**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 canbe 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 releaseSS\_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.

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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 \* \* \* \*