**3GPP TSG-CT WG3 Meeting #131 *C3-235308***

**Chicago, United States, 13 - 17 November, 2023**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.537** | **CR** | **0027** | **rev** | **-** | **Current version:** | **17.2.0** |  |
|  | | | | | | | | |
| *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** |

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| ***Title:*** | Correction to Npcf\_MBSPolicyControl API for location dependent MBS service | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson, Nokia, Nokia Shanghai Bell | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5MBS | | | | |  | ***Date:*** | | | 2023-10-20 |
|  |  | | | |  | |  | | |  |
| ***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 can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | SA2 has agreed on a solution (see S2-2311704) for location dependent MBS services that solves the following issues:  **Issue#1** Unclear how to handle creation of MBS policy associations for the 2nd, the 3rd …Area Sessions  The PCF may handle the policy association creation requests for 2nd, the 3rd … Area Sessions as an error situation since there is already a policy association for the same MBS Session ID, thus it is expected that the PCF will reject the Npcf\_MBSPolicyControl\_Create request for the 2nd, the 3rd… Area Sessions.  If the PCF, based on implementation, proceeds with policy association creation, there is no way to distinguish which policy association is being updated etc.  **Issue#2** Unclear how to bind the policy association created by Npcf\_MBSPolicyControl\_Create with the policy authorized in Npcf\_MBSPolicyAuthorization\_Create for the same Area Session when the AF/NEF/MBSF decides to interact with the PCF based on local configuration.  To address **Issue#**1, the agreed SA2 CR specifies that, for each Area Session, the MB-SMF needs to provide an additional ID (Area Session policy ID) together MBS Session ID in Npcf\_MBSPolicyControl\_Create request to the PCF over N7mb.  To address **Issue#2**, the agreed SA2 CR specifies that, for each Area Session, an additional ID (Area Session policy ID) needs to be assigned when the AF/NEF/MBSF interacts with the PCF, and such ID needs to be sent by AF/NEF/MBSF to the MB-SMF. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | A new attribute, areaSessPolId, is introduced in MbsPolicyCtxData data type in order to provide the Area Session Policy ID at MBS SM Policy Association establishment for Location Dependent MBS services.  MBS Application Session Context Establishment procedure is updated so that the AF/NEF/MBSF may indicate the PCF that the request corresponds to a location dependent MBS service. The PCF will provide in the reply the derived Area Session Policy ID that will be used in the session binding.  MbsAppSessionCtxt data type is modified to introduce the two new attributes.  A new feature is defined to support this functionality in both services. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The support of the Area Session Policy ID related handling is not specified in stage 3. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.2.2.2.2; 5.2.2.4.2; 5.3.2.2.2; 6.1.6.1; 6.1.6.2.2; 6.1.8; 6.2.6.1; 6.2.6.2.2; 6.2.8; A.2; A.3. | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS 23.247 CR#200  TS 29.571 CR#0476 | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | This CR introduces backward compatibility corrections to the OpenAPI descriptions of the Npcf\_MBSPolicyControl API specification and Npcf\_MBSPolicyAuthorization APIs defined in this specification. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**Additional discussion(if needed):**

**Proposed changes:**

\*\*\* First Change \*\*\*

##### 5.2.2.2.2 MBS Policy Association Establishment



Figure 5.2.2.2.2-1: Procedure for MBS Policy Association establishment

1. In order to request the creation of an MBS Policy Association, the NF service consumer (e.g. MB-SMF) shall send an HTTP POST request to the PCF targeting the URI of the "MBS Policies" collection resource, with the request body containing the MbsPolicyCtxtData data structure that shall contain:

- the identifier of the concerned MBS Session, within the "mbsSessionId" attribute;

- the MBS Service Information, if available, within the "mbsServInfo" attribute;

- the list of supported features, if feature negotiation needs to take place, within the "suppFeat" attribute; and

- the Area Session Policy ID within the "areaSessPolId" attribute, if the "AreaSessPolicy" feature is supported and the request corresponds to an MBS Session that is an instance of a location-dependent MBS service.

and may contain:

- the DNN of the MBS session, within the "dnn" attribute; and

- the S-NSSAI of the MBS session, within the "snssai" attribute.

2. Upon reception of the HTTP POST request from the NF service consumer:

- if MBS Service Information is present within the "mbsServInfo" attribute, and if the "AreaSessPolicy" feature is supported, the Area Session Policy ID is present within the "areaSessPolId" attribute, and the PCF is not already serving this location-dependent MBS service (i.e. there is no MBS Policy Association at the PCF for the MBS Session ID provided within "mbsSessionId" attribute) or if the MBS Service Information is not present, the PCF may interact with the BSF by invoking the Nbsf\_Management\_Register service operation, as specified in clause 4.2.2.4 of 3GPP TS 29.521 [21], to check whether there is already a PCF serving the MBS Session, and if it is not the case, register itself as the PCF serving the MBS session;

NOTE 1: The Area Session Policy ID identifies an instance of a location-dependent MBS service.

NOTE 2: Interacting with the BSF is not necessary in a deployment with a single PCF.

- if MBS Service Information is present within the "mbsServInfo" attribute, then:

- the PCF may interact with the UDR to retrieve MBS Session policy control data for the MBS session, as specified in 3GPP TS 29.519 [20];

NOTE 3: Interacting with the UDR for MBS Session policy control data retrieval is not necessary in a deployment where MBS Policy Session policy control data is stored locally at the PCF.

- the PCF shall then perform MBS policy authorization based on the received MBS Service Information, the operator policies that are pre-configured at the PCF and the MBS Session policy control data retrieved from the UDR, if any;

- if MBS policy authorization is successful, the PCF shall derive the required MBS policies (e.g. QoS parameters) and determine whether they are allowed or not;

- if the required MBS policies are allowed:

- the PCF shall store the generated MBS policies for the MBS session together with the corresponding MBS session ID and if the "AreaSessPolicy" feature is supported and the MBS session is an instance of a location-dependent MBS service, the corresponding Area Session Policy ID; and

- if MBS policy authorization is not successful or the required MBS policies are not allowed, the PCF shall reject the request with an appropriate error response as specified below in this clause;

- otherwise, when MBS Service Information is not present within the "mbsServInfo" attribute and the PCF has previously derived the necessary MBS policies for the MBS session using the procedure defined in clause 5.3.2.2, the PCF shall provide these MBS policies in the response message returned to the NF service consumer (MB-SMF) as described below;

- upon success, the PCF shall:

- create a new "Individual MBS Policy" resource; and

- respond to the NF service consumer with an HTTP "201 Created" status code including a Location header field containing the URI of the created "Individual MBS Policy" resource, and the response body including the MbsPolicyData data structure that shall contain:

- the received input parameters within the corresponding request body, within the "mbsPolicyCtxtData" attribute;

- the provisioned MBS Policy Decision containing the MBS policies derived by the PCF as defined above in this clause, within the "mbsPolicies" attribute; and- the list of supported features, if feature negotiation is taking place, within the "suppFeat" attribute;

- if errors occur when processing the HTTP POST request, the PCF shall apply the error handling procedures specified in clause 6.1.7;

NOTE 4: The PCF also deregisters at the BSF from being the PCF serving the MBS Session and for a location dependent MBS service if it is the last MBS policy association, using the procedure defined in clause 4.2.3.4 of 3GPP TS 29.521 [21], if the PCF created such MBS Session binding as defined above in this clause. Interacting with the BSF to deregister from being the PCF serving the MBS Session is not necessary in a deployment with a single PCF.

- if MBS Service Information is provided but is invalid, incorrect or insufficient for the PCF to perform MBS policy authorization, the PCF shall reject the request with an HTTP "400 Bad Request" response message including the ProblemDetails data structure with the "cause" attribute set to "INVALID\_MBS\_SERVICE\_INFO";

- if MBS Service Information is provided, but the MBS IP flow(s) description provided within the MBS Service Information cannot be handled by the PCF because the restrictions defined in clause 5.3.8 of 3GPP TS 29.214 [19] are not respected, the PCF shall reject the request with an HTTP "400 Bad Request" status code including the ProblemDetails data structure with the "cause" attribute set to "FILTER\_RESTRICTIONS\_NOT\_RESPECTED";

- if from an application level point of view, the provided set of input parameters is incomplete, erroneous or missing necessary information for the PCF to perform MBS policy control, the PCF shall reject the request with an HTTP "400 Bad Request" response message including the ProblemDetails data structure with the "cause" attribute set to "ERROR\_INPUT\_PARAMETERS";

- if MBS Service Information is provided but is not authorized, the PCF shall reject the request with an HTTP "403 Forbidden" status code including the MbsExtProblemDetails data structure that shall contain:

- the ProblemDetails data structure with the "cause" attribute set to "MBS\_SERVICE\_INFO\_NOT\_AUTHORIZED";

and may contain:

- the AcceptableMbsServInfo data structure including the MBS Service Information that is acceptable for the PCF;

and

- if the PCF denies the creation of the "Individual MBS Policy" resource based on local configuration and/or operator policies, the PCF shall reject the request within an HTTP "403 Forbidden" status code including the "cause" attribute of the ProblemDetails data structure set to "MBS\_POLICY\_CONTEXT\_DENIED". At the reception of this error code and based on the internally configured failure actions, the NF service consumer may reject or allow, by applying local policies, the establishment of the corresponding MBS session.

\*\*\* Second Change \*\*\*

##### 5.2.2.4.2 MBS Policy Association Deletion



Figure 5.2.2.4.2-1: MBS Policy Association Deletion procedure

1. In order to request the deletion of an existing MBS Policy Association, the NF service consumer shall send an HTTP DELETE request to the PCF, targeting the URI of the corresponding "Individual MBS Policy" resource.

If the PCF determines that the received HTTP DELETE request needs to be redirected, the PCF shall respond with an HTTP redirect response, as specified in clause 6.10.9 of 3GPP TS 29.500 [4].

2. On successful deletion of the targeted MBS Policy Association:

- the PCF may deregister at the BSF from being the PCF serving the MBS Session using the procedure defined in clause 4.2.3.4 of 3GPP TS 29.521 [21], if the PCF created such MBS Session binding during the creation of the MBS Policy Association, and for a location dependent MBS service, if this is the last MBS Policy Association associated to the location-dependent MBS service (i.e., associated to the corresponding MBS Session ID), as specified in clause 5.2.2.2; and

- the PCF shall respond to the NF service consumer (MB-SMF) with an HTTP "204 No Content" status code.

If errors occur when processing the HTTP DELETE request, the PCF shall apply the error handling procedures specified in clause 6.1.7.

If the targeted "Individual MBS Policy" resource does not exist, the PCF shall reject the request with an HTTP "404 Not Found" status code including the ProblemDetails data structure with the "cause" attribute set to "MBS\_POLICY\_ASSOCIATION\_NOT\_FOUND".

\*\*\* Third Change \*\*\*

##### 5.3.2.2.2 MBS Application Session Context Establishment



Figure 5.3.2.2.2-1: MBS Application Session Context establishment procedure

1. In order to request the creation of a new MBS Application Session Context, the NF service consumer (e.g. AF, NEF, MBSF) shall send an HTTP POST request to the PCF, targeting the URI of the "MBS Application Session Contexts" collection resource, with the request body containing the MbsAppSessionCtxt data structure that shall contain:

- the MBS session identifier, within the "mbsSessionId" attribute;

- the MBS Service Information, if available, within the "mbsServInfo" attribute; and

- the list of supported features, if feature negotiation needs to take place, within the "suppFeat" attribute;

and may contain:

- the DNN of the MBS session, within the "dnn" attribute;

- the S-NSSAI of the MBS session, within the "snssai" attribute; and

- if the "AreaSessPolicy" feature is supported, then the location dependent MBS session request indication within the "reqForLocDepMbs" attribute.

2. Upon reception of the HTTP POST request from the NF service consumer:

- the PCF may interact with the UDR to retrieve MBS Session policy control data for the MBS session, as specified in clause 5.2.16 of 3GPP TS 29.519 [20] ;

NOTE 1: Interacting with the UDR for MBS Session policy control data retrieval is not necessary in a deployment where MBS Policy Session policy control data is stored locally at the PCF.

- the PCF shall perform MBS policy authorization based on the MBS Service Information received from the NF service consumer and the operator policies that are pre-configured at the PCF and/or the MBS Session policy control data retrieved from the UDR. Then:

- if MBS policy authorization is successful, the PCF shall derive the required MBS policies (e.g. QoS parameters) and determine whether they are allowed or not;

- if the required MBS policies are allowed:

- if the "AreaSessPolicy" feature is supported and the location dependent MBS session is requested as indicated by the attribute "locDepMbsReq" (i.e. value is set to "true"), then the PCF shall assign an Area Session Policy Identifier within the "areaSessPolId" to correlate policies for different Area Sessions belonging to same location dependent MBS session;

- the PCF shall store the generated MBS policies for the MBS session together with the corresponding MBS session ID, and if applicable, Area Session Policy ID for location dependent MBS Session;

- the PCF shall create a new "Individual MBS Application Session Context" resource and respond to the NF service consumer with an HTTP "201 Created" status code, including an HTTP Location header field containing the URI of the created "Individual MBS Application Session Context" resource and the response body containing a representation of the created resource within the MbsAppSessionCtxt data structure; and

- the PCF may register itself at the BSF as the PCF handling the MBS session as specified in clause 4.2.2.4 of 3GPP TS 29.521 [21];

NOTE 2: Registering at the BSF as the PCF serving the MBS Session is not necessary in a deployment with a single PCF.

- otherwise, when MBS policy authorization is not successful or the required MBS policies are not allowed, the PCF shall reject the request with an appropriate error response as specified below in this clause;

- if errors occur when processing the HTTP POST request, the PCF shall apply the error handling procedures specified in clause 6.2.7;

- if the provided MBS Service Information is invalid, incorrect or insufficient for the PCF to perform MBS policy authorization, the PCF shall reject the request with an HTTP "400 Bad Request" status code including the ProblemDetails data structure with the "cause" attribute set to "INVALID\_MBS\_SERVICE\_INFO";

- if the MBS IP flow(s) description provided within the MBS Service Information cannot be handled by the PCF because the restrictions defined in clause 5.3.8 of 3GPP TS 29.214 [19] are not respected, the PCF shall reject the request with an HTTP "400 Bad Request" status code including the ProblemDetails data structure with the "cause" attribute set to "FILTER\_RESTRICTIONS\_NOT\_RESPECTED"; and

- if the provided MBS Service Information are not authorized, the PCF shall reject the request with an HTTP "403 Forbidden" status code including the MbsExtProblemDetails data structure that shall contain:

- the ProblemDetails data structure with the "cause" attribute set to "MBS\_SERVICE\_INFO\_NOT\_AUTHORIZED";

and may contain:

- the AcceptableMbsServInfo data structure including the MBS Service Information that is acceptable for the PCF.

\*\*\* Fourth Change \*\*\*

#### 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 Npcf\_MBSPolicyControl service based interface protocol.

Table 6.1.6.1-1: Npcf\_MBSPolicyControl specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Clause defined | Description | Applicability |
| MbsErrorReport | 6.1.6.2.10 | Contains the reporting of MBS Policy decision level failure(s) and/or MBS PCC rule level failure(s). |  |
| MbsFailureCode | 6.1.6.3.4 | Represents the reason behind the MBS Policy Decision(s) enforcement failure or the MBS PCC rule(s) installation failure. |  |
| MbsMaxDataBurstVol | 6.1.6.3.2 | Represents the maximum MBS data burst volume. |  |
| MbsPccRule | 6.1.6.2.7 | Represents the parameters constituting an MBS PCC rule. |  |
| MbsPcrt | 6.1.6.3.3 | Represents an MBS Policy Control Request Trigger. |  |
| MbsPolicyCtxtData | 6.1.6.2.2 | Contains the parameters used to request the creation of an Individual MBS Policy resource. |  |
| MbsPolicyCtxtDataUpdate | 6.1.6.2.11 | Contains the parameters to update an existing MBS Policy Association. |  |
| MbsPolicyData | 6.1.6.2.4 | Contains the MBS policy data of an Individual MBS Policy resource. |  |
| MbsPolicyDecision | 6.1.6.2.3 | Contains the parameters constituting an MBS Policy Decision. |  |
| MbsPccRuleStatus | 6.1.6.3.5 | Represents the status of an MBS PCC rule. |  |
| MbsQosChar | 6.1.6.2.9 | Represents the parameters constituting a set of explicitly signalled QoS Characteristics. |  |
| MbsQosDec | 6.1.6.2.8 | Represents the parameters constituting an MBS QoS Decision. |  |
| MbsReport | 6.1.6.2.12 | Includes the information about the MBS Policy Decision level failure(s) and/or the MBS PCC rule level failure(s). |  |

Table 6.1.6.1-2 specifies data types re-used by the Npcf\_MBSPolicyControl 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 Npcf\_MBSPolicyControl service based interface.

Table 6.1.6.1-2: Npcf\_MBSPolicyControl re-used Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
| 5Qi | 3GPP TS 29.571 [15] | Indicates the 5G QoS Identifier. |  |
| 5QiPriorityLevel | 3GPP TS 29.571 [15] | Indicates the 5QI Priority Level. |  |
| AreaSessionPolicyId | 3GPP TS 29.571 [15] | Indicates the Area Session Policy Identifier. | AreaSessPolicy |
| Arp | 3GPP TS 29.571 [15] | Indicates the allocation and retention priority. |  |
| AverWindow | 3GPP TS 29.571 [15] | Indicates the Averaging Window. |  |
| BitRate | 3GPP TS 29.571 [15] | Indicates the Bit Rate. |  |
| Dnn | 3GPP TS 29.571 [15] | Identifies a DNN. |  |
| FlowDescription | 3GPP TS 29.512 [18] | Represents packet filtering information for an IP flow. |  |
| MbsExtProblemDetails | Clause 6.2.6.4.1 | Identifies the MBS related extensions to the ProblemDetails data structure. |  |
| MbsServiceInfo | 3GPP TS 29.571 [15] | Represents MBS Service Information. |  |
| MbsSessionId | 3GPP TS 29.571 [15] | Represents an MBS Session Identifier. |  |
| PacketDelBudget | 3GPP TS 29.571 [15] | Indicates the Packet Delay Budget. |  |
| PacketErrRate | 3GPP TS 29.571 [15] | Indicates the Packet Error Rate. |  |
| ProblemDetails | 3GPP TS 29.571 [15] | Contains error related additional information. |  |
| QosResourceType | 3GPP TS 29.571 [15] | Indicates the QoS resource type. |  |
| RedirectResponse | 3GPP TS 29.571 [15] | Contains redirection related information. |  |
| Snssai | 3GPP TS 29.571 [15] | Identifies an S-NSSAI. |  |
| SupportedFeatures | 3GPP TS 29.571 [15] | Represents the list of supported features. It is used to negotiate the applicability of the optional features. |  |
| Uinteger | 3GPP TS 29.571 [15] | Represents an unsigned integer. |  |

\*\*\* Fifth Change \*\*\*

##### 6.1.6.2.2 Type: MbsPolicyCtxtData

Table 6.1.6.2.2-1: Definition of type MbsPolicyCtxtData

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| mbsSessionId | MbsSessionId | M | 1 | Represents the identifier of the MBS Session. |  |
| dnn | Dnn | O | 0..1 | Represents the DNN of the MBS session. |  |
| snssai | Snssai | O | 0..1 | Represents the S-NSSAI of the MBS session. |  |
| areaSessPolId | AreaSessionPolicyId | C | 0..1 | Represents the Area Session Policy ID for a location dependent MBS Session.  It shall be included if available. | AreaSessPolicy |
| mbsServInfo | MbsServiceInfo | O | 0..1 | Represents the MBS Service Information.  This attribute shall be provided, if available. |  |
| suppFeat | SupportedFeatures | C | 0..1 | Contains the list of the supported features among the ones defined in clause 6.1.8.  This attribute shall be present when feature negotiation needs to take place. |  |

\*\*\* Sixth Change \*\*\*

### 6.1.8 Feature negotiation

The optional features listed in table 6.1.8-1 are defined for the Npcf\_MBSPolicyControl API. They shall be negotiated using the extensibility mechanism defined in clause 6.6 of 3GPP TS 29.500 [4].

Table 6.1.8-1: Supported Features

|  |  |  |
| --- | --- | --- |
| Feature number | Feature Name | Description |
| 1 | AreaSessPolicy | This feature indicates the support of the Area Session Policy ID related handling for location-dependent MBS services.  The following functionalities are supported:  - Support the provisioning of the Area Session Policy ID to the PCF for MBS Sessions that are instances of a location-dependent MBS service. |

\*\*\* Seventh Change \*\*\*

#### 6.2.6.1 General

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

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

Table 6.2.6.1-1: Npcf\_MBSPolicyAuthorization specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Clause defined | Description | Applicability |
| AcceptableMbsServInfo | 6.2.6.2.4 | Contains the MBS Service Information that can be accepted by the PCF. |  |
| MbsExtProblemDetails | 6.2.6.4.1 | Identifies the MBS related extensions to the ProblemDetails data structure. |  |
| MbsAppSessionCtxt | 6.2.6.2.2 | Represents the parameters of an MBS Application Session Context. |  |
| MbsAppSessionCtxtPatch | 6.2.6.2.3 | Represents the modifications to an existing MBS Application Session Context. |  |

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

Table 6.2.6.1-2: Npcf\_MBSPolicyAuthorization re-used Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
| AreaSessionPolicyId | 3GPP TS 29.571 [15] | Indicates the Area Session Policy Identifier. | AreaSessPolicy |
| BitRate | 3GPP TS 29.571 [15] | Represents a bit rate. |  |
| Dnn | 3GPP TS 29.571 [15] | Identifies a DNN. |  |
| MbsMediaComp | 3GPP TS 29.571 [15] | Represents an MBS Media Component. |  |
| MbsServiceInfo | 3GPP TS 29.571 [15] | Represents MBS Service Information. |  |
| MbsSessionId | 3GPP TS 29.571 [15] | Represents an MBS Session Identifier. |  |
| ProblemDetails | 3GPP TS 29.571 [15] | Contains error related additional information. |  |
| RedirectResponse | 3GPP TS 29.571 [15] | Contains redirection related information. |  |
| Snssai | 3GPP TS 29.571 [15] | Identifies an S-NSSAI. |  |
| SupportedFeatures | 3GPP TS 29.571 [15] | Represents the list of supported features. It is used to negotiate the applicability of the optional features. |  |

\*\*\* Eighth Change \*\*\*

##### 6.2.6.2.2 Type: MbsAppSessionCtxt

Table 6.2.6.2.2-1: Definition of type MbsAppSessionCtxt

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| mbsSessionId | MbsSessionId | M | 1 | Represents the identifier of the corresponding MBS Session. |  |
| mbsServInfo | MbsServiceInfo | C | 0..1 | Represents the MBS Service Information.  This attribute shall be provided, if available. |  |
| dnn | Dnn | O | 0..1 | Represents the DNN of the MBS session. |  |
| snssai | Snssai | O | 0..1 | Represents the S-NSSAI of the MBS session. |  |
| areaSessPolId | AreaSessionPolicyId | C | 0..1 | Contains the Area Session Policy ID.  This attribute may be present only in the response to an MBS Application Session Context create request.  This attribute shall be present in the response when "locDepMbsReq" attribute is present and set to true in the request. | AreaSessPolicy |
| reqForLocDepMbs | boolean | O | 0..1 | Indicates whether the request corresponds to a location-dependent MBS service or not, i.e.:  - "true" means that the request corresponds to a location-dependent MBS service.  - "false" means that the request does not correspond to a location dependent MBS service.  - When this attribute is not present, the default value is "false".  This attribute may be present only in a request to create an MBS Application Session Context. It shall not be present otherwise. | AreaSessPolicy |
| contactPcfInd | boolean | O | 0..1 | Indicates whether the PCF shall be contacted or not, i.e.:  - "true" means that the PCF shall be contacted.  - "false" means that the PCF shall not be contacted.  - When this attribute is not present, the default value is "false".  This attribute may be present only in the response to an MBS Application Session Context update request. |  |
| suppFeat | SupportedFeatures | C | 0..1 | Contains the list of the supported features (among the ones defined in clause 6.2.8).  This parameter shall be provided if feature negotiation needs to take place. |  |

\*\*\* Ninth Change \*\*\*

### 6.2.8 Feature negotiation

The optional features listed in table 6.2.8-1 are defined for the Npcf\_MBSPolicyAuthorization 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 | AreaSessPolicy | This feature indicates the support of the Area Session Policy ID related handling for location-dependent MBS services.  The following functionalities are supported:  - Support the provisioning of the "request for location dependent MBS session" indication to the PCF for MBS Sessions that are instances of a location-dependent MBS service.  - Support that the PCF assigns and returns to the NF service consumer an Area Session Policy ID for an MBS Session that is an instance of a location-dependent MBS service. |

\*\*\* Tenth Change \*\*\*

# A.2 Npcf\_MBSPolicyControl API

openapi: 3.0.0

info:

title: Npcf\_MBSPolicyControl API

version: 1.0.1

description: |

MBS Policy Control Service

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externalDocs:

description: >

3GPP TS 29.537 V17.1.0; 5G System; Multicast/Broadcast Policy Control Services.

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.537/'

security:

- {}

- oAuth2ClientCredentials:

- npcf-mbspolicycontrol

servers:

- url: '{apiRoot}/npcf-mbspolicycontrol/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/mbs-policies:

post:

summary: Request the creation of a new MBS Policy Association.

operationId: CreateMBSPolicy

tags:

- MBS Policies (Collection)

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'201':

description: >

Created. An Individual MBS Policy resource is successfully created.

content:

application/json:

schema:

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

headers:

Location:

description: >

Contains the URI of the newly created Individual MBS Policy resource.

required: true

schema:

type: string

'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':

description: Forbidden.

content:

application/problem+json:

schema:

$ref: 'TS29537\_Npcf\_MBSPolicyAuthorization.yaml#/components/schemas/MbsExtProblemDetails'

'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'

'503':

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

default:

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

/mbs-policies/{mbsPolicyId}:

parameters:

- name: mbsPolicyId

in: path

description: >

Contains the identifier of the concerned Individual MBS Policy resource.

required: true

schema:

type: string

get:

summary: Read an Individual MBS Policy resource.

operationId: GetIndMBSPolicy

tags:

- Individual MBS Policy (Document)

responses:

'200':

description: >

OK. The requested Individual MBS Policy resource is successfully returned.

content:

application/json:

schema:

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

'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'

'503':

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

default:

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

delete:

summary: Deletes an existing Individual MBS Policy resource.

operationId: DeleteIndMBSPolicy

tags:

- Individual MBS Policy (Document)

parameters:

- name: mbsPolicyId

in: path

description: >

Contains the identifier of the concerned Individual MBS Policy resource.

required: true

schema:

type: string

responses:

'204':

description: >

No Content. The concerned Individual MBS Policy 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'

'406':

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

'429':

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

'500':

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

'503':

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

default:

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

/mbs-policies/{mbsPolicyId}/update:

post:

summary: Request the update of an existing MBS Policy Association.

operationId: UpdateIndMBSPolicy

tags:

- Individual MBS Policy (Document)

parameters:

- name: mbsPolicyId

in: path

description: >

Contains the identifier of the concerned Individual MBS Policy resource.

required: true

schema:

type: string

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: >

OK. The targeted Individual MBS Policy resource is successfully updated.

content:

application/json:

schema:

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

'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':

description: Forbidden.

content:

application/problem+json:

schema:

$ref: 'TS29537\_Npcf\_MBSPolicyAuthorization.yaml#/components/schemas/MbsExtProblemDetails'

'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'

'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:

npcf-mbspolicycontrol: Access to the Npcf\_MBSPolicyControl API

schemas:

MbsPolicyCtxtData:

description: >

Contains the parameters used to request the creation of an MBS Policy

Association.

type: object

properties:

mbsSessionId:

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

dnn:

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

snssai:

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

areaSessPolId:

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

mbsServInfo:

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

suppFeat:

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

required:

- mbsSessionId

MbsPolicyDecision:

description: >

Represents the parameters constituting an MBS Policy Decision.

type: object

properties:

mbsPccRules:

type: object

additionalProperties:

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

minProperties: 1

description: >

A map of MBS PCC rule(s) with each map entry containing the MbsPccRule data structure.

The key of the map for each entry is the mbsPccRuleId attribute of the corresponding

MbsPccRule data structure.

nullable: true

mbsQosDecs:

type: object

additionalProperties:

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

minProperties: 1

description: >

A map of MBS QoS Decision(s) with each map entry containing the MbsQosDec data structure.

The key of the map for each entry is the mbsQosId attribute of the corresponding

MbsQosDec data structure.

mbsQosChars:

type: object

additionalProperties:

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

minProperties: 1

description: >

A map of MBS QoS Characteristics set(s) with each map entry containing the MbsQosChar data

structure. The key of the map for each entry is the 5QI attribute of the corresponding

MbsQosDec data structure.

authMbsSessAmbr:

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

mbsPcrts:

type: array

items:

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

minItems: 1

nullable: true

MbsPolicyData:

description: >

Contains the MBS policy data provisioned as part of an MBS Policy Association.

type: object

properties:

mbsPolicyCtxtData:

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

mbsPolicies:

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

suppFeat:

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

required:

- mbsPolicyCtxtData

MbsPccRule:

description: Represents the parameters constituting an MBS PCC rule.

type: object

properties:

mbsPccRuleId:

type: string

mbsDlIpFlowInfo:

type: array

items:

$ref: 'TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/FlowDescription'

minItems: 1

precedence:

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

refMbsQosDec:

type: array

items:

type: string

minItems: 1

maxItems: 1

required:

- mbsPccRuleId

MbsQosDec:

description: Represents the parameters constituting an MBS QoS Decision.

type: object

properties:

mbsQosId:

type: string

5qi:

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

priorityLevel:

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

mbrDl:

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

gbrDl:

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

arp:

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

averWindow:

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

mbsMaxDataBurstVol:

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

required:

- mbsQosId

MbsQosChar:

description: >

Represents the parameters constituting a set of explicitly signalled QoS characteristics.

type: object

properties:

5qi:

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

priorityLevel:

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

resourceType:

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

packetDelayBudget:

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

packetErrorRate:

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

averWindow:

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

mbsMaxDataBurstVol:

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

required:

- 5qi

- resourceType

- priorityLevel

- packetDelayBudget

- packetErrorRate

- mbsMaxDataBurstVol

MbsPolicyCtxtDataUpdate:

description: >

Contains the parameters to request the modification of an existing MBS Policy Association.

type: object

properties:

mbsServInfo:

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

mbsPcrts:

type: array

items:

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

minItems: 1

mbsErrorReport:

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

MbsErrorReport:

description: >

Represents the reporting of MBS Policy decision level failure(s) and/or MBS PCC rule level

failure(s).

type: object

properties:

mbsReports:

type: array

items:

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

minItems: 1

MbsReport:

description: >

Contains information about the MBS Policy Decision level failure(s) and/or the MBS PCC

rule level failure(s).

type: object

properties:

mbsPccRuleIds:

type: array

items:

type: string

minItems: 1

mbsPccRuleStatus:

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

failureCode:

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

# Simple data types:

MbsMaxDataBurstVol:

description: Represents the MBS Maximum Data Burst Volume expressed in Bytes.

type: integer

minimum: 1

maximum: 2000000

# ENUMS:

MbsPcrt:

anyOf:

- type: string

enum:

- MBS\_SESSION\_UPDATE

- type: string

description: >

Represents MBS Policy Control Request Triggers.

description: |

Possible values are

- MBS\_SESSION\_UPDATE: Indicates the MBS Session Update policy control request trigger.

MbsPccRuleStatus:

anyOf:

- type: string

enum:

- ACTIVE

- INACTIVE

- type: string

description: >

Represents the MBS PCC rule status.

description: |

Possible values are

- ACTIVE: Indicates that the MBS PCC rule(s) are successfully installed.

- INACTIVE: Indicates that the MBS PCC rule(s) are removed.

MbsFailureCode:

anyOf:

- type: string

enum:

- NF\_MALFUNCTION

- NF\_RESOURCES\_UNAVAILABLE

- RESOURCE\_ALLOCATION\_FAILURE

- MBS\_QOS\_VALIDATION\_FAILURE

- NO\_MBS\_QOS\_FLOW

- MBS\_QOS\_DECISION\_ERROR

- MBS\_POLICY\_PARAM\_ERROR

- type: string

description: >

Represents the reason for the MBS Policy Decision(s) enforcement failure or the MBS PCC

rule(s) installation failure.

description: |

Possible values are:

- NF\_MALFUNCTION: Indicates that the MBS PCC rule could not be successfully installed due to MB-SMF/MB-UPF malfunction.

- NF\_RESOURCES\_UNAVAILABLE: Indicates that the MBS PCC rule could not be successfully installed due to resources unavailable at the MB-SMF/MB-UPF.

- RESOURCE\_ALLOCATION\_FAILURE: Indicates that the MBS PCC rule could not be successfully installed or maintained since the associated MBS QoS flow establishment/modification failed or the associated MBS QoS flow was released.

- MBS\_QOS\_VALIDATION\_FAILURE: Indicates that MBS QoS validation has failed.

- NO\_MBS\_QOS\_FLOW: Indicates that there is no MBS QoS flow to which the MB-SMF can bind the MBS PCC rule(s).

- MBS\_QOS\_DECISION\_ERROR: Indicates failure in the provisioning of MBS QoS Decision data.

- MBS\_POLICY\_PARAM\_ERROR: Indicates that the information related to the provisioned MBS policy parameter(s) is incorrect, incomplete or inconsistent.

\*\*\* Eleventh Change \*\*\*

# A.3 Npcf\_MBSPolicyAuthorization API

openapi: 3.0.0

info:

title: Npcf\_MBSPolicyAuthorization API

version: 1.0.1

description: |

MBS Policy Authorization Service.

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externalDocs:

description: >

3GPP TS 29.537 V17.1.0; 5G System; Multicast/Broadcast Policy Control Services.

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.537/'

security:

- {}

- oAuth2ClientCredentials:

- npcf-mbspolicyauth

servers:

- url: '{apiRoot}/npcf-mbspolicyauth/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/contexts:

post:

summary: Request the creation of a new Individual MBS Application Session Context resource.

operationId: CreateMBSAppSessionCtxt

tags:

- MBS Application Session Contexts (Collection)

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'201':

description: >

Created. An Individual MBS Application Session Context resource is successfully created

and a representation of the created resource is returned.

content:

application/json:

schema:

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

headers:

Location:

description: >

Contains the URI of the newly created Individual MBS Application Session Context

resource.

required: true

schema:

type: string

'400':

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

'401':

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

'403':

description: Forbidden.

content:

application/problem+json:

schema:

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

'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'

'503':

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

default:

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

/contexts/{contextId}:

parameters:

- name: contextId

in: path

description: >

Contains the identifier of the Individual MBS Application Session Context resource.

required: true

schema:

type: string

get:

summary: Read an existing Individual MBS Application Session Context resource.

operationId: GetMBSAppSessionCtxt

tags:

- Individual MBS Application Session Context (Document)

responses:

'200':

description: >

OK. The requested Individual MBS Application Session Context resource is successfully

returned.

content:

application/json:

schema:

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

'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'

'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 Application Session Context resource.

operationId: ModifyMBSAppSessionCtxt

tags:

- Individual MBS Application Session Context (Document)

requestBody:

required: true

content:

application/merge-patch+json:

schema:

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

responses:

'200':

description: >

OK. The requested Individual MBS Application Session Context resource is successfully

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

content:

application/json:

schema:

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

'204':

description: >

No Content. The corresponding Individual MBS Application Session Context 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':

description: Forbidden.

content:

application/problem+json:

schema:

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

'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'

'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 Application Session Context resource.

operationId: DeleteMBSAppSessionCtxt

tags:

- Individual MBS Application Session Context (Document)

responses:

'204':

description: >

No Content. The corresponding Individual MBS Application Session Context 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'

'406':

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

'429':

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

'500':

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

'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:

npcf-mbspolicyauth: Access to the Npcf\_MBSPolicyAuthorization API

schemas:

MbsAppSessionCtxt:

description: >

Represents the parameter of an MBS Application Session Context.

type: object

properties:

mbsSessionId:

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

mbsServInfo:

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

dnn:

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

snssai:

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

areaSessPolId:

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

reqForLocDepMbs:

type: boolean

default: false

contactPcfInd:

type: boolean

default: false

suppFeat:

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

required:

- mbsSessionId

MbsAppSessionCtxtPatch:

description: >

Represents the modifications to an existing MBS Application Session Context resource.

type: object

properties:

mbsServInfo:

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

AcceptableMbsServInfo:

description: >

Contains the MBS Service Information that can be accepted by the PCF.

type: object

properties:

accMbsServInfo:

type: object

additionalProperties:

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

minProperties: 1

accMaxMbsBw:

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

oneOf:

- required: [accMbsServInfo]

- required: [accMaxMbsBw]

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

MbsExtProblemDetails:

description: Identifies the MBS related extensions to the ProblemDetails data structure.

allOf:

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

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

\*\*\* End of Changes \*\*\*