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

**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:

 - Resource URI structure of the SDD\_Transmission API is added;

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

 - Resource Custom Operations template for the SDD\_Transmission is removed;

 - 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 \*\*\*

|  |  |  |  |
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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 | Responsecodes | 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. |
|  |  |  |  |  |
|  |  |  |  |  |
| 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} |

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

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# 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: Request the Creation of a new Connection Status Subscription.

 operationId: CreateConnStatusSubsc

 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: >

 Successful case. The Connection Status 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

 items:

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

 minItems: 1

 valServiceId:

 type: string

 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'

 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 \*\*\*