**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 canbe 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 | Responsecodes | 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 | Responsecodes | 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 IndicationWhen 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.

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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 \* \* \* \*