**3GPP TSG-CT WG4 Meeting #111-eC4-224615\_v3**

**E-Meeting, 18th – 26th August 2022**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.532** | **CR** | **0034** | **rev** | **-** | **Current version:** | **17.1.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Defining the "indication that the PCF has to be contacted" | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | CT4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5MBS | | | | |  | ***Date:*** | | | 2022-08-26 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | As per the provisions of S2-2207408 agreed during SA2#152-e, the "indication that the PCF has to be contacted" may be provided to the MB-SMF during MBS Session update procedures. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | This CR proposes to:   * Update the relevant service description clause accodingly. * Define the new indication within the MbsSessionExtension data type. * Some additional editorial corrections. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | * Stage 2 requirements not captured in Stage 3. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.3.2.3.1, 6.2.6.2.4, A.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 23.247 CR#0109 | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | This CR introduces a backwards compatible new fetaure to the OpenAPI description of the Nmbsmf\_MBSSession API defined in this specification. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\* \* \* \* Start of changes \* \* \* \*

##### 5.3.2.3.1 General

The Update service operation shall be used to update a multicast or a broadcast MBS session, or for a location dependent MBS session, the part of an MBS Session within an MBS service area.

NOTE: For a location dependent MBS service, the Update service operation is performed per MBS service area of the MBS session.

It is used in the following procedures:

- MBS Session Update with or without PCC (see clauses 7.1.1.6 and 7.1.1.7 of 3GPP TS 23.247 [14]); and

- MBS Session Update for Broadcast (see clause 7.3.3 of 3GPP TS 23.247 [14]).

The NF Service Consumer (e.g. NEF, MBSF or AF) shall update an MBS session by using the HTTP PATCH method with the URI of the individual MBS session as shown in Figure 5.3.2.3.1-1.



Figure 5.3.2.3.1-1: MBS session update

1. The NF Service Consumer shall send a PATCH request (PatchData) to update the MBS session. The following parameters may be modified:

- for a multicast or a broadcast MBS session:

- MBS Service Area;

- QoS information;

- for a multicast MBS session:

- session activity status (active/inactive) to activate or deactivate an MBS session;

- if security protection is applied, the multicast session security context containing MBS Service Key (MSK), MBS Traffic Key (MTK) and the corresponding key IDs.

- for a broadcast MBS session:

- list of MBS FSA IDs.

If the "indication that the PCF has to be contacted" shall be conveyed in the update request as defined in 3GPP TS 23.247 [14], the NF service consumer shall include the corresponding "contactPcfInd" attribute within the set of requested modifications.

2a. On success, the MB-SMF shall return a "204 No Content" response.

2b. On failure or redirection, one of the HTTP status code listed in Table 6.2.3.3.3.1-3 shall be returned. For a 4xx/5xx response, the message body may contain a ProblemDetails structure with the "cause" attribute set to one of the application errors listed in Table 6.2.3.3.3.1-3.

\* \* \* \* Next changes \* \* \* \*

6.2.3.3.3.1 PATCH

This method updates an individual MBS session resource in the MB-SMF.

This method shall support the URI query parameters specified in table 6.2.3.2.3.1-1.

Table 6.2.3.3.3.1-1: URI query parameters supported by the PATCH method on this resource

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description | Applicability |
| n/a |  |  |  |  |  |

This method shall support the request data structures specified in table 6.2.3.3.3.1-2 and the response data structures and response codes specified in table 6.2.3.3.3.1-3.

Table 6.2.3.3.3.1-2: Data structures supported by the PATCH Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| array(PatchItem) | M | 1 | List of changes to be made to the MBS session resource, according to the JSON PATCH format specified in IETF RFC 6902 [16]. |

Table 6.2.3.3.3.1-3: Data structures supported by the PATCH Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Successful response |
| RedirectResponse | O | 0..1 | 307 Temporary Redirect | Temporary redirection. The response shall include a Location header field containing a different URI, or the same URI if a request is redirected to the same target resource via a different SCP. In the former case, the URI shall be an alternative URI of the resource located on an alternative service instance within the same MB-SMF or MB-SMF (service) set.  (NOTE 2) |
| RedirectResponse | O | 0..1 | 308 Permanent Redirect | Permanent redirection. The response shall include a Location header field containing a different URI, or the same URI if a request is redirected to the same target resource via a different SCP. In the former case, the URI shall be an alternative URI of the resource located on an alternative service instance within the same MB-SMF or MB-SMF (service) set.  (NOTE 2) |
| ProblemDetails | O | 0..1 | 404 Not Found | When used to represent an unsuccessful MBS session update, the "cause" attribute of the "ProblemDetails" may be used to include one of the following application error codes:  - UNKNOWN\_MBS\_SESSION, if the indicated MBS session is not found in the MB-SMF. |
| NOTE 1: The mandadatory HTTP error status code for the PATCH method listed in Table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.  NOTE 2: RedirectResponse may be inserted by an SCP, see clause 6.10.9.1 of 3GPP TS 29.500 [4]. | | | | |

Table 6.2.3.3.3.1-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located on an alternative service instance within the same MB-SMF or MB-SMF (service) set.  Or the same URI, if a request is redirected to the same target resource via a different SCP. |
| 3gpp-Sbi-Target-Nf-Id | string | O | 0..1 | Identifier of the target MB-SMF (service) instance ID towards which the request is redirected |

Table 6.2.3.3.3.1-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located on an alternative service instance within the same MB-SMF or MB-SMF (service) set.  Or the same URI, if a request is redirected to the same target resource via a different SCP. |
| 3gpp-Sbi-Target-Nf-Id | string | O | 0..1 | Identifier of the target MB-SMF (service) instance ID towards which the request is redirected |

\* \* \* \* Next changes \* \* \* \*

6.2.3.3.3.2 DELETE

This method deletes an individual MBS session resource in the MB-SMF.

This method shall support the URI query parameters specified in table 6.2.3.2.3.2-1.

Table 6.2.3.3.3.2-1: URI query parameters supported by the DELETE method on this resource

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description | Applicability |
| n/a |  |  |  |  |  |

This method shall support the request data structures specified in table 6.2.3.3.3.2-2 and the response data structures and response codes specified in table 6.2.3.3.3.2-3.

Table 6.2.3.3.3.2-2: Data structures supported by the DELETE Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 6.2.3.3.3.2-3: Data structures supported by the DELETE Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Successful response |
| RedirectResponse | O | 0..1 | 307 Temporary Redirect | Temporary redirection. The response shall include a Location header field containing a different URI, or the same URI if a request is redirected to the same target resource via a different SCP. In the former case, the URI shall be an alternative URI of the resource located on an alternative service instance within the same MB-SMF or MB-SMF (service) set.  (NOTE 2) |
| RedirectResponse | O | 0..1 | 308 Permanent Redirect | Permanent redirection. The response shall include a Location header field containing a different URI, or the same URI if a request is redirected to the same target resource via a different SCP. In the former case, the URI shall be an alternative URI of the resource located on an alternative service instance within the same MB-SMF or MB-SMF (service) set.  (NOTE 2) |
| NOTE 1: The mandadatory HTTP error status code for the DELETE method listed in Table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.  NOTE 2: RedirectResponse may be inserted by an SCP, see clause 6.10.9.1 of 3GPP TS 29.500 [4]. | | | | |

Table 6.2.3.3.3.2-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located on an alternative service instance within the same MB-SMF or MB-SMF (service) set.  Or the same URI, if a request is redirected to the same target resource via a different SCP. |
| 3gpp-Sbi-Target-Nf-Id | string | O | 0..1 | Identifier of the target MB-SMF (service) instance ID towards which the request is redirected |

Table 6.2.3.3.3.2-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located on an alternative service instance within the same MB-SMF or MB-SMF (service) set.  Or the same URI, if a request is redirected to the same target resource via a different SCP. |
| 3gpp-Sbi-Target-Nf-Id | string | O | 0..1 | Identifier of the target MB-SMF (service) instance ID towards which the request is redirected |

\* \* \* \* Next changes \* \* \* \*

##### 6.2.6.2.3 Type: CreateRspData

Table 6.2.6.2.3-1: Definition of type CreateRspData

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| mbsSession | ExtMbsSession | M | 1 | Representation of the created MBS session |  |

Editor's Note: It is FFS whether immediate event reports may be included in the response.

\* \* \* \* Next changes \* \* \* \*

##### 6.2.6.2.4 Type: MbsSessionExtension

Table 6.2.6.2.4-1: Definition of type MbsSessionExtension

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| policyAuthInd | boolean | O | 0..1 | Policy Authorization Indication  When present, it shall be set as follows:  - true: policy authorization is provided for the MBS session to the PCF;  - false (default): no policy authorization provided |  |
| mbsSecurityContext | MbsSecurityContext | O | 0..1 | This IE may be present if security protection is applied to the MBS Session. When present, it shall contain the MBS Service Key (MSK), MBS Traffic Key (MTK) and the corresponding key IDs. |  |
| contactPcfInd | boolean | O | 0..1 | Indicates whether the PCF shall be contacted or not, i.e.:   * "true" means that the PCF shall be contacted; and * "false" means that the PCF shall not be contacted.   When this attribute is not present, the default value is "false".  This attribute may only be present in an MBS Session update request. |  |

\* \* \* \* Next changes \* \* \* \*

# A.3 Nmbsmf\_MBSSession API

openapi: 3.0.0

info:

title: 'Nmbsmf-MBSSession'

version: 1.0.0

description: |

MB-SMF MBSSession Service.

© 2022, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

All rights reserved.

externalDocs:

description: >

3GPP TS 29.532 V17.1.0; 5G System; 5G Multicast-Broadcast Session Management Services;

Stage 3.

url: https://www.3gpp.org/ftp/Specs/archive/29\_series/29.532/

servers:

- url: '{apiRoot}/nmbsmf-mbssession/v1'

variables:

apiRoot:

default: https://example.com

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

security:

- {}

- oAuth2ClientCredentials:

- nmbsmf-mbssession

paths:

/mbs-sessions:

post:

summary: Create

tags:

- MBS sessions collection

operationId: Create

requestBody:

description: >

Representation of the MBS session to be created in the MB-SMF

Creates an individual MBS session resource in the MB-SMF.

required: true

content:

application/json:

schema:

$ref: '#/components/schemas/CreateReqData'

responses:

'201':

description: >

Successful creation of an MBS session

content:

application/json:

schema:

$ref: '#/components/schemas/CreateRspData'

headers:

Location:

description: >

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

{apiRoot}/nmbsmf-mbssession/<apiVersion>/mbssessions/{mbsSessionRef}'

required: true

schema:

type: string

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29571\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29571\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

/mbs-sessions/{mbsSessionRef}:

patch:

summary: Updates an individual MBS session resource in the MB-SMF.

tags:

- Individual MBS session

operationId: Update

parameters:

- name: mbsSessionRef

in: path

required: true

description: Unique ID of the MBS session to be modified

schema:

type: string

requestBody:

description: Data within the Update Request

required: true

content:

application/json-patch+json:

schema:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/PatchItem'

minItems: 1

responses:

'204':

description: >

Successful modification of the MBS session without content in the response.

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29571\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29571\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

delete:

summary: Deletes an individual MBS session resource in the MB-SMF.

tags:

- Individual MBS session

operationId: Release

parameters:

- name: mbsSessionRef

in: path

required: true

description: Unique ID of the MBS session to be released

schema:

type: string

responses:

'204':

description: >

Successful release of the MBS session without content in the response.

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

/mbs-sessions/contexts/update:

post:

summary: ContextUpdate

tags:

- MBS sessions collection

operationId: ContextUpdate

requestBody:

description: Data within the ContextUpdate Request

required: true

content:

application/json: # message without binary body part

schema:

$ref: '#/components/schemas/ContextUpdateReqData'

multipart/related: # message with binary body part

schema:

type: object

properties: # Request parts

jsonData:

$ref: '#/components/schemas/ContextUpdateReqData'

binaryDataN2Information:

type: string

format: binary

encoding:

jsonData:

contentType: application/json

binaryDataN2Information:

contentType: application/vnd.3gpp.ngap

headers:

Content-Id:

schema:

type: string

responses:

'200':

description: Successful response with content in the response

content:

application/json: # message without binary body part

schema:

$ref: '#/components/schemas/ContextUpdateRspData'

multipart/related: # message with binary body part

schema:

type: object

properties:

jsonData:

$ref: '#/components/schemas/ContextUpdateRspData'

binaryDataN2Information:

type: string

format: binary

encoding:

jsonData:

contentType: application/json

binaryDataN2Information:

contentType: application/vnd.3gpp.ngap

headers:

Content-Id:

schema:

type: string

'204':

description: Successful response without content in the response

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29571\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29571\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

/mbs-sessions/subscriptions:

post:

summary: StatusSubscribe creating a subscription

tags:

- Subscriptions collection for MBS sessions

operationId: StatusSubscribe

requestBody:

description: Data within the StatusSubscribe Request

required: true

content:

application/json:

schema:

$ref: '#/components/schemas/StatusSubscribeReqData'

responses:

'201':

description: Data within a successful StatusSubscribe Response

content:

application/json:

schema:

$ref: '#/components/schemas/StatusSubscribeRspData'

'204':

description: Successful response without content in the response

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29571\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29571\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

callbacks:

statusNotification:

'{$request.body#/notifUri}':

post:

parameters:

- name: Content-Encoding

in: header

description: Content-Encoding, described in IETF RFC 7231

schema:

type: string

requestBody:

description: Notification Payload

content:

application/json:

schema:

$ref: '#/components/schemas/StatusNotifyReqData'

responses:

'204':

description: Expected response to a successful callback processing

headers:

Accept-Encoding:

description: Accept-Encoding, described in IETF RFC 7694

schema:

type: string

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29571\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29571\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'501':

$ref: 'TS29571\_CommonData.yaml#/components/responses/501'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

/mbs-sessions/subscriptions/{subscriptionId}:

patch:

summary: StatusSubscribe to modify (update or renew) an individual subscription

tags:

- Individual Subscription for an MBS session

operationId: StatusSubscribeMod

parameters:

- name: subscriptionId

in: path

required: true

description: Unique ID of the individual subscription to be modified

schema:

type: string

requestBody:

description: Data to be modified in the MBSSessionSubscription

required: true

content:

application/json-patch+json:

schema:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/PatchItem'

minItems: 1

responses:

'200':

description: Successful modification of the individual Status Subscription

content:

application/json:

schema:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MbsSessionSubscription'

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29571\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29571\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

delete:

summary: StatusUnSubscribe to unsubscribe from the Status Subscription

tags:

- Individual Subscription for an MBS session

operationId: StatusUnSubscribe

parameters:

- name: subscriptionId

in: path

required: true

description: Unique ID of the subscription to be deleted

schema:

type: string

responses:

'204':

description: Successful deletion of the subscription

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

/mbs-sessions/contexts/subscriptions:

post:

summary: ContextStatusSubscribe creating a subscription

tags:

- Subscriptions collection for MBS contexts

operationId: ContextStatusSubscribe

requestBody:

description: Data within the ContextStatusSubscribe Request

required: true

content:

application/json:

schema:

$ref: '#/components/schemas/ContextStatusSubscribeReqData'

responses:

'201':

description: successful creation of a Context Status Subscription

content:

application/json:

schema:

$ref: '#/components/schemas/ContextStatusSubscribeRspData'

'204':

description: Successful response without content in the response

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29571\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29571\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

callbacks:

contextStatusNotification:

'{$request.body#/subscription/notifUri}':

post:

parameters:

- name: Content-Encoding

in: header

description: Content-Encoding, described in IETF RFC 7231

schema:

type: string

requestBody:

description: Notification Payload

content:

application/json:

schema:

$ref: '#/components/schemas/ContextStatusNotifyReqData'

responses:

'204':

description: Expected response to a successful callback processing

headers:

Accept-Encoding:

description: Accept-Encoding, described in IETF RFC 7694

schema:

type: string

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29571\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29571\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'501':

$ref: 'TS29571\_CommonData.yaml#/components/responses/501'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

/mbs-sessions/contexts/subscriptions/{subscriptionId}:

patch:

summary: ContextStatusSubscribe modifying an individual subscription

tags:

- Individual Subscription for an MBS context

operationId: ContextStatusSubscribeMod

parameters:

- name: subscriptionId

in: path

required: true

description: Unique ID of the subscription to be modified

schema:

type: string

requestBody:

description: Data within the ContextStatusSubscribe Request

required: true

content:

application/json-patch+json:

schema:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/PatchItem'

minItems: 1

responses:

'200':

description: Successful modification of a Context Status Subscription

content:

application/json:

schema:

$ref: '#/components/schemas/ContextStatusSubscription'

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29571\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29571\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29571\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

delete:

summary: ContextStatusUnSubscribe

tags:

- Individual Subscription for an MBS context

operationId: ContextStatusUnSubscribe

parameters:

- name: subscriptionId

in: path

required: true

description: Unique ID of the subscription to be deleted

schema:

type: string

responses:

'204':

description: Successful deletion

'307':

$ref: 'TS29571\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29571\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29571\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29571\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29571\_CommonData.yaml#/components/responses/404'

'429':

$ref: 'TS29571\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29571\_CommonData.yaml#/components/responses/500'

'502':

$ref: 'TS29571\_CommonData.yaml#/components/responses/502'

'503':

$ref: 'TS29571\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

nmbsmf-mbssession: Access to the Nmbsmf-MBSSession API

schemas:

#

# STRUCTURED DATA TYPES

#

CreateReqData:

description: Data within Create Request

type: object

properties:

mbsSession:

$ref: '#/components/schemas/ExtMbsSession'

required:

- mbsSession

CreateRspData:

description: Data within Create Response

type: object

properties:

mbsSession:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ExtMbsSession'

ExtMbsSession:

description: MbsSession common data type with MB-SMF API specific extensions

allOf:

- $ref: 'TS29571\_CommonData.yaml#/components/schemas/MbsSession'

- $ref: '#/components/schemas/MbsSessionExtension'

MbsSessionExtension:

description: MB-SMF API specific extensions to the MbsSession common data type

type: object

properties:

policyAuthInd:

type: boolean

default: false

mbsSecurityContext:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MbsSecurityContext'

contactPcfInd:

type: boolean

default: false

ContextUpdateReqData:

description: Data within ContextUpdate Request

type: object

properties:

nfcInstanceId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

mbsSessionId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MbsSessionId'

areaSessionId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/AreaSessionId'

requestedAction:

$ref: '#/components/schemas/ContextUpdateAction'

dlTunnelInfo:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Bytes'

n2MbsSmInfo:

$ref: '#/components/schemas/N2MbsSmInfo'

ranNodeId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/GlobalRanNodeId'

leaveInd:

type: boolean

enum:

- true

required:

- nfcInstanceId

- mbsSessionId

ContextUpdateRspData:

description: Data within ContextUpdate Response

type: object

properties:

llSsm:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Ssm'

cTeid:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

n2MbsSmInfo:

$ref: '#/components/schemas/N2MbsSmInfo'

ContextStatusSubscribeReqData:

description: Data within ContextStatusSubscribe Request

type: object

properties:

subscription:

$ref: '#/components/schemas/ContextStatusSubscription'

required:

- subscription

ContextStatusSubscription:

description: Context Status Subscription

type: object

properties:

nfcInstanceId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

mbsSessionId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MbsSessionId'

eventList:

type: array

items:

$ref: '#/components/schemas/ContextStatusEvent'

minItems: 1

notifyUri:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

notifyCorrelationId:

type: string

expiryTime:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/DateTime'

required:

- nfcInstanceId

- mbsSessionId

- eventList

- notifyUri

ContextStatusEvent:

description: Context Status Event

type: object

properties:

eventType:

$ref: '#/components/schemas/ContextStatusEventType'

immediateReportInd:

type: boolean

default: false

reportingMode:

$ref: '#/components/schemas/ReportingMode'

required:

- eventType

ContextStatusSubscribeRspData:

description: Data within ContextStatusSubscribe Response

type: object

properties:

subscription:

$ref: '#/components/schemas/ContextStatusSubscription'

reportList:

type: array

items:

$ref: '#/components/schemas/ContextStatusEventReport'

minItems: 1

mbsContextInfo:

$ref: '#/components/schemas/MbsContextInfo'

required:

- subscription

MbsContextInfo:

description: MBS context information

type: object

properties:

startTime:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/DateTime'

anyUeInd:

type: boolean

default: false

llSsm:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Ssm'

cTeid:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

mbsServiceArea:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MbsServiceArea'

mbsServiceAreaInfoList:

description: >

A map (list of key-value pairs) where the key identifies an areaSessionId

additionalProperties:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MbsServiceAreaInfo'

minProperties: 1

ContextStatusEventReport:

description: Context Status Event Report

type: object

properties:

eventType:

$ref: '#/components/schemas/ContextStatusEventType'

timeStamp:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/DateTime'

qosInfo:

$ref: '#/components/schemas/QosInfo'

statusInfo:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MbsSessionActivityStatus'

mbsServiceArea:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MbsServiceArea'

mbsServiceAreaInfoList:

description: >

A map (list of key-value pairs) where the key identifies an areaSessionId

additionalProperties:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MbsServiceAreaInfo'

minProperties: 1

multicastTransAddInfo:

$ref: '#/components/schemas/MulticastTransportAddressChangeInfo'

mbsSecurityContext:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MbsSecurityContext'

required:

- eventType

- timeStamp

ContextStatusNotifyReqData:

description: Context Status Notification

type: object

properties:

reportList:

type: array

items:

$ref: '#/components/schemas/ContextStatusEventReport'

minItems: 1

notifyCorrelationId:

type: string

required:

- reportList

StatusSubscribeReqData:

description: Data within the StatusSubscribe Request

type: object

properties:

subscription:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MbsSessionSubscription'

required:

- subscription

StatusSubscribeRspData:

description: Data within StatusSubscribe Response

type: object

properties:

subscription:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MbsSessionSubscription'

eventList:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MbsSessionEventReportList'

required:

- subscription

StatusNotifyReqData:

description: Status Notification

type: object

properties:

eventList:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/MbsSessionEventReportList'

required:

- eventList

N2MbsSmInfo:

description: N2 MBS Session Management information

type: object

properties:

ngapIeType:

$ref: '#/components/schemas/NgapIeType'

ngapData:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/RefToBinaryData'

MulticastTransportAddressChangeInfo:

description: Multicast Transport Address Change Information

type: object

properties:

llSsm:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Ssm'

cTeid:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

areaSessionId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/AreaSessionId'

required:

- llSsm

- cTeid

QosInfo:

description: QoS Information

type: object

properties:

qosFlowsAddModRequestList:

type: array

items:

$ref: '#/components/schemas/QosFlowAddModifyRequestItem'

minItems: 1

qosFlowsRelRequestList:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Qfi'

minItems: 1

QosFlowAddModifyRequestItem:

description: Individual MBS QoS flow requested to be created or modified

type: object

properties:

qfi:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Qfi'

qosFlowProfile:

$ref: '#/components/schemas/QosFlowProfile'

required:

- qfi

QosFlowProfile:

description: MBS QoS flow profile

type: object

properties:

5qi:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/5Qi'

nonDynamic5Qi:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/NonDynamic5Qi'

dynamic5Qi:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Dynamic5Qi'

arp:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Arp'

gbrQosFlowInfo:

$ref: '#/components/schemas/GbrQosFlowInformation'

required:

- 5qi

GbrQosFlowInformation:

description: GBR MBS QoS flow information

type: object

properties:

maxFbrDl:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/BitRate'

guaFbrDl:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/BitRate'

maxPacketLossRateDl:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/PacketLossRate'

required:

- maxFbrDl

- guaFbrDl

#

# SIMPLE DATA TYPES

#

#

# ENUMERATIONS

#

ContextUpdateAction:

description: Start or Terminate MBS data reception

anyOf:

- type: string

enum:

- START

- TERMINATE

- type: string

ContextStatusEventType:

description: Context Status Event Type

anyOf:

- type: string

enum:

- QOS\_INFO

- STATUS\_INFO

- SERVICE\_AREA\_INFO

- SESSION\_RELEASE

- MULT\_TRANS\_ADD\_CHANGE

- SECURITY\_INFO

- type: string

ReportingMode:

description: Reporting Mode

anyOf:

- type: string

enum:

- CONTINUOUS

- ONE\_TIME

- type: string

NgapIeType:

description: NGAP Information Element Type

anyOf:

- type: string

enum:

- MBS\_DIS\_SETUP\_REQ

- MBS\_DIS\_SETUP\_RSP

- MBS\_DIS\_SETUP\_FAIL

- MBS\_DIS\_REL\_REQ

- type: string

\* \* \* \* End of changes \* \* \* \*