**3GPP TSG- Meeting #**

**, , - (revision of *C3-253178*)**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.222** | **CR** |  | **rev** | **1** | **Current version:** | **19.3.0** |  |
|  | | | | | | | | |
| *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:*** | Network Slice Information in the CAPIF\_Access\_Control\_Policy\_API | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | CAPIF\_Ph3 | | | | |  | ***Date:*** | | | 2025-08-28 |
|  |  | | | |  | |  | | |  |
| ***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 defined in TS 23.222 clause 8.12.2.2, support for Network Slice Information is needed as part of the procedure AEF obtaining service API access control policy. This enhancement allows to obtain access control policy response from the CAPIF core function to the AEF.  The access control policy information referring to the Annex E(See Table E-1) has defined the parameter Network Slice Info.  In 29.222 the AEF obtains the access control policy by using CAPIF\_Access\_Control\_Policy\_API. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | This CR proposes to implement network slice information per service API within newly defined netSliceInfo attribute within the ApiInvokerPolicy data type to obtain access control policy response. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Misalignment with stage-2 requirement. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 8.6.4.1, 8.6.4.2.3, 8.6.6, A.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 introduces backward compatible feature to the following API: TS29222\_CAPIF\_Access\_Control\_Policy\_API.yaml | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

#### 8.6.4.1 General

This clause specifies the application data model supported by the API. Data types listed in clause 7.2 also apply to this API.

Table 8.6.4.1-1 specifies the data types defined specifically for the CAPIF\_Access\_Control\_Policy\_API service.

Table 8.6.4.1-1: CAPIF\_Access\_Control\_Policy\_API specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Section defined | Description | Applicability |
| AccessControlPolicyList | Clause 8.6.4.2.2 | Represents the access control policy list for a published service API. |  |
| ApiInvokerPolicy | Clause 8.6.4.2.3 | Represents the policy of an API Invoker. |  |
| TimeRangeList | Clause 8.6.4.2.4 | Represents the time range during which the invocation of a service API is allowed by the API invoker. |  |

Table 8.6.4.1-2 specifies data types re-used by the CAPIF\_Access\_Control\_Policy\_API service.

Table 8.6.4.1-2: Re-used Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
| DateTime | 3GPP TS 29.122 [14] | Used to indicate start and end times. |  |
| NetSliceId | 3GPP TS 29.435 [31] | Represents the identification information of a network slice. | CAPIF\_Ext1 |
| SupportedFeatures | 3GPP TS 29.571 [19] | Used to negotiate the applicability of optional features defined in table 8.6.6-1. |  |

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

##### 8.6.4.2.3 Type: ApiInvokerPolicy

Table 8.6.4.2.3-1: Definition of type ApiInvokerPolicy

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| apiInvokerId | string | M | 1 | API invoker ID assigned by the CAPIF core function |  |
| allowedTotalInvocations | integer | O | 0..1 | Total number of invocations allowed on the service API by the API invoker. |  |
| allowedInvocationsPerSecond | integer | O | 0..1 | Invocations per second allowed on the service API by the API invoker. |  |
| allowedInvocationTimeRangeList | array(TimeRangeList) | O | 0..N | The time ranges during which the invocations are allowed on the service API by the API invoker. |  |
| netSliceInfo | array(NetSliceId) | O | 1..N | Represents the applicable network slice identifiers. | CAPIF\_Ext1 |

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

### 8.6.6 Feature negotiation

General feature negotiation procedures are defined in clause 7.8.

Table 8.6.6-1: Supported Features

|  |  |  |
| --- | --- | --- |
| **Feature number** | **Feature Name** | **Description** |
| 1 | CAPIF\_Ext1 | Indicates the support of the enhancements for CAPIF functionality.  Within this feature, the following enhancements are covered:  - Support of the service API access control policy based on the supported network slice. |

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

# A.7 CAPIF\_Access\_Control\_Policy\_API

openapi: 3.0.0

info:

title: CAPIF\_Access\_Control\_Policy\_API

description: |

API for access control policy.

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version: "1.3.0"

externalDocs:

description: 3GPP TS 29.222 V18.6.0 Common API Framework for 3GPP Northbound APIs

url: https://www.3gpp.org/ftp/Specs/archive/29\_series/29.222/

servers:

- url: '{apiRoot}/access-control-policy/v1'

variables:

apiRoot:

default: https://example.com

description: apiRoot as defined in clause 7.5 of 3GPP TS 29.222

paths:

/accessControlPolicyList/{serviceApiId}:

get:

description: Retrieves the access control policy list.

parameters:

- name: serviceApiId

in: path

description: Identifier of a published service API

required: true

schema:

type: string

- name: aef-id

in: query

required: true

description: Identifier of the AEF

schema:

type: string

- name: api-invoker-id

in: query

description: Identifier of the API invoker

schema:

type: string

- name: supported-features

in: query

description: To filter irrelevant responses related to unsupported features

schema:

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

responses:

'200':

description: OK.

content:

application/json:

schema:

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

'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'

'414':

$ref: 'TS29122\_CommonData.yaml#/components/responses/414'

'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:

schemas:

AccessControlPolicyList:

type: object

description: Represents the access control policy list for a published service API.

properties:

apiInvokerPolicies:

type: array

items:

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

minItems: 0

description: Policy of each API invoker.

ApiInvokerPolicy:

type: object

description: Represents the policy of an API Invoker.

properties:

apiInvokerId:

type: string

description: API invoker ID assigned by the CAPIF core function

allowedTotalInvocations:

type: integer

description: Total number of invocations allowed on the service API by the API invoker.

allowedInvocationsPerSecond:

type: integer

description: Invocations per second allowed on the service API by the API invoker.

allowedInvocationTimeRangeList:

type: array

items:

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

minItems: 0

description: >

The time ranges during which the invocations are allowed on the service API

by the API invoker.

netSliceInfo:

type: array

items:

$ref: 'TS29435\_NSCE\_PolicyManagement.yaml#/components/schemas/NetSliceId'

minItems: 1

required:

- apiInvokerId

TimeRangeList:

type: object

description: >

Represents the time range during which the invocation of a service API is allowed

by the API invoker.

properties:

startTime:

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

stopTime:

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

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