**3GPP TSG-CT WG1 Meeting #141eC1-232261**

**Online 17– 21 April 2023**

|  |
| --- |
| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  |  | **CR** | **9** | **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)*.* |
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|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **X** |

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| --- |
|  |
| ***Title:***  | EAS instantiation status via EAS discovery by EES |
|  |  |
| ***Source to WG:*** | InterDigital Inc. |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | \_Ph2 |  | ***Date:*** | 2023-04-10 |
|  |  |  |  |  |
| ***Category:*** |  |  | ***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 canbe 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:*** | In TS 23.558 the enhancement of dynamic EAS instantiation triggerng was agreed. The EAS instantiation status via discovery by EES as agreed in TS 23.558, needs to be implemented in stage-3 TS 24.558.  |
|  |  |
| ***Summary of change:*** | Proposed changes are:1. Reference to definition for Instantiable EAS added
2. EEC requesting EAS discovery information is updated for EAS Instantiation Triggering
3. EEC subscribing to EAS discovery information from EES is updated for EAS Instantiation Triggering
4. easIntTrigSup is provided in EasDiscoveryReq
5. instEasInfo is provided in EasDiscoveryResp
6. easIntTrigSup is provided in EasDiscoverySubscription
7. instEasInfo is provided in EasDiscoveryNotification
8. instEasInfo structure is provided
 |
|  |  |
| ***Consequences if not approved:*** | Dynamic EAS instantiation via discovery by EES remains missing. |
|  |  |
| ***Clauses affected:*** | 3.1, 5.3.2.2.2, 5.3.2.3.2, 6.3.5.2.2, 6.3.5.2.3, 6.3.5.2.4, 6.3.5.2.5, A.3, 8.1.5.1 |
|  |  |
|  | **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's revision history:*** |  |

\*\*\*\*\* First change \*\*\*\*\*

## 3.1 Terms

For the purposes of the present document, the terms given in 3GPP TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [1].

For the purposes of the present document, the following terms and definitions given in 3GPP TS 23.558 [2] apply:

Application Context

Application Context Relocation

EEC Context

Instantiable EAS

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

##### 5.3.2.2.2 EEC requesting EAS discovery information using Eees\_EASDiscovery\_EasDiscRequest operation

To request for one-time EAS discovery, the EEC shall send an HTTP POST request to the EES as specified in clause 6.3.2.4.4. The body of the POST message shall include the EasDiscoveryReq data structure as specified in clause 6.3.5.2.2.

Upon reception of the HTTP POST message from the EEC, the EES shall:

a) process the EAS discovery request information;

b) the EES verifies and checks if the EEC is authorized to discover the requested EAS(s) from EES;

c) if EEC is authorized to discover the requested EAS(s) from EES, the EEC is not registered with the EES, and the ECSP policy requires the EEC to perform EEC registration prior to EAS discovery, the EES shall reject the request by sending an HTTP "403 Forbidden" status code to the EEC including the ProblemDetails data structure with the "cause" attribute containing the "REGISTRATION\_REQUIRED" application error;

d) if the EEC is authorized to discover the requested EAS(s) from EES and the EEC is registered as required by the ECSP policy, then the EES;

1) may obtain the UE's location as specified in clause 5.3 of 3GPP TS 29.122 [3];

2) if EAS discovery filters are provided by the EEC, the EES identifies the EAS(s) based on the provided EAS discovery filters and the UE location, and if the enNB1 feature is supported, the "userLocation" attribute may be provided in the "locInf" attribute within the EasDiscoveryReq data type;

3) if the EEC indicates that service continuity support is required, the EES shall take the indication which ACR scenarios are supported by the AC and the EEC and which of these are preferred by the AC into consideration. The EES identifies the EAS(s) who supports at least one of the ACR scenarios as indicated by EEC;

4) if EAS discovery filters are not provided:

i. if available, the EES identifies the EAS(s) based on the UE-specific service information at the EES and the UE location; and

ii. EES identifies the EAS(s) by applying the ECSP policy (e.g. based only on the UE location);

5) the EES may trigger the EAS management system to instantiate the EAS that matches with EAS discovery filter IEs;

6) if the EdgeApp\_2 feature is supported and the EEC indicates the EAS selection support within the "easSelSupInd" attribute, the EES shall select one matching EAS that fulfils the EEC requirements as described in bullets 2), 3) and 4), and the EES shall provide the selected EAS information to the EEC within the "discoveredEas" attribute;

e) if EEC indicates EAS Instantiation Triggering using "easIntTrigSup" attribute in the EAS discovery request, the EES supports such capability, the EES may determine instantiable EAS information using "easInstInfos" attribute, which is provided in the EAS discovery response, for EAS(s) that are instantiable but not yet instantiated and match the EAS discovery filter IEs; and

f) if the processing of the request was successful, the EES sends an EAS discovery response to the EEC as specified in clause 6.3.2.4.4.2.2, which includes information about the discovered EASs. The response shall include endpoint information for discovered EASs. Depending on the EAS discovery filters received in the EAS discovery request, the response may include additional information regarding matched capabilities, e.g. service permissions levels, KPIs, AC locations(s) that the EASs can support, ACR scenarios supported by the EAS, etc. The EAS discovery response may contain a list of EASs. This list may be based on EAS discovery filters containing a Geographical or Topological Service Area, e.g. a route, included in the EAS discovery request by the EEC.

 If the successful processing of the request does not result in finding a matching EAS (i.e. there is no client side error), the EES responds with "204 No Content" HTTP status code. Otherwise, the EES shall reject the EAS discovery request and respond with an appropriate failure HTTP status code.

The EEC may cache the EAS information (e.g. EAS endpoint) for subsequent use and avoid the need to repeat this procedure. If the "lifeTime" attribute is included in the response, the EEC may cache the EAS information only for the duration specified by the Lifetime IE.

If the failure response is received for the EAS discovery request, the EEC may resend the EAS discovery request, taking into account the received failure cause. If the failure cause indicated "REGISTRATION\_REQUIRED" error in the "cause" attribute of the "ProblemDetails" structure, the EEC shall perform an EEC registration as specified in clause 5.2.2.2.2 before resending the EAS discovery request.

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

##### 5.3.2.3.2 EEC subscribing to EAS discovery information from EES using Eees\_EASDiscovery\_Subscribe operation

To subscribe to changes of EAS discovery information at the EES, the EEC shall send an HTTP POST message to the EES on the "EAS Discovery Subscriptions" resource. The body of the POST message shall include the EASDiscoverySubscription data structure as specified in clause 6.3.2.2.3.1.

Upon receiving the HTTP POST message from the EEC, the EES:

a) shall process the EAS discovery subscription request;

b) if the EEC is not registered with the EES, and if ECSP policy requires the EEC to perform EEC registration prior to EAS discovery, the EES shall reject the request message by sending an HTTP response to the EEC with a status code set to 403 Forbidden and may indicate the "REGISTRATION\_REQUIRED" error in the "cause" attribute of the "ProblemDetails" structure;

b) if the EEC is registered, the EES shall verify and check if the EEC is authorized to subscribe for information of the requested EAS(s) from EES;

c) if the EEC is authorized to discover the requested EAS(s) from EES, then the EES;

1) may obtain the UE's location as specified in clause 5.3 of 3GPP TS 29.122 [3];

2) shall create a new Individual EAS Discovery Subscription resource as specified in clause 6.3.2.2.3.1; and

d) if EEC indicates EAS Instantiation Triggering using "easIntTrigSup" attribute in the EAS discovery subscription request, the EES may trigger dynamic instantiation of the EAS; and

e) if the processing of the request was successful, the EES shall send an EAS discovery subscription response to the EEC as specified in clause 6.3.2.2.3.1, which includes the subscription identifier and shall include the expiration time, indicating when the subscription will automatically expire.

 If the EES is unable to process the request (e.g. was not able to determine the EAS using the input information in the request or using the locally available information), the EES shall reject the request with a with appropriate response code as specified in Table 5.2.6-1 of TS 29.122 [3].

If the expiration time is provided, the EEC shall send an EAS discovery subscription update request prior to the expiration time if the EEC wants to maintain the subscription. If an EAS discovery subscription update request is not received prior to the expiration time, the EES shall treat the EEC as implicitly unsubscribed.

If the failure response is received for the EAS discovery request, the EEC may resend the EAS discovery subscription request, taking into account the received failure cause. If the failure cause indicated "REGISTRATION\_REQUIRED" error in the "cause" attribute of the "ProblemDetails" structure, the EEC shall perform an EEC registration as specified in clause 5.2.2.2.2 before resending the EAS discovery request.

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

##### 6.3.5.2.2 Type: EasDiscoveryReq

Table 6.3.5.2.2-1: Definition of type EasDiscoveryReq

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| requestorId | RequestorId | M | 1 | Represents a unique identifier of the requestor (e.g. EEC, EAS, EES). |  |
| ueId | string | O | 0..1 | Represents the identifier of the UE. |  |
| easDiscoveryFilter | EasDiscoveryFilter | O | 0..1 | Contains EAS characteristics |  |
| eecSvcContinuity | string | O | 0..1 | Contains service continuity support; indicates EEC supported ACR scenarios |  |
| eesSvcContinuity | String | O | 0..1 | Contains service continuity support; indicates EES supported ACR scenarios |  |
| easSvcContinuity | string | O | 0..1 | Contains service continuity support; indicates EAS supported ACR scenarios |  |
| locInf | LocationInfo | O | 0..1 | Represents location information of the UE. |  |
| easTDnais | array(Dnai) | O | 1..N | Contains the target DNAI information which can be associated with potential target-EAS(s)  |  |
| easSelSupInd | boolean | O | 0..1 | Indicates if the EEC requires the EAS selection support from the EES (e.g., for constrained device)."true": the EAS selection is required from the EES."false" (default): the EAS selection is not required from the EES. | EdgeApp\_2 |
| suppFeat | SupportedFeatures | C | 0..1 | Represents a list of Supported features used as described in clause 6.3.7.Shall be present in the HTTP POST request/response. |  |
| easIntTrigSup | boolean | O | 0..1 | Indicates to the EES whether the EAS instantiation triggering should be performed for the current request."false" (default): the EAS instantiation triggering should not be performed."true": the EAS instantiation triggering should be performed. | EdgeApp\_2 |

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

##### 6.3.5.2.3 Type: EasDiscoveryResp

Table 6.3.5.2.3-1: Definition of type EasDiscoveryResp

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| discoveredEas | array(DiscoveredEas) | M | 1..N | List of EAS discovery information |  |
| easInstInfos | array(EASInstantiationInfo) | O | 1..N | The EAS instantiation status per EASID (e.g. instantiated, instantiable but not be instantiated yet) | EdgeApp\_2 |

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

##### 6.3.5.2.4 Type: EasDiscoverySubscription

Table 6.3.5.2.4-1: Definition of type EasDiscoverySubscription

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| eecId | string | M | 1 | Represents a unique identifier of the EEC. |  |
| ueId | Gpsi | O | 0..1 | Represents the identifier of the UE. |  |
| easEventType | EASDiscEventIDs | M | 1 | Event type for which the EEC should be notified; |  |
| easDiscoveryFilter | EasDiscoveryFilter | O | 0..1 | EAS characteristics filter; Applicable when easEventType is set to "EAS\_AVAILABILITY\_CHANGE" event |  |
| easDynInfoFilter | EasDynamicInfoFilter | O | 0..1 | EAS dynamic information changes filter; Applicable when easEventType is set to "EAS\_DYNAMIC\_INFO\_CHANGE" event |  |
| eecSvcContinuity | array(ACRScenario) | O | 0..1 | Service continuity support; indicates EEC supported ACR scenarios |  |
| notificationDestination | Uri | M | 1 | URI where the EAS discovery notification should be delivered to. This attribute shall be present in HTTP POST message to EES. |  |
| expTime | DateTime | O | 0..1 | Expiration time of the subscription. If the expiration time is not present, then it indicates that the EEC subscription never expires. |  |
| requestTestNotification | boolean | O | 0..1 | Set to true by Subscriber to request the EES to send a test notification as defined in clause 6.1. Set to false or omitted otherwise. | Notification\_test\_event |
| websockNotifConfig | WebsockNotifConfig | O | 0..1 | Configuration parameters to set up notification delivery over Websocket protocol as defined in clause 7.6. | Notification\_websocket |
| suppFeat | SupportedFeatures | C | 0..1 | Represents a list of Supported features used as described in clause 6.3.7. Shall be present in the HTTP POST request/response; |  |
| easIntTrigSup | boolean | O | 0..1 | Indicates to the EES whether the EAS instantiation triggering should be performed for the current request."false" (default): the EAS instantiation triggering should not be performed."true": the EAS instantiation triggering should be performed. | EdgeApp\_2 |

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

##### 6.3.5.2.5 Type: EasDiscoveryNotification

Table 6.3.5.2.5-1: Definition of type EasDiscoveryNotification

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| subId | string | M | 1 | String identifying the individual subscription for which the service provisioning notification is delivered. |  |
| eventType | EASDiscEventIDs | M | 1 | Event type for which the notification is delivered; |  |
| discoveredEas | array(DiscoveredEas) | M | 1..N | List of EAS discovery information |  |
| easInstInfos | array(EASInstantiationInfo) | O | 1..N | The EAS instantiation status per EASID (e.g. instantiated, instantiable but not be instantiated yet) | EdgeApp\_2 |

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

#### 8.1.5.1 General

This clause specifies the application data model supported by the API. Data types listed in clause 7.2 of 3GPP TS 29.558 [4] apply to this API.

Table 8.1.5.1-1 specifies the data types defined specifically for the Eecs\_ServiceProvisioning API service.

Table 8.1.5.1-1: Eecs\_ServiceProvisioning API specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Section defined | Description | Applicability |
| ECSServProvReq | 8.1.5.2.2 |  |  |
| ECSServProvResp | 8.1.5.2.3 |  |  |
| ECSServProvSubscription | 8.1.5.2.4 | Represents the service provisioning subscription. |  |
| ConnectivityInfo | 8.1.5.2.5 |  |  |
| ServProvNotification | 8.1.5.2.6 | Service provisioning information notification from ECS to EEC.  |  |
| EDNConfigInfo | 8.1.5.2.7 |  |  |
| EDNConInfo | 8.1.5.2.8 |  |  |
| EESInfo | 8.1.5.2.9 |  |  |

Table 8.1.5.1-2 specifies data types re-used by the Eecs\_ServiceProvisioning API service.

Table 8.1.5.1-2: Re-used Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
| PlmnId | 3GPP TS 29.571 [5] |  |  |
| ACProfile | clause 6.2.5.2.3 |  |  |
| DateTime | 3GPP TS 29.122 [3] |  |  |
| Uri | 3GPP TS 29.122 [3] |  |  |
| SupportedFeatures | 3GPP TS 29.571 [5] | Used to negotiate the applicability of optional features. |  |
| Snssai | 3GPP TS 29.571 [5] |  |  |
| LocationArea5G | 3GPP TS 29.122 [3] |  |  |
| EndPoint | 3GPP TS 29.558 [4] |  |  |
| Dnai | 3GPP TS 29.571 [5] |  |  |
| LocationInfo | 3GPP TS 29.122 [3] | The location information related to the UE. |  |
| Dnn | 3GPP TS 29.571 [5] |  |  |
| Gpsi | 3GPP TS 29.571 [5] | Used to identify the UE.  |  |
| ACRScenario | 3GPP TS 29.558 [4] |  |  |
| EASInstantiationInfo | 3GPP TS 29.558 [4] |  |  |

\*\*\*\*\* 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: "1.1.0-alpha.1"

externalDocs:

 description: >

 3GPP TS 24.558 V18.0.0 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: EAS discovery 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'

 easSelSupInd:

 type: boolean

 description: >

 Indicates if the EEC requires the EAS selection support from the EES (e.g., for

 constrained device). The default value false indicates the EAS selection is not

 required from the EES.

 suppFeat:

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

 easIntTrigSup:

 type: boolean

 description: >

 Indicates to the EES whether the EAS instantiation triggering should be performed for

 the current request.The default value false indicates the EAS instantiation triggering

 should not be performed. The true value indicate the EAS instantiation triggering should

 be performed.

 required:

 - requestorId

 EasDiscoveryResp:

 description: ECS discovery response.

 type: object

 properties:

 discoveredEas:

 type: array

 items:

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

 description: List of EAS discovery information.

 easInstInfos:

 type: array

 items:

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

 minItems: 1

 description: >

 The EAS instantiation status per EASID (e.g. instantiated, instantiable but not be

 instantiated yet).

 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'

 easIntTrigSup:

 type: boolean

 description: >

 Indicates to the EES whether the EAS instantiation triggering should be performed for

 the current request.The default value false indicates the EAS instantiation triggering

 should not be performed. The true value indicate the EAS instantiation triggering should

 be performed.

 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.

 easInstInfos:

 type: array

 items:

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

 minItems: 1

 description: >

 The EAS instantiation status per EASID (e.g. instantiated, instantiable but not be

 instantiated yet).

 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 application identifier.

 easProvId:

 type: string

 description: EAS provider identifier.

 stdEasType:

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

 easType:

 type: string

 description: EAS type with the flexible value set.

 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.

 not:

 required: [stdEasType, easType]

 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]

\*\*\*\*\* End of change \*\*\*\*\*