**3GPP TSG CT WG3 Meeting #142 *C3-253370***

**Goteborg, SE, 25th – 29th August, 2025**

**Source: Huawei, Nokia**

**Title: Pseudo-CR on defining the OpenAPI description of the Naf\_VFLTraining API**

**Spec: 3GPP TS 29.530**

**Agenda item: 19.39 (AIML\_CN)**

**Document for: Agreement**

**1. Introduction**

The stage 2 requirements for the new Naf\_VFLTraining API have been defined in clauses TS 23.288.

**2. Reason for Change**

Define the OpenAPI description of this new API in the corresponding new AI/ML related AF Services TS.

**3. Conclusions**

N/A

**4. Proposal**

It is proposed to agree the following changes to 3GPP TS 29.530 V 0.0.0.

\* \* \* \* Start of changes \* \* \* \*

# A.2 Naf\_VFLTraining API

openapi: 3.0.0

info:

 title: Naf\_VFLTraining Service API

 version: 1.0.0-alpha.1

 description: |

 AF VFL Training Service.

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externalDocs:

 description: >

 3GPP TS 29.530 V1.0.0; 5G System; Application Function Artificial Intelligence/Machine Learning

 (AI/ML) Services.

 url: http://www.3gpp.org/ftp/Specs/archive/29\_series/29.530/

servers:

 - url: '{apiRoot}/naf-vfl-train/v1'

 variables:

 apiRoot:

 default: https://example.com

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

security:

 - {}

 - oAuth2ClientCredentials:

 - naf-vfl-train

paths:

 /subscriptions:

 post:

 summary: Request the creation of a VFL Training Subscription.

 operationId: CreateVflTrainSubsc

 tags:

 - VFL Training Subscriptions (Collection)

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '201':

 description: >

 Created. The VFL Training Subscription is successfully created and a representation of

 the created Individual VFL Training Subscription resource shall be returned.

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: >

 Contains the URI of the created Individual VFL Training Subscription 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'

 '502':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/502'

 '503':

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

 default:

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

 callbacks:

 myNotification:

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

 post:

 requestBody:

 required: true

 content:

 application/json:

 schema:

 $ref: 'TS29520\_Nnwdaf\_VFLTraining.yaml#/components/schemas/VflTrainingNotify'

 responses:

 '204':

 description: >

 No Content. The VFL Training Notification is successfully received

 and acknowledged.

 '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'

 '502':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/502'

 '503':

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

 default:

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

 /subscriptions/{subscriptionId}:

 parameters:

 - name: subscriptionId

 in: path

 description: >

 Represents the identifier of the Individual VFL Training Subscription

 resource.

 required: true

 schema:

 type: string

 get:

 summary: Retrieve an existing Individual VFL Training Subscription resource.

 operationId: GetIndVflTrainSubsc

 tags:

 - Individual VFL Training Subscription (Document)

 responses:

 '200':

 description: >

 OK. The requested Individual VFL Training Subscription resource is returned.

 content:

 application/json:

 schema:

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

 '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'

 '502':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/502'

 '503':

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

 default:

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

 put:

 summary: Request the update of an existing Individual VFL Training Subscription resource.

 operationId: UpdateIndVflTrainSubsc

 tags:

 - Individual VFL Training Subscription (Document)

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '200':

 description: >

 OK. The Individual VFL Training Subscription resource is successfully updated and a

 representation of the updated resource shall be returned in the response body.

 content:

 application/json:

 schema:

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

 '204':

 description: >

 No Content. The Individual VFL Training Subscription resource is successfully updated

 and no content is returned in the response body.

 '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'

 '502':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/502'

 '503':

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

 default:

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

 patch:

 summary: Request the modification of an existing Individual VFL Training Subscription resource.

 operationId: ModifyIndVflTrainSubsc

 tags:

 - Individual VFL Training Subscription (Document)

 requestBody:

 required: true

 content:

 application/merge-patch+json:

 schema:

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

 responses:

 '200':

 description: >

 OK. The Individual VFL Training Subscription resource is successfully modified and a

 representation of the updated resource shall be returned in the response body.

 content:

 application/json:

 schema:

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

 '204':

 description: >

 No Content. The Individual VFL Training Subscription resource is successfully modified

 and no content is returned in the response body.

 '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'

 '502':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/502'

 '503':

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

 default:

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

 delete:

 summary: Request the deletion of an existing Individual VFL Training Subscription resource.

 operationId: DeleteIndVflTrainSubsc

 tags:

 - Individual VFL Training Subscription (Document)

 responses:

 '204':

 description: >

 No Content. The Individual VFL Training Subscription resource is 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'

 '429':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/500'

 '502':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/502'

 '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:

 naf-vfl-train: >

 Enables to access all the resources and custom operations of the Naf\_VFLTraining API.

 schemas:

#

# STRUCTURED DATA TYPES

#

 VflTrainSubsc:

 description: >

 Represents a VFL Training Subscription.

 type: object

 properties:

 vflTrainSubSets:

 type: object

 additionalProperties:

 $ref: 'TS29520\_Nnwdaf\_VFLTraining.yaml#/components/schemas/VflTrainingSub'

 minProperties: 1

 description: >

 Contains the subscribed VFL training set(s).

 The key of the map shall be set to the value of the event attribute of the

 corresponding map value encoded using the VflTrainingSub data structure.

 notifUri:

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

 notifCorrId:

 type: string

 reportingReqs:

 $ref: 'TS29523\_Npcf\_EventExposure.yaml#/components/schemas/ReportingInformation'

 trainReports:

 $ref: 'TS29520\_Nnwdaf\_VFLTraining.yaml#/components/schemas/VflTrainReport'

 suppFeat:

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

 required:

 - vflTrainSubSets

 - notifUri

 - notifCorrId

 VflTrainSubscPatch:

 description: >

 Represents the requested modifications to a VFL Training Subscription.

 type: object

 properties:

 vflTrainSubSets:

 type: object

 additionalProperties:

 $ref: 'TS29520\_Nnwdaf\_VFLTraining.yaml#/components/schemas/VflTrainingSub'

 minProperties: 1

 nullable: true

 description: >

 Contains the subscribed VFL training set(s).

 The key of the map shall be set to the value of the event attribute of the

 corresponding map value encoded using the VflTrainingSub data structure.

 notifUri:

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

 notifCorrId:

 type: string

 reportingReqs:

 $ref: 'TS29523\_Npcf\_EventExposure.yaml#/components/schemas/ReportingInformation'

# SIMPLE DATA TYPES

#

#

# ENUMERATIONS

#

# Data types describing alternative data types or combinations of data types:

#

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