**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

openapi: 3.0.0

info:

 title: Naf\_VFLInference

 version: 1.0.0-alpha.1

 description: |

 Naf\_VflInference API Service.

 © 2025, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

 All rights reserved.

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 \* \* \* \*