**3GPP TSG-CT WG3 Meeting #123-eC3-224116**

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

**Source: Nokia, Nokia Shanghai Bell**

**Title: Pseudo-CR on EN resolution related to MbsMaxDataBurstVol**

**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**

In cl 6.1.61, following EN needs to be resolved

Editor's note: Whether the data type MbsMaxDataBurstVol will be defined in 3GPP TS 29.537 or 3GPP TS 29.571 is FFS.

It is proposed to reuse the common data type (MaxDataBurstVol and ExtMaxDataBurstVol) from TS 29.571.

**3. Conclusions**

N/A.

**4. Proposal**

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

\* \* \* First 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 |
| MbsPccRule | 6.1.6.2.7 | Represents an MBS PCC rule's information. |  |
| MbsPolicyCtxtData | 6.1.6.2.2 | Contains the parameters used to request the creation of an Individual MBS Policy resource. |  |
| 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 MBS policies authorized by the PCF. |  |
| MbsPolicyNotif | 6.1.6.2.5 | Represents an MBS policy update notification. |  |
| MbsQosChar | 6.1.6.2.9 | Represents explicitly signalled QoS characteristics. |  |
| MbsQosInfo | 6.1.6.2.8 | Represents MBS QoS information. |  |
| MbsTermNotif | 6.1.6.2.6 | Represents an MBS policy termination notification. |  |
| PartialMbsSuccessReport | 6.1.6.2.10 | Includes the information reported by the NF service consumer when some of the MBS PCC rules are not successfully installed. |  |
| MbsErrorReport | 6.1.6.2.11 | Contains the rule reports. |  |
| MbsMaxDataBurstVol | 6.1.6.2.12 | Represents the maximum MBS data burst volume.  |  |

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. |  |
| 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 filter for an IP flow. |  |
| MbsSessionId | 3GPP TS 29.571 [15] | Represents an MBS Session Identifier. |  |
| PacketDelBudget | TS 29.571 [15] | Indicates Packet Delay Budget. |  |
| PacketErrRate | TS 29.571 [15] | Indicates Packet Error Rate. |  |
| 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. |  |
| Uri | 3GPP TS 29.571 [15] | Represents a URI. |  |
| Uinteger | 3GPP TS 29.571 [15] | Represents an unsigned integer |  |

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

##### 6.1.6.3.2 Simple data types

The simple data types defined in table 6.1.6.3.2-1 shall be supported.

Table 6.1.6.3.2-1: Simple data types

|  |  |  |  |
| --- | --- | --- | --- |
| Type Name | Type Definition | Description | Applicability |
| MbsMaxDataBurstVol | Integer | Unsigned integer indicating Maximum MBS Data Burst Volume, expressed in Bytes.Minimum = 1. Maximum = 2000000.  |  |

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

# A.2 Npcf\_MBSPolicyControl API

openapi: 3.0.0

info:

 title: Npcf\_MBSPolicyControl API

 version: 1.0.0-alpha.4

 description: |

 MBS Session Policy Control Service

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externalDocs:

 description: >

 3GPP TS 29.537 V1.0.1; 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 Individual MBS Policy resource.

 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 and

 a representation of the created resource is returned.

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: >

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

 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'

 '503':

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

 default:

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

 callbacks:

 MbsPolicyUpdateNotification:

 '{$request.body#/notificationUri}/update':

 post:

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: >

 No Content. The MBS Policy Update Notification was successfully received.

 '307':

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

 '308':

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

 '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'

 '503':

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

 default:

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

 MbsPolicyTerminationNotification:

 '{$request.body#/notificationUri}/terminate':

 post:

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: >

 No Content. The notification was successfully received.

 '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'

 '503':

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

 default:

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

 /mbs-policies/{mbsPolicyId}:

 get:

 summary: Read an Individual MBS Policy.

 operationId: GetMBSPolicy

 tags:

 - Individual MBS Policy (Document)

 parameters:

 - name: mbsPolicyId

 in: path

 description: >

 Contains the identifier of the concerned Individual MBS Session Policy Association.

 required: true

 schema:

 type: string

 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: DeleteMBSPolicy

 tags:

 - Individual MBS Policy

 parameters:

 - name: mbsPolicyId

 in: path

 description: >

 Contains the identifier of the concerned Individual MBS Session Policy.

 required: true

 schema:

 type: string

 responses:

 '204':

 description: >

 No Content. The concerned Individual MBS Policy resource was 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-mbspolicycontrol: Access to the Npcf\_MBSPolicyControl API

 schemas:

 MbsPolicyCtxtData:

 description: >

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

 Policy resource.

 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'

 notificationUri:

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

 suppFeat:

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

 required:

 - mbsSessionId

 - dnn

 - snssai

 - notificationUri

 MbsPolicyData:

 description: Contains the MBS policy data of an Individual MBS Policy resource.

 type: object

 properties:

 mbsPolicyCtxtData:

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

 suppFeat:

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

 required:

 - mbsPolicyCtxtData

 MbsPolicyDecision:

 description: >

 Identifies the service requirements of an Individual Application MBS Session Context.

 type: object

 properties:

 mbsPccRules:

 type: object

 additionalProperties:

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

 minProperties: 1

 description: >

 A map of MBS PCC rules with the content being the MbsPccRule

 The key used in this map for each entry is the pccRuleId attribute of the corresponding

 MbsPccRule.

 mbsQosInfos:

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

 mbsQosChars:

 type: object

 additionalProperties:

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

 minProperties: 1

 description: >

 Map of QoS characteristics for non standard 5QIs. This map uses the 5QI values as keys.

 MbsPolicyNotif:

 description: Represents an MBS Policy Update Notification.

 type: object

 properties:

 mbsSessionId:

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

 required:

 - mbsSessionId

 MbsTermNotif:

 description: Represents an MBS Policy Termination Notification.

 type: object

 properties:

 mbsSessionId:

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

 cause:

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

 required:

 - mbsSessionId

 - cause

 MbsPccRule:

 description: Contains a PCC rule information for MBS sessions.

 type: object

 properties:

 dlIpFlowInfos:

 type: array

 items:

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

 minItems: 1

 description: An array of downlink IP flow packet filter information.

 pccRuleId:

 type: string

 description: Univocally identifies the PCC rule within a MBS session.

 precedence:

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

 refMbsQosInfo:

 type: array

 items:

 type: string

 minItems: 1

 maxItems: 1

 description: >

 A reference to the MbsQosInfo policy decision type.

 MbsQosInfo:

 description: Contains MBS session QoS requirements.

 type: object

 properties:

 mbsQosId:

 type: string

 description: Univocally identifies the QoS control policy data within a MBS session.

 5qi:

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

 mbrDl:

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

 gbrDl:

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

 arp:

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

 priorityLevel:

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

 averWindow:

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

 mbsMaxDataBurstVol:

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

 required:

 - mbsQosId

 MbsQosChar:

 description: Represents explicitly signalled  QoS characteristics.

 type: object

 properties:

 5qi:

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

 resourceType:

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

 priorityLevel:

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

 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

# Simple Data types:

 MbsMaxDataBurstVol:

 type: integer

 minimum: 1

 maximum: 2000000

 description: Unsigned integer indicating Maximum MBS Data Burst Volume, expressed in Bytes.

# ENUMS:

 MbsPolicyAssociationReleaseCause:

 description: >

 Represents the cause due to which the PCF requests the termination of the MBS policy

 association.

 anyOf:

 - type: string

 enum:

 - UNSPECIFIED

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