**3GPP TSG-CT3 Meeting #120-e C3-221675**

**E-Meeting, 15th – 25th February 2022** *(revision of C3-22xxxx)*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.549** | **CR** | **72** | **rev** | **-** | **Current version:** | **17.3.0** |  |
|  | | | | | | | | |
| *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:*** | Update of info and externalDocs fields | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Samsung | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI17 | | | | |  | ***Date:*** | | | 2022-02-24 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | F |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | CRs modifying the SEAL APIs have been agreed and the version number of the corresponding OpenAPI file thus needs to be incremented following the rules in TS 29.501, subclause 4.3.1.  The following are the agreed CRs the update the various SEAL OpenAPI files for the present release  SS\_LocationReporting API   * TS 29.549, CR#0070: Backward compatible feature   SS\_GroupManagemnt API   * TS 29.549, CR#0063: Backward compatible feature * TS 29.549, CR#0071: Backward compatible feature   SS\_NetworkResourceAdaptation API   * TS 29.549, CR#0044: Backward compatible feature   SS\_Events API   * TS 29.549, CR#0060: Backward compatible feature * TS 29.549, CR#0061: Backward compatible feature * TS 29.549, CR#0062: Backward compatible feature * TS 29.549, CR#0063: Backward compatible feature, due to data type change in SS\_ GroupManagemnt API * TS 29.549, CR#0066: Backward compatible feature * TS 29.549, CR#0067: Backward compatible feature   SS\_LocationAreaInfoRetrieval API   * TS 29.549, CR#0062: Backward compatible feature, due to data type change in SS\_Events API   As the present release is not frozen, the alpha part of the API version needs to be incremented, and the TS version in the externalDocs field to 17.4.0.  In addition, the description field covering TS information is updated to cover proper line breaks structure and the URL of the External Docs field is updated to https. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | SS\_LocationReporting API   * Update API version from 1.1.0-alpha.2 to 1.1.0-alpha.3 * Copyright year to 2022 * Update of the line breaks in the description field of info and externalDocs fields * Update externalDocs to 17.4.0 * Update http URL to https for externalDocs field   SS\_GroupManagemnt API   * Update API version from 1.1.0-alpha.4 to 1.1.0-alpha.5 * Copyright year to 2022 * Update of the line breaks in the description field of info and externalDocs fields * Update externalDocs to 17.4.0 * Update http URL to https for externalDocs field   SS\_NetworkResourceAdaptation API   * Update API version from 1.1.0-alpha.3 to 1.1.0-alpha.4 * Copyright year to 2022 * Update of the line breaks in the description field of info and externalDocs fields * Update externalDocs to 17.4.0 * Update http URL to https for externalDocs field   SS\_Events API   * Update API version from 1.1.0-alpha.4 to 1.1.0-alpha.5 * Copyright year to 2022 * Update of the line breaks in the description field of info and externalDocs fields * Update externalDocs to 17.4.0 * Update http URL to https for externalDocs field   SS\_LocationAreaInfoRetrieval API   * Update API version from 1.0.0-alpha.1 to 1.0.0-alpha.2 * Copyright year to 2022 * Update of the line breaks in the description field of info and externalDocs fields * Update externalDocs to 17.4.0 * Update http URL to https for externalDocs field | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Incorrect API version number and TS version in externalDocs field. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | A.2, A.3, A.5, A.6, A.8 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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's revision history:*** | |  | | | | | | | | |

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

## A.2 SS\_LocationReporting API

openapi: 3.0.0

info:

title: SS\_LocationReporting

description: |

API for SEAL Location Reporting Configuration.

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version: "1.1.0-alpha.3"

externalDocs:

description: >

3GPP TS 29.549 V17.4.0 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-lr/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/trigger-configurations:

post:

description: Creates a new location reporting configuration.

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'201':

description: Location reporting configuration resource is created sucessfully.

content:

application/json:

schema:

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

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'

'500':

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

'503':

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

default:

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

/trigger-configurations/{configurationId}:

get:

description: Retrieves an individual SEAL location reporting configuration information.

parameters:

- name: configurationId

in: path

description: String identifying an individual configuration resource.

required: true

schema:

type: string

responses:

'200':

description: The location reporting configuration information.

content:

application/json:

schema:

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

'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'

'406':

$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'

put:

description: Updates an individual SEAL location reporting configuration.

parameters:

- name: configurationId

in: path

description: String identifying an individual configuration resource.

required: true

schema:

type: string

requestBody:

description: Configuration information to be updated in location management server.

required: true

content:

application/json:

schema:

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

responses:

'200':

description: The configuration is updated successfully.

content:

application/json:

schema:

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

'204':

description: No Content

'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'

delete:

description: Deletes an individual SEAL location reporting configuration.

parameters:

- name: configurationId

in: path

description: String identifying an individual configuration resource.

required: true

schema:

type: string

responses:

'204':

description: The individual configuration matching configurationId 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:

LocationReportConfiguration:

description: Represents Location reporting configuration information.

type: object

properties:

valServerId:

type: string

valTgtUe:

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

immRep:

type: boolean

monDur:

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

repPeriod:

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

accuracy:

$ref: 'TS29122\_MonitoringEvent.yaml#/components/schemas/Accuracy'

suppFeat:

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

required:

- valServerId

- valTgtUe

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

## A.3 SS\_GroupManagement API

openapi: 3.0.0

info:

title: SS\_GroupManagement

description: |

API for SEAL Group management.

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version: "1.1.0-alpha.5"

externalDocs:

description: >

3GPP TS 29.549 V17.4.0 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-gm/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/group-documents:

post:

description: Creates a new VAL group document.

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'201':

description: VAL group created sucessfully.

content:

application/json:

schema:

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

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'

'500':

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

'503':

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

default:

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

get:

description: Retrieves VAL group documents satisfying filter criteria

parameters:

- name: val-group-id

in: query

description: String identifying the VAL group.

schema:

type: string

- name: val-service-id

in: query

description: String identifying the Val service.

schema:

type: string

responses:

'200':

description: List of VAL group documents matching the query parameters in the request.

content:

application/json:

schema:

type: array

items:

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

minItems: 0

'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'

'406':

$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'

/group-documents/{groupDocId}:

get:

description: Retrieves VAL group information satisfying filter criteria.

parameters:

- name: groupDocId

in: path

description: String identifying an individual VAL group document resource.

required: true

schema:

type: string

- name: group-members

in: query

description: When set to true indicates the group management server to send the members list information of the VAL group.

schema:

type: boolean

- name: group-configuration

in: query

description: When set to true indicates the group management server to send the group configuration information of the VAL group.

schema:

type: boolean

responses:

'200':

description: The VAL group information based on the request from the VAL server. Includes VAL group members list if group-members flag is set to true in the request, VAL group configuration information if the group-configuration flag is set to true in the request, VAL group identifier, whole VAL group document resource if both group-members and group-configuration flags are omitted/set to false in the request.

content:

application/json:

schema:

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

'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'

'406':

$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'

put:

description: Updates an individual VAL group document.

parameters:

- name: groupDocId

in: path

description: String identifying an individual VAL group document resource

required: true

schema:

type: string

requestBody:

description: VAL group document to be updated in Group management server.

required: true

content:

application/json:

schema:

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

responses:

'200':

description: VAL group document updated successfully.

content:

application/json:

schema:

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

'204':

description: No Content

'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'

delete:

description: Deletes a VAL Group.

parameters:

- name: groupDocId

in: path

description: String identifying an individual VAL group document resource.

required: true

schema:

type: string

responses:

'204':

description: The individual VAL group matching groupDocId was 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:

VALGroupDocument:

description: Represents details of the VAL group document information.

type: object

properties:

valGroupId:

type: string

description: The VAL group idenitity.

grpDesc:

type: string

description: The text description of the VAL group.

members:

type: array

description: The list of VAL User IDs or VAL UE IDs, which are members of the VAL group.

items:

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

minItems: 1

valGrpConf:

type: string

description: Configuration data for the VAL group.

valServiceIds:

type: array

description: The list of VAL services enabled on the group.

items:

type: string

minItems: 1

suppFeat:

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

resUri:

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

locInfo:

$ref: 'TS29122\_MonitoringEvent.yaml#/components/schemas/LocationInfo'

addLocInfo:

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

extGrpId:

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

com5GLanType:

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

required:

- valGroupId

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

## A.5 SS\_NetworkResourceAdaptation API

openapi: 3.0.0

info:

version: 1.1.0-alpha.4

title: SS\_NetworkResourceAdaptation

description: |

SS Network Resource Adaptation Service.

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externalDocs:

description: >

3GPP TS 29.549 V17.4.0; 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-nra/v1'

variables:

apiRoot:

default: https://example.com

description: apiRoot as defined in clause 4.4 of 3GPP TS 29.501

paths:

/multicast-subscriptions:

post:

summary: Creates a new Individual Multicast Subscription resource

operationId: CreateMulticastSubscription

tags:

- Multicast Subscriptions (Collection)

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'201':

description: Success

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the created individual multicast 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:

UserPlaneNotification:

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

post:

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content, Notification was succesfull

'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'

/multicast-subscriptions/{multiSubId}:

get:

summary: "Reads an existing Individual Multicast Subscription"

operationId: GetMulticastSubscription

tags:

- Individual Multicast Subscription (Document)

parameters:

- name: multiSubId

in: path

description: Multicast Subscription ID

required: true

schema:

type: string

responses:

'200':

description: OK. Resource representation is returned

content:

application/json:

schema:

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

'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'

'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: "Delete an existing Individual Multicast Subscription"

operationId: DeleteMulticastSubscription

tags:

- Individual Multicast Subscription (Document)

parameters:

- name: multiSubId

in: path

description: Multicast Subscription ID

required: true

schema:

type: string

responses:

'204':

description: No Content. Resource was succesfully 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'

/unicast-subscriptions:

post:

summary: Creates a new Individual Unicast Subscription resource

operationId: CreateUnicastSubscription

tags:

- Unicast Subscriptions (Collection)

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'201':

description: Success

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the created individual unicast 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:

UserPlaneNotification:

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

post:

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content, Notification was succesfull

'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'

/unicast-subscriptions/{uniSubId}:

get:

summary: "Reads an existing Individual Unicast Subscription"

operationId: GetUnicastSubscription

tags:

- Individual Unicast Subscription (Document)

parameters:

- name: uniSubId

in: path

description: Unicast Subscription ID

required: true

schema:

type: string

responses:

'200':

description: OK. Resource representation is returned

content:

application/json:

schema:

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

'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'

'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: "Delete an existing Individual Unicast Subscription"

operationId: DeleteUnicastSubscription

tags:

- Individual Unicast Subscription (Document)

parameters:

- name: uniSubId

in: path

description: Unicast Subscription ID

required: true

schema:

type: string

responses:

'204':

description: No Content. Resource was succesfully 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'

/tsc-streams:

post:

summary: Create a TSC stream.

operationId: PostTscStream

tags:

- TSC stream creation

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'201':

description: Success

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the created individual TSC stream 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'

/tsc-streams/{tscStreamId}:

get:

summary: "Reads an existing Individual TSC stream data information"

operationId: GetTscStreamData

tags:

- Individual TSC Stream Creation

parameters:

- name: tscStreamId

in: path

description: TSC Stream ID corresponding to the VAL stream.

required: true

schema:

type: string

responses:

'200':

description: OK. Resource representation is returned

content:

application/json:

schema:

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

'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'

'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: "Delete an existing Individual TSC stream"

operationId: DeleteTscStream

tags:

- Individual TSC Stream Deletion

parameters:

- name: tscStreamId

in: path

description: TSC Stream ID corresponding to the VAL stream.

required: true

schema:

type: string

responses:

'204':

description: No Content. Resource was succesfully 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:

MulticastSubscription:

description: Represents a multicast subscription.

type: object

properties:

valGroupId:

type: string

anncMode:

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

multiQosReq:

type: string

locArea:

$ref: 'TS29122\_GMDviaMBMSbyMB2.yaml#/components/schemas/MbmsLocArea'

duration:

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

tmgi:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

localMbmsInfo:

$ref: 'TS29486\_VAE\_FileDistribution.yaml#/components/schemas/LocalMbmsInfo'

localMbmsActInd:

type: boolean

notifUri:

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

reqTestNotif:

type: boolean

wsNotifCfg:

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

suppFeat:

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

upIpv4Addr:

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

upIpv6Addr:

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

upPortNum:

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

radioFreqs:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

minItems: 1

required:

- valGroupId

- anncMode

- multiQosReq

- notifUri

UnicastSubscription:

description: Represents a unicast subscription.

type: object

properties:

valTgtUe:

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

uniQosReq:

type: string

duration:

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

notifUri:

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

reqTestNotif:

type: boolean

wsNotifCfg:

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

suppFeat:

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

required:

- valTgtUe

- notifUri

UserPlaneNotification:

description: Represents a notification on User Plane events.

type: object

properties:

notifId:

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

eventNotifs:

type: array

items:

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

minItems: 1

required:

- notifId

- eventNotifs

NrmEventNotification:

description: Represents a notification on an individual User Plane event.

type: object

properties:

event:

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

ts:

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

deliveryMode:

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

streamIds:

type: array

items:

type: string

minItems: 1

required:

- event

- ts

TscStreamData:

description: TSC stream data information.

type: object

properties:

reqIdentity:

type: string

description: The identity of the VAL server performing the request.

valStreamId:

type: string

description: Identifies the VAL stream.

streamSpec:

type: string

# Editor’s Note: Align with datatype definition of StreamSpecification

trafficSpecInfo:

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

required:

- reqIdentity

- valStreamId

- streamSpec

- trafficSpecInfo

TrafficSpecInformation:

description: The traffic classe supported by the DS-TTs and available end-to-end latency value and Priority Code Point (PCP) value.

type: object

properties:

pcpValue:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

maxFramInt:

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

maxFramSize:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

maxIntFrames:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

maxLatency:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Uint32'

required:

- pcpValue

- maxFramInt

- maxFramSize

- maxIntFrames

- maxLatency

# Simple data types and Enumerations

ServiceAnnoucementMode:

anyOf:

- type: string

enum:

- NRM

- VAL

- 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: >

Possible values are

- NRM: NRM server performs the service announcement.

- VAL: VAL server performs the service announcement.

DeliveryMode:

anyOf:

- type: string

enum:

- UNICAST

- MULTICAST

- 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: >

Possible values are

- UNICAST: Unicast delivery.

- MULTICAST: Multicast delivery.

NrmEvent:

anyOf:

- type: string

enum:

- UP\_DELIVERY\_MODE

- 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: >

Possible values are

- UP\_DELIVERY\_MODE: User Plane delivery mode.

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

## A.6 SS\_Events API

openapi: 3.0.0

info:

title: SS\_Events

description: |

API for SEAL Events management.

© 2022, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

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version: "1.1.0-alpha.5"

externalDocs:

description: >

3GPP TS 29.549 V17.4.0 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-events/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/subscriptions:

post:

description: Creates a new individual SEAL Event Subscription.

requestBody:

required: true

content:

application/json:

schema:

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

callbacks:

notificationDestination:

'{request.body#/notificationDestination}':

post:

requestBody: # contents of the callback message

required: true

content:

application/json:

schema:

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

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: SEAL Events subscription resource created successfully.

content:

application/json:

schema:

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

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'

'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/{subscriptionId}:

delete:

description: Deletes an individual SEAL Event Subscription.

parameters:

- name: subscriptionId

in: path

description: Identifier of an individual Events Subscription

required: true

schema:

type: string

responses:

'204':

description: The individual SEAL Events Subscription matching the subscriptionId 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:

SEALEventSubscription:

description: Represents an individual SEAL Event Subscription resource.

type: object

properties:

subscriberId:

type: string

description: String identifying the subscriber of the event.

eventSubs:

type: array

items:

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

minItems: 1

description: Subscribed events.

eventReq:

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

notificationDestination:

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

requestTestNotification:

type: boolean

description: Set to true by Subscriber to request the SEAL server to send a test notification. Set to false or omitted otherwise.

websockNotifConfig:

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

eventDetails:

type: array

items:

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

minItems: 1

suppFeat:

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

required:

- subscriberId

- eventSubs

- eventReq

- notificationDestination

SEALEventNotification:

description: Represents notification information of a SEAL Event.

type: object

properties:

subscriptionId:

type: string

description: Identifier of the subscription resource.

eventDetails:

type: array

items:

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

minItems: 1

description: Detailed notifications of individual events.

required:

- subscriptionId

- eventDetails

EventSubscription:

description: Represents the subscription to a single SEAL event.

type: object

properties:

eventId:

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

valGroups:

type: array

items:

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

minItems: 1

description: Each element of the array represents the VAL group identifier(s) of a VAL service that the subscriber wants to know in the interested event.

identities:

type: array

items:

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

minItems: 1

description: Each element of the array represents the VAL User / UE IDs of a VAL service that the event subscriber wants to know in the interested event.

monFltr:

type: array

items:

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

minItems: 1

description: List of event monitoring details that the subscriber wishes to mmonitor the VAL UEs, VAL group and/or VAL service.

required:

- eventId

SEALEventDetail:

description: Represents the SEAL event details.

type: object

properties:

eventId:

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

lmInfos:

type: array

items:

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

minItems: 1

valGroupDocuments:

type: array

items:

$ref: 'TS29549\_SS\_GroupManagement.yaml#/components/schemas/VALGroupDocument'

minItems: 1

description: The VAL groups documents with modified membership and configuration information.

profileDocs:

type: array

items:

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

minItems: 1

description: Updated profile information associated with VAL Users or VAL UEs.

msgFltrs:

type: array

items:

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

minItems: 1

description: The message filter information for various member VAL User or UEs of the VAL group.

monRep:

type: array

items:

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

minItems: 1

description: The events reports with details of the events related to the VAL UE(s).

required:

- eventId

VALGroupFilter:

description: Represents a filter of VAL group identifiers belonging to a VAL service.

type: object

properties:

valSvcId:

type: string

description: Identity of the VAL service

valGrpIds:

type: array

items:

type: string

minItems: 1

description: VAL group identifiers that event subscriber wants to know in the interested event.

required:

- valGrpIds

IdentityFilter:

description: Represents a filter of VAL User / UE identities belonging to a VAL service.

type: object

properties:

valSvcId:

type: string

description: Identity of the VAL service

valTgtUes:

type: array

items:

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

minItems: 1

description: VAL User IDs or VAL UE IDs that the event subscriber wants to know in the interested event.

LMInformation:

description: Represents the location information for a VAL User ID or a VAL UE ID.

type: object

properties:

valTgtUe:

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

locInfo:

$ref: 'TS29122\_MonitoringEvent.yaml#/components/schemas/LocationInfo'

required:

- locInfo

- valTgtUe

MessageFilter:

description: Represents the message filters applicable to a VAL User ID or VAL UE ID.

type: object

properties:

reqUe:

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

tgtUe:

type: array

items:

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

minItems: 1

description: List of VAL User or UE IDs whose message to be sent.

maxMsgs:

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

scheds:

type: array

items:

$ref: 'TS29122\_CpProvisioning.yaml#/components/schemas/ScheduledCommunicationTime'

minItems: 1

description: Time frame associated with total number of messages.

msgTypes:

type: array

items:

type: string

minItems: 1

description: List of message types to be sent to VAL UE.

required:

- reqUe

MonitorFilter:

description: Represents the event monitoring filters applicable to a VAL User ID or VAL UE ID.

type: object

properties:

idnts:

type: array

items:

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

minItems: 1

description: List of VAL User or UE IDs whose events monitoring is requested.

valSvcId:

type: string

description: Identity of the VAL service.

valGrpId:

type: string

description: Identity of the group of the target UEs.

profId:

type: string

description: The monitoring profile ID identifying a list of monitoring, analytics events.

valCnds:

type: array

items:

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

minItems: 1

description: The temporal,spatial conditions for the events to be considered valid.

evntDets:

type: array

items:

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

minItems: 1

description: List of monitoring, analytics events to be monitored.

MonitorEvents:

description: List of event types to be monitored in the context of events monitoring service.

type: object

properties:

cnEvnts:

type: array

items:

$ref: 'TS29122\_MonitoringEvent.yaml#/components/schemas/MonitoringType'

minItems: 1

description: List of monitoring events related to VAL UE.

anlEvnts:

type: array

items:

$ref: 'TS29522\_AnalyticsExposure.yaml#/components/schemas/AnalyticsEvent'

minItems: 1

description: List of analytics events related to VAL UE.

MonitorEventsReport:

description: List of monitoring and/or analytics events related to VAL UE.

type: object

properties:

tgtUe:

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

evnts:

type: array

items:

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

minItems: 1

description: List of monitoring and analytics events related to VAL UE.

required:

- tgtUe

- evnts

ValidityConditions:

description: List of monitoring and/or analytics events related to VAL UE.

type: object

properties:

locArea:

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

tmWdws:

type: array

items:

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

minItems: 1

description: Time window validity conditions.

SEALEvent:

anyOf:

- type: string

enum:

- LM\_LOCATION\_INFO\_CHANGE

- GM\_GROUP\_INFO\_CHANGE

- CM\_USER\_PROFILE\_CHANGE

- GM\_GROUP\_CREATE

- NRM\_MONITOR\_UE\_USER\_EVENTS

- 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: >

Possible values are

- LM\_LOCATION\_INFO\_CHANGE: Events related to the location information of VAL Users or VAL UEs from the Location Management Server.

- GM\_GROUP\_INFO\_CHANGE: Events related to the modification of VAL group membership and configuration information from the Group Management Server.

- CM\_USER\_PROFILE\_CHANGE: Events related to update of user profile information from the Configuration Management Server.

- GM\_GROUP\_CREATE: Events related to creation of new VAL groups from the Group Mananagement Server.

- NRM\_MONITOR\_UE\_USER\_EVENTS: Monitoring and analytic events related to VAL UEs, users or VAL group, from the Network Resource Management Server.

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

## A.8 SS\_LocationAreaInfoRetrieval API

openapi: 3.0.0

info:

title: SS\_LocationAreaInfoRetrieval

description: |

API for SEAL Location Area Info Retrieval.

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version: "1.0.0-alpha.2"

externalDocs:

description: >

3GPP TS 29.549 V17.4.0 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-lair/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/location-retrievals:

get:

description: Retrieve the UE(s) information in an application defined proximity range of a location.

parameters:

- name: loc**ation**-info

in: query

description: Location information around which the UE(s) information is requested.

required: true

schema:

$ref: 'TS29122\_MonitoringEvent.yaml#/components/schemas/LocationInfo'

- name: range

in: query

description: The range information over which the UE(s) information is required, expressed in meters..

required: true

schema:

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

responses:

'200':

description: The UE(s) information in an application defined proximity range of a location.

content:

application/json:

schema:

type: array

items:

$ref: 'TS29549\_SS\_Events.yaml#/components/schemas/LMInformation'

minItems: 0

description: The UE(s) information in an application defined proximity range of a location.

'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'

'406':

$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: {}

\* \* \* End of Change \* \* \* \*