**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 \* \* \* \*