**3GPP TSG-CT WG4 Meeting #105-eC4-214abc**

**E-Meeting, 17th – 27th August 2021 *was* C4-214471**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.505** | **CR** | **0381** | **rev** | **1** | **Current version:** | **17.3.0** |  |
|  | | | | | | | | |
| *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:*** | Get the specific EE data | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | C4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI17, 5G\_CIoT | | | | |  | ***Date:*** | | | 2021-08-09 |
|  |  | | | |  | |  | | |  |
| ***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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | When the UDM received multiple EE subscription with regards to loss of connectivity and/or UE reachability, the UDM is the aggregator of the multiple values of the Maximum Latency, Maximum Latency, Maximum Response Time and/or Suggested number of downlink packets, we can read the details in 29.503 clause 4.15.3.2.3b.  The UDM has to calculate/re-calculate to new values of the Maximum Latency, Maximum Latency, Maximum Response Time and/or Suggested number of downlink packets, and then send them to related AMFs when receive a new subscription or an existing subscription is unsubscribed or expires. During every calculation, the UDM need to get the all existing subscriptions of loss of connectivity and/or UE reachability events which are still valid to recalculate the values, It's suggested that the UDM only get the needed data to avoid getting the huge unnecessary data which wastes the network bandwidth, but in the existing definition, there is only service operation to get all the subscription data of the user (i.e. not only the data related to loss of connectivity and/or UE reachability events, but also the data with regards to other events) in Nudr.  Based on information above, it's suggested to introduce that the UDM can indicate the event types and then the UDR only need to return the related EE Subscription data when the UDM retrieves EE subscriptions from the UDR. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Adds the event-types in URI query parameters of GET method on EeSubscriptions resource | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The existing defintion of obtaining EE Subscriptions is not efficient for getting the specific Monitoring Configuration data in different EE Subscriptions. It will cost multiple times of the bandwidth because of lots of extra data in the returned message. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.2.18.2, 5.2.18.3.1, 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 new feature to the OpenAPI TS29504\_Nudr\_DR API. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Rev1:   1. Correct the impacted OpenAPI in Other comments: of cover page. 2. Removed the misplaced text (Option 1) right before the “Begin of Changes” header. | | | | | | | | |

\* \* \* Begin of Changes \* \* \* \*

#### 5.2.18.2 Resource Definition

Resource URI: {apiRoot}/nudr-dr/<apiVersion>/subscription-data/{ueId}/context-data/ee-subscriptions

This resource shall support the resource URI variables defined in table 5.2.18.2-1.

Table 5.2.18.2-1: Resource URI variables for this resource

|  |  |
| --- | --- |
| Name | Definition |
| apiRoot | See 3GPP TS 29.504 [2] clause 6.1.1 |
| ueId | Represents the Subscription Identifier SUPI or GPSI (see 3GPP TS 23.501 [4] clause 5.9.2)  pattern: See pattern of type VarUeId 3GPP TS 29.571 [3] |

#### 5.2.18.3 Resource Standard Methods

##### 5.2.18.3.1 GET

This method shall support the URI query parameters specified in table 5.2.18.3.1-1.

Table 5.2.18.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| supported-features | SupportedFeatures | O | 0..1 | see 3GPP TS 29.500 [8] clause 6.6 |
| event-types | array(EventType) | O | 1..N | Indicates only to return the EE subscription data which contains at least one of the indicated Event Types and returned monitoring configuration data in EE subscription data only contains the data related to the indicated event types. |

This method shall support the request data structures specified in table 5.2.18.3.1-2 and the response data structures and response codes specified in table 5.2.18.3.1-3.

Table 5.2.18.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 5.2.18.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| array(EeSubscription) | M | 1..N | 200 OK | Upon success, a response body containing the individual EE subscriptions shall be returned. |
| NOTE: In addition common data structures as listed in table 5.5-1 are supported. | | | | |

\* \* \* Next Change \* \* \* \*

## A.2 Nudr\_DataRepository API for Subscription Data

For the purpose of referencing entities in the Open API file defined in this Annex, it shall be assumed that this Open API file is contained in a physical file named "TS29505\_Subscription\_Data.yaml".

openapi: 3.0.0

***(… text not shown for clarity …)***

/subscription-data/{ueId}/context-data/ee-subscriptions:

get:

summary: Retrieves the ee subscriptions of a UE

operationId: Queryeesubscriptions

tags:

- Event Exposure Subscriptions (Collection)

security:

- {}

- oAuth2ClientCredentials:

- nudr-dr

- oAuth2ClientCredentials:

- nudr-dr

- nudr-dr:subscription-data

parameters:

- name: ueId

in: path

description: UE id

required: true

schema:

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

- name: supported-features

in: query

description: Supported Features

schema:

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

- name: event-types

in: query

required: false

description: Event Types

schema:

type: array

items:

$ref: 'TS29503\_Nudm\_EE.yaml#/components/schemas/EventType'

minItems: 1

style: form

explode: false

responses:

'200':

description: Expected response to a valid request

content:

application/json:

schema:

type: array

items:

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

default:

$ref: 'TS29571\_CommonData.yaml#/components/responses/default'

***(… text not shown for clarity …)***

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