**3GPP TSG-CT WG3 Meeting #125 *C3-225186\_R1***

**Toulouse, France, 14th – 18th November 2022**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.486** | **CR** | **0089** | **rev** | **-** | **Current version:** | **17.6.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Correction the enumerations in the VAE OpenAPI files | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NBI18 | | | | |  | ***Date:*** | | | 2022-11-01 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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:*** | | Clause 5.2.9.10 of 3GPP TS 29.122 specifies for the enumeration definition in the OpenAPI file that the schema:  - shall contain the "anyOf" keyword listing as alternatives:  1. the "type: string" keyword and the "enum" keyword with a list of all defined values for the enumeration; and  2. the "type: string" keyword and the "description" keyword with a description stating that the string is only provided for extensibility and is not used to encode contents defined in the present version of the specification. And  - may contain a description listing the defined values of the enumeration together with explanations of those values.  However, the VAE OpenAPI files are not aligned with the above requirement from clause 5.2.9.10, i.e., in definition of ResultReason enumeration, description of the string data type provided for forward compatibility with future extensions is incorrect. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | This CR introduces the correction for the enumerations in OpenAPI file according to clause 5.2.9.10 of 3GPP TS 29.122. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | * Misalignment with the requirements defined in 3GPP TS 29.122 and 3GPP TS 29.501. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | A.2; A.3; A.4; A.8; | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | * This CR does backwards compatible correction of the OpenAPI file for the VAE\_MessageDelivery API, VAE\_FileDistribution API, VAE\_ApplicationRequirement API, VAE\_SessionOrientedService API. | | | | | | | | |
| ***()*** | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**Additional discussion(if needed):**

**Proposed changes:**

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

# A.2 VAE\_MessageDelivery API

openapi: 3.0.0

info:

version: 1.1.0

title: VAE\_MessageDelivery

description: |

API for VAE Message Delivery Service

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externalDocs:

description: 3GPP TS 29.486 V17.5.0 V2X Application Enabler (VAE) Services

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.486/'

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/vae-message-delivery/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/subscriptions:

post:

summary: Create a new Individual Message Delivery Data Subscription resource

operationId: CreateIndividualMessageDeliveryDataSubscription

tags:

- Message Delivery Data Subscriptions (Collection)

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'201':

description: The subscription was created successfully.

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created 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:

uplinkMessageDelivery:

'{$request.body#/notifUri}':

post:

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content, Notification was successful

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_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'

receptReportOfDownlinkMesageDelivery:

'{$request.body#/notifUri}':

post:

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content, Notification was successful

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_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'

/subscriptions/{subscriptionId}:

get:

summary: Get an existing individual Message Delivery Subscription resource

operationId: ReadIndividualMessageDeliverySubscription

tags:

- Individual Message Delivery Subscription (Document)

parameters:

- name: subscriptionId

in: path

description: String identifying a subscription to the Individual Message Delivery Subscription

required: true

schema:

type: string

responses:

'200':

description: The subscription information is returned.

content:

application/json:

schema:

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

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_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: Delete an individual Message Delivery Subscription resource

operationId: DeleteMessageDeliverySubscription

tags:

- Individual Message Delivery Subscription (Document)

parameters:

- name: subscriptionId

in: path

description: String identifying a subscription to the Individual Message Delivery Subscription

required: true

schema:

type: string

responses:

'204':

description: The subscription was terminated successfully.

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_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'

'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'

/subscriptions/{subscriptionId}/message-deliveries:

post:

summary: VAE Message delivery resource create service Operation

tags:

- message deliveries collection (Collection)

operationId: CreateDownlinkMessageDelivery

parameters:

- name: subscriptionId

in: path

description: String identifying a subscription to the Individual Message Delivery Subscription

required: true

schema:

type: string

requestBody:

content:

application/json:

schema:

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

required: true

responses:

'201':

description: Downlink Message Delivery Resource Created

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

content:

application/json:

schema:

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

'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'

/subscriptions/{subscriptionId}/message-deliveries/{dlDeliveryId}:

get:

summary: VAE Message delivery resource Read service Operation

tags:

- Individual downlink message delivery (Document)

operationId: ReadIndividualDownlinkMessageDelivery

parameters:

- name: subscriptionId

in: path

description: String identifying a subscription to the Individual Message Delivery Subscription

required: true

schema:

type: string

- name: dlDeliveryId

in: path

description: Identifier of a downlink messge delivery resource

required: true

schema:

type: string

responses:

'200':

description: OK. Resource representation is returned

content:

application/json:

schema:

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

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_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: VAE Message delivery resource delete service Operation

tags:

- Individual message delivery (Document)

operationId: DeleteMessageDelivery

parameters:

- name: subscriptionId

in: path

description: String identifying a subscription to the Individual Message Delivery Subscription

required: true

schema:

type: string

- name: dlDeliveryId

in: path

required: true

description: Unique ID of the message delivery to be deleted

schema:

type: string

responses:

'204':

description: No Content (Successful deletion of the existing subscription)

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_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'

'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: '{tokenUrl}'

scopes: {}

schemas:

DownlinkMessageDeliveryData:

description: Contains the downlink V2X message delivery data.

type: object

properties:

ueId:

$ref: '#/components/schemas/V2xUeId'

groupId:

$ref: '#/components/schemas/V2xGroupId'

duration:

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

geoId:

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

payload:

$ref: '#/components/schemas/V2xMessagePayload'

required:

- payload

MessageDeliverySubscriptionData:

description: Represents the V2X message delivery subscription data.

type: object

properties:

appSerId:

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

serviceId:

$ref: '#/components/schemas/V2xServiceId'

geoId:

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

notifUri:

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

requestTestNotification:

type: boolean

description: >

Set to true by the NF service consumer to request the VAE server to send a test

notification as defined in clause 6.1.5.3. Set to false or omitted otherwise.

websockNotifConfig:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/WebsockNotifConfig'

suppFeat:

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

required:

- appSerId

- serviceId

- notifUri

UplinkMessageDeliveryData:

description: Represents the uplink V2X message delivery data.

type: object

properties:

resourceUri:

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

ueId:

$ref: '#/components/schemas/V2xUeId'

geoId:

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

payload:

$ref: '#/components/schemas/V2xMessagePayload'

required:

- resourceUri

- ueId

- payload

Result:

description: Contains the result of downlink message delivery.

anyOf:

- type: string

enum:

- SUCCESS

- FAIL

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration and is not used to encode

content defined in the present version of this API.

AppServerId:

description: Represents the V2X application specific server identifier.

type: string

V2xUeId:

description: Represents the identifier of the V2X UE.

type: string

V2xGroupId:

description: Represents the group ID for which a V2X message is addressed.

type: string

V2xServiceId:

description: Represents the V2X service ID to which a V2X message belongs.

type: string

GeoId:

description: Represents a geographical area identifier.

type: string

V2xMessagePayload:

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

\* \* \* Next change \* \* \* \*

# A.3 VAE\_FileDistribution API

openapi: 3.0.0

info:

version: 1.1.0

title: VAE\_FileDistribution

description: |

API for VAE File Distribution Service

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externalDocs:

description: 3GPP TS 29.486 V17.5.0 V2X Application Enabler (VAE) Services

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.486/'

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/vae-file-distribution/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/file-distributions:

post:

summary: VAE File Distributions resource create service Operation

tags:

- file distributions collection (Document)

operationId: CreateFileDistributions

requestBody:

content:

application/json:

schema:

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

required: true

responses:

'201':

description: File Distribution Resource Created

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

content:

application/json:

schema:

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

'400':

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

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29571\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_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'

/file-distributions/{distributionId}:

get:

summary: Get an existing individual file distribution resource

operationId: ReadIndividualFileDistribution

tags:

- Individual File Distribution (Document)

parameters:

- name: distributionId

in: path

description: Identifier of a file distribution resource

required: true

schema:

type: string

responses:

'200':

description: OK. Resource representation is returned

content:

application/json:

schema:

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

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_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: VAE File Distribution resource delete service Operation

tags:

- Individual file distribution (Document)

operationId: DeleteFileDistribution

parameters:

- name: distributionId

in: path

required: true

description: Unique ID of the file distribution to be deleted

schema:

type: string

responses:

'204':

description: The subscription was terminated successfully.

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_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'

'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: '{tokenUrl}'

scopes: {}

schemas:

FileDistributionData:

description: Represents an individual File Distribution resource for a V2X group ID.

type: object

properties:

groupId:

$ref: 'TS29486\_VAE\_MessageDelivery.yaml#/components/schemas/V2xGroupId'

fileLists:

type: array

items:

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

minItems: 1

serviceClass:

type: string

geoArea:

$ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/GeographicArea'

maxBitrate:

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

maxDelay:

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

localMbmsInfo:

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

localMbmsActInd:

type: boolean

suppFeat:

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

required:

- fileLists

- geoArea

- maxBitrate

- maxDelay

FileList:

description: Represents a file list.

type: object

properties:

fileUri:

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

fileDisplayUri:

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

fileEarFetchTime:

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

fileLatFetchTime:

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

fileSize:

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

fileStatus:

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

completionTime:

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

keepUpdateInterval:

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

uniAvailability:

type: boolean

fileRepetition:

type: integer

required:

- fileUri

- fileDisplayUri

- fileEarFetchTime

- fileLatFetchTime

- fileStatus

- completionTime

- keepUpdateInterval

LocalMbmsInfo:

description: Contains the local MBMS information.

type: object

properties:

mbmsEnbIpv4MulAddr:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

mbmsEnbIpv6MulAddr:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Prefix'

mbmsGwIpv4SsmAddr:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

mbmsGwIpv6SsmAddr:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Addr'

cteid:

type: string

bmscIpv4Addr:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

bmscIpv6Addr:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Addr'

bmscPort:

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

FileStatus:

description: Represents a file status.

anyOf:

- type: string

enum:

- PENDING

- FETCHED

- PREPARED

- TRANSMITTING

- SENT

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration and is not used to encode

content defined in the present version of this API.

\* \* \* Next change \* \* \* \*

# A.4 VAE\_ApplicationRequirement API

openapi: 3.0.0

info:

version: 1.1.0

title: VAE\_ApplicationRequirement

description: |

API for VAE Application Requirement Service

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externalDocs:

description: 3GPP TS 29.486 V17.5.0 V2X Application Enabler (VAE) Services

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.486/'

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/vae-app-req/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/application-requirements:

post:

summary: VAE\_Application\_Requirements resource create service Operation

tags:

- application requirements collection (Document)

operationId: CreateApplicationRequirement

requestBody:

content:

application/json:

schema:

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

required: true

responses:

'201':

description: Application Requirement Resource Created

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

content:

application/json:

schema:

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

'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:

NotifyNetworkResource:

'{$request.body#/notifUri}':

post:

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content, Notification was succesfull

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_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'

/application-requirements/{requirementId}:

get:

summary: VAE Application Requirement resource read service Operation

tags:

- Individual application requirement (Document)

operationId: ReadApplicationRequirement

parameters:

- name: requirementId

in: path

description: Identifier of an application requirement resource

required: true

schema:

type: string

responses:

'200':

description: OK. Resource representation is returned

content:

application/json:

schema:

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

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_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: VAE Application Requirement resource delete service Operation

tags:

- Individual application requirement (Document)

operationId: DeleteApplicationRequirement

parameters:

- name: requirementId

in: path

required: true

description: Unique ID of the application requirement to be deleted

schema:

type: string

responses:

'204':

description: The subscription was terminated successfully.

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_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'

'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: '{tokenUrl}'

scopes: {}

schemas:

ApplicationRequirementData:

description: Represents an individual Application Requirement resource for a V2X UE ID or a V2X group ID.

type: object

properties:

ueId:

$ref: 'TS29486\_VAE\_MessageDelivery.yaml#/components/schemas/V2xUeId'

groupId:

$ref: 'TS29486\_VAE\_MessageDelivery.yaml#/components/schemas/V2xGroupId'

duration:

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

serviceId:

$ref: 'TS29486\_VAE\_MessageDelivery.yaml#/components/schemas/V2xServiceId'

appRequirement:

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

notifUri:

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

requestTestNotification:

type: boolean

description: >

Set to true by the NF service consumer to request the VAE server to send a test

notification as defined in clause 6.3.5.3. Set to false or omitted otherwise.

websockNotifConfig:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/WebsockNotifConfig'

suppFeat:

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

required:

- serviceId

- appRequirement

- notifUri

ApplicationRequirement:

description: Represents the requirements for application change.

type: object

properties:

serviceLevel:

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

AppReqNotification:

description: >

Represents a notificaton of the result of the network resource adaptation corresponding to

the V2X application requirement.

type: object

properties:

resourceUri:

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

result:

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

required:

- resourceUri

- result

ServiceLevel:

description: Indicates a service level for application service.

anyOf:

- type: string

enum:

- HIGH

- MEDIUM

- LOW

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration and is not used to encode

content defined in the present version of this API.

ReservationResult:

description: Represents the result of the network resource adaptation corresponding to the V2X application requirement.

anyOf:

- type: string

enum:

- SUCCESSFUL

- FAILURE

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration and is not used to encode

content defined in the present version of this API.

\* \* \* Next change \* \* \* \*

# A.8 VAE\_SessionOrientedService

openapi: 3.0.0

info:

version: 1.0.0

title: VAE\_SessionOrientedService

description: |

API for VAE\_SessionOrientedService

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externalDocs:

description: 3GPP TS 29.486 V17.5.0 V2X Application Enabler (VAE) Services

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.486/'

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/vae-session-Oriented-service/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/subscriptions:

post:

summary: VAE\_SessionOrientedService resource create service Operation

tags:

- session oriented service subscriptions collection (Document)

operationId: Create

requestBody:

content:

application/json:

schema:

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

required: true

responses:

'201':

description: Session Oriented Service Subscription Resource Created

headers:

Location:

description: 'Contains the URI of the newly created resource'

required: true

schema:

type: string

content:

application/json:

schema:

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

'400':

$ref: 'TS29122\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29122\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29122\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29122\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29122\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29122\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29122\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29122\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

callbacks:

NotifyResutOfSessionOrientedService:

'{$request.body#/notifUri}':

post:

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content, Notification was succesfull

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29122\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29122\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29122\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29122\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29122\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29122\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29122\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29122\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

/subscriptions/{subscriptionId}:

get:

summary: VAE Session Oriented Service Subscription resource read service Operation

tags:

- Individual Session Oriented Service Subscription (Document)

operationId: ReadSessionOrientedServiceSubscription

parameters:

- name: subscriptionId

in: path

description: Identifier of an Session Oriented Service Subscription resource

required: true

schema:

type: string

responses:

'200':

description: OK. Resource representation is returned

content:

application/json:

schema:

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

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29122\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29122\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_CommonData.yaml#/components/responses/404'

'406':

$ref: 'TS29122\_CommonData.yaml#/components/responses/406'

'429':

$ref: 'TS29122\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29122\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29122\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

put:

summary: Updates/replaces an existing subscription resource

tags:

- VAE Session Oriented Service Subscription resource put service Operation

parameters:

- name: subscriptionId

in: path

description: Identifier of an Session Oriented Service Subscription resource

required: true

schema:

type: string

requestBody:

description: Parameters to update/replace the existing subscription

required: true

content:

application/json:

schema:

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

responses:

'200':

description: OK (Successful update of the subscription)

content:

application/json:

schema:

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

'204':

description: No Content (Successful update of the subscription)

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29122\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29122\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29122\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29122\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29122\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29122\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29122\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29122\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

delete:

summary: VAE Session Oriented Service Subscription resource delete service Operation

tags:

- Individual Session Oriented Service Subscription (Document)

operationId: DeleteSessionOrientedServiceSubscription

parameters:

- name: subscriptionId

in: path

required: true

description: Unique ID of the Session Oriented Service Subscription n to be deleted

schema:

type: string

responses:

'204':

description: The subscription was terminated successfully.

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29122\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29122\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_CommonData.yaml#/components/responses/404'

'429':

$ref: 'TS29122\_CommonData.yaml#/components/responses/429'

'500':

$ref: 'TS29122\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29122\_CommonData.yaml#/components/responses/503'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

SessionOrientedData:

description: Represents an Individual Session Oriented Service Subscription resource.

type: object

properties:

ueId:

$ref: 'TS29486\_VAE\_MessageDelivery.yaml#/components/schemas/V2xUeId'

notifUri:

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

serviceId:

$ref: 'TS29486\_VAE\_MessageDelivery.yaml#/components/schemas/V2xServiceId'

appSerId:

$ref: 'TS29486\_VAE\_MessageDelivery.yaml#/components/schemas/AppServerId'

appQosReq:

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

requestTestNotification:

type: boolean

description: >

Set to true by the NF service consumer to request the VAE server to send a test

notification as defined in clause 6.3.5.3. Set to false or omitted otherwise.

websockNotifConfig:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/WebsockNotifConfig'

suppFeat:

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

required:

- ueId

- notifUri

- serviceId

- appSerId

Notification:

description: Represents a notificaton of result of Session Oriented Service.

type: object

properties:

resourceUri:

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

action:

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

result:

$ref: 'TS29486\_VAE\_MessageDelivery.yaml#/components/schemas/Result'

required:

- resourceUri

- action

- result

AppplicationQosRequirement:

description: Represents application layer QoS requirement.

type: object

properties:

pqi:

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

resourceType:

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

priorityLevel:

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

packetDelayBudget:

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

packetErrorRate:

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

averagingWindow:

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

maxDataBurstVol:

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

Action:

description: Indicate the action to the session-oriented service.

anyOf:

- type: string

enum:

- ESTABLISHMENT

- UPDATE

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration and is not used to encode

content defined in the present version of this API.

\* \* \* End of changes \* \* \* \*