**3GPP TSG-CT WG1 Meeting #136-eC1-223668**

**E-Meeting, 12th – 20th May 2022**

**Source: Samsung**

**Title: Pseudo-CR to update ACR information notification**

**Spec: 3GPP TS 24.558 v1.3.0**

**Agenda item: 17.2.16**

**Document for: Agreement**

**1. Introduction**

The pCR proposes changes to ACR information notification procedure

**2. Reason for Change**

The pCR provides the changes related to ACR information notification as per the accepted contribution S6-220933 to stage-2

**3. Proposal**

It is proposed to agree the following changes to 3GPP TS 24.558 v1.3.0.

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

#### 5.4.2.3 Eees\_ACREvents\_Notify

##### 5.4.2.3.1 General

This service operation is used by the EES to notify the EEC about the ACR information notification.

##### 5.4.2.3.2 EES notifying the ACR information to EEC using Eees\_ACREvents\_Notify operation

The EES determines to notify the EEC with the ACR information on following events:

- For EEC executed ACR via S-EES scenario, when S-EAS sends the ACR Complete message to the S-EES to confirm that the ACR has completed;

- For S-EAS decided ACR scenario, when T-EAS selection information received from the S-EAS or when S-EAS informs the S-EES of the complete of ACT;

- For S-EES executed ACR scenario, when S-EES determines T-EES and T-EAS via the Discover T-EAS procedure or when S-EAS informs the S-EES of the complete of ACT; and

- For EEC executed ACR via T-EES scenario, when T-EAS sends the ACR Complete message to the T-EES to confirm that the ACR has completed.

To notify the ACR information events, the EES shall send an HTTP POST message using the Notification Destination URI received in the subscription request, as specified in clause 6.4.4. The EES shall include "eecCtxtReloc" attribute containing the registration ID and registration expiration time as specified in clause 6.4.5.2.3.

Upon receiving the HTTP POST message, the EEC shall process the ACR information Notification.

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

#### 6.4.5.1 General

This clause specifies the application data model supported by the Eees\_ACREvents API.

Table 6.4.5.1-1 specifies the data types defined specifically for the Eees\_ACREvents API service.

Table 6.4.5.1-1: Eees\_ACREvents API specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Section defined | Description | Applicability |
| ACREventsSubscription | 6.4.5.2.2 |  |  |
| ACRInfoNotification | 6.4.5.2.3 |  |  |
|  |  |  |  |
| ACREventIDs | 6.4.5.3.3 |  |  |

Table 6.4.5.1-2 specifies data types re-used by the Eees\_ACREvents API service.

Table 6.4.5.1-2: Re-used Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
| DateTime | 3GPP TS 29.122 [3] |  |  |
| Uri | 3GPP TS 29.122 [3] |  |  |
| WebsockNotifConfig | 3GPP TS 29.122 [3] |  |  |
| SupportedFeatures | 3GPP TS 29.571 [5] |  |  |
| EDNConfigInfo | Clause 8.1.5.2.7 |  |  |
| DiscoveredEas | Clause 6.3.5.2.8 |  |  |
| ImplicitRegDetail | 3GPP TS 29.558 [4] |  |  |

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

##### 6.4.5.2.3 Type: ACRInfoNotification

Table 6.4.5.2.3-1: ACRInfoNotification

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| subId | string | M | 1 | String identifying the Individual ACR events subscription for which the ACT Information notification is delivered. |  |
| easId | string | M | 1 | The identifier of the EASs |  |
| eventId | ACREventIDs | M | 1 | Specifies the events for which notification is sent |  |
| TrgtInfo (NOTE 1) | TargetInfo | O | 0..1 | Details of the selected T-EAS and the T-EES. |  |
| ACRRes (NOTE 2) | boolean | O | 0..1 | Indicates whether the ACR is successful or failure |  |
| failReason (NOTE 3) | string | O | 0..1 | Indicates the cause information for the failure |  |
| eecCtxtReloc (NOTE 4) | EecCtxtRelocStatus | O | 0..1 | Specifies the registration id and expiry time of the registration. |  |
| NOTE 1: This attribute shall be included when Event ID indicates 'TARGET\_INFORMATION' event  NOTE 2: This attribute shall be included when Event ID indicates 'ACR\_COMPLETE' event  NOTE 3: This attribute shall be included when the ACRRes attribute indicates failure.  NOTE 4: This attribute shall be included when eventId indicates 'ACR\_COMPLETE' event and EEC context relocation was attempted. | | | | | |

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

##### 6.4.5.2.x Type: EecCtxtRelocStatus

Table 6.4.5.2.x-1: EecCtxtRelocStatus

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| implReg | ImplicitRegDetail | O | 0..1 | Provides implicit registration details  (NOTE) |  |
| NOTE 1: This attribute shall be included when the S-EES has received it in EEC Context Push response. | | | | | |

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

## A.4 Eees\_ACREvents API

openapi: 3.0.0

info:

title: Eees\_ACREvents

description: |

API for ACR events subscription and notification.

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version: "1.0.0-alpha.1"

externalDocs:

description: 3GPP TS 24.558 V1.3.0 Enabling Edge Applications; Protocol specification.

url: https://www.3gpp.org/ftp/Specs/archive/24\_series/24.558/

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/eees-acrevents/v1'

variables:

apiRoot:

default: https://example.com

description: apiRoot as defined in clause 6.1 of 3GPP TS 24.558

paths:

/subscriptions:

post:

description: Creates a new individual ACR events subscription.

operationId: CreateACREventsSubscripton

tags:

- ACR events subscription (Collection)

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'201':

description: Individual ACR events subscription resource created successfully.

content:

application/json:

schema:

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

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:

notificationDestination:

'{request.body#/notificationDestination}':

post:

requestBody: # contents of the callback message

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content (The receipt of the Notification is acknowledged)

'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}:

put:

description: Updates an existing individual ACR events subscription identified by the subscriptionId.

operationId: UpdateACREventsSubscription

tags:

- Individual ACR Events Subscription

parameters:

- name: subscriptionId

in: path

description: Identifies an individual ACR Events subscription resource

required: true

schema:

type: string

requestBody:

description: Parameters to replace the existing subscription

required: true

content:

application/json:

schema:

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

responses:

'200':

description: OK (An individual ACR Events subscription resource updated successfully)

content:

application/json:

schema:

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

'204':

description: No Content (updated successfully)

'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 existing individual ACR events subscription identified by the subscriptionId.

operationId: DeleteACREventsSubscription

tags:

- Individual ACR Events Subscription

parameters:

- name: subscriptionId

in: path

description: Identifies an individual ACR Events subscription resource

required: true

schema:

type: string

responses:

'204':

description: An individual ACR Events subscription resource deleted successfully.

'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'

patch:

description: Partially modifyan existing individual ACR events subscription identified by the subscriptionId.

operationId: ModifyACREventsSubscription

tags:

- Individual ACR Events Subscription

parameters:

- name: subscriptionId

in: path

description: Identifies an individual ACR Events subscription resource

required: true

schema:

type: string

requestBody:

description: Parameters to replace the existing subscription

required: true

content:

application/merge-patch+json:

schema:

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

responses:

'200':

description: OK (An individual ACR Events subscription resource updated successfully)

content:

application/json:

schema:

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

'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'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

ACREventsSubscription:

description: ACE Events subscription request.

type: object

properties:

eecId:

type: string

description: Represents a unique identifier of the EEC.

ueId:

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

expTime:

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

easIds:

type: array

items:

type: string

minItems: 1

description: The list of identifier of the EASs.

eventIds:

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

notificationDestination:

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

requestTestNotification:

type: boolean

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

websockNotifConfig:

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

suppFeat:

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

required:

- eecId

- easIds

- eventIds

ACRInfoNotification:

description: Notification of ACR events information.

type: object

properties:

subId:

type: string

description: String identifying the Individual ACR events subscription for which the ACT Information notification is delivered.

easId:

type: string

description: Identifier of the EAS.

eventId:

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

trgtInfo:

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

acrRes:

type: boolean

description: Indicates whether the ACR is successful or failure.

failReason :

type: string

description: Indicates the cause information for the failure.

eecCtxtReloc:

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

required:

- subId

- easId

- eventId

TargetInfo:

description: Details of the selected T-EAS and the T-EES.

type: object

properties:

trgetEASInfo:

$ref: 'TS24558\_Eees\_EASDiscovery.yaml#/components/schemas/DiscoveredEas'

trgetEESInfo:

$ref: 'TS24558\_Eecs\_ServiceProvisioning.yaml#/components/schemas/EDNConfigInfo'

ACREventsSubscriptionPatch:

description: An individual ACR events subscription resource to be updated.

type: object

properties:

expTime:

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

easIds:

type: array

items:

type: string

minItems: 1

description: The list of identifier of the EASs.

eventIds:

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

notificationDestination:

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

ACREventIDs:

anyOf:

- type: string

enum:

- TARGET\_INFORMATION

- ACR\_COMPLETE

- 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

- TARGET\_INFORMATION: Represents the target information event.

- ACR\_COMPLETE: Represents the ACR complete event.

EecCtxtRelocStatus:

description: Indicates the registration id and expiry time of the registration.

type: object

properties:

implReg

$ref: 'TS 29.558\_CommonData.yaml#/components/schemas/ImplicitRegDetail'

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