**3GPP TSG CT WG3 Meeting #132e *C3-240106\_R1***

**Electronic, 22 - 24 January, 2024**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** | **0228** | **rev** | **-** | **Current version:** |  |  |
|  | | | | | | | | |
| *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:*** | The procedures of the SS\_ADAE\_Ue2UePerformanceAnalytics API | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** |  | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | ADAES | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | |  |
|  | *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:*** | | The Editor's Notes in the SS\_ADAE\_Ue2UePerformanceAnalytics API shall be resolved and Stage 3 shall be aligned with Stage 2. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | This CR introduces the procedures of SS\_ADAE\_Ue2UePerformanceAnalytics API. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The defenition of the VAL service area functionality cannot be completed in the stage 3. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.1, 5.11.A (new), 7.10.3.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 does not affect any OpenAPI file. | | | | | | | | |
| ***()*** | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**Additional discussion(if needed):**

**Proposed changes:**

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

## 5.1 Introduction of SEAL services

The table 5.1-1 lists the SEAL server APIs below the service name. A service description clause for each API gives a general description of the related API.

Table 5.1-1: List of SEAL Service APIs

|  |  |  |  |
| --- | --- | --- | --- |
| Service Name | Service Operations | Operation Semantics | Consumer(s) |
| SS\_LocationReporting | Create\_Trigger\_Location\_Reporting | Request/ Response | VAL server |
| Fetch\_Location\_Report\_Trigger | Request/Response | VAL server |
| Update\_Trigger\_Location\_Reporting | Request/ Response | VAL server |
| Cancel\_Trigger\_Location\_Reporting | Request/ Response | VAL server |
| Notify\_Trigger\_Location\_Reporting | Notify | VAL server |
| SS\_LocationInfoEvent | Subscribe\_Location\_Info | Subscribe/Notify | VAL server |
| Unsubscribe\_Location\_Info | VAL server |
| Notify\_Location\_Info | VAL server |
| SS\_LocationInfoRetrieval | Obtain\_Location\_Info | Request/ Response | VAL server |
| SS\_LocationAreaInfoRetrieval | Obtain\_UEs\_Info | Request/ Response | VAL server |
| SS\_LocationMonitoring | Subscribe\_Location\_Monitoring | Subscribe/Notify | VAL server |
| Unsubscribe\_Location\_Monitoring |
| Notify\_Location\_Monitoring\_Events |
| SS\_LocationAreaMonitoring | Subscribe\_Location\_Area\_Monitoring | Subscribe/Notify | VAL server |
| Notify\_Location\_Area\_Monitoring\_Events |
| Update\_Location\_Area\_Monitoring\_Subscribe |
| Unsubscribe\_Location\_Area\_Monitoring |
| SS\_VALServiceAreaConfiguration | Configure\_VAL\_Service\_Area | Request/Response | VAL server |
| Obtain\_VAL\_Service\_Area | Request/Response | VAL server |
| Update\_VAL\_Service\_Area | Request/Response | VAL server |
| Delete\_VAL\_Service\_Area | Request/Response | VAL server |
| Subscribe\_VAL\_Service\_Area\_Change\_Event | Subscribe/Notify | SEAL server |
| Update\_Subscription\_VAL\_Service\_Area\_Change\_Event |
| Unsubscribe\_VAL\_Service\_Area\_Change\_Event |
| Notify\_VAL\_Service\_Area\_Change\_Event |
| SS\_GroupManagement | Query\_Group\_Info | Request/ Response | VAL server |
| Update\_Group\_Info | Request/ Response | VAL server |
| Create\_Group | Request/ Response | VAL server |
| Delete\_Group | Request/Response | VAL server |
| SS\_GroupManagementEvent | Subscribe\_Group\_Info\_Modification | Subscribe/Notify | VAL server |
| Notify\_Group\_Info\_Modification | VAL server |
| Notify\_Group\_Creation | VAL server |
| SS\_UserProfileRetrieval | Obtain\_User\_Profile | Request/ Response | VAL server |
| SS\_VALServiceData | Obtain\_VAL\_Service\_Data | Request/Response | SEAL server |
| SS\_UserProfileEvent | Subscribe\_User\_Profile\_Update | Subscribe/Notify | VAL server |
| Notify\_User\_Profile\_Update | VAL server |
| SS\_NetworkResourceAdaptation  (NOTE 3) | Reserve\_Network\_Resource | Request/Response | VAL server |
| Request\_Unicast\_Resource | Request/Response | VAL server |
| Update\_Unicast\_Resource | Request/Response | VAL server |
| Request\_Multicast\_Resource | Request/Response | VAL server |
| Notify\_UP\_Delivery\_Mode | Subscribe/Notify | VAL server |
| Discover\_TSC\_Stream\_Availability | Request/Response | VAL server |
| Create\_TSC\_Stream | Request/Response | VAL server |
| Delete\_TSC\_Stream | Request/Response | VAL server |
| Create\_MBS\_Resource | Request/Response | VAL server |
| Update\_MBS\_Resource | Request/Response | VAL server |
| Delete\_MBS\_Resource | Request/Response | VAL server |
| Activate\_MBS\_Resource | Request/Response | VAL server |
| Deactivate\_MBS\_Resource | Request/Response | VAL server |
| SS\_EventsMonitoring | Subscribe\_Monitoring\_Events | Subscribe/Notify | VAL server |
| Notify\_Monitoring\_Events |
| SS\_Events | Subscribe\_Event | Subscribe/Notify | VAL server |
| Notify\_Event | VAL server |
| Unsubscribe\_Event | VAL server |
| Update\_Subscription | VAL server |
| SS\_KeyInfoRetrieval | Obtain\_Key\_Info | Request/Response | VAL server |
| SS\_NetworkSliceAdaptation | Request\_Network\_Slice\_Adaptation | Request/Response | VAL server |
| SS\_NetworkResourceMonitoring | Subscribe\_Unicast\_QoS\_Monitoring\_Data | Subscribe/Notify | VAL server |
| Unsubscribe\_Unicast\_QoS\_Monitoring\_Data | VAL server |
| Notify\_Unicast\_QoS\_Monitoring\_Data | VAL server |
| Obtain\_Unicast\_QoS\_Monitoring\_Data | Request/Response | VAL server |
| Update\_Unicast\_QoS\_Monitoring\_Subscription | VAL server |
| SS\_IdmParameterProvisioning | Provide\_Configuration | Request/Response | VAL server |
| Get\_Configuration |
| Update\_Configuration |
| Delete\_Configuration |
| SS\_ADAE\_Ue2UePerformanceAnalytics | UE-to-UE\_Performance\_Analytics\_Subscribe | Subscribe/Notify | VAL server |
| UE-to-UE\_Performance\_Analytics\_Notify |
| UE-to-UE\_Performance\_Analytics\_Unsubscribe |
| NOTE 1: The service operations of SS\_Events API are reused by the SS\_LocationInfoEvent, SS\_LocationMonitoring, SS\_LocationAreaMonitoring, SS\_GroupManagementEvent, SS\_UserProfileEvent and SS\_EventsMonitoring for events related services.  NOTE 2: The service APIs exposed by the SEALDD Server and the corresponding service operations, operation semantics and service consumers are specified in clause 5 of 3GPP TS 29.548 [35].  NOTE 3: The "Create\_MBS\_Resource", "Update\_MBS\_Resource", "Delete\_MBS\_Resource", "Activate\_MBS\_Resource" and "Deactivate\_MBS\_Resource" service operations correspond to the stage 2 "Request\_Multicast/Broadcast\_Resource", "Update\_Multicast/Broadcast\_Resource", "Delete\_Multicast/Broadcast\_Resource", "Activate\_Multicast\_Resource" and "Deactivate\_Multicast\_Resource" service operations defined in clause 14.4.2 of 3GPP TS 23.434 [2]. | | | |

Editor's Note: The definition of the update/modify service operations for the VAL service area event subscription are FFS.

Table 5.1-2 summarizes the corresponding APIs defined in this specification.

Table 5.1-2: API Descriptions

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Service Name** | **Clause** | **Description** | **OpenAPI Specification File** | **apiName** | **Annex** |
| SS\_LocationReporting | 7.1 | Report Location Information Service. | TS29549\_SS\_LocationReporting.yaml | ss-lr | A.2 |
| SS\_GroupManagement | 7.2 | Group Management Service | TS29549\_SS\_GroupManagement.yaml | ss-gm | A.3 |
| SS\_UserProfileRetrieval | 7.3 | User Profile Retrieval Service | TS29549\_SS\_UserProfileRetrieval.yaml | ss-upr | A.4 |
| SS\_NetworkResourceAdaptation | 7.4 | Network Resource Adaptation Service | TS29549\_SS\_NetworkResourceAdaptation.yaml | ss-nra | A.5 |
| SS\_Events | 7.5 | Events Notify Service | TS29549\_SS\_Events.yaml | ss-events | A.6 |
| SS\_KeyInfoRetrieval | 7.6 | Key Information Retrieval Service | TS29549\_SS\_KeyInfoRetrieval.yaml | ss-kir | A.7 |
| SS\_LocationAreaInfoRetrieval | 7.1 | Location Area Info Retrieval Service | TS29549\_SS\_LocationAreaInfoRetrieval.yaml | ss-lair | A.8 |
| SS\_NetworkSliceAdaptation | 7.7 | Network Slice Adaptation Service | TS29549\_SS\_NetworkSliceAdaptation.yaml | ss-nsa | A.9 |
| SS\_NetworkResourceMonitoring | 7.4 | Network Resource Monitoring | TS29549\_SS\_NetworkResourceMonitoring.yaml | ss-nrm | A.10 |
| SS\_VALServiceData | 7.3 | VAL Service Data Service | TS29549\_SS\_VALServiceData.yaml | ss-vsd | A.11 |
| SS\_VALServiceAreaConfiguration | 7.1 | VAL Service Area Configuration Service | TS29549\_SS\_VALServiceAreaConfiguration.yaml | ss-vsac | A.12 |
| SS\_IdmParameterProvisioning | 7.8 | VAL Service Parameter Provisioning Service | TS29549\_SS\_IdmParameterProvisioning.yaml | ss-ipp | A.13 |
| SS\_ADAE\_Ue2UePerformanceAnalytics | 7.10 | ADAE UE-to-UE PerformanceAnalytics Service | TS29549\_SS\_ADAE\_Ue2UePerformanceAnalytics.yaml | ss-adae-uupa | A.X |
| NOTE: The APIs exposed by the SEALDD Server are specified in clause 5 of 3GPP TS 29.548 [35]. | | | | | |

\* \* \* Next change \* \* \* \*

### 5.11.A SS\_ADAE\_Ue2UePerformanceAnalytics API

#### 5.11.A.1 Service Description

##### 5.11.A.1.1 Overview

The SS\_ADAE\_Ue2UePerformanceAnalytics API, as defined in 3GPP TS 23.436 [38], allows VAL server via ADAE-S reference point to communicate with the ADAE Server for UE-to-UE session performance analytics retrieval including managing UE-to-UE session performance subscriptions.

#### 5.11.A.2 Service Operations

##### 5.11.A.2.1 Introduction

The service operations defined for the SS\_ADAE\_Ue2UePerformanceAnalytics API are shown in the table 5.11.A.2.1-1.

Table 5.11.A.2.1-1: Operations of the SS\_ADAE\_Ue2UePerformanceAnalytics API

|  |  |  |
| --- | --- | --- |
| Service operation name | Description | Initiated by |
| UE-to-UE\_Performance\_Analytics\_Subscribe | This service operation is used by VAL server to subscribe to UE-to-UE performance analytics from SEAL servers. | VAL server |
| UE-to-UE\_Performance\_Analytics\_Notify | This service operation is used by the SEAL Server to notify the VAL Server on UE-to-UE performance analytics events. | ADAE server |
| UE-to-UE\_Performance\_Analytics\_Unsubscribe | This service operation is used by VAL server to unsubscribe to UE-to-UE performance analytics from SEAL servers. | VAL server |

##### 5.11.A.2.2 UE-to-UE\_Performance\_Analytics\_Subscribe

###### 5.11.A.2.2.1 General

###### This service operation is used by VAL server to subscribe to UE-to-UE performance analytics from ADAE Server.

###### 5.11.A.2.2.2 VAL server subscribes for UE-to-UE performance analytics using UE-to-UE\_Performance\_Analytics\_Subscribe

In order to subscribe to UE-to-UE performance analytics, the VAL server shall send an HTTP POST message to the ADAE server targeting the URI of the "UE-to-UE Session Performance Event Subscription" resource as specified in clause 7.10.3.2.2.3.1. The request body shall include the U2UPerfSub data structure as defined in clause 7.10.3.4.2.2.

Upon reception of the HTTP POST request message, the ADAE Server shall:

1. verify the identity of the VAL server and whether the VAL server is authorized to create an individual UE-to-UE session performance analytics event subscription at the ADAE Server;

2. if the VAL server is authorized, the ADAE Server shall create a new "Individual UE-to-UE Session Performance Event Subscription" resource and respond to the VAL server with an HTTP "201 Created" status code, including a Location header field containing the URI for the created "Individual UE-to-UE Session Performance Event Subscription" resource and the response body including the U2UPerfSub data structure containing a representation of the created resource as defined in clause 7.10.3.4.2.2; and

3. if errors occur when processing the request, the ADAES Server shall respond to the VAL Server with an appropriate error response as specified in clause 7.10.3.5.

##### 5.11.A.2.3 UE-to-UE\_Performance\_Analytics\_Notify

###### 5.11.A.2.3.1 General

This service operation is used by the ADAE Server to notify the VAL server of UE-to-UE performance analytics events.

###### 5.11.A.2.3.2 ADAE server notifies for UE-to-UE performance analytics events using UE-to-UE\_Performance\_Analytics\_Notify

In order to notify the VAL server about UE-to-UE performance analytics events, the ADAE Server shall send an HTTP POST request message to the VAL Server targeting the notification URI provided during subscription creation as specified in clause 5.11.A.2.2.2.

Upon receiving the HTTP POST request message, the VAL Server shall:

1. process the UE-to-UE performance analytics events notification; and

2. upon success, respond to the ADAE Server with a "204 No Content" status code; and

3. if errors occur when processing the request, the VAL Server shall respond to the ADAE Server with an appropriate error response as specified in clause 7.10.3.5.

##### 5.11.A.2.3.2 UE-to-UE\_Performance\_Analytics\_Unsubscribe

###### 5.11.A.2.3.2.1 General

This service operation is used by VAL server to unsubscribe to UE-to-UE performance analytics from the SEAL Server.

###### 5.11.A.2.3.2.2 VAL server unsubscribes from the UE-to-UE performance analytics events using UE-to-UE\_Performance\_Analytics\_Unsubscribe

In order to terminate an individual UE-to-UE session performance event subscription, the VAL server shall send an HTTP DELETE request message to the ADAE Server, on the corresponding "Individual UE-to-UE Session Performance Event Subscription" resource URI as specified in clause 7.10.3.2.3.3.2.

Upon reception of the HTTP DELETE request message, the LM server shall:

1. verify the identity of the VAL Server and check if the VAL Server is authorised to terminate the targeted "Individual UE-to-UE Session Performance Event Subscription" associated with the resource URI;

2. if the VAL Server is authorized to unsubscribe from UE-to-UE performance analytics events, the ADAE Server shall delete the related "Individual UE-to-UE Session Performance Event Subscription" subscription resource at the ADAE Server;

3. upon success, respond to the ADAE Server with a "204 No Content" status code; and

4. if errors occur when processing the request, the ADAE Server shall respond to the VAL Server with an appropriate error response as specified in clause 7.10.3.5.

\* \* \* Next change \* \* \* \*

#### 7.10.3.1 API URI

The SS\_ADAE\_Ue2UePerformanceAnalytics service shall use the SS\_ADAE\_Ue2UePerformanceAnalytics API.

The request URIs used in HTTP requests from the VAL server towards the ADAE server shall have the Resource URI structure as defined in clause 6.5 with the following clarifications:

- The <apiName>shall be "ss-adae-u2upa".

- The <apiVersion> shall be "v1".

- The <apiSpecificSuffixes> shall be set as described in clause 7.10.3.2.

Editor's Note: The OpenAPI for this API is FFS.

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