**TSG-CT WG3 Meeting #116-e *C3-213388***

**E-Meeting, 19th – 28th May 2021 (Revision of C3-213182)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.222** | **CR** | **0207** | **rev** | **1** | **Current version:** | **17.0.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

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

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Support redirection and mandatory error codes for CAPIF APIs | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NBI17 | | | | |  | ***Date:*** | | | 2021-05-12 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***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:*** | | It was agreed to enable the CAPIF APIs from Release 17 to support the redirection functionality as described in subclause 5.2.10 of TS 29.122.  In addition, support of mandatory HTTP error status codes is missed for each HTTP operation on resource definition. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | * redirection support in the resource methods; * support of mandatory HTTP error status codes for each HTTP operation on resource definition. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Lack of full support of the redirection functionality and for mandatory HTTP error status codes, the definition in main body misaligns with OpenAPI file. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 8.1.2.2.3.1; 8.2.2.2.3.1; 8.2.2.2.3.2; 8.2.2.3.3.1; 8.2.2.3.3.2; 8.2.2.3.3.3; 8.3.2.2.3.1; 8.3.2.3.3.1; 8.3.3.2.2; 8.4.2.2.3.1; 8.4.2.3.3.2; 8.4.2.3.3.1; 8.4.3.2.2; 8.4.3.3.2; 8.5.2.3.3.1; 8.5.2.3.3.2; 8.5.2.3.3.3; 8.5.2.3.4.2.2; 8.5.2.3.4.3.2; 8.5.2.3.4.4.2; 8.5.3.2.2; 8.6.2.2.3.1; 8.7.2.2.3.1; 8.8.2.2.3.1; 8.9.2.2.3.1; 8.9.2.3.3.1; 8.9.2.3.3.2; 8.10.2.2.3.1; 9.1.2a.2.2; 9.1.2a.3.2; A.2; A.3; A.4; A.5; A.6; A.7; A.9; A.10; A.11; A.12 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 corrections on OpenAPI files for CAPIF\_Discover\_Service\_API, CAPIF\_Publish\_Service\_API, CAPIF\_Events\_API, CAPIF\_API\_Invoker\_Management\_API, CAPIF\_Security\_API, CAPIF\_Access\_Control\_Policy\_API, CAPIF\_Auditing\_API, AEF\_Security\_API, CAPIF\_API\_Provider\_Management\_API and CAPIF\_Routing\_Info\_API.  When implementing this CR clause 8.4.2.3.3.2 should be moved after clause 8.4.2.3.3.2. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**Additional discussion(if needed):**

**Proposed changes:**

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

###### 8.1.2.2.3.1 GET

This operation retrieves a list of APIs currently registered in the CAPIF core function, satisfying a number of filter criteria.

Table 8.1.2.2.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description | Applicability |
| api-invoker-id | string | M | 1 | String identifying the API invoker assigned by the CAPIF core function. It also represents the CCF identifier in the CAPIF-6/6e reference point. |  |
| api-name | string | O | 0..1 | API name, it is set as {apiName} part of the URI structure as defined in subclause 4.4 of 3GPP TS 29.501 [18]. |  |
| api-version | string | O | 0..1 | API major version in the URI (e.g. v1) |  |
| comm-type | CommunicationType | O | 0..1 | Communication type used by the API (e.g.REQUEST\_RESPONSE). |  |
| protocol | Protocol | O | 0..1 | Protocol used by the API. |  |
| aef-id | string | O | 0..1 | AEF identifier. |  |
| data-format | DataFormat | O | 0..1 | Data format used by the API (e.g. serialization protocol JSON used). |  |
| api-cat | string | O | 0..1 | The service API category to which the service API belongs to. |  |
| supported-features | SupportedFeatures | O | 0..1 | To filter irrelevant responses related to unsupported features. |  |
| api-supported-features | SupportedFeatures | C | 0..1 | Features supported by the discovered service API indicated by api-name parameter. This may only be present if api-name query parameter is present. | ApiSupportedFeatureQuery |

This method shall support the request data structures specified in table 8.1.2.2.3.1-2 and the response data structures and response codes specified in table 8.1.2.2.3.1-3.

Table 8.1.2.2.3.1-2: Data structures supported by the GET Request Body on this resource

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

Table 8.1.2.2.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| DiscoveredAPIs | M | 1 | 200 OK | The response body contains the result of the search over the list of registered APIs. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during resource retrieval. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during resource retrieval. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| ProblemDetails | O | 0..1 | 414 URI Too Long | Indicates that the server is refusing to service the request because the request-target is too long. |
| NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.1.2.2.3.1-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

Table 8.1.2.2.3.1-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

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

###### 8.2.2.2.3.1 POST

This method shall support the URI query parameters specified in table 8.2.2.2.3.1-1.

Table 8.2.2.2.3.1-1: URI query parameters supported by the POST method on this resource

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

This method shall support the request data structures specified in table 8.2.2.2.3.1-2 and the response data structures and response codes specified in table 8.2.2.2.3.1-3.

Table 8.2.2.2.3.1-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| ServiceAPIDescription | M | 1 | Definition of the service API being published |

Table 8.2.2.2.3.1-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| ServiceAPIDescription | M | 1 | 201 Created | Service API published successfully.  The URI of the created resource shall be returned in the "Location" HTTP header |
| NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.2.2.2.3.1-4: Headers supported by the 201 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains the URI of the newly created resource, according to the structure: {apiRoot}/published-apis/<apiVersion>/{apfId}/service-apis/{serviceApiId} |

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

###### 8.2.2.2.3.2 GET

This method shall support the URI query parameters specified in table 8.2.2.2.3.2-1.

Table 8.2.2.2.3.2-1: URI query parameters supported by the GET method on this resource

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

This method shall support the request data structures specified in table 8.2.2.2.3.2-2 and the response data structures and response codes specified in table 8.2.2.2.3.2-3.

Table 8.2.2.2.3.2-2: Data structures supported by the GET Request Body on this resource

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

Table 8.2.2.2.3.2-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| array(ServiceAPIDescription) | O | 0..N | 200 OK | Definition of all service API(s) published by the API publishing function. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during resource retrieval. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during resource retrieval. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.2.2.2.3.2-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

Table 8.2.2.2.3.2-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

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

###### 8.2.2.3.3.1 GET

This method shall support the URI query parameters specified in table 8.2.2.3.3.1-1.

Table 8.2.2.3.3.1-1: URI query parameters supported by the GET method on this resource

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

This method shall support the request data structures specified in table 8.2.2.3.3.1-2 and the response data structures and response codes specified in table 8.2.2.3.3.1-3.

Table 8.2.2.3.3.1-2: Data structures supported by the GET Request Body on this resource

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

Table 8.2.2.3.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| array(ServiceAPIDescription) | O | 0..N | 200 OK | Definition of all service API published by the API publishing function. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during resource retrieval. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during resource retrieval. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.2.2.3.3.1-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

Table 8.2.2.3.3.1-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

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

###### 8.2.2.3.3.2 PUT

This method shall support the URI query parameters specified in table 8.2.2.3.3.2-1.

Table 8.2.2.3.3.2-1: URI query parameters supported by the PUT method on this resource

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

This method shall support the request data structures specified in table 8.2.2.3.3.2-2 and the response data structures and response codes specified in table 8.2.2.3.3.2-3.

Table 8.2.2.3.3.2-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| ServiceAPIDescription | M | 1 | Updated definition of the service API. |

Table 8.2.2.3.3.2-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| ServiceAPIDescription | M | 1 | 200 OK | Definition of the service API updated successfully. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during resource modification. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during resource modification. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| NOTE: The mandatory HTTP error status codes for the PUT method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.2.2.3.3.2-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

Table 8.2.2.3.3.2-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

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

###### 8.2.2.3.3.3 DELETE

This method shall support the URI query parameters specified in table 8.2.2.3.3.3-1.

Table 8.2.2.3.3.3-1: URI query parameters supported by the GET method on this resource

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

This method shall support the request data structures specified in table 8.2.2.3.3.3-2 and the response data structures and response codes specified in table 8.2.2.3.3.3-3.

Table 8.2.2.3.3.3-2: Data structures supported by the DELETE Request Body on this resource

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

Table 8.2.2.3.3.3-3: Data structures supported by the DELETE Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | The individual published service API matching the serviceApiId is deleted. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during resource termination. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during resource termination. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.2.2.3.3.3-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

Table 8.2.2.3.3.3-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

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

###### 8.3.2.2.3.1 POST

This method shall support the URI query parameters specified in table 8.3.2.2.3.1-1.

Table 8.3.2.2.3.1-1: URI query parameters supported by the POST method on this resource

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

This method shall support the request data structures specified in table 8.3.2.2.3.1-2 and the response data structures and response codes specified in table 8.3.2.2.3.1-3.

Table 8.3.2.2.3.1-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| EventSubscription | M | 1 | Create a new individual CAPIF Events Subscription resource. |

Table 8.3.2.2.3.1-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| EventSubscription | M | 1 | 201 Created | CAPIF Events Subscription resource created successfully.  The URI of the created resource shall be returned in the "Location" HTTP header |
| NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.3.2.2.3.1-4: Headers supported by the 201 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains the URI of the newly created resource, according to the structure: {apiRoot}/capif-events/<apiVersion>/{subscriberId}/subscriptions/{subscriptionId} |

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

###### 8.3.2.3.3.1 DELETE

This method shall support the URI query parameters specified in table 8.3.2.3.3.1-1.

Table 8.3.2.3.3.1-1: URI query parameters supported by the DELETE method on this resource

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

This method shall support the request data structures specified in table 8.3.2.3.3.1-2 and the response data structures and response codes specified in table 8.3.2.3.3.1-3.

Table 8.3.2.3.3.1-2: Data structures supported by the DELETE Request Body on this resource

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

Table 8.3.2.3.3.1-3: Data structures supported by the DELETE Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | The individual CAPIF Events Subscription matching the subscriptionId is deleted. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during resource termination. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during resource termination. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.3.2.3.3.1-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

Table 8.3.2.3.3.1-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

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

##### 8.3.3.2.2 Notification definition

The POST method shall be used for Event notification and the URI shall be the one provided by the Subscriber during the subscription to the event.

Callback URI: **{notificationDestination}**

This method shall support the URI query parameters specified in table 8.3.3.2.2.1-1.

Table 8.3.3.2.2-1: URI query parameters supported by the POST method on this resource

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

This method shall support the request data structures specified in table 8.3.3.2.2-2 and the response data structures and response codes specified in table 8.3.3.2.2-3.

Table 8.3.3.2.2-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| EventNotification | M | 1 | Notification information of a CAPIF Event |

Table 8.3.3.2.2-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response codes | Description |
| n/a |  |  | 204 No Content | The receipt of the Notification is acknowledged. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during notification. The response shall include a Location header field containing an alternative URI representing the end point of an alternative notification destination where the notification should be sent.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [4]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during notification. The response shall include a Location header field containing an alternative URI representing the end point of an alternative notification destination where the notification should be sent.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [4]. |
| NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.3.3.2.2-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI representing the end point of an alternative notification destination towards which the notification should be redirected. |

Table 8.3.3.2.2-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI representing the end point of an alternative notification destination towards which the notification should be redirected. |

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

###### 8.4.2.2.3.1 POST

This method shall support the URI query parameters specified in table 8.4.2.2.3.1-1.

Table 8.4.2.2.3.1-1: URI query parameters supported by the POST method on this resource

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

This method shall support the request data structures specified in table 8.4.2.2.3.1-2 and the response data structures and response codes specified in table 8.4.2.2.3.1-3.

Table 8.4.2.2.3.1-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| APIInvokerEnrolmentDetails | M | 1 | Enrolment details of the API invoker including notification destination URI for any on-boarding related notifications and an optional list of APIs the API invoker intends to invoke while on-board. |

Table 8.4.2.2.3.1-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| APIInvokerEnrolmentDetails | M | 1 | 201 Created | API invoker on-boarded successfully  The URI of the created resource shall be returned in the "Location" HTTP header. A list of APIs the API invoker is allowed to invoke while on-board may also be included as part of the APIInvokerEnrolmentDetails which is provided in the response body, if requested in the POST request. |
| n/a |  |  | 202 Accepted | The CAPIF core has accepted the Onboarding request and is processing it. When processing is completed, the CAPIF core function will send a Notify\_Onboarding\_Completion notification to the requesting API invoker. See subclause 8.4.3.2. |
| NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.4.2.2.3.1-4: Headers supported by the 201 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains the URI of the newly created resource, according to the structure: {apiRoot}/api-invoker-management/<apiVersion>/onboardedInvokers/{onboardingId} |

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

###### 8.4.2.3.3.2 PUT

The PUT method allows updating the API invoker details of the onboarded API invoker. This method shall support the URI query parameters specified in table 8.4.2.3.3.2-1.

Table 8.4.2.3.3.2-1: URI query parameters supported by the PUT method on this resource

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

This method shall support the request data structures specified in the table 8.4.2.3.3.2-2 and the response data structures and response codes specified in the table 8.4.2.3.3.2-3.

Table 8.4.2.3.3.2-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| APIInvokerEnrolmentDetails | M | 1 | Updated details of the API invoker and a notification destination URI for any update request related notifications. |

Table 8.4.2.3.3.2-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| APIInvokerEnrolmentDetails | M | 1 | 200 OK | API invoker’s information updated successfully.  Updated details of the API invoker as part of the APIInvokerEnrolmentDetails, which is provided in the response body. |
| n/a |  |  | 202 Accepted | The CAPIF core has accepted the Update details request and is processing it. When processing is completed, the CAPIF core function will send a Notify\_Update\_Completion notification to the requesting API invoker. See sub clause 8.4.3.3. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during resource modification. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during resource modification. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| NOTE: The mandatory HTTP error status codes for the PUT method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.4.2.3.3.2-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

Table 8.4.2.3.3.2-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

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

###### 8.4.2.3.3.1 DELETE

This method shall support the URI query parameters specified in table 8.4.2.3.3.1-1.

Table 8.4.2.3.3.1-1: URI query parameters supported by the DELETE method on this resource

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

This method shall support the response codes specified in table 8.4.2.3.3.1-2 and the response data structures and response codes specified in table 8.4.2.3.3.1-3.

Table 8.4.2.3.3.1-2: Data structures supported by the DELETE Request Body on this resource

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

Table 8.4.2.3.3.1-3: Data structures supported by the DELETE Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | The individual on-boarded API invoker matching the onboardingId is deleted |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during resource termination. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during resource termination. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.4.2.3.3.1-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

Table 8.4.2.3.3.1-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

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

##### 8.4.3.2.2 Notification definition

The POST method shall be used for Notify\_Onboarding\_Completion and the URI shall be the one provided by the API invoker during the on-boarding request.

Callback URI: **{notificationDestination}**

This method shall support the URI query parameters specified in table 8.4.3.2.2-1.

Table 8.4.3.2.2-1: URI query parameters supported by the POST method on this resource

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

This method shall support the request data structures specified in table 8.4.3.2.2-2 and the response data structures and response codes specified in table 8.4.3.2.2-3.

Table 8.4.3.2.2-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| OnboardingNotification | M | 1 | Notification with on-boarding result |

Table 8.4.3.2.2-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response codes | Description |
| n/a |  |  | 204 No Content | The receipt of the Notification is acknowledged. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during notification. The response shall include a Location header field containing an alternative URI representing the end point of an alternative notification destination where the notification should be sent.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [4]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during notification. The response shall include a Location header field containing an alternative URI representing the end point of an alternative notification destination where the notification should be sent.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [4]. |
| NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.4.3.2.2-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI representing the end point of an alternative notification destination towards which the notification should be redirected. |

Table 8.4.3.2.2-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI representing the end point of an alternative notification destination towards which the notification should be redirected. |

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

##### 8.4.3.3.2 Notification definition

The POST method shall be used for Notify\_Update\_Completion and the URI shall be the one provided by the API invoker during the API invoker details update request.

Callback URI: **{notificationDestination}**

This method shall support the URI query parameters specified in table 8.4.3.3.2-1.

Table 8.4.3.3.2-1: URI query parameters supported by the POST method on this resource

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

This method shall support the request data structures specified in table 8.4.3.3.2-2 and the response data structures and response codes specified in table 8.4.3.3.2-3.

Table 8.4.3.3.2-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| OnboardingNotification | M | 1 | Notification with API Invoker’s details update result. |

Table 8.4.3.3.2-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response codes | Description |
| n/a |  |  | 204 No Content | The receipt of the Notification is acknowledged. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during notification. The response shall include a Location header field containing an alternative URI representing the end point of an alternative notification destination where the notification should be sent.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [4]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during notification. The response shall include a Location header field containing an alternative URI representing the end point of an alternative notification destination where the notification should be sent.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [4]. |
| NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.4.3.3.2-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI representing the end point of an alternative notification destination towards which the notification should be redirected. |

Table 8.4.3.3.2-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI representing the end point of an alternative notification destination towards which the notification should be redirected. |

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

###### 8.5.2.3.3.1 GET

This method shall support the URI query parameters specified in table 8.5.2.3.3.1-1.

Table 8.5.2.3.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| authentication | boolean | O | 0..1 | When set to 'true', it indicates the CAPIF core function to send the authentication information of the API invoker. Set to false or omitted otherwise. |
| authorization | boolean | O | 0..1 | When set to 'true', it indicates the CAPIF core function to send the authorization information of the API invoker. Set to false or omitted otherwise. |

This method shall support the request data structures specified in table 8.5.2.3.3.1-2 and the response data structures and response codes specified in table 8.5.2.3.3.1-3.

Table 8.5.2.3.3.1-2: Data structures supported by the GET Request Body on this resource

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

Table 8.5.2.3.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| ServiceSecurity | M | 1 | 200 OK | The security related information of the API Invoker based on the request from the API exposing function. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during resource retrieval. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during resource retrieval. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.5.2.3.3.1-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

Table 8.5.2.3.3.1-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

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

###### 8.5.2.3.3.2 DELETE

This method shall support the URI query parameters specified in table 8.5.2.3.3.2-1.

Table 8.5.2.3.3.2-1: URI query parameters supported by the DELETE method on this resource

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

This method shall support the request data structures specified in table 8.5.2.3.3.2-2 and the response data structures and response codes specified in table 8.5.2.3.3.2-3.

Table 8.5.2.3.3.2-2: Data structures supported by the DELETE Request Body on this resource

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

Table 8.5.2.3.3.2-3: Data structures supported by the DELETE Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | Authorization of the API invoker revoked, and a notification is sent to the API invoker as specified in subclause 8.5.3.2 |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during resource termination. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during resource termination. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.5.2.3.3.2-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

Table 8.5.2.3.3.2-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

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

###### 8.5.2.3.3.3 PUT

This method shall support the URI query parameters specified in table 8.5.2.3.3.3-1.

Table 8.5.2.3.3.3-1: URI query parameters supported by the PUT method on this resource

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

This method shall support the request data structures specified in table 8.5.2.3.3.3-2 and the response data structures and response codes specified in table 8.5.2.3.3.3-3.

Table 8.5.2.3.3.3-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| ServiceSecurity | M | 1 | Security method request from the API invoker to the CAPIF core function. The request indicates a list of service APIs and a preferred method of security for the service APIs.  The request also includes a notification destination URI for security related notifications. |

Table 8.5.2.3.3.3-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| ServiceSecurity | M | 1 | 201 Created | Security method from the CAPIF core function to the API invoker is based on the received request. The response indicates the security method to be used for the service APIs  The URI of the created resource shall be returned in the "Location" HTTP header. |
| NOTE: The mandatory HTTP error status codes for the PUT method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.5.2.3.3.3-4: Headers supported by the 201 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains the URI of the newly created resource, according to the structure: {apiRoot}/capif-security/v1/trustedInvokers/{apiInvokerId} |

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

8.5.2.3.4.2.2 Operation Definition

This method shall support the URI query parameters specified in table 8.5.2.3.4.2.2-1.

Table 8.5.2.3.4.2.2-1: URI query parameters supported by the POST method on this resource

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

This operation shall support the request data structures specified in table 8.5.2.3.4.2.2-2 and the response data structure and response codes specified in table 8.5.2.3.4.2.2-3.

Table 8.5.2.3.4.2.2-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| ServiceSecurity | M | 1 | Security method request from the API invoker to the CAPIF core function. The request indicates a list of service APIs and a preferred method of security for the service APIs.  The request also includes a notification destination URI for security related notifications. |

Table 8.5.2.3.4.2.2-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response codes | Description |
| ServiceSecurity | M | 1 | 200 OK | Security method from the CAPIF core function to the API invoker is based on the received request. The response indicates the security method to be used for the service APIs |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during security instance modification. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during security instance modification. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.5.2.3.4.2.2-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

Table 8.5.2.3.4.2.2-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

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

8.5.2.3.4.3.2 Operation Definition

This method shall support the URI query parameters specified in table 8.5.2.3.4.3.2-1.

Table 8.5.2.3.4.3.2-1: URI query parameters supported by the POST method on this resource

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

This operation shall support the request data structures specified in table 8.5.2.3.4.3.2-2 and the response data structure and response codes specified in table 8.5.2.3.4.3.2-3.

Table 8.5.2.3.4.3.2-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| SecurityNotification | M | 1 | It includes a list of API identifiers for which authorization needs to be revoked for an API invoker. |

Table 8.5.2.3.4.3.2-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response codes | Description |
| n/a |  |  | 204 No Content | Successful case.  The CAPIF core function revoked the authorization of the API invoker for the requested APIs. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during authorization revocation. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during authorization revocation. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.5.2.3.4.3.2-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

Table 8.5.2.3.4.3.2-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

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

8.5.2.3.4.4.2 Operation Definition

This method shall support the URI query parameters specified in table 8.5.2.3.4.4.2-1.

Table 8.5.2.3.4.4.2-1: URI query parameters supported by the POST method on this resource

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

This operation shall support the request data structures specified in table 8.5.2.3.4.4.2-2 and the response data structure and response codes specified in table 8.5.2.3.4.4.2-3.

Table 8.5.2.3.4.4.2-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| AccessTokenReq | M | 1 | This IE shall contain the request information for the access token request. |

Table 8.5.2.3.4.4.2-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response codes | Description |
| AccessTokenRsp | M | 1 | 200 OK | This IE shall contain the access token response information. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during obtaining authorization information. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during obtaining authorization information. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| AccessTokenErr | M | 1 | 400 Bad Request | See IETF RFC 6749 [23] subclause 5.2. |
| NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.5.2.3.4.4.2-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

Table 8.5.2.3.4.4.2-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

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

##### 8.5.3.2.2 Notification definition

The POST method shall be used for Authorization revoked notification and the URI shall be the one provided by the API invoker during the Obtain\_Security\_Method service operation.

Callback URI: **{notificationDestination}**

This method shall support the URI query parameters specified in table 8.5.3.2.2-1.

Table 8.5.3.2.2-1: URI query parameters supported by the POST method on this resource

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

This method shall support the request data structures specified in table 8.5.3.2.2-2 and the response data structures and response codes specified in table 8.5.3.2.2-3.

Table 8.5.3.2.2-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| SecurityNotification | M | 1 | Notification with information related to revoked authorization. |

Table 8.5.3.2.2-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response codes | Description |
| n/a |  |  | 204 No Content | The receipt of the Notification is acknowledged. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during notification. The response shall include a Location header field containing an alternative URI representing the end point of an alternative notification destination where the notification should be sent.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [4]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during notification. The response shall include a Location header field containing an alternative URI representing the end point of an alternative notification destination where the notification should be sent.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [4]. |
| NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.5.3.2.2-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI representing the end point of an alternative notification destination towards which the notification should be redirected. |

Table 8.5.3.2.2-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI representing the end point of an alternative notification destination towards which the notification should be redirected. |

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

###### 8.6.2.2.3.1 GET

This method shall support the URI query parameters specified in table 8.6.2.2.3.1-1.

Table 8.6.2.2.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| aef-id | string | M | 1 | AEF identifier |
| api-invoker-id | string | O | 1 | String identifying the API invoker |
| supported-features | SupportedFeatures | O | 0..1 | To filter irrelevant responses related to unsupported features. |

This method shall support the request data structures specified in table 8.6.2.2.3.1-2 and the response data structures and response codes specified in table 8.6.2.2.3.1-3.

Table 8.6.2.2.3.1-2: Data structures supported by the GET Request Body on this resource

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

Table 8.6.2.2.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| AccessControlPolicyList | M | 1 | 200 OK | List of the access control policy applicable for the service API requested. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during resource retrieval. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during resource retrieval. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.6.2.2.3.1-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

Table 8.6.2.2.3.1-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

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

###### 8.7.2.2.3.1 POST

This method shall support the URI query parameters specified in table 8.7.2.2.3.1-1.

Table 8.7.2.2.3.1-1: URI query parameters supported by the POST method on this resource

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

This method shall support the request data structures specified in table 8.7.2.2.3.1-2 and the response data structures and response codes specified in table 8.7.2.2.3.1-3.

Table 8.7.2.2.3.1-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| InvocationLogs | M | 201 Created | Log of service API invocations provided by API exposing function to store on the CAPIF core function. |

Table 8.7.2.2.3.1-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| InvocationLogs | M | 1 | 201 Created | Log of service API invocations provided by API exposing function successfully stored on the CAPIF core function.  The URI of the created resource shall be returned in the "Location" HTTP header. |
| NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.7.2.2.3.1-4: Headers supported by the 201 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains the URI of the newly created resource, according to the structure: {apiRoot}/api-invocation-logs/<apiVersion>/{aefId}/logs/{logId} |

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

###### 8.8.2.2.3.1 GET

This method shall support the URI query parameters specified in table 8.8.2.2.3.1-1.

Table 8.8.2.2.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| aef-id | string | O | 0..1 | String identifying the API exposing function |
| api-invoker-id | string | O | 0..1 | String identifying the API invoker which invoked the service API |
| time-range-start | DateTime | O | 0..1 | Start time of the invocation time range |
| time-range-end | DateTime | O | 0..1 | End time of the invocation time range |
| apiid | string | O | 0..1 | String identifying the API invoked. |
| api-name | string | O | 0..1 | API name, it is set as {apiName} part of the URI structure as defined in subclause 4.4 of 3GPP TS 29.501 [18]. |
| api-version | string | O | 0..1 | Version of the API which was invoked |
| protocol | Protocol | O | 0..1 | Protocol invoked |
| operation | Operation | O | 0..1 | Operation that was invoked on the API |
| result | string | O | 0..1 | HTTP status code of the invocation |
| resource-name | string | O | 0..1 | Name of the specific resource invoked |
| src-interface | InterfaceDescription | O | 0..1 | Interface description of the API invoker. |
| dest-interface | InterfaceDescription | O | 0..1 | Interface description of the API invoked. |
| supported-features | SupportedFeatures | O | 0..1 | To filter irrelevant responses related to unsupported features. |

This method shall support the request data structures specified in table 8.8.2.2.3.1-2 and the response data structures and response codes specified in table 8.8.2.2.3.1-3.

Table 8.8.2.2.3.1-2: Data structures supported by the GET Request Body on this resource

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

Table 8.8.2.2.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| array(InvocationLog) | O | 1..N | 200 OK | Result of the query operation along with fetched service API invocation log data. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during resource retrieval. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during resource retrieval. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| ProblemDetails | O | 0..1 | 414 URI Too Long | Indicates that the server is refusing to service the request because the request-target is too long. |
| NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.8.2.2.3.1-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

Table 8.8.2.2.3.1-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

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

###### 8.9.2.2.3.1 POST

This method shall support the URI query parameters specified in table 8.9.2.2.3.1-1.

Table 8.9.2.2.3.1-1: URI query parameters supported by the POST method on this resource

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

This method shall support the request data structures specified in table 8.9.2.2.3.1-2 and the response data structures and response codes specified in table 8.9.2.2.3.1-3.

Table 8.9.2.2.3.1-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| APIProviderEnrolmentDetails | M | 1 | Enrolment details of the API provider domain including individual API provider domain function details. |

Table 8.9.2.2.3.1-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| APIProviderEnrolmentDetails | M | 1 | 201 Created | API provider domain registered successfully  The URI of the created resource shall be returned in the "Location" HTTP header.  The list of successfully registered individual API provider domain functions, registration specific failure information of failed API provider domain function registrations, are included in APIProviderEnrolmentDetails which is provided in the response body. |
| NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.9.2.2.3.1-4: Headers supported by the 201 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | Contains the URI of the newly created resource, according to the structure: {apiRoot}/api-provider-management/<apiVersion>/registrations/{registrationId} |

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

###### 8.9.2.3.3.1 PUT

The PUT method allows updating the registered API provider domain’s detail. The properties "apiProviderDomainId”, and “supportedFeatures” shall remain unchanged from previously provided values. This method shall support the URI query parameters specified in table 8.9.2.3.3.1-1.

Table 8.9.2.3.3.1-1: URI query parameters supported by the PUT method on this resource

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

This method shall support the request data structures specified in the table 8.9.2.3.3.1-2 and the response data structures and response codes specified in the table 8.9.2.3.3.1-3.

Table 8.9.2.3.3.1-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| APIProviderEnrolmentDetails | M | 1 | Updated details of the API provider domain. |

Table 8.9.2.3.3.1-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| APIProviderEnrolmentDetails | M | 1 | 200 OK | API provider domain’s information updated successfully.  Updated details of the API provider domain is part of the APIProviderEnrolmentDetails, which is provided in the response body. The list of successfully updated individual API provider domain functions, registration update specific failure information of failed API provider domain function registration updates, are included in APIProviderEnrolmentDetails which is provided in the response body. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during resource modification. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during resource modification. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| NOTE: The mandatory HTTP error status codes for the PUT method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.9.2.3.3.1-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

Table 8.9.2.3.3.1-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

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

###### 8.9.2.3.3.2 DELETE

This method shall support the URI query parameters specified in table 8.9.2.3.3.2-1.

Table 8.9.2.3.3.2-1: URI query parameters supported by the DELETE method on this resource

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

This method shall support the response codes specified in table 8.9.2.3.3.2-2 and the response data structures and response codes specified in table 8.9.2.3.3.2-3.

Table 8.9.2.3.3.2-2: Data structures supported by the DELETE Request Body on this resource

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

Table 8.9.2.3.3.2-3: Data structures supported by the DELETE Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | The individual registered API provider domain matching the registrationId is deleted. All the individual API provider domain functions of the API provider domain are deleted. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during resource termination. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during resource termination. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.9.2.3.3.2-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

Table 8.9.2.3.3.2-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

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

###### 8.10.2.2.3.1 GET

This method shall support the URI query parameters specified in table 8.10.2.2.3.1-1.

Table 8.10.2.2.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| aef-id | string | M | 1 | AEF identifier |
| supp-feat | SupportedFeatures | O | 0..1 | To filter irrelevant responses related to unsupported features. |

This method shall support the request data structures specified in table 8.10.2.2.3.1-2 and the response data structures and response codes specified in table 8.10.2.2.3.1-3.

Table 8.10.2.2.3.1-2: Data structures supported by the GET Request Body on this resource

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

Table 8.10.2.2.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  Codes | Description |
| RoutingInfo | M | 1 | 200 OK | The Routing information applicable for the service API requested. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during resource retrieval. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during resource retrieval. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.10.2.2.3.1-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

Table 8.10.2.2.3.1-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

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

##### 9.1.2a.2.2 Operation Definition

This method shall support the URI query parameters specified in table 9.1.2a.2.2-1.

Table 9.1.2a.2.2-1: URI query parameters supported by the POST method on this resource

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

This operation shall support the request and response data structures, and response codes specified in tables 9.1.2a.2.2-2 and 9.1.2a.2.2-3.

Table 9.1.2a.2.2-2: Data structures supported by the POST Request Body on this operation

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| CheckAuthenticationReq | M | 1 | Authentication check request data |

Table 9.1.2a.2.2-3: Data structures supported by the POST Response Body on this operation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| CheckAuthenticationRsp | M | 1 | 200 OK | The request was successful. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during authentication confirmation. The response shall include a Location header field containing an alternative URI of the resource located in an alternative API exposing function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during authentication confirmation. The response shall include a Location header field containing an alternative URI of the resource located in an alternative API exposing function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 9.1.2a.2.2-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative API exposing function. |

Table 9.1.2a.2.2-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative API exposing function. |

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

##### 9.1.2a.3.2 Operation Definition

This method shall support the URI query parameters specified in table 9.1.2a.3.2-1.

Table 9.1.2a.3.2-1: URI query parameters supported by the POST method on this resource

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

This operation shall support the request and response data structures, and response codes specified in tables 9.1.2a.3.2-2 and 9.1.2a.3.2-3.

Table 9.1.2a.3.2-2: Data structures supported by the POST Request Body on this operation

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| RevokeAuthorizationReq | M | 1 | Authorization revocation request data |

Table 9.1.2a.3.2-3: Data structures supported by the POST Response Body on this operation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| RevokeAuthorizationRsp | M | 1 | 200 OK | The request was successful. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during authorization revocation. The response shall include a Location header field containing an alternative URI of the resource located in an alternative API exposing function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during authorization revocation. The response shall include a Location header field containing an alternative URI of the resource located in an alternative API exposing function.  Redirection handling is described in subclause 5.2.10 of 3GPP TS 29.122 [14]. |
| NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 9.1.2a.3.2-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative API exposing function. |

Table 9.1.2a.3.2-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative API exposing function. |

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

## A.2 CAPIF\_Discover\_Service\_API

openapi: 3.0.0

info:

title: CAPIF\_Discover\_Service\_API

description: |

API for discovering service APIs.

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version: "1.1.0"

externalDocs:

description: 3GPP TS 29.222 V16.3.0 Common API Framework for 3GPP Northbound APIs

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

servers:

- url: '{apiRoot}/service-apis/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/allServiceAPIs:

get:

description: Discover published service APIs and retrieve a collection of APIs according to certain filter criteria.

parameters:

- name: api-invoker-id

in: query

description: String identifying the API invoker assigned by the CAPIF core function. It also represents the CCF identifier in the CAPIF-6/6e interface.

required: true

schema:

type: string

- name: api-name

in: query

description: API name, it is set as {apiName} part of the URI structure as defined in subclause 4.4 of 3GPP TS 29.501 [18].

schema:

type: string

- name: api-version

in: query

description: API major version the URI (e.g. v1).

schema:

type: string

- name: comm-type

in: query

description: Communication type used by the API (e.g. REQUEST\_RESPONSE).

schema:

$ref: 'TS29222\_CAPIF\_Publish\_Service\_API.yaml#/components/schemas/CommunicationType'

- name: protocol

in: query

description: Protocol used by the API.

schema:

$ref: 'TS29222\_CAPIF\_Publish\_Service\_API.yaml#/components/schemas/Protocol'

- name: aef-id

in: query

description: AEF identifer.

schema:

type: string

- name: data-format

in: query

description: Data formats used by the API (e.g. serialization protocol JSON used).

schema:

$ref: 'TS29222\_CAPIF\_Publish\_Service\_API.yaml#/components/schemas/DataFormat'

- name: api-cat

in: query

description: The service API category to which the service API belongs to.

schema:

type: string

- name: supported-features

in: query

description: Features supported by the NF consumer for the CAPIF Discover Service API.

schema:

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

- name: api-supported-features

in: query

description: Features supported by the discovered service API indicated by api-name parameter. This may only be present if api-name query parameter is present.

schema:

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

responses:

'200':

description: The response body contains the result of the search over the list of registered APIs.

content:

application/json:

schema:

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

'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:

DiscoveredAPIs:

type: object

properties:

serviceAPIDescriptions:

type: array

items:

$ref: 'TS29222\_CAPIF\_Publish\_Service\_API.yaml#/components/schemas/ServiceAPIDescription'

minItems: 1

description: Description of the service API as published by the service. Each service API description shall include AEF profiles matching the filter criteria.

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

## A.3 CAPIF\_Publish\_Service\_API

openapi: 3.0.0

info:

title: CAPIF\_Publish\_Service\_API

description: |

API for publishing service APIs.

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version: "1.1.0"

externalDocs:

description: 3GPP TS 29.222 V16.3.0 Common API Framework for 3GPP Northbound APIs

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

servers:

- url: '{apiRoot}/published-apis/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

# APF published API

/{apfId}/service-apis:

post:

description: Publish a new API.

parameters:

- name: apfId

in: path

required: true

schema:

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

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'201':

description: Service API published successfully The URI of the created resource shall be returned in the "Location" HTTP header.

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/published-apis/v1/{apfId}/service-apis/{serviceApiId}'

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'

get:

description: Retrieve all published APIs.

parameters:

- name: apfId

in: path

required: true

schema:

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

responses:

'200':

description: Definition of all service API(s) published by the API publishing function.

content:

application/json:

schema:

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

'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'

# Individual APF published API

/{apfId}/service-apis/{serviceApiId}:

get:

description: Retrieve a published service API.

parameters:

- name: serviceApiId

in: path

required: true

schema:

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

- name: apfId

in: path

required: true

schema:

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

responses:

'200':

description: Definition of all service API published by the API publishing function.

content:

application/json:

schema:

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

'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:

description: Update a published service API.

parameters:

- name: serviceApiId

in: path

required: true

schema:

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

- name: apfId

in: path

required: true

schema:

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

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: Definition of service API updated successfully.

content:

application/json:

schema:

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

'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: Unpublish a published service API.

parameters:

- name: serviceApiId

in: path

required: true

schema:

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

- name: apfId

in: path

required: true

schema:

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

responses:

'204':

description: The individual published service API matching the serviceAPiId is 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

components:

schemas:

# Data types uses as path variables

apfId:

type: string

description: Identification of the API publishing function.

serviceApiId:

type: string

description: String identifying an individual published service API.

# Data Type for representations

ServiceAPIDescription:

type: object

properties:

apiName:

type: string

description: API name, it is set as {apiName} part of the URI structure as defined in subclause 4.4 of 3GPP TS 29.501.

apiId:

type: string

description: API identifier assigned by the CAPIF core function to the published service API. Shall not be present in the HTTP POST request from the API publishing function to the CAPIF core function. Shall be present in the HTTP POST response from the CAPIF core function to the API publishing function and in the HTTP GET response from the CAPIF core function to the API invoker (discovery API).

aefProfiles:

type: array

items:

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

minItems: 1

description: AEF profile information, which includes the exposed API details (e.g. protocol).

description:

type: string

description: Text description of the API

supportedFeatures:

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

shareableInfo:

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

serviceAPICategory:

type: string

apiSuppFeats:

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

pubApiPath:

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

ccfId:

type: string

description: CAPIF core function identifier.

required:

- apiName

InterfaceDescription:

type: object

properties:

ipv4Addr:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/Ipv4Addr'

ipv6Addr:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/Ipv6Addr'

port:

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

securityMethods:

type: array

items:

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

minItems: 1

description: Security methods supported by the interface, it take precedence over the security methods provided in AefProfile, for this specific interface.

oneOf:

- required: [ipv4Addr]

- required: [ipv6Addr]

AefProfile:

type: object

properties:

aefId:

type: string

description: Identifier of the API exposing function

versions:

type: array

items:

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

minItems: 1

description: API version

protocol:

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

dataFormat:

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

securityMethods:

type: array

items:

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

minItems: 1

description: Security methods supported by the AEF

domainName:

type: string

description: Domain to which API belongs to

interfaceDescriptions:

type: array

items:

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

minItems: 1

description: Interface details

required:

- aefId

- versions

oneOf:

- required: [domainName]

- required: [interfaceDescriptions]

Resource:

type: object

properties:

resourceName:

type: string

description: Resource name

commType:

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

uri:

type: string

description: Relative URI of the API resource, it is set as {apiSpecificResourceUriPart} part of the URI structure as defined in subclause 4.4 of 3GPP TS 29.501.

custOpName:

type: string

description: it is set as {custOpName} part of the URI structure for a custom operation associated with a resource as defined in subclause 4.4 of 3GPP TS 29.501.

operations:

type: array

items:

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

minItems: 1

description: Supported HTTP methods for the API resource. Only applicable when the protocol in AefProfile indicates HTTP.

description:

type: string

description: Text description of the API resource

required:

- resourceName

- commType

- uri

CustomOperation:

type: object

properties:

commType:

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

custOpName:

type: string

description: it is set as {custOpName} part of the URI structure for a custom operation without resource association as defined in subclause 4.4 of 3GPP TS 29.501.

operations:

type: array

items:

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

minItems: 1

description: Supported HTTP methods for the API resource. Only applicable when the protocol in AefProfile indicates HTTP.

description:

type: string

description: Text description of the custom operation

required:

- commType

- custOpName

Version:

type: object

properties:

apiVersion:

type: string

description: API major version in URI (e.g. v1)

expiry:

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

resources:

type: array

items:

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

minItems: 1

description: Resources supported by the API.

custOperations:

type: array

items:

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

minItems: 1

description: Custom operations without resource association.

required:

- apiVersion

ShareableInformation:

type: object

properties:

isShareable:

type: boolean

description: Set to "true" indicates that the service API and/or the service API category can be shared to the list of CAPIF provider domain information. Otherwise set to "false".

capifProvDoms:

type: array

items:

type: string

minItems: 1

description: List of CAPIF provider domains to which the service API information to be shared.

required:

- isShareable

PublishedApiPath:

type: object

properties:

ccfIds:

type: array

items:

type: string

minItems: 1

description: A list of CCF identifiers where the service API is already published.

Protocol:

anyOf:

- type: string

enum:

- HTTP\_1\_1

- HTTP\_2

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration but is not used to encode

content defined in the present version of this API.

description: >

Possible values are

- HTTP\_1\_1: HTTP version 1.1

- HTTP\_2: HTTP version 2

CommunicationType:

anyOf:

- type: string

enum:

- REQUEST\_RESPONSE

- SUBSCRIBE\_NOTIFY

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration but is not used to encode

content defined in the present version of this API.

description: >

Possible values are

- REQUEST\_RESPONSE: The communication is of the type request-response

- SUBSCRIBE\_NOTIFY: The communication is of the type subscribe-notify

DataFormat:

anyOf:

- type: string

enum:

- JSON

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration but is not used to encode

content defined in the present version of this API.

description: >

Possible values are

- JSON: JavaScript Object Notation

SecurityMethod:

anyOf:

- type: string

enum:

- PSK

- PKI

- OAUTH

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration but is not used to encode

content defined in the present version of this API.

description: >

Possible values are

- PSK: Security method 1 (Using TLS-PSK) as described in 3GPP TS 33.122

- PKI: Security method 2 (Using PKI) as described in 3GPP TS 33.122

- OAUTH: Security method 3 (TLS with OAuth token) as described in 3GPP TS 33.122

Operation:

anyOf:

- type: string

enum:

- GET

- POST

- PUT

- PATCH

- DELETE

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration but is not used to encode

content defined in the present version of this API.

description: >

Possible values are

- GET: HTTP GET method

- POST: HTTP POST method

- PUT: HTTP PUT method

- PATCH: HTTP PATCH method

- DELETE: HTTP DELETE method

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

## A.4 CAPIF\_Events\_API

openapi: 3.0.0

info:

title: CAPIF\_Events\_API

description: |

API for event subscription management.

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version: "1.1.0"

externalDocs:

description: 3GPP TS 29.222 V16.3.0 Common API Framework for 3GPP Northbound APIs

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

servers:

- url: '{apiRoot}/capif-events/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/{subscriberId}/subscriptions:

post:

description: Creates a new individual CAPIF Event Subscription.

parameters:

- name: subscriberId

in: path

description: Identifier of the Subscriber

required: true

schema:

type: string

requestBody:

required: true

content:

application/json:

schema:

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

callbacks:

notificationDestination:

'{request.body#/notificationDestination}':

post:

requestBody: # contents of the callback message

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content (successful notification)

'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'

responses:

'201':

description: Created (Successful creation of subscription)

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/capif-events/v1/{subscriberId}/subscriptions/{subscriptionId}'

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'

/{subscriberId}/subscriptions/{subscriptionId}:

delete:

description: Deletes an individual CAPIF Event Subscription.

parameters:

- name: subscriberId

in: path

description: Identifier of the Subscriber

required: true

schema:

type: string

- name: subscriptionId

in: path

description: Identifier of an individual Events Subscription

required: true

schema:

type: string

responses:

'204':

description: The individual CAPIF Events Subscription matching the subscriptionId is 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:

schemas:

EventSubscription:

type: object

properties:

events:

type: array

items:

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

minItems: 1

description: Subscribed events

eventFilters:

type: array

items:

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

minItems: 1

description: Subscribed event filters

eventReq:

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

notificationDestination:

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

requestTestNotification:

type: boolean

description: Set to true by Subscriber to request the CAPIF core function to send a test notification as defined in in subclause 7.6. Set to false or omitted otherwise.

websockNotifConfig:

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

supportedFeatures:

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

required:

- events

- notificationDestination

EventNotification:

type: object

properties:

subscriptionId:

type: string

description: Identifier of the subscription resource to which the notification is related – CAPIF resource identifier

events:

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

eventDetail:

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

required:

- subscriptionId

- events

CAPIFEventFilter:

type: object

properties:

apiIds:

type: array

items:

type: string

minItems: 1

description: Identifier of the service API

apiInvokerIds:

type: array

items:

type: string

minItems: 1

description: Identity of the API invoker

aefIds:

type: array

items:

type: string

minItems: 1

description: Identifier of the API exposing function

CAPIFEventDetail:

type: object

properties:

serviceAPIDescriptions:

type: array

items:

$ref: 'TS29222\_CAPIF\_Publish\_Service\_API.yaml#/components/schemas/ServiceAPIDescription'

minItems: 1

description: Description of the service API as published by the APF.

apiIds:

type: array

items:

type: string

minItems: 1

description: Identifier of the service API

apiInvokerIds:

type: array

items:

type: string

minItems: 1

description: Identity of the API invoker

accCtrlPolList:

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

invocationLogs:

type: array

items:

$ref: 'TS29222\_CAPIF\_Logging\_API\_Invocation\_API.yaml#/components/schemas/InvocationLog'

minItems: 1

description: Invocation logs.

apiTopoHide:

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

AccessControlPolicyListExt:

allOf:

- $ref: 'TS29222\_CAPIF\_Access\_Control\_Policy\_API.yaml#/components/schemas/AccessControlPolicyList'

- type: object

properties:

apiId:

type: string

required:

- apiId

TopologyHiding:

type: object

properties:

apiId:

type: string

routingRules:

type: array

items:

$ref: 'TS29222\_CAPIF\_Routing\_Info\_API.yaml#/components/schemas/RoutingRule'

minItems: 1

required:

- apiId

- routingRules

CAPIFEvent:

anyOf:

- type: string

enum:

- SERVICE\_API\_AVAILABLE

- SERVICE\_API\_UNAVAILABLE

- SERVICE\_API\_UPDATE

- API\_INVOKER\_ONBOARDED

- API\_INVOKER\_OFFBOARDED

- SERVICE\_API\_INVOCATION\_SUCCESS

- SERVICE\_API\_INVOCATION\_FAILURE

- ACCESS\_CONTROL\_POLICY\_UPDATE

- ACCESS\_CONTROL\_POLICY\_UNAVAILABLE

- API\_INVOKER\_AUTHORIZATION\_REVOKED

- API\_INVOKER\_UPDATED

- API\_TOPOLOGY\_HIDING\_CREATED

- API\_TOPOLOGY\_HIDING\_REVOKED

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration but is not used to encode

content defined in the present version of this API.

description: >

Possible values are

- SERVICE\_API\_AVAILABLE: Events related to the availability of service APIs after the service APIs are published.

- SERVICE\_API\_UNAVAILABLE: Events related to the unavailability of service APIs after the service APIs are unpublished.

- SERVICE\_API\_UPDATE: Events related to change in service API information.

- API\_INVOKER\_ONBOARDED: Events related to API invoker onboarded to CAPIF.

- API\_INVOKER\_OFFBOARDED: Events related to API invoker offboarded from CAPIF.

- SERVICE\_API\_INVOCATION\_SUCCESS: Events related to the successful invocation of service APIs.

- SERVICE\_API\_INVOCATION\_FAILURE: Events related to the failed invocation of service APIs.

- ACCESS\_CONTROL\_POLICY\_UPDATE: Events related to the update for the access control policy related to the service APIs.

- ACCESS\_CONTROL\_POLICY\_UNAVAILABLE: Events related to the unavailability of the access control policy related to the service APIs.

- API\_INVOKER\_AUTHORIZATION\_REVOKED: Events related to the revocation of the authorization of API invokers to access the service APIs.

- API\_INVOKER\_UPDATED: Events related to API invoker profile updated to CAPIF.

- API\_TOPOLOGY\_HIDING\_CREATED: Events related to the creation or update of the API topology hiding information of the service APIs after the service APIs are published.

- API\_TOPOLOGY\_HIDING\_REVOKED: Events related to the revocation of the API topology hiding information of the service APIs after the service APIs are unpublished.

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

## A.5 CAPIF\_API\_Invoker\_Management\_API

openapi: 3.0.0

info:

title: CAPIF\_API\_Invoker\_Management\_API

description: |

API for API invoker management.

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version: "1.1.0"

externalDocs:

description: 3GPP TS 29.222 V16.3.0 Common API Framework for 3GPP Northbound APIs

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

servers:

- url: '{apiRoot}/api-invoker-management/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/onboardedInvokers:

post:

description: Creates a new individual API Invoker profile.

requestBody:

required: true

content:

application/json:

schema:

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

callbacks:

notificationDestination:

'{request.body#/notificationDestination}':

post:

description: Notify the API Invoker about the onboarding completion

requestBody: # contents of the callback message

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content (successful onboarding notification)

'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'

responses:

'201':

description: API invoker on-boarded successfully

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/api-invoker-management/v1/onboardedInvokers/{onboardingId}'

required: true

schema:

type: string

'202':

description: The CAPIF core has accepted the Onboarding request and is processing it.

'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'

/onboardedInvokers/{onboardingId}:

delete:

description: Deletes an individual API Invoker.

parameters:

- name: onboardingId

in: path

description: String identifying an individual on-boarded API invoker resource

required: true

schema:

type: string

responses:

'204':

description: The individual API Invoker matching onboardingId was offboarded.

'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'

put:

description: Updates an individual API invoker details.

parameters:

- name: onboardingId

in: path

description: String identifying an individual on-boarded API invoker resource

required: true

schema:

type: string

requestBody:

description: representation of the API invoker details to be updated in CAPIF core function

required: true

content:

application/json:

schema:

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

callbacks:

notificationDestination:

'{request.body#/notificationDestination}':

post:

description: Notify the API Invoker about the API invoker update completion

requestBody: # contents of the callback message

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content (successful API invoker update notification)

'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'

responses:

'200':

description: API invoker details updated successfully

content:

application/json:

schema:

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

'202':

description: The CAPIF core has accepted the API invoker update details request and is processing it.

'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:

schemas:

OnboardingInformation:

type: object

properties:

apiInvokerPublicKey:

type: string

description: The API Invoker’s public key

apiInvokerCertificate:

type: string

description: The API Invoker’s generic client certificate, provided by the CAPIF core function.

onboardingSecret:

type: string

description: The API Invoker’s onboarding secret, provided by the CAPIF core function.

required:

- apiInvokerPublicKey

APIList:

type: array

items:

$ref: 'TS29222\_CAPIF\_Publish\_Service\_API.yaml#/components/schemas/ServiceAPIDescription'

minItems: 1

description: The list of service APIs that the API Invoker is allowed to invoke

APIInvokerEnrolmentDetails:

type: object

properties:

apiInvokerId:

type: string

description: API invoker ID assigned by the CAPIF core function to the API invoker while on-boarding the API invoker. Shall not be present in the HTTP POST request from the API invoker to the CAPIF core function, to on-board itself. Shall be present in all other HTTP requests and responses.

readOnly: true

onboardingInformation:

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

notificationDestination:

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

requestTestNotification:

type: boolean

description: Set to true by Subscriber to request the CAPIF core function to send a test notification as defined in in subclause 7.6. Set to false or omitted otherwise.

websockNotifConfig:

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

apiList:

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

apiInvokerInformation:

type: string

description: Generic information related to the API invoker such as details of the device or the application.

supportedFeatures:

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

required:

- onboardingInformation

- notificationDestination

description: Information about the API Invoker that requested to onboard

OnboardingNotification:

type: object

properties:

result:

type: boolean

description: Set to "true" indicate successful on-boarding. Otherwise set to "false"

resourceLocation:

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

apiInvokerEnrolmentDetails:

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

apiList:

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

required:

- result

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

## A.6 CAPIF\_Security\_API

openapi: 3.0.0

info:

title: CAPIF\_Security\_API

description: |

API for CAPIF security management.

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version: "1.0.3"

externalDocs:

description: 3GPP TS 29.222 V15.7.0 Common API Framework for 3GPP Northbound APIs

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

servers:

- url: '{apiRoot}/capif-security/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/trustedInvokers/{apiInvokerId}:

get:

parameters:

- name: apiInvokerId

in: path

description: Identifier of an individual API invoker

required: true

schema:

type: string

- name: authenticationInfo

in: query

description: When set to 'true', it indicates the CAPIF core function to send the authentication information of the API invoker. Set to false or omitted otherwise.

schema:

type: boolean

- name: authorizationInfo

in: query

description: When set to 'true', it indicates the CAPIF core function to send the authorization information of the API invoker. Set to false or omitted otherwise.

schema:

type: boolean

responses:

'200':

description: The security related information of the API Invoker based on the request from the API exposing function.

content:

application/json:

schema:

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

'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'

put:

parameters:

- name: apiInvokerId

in: path

description: Identifier of an individual API invoker

required: true

schema:

type: string

requestBody:

description: create a security context for an API invoker

required: true

content:

application/json:

schema:

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

callbacks:

notificationDestination:

'{request.body#/notificationDestination}':

post:

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'204':

description: No Content (successful notification)

'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'

responses:

'201':

description: Successful created.

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/capif-security/v1/trustedInvokers/{apiInvokerId}'

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'

'411':

$ref: 'TS29122\_CommonData.yaml#/components/responses/411'

'413':

$ref: 'TS29122\_CommonData.yaml#/components/responses/413'

'414':

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

'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:

parameters:

- name: apiInvokerId

in: path

description: Identifier of an individual API invoker

required: true

schema:

type: string

responses:

'204':

description: No Content (Successful deletion of the existing subscription)

'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'

/trustedInvokers/{apiInvokerId}/update:

post:

parameters:

- name: apiInvokerId

in: path

description: Identifier of an individual API invoker

required: true

schema:

type: string

requestBody:

description: Update the security context (e.g. re-negotiate the security methods).

required: true

content:

application/json:

schema:

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

responses:

'200':

description: Successful updated.

content:

application/json:

schema:

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

'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'

/trustedInvokers/{apiInvokerId}/delete:

post:

parameters:

- name: apiInvokerId

in: path

description: Identifier of an individual API invoker

required: true

schema:

type: string

requestBody:

description: Revoke the authorization of the API invoker for APIs.

required: true

content:

application/json:

schema:

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

responses:

'204':

description: Successful revoked.

'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'

/securities/{securityId}/token:

post:

parameters:

- name: securityId

in: path

description: Identifier of an individual API invoker

required: true

schema:

type: string

requestBody:

required: true

content:

application/x-www-form-urlencoded:

schema:

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

responses:

'200':

description: Successful Access Token Request

content:

application/json:

schema:

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

'307':

$ref: 'TS29122\_CommonData.yaml#/components/responses/307'

'308':

$ref: 'TS29122\_CommonData.yaml#/components/responses/308'

'400':

description: Error in the Access Token Request

content:

application/json:

schema:

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

components:

schemas:

ServiceSecurity:

type: object

properties:

securityInfo:

type: array

items:

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

minimum: 1

notificationDestination:

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

requestTestNotification:

type: boolean

description: Set to true by API invoker to request the CAPIF core function to send a test notification as defined in in subclause 7.6. Set to false or omitted otherwise.

websockNotifConfig:

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

supportedFeatures:

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

required:

- securityInfo

- notificationDestination

SecurityInformation:

type: object

properties:

interfaceDetails:

$ref: 'TS29222\_CAPIF\_Publish\_Service\_API.yaml#/components/schemas/InterfaceDescription'

aefId:

type: string

description: Identifier of the API exposing function

prefSecurityMethods:

type: array

items:

$ref: 'TS29222\_CAPIF\_Publish\_Service\_API.yaml#/components/schemas/SecurityMethod'

minItems: 1

description: Security methods preferred by the API invoker for the API interface.

selSecurityMethod:

$ref: 'TS29222\_CAPIF\_Publish\_Service\_API.yaml#/components/schemas/SecurityMethod'

authenticationInfo:

type: string

description: Authentication related information

authorizationInfo:

type: string

description: Authorization related information

required:

- prefSecurityMethods

oneOf:

- required: [interfaceDetails]

- required: [aefId]

SecurityNotification:

type: object

properties:

apiInvokerId:

type: string

description: String identifying the API invoker assigned by the CAPIF core function

aefId:

type: string

description: String identifying the AEF.

apiIds:

type: array

items:

type: string

minItems: 1

description: Identifier of the service API

cause:

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

required:

- apiInvokerId

- apiIds

- cause

AccessTokenReq:

format: x-www-form-urlencoded

properties:

grant\_type:

type: string

enum:

- client\_credentials

client\_id:

type: string

client\_secret:

type: string

scope:

type: string

required:

- grant\_type

- client\_id

AccessTokenRsp:

type: object

properties:

access\_token:

type: string

description: JWS Compact Serialized representation of JWS signed JSON object (AccessTokenClaims)

token\_type:

type: string

enum:

- Bearer

expires\_in:

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

scope:

type: string

required:

- access\_token

- token\_type

- expires\_in

AccessTokenClaims:

type: object

properties:

iss:

type: string

scope:

type: string

exp:

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

required:

- iss

- scope

- exp

AccessTokenErr:

type: object

properties:

error:

type: string

enum:

- invalid\_request

- invalid\_client

- invalid\_grant

- unauthorized\_client

- unsupported\_grant\_type

- invalid\_scope

error\_description:

type: string

error\_uri:

type: string

required:

- error

Cause:

anyOf:

- type: string

enum:

- OVERLIMIT\_USAGE

- UNEXPECTED\_REASON

- type: string

description: >

This string provides forward-compatibility with future

extensions to the enumeration but is not used to encode

content defined in the present version of this API.

description: >

Possible values are

- OVERLIMIT\_USAGE: The revocation of the authorization of the API invoker is due to the overlimit usage of the service API

- UNEXPECTED\_REASON: The revocation of the authorization of the API invoker is due to unexpected reason.

\*\*\* Next 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: "1.0.3"

externalDocs:

description: 3GPP TS 29.222 V15.6.0 Common API Framework for 3GPP Northbound APIs

url: http://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 subclause 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

properties:

apiInvokerPolicies:

type: array

items:

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

minItems: 0

description: Policy of each API invoker.

ApiInvokerPolicy:

type: object

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.

required:

- apiInvokerId

TimeRangeList:

type: object

properties:

startTime:

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

stopTime:

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

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

## A.9 CAPIF\_Auditing\_API

openapi: 3.0.0

info:

title: CAPIF\_Auditing\_API

description: |

API for auditing.

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version: "1.0.1"

externalDocs:

description: 3GPP TS 29.222 V15.4.0 Common API Framework for 3GPP Northbound APIs

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

servers:

- url: '{apiRoot}/logs/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/apiInvocationLogs:

get:

description: Query and retrieve service API invocation logs stored on the CAPIF core function.

parameters:

- name: aef-id

in: query

description: String identifying the API exposing function.

schema:

type: string

- name: api-invoker-id

in: query

description: String identifying the API invoker which invoked the service API.

schema:

type: string

- name: time-range-start

in: query

description: Start time of the invocation time range.

schema:

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

- name: time-range-end

in: query

description: End time of the invocation time range.

schema:

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

- name: api-id

in: query

description: String identifying the API invoked.

schema:

type: string

- name: api-name

in: query

description: API name, it is set as {apiName} part of the URI structure as defined in subclause 4.4 of 3GPP TS 29.501.

schema:

type: string

- name: api-version

in: query

description: Version of the API which was invoked.

schema:

type: string

- name: protocol

in: query

description: Protocol invoked.

schema:

$ref: 'TS29222\_CAPIF\_Publish\_Service\_API.yaml#/components/schemas/Protocol'

- name: operation

in: query

description: Operation that was invoked on the API.

schema:

$ref: 'TS29222\_CAPIF\_Publish\_Service\_API.yaml#/components/schemas/Operation'

- name: result

in: query

description: Result or output of the invocation.

schema:

type: string

- name: resource-name

in: query

description: Name of the specific resource invoked.

schema:

type: string

- name: src-interface

in: query

description: Interface description of the API invoker.

content:

application/json:

schema:

$ref: 'TS29222\_CAPIF\_Publish\_Service\_API.yaml#/components/schemas/InterfaceDescription'

- name: dest-interface

in: query

description: Interface description of the API invoked.

content:

application/json:

schema:

$ref: 'TS29222\_CAPIF\_Publish\_Service\_API.yaml#/components/schemas/InterfaceDescription'

- 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: Result of the query operation along with fetched service API invocation log data.

content:

application/json:

schema:

$ref: 'TS29222\_CAPIF\_Logging\_API\_Invocation\_API.yaml#/components/schemas/InvocationLog'

'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'

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

## A.10 AEF\_Security\_API

openapi: 3.0.0

info:

title: AEF\_Security\_API

description: |

API for AEF security management.

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version: "1.0.1"

externalDocs:

description: 3GPP TS 29.222 V15.4.0 Common API Framework for 3GPP Northbound APIs

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

servers:

- url: '{apiRoot}/aef-security/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/check-authentication:

post:

summary: Check authentication.

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: The request was successful.

content:

application/json:

schema:

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

'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'

/revoke-authorization:

post:

summary: Revoke authorization.

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'200':

description: The request was successful.

content:

application/json:

schema:

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

'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:

schemas:

CheckAuthenticationReq:

type: object

properties:

apiInvokerId:

type: string

description: API invoker ID assigned by the CAPIF core function to the API invoker while on-boarding the API invoker.

supportedFeatures:

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

required:

- apiInvokerId

- supportedFeatures

CheckAuthenticationRsp:

type: object

properties:

supportedFeatures:

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

required:

- supportedFeatures

RevokeAuthorizationReq:

type: object

properties:

revokeInfo:

$ref: 'TS29222\_CAPIF\_Security\_API.yaml#/components/schemas/SecurityNotification'

supportedFeatures:

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

required:

- revokeInfo

- supportedFeatures

RevokeAuthorizationRsp:

type: object

properties:

supportedFeatures:

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

required:

- supportedFeatures

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

## A.11 CAPIF\_API\_Provider\_Management\_API

openapi: 3.0.0

info:

title: CAPIF\_API\_Provider\_Management\_API

description: |

API for API provider domain functions management.

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version: "1.0.0"

externalDocs:

description: 3GPP TS 29.222 V16.3.0 Common API Framework for 3GPP Northbound APIs

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

servers:

- url: '{apiRoot}/api-provider-management/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/registrations:

post:

description: Registers a new API Provider domain with API provider domain functions profiles.

requestBody:

required: true

content:

application/json:

schema:

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

responses:

'201':

description: API provider domain registered successfully

content:

application/json:

schema:

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

headers:

Location:

description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/api-provider-management/v1/registrations/{registrationId}'

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'

/registrations/{registrationId}:

delete:

description: Deregisters API provider domain by deleting API provider domain and functions.

parameters:

- name: registrationId

in: path

description: String identifying an registered API provider domain resource

required: true

schema:

type: string

responses:

'204':

description: The API provider domain matching registrationId is 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'

put:

description: Updates an API provider domain's registration details.

parameters:

- name: registrationId

in: path

description: String identifying an registered API provider domain resource

required: true

schema:

type: string

requestBody:

description: representation of the API provider domain registration details to be updated in CAPIF core function

required: true

content:

application/json:

schema:

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

responses:

'200':

description: API provider domain registration details updated successfully

content:

application/json:

schema:

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

'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:

schemas:

APIProviderEnrolmentDetails:

type: object

properties:

apiProvDomId:

type: string

description: API provider domain ID assigned by the CAPIF core function to the API management function while registering the API provider domain. Shall not be present in the HTTP POST request from the API Management function to the CAPIF core function, to on-board itself. Shall be present in all other HTTP requests and responses.

readOnly: true

regSec:

type: string

description: Security information necessary for the CAPIF core function to validate the registration of the API provider domain. Shall be present in HTTP POST request from API management function to CAPIF core function for API provider domain registration.

apiProvFuncs:

type: array

items:

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

minItems: 1

description: A list of individual API provider domain functions details. When included by the API management function in the HTTP request message, it lists the API provider domain functions that the API management function intends to register/update in registration or update registration procedure. When included by the CAPIF core function in the HTTP response message, it lists the API domain functions details that are registered or updated successfully.

apiProvDomInfo:

type: string

description: Generic information related to the API provider domain such as details of the API provider applications.

suppFeat:

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

failReason:

type: string

description: Registration or update specific failure information of failed API provider domain function registrations.Shall be present in the HTTP response body if atleast one of the API provider domain function registration or update registration fails.

required:

- regSec

APIProviderFunctionDetails:

type: object

properties:

apiProvFuncId:

type: string

description: API provider domain functionID assigned by the CAPIF core function to the API provider domain function while registering/updating the API provider domain. Shall not be present in the HTTP POST request from the API management function to the CAPIF core function, to register itself. Shall be present in all other HTTP requests and responses.

regInfo:

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

apiProvFuncRole:

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

apiProvFuncInfo:

type: string

description: Generic information related to the API provider domain function such as details of the API provider applications.

required:

- regInfo

- apiProvFuncRole

RegistrationInformation:

type: object

properties:

apiProvPubKey:

type: string

description: Public Key of API Provider domain function.

apiProvCert:

type: string

description: API provider domain function's client certificate

required:

- apiProvPubKey

ApiProviderFuncRole:

anyOf:

- type: string

enum:

- AEF

- APF

- AMF

- type: string

description: >

This string provides forward-compatiblity with future extensions to the enumeration but is not used to encode content defined in the present version of this API.

description: >

Possible values are

- AEF: API provider function is API Exposing Function.

- APF: API provider function is API Publishing Function.

- AMF: API Provider function is API Management Function.

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

## A.12 CAPIF\_Routing\_Info\_API

openapi: 3.0.0

info:

title: CAPIF\_Routing\_Info\_API

description: |

API for Routing information.

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version: "1.0.0"

externalDocs:

description: 3GPP TS 29.222 V16.3.0 Common API Framework for 3GPP Northbound APIs

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

servers:

- url: '{apiRoot}/capif-routing-info/v1'

variables:

apiRoot:

default: https://example.com

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

paths:

/service-apis/{serviceApiId}:

get:

description: Retrieves the API routing information.

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: supp-feat

in: query

required: false

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/RoutingInfo'

'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:

RoutingInfo:

type: object

properties:

routingRules:

type: array

items:

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

minItems: 1

required:

- routingRules

RoutingRule:

type: object

properties:

ipv4AddrRanges:

type: array

items:

$ref: 'TS29510\_Nnrf\_NFManagement.yaml#/components/schemas/Ipv4AddressRange'

minItems: 1

ipv6AddrRanges:

type: array

items:

$ref: '#/components/schemas/Ipv6AddressRange'

minItems: 1

aefProfile:

$ref: 'TS29222\_CAPIF\_Publish\_Service\_API.yaml#/components/schemas/AefProfile'

required:

- aefProfile

Ipv6AddressRange:

type: object

properties:

start:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/Ipv6Addr'

end:

$ref: 'TS29122\_CommonData.yaml#/components/schemas/Ipv6Addr'

required:

- start

- end

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