**3GPP TSG-CT WG4 Meeting #111-eC4-224394**

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

|  |
| --- |
| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **29.581** | **CR** | **0013** | **rev** | **-** | **Current version:** | **17.0.0** |  |
|  |
| *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)*.* |
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|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

|  |
| --- |
|  |
| ***Title:***  | Miscellaneous updates and corrections to the data model of the Nmbstf\_DistSession API |
|  |  |
| ***Source to WG:*** | Huawei |
| ***Source to TSG:*** | CT4 |
|  |  |
| ***Work item code:*** | 5MBS |  | ***Date:*** | 2022-08-10 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***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:*** | The following issues have been encountered in the data model of the Nmbstf\_DistSession API:* The "objPullFreq" attribute of the ObjDistributionData data type and the related "ObjPullFreq" data type are not needed as the object pull frequency is not a sub-type of the "PULL" object acquisition method, but rather depends on the operating mode as specified in Table 6.1-1 of TS 26.502.
 |
|  |  |
| ***Summary of change:*** | This CR proposes to:* Remove the "objPullFreq" attribute of the ObjDistributionData data type and the related "ObjPullFreq" data type.
* Apply some editorial corrections.

This CR is also aimed to be a used for any potential updated to the data model of the Nmbstf\_DistSession API based on the progress of the discussions in SA2. |
|  |  |
| ***Consequences if not approved:*** | * The data model of the Nmbstf\_DistSession API is not correct/complete.
 |
|  |  |
| ***Clauses affected:*** | 6.1.6.1, 6.1.6.2.5, A.2 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ... |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ... |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ... |
|  |  |
| ***Other comments:*** | This CR introduces backwards compatible corrections to the OpenAPI description of the Nmbstf\_DistSession API defined in this specification. |
|  |  |
| ***This CR's revision history:*** |  |

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

#### 6.1.6.1 General

This clause specifies the application data model supported by the API.

Table 6.1.6.1-1 specifies the data types defined for the Nmbstf\_MBSDistributionSession service based interface protocol.

Table 6.1.6.1-1: Nmbstf\_MBSDistributionSession specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Clause defined | Description | Applicability |
| CreateReqData | 6.1.6.2.2 | Data within the Create Request |  |
| CreateRspData | 6.1.6.1.3 | Data within the Create Response |  |
| DistSession | 6.1.6.2.4 | Data specific to distribution session |  |
| ObjDistributionData | 6.1.6.2.5 | Data specific to Object Distribution Method |  |
| PktDistributionData | 6.1.6.2.6 | Data specific to Packet Distribution Method |  |
| StatusSubscribeReqData | 6.1.6.2.7 | Data within Subscription creation request |  |
| StatusSubscribeRspData | 6.1.6.2.8 | Data within Subscription creation response |  |
| StatusNotifyReqData | 6.1.6.2.9 | Data within Notification request |  |
| DistSessionSubscription | 6.1.6.2.10 | Data specific to subscription request |  |
| DistSessionEventReportList | 6.1.6.2.11 | MBS distribution session event report list |  |
| DistSessionEventReport | 6.1.6.2.12 | MBS distribution session event report |  |
| UpTrafficFlowInfo | 6.1.6.2.13 | IP Multicast Address and Port Number |  |
| MbStfIngestAddr | 6.1.6.2.14 | MBSTF Ingest Addresses |  |
| ExtSsm | 6.1.6.2.15 | SSM and Port Number |  |
| DistSessionState | 6.1.6.3.3 | MBS distribution session state |  |
| ObjDistributionOperatingMode | 6.1.6.3.4 | Operating Mode for Object distribution method |  |
| ObjAcquisitionMethod | 6.1.6.3.5 | Object acquisition method |  |
| PktDistributionOperatingMode | 6.1.6.3.6 | Operating Mode for Packet distribution method |  |
| DistSessionEventType | 6.1.6.3.7 | MBS distribution session event type |  |
| PktIngestMethod | 6.1.6.3.8 | Packet Ingest Method |  |
|  |  |  |  |

Table 6.1.6.1-2 specifies data types re-used by the Nmbstf\_MBSDistributionSession service based interface protocol from other specifications, including a reference to their respective specifications and when needed, a short description of their use within the Nmbstf\_MBSDistributionSession service based interface.

Table 6.1.6.1-2: Nmbstf\_MBSDistributionSession re-used Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
| TunnelAddress | 3GPP TS 29.571 [16] | Tunnel Address (UDP/IP) |  |
| Tmgi | 3GPP TS 29.571 [16] | TMGI |  |
| 5Qi | 3GPP TS 29.571 [16] | 5QI |  |
| BitRate | 3GPP TS 29.571 [16] | Bit Rate |  |
| PacketDelBudget | 3GPP TS 29.571 [16] | Maximum Delay |  |
| Uri | 3GPP TS 29.571 [16] | Uniform resource identifier |  |
| DateTime | 3GPP TS 29.571 [16] | Data and Time |  |
| NfInstanceId | 3GPP TS 29.571 [16] | NF Instance Identifier |  |
| Uinteger | 3GPP TS 29.571 [16] | Unsigned Integer |  |
| IpAddr | 3GPP TS 29.571 [16] | IP Address |  |
| Ssm | 3GPP TS 29.571 [16] | Source Specific Multicast Address |  |
| MbsSecurityContext | 3GPP TS 29.571 [16] | MBS Security Context |  |
| MbsSessionId | 3GPP TS 29.571 [16] | MBS Session ID |  |
| MbsServiceArea | 3GPP TS 29.571 [16] | MBS Service Area |  |

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

##### 6.1.6.2.5 Type: ObjDistributionData

Table 6.1.6.2.5-1: Definition of type ObjDistributionData

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| objDistributionOperatingMode | ObjDistributionOperatingMode | M | 1 | Operating Mode for the Object distribution method |  |
| objAcquisitionMethod | ObjAcquisitionMethod | M | 1 | Indicates whether the objects(s) are to be pushed into the MBSTF by the MBS Application Provider or whether they are to be pulled from the MBS Application Provider by the MBSTF |  |
|  |  |  |  |  |  |
| objAcquisitionIdsPull | array(Uri) | C | 0..1 | In case or PULL method, it identifies the object(s) to be ingested and distributed by the MBSTF during this MBS Distribution Session. |  |
| objAcquisitionIdPush | Uri | C | 0..1 | In case or PUSH method, it identifies the URL endpoint on the MBSTF used to ingest objects by the application provider. This may be present only in the response to the Create or Retrieve requestRead-Only: true |  |
| objIngestBaseUrl | Uri | C | 0..1 | A URL prefix substituted by the MBSTF with the Object distribution base URL prior to distribution of ingested objects.Shall be present if Object Distribution base URL is present.Shall be present only in case of PUSH Method. |  |
| objDistributionBaseUrl | Uri | O | 0..1 | A URL prefix substituted by the MBSTF in place of the Object ingest base URL prior to distribution of ingested objects.Shall be present only in case of PUSH Method. |  |

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

|  |  |  |
| --- | --- | --- |
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|  |  |  |
|  |  |  |

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

# A.2 Nmbstf\_DistSession API

openapi: 3.0.0

info:

 title: Nmbstf-distsession

 version: 1.0.0

 description: |

 MBSTF Distribution Session Service.

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externalDocs:

 description: 3GPP TS 29.581 V17.0.0; 5G System; MBSDistribution Service.

 url: https://www.3gpp.org/ftp/Specs/archive/29\_series/29.581/

servers:

 - url: '{apiRoot}/nmbstf-distsession/v1'

 variables:

 apiRoot:

 default: https://example.com

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

security:

 - {}

 - oAuth2ClientCredentials:

 - nmbstf-distsession

paths:

 /dist-sessions:

 post:

 summary: Create

 tags:

 - MBS distribution sessions collection

 operationId: Create

 requestBody:

 description: >

 Representation of the MBS distribution session to be created in the MBSTF

 Creates an individual MBS distribution session resource in the MBSTF.

 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}/nmbstf-distsession/<apiVersion>/dist-sessions/{distSessionRef}'

 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'

 /dist-sessions/{distSessionRef}:

 patch:

 summary: Updates an individual MBS distribution session resource in the MBSTF.

 tags:

 - Individual MBS distribution session

 operationId: Update

 parameters:

 - name: distSessionRef

 in: path

 required: true

 description: Unique ID of the MBS distribution session

 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 distribution session without content in the response.

 '200':

 description: >

 Successful response containing the updated representation of Distribution Session.

 content:

 application/json:

 schema:

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

 '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 distribution session resource in the MBSTF.

 tags:

 - Individual MBS distribution session

 operationId: Destroy

 parameters:

 - name: distSessionRef

 in: path

 required: true

 description: Unique ID of the MBS distribution session

 schema:

 type: string

 responses:

 '204':

 description: >

 Successful release of the MBS distribution 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'

 get:

 summary: Retrieves an individual MBS distribution session resource in the MBSTF.

 tags:

 - Individual MBS distribution session

 operationId: Retrieve

 parameters:

 - name: distSessionRef

 in: path

 required: true

 description: Unique ID of the MBS distribution session

 schema:

 type: string

 responses:

 '200':

 description: successful retrieval of MBS distribution session parameters

 content:

 application/json:

 schema:

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

 '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'

 /dist-sessions/{distSessionRef}/subscriptions:

 post:

 summary: StatusSubscribe creating a subscription

 tags:

 - Subscriptions collection for MBS distribution session

 operationId: StatusSubscribe

 parameters:

 - name: distSessionRef

 in: path

 required: true

 description: Unique ID of the MBS distribution session

 schema:

 type: string

 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'

 /dist-sessions/{distSessionRef}/subscriptions/{subscriptionId}:

 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

 schema:

 type: string

 - name: distSessionRef

 in: path

 required: true

 description: Unique ID of the MBS distribution session

 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'

 patch:

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

 tags:

 - Individual Subscription for an MBS distribution session

 operationId: StatusSubscribeMod

 parameters:

 - name: subscriptionId

 in: path

 required: true

 description: Unique ID of the individual subscription to be modified

 schema:

 type: string

 - name: distSessionRef

 in: path

 required: true

 description: Unique ID of the MBS distribution session

 schema:

 type: string

 requestBody:

 description: Data to be modified in the DistSessionSubscription

 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: '#/components/schemas/DistSessionSubscription'

 '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'

components:

 securitySchemes:

 oAuth2ClientCredentials:

 type: oauth2

 flows:

 clientCredentials:

 tokenUrl: '{nrfApiRoot}/oauth2/token'

 scopes:

 nmbstf-distsession: Access to the nmbstf-distsession API

 schemas:

#

# STRUCTURED DATA TYPES

#

 CreateReqData:

 description: Data within Create Request

 type: object

 properties:

 distSession:

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

 required:

 - distSession

 CreateRspData:

 description: Data within Create Response

 type: object

 properties:

 distSession:

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

 required:

 - distSession

 DistSession:

 description: Mbs Distribution Session Information

 type: object

 properties:

 distSessionId:

 type: string

 distSessionState:

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

 mbUpfTunAddr:

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

 upTrafficFlowInfo:

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

 mbsSessionId:

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

 mbsServiceAreas:

 description: A map (list of key-value pairs) where a AreaSessionId serves as key of MbsServiceArea

 type: object

 additionalProperties:

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

 minProperties: 1

 5qi:

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

 mbr:

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

 maxDelay:

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

 objDistributionData:

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

 pktDistributionData:

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

 fecInformation:

 type: string

 dscpMarking:

 type: string

 mbsSecurityContext:

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

 required:

 - distSessionId

 - distSessionState

 - mbUpfTunAddr

 - mbr

 oneOf:

 - required: [ objDistributionData ]

 - required: [ pktDistributionData ]

# Editor's Note: the encoding of the fecInformation IE is FFS

 ObjDistributionData:

 description: Info for Object Distribution Method

 type: object

 properties:

 objDistributionOperatingMode:

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

 objAcquisitionMethod:

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

 objAcquisitionIdsPull:

 type: array

 items:

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

 minItems: 1

 objAcquisitionIdPush:

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

 objIngestBaseUrl:

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

 objDistributionBaseUrl:

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

 required:

 - objDistributionOperatingMode

 - objAcquisitionMethod

 PktDistributionData:

 description: Info for Packet Distribution Method

 type: object

 properties:

 pktDistributionOperatingMode:

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

 pktIngestMethod:

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

 mbStfIngestAddr:

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

 required:

 - pktDistributionOperatingMode

 - mbStfIngestAddr

 StatusSubscribeReqData:

 description: Data within the StatusSubscribe Request

 type: object

 properties:

 subscription:

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

 required:

 - subscription

 StatusSubscribeRspData:

 description: Data within StatusSubscribe Response

 type: object

 properties:

 subscription:

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

 reportList:

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

 required:

 - subscription

 StatusNotifyReqData:

 description: Status Notification

 type: object

 properties:

 reportList:

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

 required:

 - reportList

 DistSessionSubscription:

 description: Data within the Status Subscription

 type: object

 properties:

 nfcInstanceId:

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

 eventList:

 type: array

 items:

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

 minItems: 1

 notifyUri:

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

 notifyCorrelationId:

 type: string

 expiryTime:

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

 distSessionSubscUri:

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

 required:

 - eventList

 - notifyUri

 DistSessionEventReportList:

 description: List of Event Reports

 type: object

 properties:

 eventReportList:

 type: array

 items:

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

 minItems: 1

 notifyCorrelationId:

 type: string

 required:

 - eventReportList

 DistSessionEventReport:

 description: Data related to a specific event

 type: object

 properties:

 eventType:

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

 timeStamp:

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

 mbsSecurityContext:

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

 required:

 - eventType

 UpTrafficFlowInfo:

 description: IP Multicast Address and Port Number

 type: object

 properties:

 destIpAddr:

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

 portNumber:

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

 required:

 - destIpAddr

 MbStfIngestAddr:

 description: MBSTF Ingest Addresses

 type: object

 properties:

 afEgressTunAddr:

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

 mbStfIngressTunAddr:

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

 afSsm:

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

 mbStfListenAddr:

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

 ExtSsm:

 description: SSM and Port Number

 type: object

 properties:

 ssm:

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

 portNumber:

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

 required:

 - ssm

 - portNumber

#

# SIMPLE DATA TYPES

#

#

# ENUMERATIONS

#

 DistSessionState:

 description: Current State of MBS distribution session

 anyOf:

 - type: string

 enum:

 - INACTIVE

 - ESTABLISHED

 - ACTIVE

 - DEACTIVATING

 - type: string

 ObjDistributionOperatingMode:

 description: Mode of data ingestion for Object distribution method

 anyOf:

 - type: string

 enum:

 - FILE

 - COLLECTION

 - CAROUSEL

 - REAL\_TIME

 - type: string

 ObjAcquisitionMethod:

 description: Object Acquisition Method

 anyOf:

 - type: string

 enum:

 - PULL

 - PUSH

 - type: string

 PktDistributionOperatingMode:

 description: Mode of data ingestion for Packet distribution method

 anyOf:

 - type: string

 enum:

 - PROXY

 - FORWARD\_ONLY

 - type: string

 DistSessionEventType:

 description: Status Event Type

 anyOf:

 - type: string

 enum:

 - DATA\_INGEST\_FAILURE

 - SESSION\_TERMINATED

 - DELIVERY\_STARTED\_VIA\_NMB9

 - MTK\_UPDATE

 - MSK\_REQUEST

 - type: string

 PktIngestMethod:

 description: Packet Ingest Method

 anyOf:

 - type: string

 enum:

 - MULTICAST

 - UNICAST

 - type: string

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

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