**3GPP TSG- Meeting #130 *C3-234357\_R1***

**Xiamen, China, 09th – 13th October, 2023**

**Source: Ericsson**

**Title: Pseudo-CR on The Subscribe-Notify service operations implementation in the SDD\_Transmission OpenAPI file**

**Spec: 3GPP TS 29.548 V0.3.0**

**Agenda item: 18.22**

**Document for: Agreement**

**1. Introduction**

TS 23.433 is introduced the subscribe-notify service operations for the SDD\_Transmission API for connection status monitoring in the SEALDD Layer.

**2. Reason for Change**

The Subscribe-Notify service operations shall be implemented in the SDD\_Transmission OpenAPI file.

Changes:

- Header supported by the 201 Response Code on Subscription resource is added

- SDD\_Transmission OpenAPI file is updated to introduce subscribe-notify service operations in the SDD\_Transmission.

**3. Conclusions**

**4. Proposal**

It is proposed to agree the following changes to 3GPP TS 29.548 V0.3.0.

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

6.1.3.2.3.1 POST

This method enables a service consumer (e.g., VAL Server) to request the creation of an new Connection Status Subscription at the SEALDD Server.

This method shall support the URI query parameters specified in table 6.1.3.2.3.1-1.

Table 6.1.3.2.3.1-1: URI query parameters supported by the POST method on this resource

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description | Applicability |
| n/a |  |  |  |  |  |

This method shall support the request data structures specified in table 6.1.3.2.3.1-2 and the response data structures and response codes specified in table 6.1.3.2.3.1-3.

Table 6.1.3.2.3.1-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| ConnectStatSubsc | M | 1 | Represents the DD connection status subscription request. |

Table 6.1.3.2.3.1-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| ConnectStatSubsc | M | 1 | 201 Created | Successful case. The requested Connection Status Subscription resource is successfully created and a representation of the created "Individual Connection Status Subscription" resource is returned in the response body. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection.  The response shall include a Location header field containing an alternative URI of the resource located in an alternative SEALDD Server.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [2]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection.  The response shall include a Location header field containing an alternative URI of the resource located in an alternative SEALDD Server.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [2]. |
| NOTE: The manadatory HTTP error status code for the HTTP POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [2] also apply. | | | | |

Editor's Note: The error cases of this API are FFS.

Table 6.1.3.2.3.1-4: Headers supported by the 201 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains the URI of the newly created resource, according to the structure: {apiRoot}/sdd-trans/<apiVersion>/subscriptions{subscriptionId} |

Table 6.1.3.2.3.1-5: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative SEALDD Server. |

Table 6.1.3.2.3.1-6: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative SEALDD Server. |

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

# A.2 SDD\_Transmission API

openapi: 3.0.0

info:

title: SEALDD Data Transmission Service

version: 1.0.0-alpha.1

description: |

SEALDD Server Data Transmission Service.

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externalDocs:

description: >

3GPP TS 29.548 V0.3.0; Service Enabler Architecture Layer for Verticals (SEAL);

SEAL Data Delivery (SEALDD) Server Services; Stage 3.

url: https://www.3gpp.org/ftp/Specs/archive/29\_series/29.548/

servers:

- url: '{apiRoot}/sdd-trans/v1'

variables:

apiRoot:

default: https://example.com

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

security:

- {}

- oAuth2ClientCredentials: []

paths:

/{transType}/request-trans:

parameters:

- name: transType

in: path

description: >

Represents the requested transmission type (i.e., regular or URLLC).

required: true

schema:

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

post:

summary: Request SEALDD enabled regular or URLLC Data Transmission.

operationId: RequestTrans

tags:

- Request SEALDD Data Transmission

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: >

OK. The SEALDD enabled regular or URLLC application data transmission service request

was successfully received and processed.

content:

application/json:

schema:

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

'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'

/subscriptions:

post:

summary: Create a new Connection Status Subscription.

operationId: SubscribeConnStatus

tags:

- Connection Status Subscriptions (Collection)

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'201':

description: >

Successful case. The requested Connection Status Subscription resource

is successfully created and a representation of the created

"Individual Connection Status Subscription" resource is returned

in the response body.

content:

application/json:

schema:

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

headers:

Location:

description: >

Contains the URI of the newly created connection status subscription 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:

ConnectStatusNotif:

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

post:

summary: Notify a previously subscribed service consumer (e.g. VAL Server) on SEALDD connection status event(s).

requestBody:

required: true

content:

application/json:

schema:

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

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'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

TransReq:

description: >

Represents the parameters to request the SEALDD enabled regular or URLLC application data

transmission service.

type: object

properties:

valServerId:

type: string

valServiceId:

type: string

valTargetUeId:

$ref: 'TS29548\_SDD\_TransmissionQualityMeasurement.yaml#/components/schemas/ValTargetUeId'

valServerConnInfo:

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

valServerBdw:

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

valUsersBdw:

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

suppFeat:

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

required:

- valServerId

- valServerConnInfo

TransResp:

description: >

Represents a SEALDD enabled regular or URLLC application data transmission service response.

type: object

properties:

ddServerConnInfo:

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

suppFeat:

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

ConnInfo:

description: >

Represents SEALDD Data transmission connection information.

type: object

properties:

ipv4Addr:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv4Addr'

ipv6Addr:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Ipv6Addr'

port:

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

uri:

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

oneOf:

- required: [ipv4Addr]

- required: [ipv6Addr]

- required: [uri]

ValServBdw:

description: >

Represents VAL Server related bandwidth information.

type: object

properties:

totalUlBdw:

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

totalDlBdw:

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

required:

- totalUlBdw

- totalDlBdw

ValUsersBdw:

description: >

Represents VAL users related bandwidth information.

type: object

properties:

minUlBdw:

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

minDlBdw:

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

maxUlBdw:

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

maxDlBdw:

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

required:

- minUlBdw

- minDlBdw

- maxUlBdw

- maxDlBdw

ConnectStatSubsc:

description: >

Represents a Connection Status Event Subscription.

type: object

properties:

events:

type: array

minItems: 1

items:

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

minItems: 1

description: >

Represents the list of the subscribed event(s).

valServiceId:

type: string

description: Represents the identity of the VAL service.

valTgtUe:

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

notifUri:

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

suppFeat:

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

required:

- events

- notifUri

ConnectStatNotif:

description: >

Represents a Connection Status Event Notification.

type: object

properties:

event:

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

valServiceId:

type: string

description: Represents the identity of the VAL service.

valTgtUe:

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

conEstStat:

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

required:

- event

ConnectEstabData:

description: >

Represents SEALDD connection status establishment data.

type: object

properties:

comLifetime:

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

# Simple data types and Enumerations

TransType:

description: >

Represents the requested transmission type (i.e., regular or URLLC).

type: string

ConnectStatEvent:

anyOf:

- type: string

enum:

- ESTABLISHED

- RELEASED

- 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 Connection Status Events.

Possible values are:

- ESTABLISHED: Indicates that the SEALDD connection is established.

- RELEASED: Indicates that the SEALDD connection is released.

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