**3GPP TSG CT WG3 Meeting #138 *C3-246376***

**Orlando, US, 18 - 22 November, 2024 was C3-246228**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.549** | **CR** | **0345** | **rev** | **-** | **Current version:** | **19.0.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Define SS\_SLPositioningManagement API resources and data model | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eLSAPP | | | | |  | ***Date:*** | | | 2024-11-11 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-19 |
|  | *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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Stage-2 (SA6) agreed CR S6-244617 (TS 23.434 CR#337) defines new API - SS\_SLPositioningManagement API, where SEAL LMS (SL positioning enabler capability) provides support to the provisioning/delivery of ranging services in an area to the subscribed VAL server (SL Positioning / Ranging Server). | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | SS\_SLPositioningManagement API resources and data model are defined. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Stage-2 requirements not supported. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 7.1.4 (new) and sub clauses. | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS/TR 23.434 CR 0337 | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | This CR does not impact open API defined in this specification | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

### 7.1.4 SS\_SLPositioningManagement Service API

#### 7.1.4.1 Introduction

The SS\_SLPositioningManagement service shall use the SS\_SLPositioningManagement API.

The API URI of the SS\_SLPositioningManagement API shall be:

**{apiRoot}/<apiName>/<apiVersion>**

The request URIs used in HTTP requests shall have the Resource URI structure as defined in clause 6.5, i.e.:

**{apiRoot}/<apiName>/<apiVersion>/<apiSpecificSuffixes>**

with the following components:

- The {apiRoot} shall be set as described in clause 6.5.

- The <apiName>shall be "ss-slpm".

- The <apiVersion> shall be "v1".

- The <apiSpecificSuffixes> shall be set as described in clause 7.1.4.3.

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

#### 7.1.4.2 Usage of HTTP

The provisions of clause 6.3 shall apply for the SS\_SLPositioningManagement API.

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

#### 7.1.4.3 Resources

##### 7.1.4.3.1 Overview

This clause describes the structure for the Resource URIs and the resources and methods used for the service.

Figure 7.1.4.3.1-1 depicts the resource URIs structure for the SS\_SLPositioningManagement API.



Figure 7.1.4.3.1-1: Resource URI structure of the SS\_SLPositioningManagement API

Table 7.1.4.3.1-1 provides an overview of the resources and applicable HTTP methods.

Table 7.1.4.3.1-1: Resources and methods overview

|  |  |  |  |
| --- | --- | --- | --- |
| Resource name | Resource URI | HTTP method or custom operation | Description |
| SL Positioning Management Subscriptions | /subscriptions | POST | Create a new SL Positioning Management subscription. |
| Individual SL Positioning Management Subscription | /subscriptions/{subscriptionId} | PUT | Update an individual SL Positioning Management subscription identified by the subscriptionId. |
| PATCH | Modify an individual SL Positioning Management subscription identified by the subscriptionId. |
| DELETE | Remove an existing individual SL Positioning Management subscription resource according to the subscriptionId. |

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

##### 7.1.4.3.2 Resource: SL Positioning Management Subscriptions

###### 7.1.4.3.2.1 Description

###### 7.1.4.3.2.2 Resource Definition

Resource URI: {**apiRoot**}/**ss-slpm**/<**apiVersion**>/**subscriptions**

This resource shall support the resource URI variables defined in table 7.1.4.3.2.2-1.

Table 7.1.4.3.2.2-1: Resource URI variables for this resource

|  |  |  |
| --- | --- | --- |
| Name | Data Type | Definition |
| apiRoot | string | See clause 7.1.4.1. |

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

###### 7.1.4.3.2.3 Resource Standard Methods

7.1.4.3.2.3.1 POST

This method enables a VAL Server to request the creation of the individual VAL SL Poistioning Management subscription at the LM Server. This method shall support the URI query parameters specified in table 7.1.4.3.2.3.1-1.

Table 7.1.4.3.2.3.1-1: URI query parameters supported by the POST method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
|  |  |  |  |  |

This method shall support the request data structures specified in table 7.1.4.3.2.3.1-2 and the response data structures and response codes specified in table 7.1.4.3.2.3.1-3.

Table 7.1.4.3.2.3.1-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| SlPositionMgmtSubsc | M | 1 | Represents the requested SL Positioning Management subscription parameters. |

Table 7.1.4.3.2.3.1-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| SlPositiongMgmtSubsc | M | 1 | 201 Created | Successful case. The requested individual SL Position Management subscription resource is successfully created, and a representation of the created resource is returned in the response body. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection.  The response shall include a Location header field containing an alternative URI of the resource located in an alternative LM Server.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection.  The response shall include a Location header field containing an alternative URI of the resource located in an alternative LM Server.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3]. |
| NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [3] shall also apply. | | | | |

Table 7.1.4.3.2.3.1-4: Headers supported by the 201 Response Code on this resource

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

Table 7.1.4.3.2.3.1-5: Headers supported by the 307 Response Code on this resource

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

Table 7.1.4.3.2.3.1-6: Headers supported by the 308 Response Code on this resource

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

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

###### 7.1.4.3.2.4 Resource Custom Operations

None.

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

##### 7.1.4.3.3 Resource: Individual SL Positioning Management Subscription

###### 7.1.4.3.3.1 Description

###### 7.1.4.3.3.2 Resource Definition

Resource URI: {**apiRoot**}/**ss-slpm**/<**apiVersion**>/**subscriptions**/{**subscriptionId**}

This resource shall support the resource URI variables defined in table 7.1.4.3.3.2-1.

Table 7.1.4.3.3.2-1: Resource URI variables for this resource

|  |  |  |
| --- | --- | --- |
| Name | Data Type | Definition |
| apiRoot | string | See clause 7.1.4.1. |
| subscriptionId | string | Represents the identifier of an individual SL Positioning Management subscription resource. |

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

###### 7.1.4.3.3.3 Resource Standard Methods

7.1.4.3.3.3.1 PUT

This operation updates the Individual VAL SL Positioning Management Subscription resource. This method shall support the URI query parameters specified in table 7.1.4.3.3.3.1-1.

Table 7.1.4.3.3.3.1-1: URI query parameters supported by the PUT method on this resource

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

This method shall support the request data structures specified in table 7.1.4.3.3.3.1-2 and the response data structures and response codes specified in table 7.1.4.3.3.3.1-3.

Table 7.1.4.3.3.3.1-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| SlPositionMgmtSubsc | M | 1 | Represents the updated representation of the SL Position Management subscription. |

Table 7.1.4.3.3.3.1-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| SlPositionMgmtSubsc | M | 1 | 200 OK | The individual SL Position Management subscription is updated successfully, and the representation of the updated resource is returned. |
| n/a |  |  | 204 No Content | The individual SL Position Management subscription is updated successfully, and no content is returned in the response body. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection.  The response shall include a Location header field containing an alternative URI representing the end point of an alternative LM server.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection.  The response shall include a Location header field containing an alternative URI representing the end point of an alternative LM server.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3]. |
| NOTE: The mandatory HTTP error status codes for the PUT method listed in table 5.2.6-1 of 3GPP TS 29.122 [3] also apply. | | | | |

Table 7.1.4.3.3.3.1-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | String | M | 1 | Contains an alternative URI of the resource located in an alternative LM Server. |

Table 7.1.4.3.3.3.1-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | String | M | 1 | Contains an alternative URI of the resource located in an alternative LM Server. |

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

7.1.4.3.3.3.2 PATCH

This operation modifies the Individual SL Position Management Subscription resource. This method shall support the URI query parameters specified in table 7.1.4.3.3.3.2-1.

Table 7.1.4.3.3.3.2-1: URI query parameters supported by the PATCH method on this resource

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

This method shall support the request data structures specified in table 7.1.4.3.3.3.2-2 and the response data structures and response codes specified in table 7.1.4.3.3.3.2-3.

Table 7.1.4.3.3.3.2-2: Data structures supported by the PATCH Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| SlPositionMgmtSubscPatch | M | 1 | Represents the requested modifications to the SL Position Management subscription. |

Table 7.1.4.3.3.3.2-3: Data structures supported by the PATCH Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| SlPositionMgmtSubsc | M | 1 | 200 OK | The individual SL Position Management subscription is modified successfully, and the representation of the modified resource is returned. |
| n/a |  |  | 204 No Content | The individual SL Position Management subscription is modified successfully, and no content is returned in the response body. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection.  The response shall include a Location header field containing an alternative URI of the resource located in an alternative LM server.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection.  The response shall include a Location header field containing an alternative URI of the resource located in an alternative LM server.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3]. |
| NOTE: The mandatory HTTP error status codes for the PATCH method listed in table 5.2.6-1 of 3GPP TS 29.122 [3] also apply. | | | | |

Table 7.1.4.3.3.3.2-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | String | M | 1 | Contains an alternative URI of the resource located in an alternative LM Server. |

Table 7.1.4.3.3.3.2-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | String | M | 1 | Contains an alternative URI of the resource located in an alternative LM Server. |

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

7.1.4.3.3.3.3 DELETE

This operation deletes the Individual SL Position Management Subscription resource. This method shall support the URI query parameters specified in table 7.1.4.3.3.3.3-1.

Table 7.1.4.3.3.3.3-1: URI query parameters supported by the DELETE method on this resource

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

This method shall support the request data structures specified in table 7.1.4.3.3.3.3-2 and the response data structures and response codes specified in table 7.1.4.3.3.3.3-3.

Table 7.1.4.3.3.3.3-2: Data structures supported by the DELETE Request Body on this resource

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

Table 7.1.4.3.3.3.3-3: Data structures supported by the DELETE Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | The individual SL Position Management subscription resource matching the subscriptionId is deleted. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection.  The response shall include a Location header field containing an alternative URI of the resource located in an alternative LM server.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection.  The response shall include a Location header field containing an alternative URI of the resource located in an alternative LM server.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3]. |
| NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.6-1 of 3GPP TS 29.122 [3] also apply. | | | | |

Table 7.1.4.3.3.3.3-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | String | M | 1 | An alternative URI of the resource located in an alternative LM server. |

Table 7.1.4.3.3.3.3-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | String | M | 1 | An alternative URI of the resource located in an alternative LM server. |

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

7.1.4.4 Notifications

7.1.4.4.1 General

Table 7.1.4.4.1-1: Notifications overview

|  |  |  |  |
| --- | --- | --- | --- |
| Notification | Callback URI | HTTP method or custom operation | Description  (service operation) |
| SL Position Management Event Notification | {notifUri} | POST | Notify on SL Position Management event(s). |

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

##### 7.1.4.4.2 Individual SL Position Management Notification

###### 7.1.4.4.2.1 Description

The Event Notification is used by the SEAL LM server to report SL Positioning Management information to the VAL server that has subscribed for such Notifications.

###### 7.1.4.4.2.2 Target URI

The Callback URI **"{notifUri}"** shall be used with the callback URI variables defined in table 7.1.4.4.2.2-1.

Table 7.1.4.4.2.2-1: Callback URI variables

|  |  |
| --- | --- |
| Name | Definition |
| notifUri | String formatted as URI with the Callback Uri |

###### 7.1.4.4.2.3 Standard Methods

7.1.4.4.2.3.1 POST

This method shall support the URI query parameters specified in table 7.1.4.4.2.2-1.

Table 7.1.4.4.2.2-1: URI query parameters supported by the POST method on this resource

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

This method shall support the request data structures specified in table 7.1.4.4.2.2-2 and the response data structures and response codes specified in table 7.1.4.4.2.2-3.

Table 7.1.4.4.2.2-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| SlPositionMgmtNotif | M | 1 | Represents the reported SL Position Management event information. |

Table 7.1.4.4.2.2-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response codes | Description |
| n/a |  |  | 204 No Content | The notification is successfully received. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection.  The response shall include a Location header field containing an alternative URI representing the end point of an alternative VAL server where the notification should be sent.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection.  The response shall include a Location header field containing an alternative URI representing the end point of an alternative VAL server where the notification should be sent.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3]. |
| NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [3] also apply. | | | | |

Table 7.1.4.4.2.2-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | String | M | 1 | An alternative URI representing the end point of an alternative VAL server towards which the notification should be redirected. |

Table 7.1.4.4.2.2-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | String | M | 1 | An alternative URI representing the end point of an alternative VAL server towards which the notification should be redirected. |

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

#### 7.1.4.5 Data Model

##### 7.1.4.5.1 General

This clause specifies the application data model supported by the API. Data types listed in clause 6.2 apply to this API

Table 7.1.4.5.1-1 specifies the data types defined specifically for the SS\_SLPositioningManagement API service.

Table 7.1.4.5.1-1: SS\_SLPositioningManagement API specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Section defined | Description | Applicability |
| SlPositionMgmtSubsc | 7.1.4.5.2.2 | Represents the SL Positioning Management subscription information. |  |
| SlPositionMgmtSubscPatch | 7.1.4.5.2.3 | Represents the update in the SL Positioning Management subscription. |  |
| SlPositionMgmtNotif | 7.1.4.5.2.4 | Represents the SL Positioning Management notification. |  |

Table 7.1.4.5.1-2 specifies data types re-used by the SS\_SLPositioningManagement API service.

Table 7.1.4.5.1-2: Re-used Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
| LocationInfo | 3GPP TS 29.122 [3] | The location information related to VAL group. |  |
| ReportingInformation | 3GPP TS 29.523 [20] | Used to indicate the reporting requirement, only the following information are applicable for SEAL. |  |
| SupportedFeatures | 3GPP TS 29.571 [21] | Used to negotiate the applicability of optional features defined in table 7.1.4.6-1. |  |
| Uri | 3GPP TS 29.122 [3] | Used to indicate the notification URI. |  |
| ValTargetUe | Clause 7.3.1.4.2.3 | Used to indicate either VAL User ID or VAL UE ID, to which location reporting applies. |  |

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

##### 7.1.4.5.2 Structured data types

###### 7.1.4.5.2.1 Introduction

###### 7.1.4.5.2.2 Type: SlPositionMgmtSubsc

Table 7.1.4.5.2.2-1: Definition of type SlPositionMgmtSubsc

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| valSvcId | string | M | 0..1 | The VAL service ID of the VAL application for which the SL Positioning change event(s) is subscribed. |  |
| tgtUes | array(ValTargetUe) | C | 1..N | List of VAL User(s) or UE ID(s) for which SL Positioning management monitoring is requested for the given location information.  (NOTE) |  |
| locInfo | LocationInfo | C | 0..1 | Location information where the VAL server wishes to monitor the target VAL UE(s) location deviation.  (NOTE) |  |
| slPosMgmtParams | SLPositionMgmtParams | M | 0..1 | Represents the SL Positioning parameters that SEAL LMS has to configure the identified VAL UE(s). |  |
| valUeSel | ValUeSelectionCriteria | O | 0..1 | List of VAL UE(s) selection criteria for SL Positioning Management which when satisfied requires the SEAL LM server to send the notification. |  |
| eventReport | ReportingInformation | M | 1 | Represents the reporting requirements of the event subscription. |  |
| notifUri | Uri | M | 1 | Indicates the URI towards which the notification should be delivered. |  |
| suppFeat | SupportedFeatures | C | 0..1 | Represents the supported features.  This attribute shall be provided when feature negotiation needs to take place. |  |
| NOTE: At least one of the "tgtUes" attribute and the “locInfo” attribute shall be present. | | | | | |

Editor's Note: Definition of valUeSel/ValUeSelectionCriteria and slPosParams/SLPositionParams are FFS.

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

###### 7.1.4.5.2.3 Type: SlPositionMgmtSubscPatch

Table 7.1.4.5.2.3-1: Definition of type SlPositionMgmtSubscPatch

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| tgtUes | array(ValTargetUe) | O | 1..N | List of VAL User(s) or UE ID(s) for which SL Positioning management monitoring is requested for the given location information.  (NOTE) |  |
| locInfo | LocationInfo | O | 0..1 | Location information where the VAL server wishes to monitor the target VAL UE(s) location deviation.  (NOTE) |  |
| slPosMgmtParams | SLPositionMgmtParams | M | 0..1 | Represents the SL Positioning parameters that SEAL LMS has to configure the identified VAL UE(s). |  |
| valUeSel | ValUeSelectionCriteria | O | 0..1 | List of VAL UE(s) selection criteria for SL Positioning Management which when satisfied requires the SEAL LM server to send the notification. |  |
| eventReport | ReportingInformation | O | 1 | Represents the reporting requirements of the event subscription. |  |
| notifUri | Uri | O | 1 | Indicates the URI towards which the notification should be delivered. |  |
| suppFeat | SupportedFeatures | C | 0..1 | Represents the supported features.  This attribute shall be provided when feature negotiation needs to take place. |  |
| NOTE: At least one of the "tgtUes" attribute and the “locInfo” attribute shall be present. | | | | | |

Editor's Note: Definition of valUeSel/ValUeSelectionCriteria and slPosParams/SLPositionParams are FFS.

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

###### 7.1.4.5.2.4 Type: SlPositionNotify

Table 7.1.4.5.2.4-1: Definition of type SlPositionNotify

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| tgtUes | array(ValTargetUe) | C | 1..N | VAL User ID(s) or UE ID(s) to which the report is related.  This attribute shall be present if available. |  |
| role | AssignedRole | C | 0..1 | Based on positioning calculation and VAL UE capability, the role assigned by the SEAL LM server to the "tgtUe".  This attribute shall be present if "tgtUe" is present. |  |
| notifyType | NotifyType | M | 0..1 | Notification from the SEAL LM server regarding the criteria that is matched. |  |

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

##### 7.1.4.5.3 Simple data types and enumerations

###### 7.1.4.5.3.1 Introduction

This clause defines simple data types and enumerations that can be referenced from data structures defined in the previous clauses.

###### 7.1.4.5.3.2 Simple data types

The simple data types defined in table 7.1.4.5.3.2-1 shall be supported.

Table 7.1.4.5.3.2-1: Simple data types

|  |  |
| --- | --- |
| Type name | Description |
|  |  |

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

###### 7.1.4.5.3.3 Enumeration: AssignedRole

Table 7.1.4.5.3.3-1: Enumeration AssignedRole

|  |  |  |
| --- | --- | --- |
| Enumeration value | Description | Applicability |
| REFERENCE\_UE | This value indicates that the identified VAL UE has been assigned the role of Reference UE in the SL Positioning procedures. |  |
| TARGET\_UE | This value indicates that the identified VAL UE has been assigned the role of Target UE in the SL Positioning procedures. |  |
| CLIENT\_UE | This value indicates that the identified VAL UE has been assigned the role of Client UE, which are allowed to receive ranging information for other UEs in the SL Positioning procedures. |  |

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

###### 7.1.4.5.3.4 Enumeration: NotifyType

Table 7.1.4.5.3.4-1: Enumeration NotifyType

|  |  |  |
| --- | --- | --- |
| Enumeration value | Description | Applicability |
| NOTIFY\_CRITERIA\_MATCHED | This value indicates that the VAL UE in the report matches to the criteria indicated in the subscription. |  |
| NOTIFY\_NO\_REFERENCE\_UE\_FOUND | This value indicates that the none of the VAL UE matched the criteria for the Reference UE. |  |
| NOTIFY\_NO\_TARGET\_UE\_FOUND | This value indicates that the none of the VAL UE matched the criteria for Target UE. |  |
| NOTIFY\_NO\_CLIENT\_UE\_FOUND | This value indicates that the none of the VAL UE matched the criteria for Client UE. |  |

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

#### 7.1.4.6 Error Handling

##### 7.1.4.6.1 General

HTTP error handling shall be supported as specified in clause 6.7.

In addition, the requirements in the following clauses shall apply.

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

##### 7.1.4.6.2 Protocol Errors

In this Release of the specification, there are no additional protocol errors applicable for the SS\_SLPositioningManagement API.

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

##### 7.1.4.6.3 Application Errors

The application errors defined for SS\_SLPositioningManagement API are listed in table 7.1.4.5.3-1.

Table 7.1.4.6.3-1: Application errors

|  |  |  |  |
| --- | --- | --- | --- |
| Application Error | HTTP status code | Description | Applicability |
| n/a |  |  |  |

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

#### 7.1.4.7 Feature negotiation

The optional features in table 7.1.4.7-1 are defined for the SS\_SLPositioningManagement API. They shall be negotiated using the extensibility mechanism defined in clause 6.8.

Table 7.1.4.7-1: Supported Features

|  |  |  |
| --- | --- | --- |
| **Feature number** | **Feature Name** | **Description** |
|  |  |  |

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