**3GPP TSG-CT WG3 Meeting #123-eC3-224117r1**

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

**Source: Nokia, Nokia Shanghai Bell, Huawei, Ericsson**

**Title: Pseudo-CR on the Service Description update for MBS error reports.**

**Spec: 3GPP TS 29.537 V1.0.1**

**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 and Authorization services.

**2. Reason for Change**

MBS error reports for the failed PCC rules and Policy Decisions in the Npcf\_MBSPolicyControl\_UpdateNotify service operation needs to be specified.

**3. Conclusions**

N/A.

**4. Proposal**

It is proposed to agree the following changes to 3GPP TS 29.537 V1.0.1.

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

##### 5.2.2.3.2 PCF initiated MBS Session Policy Association Update



Figure 5.2.2.3.2-1: MBS Session Policy Association update

1. The PCF may decide to provision policies related to an Individual MBS Policy resource in response to e.g. an internal trigger within the PCF. The PCF shall send for this purpose an HTTP POST request to the NF service consumer (e.g. MB-SMF) using the URI"{notificationUri}/update", with the "notificationUri" set to the notification URI received during the MBS Session Policy Association establishment procedure, as defined in clause 5.2.2.2, and the request message body including the MbsPolicyNotif data structure that shall contain:

- the identifier of the "Individual MBS Policy" resource to which the notification is related, within the "mbsPolicyId" attribute; and

- the representation of the updated MBS Policy Decision within the "mbsPolicyDecision" attribute.

2. Upon successful update of the MBS policies, an HTTP "204 No Content" status code shall be returned to the PCF.

If errors occur when processing the HTTP POST request, the NF service consumer shall send an HTTP error response as specified in clause 6.1.7

If the validation of the updated MBS Policy Decision and/or all the MBS PCC Rules within it is unsuccessful, the NF service consumer shall reject the request with an HTTP "400 Bad Request" status code with the response body containing the MbsErrorReport data structure that shall include:

- the "error" attribute encoded using the ProblemDetails data structure and containing the "MBS\_PCC\_RULE\_PERMANENT\_FAIL", "MBS\_PCC\_RULE\_TEMP\_FAIL" or "MBS\_POLICY\_DECISION\_FAIL" application errors (see clause 6.1.7.3) within the "cause" attribute;

and may contain:

- the "mbsReports" attribute containing one or several failure report(s), each one of them encoded using the MbsReport data structure, in order to provide further information regarding the MBS Policy decision failure(s) and/or the MBS PCC rule failure(s) that occurred, as defined in clause 5.2.4.

If the MBS Policy Decision enforcement results in failure and/or the validation of some of MBS PCC rule(s) within it is unsuccessful, the NF service consumer shall respond to the PCF with an HTTP "200 OK" status code with the response body including the PartialMbsSuccessReport data structure that shall include:

- the "mbsReports" attribute containing one or several failure report(s), each one of them encoded using the MbsReport data structure, to provide further information regarding the MBS Policy decision failure(s) and/or MBS PCC rule failure(s) as defined in clause 5.2.4.

Editor's Note: The handling of predefined rules is FFS.

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

### 5.2.4 MBS Policy Error Handling

#### 5.2.4.1 MBS Report

If the installation of one or more MBS PCC rules fails using the procedure as defined in clause 5.2.2.2.2 or 5.2.2.3.2 or the PCF installed or modified one or more MBS PCC rules as part of those procedures but resource allocation for the MBS PCC rule was unsuccessful, the MB-SMF shall include the "mbsReports" attribute for the affected MBS PCC rules to report the failure within the MbsPolicyCtxtDataUpdate data structure. Within each MbsReport instance, the MB-SMF shall identify the failed MBS PCC rule(s) by including the affected MBS PCC rules within the "mbsPccRuleIds" attribute, identify the failed reason code by including a "failureCode" attribute, and shall include rule status within the "mbsPccRuleStatus" attribute with the value as described below.

If the installation of one or more new MBS PCC rules (i.e., rules which were not previously successfully installed) fails, the SMF shall set the "mbsPccRuleStatus" to INACTIVE.

The removal of a MBS PCC rule shall not fail. The MB-SMF shall retain information on the removal and conduct the necessary procedures in the network when it is possible.

If the modification of a currently active MBS PCC rule fails, the MB-SMF shall retain the existing MBS PCC rule as active without any modification unless the reason for the failure has an impact also on the existing MBS PCC rule. The MB-SMF shall report the modification failure to the PCF.

If a MB-PCC rule was successfully installed but can no longer be enforced by the MB-SMF, the MB-SMF shall set the "mbsPccRuleStatus" attribute to INACTIVE.

NOTE: When the PCF receives "mbsPccRuleStatus" set to INACTIVE, the PCF does not need request the SMF to remove the inactive PCC rule.

Depending on the value of the "failureCode" attribute, the PCF may decide whether retaining of the old PCC rule, re-installation, modification, removal of the MBS PCC rule or any other action applies.

\* \* \* 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.

Table 6.1.7.3-1: Application errors

|  |  |  |
| --- | --- | --- |
| Application Error | HTTP status code | Description |
| MBS\_PCC\_RULE\_PERMANENT\_FAIL | 400 Bad Request | The HTTP request is rejected because all the MBS PCC rule(s) provisioned by the PCF in the request cannot be installed. It is used to inform the PCF that the request failed and should not be re-attempted. |
| MBS\_PCC\_RULE\_TEMP\_FAIL | 400 Bad Request | The HTTP request is rejected because all the MBS PCC rule(s) provisioned by the PCF in the request cannot be modified successfully in a network initiated procedure for an unspecified reason. It is used to inform the PCF that the request could not be satisfied at the time it was received but may be satisfied in the future. |
| MBS\_POLICY\_DECISION\_FAIL | 400 Bad Request | The HTTP request is rejected because all the component(s) (e.g. MBS Policy Decision(s)) of the MBS Policy Decision provisioned by the PCF in the request cannot be enforced. It is used to inform the PCF that the request failed and should not be re-attempted. |
| 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 \* \* \* \*