**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 \* \* \* \*