**3GPP TSG-CT WG1 Meeting #141eC1-232467\_r1**

**Online 17– 21 April 2023**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **24.558** | **CR** | **0040** | **rev** | **-** | **Current version:** | **18.0.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **x** | Radio Access Network |  | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | Eees\_EECRegistration API: enumeration definition | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NBI18 | | | | |  | ***Date:*** | | | 2023-03-27 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***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 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:*** | | TS 29.122 specifies in clause 5.2.9.10 for a definition of enumerations in the OpenAPI file that the schema:  *- shall contain the "anyOf" keyword listing as alternatives:*  *1. the "type: string" keyword and the "enum" keyword with a list of all defined values for the enumeration; and*  *2. the "type: string" keyword and the "description" keyword with a description stating that the string is only provided for extensibility and is not used to encode contents defined in the present version of the specification, and*  *- should contain a description field, containing the overall meaning and purpose of the enumeration; additionally, this field may contain a list of the defined values of the enumeration together with explanations of those values.*  However, the Eees\_EECRegistration OpenAPI file is not aligned with the above requirement from TS 29.122 i.e. in definition of the UnfulfillACProfRsn enumeration the "type: string" keyword and the corresponding "description" keyword with a description stating that the string is only provided for extensibility and is not used to encode contents defined in the present version of the specification are missing and need to be added. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Definition of the UnfulfillACProfRsn enumeration:   * added the "type: string" keyword and the "description" keyword with a description stating that the string is only provided for extensibility and is not used to encode contents defined in the present version of the specification; and * description of the UnfulfillACProfRsn enumeration aligned with TS 29.122, clause 5.2.9.10.   **Backward compatibility analysis:**  This CR introduces backward correction to the Eees\_EECRegistration API since it adds in enumeration definition optional property of type: string used for extensibility purposes. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The OpenAPI file of Eees\_EECRegistration API not aligned with requirements specified in with TS 29.122, clause 5.2.9.10. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | A.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 introduces backward compatible correction to the OpenAPI file of Eees\_EECRegistration API. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

# A.2 Eees\_EECRegistration

openapi: 3.0.0

info:

title: Eees\_EECRegistration

version: "1.1.0-alpha.1"

description: |

API for EEC registration.

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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-eecregistration/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/registrations:

post:

description: Create a new EEC registration at the EES.

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'201':

description: Created (EEC information is registered successfully at EES).

content:

application/json:

schema:

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

'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'

/registrations/{registrationId}:

put:

description: Update an existing EEC registration a the EES.

parameters:

- name: registrationId

in: path

description: Identifies an individual EEC registration

required: true

schema:

type: string

requestBody:

description: Parameters to replace the existing registration

required: true

content:

application/json:

schema:

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

responses:

'200':

description: OK (An individual EEC registration resource updated successfully).

content:

application/json:

schema:

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

'204':

description: >

No Content (An individual EEC registration resource 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: Remove an existing ECC registration at EES.

parameters:

- name: registrationId

in: path

description: Identifies an individual EEC registration

required: true

schema:

type: string

responses:

'204':

description: >

No Content (An individual EEC registration 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 update an existing EEC registration a the EES.

parameters:

- name: registrationId

in: path

description: Identifies an individual EEC registration

required: true

schema:

type: string

requestBody:

description: Parameters to replace the existing registration

required: true

content:

application/json:

schema:

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

responses:

'200':

description: OK (An individual EEC registration resource updated successfully).

content:

application/json:

schema:

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

'204':

description: >

No Content (An individual EEC registration resource 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'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

EECRegistration:

description: Describes the parameters to perform EEC Registration related operations.

type: object

properties:

eecId:

type: string

description: Represents a unique identifier of the EEC.

ueId:

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

acProfs:

type: array

items:

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

description: Profiles of ACs for which the EEC provides edge enabling services.

expTime:

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

eecSvcContSupp:

type: array

items:

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

description: Profiles of ACs for which the EEC provides edge enabling services.

eecCntxId:

type: string

description: Identifier of the EEC context obtained from a previous registration.

srcEesId:

type: string

description: Identifier of the EES that provided EEC context ID.

endPt:

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

unfulfilledAcProfs:

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

required:

- eecId

ACProfile:

description: ECS service provisioning response information.

type: object

properties:

acId:

type: string

description: Identity of the AC.

acType:

type: string

description: The category or type of AC.

prefEcsps:

type: array

items:

type: string

description: Indicates to the ECS which ECSPs are preferred for the AC.

acSchedule:

$ref: 'TS29122\_CpProvisioning.yaml#/components/schemas/ScheduledCommunicationTime'

expAcGeoServArea:

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

acSvcContSupp:

type: array

items:

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

description: Profiles of ACs for which the EEC provides edge enabling services.

simInactTime:

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

eass:

type: array

items:

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

minItems: 1

description: List of EAS information.

required:

- acId

EasDetail:

description: EAS details.

type: object

properties:

easId:

type: string

description: Application identifier of the EAS.

expectedSvcKPIs:

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

minimumReqSvcKPIs:

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

required:

- easId

ACServiceKPIs:

description: EAS details.

type: object

properties:

connBand:

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

reqRate:

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

respTime:

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

avail:

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

reqComp:

type: string

description: The compute resources required by the AC.

reqGrapComp:

type: string

description: The graphical compute resources required by the AC.

reqMem:

type: string

description: The memory resources required by the AC.

reqStrg:

type: string

description: The storage resources required by the AC.

EECRegistrationPatch:

description: Describes the parameters to perform EEC Registration update.

type: object

properties:

acProfs:

type: array

items:

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

description: Profiles of ACs for which the EEC provides edge enabling services.

expTime:

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

unfulfilledAcProfs:

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

UnfulfilledAcProfile:

description: Desrcibes AC Profile ID and reason sent by EES in EEC Register response.

type: object

properties:

acId:

type: string

description: The AC ID of a AC profile.

reason:

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

UnfulfillACProfRsn:

anyOf:

- type: string

enum:

- EAS\_NOT\_AVAILABLE

- REQ\_UNFULFILLED

- type: string

description: >

This string provides forward-compatibility with future extensions to the

enumeration and is not used to encode content defined in the present version

of this API.

description: |

Represents reason for unfulfilled AC profile requirements.

Possible values are:

- EAS\_NOT\_AVAILABLE: EAS is not available.

- REQ\_UNFULFILLED: Requirements cannot be fulfilled.

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