**3GPP TSG-CT3 Meeting #135C3-243xxx**

**Hyderabad, IN, 27 - 31 May, 2024 was C3-243270 was C3-242441 was C3-242369 was C3-241339**

|  |
| --- |
| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  |  | **CR** | **0048** | **rev** | **4** | **Current version:** |  |  |
|  |
| *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:***  | Defining the missing 5MBS error handling procedures |
|  |  |
| ***Source to WG:*** | Huawei, Nokia |
| ***Source to TSG:*** | CT3 |
|  |  |
| ***Work item code:*** | TEI18, 5MBS |  | ***Date:*** | 2024-05-31 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** |  |
|  | *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 current definition of MBS session creation/update, several error scenarios have been defined in Table 5.20.7.3-1 of TS 29.522 (and also TS 29.537) for the case where the MBSF is not involved. However, these error scenarios are also applicable to the case where the MBSF is involved. It is just that they should be defined with MBS Distribution session granularity. Otherwise, the MBSF/NEF will not be able to relay these errors to the AF. |
|  |  |
| ***Summary of change:*** | This CR proposes to:* Define the missing error handling procedures for the MBSF/NEF APIs used when the MBSF is involved in 5MBS procedures.
 |
|  |  |
| ***Consequences if not approved:*** | * The same level of functionality for 5MBS is not ensured for all cases, which leads to the MBSF option not being complete from stage 3 perspective.
* Missing essential error handling procedures.
 |
|  |  |
| ***Clauses affected:*** | 2, 6.2.3.2.3.2, 6.2.3.3.3.2, 6.2.3.3.3.3, 6.2.6.1, 6.2.6.2.2, 6.2.6.2.17 (new clause), 6.2.6.2.18 (new clause), 6.2.6.3.5, 6.2.6.4, 6.2.6.4.1 (new clause), 6.2.8, A.3 |
|  |  |
|  | **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 a backwards compatible new fetaure to the OpenAPI description of the Nmbsf\_MBSUserDataIngestSession API defined in this specification. |
|  |  |
| ***This CR's revision history:*** | Rev 1 (to CT3#134):* Resubmitting the CR with no changes.

Rev 3 (to CT3#135):* Resubmitting the CR with no changes.
 |

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

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 23.501: "System Architecture for the 5G System; Stage 2".

[3] 3GPP TS 23.502: "Procedures for the 5G System; Stage 2".

[4] 3GPP TS 29.500: "5G System; Technical Realization of Service Based Architecture; Stage 3".

[5] 3GPP TS 29.501: "5G System; Principles and Guidelines for Services Definition; Stage 3".

[6] OpenAPI: "OpenAPI Specification Version 3.0.0", <https://spec.openapis.org/oas/v3.0.0>.

[7] 3GPP TR 21.900: "Technical Specification Group working methods".

[8] 3GPP TS 33.501: "Security architecture and procedures for 5G system".

[9] IETF RFC 6749: "The OAuth 2.0 Authorization Framework".

[10] 3GPP TS 29.510: "5G System; Network Function Repository Services; Stage 3".

[11] IETF RFC 9113: "HTTP/2".

[12] IETF RFC 8259: "The JavaScript Object Notation (JSON) Data Interchange Format".

[13] IETF RFC 9457: "Problem Details for HTTP APIs".

[14] 3GPP TS 23.247: "Architectural enhancements for 5G multicast-broadcast services; Stage 2".

[15] 3GPP TS 26.502: "5G Multicast-Broadcast User Service Architecture".

[16] 3GPP TS 29.554: "5G System; Background Data Transfer Policy Control Service; Stage 3".

[17] 3GPP TS 29.571: "5G System; Common Data Types for Service Based Interfaces; Stage 3".

[18] 3GPP TS 29.122: "T8 reference point for northbound Application Programming Interfaces (APIs)".

[19] OMA: "OMNA BCAST Service Class Registry", <https://technical.openmobilealliance.org/OMNA/bcast/bcast-service-class-registry.html>.

[20] 3GPP TS 29.581: "5G System; Multicast/Broadcast Service Transport Services; Stage 3".

[21] IANA: "Reliable Multicast Transport (RMT) FEC Encoding IDs and FEC Instance IDs", https://www.iana.org/assignments/rmt-fec-parameters/rmt-fec-parameters.xhtml#rmt-fec-parameters-1

[22] IETF RFC 7396: "JSON Merge Patch".

[23] 3GPP TS 26.517: "5G Multicast-Broadcast User Services; Protocols and Formats".

[24] 3GPP TS 29.522: "5G System; Network Exposure Function Northbound APIs; Stage 3".

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

###### 6.2.3.2.3.2 POST

The POST method allows an NF service consumer (e.g. AF, NEF) to request the creation of a new MBS User Data Ingest Session including one or several subordinate MBS Distribution Session(s).

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

Table 6.2.3.2.3.2-1: URI query parameters supported by the POST method on this resource

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

This method shall support the request data structures specified in table 6.2.3.2.3.2-2 and the response data structures and response codes specified in table 6.2.3.2.3.2-3.

Table 6.2.3.2.3.2-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| MBSUserDataIngSession | M | 1 | Contains the parameters to request the creation of a new MBS User Data Ingest Session. |

Table 6.2.3.2.3.2-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Responsecodes | Description |
| MBSUserDataIngSession | M | 1 | 201 Created | Successful case. The MBS User Data Ingest Session is successfully created and a representation of the created "Individual MBS User Data Ingest Session" resource is returned.An HTTP "Location" header that contains the resource URI of the created "Individual MBS User Data Ingest Session" resource is also included. |
| ProblemDetailsMBS | O | 0..1 | 400 Bad Request | (NOTE 2) |
| ProblemDetailsMBS | O | 0..1 | 403 Forbidden | (NOTE 2) |
| ProblemDetailsMBS | O | 0..1 | 404 Not Found | (NOTE 2) |
| NOTE 1: The manadatory HTTP error status codes for the HTTP POST method listed in Table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.NOTE 2: Failure cases are described in clause 6.2.7. |

Table 6.2.3.2.3.2-4: Headers supported by the 201 response code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains the URI of the newly created resource, according to the structure:{apiRoot}/nmbsf-mbs-ud-ingest/<apiVersion>/sessions/{sessionId} |

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

###### 6.2.3.3.3.2 PUT

The PUT method allows an NF service consumer (e.g. AF, NEF) to update an existing "Individual MBS User Data Ingest Session" resource managed by the MBSF.

This method shall support the URI query parameters specified in table 6.2.3.3.3.2-1.

Table 6.2.3.3.3.2-1: URI query parameters supported by the PUT 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 PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| MBSUserDataIngSession | M | 1 | Contains the updated representation of the existing "Individual MBS User Data Ingest Session" resource that is to be updated. |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Responsecodes | Description |
| MBSUserDataIngSession | M | 1 | 200 OK | Successful case. The concerned "Individual MBS User Data Ingest Session" resource is successfully updated and a representation of the updated resource is returned to the NF service consumer in the response body. |
| n/a |  |  | 204 No Content | Successful case. The concerned "Individual MBS User Data Ingest Session" resource is successfully updated and no content is returned in the response body. |
| RedirectResponse | O | 0..1 | 307 Temporary Redirect | Temporary redirection.(NOTE 2) |
| RedirectResponse | O | 0..1 | 308 Permanent Redirect | Permanent redirection.(NOTE 2) |
| ProblemDetailsMBS | O | 0..1 | 400 Bad Request | (NOTE 3) |
| ProblemDetailsMBS | O | 0..1 | 403 Forbidden | (NOTE 3) |
| ProblemDetailsMBS | O | 0..1 | 404 Not Found | (NOTE 3) |
| NOTE 1: The mandatory HTTP error status codes for the HTTP PUT method listed in Table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.NOTE 2: The RedirectResponse data structure may be provided by an SCP (cf. clause 6.10.9.1 of 3GPP TS 29.500 [4]).NOTE 3: Failure cases are described in clause 6.2.7. |

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 | Contains an alternative URI of the resource located in an alternative MBSF (service) instance towards which the request is redirected.For the case where the request is redirected to the same target via a different SCP, refer to clause 6.10.9.1 of 3GPP TS 29.500 [4]. |
| 3gpp-Sbi-Target-Nf-Id | string | O | 0..1 | Identifier of the target MBSF (service) instance 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 | Contains an alternative URI of the resource located in an alternative MBSF (service) instance towards which the request is redirected.For the case where the request is redirected to the same target via a different SCP, refer to clause 6.10.9.1 of 3GPP TS 29.500 [4]. |
| 3gpp-Sbi-Target-Nf-Id | string | O | 0..1 | Identifier of the target MBSF (service) instance towards which the request is redirected. |

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

###### 6.2.3.3.3.3 PATCH

The PATCH method allows an NF service consumer (e.g. AF, NEF) to modify an existing "Individual MBS User Data Ingest Session" resource managed by the MBSF.

This method shall support the URI query parameters specified in table 6.2.3.3.3.3-1.

Table 6.2.3.3.3.3-1: 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 6.2.3.3.3.3-2 and the response data structures and response codes specified in table 6.2.3.3.3.3-3.

Table 6.2.3.3.3.3-2: Data structures supported by the PATCH Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| MBSUserDataIngSessionPatch | M | 1 | Contains the parameters to request the modification of an existing "Individual MBS User Data Ingest Session" resource. |

Table 6.2.3.3.3.3-3: Data structures supported by the PATCH Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Responsecodes | Description |
| MBSUserDataIngSession | M | 1 | 200 OK | Successful case. The concerned "Individual MBS User Data Ingest Session" resource is successfully modified and a representation of the updated resource is returned to the NF service consumer in the response body. |
| n/a |  |  | 204 No Content | Successful case. The concerned "Individual MBS User Data Ingest Session" resource is successfully modified and no content is returned in the response body. |
| RedirectResponse | O | 0..1 | 307 Temporary Redirect | Temporary redirection.(NOTE 2) |
| RedirectResponse | O | 0..1 | 308 Permanent Redirect | Permanent redirection.(NOTE 2) |
| ProblemDetailsMBS | O | 0..1 | 400 Bad Request | (NOTE 3) |
| ProblemDetailsMBS | O | 0..1 | 403 Forbidden | (NOTE 3) |
| ProblemDetailsMBS | O | 0..1 | 404 Not Found | (NOTE 3) |
| NOTE 1: The mandatory HTTP error status codes for the HTTP PATCH method listed in Table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply.NOTE 2: The RedirectResponse data structure may be provided by an SCP (cf. clause 6.10.9.1 of 3GPP TS 29.500 [4]).NOTE 3: Failure cases are described in clause 6.2.7. |

Table 6.2.3.3.3.3-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains an alternative URI of the resource located in an alternative MBSF (service) instance towards which the request is redirected.For the case where the request is redirected to the same target via a different SCP, refer to clause 6.10.9.1 of 3GPP TS 29.500 [4]. |
| 3gpp-Sbi-Target-Nf-Id | string | O | 0..1 | Identifier of the target MBSF (service) instance towards which the request is redirected. |

Table 6.2.3.3.3.3-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains an alternative URI of the resource located in an alternative MBSF (service) instance towards which the request is redirected.For the case where the request is redirected to the same target via a different SCP, refer to clause 6.10.9.1 of 3GPP TS 29.500 [4]. |
| 3gpp-Sbi-Target-Nf-Id | string | O | 0..1 | Identifier of the target MBSF (service) instance towards which the request is redirected. |

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

#### 6.2.6.1 General

This clause specifies the application data model supported by the Nmbsf\_MBSUserDataIngestSession API.

Table 6.2.6.1-1 specifies the data types defined for the Nmbsf\_MBSUserDataIngestSession service based interface protocol.

Table 6.2.6.1-1: Nmbsf\_MBSUserDataIngestSession specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Clause defined | Description | Applicability |
| AddFecParams | 6.2.6.2.15 | Represents additional scheme-specific parameters for AL-FEC configuration. |  |
| DistributionMethod | 6.2.6.3.3 | Represents the MBS Distribution method. |  |
| DistSessionFailure | 6.2.6.3.5 | Represents the MBS Distribution Session creation/update related failure cause. | MBSErrorHandling |
| Event | 6.2.6.3.4 | Represents MBS User Data Ingest Session Status events. |  |
| EventNotification | 6.2.6.2.10 | Represents an MBS User Data Ingest Session Status event notification related information. |  |
| FECConfig | 6.2.6.2.14 | Represents FEC configuration information. |  |
| MbsDistSessFailure | 6.2.6.2.17 | Represents MBS Distribution Session specific failure information. | MBSErrorHandling |
| MbsDistSessFailureSets | 6.2.6.2.18 | Represents one or several set(s) of MBS Distribution Session specific failure information. | MBSErrorHandling |
| MBSDistSessionAnmt | 6.2.6.2.12 | Represents the set of MBS Distribution Session Announcement information associated with an MBS User Service Announcement. |  |
| MBSDistributionSessionInfo | 6.2.6.2.3 | Represents an MBS Distribution Session. |  |
| ProblemDetailsMBS | 6.2.6.4.1 | Represents an extension to the ProblemDetails data structure with potentially additional error information related to MBS. | MBSErrorHandling |
| MBSUserDataIngSession | 6.2.6.2.2 | Represents an MBS User Data Ingest Session. |  |
| MBSUserDataIngSessionPatch | 6.2.6.2.4 | Represents the requested modifications to an MBS User Data Ingest Session. |  |
| MBSUserDataIngStatNotif | 6.2.6.2.9 | Represents an MBS User Data Ingest Session Status Notification. |  |
| MBSUserDataIngStatSubsc | 6.2.6.2.7 | Represents an MBS User Data Ingest Session Status Subscription. |  |
| MBSUserDataIngStatSubscPatch | 6.2.6.2.16 | Represents the requested modifications to an MBS User Data Ingest Session Status Subscription. |  |
| MBSUserServAnmt | 6.2.6.2.11 | Represents the MBS User Service Announcement associated with the MBS User Data Ingest Session. |  |
| ObjectDistMethAnmtInfo | 6.2.6.2.13 | Represents MBS Distribution Session Announcement information for the Object Distribution Method. |  |
| ObjectDistrMethInfo | 6.2.6.2.5 | Represents additional MBS Distribution Session parameters for the case where the Object Distribution Method is used. |  |
| PacketDistrMethInfo | 6.2.6.2.6 | Represents additional MBS Distribution Session parameters for the case where the Packet Distribution Method is used. |  |
| SubscribedEvent | 6.2.6.2.8 | Represents a subscribed MBS User Data Ingest Session Status event and the related information. |  |

Table 6.2.6.1-2 specifies data types re-used by the Nmbsf\_MBSUserDataIngestSession 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 Nmbsf\_MBSUserDataIngestSession service based interface.

Table 6.2.6.1-2: Nmbsf\_MBSUserDataIngestSession re-used Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
| AssociatedSessionId | 3GPP TS 29.571 [17] | Represents an identifier to associate broadcast MBS sessions from different core networks in network sharing deployments. | 5MBS2 |
| BitRate | 3GPP TS 29.571 [17] | Represents a Bit Rate. |  |
| DateTime | 3GPP TS 29.122 [18] | Represents an absolute date time with the format "date-time", as defined in OpenAPI Specification [6]. |  |
| DistSessionState | 3GPP TS 29.581 [19] | Represents the state of an MBS Distribution Session. |  |
| ExternalMbsServiceArea | 3GPP TS 29.571 [17] | Represents an external MBS Service Area. |  |
| MbsFsaId | 3GPP TS 29.571 [17] | Represents an MBS Frequency Selection Area ID, for a broadcast MBS session. |  |
| MbsServiceArea | 3GPP TS 29.571 [17] | Represents an MBS service area. |  |
| MbsServiceInfo | 3GPP TS 29.571 [17] | Represents MBS Service Information. |  |
| MbsSessionId | 3GPP TS 29.571 [17] | Represents an MBS Session Identifier. |  |
| MbStfIngestAddr | 3GPP TS 29.581 [19] | Represents MBSTF ingest endpoint addresses. |  |
| ObjAcquisitionMethod | 3GPP TS 29.581 [19] | Represents the Object Acquisition Method. |  |
| ObjDistributionOperatingMode | 3GPP TS 29.581 [19] | Represents the operation mode for an Object distribution method. |  |
| PacketDelBudget | 3GPP TS 29.571 [17] | Represents a Packet Delay Budget expressed in milliseconds. |  |
| PktDistributionOperatingMode | 3GPP TS 29.581 [19] | Represents the operation mode for a Packet distribution method. |  |
| PktIngestMethod | 3GPP TS 29.581 [19] | Represents packets ingest method. |  |
| ProblemDetails | 3GPP TS 29.571 [17] | Represents error related information. |  |
| ReducedMbsServArea | 3GPP TS 29.522 [24] | Represents the reduced MBS Service Area information. |  |
| RedirectResponse | 3GPP TS 29.571 [17] | Contains redirection related information. |  |
| ServiceNameDescription | Clause 6.1.6.2.3 | Represents a set of per language service Name and/or service description. |  |
| SupportedFeatures | 3GPP TS 29.571 [17] | Used to negotiate the applicability of optional features. |  |
| TimeWindow | 3GPP TS 29.122 [18] | Represents a time window. |  |
| Uri | 3GPP TS 29.571 [17] | Represents a Uniform Resource Identifier. |  |
| UserServiceDescription | 3GPP TS 26.517 [23] | Represents the MBS User Service Announcement Information. |  |

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

##### 6.2.6.2.2 Type: MBSUserDataIngSession

Table 6.2.6.2.2-1: Definition of type MBSUserDataIngSession

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| mbsUserServId | string | M | 1 | Represents the Identifier of the parent MBS User Service instance. |  |
| mbsDisSessInfos | map(MBSDistributionSessionInfo) | M | 1..N | Represents one or more MBS Distribution Session(s) composing the MBS User Data Ingest Session.The key of the map shall be any unique string encoded value. |  |
| actPeriods | array(TimeWindow) | O | 1..N | Represents periods of time during which the MBS User Data Ingest Session is active in the MBS System.If omitted, the MBS User Data Ingest Session shall stay active until it is explicitly terminated by the AF or later provided by the AF. |  |
| mbsUserServAnmt | MBSUserServAnmt | O | 0..1 | Represents the MBS User Service Announcement currently associated with the MBS User Data Ingest Session.This attribute may be present only in an HTTP PUT/PATCH response to an MBS User Data Ingest Session update/modification request and only if all the constituent MBS Distribution Session(s) are in the "ESTABLISHED" or "ACTIVE" state and the "PASSED\_BACK" MBS User Service Announcement mode is provisioned within the MBS User Service Announcement mode(s) supported by the parent MBS User Service instance identified by the "mbsUserServId" attribute.This attribute is deprecated. The "mbsUserServiceAnmt" attribute should be used instead. |  |
| mbsUserServiceAnmt | UserServiceDescription | O | 0..1 | Represents the MBS User Service Announcement currently associated with the MBS User Data Ingest Session.This attribute may be present only in an HTTP PUT/PATCH response to an MBS User Data Ingest Session update/modification request and only if all the constituent MBS Distribution Session(s) are in the "ESTABLISHED" or "ACTIVE" state and the "PASSED\_BACK" MBS User Service Announcement mode is provisioned within the MBS User Service Announcement mode(s) supported by the parent MBS User Service instance identified by the "mbsUserServId" attribute. |  |
| mbsUserServiceAnmtUrl | Uri | O | 0..1 | Represents the URL via which the MBS User Service Announcement should be retrieved (by the UE/MBS client).This attribute may be present only in an HTTP PUT/PATCH response to an MBS User Data Ingest Session update/modification request and only if all the constituent MBS Distribution Session(s) are in the "ESTABLISHED" or "ACTIVE" state and the "VIA\_MBS\_5" MBS User Service Announcement mode is provisioned within the MBS User Service Announcement mode(s) supported by the parent MBS User Service instance identified by the "mbsUserServId" attribute. |  |
| failedDistSessions | MbsDistSessFailureSets | O | 0..1 | Contains the MBS Distribution Session(s) that the MBSF was not able to create/update and the corresponding failure related information.The key of the map shall be a string set to the same value received from the NF service consumer within "mbsDisSessInfos" attribute to enable the identification of the failed MBS Distribution session.This attribute may be present only in responses from the MBSF and only when the creation/update of at least one of the requested/targeted MBS Distribution Session(s) failed and the creation/update of at least one of the requested/targeted MBS Distribution Session(s) succeeded. | MBSErrorHandling |
| redMbsServAreaInfo | map(ReducedMbsServArea) | O | 0..1 | Contains the MBS Distribution Session(s) for which the provided MBS Service Area was only partially accepted by the MB-SMF and the corresponding retained (reduced) MBS Service Area.The key of the map shall be a string set to the same value received from the NF service consumer within "mbsDisSessInfos" attribute to enable the identification of the concerned MBS Distribution session.This attribute may be present only in a response to an MBS User Data Ingest Session update/modification request. | MBSErrorHandling |
| suppFeat | SupportedFeatures | C | 0..1 | Used to negotiate the supported optional features (defined in clause 6.2.8) of the API.This attribute shall be present in an HTTP POST/PUT request and response, if feature negotiation needs to take place. |  |

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

##### 6.2.6.2.17 Type MbsDistSessFailure

Table 6.2.6.2.17-1: Definition of type MbsDistSessFailure

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| cause | DistSessionFailure | M | 1 | Represents the cause of the failure of the MBS User Data Ingest session creation/update. |  |
| redMbsServArea | ReducedMbsServArea | C | 0..1 | Contains the reduced MBS Service Area information, i.e., the MBS Service Area that can be accepted by the 3GPP Core Network.This attribute shall be present only when the "cause" attribute is set to "MBS\_SERVICE\_AREA\_TOO\_LARGE". |  |

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

##### 6.2.6.2.18 Type MbsDistSessFailureSets

Table 6.2.6.2.18-1: Definition of type MbsDistSessFailureSets

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| causes | map(MbsDistSessFailure) | M | 1..N | Represents the causes of the failure of the MBS User Data Ingest session creation/update on a per-MBS Distribution Session granularity.The key of the map shall be a string set to the same value received from the NF service consumer within "mbsDisSessInfos" attribute of the MBSUserDataIngSession data type to enable the identification of the failed MBS Distribution session. |  |

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

##### 6.2.6.3.5 Enumeration: DistSessionFailure

The enumeration Event represents the the MBS Distribution Session creation/update related failure cause. It shall comply with the provisions of table 6.2.6.3.5-1.

Table 6.2.6.3.5-1: Enumeration DistSessionFailure

|  |  |  |
| --- | --- | --- |
| Enumeration value | Description | Applicability |
| INVALID\_MBS\_SERVICE\_INFO | Indicates that the provided MBS Service Information is invalid (e.g. invalid QoS reference), incorrect or insufficient to perform MBS policy authorization. |  |
| MBS\_SERVICE\_AREA\_NOT\_SUPPORTED | Indicates that the requested MBS Service Area is not supported by the 3GPP Core Network. |  |
| MBS\_SERVICE\_INFO\_NOT\_AUTHORIZED | Indicates that the provided MBS Service Information is rejected. |  |
| MBS\_DIST\_SESSION\_ALREADY\_CREATED | Indicates that the requested MBS Distribution Session has already been created. |  |
| OVERLAPPING\_MBS\_SERVICE\_AREA | Indicates that the provided MBS service area overlaps with the MBS service area of an existing MBS Distribution Session that shares the same MBS session Identifier. |  |
| UNKNOWN\_MBS\_SERVICE\_AREA | Indicates that the requested MBS service area (e.g., identified by the Area Session ID) cannot be found. |  |

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

#### 6.2.6.4 Data types describing alternative data types or combinations of data types

##### 6.2.6.4.1 Type: ProblemDetailsMBS

Table 6.2.6.4.1-1: Definition of type ProblemDetailsMBS as a list of to be combined data types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Cardinality | Description | Applicability |
| ProblemDetails | 1 | Contains the details of the encountered problem, as defined in 3GPP TS 29.571 [15]. |  |
| MbsDistSessFailureSets | 0..1 | Contains the MBS related additional error information.This attribute shall be present only when the cause of the MBS Distribution Session creation/update failure is not the same for all the requested/targeted MBS Distribution Session(s) within the MBS User Data Ingest Session.When this data type is present, the "cause" attribute of the ProblemDetails data type shall not be present as the value of the "causes" attribute of this data type replaces the value of the "cause" attribute of the ProblemDetails data type. |  |

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

#### 6.2.7.3 Application Errors

The application errors defined for the Nmbsf\_MBSUserDataIngestSession service are listed in Table 6.2.7.3-1.

Table 6.2.7.3-1: Application errors

|  |  |  |  |
| --- | --- | --- | --- |
| Application Error | HTTP status code | Description | Applicability |
| INVALID\_MBS\_SERVICE\_INFO | 400 Bad Request | Indicates that the provided MBS Service Information is invalid (e.g. invalid QoS reference), incorrect or insufficient to perform MBS policy authorization. | MBSErrorHandling |
| MBS\_SERVICE\_AREA\_NOT\_SUPPORTED | 403 Forbidden | Indicates that the requested MBS Service Area is not supported by the 3GPP Core Network. | MBSErrorHandling |
| MBS\_SERVICE\_INFO\_NOT\_AUTHORIZED | 403 Forbidden | Indicates the provided MBS Service Information is rejected. | MBSErrorHandling |
| MBS\_DIST\_SESSION\_ALREADY\_CREATED | 403 Forbidden | Indicates that the requested MBS Distribution Session has already been created. | MBSErrorHandling |
| OVERLAPPING\_MBS\_SERVICE\_AREA | 403 Forbidden | Indicates that the provided MBS service area overlaps with the MBS service area of an existing MBS Distribution Session that shares the same MBS session Identifier. | MBSErrorHandling |
| UNKNOWN\_MBS\_SERVICE\_AREA | 404 Not Found | Indicates that the requested MBS service area (e.g., identified by the Area Session ID) cannot be found. | MBSErrorHandling |

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

### 6.2.8 Feature negotiation

The optional features listed in table 6.2.8-1 are defined for the Nmbsf\_MBSUserDataIngestSession API. They shall be negotiated using the extensibility mechanism defined in clause 6.6 of 3GPP TS 29.500 [4].

Table 6.2.8-1: Supported Features

|  |  |  |
| --- | --- | --- |
| Feature number | Feature Name | Description |
| 1 | 5MBS2 | This feature indicates the support of the Rel-18 enhancements to 5G Multicast/Broadcast services.The following functionalities are supported:- Support the provisioning of the "Associated Session ID" to enable resource sharing across broadcast MBS Sessions during network sharing. |
| 2 | MBSEventsExt | This feature indicates the support of extending the MBS User Data Ingest Session Status events for 5G Multicast/Broadcast services.The following functionalities are supported:- Support of the missing MBS User Data Ingest Session Status events and identification of the redundant ones. |
| 3 | MBSErrorHandling | Represents the support of the MBS related error handling procedures.The following functionalities are supported:- Support of the missing MBS Session related error handling procedures to enable end-to-end relaying of errors.- Support MBS Data Ingest Session specific error handling.- Support partial MBS Distribution Session creation/update failure management. |

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

# A.3 Nmbsf\_MBSUserDataIngestSession API

openapi: 3.0.0

info:

 title: nmbsf-mbs-ud-ingest

 version: 1.1.0-alpha.5

 description: |

 API for MBS User Data Ingest Session Service.

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externalDocs:

 description: >

 3GPP TS 29.580 V18.4.0; 5G System; Multicast/Broadcast Service Function Services.

 url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.580/'

servers:

 - url: '{apiRoot}/nmbsf-mbs-ud-ingest/v1'

 variables:

 apiRoot:

 default: https://example.com

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

security:

 - {}

 - oAuth2ClientCredentials: []

paths:

 /sessions:

 get:

 summary: Retrieve all the active MBS User Data Ingest Sessions managed by the MBSF.

 tags:

 - MBS User Data Ingest Sessions (Collection)

 operationId: RetrieveMBSUserDataIngSessions

 responses:

 '200':

 description: >

 OK. All the active MBS User Data Ingest Sessions managed by the MBSF are returned.

 content:

 application/json:

 schema:

 type: array

 items:

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

 minItems: 0

 '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'

 '406':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/406'

 '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'

 post:

 summary: Request the creation of a new MBS User Data Ingest Session.

 tags:

 - MBS User Data Ingest Sessions (Collection)

 operationId: CreateMBSUserDataIngSession

 requestBody:

 description: >

 Contains the parameters to request the creation of a new MBS User Data Ingest Session

 at the MBSF.

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '201':

 description: >

 Created. A new MBS User Data Ingest Session is successfully created and a representation

 of the created Individual MBS User Data Ingest Session resource is returned.

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: >

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

 {apiRoot}/nmbs-mbs-ud-ingest/v1/sessions/{sessionId}

 required: true

 schema:

 type: string

 '400':

 description: >

 The request is rejected by the NEF and more details (along with ProblemDetails) may be

 returned.

 content:

 application/problem+json:

 schema:

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

 '401':

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

 '403':

 description: >

 The request is rejected by the NEF and more details (along with ProblemDetails) may be

 returned.

 content:

 application/problem+json:

 schema:

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

 '404':

 description: >

 The request is rejected by the NEF and more details (along with ProblemDetails) may be

 returned.

 content:

 application/problem+json:

 schema:

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

 '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'

 /sessions/{sessionId}:

 parameters:

 - name: sessionId

 in: path

 description: Identifier of the Individual MBS User Data Ingest Session resource.

 required: true

 schema:

 type: string

 get:

 summary: Retrieve an existing Individual MBS User Data Ingest Session resource.

 tags:

 - Individual MBS User Data Ingest Session (Document)

 operationId: RetrieveIndMBSUserDataIngSession

 responses:

 '200':

 description: >

 OK. The requested Individual MBS User Data Ingest Session resource is successfully

 returned.

 content:

 application/json:

 schema:

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

 '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'

 '406':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/406'

 '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'

 put:

 summary: Request the update of an existing Individual MBS User Data Ingest Session resource.

 tags:

 - Individual MBS User Data Ingest Session (Document)

 operationId: UpdateIndMBSUserDataIngSession

 requestBody:

 description: >

 Contains the updated representation of the Individual MBS User Data Ingest Session

 resource.

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '200':

 description: >

 OK. The concerned Individual MBS User Data Ingest Session resource is successfully

 updated and a representation of the updated resource is returned in the response body.

 content:

 application/json:

 schema:

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

 '204':

 description: >

 No Content. The concerned Individual MBS User Data Ingest Session resource is

 successfully updated and no content is returned in the response body.

 '307':

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

 '308':

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

 '400':

 description: >

 The request is rejected by the NEF and more details (along with ProblemDetails) may be

 returned.

 content:

 application/problem+json:

 schema:

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

 '401':

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

 '403':

 description: >

 The request is rejected by the NEF and more details (along with ProblemDetails) may be

 returned.

 content:

 application/problem+json:

 schema:

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

 '404':

 description: >

 The request is rejected by the NEF and more details (along with ProblemDetails) may be

 returned.

 content:

 application/problem+json:

 schema:

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

 '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'

 patch:

 summary: Request the modification of an existing Individual MBS User Data Ingest Session resource.

 tags:

 - Individual MBS User Data Ingest Session (Document)

 operationId: ModifyIndMBSUserDataIngSession

 requestBody:

 description: >

 Contains the parameters to request the modification of the Individual MBS User Data Ingest

 Session resource.

 required: true

 content:

 application/merge-patch+json:

 schema:

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

 responses:

 '200':

 description: >

 OK. The concerned Individual MBS User Data Ingest Session resource is successfully

 modified and a representation of the updated resource is returned in the response body.

 content:

 application/json:

 schema:

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

 '204':

 description: >

 No Content. The concerned Individual MBS User Data Ingest Session resource is

 successfully modified and no content is returned in the response body.

 '307':

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

 '308':

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

 '400':

 description: >

 The request is rejected by the NEF and more details (along with ProblemDetails) may be

 returned.

 content:

 application/problem+json:

 schema:

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

 '401':

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

 '403':

 description: >

 The request is rejected by the NEF and more details (along with ProblemDetails) may be

 returned.

 content:

 application/problem+json:

 schema:

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

 '404':

 description: >

 The request is rejected by the NEF and more details (along with ProblemDetails) may be

 returned.

 content:

 application/problem+json:

 schema:

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

 '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: Request the deletion of an existing Individual MBS User Data Ingest Session resource.

 tags:

 - Individual MBS User Data Ingest Session (Document)

 operationId: DeleteIndMBSUserDataIngSession

 responses:

 '204':

 description: >

 No Content. The Individual MBS User Data Ingest Session resource is successfully

 deleted.

 '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'

 /status-subscriptions:

 get:

 summary: Retrieve all the active MBS User Data Ingest Session Status Subscription resources managed by the MBSF.

 tags:

 - MBS User Data Ingest Session Status Subscriptions (Collection)

 operationId: RetrieveMBSUserDataIngStatSubscs

 responses:

 '200':

 description: >

 OK. All the active MBS User Data Ingest Session Status Subscriptions managed by the MBSF

 are returned.

 content:

 application/json:

 schema:

 type: array

 items:

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

 minItems: 0

 '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'

 '406':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/406'

 '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'

 post:

 summary: Request the creation of a new MBS User Data Ingest Session Status Subscription.

 tags:

 - MBS User Data Ingest Session Status Subscriptions (Collection)

 operationId: CreateMBSUserDataIngStatSubsc

 requestBody:

 description: >

 Contains the parameters to request the creation of a new MBS User Data Ingest Session

 Status Subscription.

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '201':

 description: >

 Created. Successful creation of a new Individual MBS User Data Ingest Session

 Status Subscription resource.

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: >

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

 {apiRoot}/nmbs-mbs-ud-ingest/v1/status-subscriptions/{subscriptionId}

 required: true

 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'

 '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:

 mbsUserDataIngestSessionStatusNotif:

 '{request.body#/notifUri}':

 post:

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: No Content. Successful reception of the notification.

 '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'

 /status-subscriptions/{subscriptionId}:

 parameters:

 - name: subscriptionId

 in: path

 description: >

 Identifier of the Individual MBS User Data Ingest Session Status Subscription resource.

 required: true

 schema:

 type: string

 get:

 summary: Retrieve an existing Individual MBS User Data Ingest Session Status Subscription resource.

 tags:

 - Individual MBS User Data Ingest Session Status Subscription (Document)

 operationId: RetrieveIndMBSUserDataIngStatSubsc

 responses:

 '200':

 description: >

 OK. Successful retrieval of the requested Individual MBS User Data Ingest Session

 Status Subscription resource.

 content:

 application/json:

 schema:

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

 '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'

 '406':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/406'

 '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'

 put:

 summary: Request the update of an existing Individual MBS User Data Ingest Session Status Subscription resource.

 tags:

 - Individual MBS User Data Ingest Session Status Subscription (Document)

 operationId: UpdateIndMBSUserDataIngStatSubsc

 requestBody:

 description: >

 Contains the updated representation of the Individual MBS User Data Ingest Session Status

 Subscription resource.

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '200':

 description: >

 OK. The concerned Individual MBS User Data Ingest Session Status Subscription resource

 is successfully updated and a representation of the updated resource is returned in the

 response body.

 content:

 application/json:

 schema:

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

 '204':

 description: >

 No Content. The concerned Individual MBS User Data Ingest Session Status Subscription

 resource is successfully updated and no content is returned in the response body.

 '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'

 patch:

 summary: Request the modification of an existing Individual MBS User Data Ingest Session Status Subscription resource.

 tags:

 - Individual MBS User Data Ingest Session Status Subscription (Document)

 operationId: ModifyIndMBSUserDataIngStatSubsc

 requestBody:

 description: >

 Contains the parameters to request the modification of the Individual MBS User Data Ingest

 Session Status Subscription resource.

 required: true

 content:

 application/merge-patch+json:

 schema:

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

 responses:

 '200':

 description: >

 OK. The concerned Individual MBS User Data Ingest Session Status Subscription resource

 is successfully modified and a representation of the updated resource is returned in the

 response body.

 content:

 application/json:

 schema:

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

 '204':

 description: >

 No Content. The concerned Individual MBS User Data Ingest Session Status Subscription

 resource is successfully modified and no content is returned in the response body.

 '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: Request the deletion of an existing Individual MBS User Data Ingest Session Status Subscription resource.

 tags:

 - Individual MBS User Data Ingest Session Status Subscription (Document)

 operationId: DeleteMBSUserDataIngStatSubsc

 responses:

 '204':

 description: >

 No Content. Successful deletion of the existing Individual MBS User Data Ingest Session

 Status Subscription resource.

 '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: '{tokenUrl}'

 scopes: {}

 description: >

 When the Nmbsf\_MBSUserDataIngestSession is consumed by a trusted or internal AF, then

 'nmbsf-mbs-ud-ingest' shall be used as the scope (i.e. with the 'scopes' property) and

 '{nrfApiRoot}/oauth2/token' shall be used as the URI to retrieve the token

 (i.e. 'tokenUri').

#

# STRUCTURED DATA TYPES

#

 schemas:

 MBSUserDataIngSession:

 description: Represents MBS User Data Ingest Session information.

 type: object

 properties:

 mbsUserServId:

 type: string

 mbsDisSessInfos:

 type: object

 additionalProperties:

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

 minProperties: 1

 nullable: true

 description: >

 Represents one or more MBS Distribution Session(s) composing the MBS User Data Ingest

 Session.

 The key of the map shall be any unique string encoded value.

 actPeriods:

 type: array

 items:

 $ref: 'TS29122\_CommonData.yaml#/components/schemas/TimeWindow'

 minItems: 1

 mbsUserServAnmt:

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

 mbsUserServiceAnmt:

 $ref: 'TS26517\_MBSUserServiceAnnouncement.yaml#/components/schemas/UserServiceDescription'

 mbsUserServiceAnmtUrl:

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

 failedDistSessions:

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

 redMbsServAreaInfo:

 type: object

 additionalProperties:

 $ref: 'TS29522\_MBSTMGI.yaml#/components/schemas/MbsDistSessFailureSets'

 minProperties: 1

 description: >

 Contains the MBS Distribution Session(s) for which the provided MBS Service Area was

 only partially accepted by the MB-SMF and the corresponding retained (reduced) MBS

 Service Area.

 The key of the map shall be a string set to the same value received from the NF service

 consumer within "mbsDisSessInfos" attribute to enable the identification of the

 concerned MBS Distribution session.

 suppFeat:

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

 required:

 - mbsUserServId

 - mbsDisSessInfos

 MBSDistributionSessionInfo:

 description: Represents MBS Distribution Session information.

 type: object

 properties:

 mbsDistSessionId:

 type: string

 mbsDistSessState:

 $ref: 'TS29581\_Nmbstf\_DistSession.yaml#/components/schemas/DistSessionState'

 mbsSessionId:

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

 associatedSessionId:

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

 mbsServInfo:

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

 maxContBitRate:

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

 maxContDelay:

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

 distrMethod:

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

 fecConfig:

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

 objDistrInfo:

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

 pckDistrInfo:

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

 trafficMarkingInfo:

 type: string

 tgtServAreas:

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

 extTgtServAreas:

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

 mbsFSAId:

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

 locationDependent:

 type: boolean

 description: >

 Represents an indication that this MBS Distribution Session belongs to a location-

 dependent MBS. This attribute shall be set to "true" to indicate that the MBS

 Distribution Session belongs to a location-dependent MBS; or set to "false" to

 indicate that the MBS Distribution Session does not belong to a location-dependent MBS.

 The default value is "false", if omitted.

 default: false

 multiplexedServFlag:

 type: boolean

 description: >

 Represents an indication that this MBS Distribution Session belongs to a multiplex, i.e.

 forms part of a set of MBS Distribution Sessions under the same parent MBS User Data

 Ingest Session with identical or empty sets of target service areas and multiplexed onto

 the same MBS Session at the MB-SMF.

 default: false

 restrictedFlag:

 type: boolean

 description: >

 Represents an indication that this MBS Distribution Session is not open to any UE, i.e.

 restricted to a set of UEs according to their MBS related subscription information.

 This attribute may be included only if the parent MBS User Service is of Multicast

 service type. This attribute shall be set to "true" to indicate that this MBS

 Distribution Session is restricted to a set of UE(s); or set to "false" to indicate that

 this MBS Distribution Session is open to any UE.

 The default value is "false", if omitted.

 default: false

 required:

 - distrMethod

 - maxContBitRate

 MBSUserDataIngSessionPatch:

 description: >

 Represents the requested modifications to an MBS User Data Ingest Session Status

 Subscription.

 type: object

 properties:

 mbsDisSessInfos:

 type: object

 additionalProperties:

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

 minProperties: 1

 nullable: true

 description: >

 Contains the requested modifications to one or more MBS Distribution Session(s)

 composing the MBS User Data Ingest Session.

 The key of the map shall be any unique string encoded value.

 actPeriods:

 type: array

 items:

 $ref: 'TS29122\_CommonData.yaml#/components/schemas/TimeWindow'

 minItems: 1

 ObjectDistrMethInfo:

 description: >

 Represents additional MBS Distribution Session parameters for the case of an Object

 Distribution Method.

 type: object

 properties:

 operatingMode:

 $ref: 'TS29581\_Nmbstf\_DistSession.yaml#/components/schemas/ObjDistributionOperatingMode'

 objAcqMethod:

 $ref: 'TS29581\_Nmbstf\_DistSession.yaml#/components/schemas/ObjAcquisitionMethod'

 objAcqIds:

 type: array

 items:

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

 minItems: 0

 objIngUri:

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

 objDistrUri:

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

 objRepairUri:

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

 required:

 - operatingMode

 - objAcqMethod

 - objAcqIds

 PacketDistrMethInfo:

 description: >

 Represents additional MBS Distribution Session parameters for the case of Packet

 Distribution Method.

 type: object

 properties:

 operatingMode:

 $ref: 'TS29581\_Nmbstf\_DistSession.yaml#/components/schemas/PktDistributionOperatingMode'

 pckIngMethod:

 $ref: 'TS29581\_Nmbstf\_DistSession.yaml#/components/schemas/PktIngestMethod'

 ingEndpointAddrs:

 $ref: 'TS29581\_Nmbstf\_DistSession.yaml#/components/schemas/MbStfIngestAddr'

 required:

 - operatingMode

 - pckIngMethod

 - ingEndpointAddrs

 MBSUserDataIngStatSubsc:

 description: >

 Represents an MBS User Data Ingest Session Status Subscription.

 type: object

 properties:

 mbsIngSessionId:

 type: string

 eventSubscs:

 type: array

 items:

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

 minItems: 1

 notifUri:

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

 required:

 - mbsIngSessionId

 - eventSubscs

 - notifUri

 MBSUserDataIngStatSubscPatch:

 description: >

 Represents the requested modifications to an MBS User Data Ingest Session Status

 Subscription.

 type: object

 properties:

 eventSubscs:

 type: array

 items:

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

 minItems: 1

 notifUri:

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

 SubscribedEvent:

 description: >

 Represents a subscribed MBS User Data Ingest Session Status event and the related

 information.

 type: object

 properties:

 statusEvent:

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

 mbsDistSessionId:

 type: string

 required:

 - statusEvent

 MBSUserDataIngStatNotif:

 description: >

 Represents an MBS User Data Ingest Session Status Notification.

 type: object

 properties:

 mbsIngSessionId:

 type: string

 eventNotifs:

 type: array

 items:

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

 minItems: 1

 required:

 - mbsIngSessionId

 - eventNotifs

 EventNotification:

 description: Represents Event Notification.

 type: object

 properties:

 statusEvent:

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

 mbsDisSessionId:

 type: string

 mbsSessionId:

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

 statusAddInfo:

 type: string

 timeStamp:

 $ref: 'TS29122\_CommonData.yaml#/components/schemas/DateTime'

 required:

 - statusEvent

 - timeStamp

 MBSUserServAnmt:

 deprecated: true

 description: >

 Represents the MBS User Service Announcement currently associated with the MBS User Data

 Ingest Session.

 type: object

 properties:

 extServiceId:

 type: array

 items:

 type: string

 minItems: 1

 servClass:

 type: string

 startTime:

 $ref: 'TS29122\_CommonData.yaml#/components/schemas/DateTime'

 endTime:

 $ref: 'TS29122\_CommonData.yaml#/components/schemas/DateTime'

 servNameDescs:

 type: array

 items:

 $ref: 'TS29580\_Nmbsf\_MBSUserService.yaml#/components/schemas/ServiceNameDescription'

 minItems: 1

 mainServLang:

 type: string

 mbsDistSessAnmt:

 additionalProperties:

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

 minProperties: 1

 description: >

 Represents the set of MBS Distribution Session Announcements currently associated with

 this MBS User Service Announcement.

 required:

 - extServiceId

 - servClass

 - servNameDescs

 MBSDistSessionAnmt:

 description: >

 Represents the set of MBS Distribution Session Announcements currently associated with this

 MBS User Service Announcement.

 type: object

 properties:

 mbsSessionId:

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

 mbsFSAId:

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

 distrMethod:

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

 objDistrAnnInfo:

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

 sesDesInfo:

 type: array

 items:

 type: string

 minItems: 1

 required:

 - distrMethod

 - sesDesInfo

 ObjectDistMethAnmtInfo:

 description: >

 Represents MBS Distribution Session Announcement parameters for Object Distribution Method.

 type: object

 properties:

 objDistrSched:

 $ref: 'TS29122\_CommonData.yaml#/components/schemas/TimeWindow'

 objDistrBaseUri:

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

 objRepBaseUri:

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

 FECConfig:

 description: Represents FEC configuration information.

 type: object

 properties:

 fecScheme:

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

 fecOverHead:

 type: integer

 additionalParams:

 type: array

 items:

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

 minItems: 1

 required:

 - fecScheme

 - fecOverHead

 AddFecParams:

 description: Represents additional scheme-specific parameters for AL-FEC configuration.

 type: object

 properties:

 paramName:

 type: string

 paramValue:

 type: string

 required:

 - paramName

 - paramValue

 MbsDistSessFailure:

 description: Represents MBS Distribution Session specific failure information.

 type: object

 properties:

 cause:

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

 redMbsServArea:

 $ref: 'TS29522\_MBSTMGI.yaml#/components/schemas/ReducedMbsServArea'

 required:

 - cause

 MbsDistSessFailureSets:

 description: >

 Represents one or several set(s) of MBS Distribution Session specific failure information.

 type: object

 properties:

 causes:

 type: object

 additionalProperties:

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

 minProperties: 1

 description: >

 Represents the causes of the failure of the MBS User Data Ingest session creation/update

 on a per-MBS Distribution Session granularity.

 The key of the map shall be a string set to the same value received from the NF service

 consumer within "mbsDisSessInfos" attribute of the MBSUserDataIngSession data type to

 enable the identification of the failed MBS Distribution session.

 required:

 - causes

# SIMPLE DATA TYPES

#

#

# ENUMERATIONS

#

 DistributionMethod:

 anyOf:

 - type: string

 enum:

 - OBJECT

 - PACKET

 - type: string

 description: >

 This string provides forward-compatibility with future extensions to the enumeration

 and is not used to encode content defined in the present version of this API.

 description: |

 Represents the MBS Distribution method.

 Possible values are:

 - OBJECT: Indicates the Object Distribution Method.

 - PACKET: Indicates the Packet Distribution Method.

 Event:

 anyOf:

 - type: string

 enum:

 - USER\_DATA\_ING\_SESS\_STARTING

 - USER\_DATA\_ING\_SESS\_STARTED

 - USER\_DATA\_ING\_SESS\_TERMINATED

 - DIST\_SESS\_STARTING

 - DIST\_SESS\_STARTED

 - DIST\_SESS\_TERMINATED

 - DIST\_SESS\_SERV\_MNGT\_FAILURE

 - DIST\_SESS\_POL\_CRTL\_FAILURE

 - DATA\_INGEST\_FAILURE

 - DELIVERY\_STARTED

 - SESSION\_TERMINATED

 - SESSION\_STARTED

 - SESSION\_RELEASED

 - DIST\_SESS\_ACTIVATED

 - DIST\_SESS\_EST\_FAILURE

 - USER\_SER\_AD

 - type: string

 description: >

 This string provides forward-compatibility with future extensions to the enumeration

 and is not used to encode content defined in the present version of this API.

 description: |

 Represents the MBS User Data Ingest Session Status events.

 Possible values are:

 - USER\_DATA\_ING\_SESS\_STARTING: >

 Indicates that the MBS User Data Ingest Session is starting. This is an "MBS User Data

 Ingest Session" level event.

 - USER\_DATA\_ING\_SESS\_STARTED: >

 Indicates that the MBS User Data Ingest Session established. This is an "MBS User Data

 Ingest Session" level event.

 - USER\_DATA\_ING\_SESS\_TERMINATED: >

 Indicates that the MBS User Data Ingest Session is terminated. This is an "MBS User Data

 Ingest Session" level event.

 - DIST\_SESS\_STARTING: >

 Indicates that the MBS Distribution Session is starting. This is an "MBS Distribution

 Session" level event.

 - DIST\_SESS\_STARTED: >

 Indicates that the MBS Distribution Session started. This is an "MBS Distribution

 Session" level event.

 - DIST\_SESS\_TERMINATED: >

 Indicates that the MBS Distribution Session is terminated. This is an "MBS Distribution

 Session" level event.

 - DIST\_SESS\_SERV\_MNGT\_FAILURE: >

 Indicates that the MBS Distribution Session could not be started (e.g. the necessary

 resources could not be allocated by the MBS system). This is an "MBS Distribution

 Session" level event.

 - DIST\_SESS\_POL\_CRTL\_FAILURE: >

 Indicates that the MBS Distribution Session could not be started because of a policy

 authorization/control failure or rejection. This is an "MBS Distribution Session"

 level event.

 - DATA\_INGEST\_FAILURE: >

 The MBS User Data Ingest is failed because the MBSTF is expecting data (the MBS Session

 is active), but not receiving it. This is an "MBS Distribution Session" level event.

 - DELIVERY\_STARTED: >

 The MBS User Data delivery is started.

 - SESSION\_TERMINATED: >

 The MBS User Data Ingest Session is terminated.

 - SESSION\_STARTED: >

 The MBS Session is started.

 - SESSION\_RELEASED: >

 The MBS Session is released.

 - DIST\_SESS\_ACTIVATED:

 Indicates that the MBS Distribution Session is activated successfully.

 - DIST\_SESS\_EST\_FAILURE:

 Indicates that the MBSF failed to successfully establish the MBS Distribution Session at

 the MBSTF. This is an "MBS Distribution Session" level event.

 - USER\_SER\_AD:

 Indicates that the MBSF advertises the User Service Announcement information to the MBS

 Application Provider.

 DistSessionFailure:

 anyOf:

 - type: string

 enum:

 - INVALID\_MBS\_SERVICE\_INFO

 - MBS\_SERVICE\_AREA\_NOT\_SUPPORTED

 - MBS\_SERVICE\_INFO\_NOT\_AUTHORIZED

 - MBS\_DIST\_SESSION\_ALREADY\_CREATED

 - OVERLAPPING\_MBS\_SERVICE\_AREA

 - UNKNOWN\_MBS\_SERVICE\_AREA

 - type: string

 description: >

 This string provides forward-compatibility with future extensions to the enumeration

 and is not used to encode content defined in the present version of this API.

 description: |

 Represents the MBS Distribution Session creation/update related failure cause.

 Possible values are:

 - INVALID\_MBS\_SERVICE\_INFO: >

 Indicates that the provided MBS Service Information is invalid (e.g. invalid QoS

 reference), incorrect or insufficient to perform MBS policy authorization.

 - MBS\_SERVICE\_AREA\_NOT\_SUPPORTED: >

 Indicates that the requested MBS Service Area is not supported by the 3GPP Core Network.

 - MBS\_SERVICE\_INFO\_NOT\_AUTHORIZED: >

 Indicates that the provided MBS Service Information is rejected.

 - MBS\_DIST\_SESSION\_ALREADY\_CREATED: >

 Indicates that the requested MBS Distribution Session has already been created.

 - OVERLAPPING\_MBS\_SERVICE\_AREA: >

 Indicates that the provided MBS service area overlaps with the MBS service area of an

 existing MBS Distribution Session that shares the same MBS session Identifier.

 - UNKNOWN\_MBS\_SERVICE\_AREA: >

 Indicates that the requested MBS service area (e.g., identified by the Area Session ID)

 cannot be found.

#

# Data types describing alternative data types or combinations of data types

#

 ProblemDetailsMBS:

 description: >

 Represents an extension to the ProblemDetails data structure with potentially additional

 error information related to MBS.

 allOf:

 - $ref: 'TS29122\_CommonData.yaml#/components/schemas/ProblemDetails'

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

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