**3GPP TSG-CT WG3 Meeting #134 *C3-242231\_R2***

**Changsha, China, 15th – 19th April, 2024**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.549** | **CR** | **0276** | **rev** | **-** | **Current version:** | **18.5.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Alignment of the SS\_ADAE\_Ue2UePerformanceAnalytics API | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | ADAES | | | | |  | ***Date:*** | | | 2024-03-20 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19) Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | CR provies the alignment with the received LS reply **C3-242031**, i.e., remove Analytics type in notifications and the EN related to the reporting requirements is removed because of no change in stage 2 requirements.  The provided changes are based on agreed SA6 CR **S6-240559.** | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | This CR introduces the alignment of SS\_ADAE\_Ue2UePerformanceAnalytics API with stage 2 requirements. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The definition of the SS\_ADAE\_Ue2UePerformanceAnalytics API cannot be completed in the stage 3. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 7.10.3.4.1, 7.10.3.4.2.2, 7.10.3.4.2.4, A.17 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | * This CR addresses received LS reply **C3-242031**. * This CR provides backward compatible correction of the SS\_ADAE\_Ue2UePerformanceAnalytics API. | | | | | | | | |
| ***()*** | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**Additional discussion(if needed):**

**Proposed changes:**

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

##### 7.10.3.4.1 General

This clause specifies the application data model supported by the API. Data types listed in clause 6.2 apply to this API.

Table 7.10.3.4.1-1 specifies the data types defined specifically for the SS\_ADAE\_Ue2UePerformanceAnalytics API service.

Table 7.10.3.4.1-1\_SS\_ADAE\_Ue2UePerformanceAnalytics API specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Section defined | Description | Applicability |
| U2UAnalytics | 7.4.2.4.3.1 | Represents the UE-to-UE analytics types. |  |
| U2UAnalyticsData | 7.10.3.4.2.6 | Represents the UE-to-UE analytics data. |  |
| U2UPair | 7.10.3.4.2.7 | Represents the UE-to-UE pair. |  |
| U2UPerfNotif | 7.10.3.4.2.3 | Represents the UE-to-UE session performance analytics notification. |  |
| U2UPerfSub | 7.10.3.4.2.2 | Represents the UE-to-UE session performance analytics subscription. |  |
| U2UReportingGranularity | 7.4.2.4.3.2 | Represents the UE-to-UE reporting granularity. |  |
| U2UThreshold | 7.10.3.4.2.5 | Represents the threshold for UE-to-UE session performance analytics. |  |

Table 7.10.3.4.1-2 specifies data types re-used by the SS\_ADAE\_Ue2UePerformanceAnalytics API service:

Table 7.10.3.4.1-2: Re-used Data Types

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data type | Reference | | Comments | | Applicability |
| AnalyticsType | Clause 7.10.1.4.2.6 | | Type of analytics for the event of the VAL application performance analytics. | |  |
| DurationSec | 3GPP TS 29.122 [3] | | Represents a period of time in units of seconds. | |  |
| LocationArea5G | 3GPP TS 29.122 [3] | | Represents location information. | |  |
| MatchingDirection | | 3GPP TS 29.520 [33] | | Used to indicate a threshold matching direction. |  |
| NotificationMethod | | 3GPP TS 29.508 [32] | | Used to indicate the reporting mode. |  |
| PacketErrRate | | 3GPP TS 29.571 [21] | | Used to represent packet error rate. |  |
| ReportingInformation | | 3GPP TS 29.523 [20] | | Used to indicate the reporting requirement, only the following information are applicable for SEAL:  - immRep  - notifMethod  - maxReportNbr  - monDur  - repPeriod |  |
| SupportedFeatures | | 3GPP TS 29.571 [21] | | Used to negotiate the supported optional features of the API. |  |
| TimeWindow | | 3GPP TS 29.122 [3] | | Used to indicate the time window. |  |
| Uinteger | | 3GPP TS 29.571 [21] | | Used to represent integer attributes. |  |
| Uri | | 3GPP TS 29.122 [3] | | Used to indicate the notification URI. |  |
| ValTargetUe | Clause 7.3.1.4.2.3 | | Used to indicate either VAL User ID or VAL UE ID. | |  |

\* \* \* Next change \* \* \* \*

###### 7.10.3.4.2.2 Type: U2UPerfSub

Table 7.10.3.4.2.2-1: Definition of type U2UPerfSub

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| analyticsType | AnalyticsType | M | 1 | Represents the type of the UE-to-UE session performance analytics. Only the "category" attribute within the AnalyticsType data structure is applicable. |  |
| valUeIds | array(ValTargetUe) | M | 1..N | Represent the list of VAL UEs, whose UE-to-UE session analytics are subscribed to. |  |
| valServiceId | string | O | 0..1 | Represents the VAL service for which the subscription applies. |  |
| confLevel | Uinteger | C | 0..1 | Defines the accuracy level for the UE-to-UE session analytics if the UE-to-UE session performance analytics.  This attribute shall be provided if the "analyticsType" is set to "ANALYTICS\_PREDICTIVE".  Minimum = 0. Maximum = 100. |  |
| area | LocationArea5G | O | 0..1 | Represents the geographical or service area, to which the UE-to-UE session performance analytics subscription is applied. |  |
| repReq | ReportingInformation | O | 0..1 | Represents the reporting requirements of the subscription. |  |
| reportingInds | array(U2UAnalytics) | C | 1..N | Indicates the list of the requested analytics.  (NOTE 1) |  |
| reportingThrs | array(U2UThreshold) | C | 1..N | Identifies reporting threshold corresponding to the application QoS index(es).  (NOTE 2) |  |
| reportingGrn | U2UReportingGranularity | C | 0..1 | Indicates the reporting granularity.  (NOTE 1) |  |
| expReqs | array(U2UThreshold) | O | 1..N | Represents the exposure level requirements for the analytics to be exposed. |  |
| notifUri | Uri | M | 1 | Represents the notification URI. |  |
| timeInterval | TimeWindow | O | 0..1 | The time interval as the start time and end time, to which the UE-to-UE session performance analytics subscription is applied. |  |
| suppFeat | SupportedFeatures | C | 0..1 | Used to negotiate the applicability of optional features.  This attribute shall be present only if feature negotiation needs to take place. |  |
| NOTE 1: These attributes shall be provided if the "repReq" attribute is present.  NOTE 2: These attributes shall be provided if the "notifMethod" attribute within the ReportingInformation data type provided in the "repReq" attribute is set to "ON\_EVENT\_DETECTION". |

\* \* \* Next change \* \* \* \*

###### 7.10.3.4.2.4 Void



\* \* \* Next change \* \* \* \*

# A.17 SS\_ADAE\_Ue2UePerformanceAnalytics API

openapi: 3.0.0

info:

title: SS\_ADAE\_Ue2UePerformanceAnalytics

description: |

API for SEAL VAL Service Area Configuration Service.

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version: "1.0.0-alpha.1"

externalDocs:

description: >

3GPP TS 29.549 V18.5.0 Service Enabler Architecture Layer for Verticals (SEAL);

Application Programming Interface (API) specification; Stage 3.

url: https://www.3gpp.org/ftp/Specs/archive/29\_series/29.549/

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/ss-adae-uupa/v1'

variables:

apiRoot:

default: https://example.com

description: apiRoot as defined in clause 6.5 of 3GPP TS 29.549

paths:

/ue2ue-session-performance:

post:

summary: Create an individual UE-to-UE session performance analytics event subscription.

operationId: SubscribeUe2UePerfAnalytics

tags:

- UE-to-UE Performance Subscriptions (Collection)

requestBody:

required: true

content:

application/json:

schema:

$ref: '#/components/schemas/U2UPerfSub'

responses:

'201':

description: >

Subscription to the UE-to-UE session performance analytics is created.

content:

application/json:

schema:

$ref: '#/components/schemas/U2UPerfSub'

headers:

Location:

description: Contains the URI of the newly created individual 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'

'500':

$ref: 'TS29122\_CommonData.yaml#/components/responses/500'

'503':

$ref: 'TS29122\_CommonData.yaml#/components/responses/503'

default:

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

callbacks:

NotifyU2USessionEvent:

'{$request.body#/notifUri}':

post:

summary: Notify the UE-to-UE session performance analytics.

requestBody:

required: true

content:

application/json:

schema:

$ref: '#/components/schemas/U2UPerfNotif'

responses:

'204':

description: The notification is successfully received.

'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'

/ue2ue-session-performance/{u2uPerfId}:

get:

summary: Read the individual UE-to-UE session performance analytics event subscription.

operationId: ReadU2UPerfSubscription

tags:

- Individual UE-to-UE Performance Subscription (Document)

parameters:

- name: u2uPerfId

in: path

description: >

Represents the identifier of an individual UE-to-UE session performance

analytics subscription.

required: true

schema:

type: string

responses:

'200':

description: >

The requested individual UE-to-UE session performance event subscription is returned.

content:

application/json:

schema:

$ref: '#/components/schemas/U2UPerfSub'

'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'

'406':

$ref: 'TS29122\_CommonData.yaml#/components/responses/406'

'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'

delete:

summary: Remove the individual UE-to-UE session performance analytics event subscription.

operationId: RemoveU2UPerfSubscription

tags:

- Individual UE-to-UE Performance Subscription (Document)

parameters:

- name: u2uPerfId

in: path

description: >

Represents the identifier of an individual UE-to-UE session performance

analytics subscription.

required: true

schema:

type: string

responses:

'204':

description: >

The individual UE-to-UE session performance event subscription matching

the u2uPerfId is deleted.

'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'

'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'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

U2UPerfSub:

description: >

Represents the UE-to-UE session performance analytics subscription.

type: object

properties:

analyticsType:

$ref: 'TS29549\_SS\_ADAE\_VALPerformanceAnalytics.yaml#/components/schemas/AnalyticsType'

valUeIds:

type: array

description: >

Represent the list of VAL UEs, whose UE-to-UE session analytics are subscribed to.

items:

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

minItems: 1

valServiceId:

description: Represents the VAL service for which the subscription applies.

type: string

confLevel:

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

area:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/LocationArea5G'

repReq:

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

reportingInds:

type: array

description: >

Indicates the list of the requested analytics.

items:

$ref: '#/components/schemas/U2UAnalytics'

minItems: 1

reportingThrs:

type: array

description: >

Identifies reporting threshold corresponding to the application QoS index(es).

items:

$ref: '#/components/schemas/U2UThreshold'

minItems: 1

reportingGrn:

$ref: '#/components/schemas/U2UReportingGranularity'

expReqs:

type: array

description: >

Represents the exposure level requirements for the analytics to be exposed.

items:

$ref: '#/components/schemas/U2UThreshold'

minItems: 1

notifUri:

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

timeInterval:

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

suppFeat:

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

required:

- analyticsType

- valUeIds

- notifUri

U2UPerfNotif:

description: >

Represents the threshold for UE-to-UE session performance analytics.

type: object

properties:

analyticsOutput:

type: array

description: >

Represents the exposure level requirements for the analytics to be exposed.

items:

$ref: '#/components/schemas/U2UAnalyticsData'

minItems: 1

analyticsType:

$ref: 'TS29549\_SS\_ADAE\_VALPerformanceAnalytics.yaml#/components/schemas/AnalyticsType'

confLevel:

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

required:

- analyticsOutput

U2UThreshold:

description: >

Represents the threshold for UE-to-UE session performance analytics.

type: object

properties:

value:

$ref: '#/components/schemas/U2UAnalyticsData'

thrDirect:

$ref: 'TS29520\_Nnwdaf\_EventsSubscription.yaml#/components/schemas/MatchingDirection'

required:

- value

- thrDirect

U2UAnalyticsData:

description: >

Represents the UE-to-UE analytics data.

type: object

properties:

valUes:

$ref: '#/components/schemas/U2UPair'

avgLatency:

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

avgPer:

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

avgDataRate:

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

jitter:

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

U2UPair:

description: >

Represents the UE-to-UE pair.

type: object

properties:

valUeA:

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

valUeB:

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

# Simple data types and Enumerations

U2UAnalytics:

anyOf:

- type: string

enum:

- AVG\_LATENCY

- AVG\_PER

- AVG\_DATA\_RATE

- JITTER

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration and is not used to encode

content defined in the present version of this API.

description: |

Represents the UE-to-UE analytics types.

Possible values are:

- AVG\_LATENCY: The indication for requesting the average latency analytics.

- AVG\_PER: The indication for requesting the average packet error rate analytics.

- AVG\_DATA\_RATE: The indication for requesting the average data rate analytics.

- JITTER: The indication for requesting the jitter analytics.

U2UReportingGranularity:

anyOf:

- type: string

enum:

- GROUP

- INDIVIDUAL

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration and is not used to encode

content defined in the present version of this API.

description: |

Represents the UE-to-UE reporting granularity.

Possible values are:

- GROUP: The indication for requesting the analytics for all

VAL UE-to-UE application sessions.

- INDIVIDUAL: The indication for requesting the analytics for individual

VAL UE-to-UE application sessions.

\* \* \* End of changes \* \* \* \*