRoot}/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access'
          Required/Optional: true
          Schema:
            Type: string
  '200':
    Description: OK
    Content:
      Application/JSON:
        Schema:
          Reference: '#/components/schemas/AmfNon3GppAccessRegistration'
  '204':
    Description: No Content
  '400':
    Reference: 'TS29571_CommonData.yaml#/components/responses/400'
  '403':
    Reference: 'TS29571_CommonData.yaml#/components/responses/403'
  '404':
    Reference: 'TS29571_CommonData.yaml#/components/responses/404'
  '500':
    Reference: 'TS29571_CommonData.yaml#/components/responses/500'
  '503':
    Reference: 'TS29571_CommonData.yaml#/components/responses/503'
Default:
  Description: Unexpected error
Callbacks:
  deregistrationNotification:
    '{request.body#/deregCallbackUri}':
      Method: Post
      Request Body:
        Required/Optional: true
        Content:
          Application/JSON:
            Schema:
              Reference: '#/components/schemas/DeregistrationData'

      Responses:

```

```

    '204':
      Description: Successful Notification response
    '400':
      Reference: 'TS29571_CommonData.yaml#/components/responses/400'
    '404':
      Reference: 'TS29571_CommonData.yaml#/components/responses/404'
    '500':
      Reference: 'TS29571_CommonData.yaml#/components/responses/500'
    '503':
      Reference: 'TS29571_CommonData.yaml#/components/responses/503'
  Default:
    Description: Unexpected error
pcscfRestorationNotification:
  '{request.body#/pcscfRestorationCallbackUri}':
    Method: Post
    Request Body:
      Required/Optional: true
      Content:
        Application/JSON:
          Schema:
            Reference: '#/components/schemas/PcscfRestorationNotification'

```

Responses:

```

    '204':
      Description: Successful Notification response
    '400':
      Reference: 'TS29571_CommonData.yaml#/components/responses/400'
    '404':
      Reference: 'TS29571_CommonData.yaml#/components/responses/404'
    '500':
      Reference: 'TS29571_CommonData.yaml#/components/responses/500'
    '503':
      Reference: 'TS29571_CommonData.yaml#/components/responses/503'
  Default:
    Description: Unexpected error

```

patch:

Summary: update a parameter in the AMF registration for non-3GPP access

Operation ID: UpdateNon3GppRegistration

Tags:

- Parameter update in the AMF registration for non-3GPP access

Parameters:

- **Name:** ueId
In: path
Description: Identifier of the UE
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
- **Name:** supported-features
In: query
Description: Features required to be supported by the target NF

Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Request Body:
Content:
application/merge-patch+json:
Schema:
Reference: '#/components/schemas/AmfNon3GppAccessRegistrationModification'
Required/Optional: true

Responses:

'200':
Description: Expected response to a valid request
Content:
Application/JSON:
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'

'204':
Description: Expected response to a valid request

'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'403':
Reference: 'TS29571_CommonData.yaml#/components/responses/403'

'404':
Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'422':
Description: Unprocessable Request
Content:
application/problem+json:
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

'500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:
Description: Unexpected error

get:
Summary: retrieve the AMF registration for non-3GPP access information
Operation ID: GetNon3GppRegistration

Tags:
- AMF non-3GPP-access Registration Info Retrieval

Parameters:

- **Name:** ueId
In: path
Description: Identifier of the UE
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
- **Name:** supported-features
In: query

Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Responses:

'200':
Description: Expected response to a valid request
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/AmfNon3GppAccessRegistration'

'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'403':
Reference: 'TS29571_CommonData.yaml#/components/responses/403'

'404':
Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:
Description: Unexpected error

/{ueid}/registrations/smf-registrations

get:

Summary: retrieve the SMF registration information
Operation ID: GetSmfRegistration

Tags:

- SMF SmfRegistration

Parameters:

- **Name:** ueId
In: path
Description: Identifier of the UE
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
- **Name:** single-nssai
In: query
Content:
Application/JSON:
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
- **Name:** dnn
In: query
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
- **Name:** supported-features
In: query

{ueId}/registrations/smf-registrations/{pduSessionId}

Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Responses:

'200':
Description: Expected response to a valid request
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/SmfRegistrationInfo'

'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'403':
Reference: 'TS29571_CommonData.yaml#/components/responses/403'

'404':
Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:
Description: Unexpected error

{ueId}/registrations/smf-registrations/{pduSessionId}

put:

Summary: register as SMF
Operation ID: Registration

Tags:

- SMF SmfRegistration

Parameters:

- **Name:** ueId
In: path
Description: Identifier of the UE
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
- **Name:** pduSessionId
In: path
Description: Identifier of the PDU session
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'

Request Body:

Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/SmfRegistration'

Required/Optional: true

Responses:**'201':****Description:** Created**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/SmfRegistration'**Headers:****Location:****description:** 'Contains the URI of the newly created resource, according to the structure:

{apiRoot}/nudm-uecm/v1/{ueId}/registrations/smf-registrations/{pduSessionId}'

Required/Optional: true**Schema:****Type:** string**'200':****Description:** Expected response to a valid request**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/SmfRegistration'**'204':****Description:** No content**'400':****Reference:** 'TS29571_CommonData.yaml#/components/responses/400'**'403':****Reference:** 'TS29571_CommonData.yaml#/components/responses/403'**'404':****Reference:** 'TS29571_CommonData.yaml#/components/responses/404'**'500':****Reference:** 'TS29571_CommonData.yaml#/components/responses/500'**'503':****Reference:** 'TS29571_CommonData.yaml#/components/responses/503'**Default:****Description:** Unexpected error**Callbacks:****deregistrationNotification:****'{request.body#/deregCallbackUri}':****Method:** Post**Request Body:****Required/Optional:** true**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/DeregistrationData'**Responses:****'204':****Description:** Successful Notification response**'400':****Reference:** 'TS29571_CommonData.yaml#/components/responses/400'

```

    '404':
      Reference: 'TS29571_CommonData.yaml#/components/responses/404'
    '500':
      Reference: 'TS29571_CommonData.yaml#/components/responses/500'
    '503':
      Reference: 'TS29571_CommonData.yaml#/components/responses/503'
  Default:
    Description: Unexpected error
pcscfRestorationNotification:
  '{request.body#/pcscfRestorationCallbackUri}':
    Method: Post
    Request Body:
      Required/Optional: true
      Content:
        Application/JSON:
          Schema:
            Reference: '#/components/schemas/PcscfRestorationNotification'

Responses:
  '204':
    Description: Successful Notification response
  '400':
    Reference: 'TS29571_CommonData.yaml#/components/responses/400'
  '404':
    Reference: 'TS29571_CommonData.yaml#/components/responses/404'
  '500':
    Reference: 'TS29571_CommonData.yaml#/components/responses/500'
  '503':
    Reference: 'TS29571_CommonData.yaml#/components/responses/503'
  Default:
    Description: Unexpected error
delete:
  Summary: delete an SMF registration
  Operation ID: SmfDeregistration

Tags:
  - SMF Deregistration

Parameters:
  - Name: ueId
    In: path
    Description: Identifier of the UE
    Required/Optional: true
    Schema:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
  - Name: pduSessionId
    In: path
    Description: Identifier of the PDU session
    Required/Optional: true
    Schema:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
  - Name: smf-set-id

```


In: query
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/NfSetId'

Responses:

'204':
Description: Expected response to a valid request

'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'404':
Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'422':
Description: Unprocessable Request
Content:
application/problem+json:
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

'500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:
Description: Unexpected error

get:

Summary: get an SMF registration
Operation ID: RetrieveSmfRegistration

Tags:

- Retrieve SMF Registration

Parameters:

- **Name:** ueId
In: path
Description: Identifier of the UE
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

- **Name:** pduSessionId
In: path
Description: Identifier of the PDU session
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'

Responses:

'200':
Description: Expected response to a valid request
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/SmfRegistration'

'400':

Reference: 'TS29571_CommonData.yaml#/components/responses/400'
'403':
Reference: 'TS29571_CommonData.yaml#/components/responses/403'
'404':
Reference: 'TS29571_CommonData.yaml#/components/responses/404'
'500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'
'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'
Default:
Description: Unexpected error

/{ueId}/registrations/smsf-3gpp-access

put:

Summary: register as SMSF for 3GPP access
Operation ID: 3GppSmsfRegistration

Tags:

- SMSF registration for 3GPP access

Parameters:

Name: ueId
In: path
Description: Identifier of the UE
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

Request Body:

Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/SmsfRegistration'
Required/Optional: true

Responses:

'201':
Description: Created
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/SmsfRegistration'

Headers:

Location:
description: 'Contains the URI of the newly created resource, according to the structure:
 {apiRoot}/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access'
Required/Optional: true
Schema:
Type: string

'200':

Description: Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmsfRegistration'

'204':

Description: No content

'400':

Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'403':

Reference: 'TS29571_CommonData.yaml#/components/responses/403'

'404':

Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'500':

Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':

Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:

Description: Unexpected error

delete:

Summary: delete the SMSF registration for 3GPP access

Operation ID: 3GppSmsfDeregistration

Tags:

- SMSF Deregistration for 3GPP Access

Parameters:

- **Name:** ueId
- In:** path
- Description:** Identifier of the UE
- Required/Optional:** true
- Schema:**
- Reference:** 'TS29571_CommonData.yaml#/components/schemas/Supi'
- **Name:** smsf-set-id
- In:** query
- Schema:**
- Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfSetId'

Responses:

'204':

Description: Expected response to a valid request

'400':

Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'404':

Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'422':

Description: Unprocessable Request

Content:

application/problem+json:

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

'500':

Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':

Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:

Description: Unexpected error

get:

Summary: retrieve the SMSF registration for 3GPP access information

Operation ID: Get3GppSmsfRegistration

Tags:

- SMSF 3GPP access Registration Info Retrieval

Parameters:

- **Name:** ueId
 - In:** path
 - Description:** Identifier of the UE
 - Required/Optional:** true
 - Schema:**
 - Reference:** 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
- **Name:** supported-features
 - In:** query
 - Schema:**
 - Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Responses:

'200':

Description: Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmsfRegistration'

'400':

Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'403':

Reference: 'TS29571_CommonData.yaml#/components/responses/403'

'404':

Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'500':

Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':

Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:

Description: Unexpected error

/{ueld}/registrations/smsf-non-3gpp-access

put:

Summary: register as SMSF for non-3GPP access

Operation ID: Non3GppSmsfRegistration

Tags:

- SMSF registration for non-3GPP access

Parameters:

- **Name:** ueId
In: path
Description: Identifier of the UE
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

Request Body:

Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/SmsfRegistration'
Required/Optional: true

Responses:

'201':
Description: Created
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/SmsfRegistration'

Headers:

Location:
description: 'Contains the URI of the newly created resource, according to the structure:

{apiRoot}/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-access'

Required/Optional: true
Schema:
Type: string

'200':
Description: Expected response to a valid request
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/SmsfRegistration'

'204':
Description: No content

'400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'403':
Reference: 'TS29571_CommonData.yaml#/components/responses/403'

'404':
Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Default:
Description: Unexpected error

delete:

Summary: delete SMSF registration for non 3GPP access

Operation ID: Non3GppSmsfDeregistration

Tags:

- SMSF Deregistration for non-3GPP access

Parameters:

- **Name:** ueId
In: path
Description: Identifier of the UE
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
- **Name:** smsf-set-id
In: query
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/NfSetId'

Responses:

- '204':
Description: Expected response to a valid request
- '400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'
- '404':
Reference: 'TS29571_CommonData.yaml#/components/responses/404'
- '422':
Description: Unprocessable Request
Content:
application/problem+json:
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
- '500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'
- '503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'
- Default:**
Description: Unexpected error

get:

Summary: retrieve the SMSF registration for non-3GPP access information

Operation ID: GetNon3GppSmsfRegistration

Tags:

- SMSF non-3GPP access Registration Info Retrieval

Parameters:

- **Name:** ueId
In: path
Description: Identifier of the UE
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
- **Name:** supported-features
In: query

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Responses:****'200':****Description:** Expected response to a valid request**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/SmsfRegistration'**'400':****Reference:** 'TS29571_CommonData.yaml#/components/responses/400'**'403':****Reference:** 'TS29571_CommonData.yaml#/components/responses/403'**'404':****Reference:** 'TS29571_CommonData.yaml#/components/responses/404'**'500':****Reference:** 'TS29571_CommonData.yaml#/components/responses/500'**'503':****Reference:** 'TS29571_CommonData.yaml#/components/responses/503'**Default:****Description:** Unexpected error

/restore-pcscf

Method: Post**Summary:** Trigger the Restoration of the P-CSCF**Operation ID:** Trigger P-CSCF Restoration**Tags:**

- Trigger P-CSCF Restoration

Request Body:**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/TriggerRequest'**Required/Optional:** true**Responses:****'204':****Description:** Successful 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'**'500':****Reference:** 'TS29571_CommonData.yaml#/components/responses/500'**'501':****Reference:** 'TS29571_CommonData.yaml#/components/responses/501'

'503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'
Default:
Description: Unexpected error

/{ueid}/registrations/location

get:

Summary: retrieve the target UE's location information

Operation ID: GetLocationInfo

Tags:

- UE Location Information retrieval

Parameters:

- **Name:** ueId
In: path
Description: Identifier of the UE
Required/Optional: true
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
- **Name:** supported-features
In: query
Schema:
Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Responses:

- '200':
Description: Expected response to a valid request
Content:
Application/JSON:
Schema:
Reference: '#/components/schemas/LocationInfo'
 - '400':
Reference: 'TS29571_CommonData.yaml#/components/responses/400'
 - '403':
Reference: 'TS29571_CommonData.yaml#/components/responses/403'
 - '404':
Reference: 'TS29571_CommonData.yaml#/components/responses/404'
 - '500':
Reference: 'TS29571_CommonData.yaml#/components/responses/500'
 - '503':
Reference: 'TS29571_CommonData.yaml#/components/responses/503'
- Default:**
Description: Unexpected error

Components

```

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

schemas:
# COMPLEX TYPES:
Amf3GppAccessRegistration:
  Type: object
  Required:
    - amfInstanceId
    - deregCallbackUri
    - guami
    - ratType
  Properties:
    amfInstanceId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
    supportedFeatures:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    purgeFlag:
      Reference: '#/components/schemas/PurgeFlag'
    pei:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'
    imsVoPs:
      Reference: '#/components/schemas/ImsVoPs'
    deregCallbackUri:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    amfServiceNameDereg:
      Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ServiceName'
    pcscfRestorationCallbackUri:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    amfServiceNamePcscfRest:
      Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ServiceName'
    initialRegistrationInd:
      Type: boolean
    guami:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'
    backupAmfInfo:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/BackupAmfInfo'
      minItems: 1
    drFlag:
      Reference: '#/components/schemas/DualRegistrationFlag'

```

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ratType:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'
urrrIndicator:
  Type: boolean
amfEeSubscriptionId:
  Type: string
epsInterworkingInfo:
  Reference: '#/components/schemas/EpsInterworkingInfo'
ueSrvccCapability:
  Type: boolean
nid:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/Nid'
registrationTime:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
vgmlcAddressIpv4:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
vgmlcAddressIpv6:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'
vgmlcFqdn:
  Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'
Amf3GppAccessRegistrationModification:
  Type: object
  Required:
    - guami
  Properties:
    guami:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'
    purgeFlag:
      Reference: '#/components/schemas/PurgeFlag'
    pei:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'
    imsVoPs:
      Reference: '#/components/schemas/ImsVoPs'
    backupAmfInfo:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/BackupAmfInfo'
    epsInterworkingInfo:
      Reference: '#/components/schemas/EpsInterworkingInfo'
    ueSrvccCapability:
      Type: boolean
      nullable: true
EpsInterworkingInfo:
  Type: object
  Properties:
    epsIwkPgws:
      Description: A map (list of key-value pairs where Dnn serves as key) of EpsIwkPgws

      Type: object
      additionalProperties:
        Reference: '#/components/schemas/EpsIwkPgw'
EpsIwkPgw:

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Type: object
Required:
  - pgwFqdn
  - smfInstanceId
Properties:
  pgwFqdn:
    Type: string
  smfInstanceId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
AmfNon3GppAccessRegistration:
Type: object
Required:
  - amfInstanceId
  - imsVoPs
  - deregCallbackUri
  - guami
  - ratType
Properties:
  amfInstanceId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
  supportedFeatures:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  purgeFlag:
    Reference: '#/components/schemas/PurgeFlag'
  pei:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'
  imsVoPs:
    Reference: '#/components/schemas/ImsVoPs'
  deregCallbackUri:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  amfServiceNameDereg:
    Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ServiceName'
  pcscfRestorationCallbackUri:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  amfServiceNamePcscfRest:
    Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ServiceName'
  guami:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'
  backupAmfInfo:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/BackupAmfInfo'
    minItems: 1
  ratType:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'
  urrrIndicator:
    Type: boolean
  amfEeSubscriptionId:
    Type: string
  nid:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Nid'
  registrationTime:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

```

```

vgmlcAddressIpv4:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
vgmlcAddressIpv6:
  Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'
vgmlcFqdn:
  Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'
AmfNon3GppAccessRegistrationModification:
Type: object
Required:
  - guami
Properties:
  guami:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'
  purgeFlag:
    Reference: '#/components/schemas/PurgeFlag'
  pei:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'
  imsVoPs:
    Reference: '#/components/schemas/ImsVoPs'
  backupAmfInfo:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/BackupAmfInfo'
SmfRegistration:
Type: object
Required:
  - smfInstanceId
  - pduSessionId
  - singleNssai
  - plmnId
Properties:
  smfInstanceId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
  smfSetId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NfSetId'
  supportedFeatures:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  pduSessionId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
  singleNssai:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
  dnn:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
  emergencyServices:
    Type: boolean
  pcscfRestorationCallbackUri:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  plmnId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
  pgwFqdn:
    Type: string
  epdgInd:

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    Type: boolean
    Default: false
deregCallbackUri:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
registrationReason:
    Reference: '#/components/schemas/RegistrationReason'
registrationTime:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
SmsfRegistration:
Type: object
Required:
  - smsfInstanceId
  - plmnId
Properties:
smsfInstanceId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
smsfSetId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NfSetId'
supportedFeatures:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
plmnId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
smsfMAPAddress:
    Reference: '#/components/schemas/E164Number'
smsfDiameterAddress:
    Reference: '#/components/schemas/NetworkNodeDiameterAddress'
registrationTime:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
DeregistrationData:
Type: object
Required:
  - deregReason
  - accessType
Properties:
deregReason:
    Reference: '#/components/schemas/DeregistrationReason'
accessType:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
pduSessionId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
newSmfInstanceId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
PcscfRestorationNotification:
Type: object
Required:
  - supi
Properties:
supi:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
NetworkNodeDiameterAddress:
Type: object
Required:
  -name

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- realm
Properties:
  name:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/DiameterIdentity'
  realm:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/DiameterIdentity'
TriggerRequest:
  Type: object
  Required:
  - supi
  Properties:
    supi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
SmfRegistrationInfo:
  Type: object
  Required:
  - smfRegistrationList
  Properties:
    smfRegistrationList:
      Type: array
      Items:
        Reference: '#/components/schemas/SmfRegistration'
      minItems: 1
AmfDeregInfo:
  Type: object
  Required:
  - deregReason
  Properties:
    deregReason:
      Reference: '#/components/schemas/DeregistrationReason'
LocationInfo:
  Type: object
  Required:
  - registrationLocationInfoList
  Properties:
    supi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    gpsi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
    registrationLocationInfoList:
      Type: array
      Items:
        Reference: '#/components/schemas/RegistrationLocationInfo'
      minItems: 1
      maxItems: 2
    supportedFeatures:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
RegistrationLocationInfo:
  Type: object
CmInfoReport:
  Type: object
  Required:
  - newCmInfoList

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Properties:
  oldCmInfoList:
    Type: array
    Items:
      Reference: 'TS29518_Namf_EventExposure.yaml#/components/schemas/CmInfo'
    minItems: 1
    maxItems: 2
  newCmInfoList:
    Type: array
    Items:
      Reference: 'TS29518_Namf_EventExposure.yaml#/components/schemas/CmInfo'
    minItems: 1
    maxItems: 2
VgmlcAddress:
  Type: object
  Properties:
    vgmlcAddressIpv4:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
    vgmlcAddressIpv6:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'
    vgmlcFqdn:
      Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'
PeiUpdateInfo:
  Type: object
  Required:
    - pei
  Properties:
    pei:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'
# SIMPLE TYPES:
PurgeFlag:
  Type: boolean
E164Number:
  Type: string
  Pattern: '^[0-9]{1,15}$'
DualRegistrationFlag:
  Type: boolean
# ENUMS:
ImsVoPs:
  anyOf:
    - type: string
      enum:
        - HOMOGENEOUS_SUPPORT
        - HOMOGENEOUS_NON_SUPPORT
        - NON_HOMOGENEOUS_OR_UNKNOWN
    - type: string
DeregistrationReason:
  anyOf:
    - type: string
      enum:
        - UE_INITIAL_REGISTRATION
        - UE_REGISTRATION_AREA_CHANGE
        - SUBSCRIPTION_WITHDRAWN
        - 5GS_TO_EPS_MOBILITY

```

- 5GS_TO_EPS_MOBILITY_UE_INITIAL_REGISTRATION
- REREGISTRATION_REQUIRED
- SMF_CONTEXT_TRANSFERRED
- type: string

RegistrationReason:**anyOf:**

- type: string
- enum:**
 - SMF_CONTEXT_TRANSFERRED
- type: string

External Docs

Description: 3GPP TS 29.503 Unified Data Management Services, version 16.3.0

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.503/'