**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 \* \* \* \*