**3GPP TSG-CT WG3 Meeting #130 *C3-234353\_R1***

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

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.549** | **CR** | **0179** | **rev** | **-** | **Current version:** | **18.3.0** |  |
|  | | | | | | | | |
| *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:*** | Subscribe/Notify service operation OpenAPI implementation in the SS\_VALServiceAreaConfiguration API | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson, Samsung | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | SEAL\_Ph3 | | | | |  | ***Date:*** | | | 2023-09-21 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Clauses 9.4.8.6, 9.4.8.7, and 9.4.8.8 of 23.434 (see CR#0228 of 23.434) specify the subscribe/notify service operations for the SS\_VALServiceAreaConfiguration API. Thus, the specified service operations shall be implemented in stage 3. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | This CR introduces the OpenAPI implementation of the subscribe/notify service operations for the SS\_VALServiceAreaConfiguration API. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Misalignment with stage 2 requirements. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | A.12 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 provides backward compatible correction of the SS\_VALServiceAreaConfiguration API. | | | | | | | | |
| ***()*** | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**Additional discussion(if needed):**

**Proposed changes:**

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

# A.12 SS\_VALServiceAreaConfiguration API

openapi: 3.0.0

info:

title: SS\_VALServiceAreaConfiguration

description: |

API for SEAL VAL Service Area Configuration Service.

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version: "1.0.0-alpha.1"

externalDocs:

description: >

3GPP TS 29.549 V18.2.0 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-vsac/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/areas:

get:

summary: Obtain the VAL service area(s) according to the provided filtering criteria.

operationId: ObtainValServiceAreas

tags:

- VAL Service Areas (Collection)

parameters:

- name: val-svc-area-ids

in: query

description: Represents the requested VAL service areas.

required: false

schema:

type: array

items:

type: string

minItems: 1

- name: supp-feats

in: query

description: To filter irrelevant responses related to unsupported features.

required: false

schema:

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

responses:

'200':

description: The requested VAL service areas information is returned.

content:

application/json:

schema:

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

'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'

/areas/configure:

post:

summary: Configure VAL service area(s).

operationId: ConfigureValServiceAreas

tags:

- Configure

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: >

Successful case. The identifier(s) of the configured VAL service area(s) information are

Returned in the response body.

content:

application/json:

schema:

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

'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'

/areas/update:

post:

summary: Update existing VAL service area(s).

operationId: UpdateValServiceAreas

tags:

- Update

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: >

Successful case. The identifier(s) of the updated VAL service area(s) information are

returned in the response body.

content:

application/json:

schema:

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

'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'

/areas/delete:

post:

summary: Delete existing VAL service area(s).

operationId: DeleteValServiceAreas

tags:

- Delete

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: >

Successful case. The identifier(s) of the deleted VAL service area(s) information are

returned in the response body.

content:

application/json:

schema:

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

'400':

$ref: 'TS29122\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29122\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29122\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29122\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29122\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29122\_CommonData.yaml#/components/responses/429'

'500':

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

'503':

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

default:

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

/subscriptions:

post:

summary: Create individual VAL service area change event(s) subscription.

operationId: SubscribeChangeEvents

tags:

- VAL Service Area Change Subscriptions (Collection)

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'201':

description: >

The requested individual VAL service area change event(s) subscription

resource is successfully created and a representation of the created

resource is returned in the response body.

content:

application/json:

schema:

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

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'

callbacks:

NotifyValServiceAreaChange:

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

post:

summary: Notify on changes of the VAL service area(s) accodring to the requested reporting settings.

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'204':

description: The notification is successfully received.

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_CommonData.yaml#/components/responses/308'

'400':

$ref: 'TS29122\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29122\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29122\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29122\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29122\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29122\_CommonData.yaml#/components/responses/429'

'500':

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

'503':

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

default:

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

/subscriptions/{subscriptionId}:

delete:

summary: Remove the existing individual VAL service area change event(s) subscription resource according to the subscriptionId.

operationId: UnsubscribeValServiceAreaChange

tags:

- Individual VAL Service Area Change Subscription (Document)

parameters:

- name: subscriptionId

in: path

description: >

Represents the identifier of an individual VAL service area change event(s)

subscription resource.

required: true

schema:

type: string

responses:

'204':

description: >

The individual VAL service area change event(s) subscription resource

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'

get:

summary: Read an existing individual unicast monitoring subscription resource according to the subscriptionId.

operationId: ReadValServiceAreaChange

tags:

- Individual VAL Service Area Change Subscription (Document)

parameters:

- name: subscriptionId

in: path

description: >

Represents the identifier of an individual VAL service area change event(s)

subscription resource.

required: true

schema:

type: string

responses:

'200':

description: >

The requested individual VAL service area change event(s) subscription is returned.

content:

application/json:

schema:

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

'400':

$ref: 'TS29122\_CommonData.yaml#/components/responses/400'

'401':

$ref: 'TS29122\_CommonData.yaml#/components/responses/401'

'403':

$ref: 'TS29122\_CommonData.yaml#/components/responses/403'

'404':

$ref: 'TS29122\_CommonData.yaml#/components/responses/404'

'411':

$ref: 'TS29122\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29122\_CommonData.yaml#/components/responses/413'

'415':

$ref: 'TS29122\_CommonData.yaml#/components/responses/415'

'429':

$ref: 'TS29122\_CommonData.yaml#/components/responses/429'

'500':

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

'503':

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

default:

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

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

ValServiceArea:

description: Represents the VAL service area.

type: object

properties:

valSvcAreaId:

description: Represents the VAL service area ID.

type: string

locations:

description: Represents the locations associated with the VAL service area.

minItems: 1

items:

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

required:

- valSvcAreaId

- locations

ValServiceAreaReq:

description: Represents the VAL service area configuration/update/delete request.

type: object

properties:

valSvcAreas:

description: Represents the VAL service area(s).

minItems: 1

items:

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

suppFeat:

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

required:

- valSvcAreas

ValServiceAreaData:

description: Represents the VAL service area retrieval information.

type: object

properties:

valSvcAreas:

description: Represents the requested VAL service area(s).

minItems: 1

items:

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

suppFeat:

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

ValServiceAreaResp:

description: Represents the VAL service area configuration/update/delete response.

type: object

properties:

valSvcAreaIds:

description: Represents the identifier(s) of the successfully handled VAL service area(s).

minItems: 1

items:

type: string

suppFeat:

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

required:

- valSvcAreaIds

ValServiceAreaSubsc:

description: Represents the VAL service area change event(s) subscription.

type: object

properties:

events:

description: Represents the subscribed VAL service area change event(s).

minItems: 1

items:

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

notifUri:

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

subscDur:

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

suppFeat:

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

required:

- events

- notifUri

ValServiceAreaEventType:

description: Represents the VAL service area change event type.

type: object

properties:

event:

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

valSvcAreaIds:

description: Represents the VAL service area ID(s) associated with the event.

minItems: 1

items:

type: string

required:

- event

- valSvcAreaIds

ValServiceAreaNotif:

description: Represents the VAL service area change event(s) notifcation.

type: object

properties:

valSvcAreaConts:

description: Represents the VAL service area change event(s) content.

minItems: 1

items:

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

required:

- valSvcAreaConts

ValServiceAreaEventInfo:

description: Represents the VAL service area change event(s) content.

type: object

properties:

event:

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

valSvcAreas:

description: Represents the VAL service area(s) associated with the event.

minItems: 1

items:

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

valSvcAreaIds:

description: Represents the VAL service area(s) associated with the event.

minItems: 1

items:

type: string

required:

- event

# Simple data types and Enumerations

ValServiceAreaEvent:

anyOf:

- type: string

enum:

- UPDATE

- DELETE

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration and is not used to encode

content defined in the present version of this API.

description: |

Represents the VAL service area change event.

Possible values are:

- UPDATE: Indicates that the VAL service area change event is VAL service area update.

- DELETE: Indicates that the VAL service area change event is VAL service area delete.

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