**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** |

|  |
| --- |
|  |
| ***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 canbe 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 | Responsecodes | 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 | Responsecodes | 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 | Responsecodes | 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 | Responsecodes | 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 | Responsecodes | 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 | Responsecodes | 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 | Responsecodes | 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 | Responsecodes | 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 | Responsecodes | 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 | Responsecodes | 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 | Responsecodes | 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 | Responsecodes | 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 | Responsecodes | 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 | Responsecodes | 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 APIsThe 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 | Responsecodes | 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 | Responsecodes | 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 | Responsecodes | 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 | Responsecodes | 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 | Responsecodes | 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 | Responsecodes | 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 | ResponseCodes | 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 | Responsecodes | 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 | Responsecodes | 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.

 © 2020, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

 All rights reserved.

 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.

 © 2020, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

 All rights reserved.

 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.

 © 2020, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

 All rights reserved.

 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.

 © 2020, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

 All rights reserved.

 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.

 © 2020, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

 All rights reserved.

 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.

 © 2020, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

 All rights reserved.

 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.

 © 2019, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

 All rights reserved.

 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.

 © 2019, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

 All rights reserved.

 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.

 © 2020, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

 All rights reserved.

 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.

 © 2020, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).

 All rights reserved.

 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 \*\*\*