**3GPP TSG CT WG3 Meeting #138 *C3-246116***

**Orlando, US, 18 - 22 November, 2024 (Revision of C3-246116)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.522** | **CR** | **1429** | **rev** | **1** | **Current version:** | **19.0.0** |  |
|  | | | | | | | | |
| *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 |  | Radio Access Network |  | Core Network | **X** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | IMS Event Exposure Services OpenAPI file definition | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NG\_RTC\_Ph2 | | | | |  | ***Date:*** | | | 2024-11-23 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-19 |
|  | *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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | As per SA2#165 agreed S2-2410974 and S2-2411188, A new NEF service, including SUBSCRIBE/UNSUBSCRIBE/NOTIFY service operations, is defined for the IMS events and event categories. Event categories include a collection of individual events.  There is a need for defining the corresponding stage 3 OpenAPI file definitions. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | IMS Event Exposure openAPI is defined to subscribe/unsubscribe/notify framework for IMS event exposurein NEF. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | There is a gap between stage 2 and stage 3 for Nnef\_ImsEventExposure OpenAPI file definitions. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | A.36 (new) | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 23.228 CR 1409  TS 23.502 CR 4872 | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | The CR introduces a new OpenAPI file of the ImsEventExposure API. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

# A.36 ImsEventExposure API

openapi: 3.0.0

info:

title: 3gpp-ims-ee

version: 1.0.0-alpha.1

description: |

API for IMS EE Services.

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externalDocs:

description: >

3GPP TS 29.522 V19.1.0; 5G System; Network Exposure Function Northbound APIs.

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.522/'

servers:

- url: '{apiRoot}/3gpp-ims-ee/v1'

variables:

apiRoot:

default: https://example.com

description: apiRoot as defined in clause 5.2.4 of 3GPP TS 29.122.

security:

- {}

- oAuth2ClientCredentials: []

paths:

/{afId}/subscriptions:

parameters:

- name: afId

in: path

description: Represents the identifier of the AF

required: true

schema:

type: string

get:

summary: Retrieve all the active IMS EE Services Subscriptions managed by the NEF.

operationId: GetIMSEESubsc

tags:

- IMS EE Services Subscriptions (Collection)

responses:

'200':

description: >

OK. All the Individual IMS EE Servcies Subscription resource(s) managed

by the NEF are returned.

If there are no active Individual IMS EE Servcies Subscription resources

at the NEF, an empty array is returned.

content:

application/json:

schema:

type: array

items:

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

minItems: 0

'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'

post:

summary: Create a new IMS EE Services Subscription.

operationId: CreateIMSEvent

tags:

- IMS EE Services Subscriptions (Collection)

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'201':

description: >

Created. A representation of the created IMS EE Services

Subscription resource is returned in the response body.

content:

application/json:

schema:

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

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:

IMSEENotif:

'{$request.body#/notifUri}':

post:

requestBody:

required: true

content:

application/json:

schema:

type: array

items:

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

minItems: 1

responses:

'204':

description: >

No Content. The notification is successfully received and 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'

/{afId}/subscriptions/{subscriptionId}:

parameters:

- name: afId

in: path

description: Represents the identifier of the AF.

required: true

schema:

type: string

- name: subscriptionId

in: path

description: >

Represents the identifier of the Individual IMS EE Services Subscription

resource.

required: true

schema:

type: string

get:

summary: Retrieve an existing Individual IMS EE Services Subscription resource.

operationId: GetIndIMSEESubsc

tags:

- Individual IMS EE Services Subscription (Document)

responses:

'200':

description: >

OK. The requested Individual IMS EE Services Subscription resource is

successfully returned in the response body.

content:

application/json:

schema:

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

'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'

put:

summary: Request the update of an existing Individual IMS EE Subscription resource.

operationId: UpdateIMSEESubsc

tags:

- Individual IMS EE Subscription (Document)

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: >

OK. The Individual IMS EE Services Subscription resource is successfully

updated and a representation of the updated resource is returned in the response body.

content:

application/json:

schema:

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

'204':

description: >

No Content. The Individual IMS EE Subscription resource is

successfully updated and no content is returned in the response body.

'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'

patch:

summary: Request the Modification of an existing Individual IMS EE Subscription resource.

operationId: ModifyIndIMSEESubsc

tags:

- Individual IMS EE Subscription (Document)

requestBody:

required: true

content:

application/merge-patch+json:

schema:

type: array

items:

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

minItems: 1

responses:

'200':

description: >

OK. The Individual IMS EE Subscription resource is successfully

modified and a representation of the updated resource is returned in the response body.

content:

application/json:

schema:

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

'204':

description: >

No Content. The Individual IMS EE Subscription resource is

successfully modified and no content is returned in the response body.

'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:

summary: Request the deletion of an existing Individual IMS EE Subscription resource.

operationId: DeleteIMSEESubsc

tags:

- Individual IMS EE Services Deletion (Document)

responses:

'204':

description: >

No Content. The Individual IMS EE Services Subscription resource is

successfully deleted.

'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'

components:

securitySchemes:

oAuth2ClientCredentials:

type: oauth2

flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas:

IMSEESubsc:

description: Represents an IMS Event Exposure Subscription.

type: object

properties:

eventRepReq:

$ref: 'TS29523\_Npcf\_EventExposure.yaml#/components/schemas/ReportingInformation'

tgtUeIds:

type: array

items:

$ref: 'TS29562\_Nhss\_imsSDM.yaml#/components/schemas/PublicIdentity'

minItems: 1

description: >

Contains the list of identifier(s) of the UEs for which IMS EE Services

Reporting is requested.

anyUeInd:

type: boolean

description: >

Identifies whether the AF subscription request applies to any UE. This attribute shall

set to "true" if applicable for any UE, otherwise, set to "false".

notifUri:

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

notifId:

type: string

description: Contains the Notification Correlation ID assigned by the AF.

# Editor’s Note: The IMSEvent data type in above data type is not specified FFS depends on SA2.

# Editor’s Note: The IMSEvent data type in above data type is not specified FFS depends on SA2.

IMSEENotif:

description: Represents an IMS Event Exposure Notification.

type: object

properties:

notifId:

type: string

imsEventRpts:

type: object

additionalProperties:

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

minItems: 1

description: Contains the list of IMS Event Reporting.

required:

- notifId

- imsEventRpts

IMSEventReport:

description: Represents an IMS Event Report.

type: object

properties:

timeStamp:

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

eventRptInfo:

type: string

required:

- timestamp

# Editor’s Note: The IMSEvent data type in above data type is not specified FFS depends on SA2.

#

# SIMPLE DATA TYPES

#

#

# ENUMERATIONS DATA TYPES

#

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