



CAPIF Security API

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OpenAPI

OpenAPI Version: 3.0.0

Info

Title: CAPIF_Security_API

Description: This API enables the API publishing function to communicate with the CAPIF core function to publish the service API information and manage the published service API information. This API also enables the API exposing function to communicate with the CAPIF core function to retrieve the security information of an API invoker.

Version: "1.0.0"

Servers

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

Variables:

API Root:

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/Optional: 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:
Reference: '#/components/schemas/ServiceSecurity'
- '400':
Reference: 'TS29122_CommonData.yaml#/components/responses/400'
- '401':
Reference: 'TS29122_CommonData.yaml#/components/responses/401'
- '403':
Reference: 'TS29122_CommonData.yaml#/components/responses/403'
- '404':
Reference: 'TS29122_CommonData.yaml#/components/responses/404'
- '406':
Reference: 'TS29122_CommonData.yaml#/components/responses/406'
- '414':
Reference: 'TS29122_CommonData.yaml#/components/responses/414'
- '429':
Reference: 'TS29122_CommonData.yaml#/components/responses/429'
- '500':

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    Reference: 'TS29122_CommonData.yaml#/components/responses/500'
  '503':
    Reference: 'TS29122_CommonData.yaml#/components/responses/503'
  Default:
    Reference: 'TS29122_CommonData.yaml#/components/responses/default'
put:
  Parameters:
    - Name: apiInvokerId
      In: path
      Description: Identifier of an individual API invoker
      Required/Optional: true
      Schema:
        Type: string
  Request Body:
    Description: create a security context for an API invoker
    Required/Optional: true
    Content:
      Application/JSON:
        Schema:
          Reference: '#/components/schemas/ServiceSecurity'
  Callbacks:
    notificationDestination:
      '{request.body#/notificationDestination}':
        Method: Post
        Request Body:
          Required/Optional: true
          Content:
            Application/JSON:
              Schema:
                Reference: '#/components/schemas/SecurityNotification'

  Responses:
    '204':
      Description: No Content (successful notification)
    '400':
      Reference: 'TS29122_CommonData.yaml#/components/responses/400'
    '401':
      Reference: 'TS29122_CommonData.yaml#/components/responses/401'
    '403':
      Reference: 'TS29122_CommonData.yaml#/components/responses/403'
    '404':
      Reference: 'TS29122_CommonData.yaml#/components/responses/404'
    '411':
      Reference: 'TS29122_CommonData.yaml#/components/responses/411'
    '413':
      Reference: 'TS29122_CommonData.yaml#/components/responses/413'
    '415':
      Reference: 'TS29122_CommonData.yaml#/components/responses/415'
    '429':
      Reference: 'TS29122_CommonData.yaml#/components/responses/429'
    '500':
```

Reference: 'TS29122_CommonData.yaml#/components/responses/500'
'503':
Reference: 'TS29122_CommonData.yaml#/components/responses/503'
Default:
Reference: 'TS29122_CommonData.yaml#/components/responses/default'

Responses:**'201':****Description:** Successful created.**Content:****Application/JSON:****Schema:****Reference:** '#/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/Optional: true**Schema:****Type:** string**'400':****Reference:** 'TS29122_CommonData.yaml#/components/responses/400'**'401':****Reference:** 'TS29122_CommonData.yaml#/components/responses/401'**'403':****Reference:** 'TS29122_CommonData.yaml#/components/responses/403'**'411':****Reference:** 'TS29122_CommonData.yaml#/components/responses/411'**'413':****Reference:** 'TS29122_CommonData.yaml#/components/responses/413'**'414':****Reference:** 'TS29122_CommonData.yaml#/components/responses/414'**'415':****Reference:** 'TS29122_CommonData.yaml#/components/responses/415'**'429':****Reference:** 'TS29122_CommonData.yaml#/components/responses/429'**'500':****Reference:** 'TS29122_CommonData.yaml#/components/responses/500'**'503':****Reference:** 'TS29122_CommonData.yaml#/components/responses/503'**Default:****Reference:** 'TS29122_CommonData.yaml#/components/responses/default'**delete:****Parameters:****- Name:** apiInvokerId**In:** path**Description:** Identifier of an individual API invoker**Required/Optional:** true**Schema:****Type:** string

Responses:

'204':
 Description: No Content (Successful deletion of the existing subscription)

'400':
 Reference: 'TS29122_CommonData.yaml#/components/responses/400'

'401':
 Reference: 'TS29122_CommonData.yaml#/components/responses/401'

'403':
 Reference: 'TS29122_CommonData.yaml#/components/responses/403'

'404':
 Reference: 'TS29122_CommonData.yaml#/components/responses/404'

'429':
 Reference: 'TS29122_CommonData.yaml#/components/responses/429'

'500':
 Reference: 'TS29122_CommonData.yaml#/components/responses/500'

'503':
 Reference: 'TS29122_CommonData.yaml#/components/responses/503'

Default:
 Reference: 'TS29122_CommonData.yaml#/components/responses/default'

/trustedInvokers/{apiInvokerId}/update

Method: Post

Parameters:

- **Name:** apiInvokerId
 In: path
 Description: Identifier of an individual API invoker
 Required/Optional: true
 Schema:
 Type: string

Request Body:

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

Required/Optional: true

Content:

Application/JSON:
 Schema:
 Reference: '#/components/schemas/ServiceSecurity'

Responses:

'200':
 Description: Successful updated.
 Content:
 Application/JSON:
 Schema:
 Reference: '#/components/schemas/ServiceSecurity'

'400':
 Reference: 'TS29122_CommonData.yaml#/components/responses/400'

'401':

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    Reference: 'TS29122_CommonData.yaml#/components/responses/401'
  '403':
    Reference: 'TS29122_CommonData.yaml#/components/responses/403'
  '404':
    Reference: 'TS29122_CommonData.yaml#/components/responses/404'
  '411':
    Reference: 'TS29122_CommonData.yaml#/components/responses/411'
  '413':
    Reference: 'TS29122_CommonData.yaml#/components/responses/413'
  '415':
    Reference: 'TS29122_CommonData.yaml#/components/responses/415'
  '429':
    Reference: 'TS29122_CommonData.yaml#/components/responses/429'
  '500':
    Reference: 'TS29122_CommonData.yaml#/components/responses/500'
  '503':
    Reference: 'TS29122_CommonData.yaml#/components/responses/503'
  Default:
    Reference: 'TS29122_CommonData.yaml#/components/responses/default'

```

/trustedInvokers/{apiInvokerId}/delete

Method: Post

Parameters:

- **Name:** apiInvokerId
- In:** path
- Description:** Identifier of an individual API invoker
- Required/Optional:** true
- Schema:**
 - Type:** string

Request Body:

- Description:** Revoke the authorization of the API invoker for APIs.
- Required/Optional:** true
- Content:**
 - Application/JSON:**
 - Schema:**
 - Reference:** '#/components/schemas/SecurityNotification'

Responses:

- '204':
 - Description:** Successful revoked.
- '400':
 - Reference:** 'TS29122_CommonData.yaml#/components/responses/400'
- '401':
 - Reference:** 'TS29122_CommonData.yaml#/components/responses/401'
- '403':
 - Reference:** 'TS29122_CommonData.yaml#/components/responses/403'
- '404':
 - Reference:** 'TS29122_CommonData.yaml#/components/responses/404'

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'411':  
  Reference: 'TS29122_CommonData.yaml#/components/responses/411'  
'413':  
  Reference: 'TS29122_CommonData.yaml#/components/responses/413'  
'415':  
  Reference: 'TS29122_CommonData.yaml#/components/responses/415'  
'429':  
  Reference: 'TS29122_CommonData.yaml#/components/responses/429'  
'500':  
  Reference: 'TS29122_CommonData.yaml#/components/responses/500'  
'503':  
  Reference: 'TS29122_CommonData.yaml#/components/responses/503'  
Default:  
  Reference: 'TS29122_CommonData.yaml#/components/responses/default'
```

/securities/{securityId}/token

Method: Post

Parameters:

- **Name:** securityId

In: path

Description: Identifier of an individual security instance

Required/Optional: true

Schema:

Type: string

Request Body:

Required/Optional: true

Content:

application/x-www-form-urlencoded:

Schema:

Reference: '#/components/schemas/AccessTokenReq'

Responses:

'200':

Description: Successful Access Token Request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AccessTokenRsp'

'400':

Description: Error in the Access Token Request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AccessTokenErr'

Components

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schemas:
  ServiceSecurity:
    Type: object
    Properties:
      securityInfo:
        Type: array
        Items:
          Reference: '#/components/schemas/SecurityInformation'
          Minimum: 1
      notificationDestination:
        Reference: '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.

      websocketNotifConfig:
        Reference: 'TS29122_CommonData.yaml#/components/schemas/WebsocketNotifConfig'
      supportedFeatures:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    Required:
      - securityInfo
      - securityNotificationDestination
  SecurityInformation:
    Type: object
    Properties:
      interfaceDetails:
        Reference:
        'TS29222_CAPIF_Publish_Service_API.yaml#/components/schemas/InterfaceDescription'
      aefId:
        Type: string
        Description: Identifier of the API exposing function
      prefSecurityMethods:
        Type: array
        Items:
          Reference:
          'TS29222_CAPIF_Publish_Service_API.yaml#/components/schemas/SecurityMethod'
          minItems: 1
        Description: Security methods preferred by the API invoker for the API interface.

      selSecurityMethod:
        Reference:
        '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:

Reference: '#/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:

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    - Bearer
expires_in:
  Reference: '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:
    Reference: '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.

```

External Docs

Description: 3GPP TS 29.222 V15.2.0 Common API Framework for 3GPP Northbound APIs

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

