**3GPP TSG-CT3 Meeting #127e *C3-231127***

**e-meeting, 17th April 2023 – 21st April 2023**

|  |
| --- |
| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **29.486** | **CR** |  **0092** | **rev** | **-** | **Current version:** | **18.0.0** |  |
|  |
| *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:***  | Adding missing presence conditions  |
|  |  |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell |
| ***Source to TSG:*** | CT3 |
|  |  |
| ***Work item code:*** | SBIProtoc18 |  | ***Date:*** | 2023-04-07 |
|  |  |  |  |  |
| ***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 canbe 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:*** | 29.501 clause 5.3.14 requires modelling attribute presence conditions in the OpenAPI, including mutual exclusivity of attributes, for example:- JSON object defining attributes "a" and "b", of type integer, where "a" and "b" can be both absent but, if one of them is present, the other shall be absent:components: schemas: ExampleType4: type: object not: required: [ a, b ] properties: a: type: integer b: type: integer1. 6.1.6.2.2 Type: DownlinkMessageDeliveryData; Either "ueId" attribute or "groupId" attribute shall be included.
2. 6.3.6.2.2 Type: ApplicationRequirementData; Either the "ueId" attribute or "groupId" attribute shall be included.
3. 6.8.6.2.2 Type: V2vConfigurationData; Either "groupId" attribute or "serviceId" attribute shall be present.
4. 6.9.6.2.2 Type: ProvisioningRequirement; Either "ueId" attribute or "groupId" attribute shall be present.
 |
|  |  |
| ***Summary of change:*** | Modelled the mutual exclusivity of attributes listed above in the OpenAPI and other minor corrections. |
|  |  |
| ***Consequences if not approved:*** | Incomplete OpenAPI file. |
|  |  |
| ***Clauses affected:*** | 6.9.6.2.2, A.2, A.4, A.9, A.10 |
|  |  |
|  | **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 introduces a backwards compatible correction in the OpenAPI file – 1. VAE\_MessageDelivery API
2. VAE\_ApplicationRequirement API
3. VAE\_V2VConfigRequirement API
4. VAE\_PC5ProvisioningRequirement API
 |
|  |  |
| ***This CR's revision history:*** |  |

\* \* \* \* First change \* \* \* \*

##### 6.9.6.2.2 Type: ProvisioningRequirement

Table 6.9.6.2.2-1: Definition of type ProvisioningRequirement

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| ueId | V2xUeId | C | 0..1 | Identity of the V2X UE for which V2X application requirement is initiated. |  |
| groupId | V2xGroupId | C | 0..1 | Identity of the V2X group for which the V2X application requirement is initiated. |  |
| notifUri | Uri | M | 1 | Identifies the recipient of notification sent by the VAE server. |  |
| serviceId | V2xServiceId | M | 1 | The V2X service ID for which application requirement corresponds to. |  |
| appQosReq | AppplicationQosRequirement | O | 0..1 | The application QoS requirements for the session-oriented service. |  |
| plmnList | array(PlmnId) | O | 1..N | The list of the PLMN identities for the PLMNs which offer the V2X service |  |
| requestTestNotification | boolean | O | 0..1 | 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. | Notification\_test\_event |
| websockNotifConfig | WebsockNotifConfig | O | 0..1 | Configuration parameters to set up notification delivery over Websocket protocol as defined in clause 6.3.5.4. | Notification\_websocket |
| suppFeat | SupportedFeatures | C | 0..1 | Indicates the features supported by the service consumer. It shall be included in the first interaction.  |  |
| NOTE: Either "ueId" attribute or "groupId" attribute shall be present. |

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

# A.2 VAE\_MessageDelivery API

openapi: 3.0.0

info:

 version: 1.2.0-alpha.1

 title: VAE\_MessageDelivery

 description: |

 API for VAE Message Delivery Service

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externalDocs:

 description: 3GPP TS 29.486 V18.0.0 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

 not:

 required: [ueId, groupId]

 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.4 VAE\_ApplicationRequirement API

openapi: 3.0.0

info:

 version: 1.2.0-alpha.1

 title: VAE\_ApplicationRequirement

 description: |

 API for VAE Application Requirement Service

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externalDocs:

 description: 3GPP TS 29.486 V18.0.0 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

 not:

 required: [ueId, groupId]

 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

# Simple data types and Enumerations

 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.9 VAE\_V2VConfigRequirement API

openapi: 3.0.0

info:

 version: 1.1.0-alpha.1

 title: VAE\_V2VConfigRequirement

 description: |

 API for VAE\_V2VConfigRequirement

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externalDocs:

 description: 3GPP TS 29.486 V18.0.0 V2X Application Enabler (VAE) Services

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

security:

 - {}

 - oAuth2ClientCredentials: []

servers:

 - url: '{apiRoot}/vae-v2v-config-req/v1'

 variables:

 apiRoot:

 default: https://example.com

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

paths:

 /configurations:

 post:

 summary: VAE V2V Configuration resource create service Operation

 tags:

 - V2V Configurations collection (Document)

 operationId: Create

 requestBody:

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/V2vConfigurationData'

 required: true

 responses:

 '201':

 description: V2V Configuration 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/V2vConfigurationData'

 '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'

 /configurations/{configurationId}:

 get:

 summary: VAE V2V Configuration resource read service Operation

 tags:

 - Individual V2V Configuration (Document)

 operationId: ReadV2VConfiguration

 parameters:

 - name: configurationId

 in: path

 description: Identifier of a V2V Configuration resource

 required: true

 schema:

 type: string

 responses:

 '200':

 description: OK. Resource representation is returned

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/V2vConfigurationData'

 '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 configuration resource

 tags:

 - VAE V2V Configuration resource put service Operation

 operationId: UpdateV2VConfiguration

 parameters:

 - name: configurationId

 in: path

 description: Identifier of a V2V Configuration resource

 required: true

 schema:

 type: string

 requestBody:

 description: Parameters to update/replace the existing configuration

 required: true

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/V2vConfigurationData'

 responses:

 '200':

 description: OK (Successful update of the configuration)

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/V2vConfigurationData'

 '204':

 description: No Content (Successful update of the configuration)

 '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 V2V Configuration resource delete service Operation

 tags:

 - Individual V2V Configuration (Document)

 operationId: DeleteV2VConfiguration

 parameters:

 - name: configurationId

 in: path

 required: true

 description: Unique ID of the V2V Configuration to be deleted

 schema:

 type: string

 responses:

 '204':

 description: The configuration was deleted 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:

 V2vConfigurationData:

 description: Contains the V2V configuration data.

 type: object

 properties:

 groupId:

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

 serviceId:

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

 canUeIds:

 type: array

 items:

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

 minItems: 1

 appQosReq:

 $ref: 'TS29486\_VAE\_SessionOrientedService.yaml#/components/schemas/AppplicationQosRequirement'

 suppFeat:

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

 not:

 required: [groupId, serviceId]

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

# A.10 VAE\_PC5ProvisioningRequirement API

openapi: 3.0.0

info:

 version: 1.1.0-alpha.1

 title: VAE\_PC5ProvisioningRequirement

 description: |

 API for VAE\_PC5ProvisioningRequirement

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externalDocs:

 description: 3GPP TS 29.486 V18.0.0 V2X Application Enabler (VAE) Services

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

security:

 - {}

 - oAuth2ClientCredentials: []

servers:

 - url: '{apiRoot}/vae-pc5-prov-req/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\_PC5 Provisioning Requirement resource create service Operation

 tags:

 - PC5 provisioning requirement subscriptions collection (Document)

 operationId: Create

 requestBody:

 content:

 application/json:

 schema:

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

 required: true

 responses:

 '201':

 description: PC5 Provisioning Requirement 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/ProvisioningRequirement'

 '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:

 NotifyResutOfMultiOperationPC5Provisioning:

 '{$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 PC5 Provisioning Requirement Subscription resource read service Operation

 tags:

 - Individual PC5 Provisioning Requirement Subscription (Document)

 operationId: ReadPC5ProvisioningRequirementSubscription

 parameters:

 - name: subscriptionId

 in: path

 description: Identifier of an PC5 Provisioning Requirement Subscription resource

 required: true

 schema:

 type: string

 responses:

 '200':

 description: OK. Resource representation is returned

 content:

 application/json:

 schema:

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

 '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 PC5 Provisioning Requirement Subscription resource put service Operation

 operationId: UpdatePC5ProvisioningRequirementSubscription

 parameters:

 - name: subscriptionId

 in: path

 description: Identifier of an PC5 Provisioning Requirement 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/ProvisioningRequirement'

 responses:

 '200':

 description: OK (Successful update of the subscription)

 content:

 application/json:

 schema:

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

 '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 PC5 Provisioning Requirement Subscription resource delete service Operation

 tags:

 - Individual PC5 Provisioning Requirement Subscription (Document)

 operationId: DeletePC5ProvisioningRequirementSubscription

 parameters:

 - name: subscriptionId

 in: path

 required: true

 description: Unique ID of the PC5 Provisioning Requirement Subscription 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:

 ProvisioningRequirement:

 description: Represents an Individual PC5 Provisioning Requirement Subscription resource.

 type: object

 properties:

 ueId:

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

 groupId:

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

 notifUri:

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

 serviceId:

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

 appQosReq:

 $ref: 'TS29486\_VAE\_SessionOrientedService.yaml#/components/schemas/AppplicationQosRequirement'

 plmnList:

 type: array

 items:

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

 minItems: 1

 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

 - notifUri

 not:

 required: [ueId, groupId]

 Notification:

 description: Represents a notificaton of result of PC5 Provisioning Requirement.

 type: object

 properties:

 resourceUri:

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

 result:

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

 required:

 - resourceUri

 - result

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