**3GPP TSG-CT WG3 Meeting #122-eC3-223154**

**E-Meeting, 12th – 20th May 2022**

**Source: Nokia, Nokia Shanghai Bell**

**Title: Pseudo-CR on the error cases update to Npcf\_MBSPolicyControl Create Service**

**Spec: 3GPP TS 29.537 V0.2.0**

**Agenda item: 17.31 (5MBS)**

**Document for: Approval**

**1. Introduction**

TS 29.537 has been allocated under the 5MBS work item to define the MBS Policy Control services.

**2. Reason for Change**

Error cases for Npcf\_MBSPolicyControl\_Create service operation needs to be specified. Error cases as specified in Ts 29.512 are referred and the common error cases applicable to MBS sessions are specified.

**3. Conclusions**

N/A.

**4. Proposal**

It is proposed to agree the following changes to 3GPP TS 29.537 V0.2.0.

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

##### 5.2.2.2.1 General

The Npcf\_MBSPolicyControl\_Create service operation enablesan NF service consumer (e.g. MB-SMF) to request the creation of an MBS Session Policy Association with the PCF for a multicast or a broadcast MBS session.

The MBS Session Management procedures of the MB-SMF and related policies are defined in TS 23.247 [x] and TS 29.532 [y].

The following procedures using the Npcf\_MBSPolicyControl\_Create service operation are supported:

- MBS Session Policy Association Establishment.

##### 5.2.2.2.2 MBS Session Policy Association Establishment



Figure 5.2.2.2.2-1: MBS Session Policy Association establishment

1. In order to request the creation of an MBS Session Policy Association, the NF service consumer (e.g. MB-SMF) shall send an HTTP POST request to the PCF, as described in step 1of figure 5.2.2.2.2-1, with the request body containing the "MbsPolicyCtxtData" data structure that shall contain:

- the concerned MBS Session Id, within the "mbsSessionId" attribute;

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

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

- the URI towards which MBS policies update notifications should be sent by the PCF, within the "notificationUri" attribute.

Editor's Note: The complete list of attributes is FFS.

2. Upon reception of the HTTP POST request from the NF service consumer, the PCF shall perform MBS perform MBS policy authorization based on the information received from the NF service consumer and operator policies that are pre-configured at the PCF. If MBS policy authorization is successful, the PCF shall create a new "Individual MBS Policy" resource, addressed by a URI as defined in clause 6.1.3.2 and containing a PCF created resource identifier. The PCF shall then respond to the NF service consumer with an HTTP 201 Created response, including a Location header field containing the URI of the created resource and the MbsPolicyData data structure in the response body.

Editor's Note: The detailed content of the MbsPolicyData data structure is FFS.

The NF service consumer shall use the URI received in the Location header in subsequent requests to the PCF to refer to the created "Individual MBS Policy" resource.

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

Editor's Note: The complete list of Error cases and the related status codes are FFS.

If the PCF, based on local configuration and/or operator policies, denies the creation of the "Individual MBS Policy" resource, the PCF may 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 reception of this error code and based on configured failure actions, the NF service consumer may reject or allow, by applying local policies, the MBS session establishment.

\* \* \* Next Change \* \* \* \*

###### 6.1.3.2.3.1 POST

This method shall support the URI query parameters specified in table 6.1.3.2.3.1-1.

Table 6.1.3.2.3.1-1: 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 6.1.3.2.3.1-2 and the response data structures and response codes specified in table 6.1.3.2.3.1-3.

Table 6.1.3.2.3.1-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| MbsPolicyCtxtData | M | 1 | Contains the parameters to create an individual MBS Policy resource. |

Table 6.1.3.2.3.1-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| MbsPolicyData | M | 1 | 201 Created | Successful case. An Individual MBS Policy resource is successfully created and a representation of the created resource is returned to the NF service consumer. |
| ProblemDetails | O | 0..1 | 403 Forbidden | (NOTE 2) |
| NOTE 1: The manadatory HTTP error status code for the POST method listed in Table 5.2.7.1-1 of TS 29.500 [4] also apply.  NOTE 2: Failure cases are described in subclause 6.1.7 | | | | |

Table 6.1.3.2.3.1-4: Headers supported by the POST method 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}/npcf-mbspolicycontrol/<apiVersion>/mbs-policies/{mbsPolicyId} |

\* \* \* Next Change \* \* \* \*

#### 6.1.7.3 Application Errors

The application errors defined for the Npcf\_MBSPolicyControl service are listed in Table 6.1.7.3-1. The PCF shall include in the HTTP status code a "ProblemDetails" data structure with the "cause" attribute indicating the application error as listed in table 6.1.7.3-1 when PCF acts as a server.

Table 6.1.7.3-1: Application errors when PCF acts as a server

|  |  |  |
| --- | --- | --- |
| Application Error | HTTP status code | Description |
| MBS\_POLICY\_CONTEXT\_DENIED | 403 Forbidden | The HTTP request is rejected because the PCF does not accept the NF service consumer request due to operator policies and/or local configuration. |

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