**3GPP TSG-CT3 Meeting #119-e *C3-216315***

**E-Meeting, 11th – 19th November 2021 (Revision of C3-21xxxx)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.522** | **CR** | **0464** | **rev** | **-** | **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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Correction on Nef\_AKMA\_ApplicationKey\_Get service operation on sending UE ID to the AKMA AF | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | China Mobile Communications Group Co.,Ltd., Huawei, Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | AKMA-CT | | | | |  | ***Date:*** | | | 2021-11-04 |
|  |  | | | |  | |  | | |  |
| ***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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | According to CR 0108 of 3GPP TS 33.535, for the AKMA AF to authorize the UE (e.g., for charging and/or service authorization purposes), a UE identifier needs to be provided to the AKMA AF. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | If the AKMA AF is outside the operator network, the AAnF provide the SUPI to the NEF. And then the NEF translates SUPI to GPSI (external ID) and sends the GPSI to AF out of operator network. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | AKMA AF may not be able to authorize the UE | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.4.23.2, 5.14.5.2, 5.14.5.3.3, A.12 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 33.535 CR 0108 | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | The CR introduce backward compatible feature to the OpenAPI file for AKMA API. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\*\*\* 1st Change \*\*\*

#### 4.4.23.2 AKMA Application Key Request

In order to retrieve the AKMA application key, the AF shall send an HTTP POST request message to the resource URI "{apiRoot}/3gpp-akma/v1/retrieve". The HTTP POST request includes the identification of AF and an A-KID.

Upon receipt of the corresponding HTTP POST message from the AF, if the AF's request is authorized by the NEF, then the NEF shall interact with the AAnF to retrieve the AKMA application key by using Naanf\_AKMA service as defined in 3GPP TS 29.535 [38]. After receiving a successful response from the AAnF, the NEF shall respond to the AF with a 200 OK status code, including a KAF and the expiration time of the KAF and optionally the GPSI (external ID) which may be translated from the SUPI received from the AAnF. If the NEF receives an error code from the AAnF, the NEF shall respond to the AF with a proper error status code.

\*\*\* 2nd Change \*\*\*

#### 5.14.5.2 Reused data types

The data types reused by the AKMA API from other specifications are listed in table 514.5.2-1.

Table 5.14.5.2-1: Re-used Data Types

|  |  |  |
| --- | --- | --- |
| Data type | Reference | Comments |
| DateTime | 3GPP TS 29.122 [4] |  |
| Gpsi | 3GPP TS 29.571 [8] |  |
| Supi | 3GPP TS 29.571 [8] |  |
| SupportedFeatures | 3GPP TS 29.571 [8] | Used to negotiate the applicability of the optional features. |

\*\*\* 3rd Change \*\*\*

##### 5.14.5.3.3 Type: AkmaAfKeyData

Table 5.14.5.3.3-1: Definition of type AkmaAfKeyData

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability  (NOTE) |
| kaf | string | M | 1 | KAF |  |
| expiry | DateTime | M | 1 | Expiration time of KAF. |  |
| gpsi | Gpsi | O | 0..1 | Indicates an external ID or an MSISDN of the UE. |  |
| supi | Supi | C | 0..1 | Indicates the SUPI of the UE. |  |
| suppFeat | SupportedFeatures | O | 0..1 | Indicates the features supported by both the AF and the NEF. |  |
| NOTE x: Properties marked with a feature as defined in subclause 5.14.6 are applicable as described in subclause 5.2.7 of 3GPP TS 29.122 [4]. If no feature is indicated, the related property applies for all the features.  NOTE y: When the "AkmaAfKeyData" data structure is used in the current release of this specification, the "gpsi" attribute may be included and the "supi" attribute is not applicable. | | | | | |

\*\*\* 4th Change \*\*\*

# A.12 AKMA API

openapi: 3.0.0

info:

title: 3gpp-akma

version: 1.0.0-alpha.3

description: |

API for AKMA.

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externalDocs:

description: 3GPP TS 29.522 V17.2.0; 5G System; Network Exposure Function Northbound APIs.

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

security:

- {}

- oAuth2ClientCredentials: []

servers:

- url: '{apiRoot}/3gpp-akma/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/retrieve:

post:

summary: Retrieve AKMA Application Key Information.

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: The requested information was returned successfully.

content:

application/json:

schema:

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

'204':

description: No Content.

'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:

AkmaAfKeyRequest:

description: Represents the parameters to request the retrieval of AKMA Application Key information.

type: object

properties:

suppFeat:

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

afId:

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

aKId:

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

required:

- afId

- aKId

AkmaAfKeyData:

description: Represents AKMA Application Key information data.

type: object

properties:

suppFeat:

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

expiry:

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

gpsi:

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

kaf:

type: string

supi:

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

required:

- kaf

- expiry

AfId:

description: Represents an AF identifier.

type: string

AKId:

description: Represents an AKMA Key Identifier.

type: string

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