**3GPP TSG-CT WG1 Meeting #137-eC1-22xxxx**

**E-Meeting, 18th – 26th August 2022**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **24.558** | **CR** | **0007** | **rev** | **-** | **Current version:** | **17.0.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Correction to the Definition of type DiscoveredEas | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | InterDigital Inc., Huawei | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | EDGEAPP | | | | |  | ***Date:*** | | | 2022-08-11 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***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 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:*** | | As specified in 23.558, Table 8.5.3.3-1: EAS discovery response, the EasDiscoveryResp contains a list of DiscoveredEas, and each DiscoveredEAS should contain a single EASProfile.  In 24.558, Table 6.3.5.2.3-1: Definition of type EasDiscoveryResp, contains a list of EAS discovery information, which is correct. On the other hand the DiscoveredEas should contain a single EASProfile, but in the Table 6.3.5.2.8-1: Definition of type DiscoveredEas, cardinality says 1, however description mentions a list. Similarly, in the Table 6.4.5.2.3-1 easId cardinality says 1, where as in the description it says “The identifier of EASs” which should be “The identifier of EAS”.  Further the yaml representation defines DiscoveredEas containing an array of EASProfiles which is incorrect.  This CR proposes correction to the definition of type DiscoveredEas table and a correction to the corresponding yaml representation. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | DiscoveredEas should contain only a single EASProfile, correction is proposed to align this. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Incorrect implementation. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.3.5.2.8, 6.4.5.2.3, A.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 \*\*\*

##### 6.3.5.2.8 Type: DiscoveredEas

Table 6.3.5.2.8-1: Definition of type DiscoveredEas

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| eas | EASProfile | M | 1 | Contains an EAS matching the discovery request filters |  |
| lifeTime | DateTime | O | 0..1 | Indicates the time duration for which the EAS information is valid and supposed to be cached in the EEC. |  |

\*\*\* 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 EAS |  |
| eventId | ACREventIDs | M | 1 | Specifies the events for which notification is sent |  |
| acId | string | O | 0..1 | Contains the identifier of the AC. |  |
| 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 \*\*\*

# A.3 Eees\_EASDiscovery API

openapi: 3.0.0

info:

title: Eees\_EASDiscovery

description: |

API for EAS Discovery.

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version: "1.0.0"

externalDocs:

description: >

3GPP TS 24.558 V17.0.0 Enabling Edge Applications; Protocol specification.

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

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/eees-easdiscovery/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 EAS discovery subscription.

tags:

- EAS Discovery Subscriptions

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'201':

description: >

Created. A new Individual EAS Discovery Subscription resource was successfully

created.

content:

application/json:

schema:

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

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:

required: true

content:

application/json:

schema:

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

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 EAS discovery subscription identified by the subscriptionId.

tags:

- Individual EAS Discovery Subscription

parameters:

- name: subscriptionId

in: path

description: Identifies an individual EAS discovery subscription resource

required: true

schema:

type: string

requestBody:

description: Parameters to replace the existing subscription

required: true

content:

application/json:

schema:

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

responses:

'200':

description: >

OK. The individual EAS discovery subscription resource was updated successfully.

content:

application/json:

schema:

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

'204':

description: No Content (updated successfully).

'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 EAS discovery subscription identified by the subscriptionId.

tags:

- Individual EAS Discovery Subscription

parameters:

- name: subscriptionId

in: path

description: Identifies an individual EAS discovery subscription resource

required: true

schema:

type: string

responses:

'204':

description: >

An individual EAS discovery 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: >

Partial update an existing EAS Discovery Subscription resource identified by a

subscriptionId.

tags:

- Individual EAS Discovery Subscription

parameters:

- name: subscriptionId

in: path

description: Identifies an individual EAS discovery subscription resource

required: true

schema:

type: string

requestBody:

description: Parameters to replace the existing subscription

required: true

content:

application/json:

schema:

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

responses:

'200':

description: >

OK (An individual EAS discovery subscription resource updated successfully)

content:

application/json:

schema:

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

'204':

description: No Content (modified successfully).

'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'

/eas-profiles/request-discovery:

post:

description: Provides EAS information requested by the service consumer (i.e. EEC, EAS or EES).

tags:

- EAS Profiles

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: >

OK (The requested EAS discovery information was returned successfully).

content:

application/json:

schema:

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

'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'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

EasDiscoveryReq:

description: ECS service provisioning request information.

type: object

properties:

requestorId:

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

ueId:

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

easDiscoveryFilter:

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

eecSvcContinuity:

type: array

items:

$ref: 'TS29558\_Eecs\_EESRegistration.yaml#/components/schemas/ACRScenario'

description: Indicates if the EEC supports service continuity or not, also indicates which ACR scenarios are supported by the EEC.

eesSvcContinuity:

type: array

items:

$ref: 'TS29558\_Eecs\_EESRegistration.yaml#/components/schemas/ACRScenario'

description: Indicates if the EEC supports service continuity or not, also indicates which ACR scenarios are supported by the EEC.

easSvcContinuity:

type: array

items:

$ref: 'TS29558\_Eecs\_EESRegistration.yaml#/components/schemas/ACRScenario'

description: Indicates if the EEC supports service continuity or not, also indicates which ACR scenarios are supported by the EEC.

locInf:

$ref: 'TS29122\_MonitoringEvent.yaml#/components/schemas/LocationInfo'

easTDnai:

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

required:

- requestorId

EasDiscoveryResp:

description: ECS discovery response.

type: object

properties:

discoveredEas:

type: array

items:

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

description: List of EAS discovery information.

required:

- discoveredEas

EasDiscoverySubscription:

description: Represents an Individual EAS Discovery Subscription resource.

type: object

properties:

eecId:

type: string

description: Represents a unique identifier of the EEC.

ueId:

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

easEventType:

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

easDiscoveryFilter:

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

easDynInfoFilter:

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

easSvcContinuity:

type: array

items:

$ref: 'TS29558\_Eecs\_EESRegistration.yaml#/components/schemas/ACRScenario'

description: Indicates if the EEC supports service continuity or not, also indicates which ACR scenarios are supported by the EEC.

expTime:

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

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

- easEventType

EasDiscoveryNotification:

description: Notification of EAS discovery information.

type: object

properties:

subId:

type: string

description: Identifier of the individual service provisioning subscription for which the service provisioning notification is delivered.

eventType:

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

discoveredEas:

type: array

items:

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

minItems: 1

description: List of EAS discovery information.

required:

- subId

- eventType

- discoveredEas

EasDiscoveryFilter:

description: Represents the EAS characteristics.

type: object

properties:

acChars:

type: array

items:

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

minItems: 1

description: AC description for which an EAS is needed.

easChars:

type: array

items:

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

minItems: 1

description: Required EAS chararcteristics.

EasCharacteristics:

description: Represents the EAS chararcteristics.

type: object

properties:

easId:

type: string

description: EAS identifier.

easProvId:

type: string

description: EAS provider identifier.

easType:

type: string

description: EAS type.

easSched:

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

svcArea:

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

easSvcContinuity:

type: array

items:

$ref: 'TS29558\_Eecs\_EESRegistration.yaml#/components/schemas/ACRScenario'

description: Indicates if the EEC supports service continuity or not, also indicates which ACR scenarios are supported by the EEC.

svcPermLevel:

type: string

description: Service permissions level.

svcFeats:

type: array

items:

type: string

minItems: 1

description: Service features.

DiscoveredEas:

description: Represents an EAS discovery information.

type: object

properties:

eas:

$ref: 'TS29558\_Eees\_EASRegistration.yaml#/components/schemas/EASProfile'

lifeTime:

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

required:

- eas

EasDynamicInfoFilter:

description: Represents EAS dynamic information changes filter.

type: object

properties:

dynInfoFilter:

type: array

items:

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

minItems: 1

description: List of EAS dynamic information required by the EEC per EAS.

required:

- dynInfoFilter

EasDynamicInfoFilterData:

description: Represents an EAS dynamic information.

type: object

properties:

eecId:

type: string

description: Represents a unique identifier of the EEC.

easStatus:

type: boolean

description: Notify if EAS status changed.

easAcIds:

type: boolean

description: Notify if list of AC identifiers changed.

easDesc:

type: boolean

description: Notify if EAS description changed.

easPt:

type: boolean

description: Notify if EAS endpoint changed.

easFeature:

type: boolean

description: NotiNotify if EAS feature changed.

easSchedule:

type: boolean

description: Notify if EAS schedule changed.

svcArea:

type: boolean

description: Notify if EAS service area changed.

svcKpi:

type: boolean

description: Notify if EAS KPIs changed.

svcCont:

type: boolean

description: Notify if EAS supported ACR changed.

required:

- eecId

ACCharacteristics:

description: Represents EAS dynamic information changes filter.

type: object

properties:

acProf:

$ref: 'TS24558\_Eees\_EECRegistration.yaml#/components/schemas/ACProfile'

required:

- acProf

EASDiscEventIDs:

anyOf:

- type: string

enum:

- EAS\_AVAILABILITY\_CHANGE

- EAS\_DYNAMIC\_INFO\_CHANGE

- 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

- EAS\_AVAILABILITY\_CHANGE: Represents the EAS availability change event.

- EAS\_DYNAMIC\_INFO\_CHANGE: Represents the EAS dynamic information change event.

EasDiscoverySubscriptionPatch:

description: Represents an Individual EAS Discovery Subscription resource.

type: object

properties:

easDiscoveryFilter:

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

easDynInfoFilter:

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

easSvcContinuity:

type: array

items:

$ref: 'TS29558\_Eecs\_EESRegistration.yaml#/components/schemas/ACRScenario'

description: Indicates if the EEC supports service continuity or not, also indicates which ACR scenarios are supported by the EEC.

expTime:

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

RequestorId:

description: Represents identifier of the requestor.

type: object

properties:

eesId:

type: string

easId:

type: string

eecId:

type: string

oneOf:

- required: [eesId]

- required: [easId]

- required: [eecId]