



Nsmsf_SMSservice

The Nsmsf_SMSservice service provides the service capability for the NF Service Consumer (for example, AMF) to authorize SMS and activate SMS for a service user on SMSF. The following are the key functionalities of this NF service:

- Activation or deactivation of SMS service for a given service user, which results in creating/updating/deleting an UE Context for SMS in SMSF.
- Send SMS payload in uplink direction to SMSF.

Reference: 3GPP TS 29.540, version 15.4.0, Release 15

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OpenAPI

OpenAPI Version: 3.0.0

Info

Version: '2.0.1'

Title: 'Nsmsf_SMSservice Service API'

Description: |

SMSF SMSservice.

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Servers

URL: '{apiRoot}/nsmf-sms/v2'

Variables:

API Root:

Default: https://example.com

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

Security

- oAuth2ClientCredentials:
 - nsmf-sms
 - {}

Paths

/ue-contexts/{supi}

put:

Summary: Activate SMS Service for a given UE

Operation ID: SMSserviceActivation

Tags:

- UEContext (Document)

Parameters:

- **Name:** supi
- In:** path
- Required/Optional:** true
- Description:** Subscriber Permanent Identifier (SUPI)
- Schema:**
 - Type:** string

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/UeSmsContextData'

Required/Optional: true

Responses:

'201':

Description: UE Context for SMS is created in SMSF

Content:

Application/JSON:

Schema:

```

    Reference: '#/components/schemas/UeSmsContextData'
  Headers:
    Location:
      description: 'Contains the URI of the newly created resource,
according to the structure: {apiRoot}/nsmf-sms/<apiVersion>/ue-contexts/{supi}'
      Required/Optional: true
      Schema:
        Type: string
  '204':
    Description: UE Context for SMS is updated in SMSF
  '400':
    Description: Invalid Service Request
    Content:
      application/problem+json:
        Schema:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
  '403':
    Description: Unable to create/update UE Context for SMS in SMSF
    Content:
      application/problem+json:
        Schema:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
  '404':
    Description: Unable to found subscription for service user or UE Context for SMS
in SMSF
    Content:
      application/problem+json:
        Schema:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
  '503':
    Description: Service Unavailable
    Content:
      application/problem+json:
        Schema:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
  Default:
    Description: Unexpected error
    Content:
      application/problem+json:
        Schema:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
  delete:
    Summary: Deactivate SMS Service for a given UE
    Operation ID: SMSserviceDeactivation

  Tags:
    - UEContext (Document)

  Parameters:
    - Name: supi
      In: path
      Required/Optional: true

```

Description: Subscriber Permanent Identifier (SUPI)

Schema:

Type: string

Responses:

'204':

Description: UE Context for SMS is deleted from SMSF

'400':

Description: Invalid Service Request

Content:

application/problem+json:

Schema:

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

'404':

Description: Unable to found UE Context for SMS in SMSF

Content:

application/problem+json:

Schema:

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

'503':

Description: Service Unavailable

Content:

application/problem+json:

Schema:

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

/ue-contexts/{supi}/sendsms

Method: Post

Summary: Send SMS payload for a given UE

Operation ID: SendSMS

Tags:

- UEContext (Document)

Parameters:

- **Name:** supi

In: path

Required/Optional: true

Description: Subscriber Permanent Identifier (SUPI)

Schema:

Type: string

Request Body:

Content:

Multipart/Related:

Schema:

Type: object

Properties:

JSON Data:

Reference: '#/components/schemas/SmsRecordData'

binaryPayload:

```

        Type: string
        Format: binary
    Encoding:
    JSON Data:
        Content Type: application/json
    binaryPayload:
        Content Type: application/vnd.3gpp.sms
    Headers:
        Content ID:
        Schema:
            Type: string
    Required/Optional: true

Responses:
'200':
    Description: SMS payload is received by SMSF, and is being delivered out
    Content:
        Application/JSON:
        Schema:
            Reference: '#/components/schemas/SmsRecordDeliveryData'
'400':
    Description: Invalid Service Request
    Content:
        application/problem+json:
        Schema:
            Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
'403':
    Description: Unable to deliver SMS at SMSF
    Content:
        application/problem+json:
        Schema:
            Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
'404':
    Description: Unable to found UE Context for SMS in SMSF
    Content:
        application/problem+json:
        Schema:
            Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
'503':
    Description: Service Unavailable
    Content:
        application/problem+json:
        Schema:
            Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

```

Components

```

securitySchemes:
  oAuth2ClientCredentials:

```

```

Type: oauth2
Flows:
  clientCredentials:
    tokenUrl: '{nrfApiRoot}/oauth2/token'
    scopes:
      nsmsf-sms: Access to the nsmsf-sms API

```

schemas:

UeSmsContextData:

```

Type: object
Required:
  - supi
  - amfId
  - accessType
Properties:
  supi:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
  pei:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'
  amfId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
  guamis:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'
    minItems: 1
  accessType:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
  gpsi:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
  ueLocation:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
  ueTimeZone:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/TimeZone'
  traceData:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/TraceData'
  backupAmfInfo:
    Type: array
    Items:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/BackupAmfInfo'
    minItems: 1
  udmGroupId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'
  routingIndicator:
    Type: string
SmsRecordData:
Type: object
Required:
  - smsRecordId
  - smsPayload
Properties:
  smsRecordId:
    Reference: '#/components/schemas/RecordId'

```

```
    smsPayload:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'
    accessType:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
    gpsi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
    pei:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'
    ueLocation:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
    ueTimeZone:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/TimeZone'
  RecordId:
    Type: string
  SmsRecordDeliveryData:
    Type: object
    Required:
      - smsRecordId
      - deliveryStatus
    Properties:
      smsRecordId:
        Reference: '#/components/schemas/RecordId'
      deliveryStatus:
        Reference: '#/components/schemas/SmsDeliveryStatus'
  SmsDeliveryStatus:
    Type: string
    enum:
      - SMS_DELIVERY_PENDING
      - SMS_DELIVERY_COMPLETED
      - SMS_DELIVERY_FAILED
```

External Docs

Description: 3GPP TS 29.540 V15.3.0; 5G System; SMS Services; Stage 3
URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.540/'

