**3GPP TSG-CT WG1 Meeting #146C1-24xxxx was 240099**

**Online, 22– 26 January 2024**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** |  | **rev** | **1** | **Current version:** | **0** |  |
|  | | | | | | | | |
| *For* [***HELP***](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:*** | Eees\_EASInformationProvisioning API definition | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | InterDigital, Samsung | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | EDGEAPP\_Ph2 | | | | |  | ***Date:*** | | | 15 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***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:*** | | In TS 24.558 the clause 6.6 specifies Eees\_EASInformationProvisioning API to implement the procedures for the EEC to exchange information with the EES about selected EAS and/or ACR scenario selection based on clause 8.15 EAS Information provisioning of TS 23.558.  In TS 23.558 three EAS information provisioning request types are supported. Therefore, in clause 6.6 of TS 24.558, three custom operations are specified corresponding to each of the request types.  In CT1#145 meeting, it was highlighted that a single operation might be enough, instead of three custom operations, with a generic description and a data model that specifies the differences via table NOTEs. In principle both approaches are correct, however, single operation approach was considered a better alternate during the CT1#145 meeting.  Therefore, the clause 6.6 and its all subclauses that implement Eees\_EASInformationProvisioning API are revised in this CR. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Eees\_EASInformationProvisioning service description, operation and API description is revised to update to a single operation approach. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Simpler approach and better alignment to stage 2. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.6.3.1, 6.6.3.2, 6.6.3.2.1, 6.6.3.2.2, 6.6.3.3, 6.6.3.4, 6.6.4, 6.6.5, 6.6.5.1, 6.6.5.2, 6.6.5.2.1, 6.6.5.2.2, 6.6.5.2.3, 6.6.5.2.4, 6.6.5.2.5, 6.6.5.2.6, 6.6.5.2.7 | | | | | | | | |
| ***.*** | |  | | | | | | | | |
|  | | **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 \*\*\*\*\*

#### 6.6.3.1 Overview

The structure of the custom operation URIs of the Eees\_EASInformationProvisioning API is shown in figure 6.6.3.1‑1.



Figure 6.6.3.1-1: Resource URI structure of the Eees\_EASInformationProvisioning API

Table 6.6.3.1-1 provides an overview of the custom operations and applicable HTTP methods defined for the Eees\_EASInformationProvisioning API.

Table 6.6.3.1-1: Custom operations without associated resources

|  |  |  |  |
| --- | --- | --- | --- |
| Operation name | Custom operation URI | Mapped HTTP method | Description |
| Declare | /declare | POST | EEC exchanging information about selected EAS or ACR scenario selection or both. |

#### 6.6.3.2 Operation: Declare

##### 6.6.3.2.1 Description

This custom operation allows the EEC to send the EAS information provisioning request to the EES to declare EAS information.

##### 6.6.3.2.2 Operation Definition

This operation shall support the request data structures, the response data structures and response codes specified in tables 6.6.3.2.2-1 and 6.6.3.2.2-2.

Table 6.6.3.2.2-1: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| EASInfoProvReq | M | 1 | Information about the EAS information provisioning request. |

Table 6.6.3.2.2-2: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response codes | Description |
| EASInfoProvResp | M | 1 | 200 OK | Information about the EAS information provisioning response. |
| n/a |  |  | 204 No Content | The EAS information request is successfully received and processed. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection. The response shall include a Location header field containing an alternative target URI located in an alternative EES.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [2]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection. The response shall include a Location header field containing an alternative target URI located in an alternative EES.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [2]. |
| NOTE: The manadatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [3] also apply. | | | | |

Table 6.6.3.2.2-3: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative target URI located in an alternative EES. |

Table 6.6.3.2.2-4: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative target URI located in an alternative EES. |

#### 6.6.3.3 Void















Void

#### 6.6.3.4 Void















Void

### 6.6.4 Notifications

None.

### 6.6.5 Data Model

#### 6.6.5.1 General

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

Table 6.6.5.1-1 specifies the data types defined specifically for the Eees\_EASInformationProvisioning API service.

Table 6.6.5.1-1: Eees\_EASInformationProvisioning API specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Section defined | Description | Applicability |
| EasInfoProvReq | 6.6.5.2.2 |  |  |
| EasInfoProvResp | 6.6.5.2.3 |  |  |
| InstantiatedEASInfo | 6.6.5.2.4 |  |  |
| EasInfoProvReqType | 6.6.5.2.7 |  |  |

Table 6.6.5.1-2 specifies data types re-used by the Eees\_EASInformationProvisioning API service from other specifications, including a reference to their respective specifications and when needed, a short description of their use within the Eees\_EASInformationProvisioning.

Table 6.6.5.1-2: Re-used Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
| ACRScenario | 3GPP TS 29.558 [4] | To represent the selected ACR scenarios in ACR\_SELECTION event. |  |
| Dnai | 3GPP TS 29.571 [5] | Identifies a DNAI. |  |
| EndPoint | 3GPP TS 29.558 [4] | Represents the endpoint information of an EAS. |  |
| LocationArea5G | 3GPP TS 29.122 [3] | Used to define the geographic and topological area served by EAS. |  |

#### 6.6.5.2 Structured data types

##### 6.6.5.2.1 Introduction

This clause defines the data structures to be used in resource representations.

##### 6.6.5.2.2 Type: EasInfoProvReq

Table 6.6.5.2.2-1: Definition of type EasInfoProvReq

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| eecId | string | M | 1 | Represents a unique identifier of the EEC. |
| acId | string | M | 1 | Identity of the AC. |
| selEasIds | array(string) | O | 0..N | The identifier(s) (e.g., FQDN, URI) of the selected EAS (or the selected EAS(s) for EAS bundles) which is either instantiated or instantiable. |
| appGrpId | string | O | 0..1 | The application group identifier, identifying a group of UEs using the same EAS. (NOTE 4) |
| eesList | array(EESInfo) | O | 0..N | Contains the list of EESs which support the application group identifier used for common EAS announcement. (NOTE 4) |
| reqType | EasInfoProvReqType | O | 0..1 | Indicates the type of the EAS Information Provisioning Request. |
| selAcrScenarios | array(ACRScenario) | O | 0..N | The list of ACR scenarios (or the list of ACR scenarios for EAS bundles) selected by the EEC. (NOTE 1) |
| selEasEndPoints | array(EndPoint) | O | 0..1 | The endpoint(s) of the selected EAS (or the selected EAS(s) for EAS bundles). |
| dnais | array(Dnai) | O | 0..1 | Represents list of Data network access identifier for each selected EAS identifier. |
| svcArea | array(LocationArea5G) | O | 0..N | Service availability area (geographical and topological) for each selected EAS identifier |
| assEesEndPoints | array(EndPoint) | O | 0..1 | EES information of the other EES(s) which support the direct bundled EAS, within the same EDN, and associated with the EASID list. |
| casInfo | EndPoint | O | 0..1 | Target cloud application server information provided by the AC. |
| acProf | ACProfile | O | 0..1 | Profile of AC for which the EEC provides edge enabling services. (NOTE 2, NOTE 3) |
| eecSvcContSupp | array(ACRScenario) | O | 0..N | The ACR scenarios supported by the EEC for service continuity. If this attribute is not present, then the EEC does not support service continuity. (NOTE 2, NOTE 5) |
| NOTE 1: The attribute may be present only if Selected EASID(s) and Selected EAS Endpoint(s) are present and “reqType” attribute is "ACR\_SCENARIO\_SELECTION\_ANNOUNCEMENT"  NOTE 2: The attributes are present only if the “reqType” attribute is “ACR\_SCENARIO\_SELECTION\_REQUEST”  NOTE 3: The attribute is present if AC Profile is not shared to EES previously  NOTE 4: This attribute may be present only if the “reqType” attribute is "EAS\_SELECTION".  NOTE 5: The EAS bundle information is not applicable for proxy type of EAS bundle. | | | | |

##### 6.6.5.2.3 Type: EasInfoProvResp

Table 6.6.5.2.3-1: Definition of type EasInfoProvResp

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| selAcrScenarioList | array(ACRScenario) | O | 0..N | The list of ACR scenarios (or the list of ACR scenarios for EAS bundles) selected by the EES. (NOTE 1) |
| instEasInfo | InstantiatedEASInfo | O | 0..1 | The instantiated EAS information. (NOTE 2) |
| comEasEndpoint | EndPoint | O | 0..1 | The common EAS endpoint provided if the EES has determined a different common EAS. (NOTE 3) |
| comEesEndpoint | EndPoint | O | 0..1 | The common EES endpoint of the common EAS provided if the common EAS is registered to a different EES. (NOTE 3) |
| NOTE 1: Only if the “reqType” attribute of the request is “ACR\_SCENARIO\_SELECTION\_REQUEST”.  NOTE 2: Only if request does not include selected EAS endpoint.  NOTE 3: Only if the “reqType” attribute of the request is "EAS\_SELECTION". | | | | |



##### 6.6.5.2.4 Type: InstantiatedEASInfo

Table 6.6.5.2.4-1: Definition of type InstantiatedEASInfo

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description | Applicability |
| eas | EASProfile | M | 1 | The profile of the instantiated EAS. |  |
| lifeTime | DateTime | O | 0..1 | Indicates the time duration for which the EAS information is valid and supposed to be cached in the EEC. |  |
| eesEndpoint | EndPoint | O | 0..1 | The endpoint address (e.g. URI, IP address) of the EES where the instantiated EAS is registered. |  |



##### 6.6.5.2.5 Void



Void

##### 6.6.5.2.6 Void



Void

##### 6.6.5.2.7 Enumeration: EasInfoProvReqType

Table 6.6.5.2.7-1: Enumeration EasInfoProvReqType

|  |  |
| --- | --- |
| Enumeration value | Description |
| ACR\_SCENARIO\_SELECTION\_ANNOUNCEMENT | The EAS information provisioning request types is ACR scenario selection announcement. |
| ACR\_SCENARIO\_SELECTION\_REQUEST | The EAS information provisioning request types is ACR scenario selection request. |
| EAS\_SELECTION | The EAS information provisioning request types is EAS selection. |

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