**3GPP TSG-CT WG1 Meeting #146C1-240308**

**Online , 22– 26 January 2024**

**Source: Lenovo**

**Title: ADAE service configuration OpenAPI**

**Spec: 3GPP TS 24.559V0.3.1**

**Agenda item: 18.2.29**

**Document for: Agreement**

**1. Introduction**

<Introduction part (optional)>

**2. Reason for Change**

HTTP resources and encoding is described in clause 7 and annex A should define the OpenAPI. General clause is added to annex A to describe the OpenAPI addition.

There is no requirement for CoAP protocol and annex B is thus removed.

**3. Conclusions**

<Conclusion part (optional)>

**4. Proposal**

It is proposed to agree the following changes to 3GPP TS 24.559V0.3.1.

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

Annex <A> (normative):  
 OpenAPI specification

\* \* \* Next Change \* \* \* \*

# A.1 General

This annex is based on the OpenAPI Specification [20] and provides corresponding representations of all APIs defined in the present specification.

NOTE 1: An OpenAPIs representation embeds JSON Schema representations of HTTP message bodies.

This annex shall take precedence when being discrepant to other parts of the specification with respect to the encoding of information elements and methods within the API(s).

NOTE 2: The semantics and procedures, as well as conditions, e.g. for the applicability and allowed combinations of attributes or values, not expressed in the OpenAPI definitions but defined in other parts of the specification also apply.

Informative copies of the OpenAPI specification files contained in this 3GPP Technical Specification are available on a Git-based repository that uses the GitLab software version control system (see clause 5B of the 3GPP TR 21.900 [1] and clause 5.3.1 of the 3GPP TS 29.501 [5] for further information).

\* \* \* Next Change \* \* \* \*

# A.2 ADAE\_ServiceConfiguration API

openapi: 3.0.0

info:

title: ADAE\_ServiceConfiguration

version: 1.0.0-alpha.1

description: |

API for ADAE service configuration.

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externalDocs:

description: >

3GPP TS 24.559 V18.0.0 Appliction Data Analytics Enablement Service; Stage 3.

url: https://www.3gpp.org/ftp/Specs/archive/24\_series/24.559/

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/adae-sc/v1'

variables:

apiRoot:

default: https://example.com

description: apiRoot as defined in clause 5.2.4 of 3GPP TS 29.122.

paths:

/application-performance:

post:

description: >

Creates a new individual VAL performance analytics event subscription.

operationId: VALPerformanceSubscription

tags:

- VAL performance event subscriptions (Collection)

requestBody:

required: true

content:

application/json:

schema:

$ref: 'TS29549\_SS\_AEDA\_VALPerformanceAnalytics.yaml#/components/schemas/AppPerfSubs'

callbacks:

notificationUri:

'{request.body#/notificationUri}':

post:

requestBody: # contents of the callback message

required: true

content:

application/json:

schema:

$ref: 'TS29549\_SS\_AEDA\_VALPerformanceAnalytics.yaml#/components/schemas/AppPerfNotif'

responses:

'204':

description: No Content (successful notification)

'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'

responses:

'201':

description: VAL performance event subscription resource created successfully.

content:

application/json:

schema:

$ref: 'TS29549\_SS\_AEDA\_VALPerformanceAnalytics.yaml#/components/schemas/AppPerfSubs'

headers:

Location:

description: Contains the URI of the newly created resource.

required: true

schema:

type: string

'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'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

/application-performance/{appPerfId}:

delete:

description: Deletes an individual VAL performance event subscription.

operationId: DeleteIndValPerfEventSubsc

tags:

- Individual VAL performance event subscription

parameters:

- name: appPerfId

in: path

description: Identifier of an individual VAL performance event subscription.

required: true

schema:

type: string

responses:

'204':

description: >

The individual VAL performance subscription matching the appPerfId is deleted.

'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'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

/ue2ue-session-performance/fetch:

post:

description: >

Obtain the UE-to-UE session performance analytics.

operationId: FetchUe2UeSessionPerformance

tags:

- Fetch UE-to-UE session performance analytics

requestBody:

required: true

content:

application/json:

schema:

$ref: '#/components/schemas/Ue2UePerfReq'

responses:

'200':

description: >

Successful case. The UE-to-UE session performance information is returned in

the response body.

content:

application/json:

schema:

$ref: '#/components/schemas/Ue2UePerfResp'

'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'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

/edge-load:

post:

description: >

Creates a new individual edge load data collection event subscription.

operationId: EdgeLoadDataCollectionSubscription

tags:

- Edge load data collection event subscriptions (Collection)

requestBody:

required: true

content:

application/json:

schema:

$ref: 'TS29549\_SS\_AEDA\_EdgeLoadAnalytics.yaml#/components/schemas/EdgeSubs'

callbacks:

notificationUri:

'{request.body#/notificationUri}':

post:

requestBody: # contents of the callback message

required: true

content:

application/json:

schema:

$ref: 'TS29549\_SS\_AEDA\_EdgeLoadAnalytics.yaml#/components/schemas/EdgeNotif'

responses:

'204':

description: No Content (successful notification)

'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'

responses:

'201':

description: Edge load data collection event subscription resource created successfully.

content:

application/json:

schema:

$ref: 'TS29549\_SS\_AEDA\_EdgeLoadAnalytics.yaml#/components/schemas/EdgeSubs'

headers:

Location:

description: Contains the URI of the newly created resource.

required: true

schema:

type: string

'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'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

/edge-load/{edgeLdId}:

delete:

description: Deletes an individual edge load data collection event subscription.

operationId: DeleteIndEdgeLdDataCollectEventSubsc

tags:

- Individual edge load data collection event subscription

parameters:

- name: edgeLdId

in: path

description: Identifier of an individual edge load data collection event subscription.

required: true

schema:

type: string

responses:

'204':

description: >

The individual edge load data collection subscription matching the edgeLdId is deleted.

'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'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

/service-experience:

post:

description: >

Configures the ADAEC triggers for service experience reporting.

operationId: ConfigTriggerServExpReporting

tags:

- Configuration for service experience reporting (Collection)

requestBody:

required: true

content:

application/json:

schema:

$ref: '#/components/schemas/Config RepTrigger'

callbacks:

notificationUri:

'{request.body#/notificationUri}':

post:

requestBody: # contents of the callback message

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content (successful notification)

'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'

responses:

'201':

description: Triggers for service experience reporting configured successfully.

content:

application/json:

schema:

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

headers:

Location:

description: Contains the URI of the newly created resource.

required: true

schema:

type: string

'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'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

/service-experience/{srvTrigId}:

delete:

description: Abolish configured triggers for service experience reporting.

operationId: DeleteTriggerSrvExpReporting

tags:

- Individual configured trigger for service experience reporting

parameters:

- name: srvTrigId

in: path

description: Identifier of an individual triger-configured service experience reporting.

required: true

schema:

type: string

responses:

'204':

description: >

The individual trigger-configured service experiment reporting matching

the srvTrigId is deleted.

'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'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

/service-experience/push:

post:

description: >

Configure ADAE client to push service experience report to the ADAE server.

operationId: PushSrvExpReport

tags:

- Push service experienec report

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: >

Successful case. The ADAE client pushes service experience reporting to the ADAE server.

content:

application/json:

schema:

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

'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'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

/service-experience/pull:

post:

description: >

ADAE server pulls service experience report from the ADAE client.

operationId: PullSrvExpReport

tags:

- Pull service experienec report

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: >

Successful case. The ADAE client provides service experience reporting to

the ADAE server.

content:

application/json:

schema:

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

'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'

default:

$ref: 'TS29122\_CommonData.yaml#/components/responses/default'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

Ue2UePerfReq:

description: ADAES requests ADAEC for the UE-to-UE session performance analytics.

type: object

properties:

serverId:

type: string

description: String identifying the ADAE server

analyticsId:

type: string

description: String identifying the UE-to-UE session analytics

valUeIds:

type: array

items:

$ref: 'TS29549\_SS\_UserProfileRetrieval.yaml#/components/schemas/ValTargetUe'

minItems: 1

description: >

One or more VAL UE IDs whose UE-to-UE session performance is requested.

pc5Qos:

$ref: 'TS29571\_CommonData.yaml'#/components/schemas/Pc5QoSPara'

description: QoS for the UE-to-UE session performance analytics.

reportConfig:

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

description: The configuration of UE-to-UE session performance analytics reporting.

area:

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

description: Area for the UE-to-UE session performance analytics.

timeWindow:

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

description: Start and end of period for the UE-to-UE session performance analytics.

required:

- serverId

- analyticsId

- valUeIds

- pc5Qos

Ue2UePerfResp:

description: >

ADAEC responds to ADAES with the UE-to-UE session performance analytics information.

type: object

properties:

dataOutputs:

type: array

items:

type: string

minItems: 1

description: >

UE-to-UE session performance analytics for prediction or statistics.

valUeIds:

type: array

items:

$ref: 'TS29549\_SS\_UserProfileRetrieval.yaml#/components/schemas/ValTargetUe'

minItems: 1

description: >

One or more VAL UE IDs whose UE-to-UE session performance has been requested.

analyticsId:

type: string

description: String identifying the UE-to-UE session analytics

required:

- dataOutputs

- valUeIds

- analyticsId

ConfigRepTrigger:

description: Configures the ADAEC triggers for service experience reporting.

type: object

properties:

valServSpecCrit:

$ref: '#/components/schemas/ValServSpecCrit description: String identifying the ADAE server

commonTriggCrit:

$ref: '#/components/schemas/SrvExpRepCrit

srvExpMeas:

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

notifyTarget:

type: string

description: the target address which is notified.

required:

- valServSpecCrit

ValServSpecCrit

type: object

properties:

valServerIds:

type: array

description: VAL servers for which configuration of service experience report applies.

items:

type: string

minItems: 1

triggCrit:

$ref: '#/components/schemas/SrvExpRepCrit

required:

- valServerIds

- triggCrit

PullSrvExpInfo

type: object

properties:

valServerId:

type: string

valServiceId:

type: string

required:

- valServerId

SrvExpInfoRep:

description: Allows ADAEC to provide the service experience report to the ADAES.

type: object

properties:

valUeId:

$ref: 'TS29549\_SS\_UserProfileRetrieval.yaml#/components/schemas/ValTargetUe'

valServerId:

type: string

description: String identifying the VAL server the service experience report applies.

valServiceId:

type: string

description: String identifying the VAL service

timeStamp:

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

valSrvExpRep:

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

required:

- valUeId

- valServerId

# Simple data types and Enumerations

SrvExpRepCrit:

anyOf:

- type: string

enum:

- TRIGGER\_CRITERIA

- COMMON\_TRIGGER\_CRITERIA

- 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 information criteria to trigger service experience reporting.

Possible values are:

- TRIGGER\_CRITERIA: Information criteria that can trigger service experience

reproting to a VAL server.

- COMMON\_TRIGGER\_CRITERIA: Information criteria that can trigger service experience

reproting to all VAL servers.

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