**3GPP TSG-CT WG3 Meeting #142C3-253638**

**Gothenburg, SE, 25 - 29 August 2025 is revision of C3-253055, 3234**

**Source: China Mobile, Ericsson, Huawei, Nokia**

**Title: Pseudo-CR on Naf\_VFLInference Service API definition**

**Spec: 3GPP TS 29.530v0.1.0**

**Agenda item: 19.39**

**Document for: Approval**

**1. Introduction**

Introduce AF VFL Inference service.

**2. Reason for Change**

Align with 3GPP TS 23.288 clause 11.3 to introduce AF VFL Inference service.

**3. Conclusions**

API not completed defined.

**4. Proposal**

It is proposed to agree the following changes to 3GPP TS 29.530v0.1.0.

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

# A.3 Naf\_VFLInference API

openapi: 3.0.0

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info:

title: Naf\_VFLInference

version: 1.0.0-alpha.1

description: |

Naf\_VflInference API Service.

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externalDocs:

description: >

3GPP TS 29.530 V0.1.0; 5G System; Application Function Artificial Intelligence/Machine

Learning (AI/ML) Services

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

servers:

- url: '{apiRoot}/naf-vflinference/v1'

variables:

apiRoot:

default: https://example.com

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

security:

- {}

- oAuth2ClientCredentials:

- naf-vflinference

paths:

/subscriptions:

post:

summary: Create a new Individual AF VFL Inference Subscription resource.

operationId: CreateAFVFLInferenceSubcription

tags:

- Subscriptions (Collection)

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'201':

description: Create a new Individual AF VFL Inference Subscription resource.

content:

application/json:

schema:

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

headers:

Location:

description: >

Contains the URI of the newly created resource, according to the

structure

{apiRoot}/naf-vflinference/v1/subscriptions/{subscriptionId}.

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: '#/components/schemas/VflInferNotif'

responses:

'204':

description: No Content, Notification was succesfull

'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}:

put:

summary: update an existing Individual AF VFL Inference Subscription

operationId: UpdateAFVFLInferenceSubcription

tags:

- Individual AF VFL Inference Subscription (Document)

requestBody:

required: true

content:

application/json:

schema:

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

parameters:

- name: subscriptionId

in: path

description: String identifying a subscription to the Naf\_VFLInference Service.

required: true

schema:

type: string

responses:

'200':

description: >

The Individual AF VFL Inference Subscription resource was modified

successfully and a representation of that resource is returned.

content:

application/json:

schema:

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

'204':

description: >

The Individual AF VFL Inference Subscription resource was modified successfully.

'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: partial update an existing Individual AF VFL Inference Subscription

operationId: PartialUpdateAFVFLInferenceSubcription

tags:

- Individual AF VFL Inference Subscription (Document)

requestBody:

required: true

content:

application/merge-patch+json:

schema:

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

parameters:

- name: subscriptionId

in: path

description: String identifying a subscription to the Naf\_VflInference Service.

required: true

schema:

type: string

responses:

'200':

description: >

The Individual AF VFL Inference Subscription resource was partial modified successfully

and a representation of that resource is returned.

content:

application/json:

schema:

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

'204':

description: >

The Individual AF VFL Inference Subscription resource was partial modified

successfully.

'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: Delete an existing Individual AF VFL Inference Subscription.

operationId: DeleteAFVFLInferenceSubcription

tags:

- Individual AF VFL Inference Subscription (Document)

parameters:

- name: subscriptionId

in: path

description: >

String identifying a subscription to the Naf\_VFLInference Service.

required: true

schema:

type: string

responses:

'204':

description: >

No Content. The Individual AF VFL Inference Subscription matching the

subscriptionId was 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-vflinference: Access to the Naf\_VflInference API

schemas:

VflInferSub:

description: Represents a VFL Inference subscription.

type: object

properties:

notifCorreId:

type: string

description: >

String identifying the Notification Correlation ID in the corresponding

notification.

notifUri:

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

suppFeats:

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

vflInferAnaSub:

$ref: 'TS29520\_Nnwdaf\_VFLInference.yaml#/components/schemas/VflInferAnaSub'

vflInferReq:

$ref: 'TS29520\_Nnwdaf\_VFLInference.yaml#/components/schemas/VflInferReq'

vflInferResults:

type: array

items:

$ref: 'TS29520\_Nnwdaf\_VFLInference.yaml#/components/schemas/VflInferResult'

minItems: 1

description: Represents intermediate VFL Inference result.

vflReportInfo:

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

required:

- notifUri

- notifCorreId

- vflInferAnaSub

VflInferSubPatch:

description: >

Represents parameters to request the modification of a VFL Inference

subscription.

type: object

properties:

notifUri:

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

vflInferReq:

$ref: 'TS29520\_Nnwdaf\_VFLInference.yaml#/components/schemas/VflInferReq'

vflReportInfo:

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

VflInferNotif:

description: Represents notifications on events that occurred.

type: object

properties:

notifCorreId:

type: string

description: >

String identifying the Notification Correlation ID in the corresponding

notification.

vflInferResults:

type: array

items:

$ref: 'TS29520\_Nnwdaf\_VFLInference.yaml#/components/schemas/VflInferResult'

minItems: 1

description: Represents intermediate VFL inference results.

termCauses:

type: array

items:

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

minItems: 1

description: Represents the termination of the events.

required:

- notifCorreId

anyOf:

- required: [vflInferResults]

- required: [termCauses]

TermCause:

description: Represents the termination of the events.

type: object

properties:

vflTermCause:

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

vflCorreIds:

type: array

items:

type: string

minItems: 1

description: Represents the identification of the VFL process.

required:

- vflTermCause

#

# ENUMERATIONS DATA TYPES

#

VflTermCause:

anyOf:

- type: string

enum:

- OVERLOAD

- type: string

description: >

This string provides forward-compatibility with future extensions to the

enumeration but is not used to encode content defined in the present version

of this API.

description: |

Represents the cause for the analytics subscription termination request.

Possible values are:

- OVERLOAD: The AF is overloaded.

\* \* \* End of Changes \* \* \* \*