



# CAPIF\_Security\_API

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API for CAPIF security management.

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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"

## externalDocs

**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/](http://www.3gpp.org/ftp/Specs/archive/29_series/29.222/)

## 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' 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': 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': 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' 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'** 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': Successful updated.

**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'

'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': 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'

'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' Successful Access Token Request

**Content:**

**Application/JSON:**

**Schema:**

**Reference:** '#/components/schemas/AccessTokenRsp'

'400' Error in the Access Token Request

**Content:**

**Application/JSON:**

**Schema:**

**Reference:** '#/components/schemas/AccessTokenErr'

## components

### 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

**aeId:**

**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:**

- 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

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.

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.