



CAPIF Publish Service

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OpenAPI

OpenAPI Version: 3.0.0

Info

Title: CAPIF_Publish_Service_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.

Version: "1.0.0"

Servers

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

Variables:

API Root:

Default: https://example.com

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

Paths

APF published API

{apfId}/service-apis

Method: Post

Description: Publish a new API.

Parameters:

- **Name:** apfId

In: path

Required/Optional: true

Schema:

Reference: '#/components/schemas/apfId'

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/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:

Reference: '#/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/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'

'404':

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

'411':

Reference: 'TS29122_CommonData.yaml#/components/responses/411'

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    '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'
get:
  Description: Retrieve all published APIs.

  Parameters:
    - Name: apfId
      In: path
      Required/Optional: true
      Schema:
        Reference: '#/components/schemas/apfId'

  Responses:
    '200':
      Description: Definition of all service API(s) published by the API publishing
function.
      Content:
        Application/JSON:
          Schema:
            Reference: '#/components/schemas/ServiceAPIDescription'
    '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'
    '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'
# Individual APF published API

```

/{apfld}/service-apis/{serviceApild}

get:

Description: Retrieve a published service API.

Parameters:

- **Name:** serviceApiId
In: path
Required/Optional: true
Schema:
Reference: '#/components/schemas/serviceApiId'
- **Name:** apfId
In: path
Required/Optional: true
Schema:
Reference: '#/components/schemas/apfId'

Responses:

'200':

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

Content:

Application/JSON:

- Schema:**
Reference: '#/components/schemas/ServiceAPIDescription'
- '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'
- '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:

Description: Update a published service API.

Parameters:

- **Name:** serviceApiId
In: path
Required/Optional: true
Schema:

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    Reference: '#/components/schemas/serviceApiId'
  - Name: apfId
    In: path
    Required/Optional: true
    Schema:
      Reference: '#/components/schemas/apfId'
Request Body:
  Required/Optional: true
  Content:
    Application/JSON:
      Schema:
        Reference: '#/components/schemas/ServiceAPIDescription'

Responses:
  '200':
    Description: Definition of service API updated successfully.
    Content:
      Application/JSON:
        Schema:
          Reference: '#/components/schemas/ServiceAPIDescription'
  '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'
delete:
  Description: Unpublish a published service API.

Parameters:
  - Name: serviceApiId
    In: path
    Required/Optional: true
    Schema:
      Reference: '#/components/schemas/serviceApiId'
  - Name: apfId

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    In: path
    Required/Optional: true
    Schema:
      Reference: '#/components/schemas/apfId'

  Responses:
    '204':
      Description: The individual published service API matching the serviceAPIId is
deleted.
    '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'
# 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:
    Reference: '#/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:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
Required:
  - apiName
InterfaceDescription:
  Type: object
  Properties:
    ipv4Addr:
      Reference: 'TS29122_CommonData.yaml#/components/schemas/Ipv4Addr'
    ipv6Addr:
      Reference: 'TS29122_CommonData.yaml#/components/schemas/Ipv6Addr'
    port:
      Reference: 'TS29122_CommonData.yaml#/components/schemas/Port'
    securityMethods:
      Type: array
      Items:
        Reference: '#/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:
        Reference: '#/components/schemas/Version'
      minItems: 1
      Description: API version
    protocol:
      Reference: '#/components/schemas/Protocol'
    dataFormat:
      Reference: '#/components/schemas/DataFormat'
    securityMethods:
      Type: array

```

```

    Items:
      Reference: '#/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:
      Reference: '#/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:
      Reference: '#/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:
        Reference: '#/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:

```


Reference: '#/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:
Reference: '#/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:
Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

resources:
Type: array
Items:
Reference: '#/components/schemas/Resource'
minItems: 1
Description: Resources supported by the API.

custOperations:
Type: array
Items:
Reference: '#/components/schemas/CustomOperation'
minItems: 1
Description: Custom operations without resource association.

Required:

- apiVersion

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

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/

