



Ultra Cloud Core 5G Session Management Function, Release 2020.02 - API Reference

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CHAPTER 1

AEF Security

API for AEF security management.

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OpenAPI

OpenAPI Version: 3.0.0

info

Title: AEF_Security_API

Description: This API allows an API invoker to check if the security information required by the API exposing function is available, by initiating authentication. This API also allows CAPIF core function to revoke access to service APIs.

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/

servers

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

Variables:

API Root:

Default: https://example.com

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

paths

/check-authentication

Method: Post

Summary: Check authentication.

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/CheckAuthenticationReq'

Responses:

'200': The request was successful.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/CheckAuthenticationRsp'

'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'

/revoke-authorization

Method: Post

Summary: Revoke authorization.

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/RevokeAuthorizationReq'

Responses:

'200': The request was successful.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/RevokeAuthorizationRsp'

'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'

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:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Required:**

- apiInvokerId
- supportedFeatures

CheckAuthenticationRsp

Type: object**Properties:****supportedFeatures:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Required:**

- supportedFeatures

RevokeAuthorizationReq

Type: object**Properties:****revokeInfo:****Reference:** 'TS29222_CAPIF_Security_API.yaml#/components/schemas/SecurityNotification'**supportedFeatures:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Required:**

- revokeInfo
- supportedFeatures

RevokeAuthorizationRsp

Type: object**Properties:****supportedFeatures:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Required:**

- supportedFeatures



CHAPTER 2

ApplicationData

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- [info](#), on page 5
- [externalDocs](#), on page 5
- [paths](#), on page 5
- [components](#), on page 23

OpenAPI

OpenAPI Version: 3.0.0

info

Version: '-'

Title: 'Unified Data Repository Service API file for policy data'

Description: 'The API version is defined in 3GPP TS 29.504'

externalDocs

Description: 3GPP TS 29.519 V15.2.0; 5G System; Usage of the Unified Data Repository Service for Policy Data, Application Data and Structured Data for Exposure.

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.519/'

paths

/policy-data/ues/{ueId}/am-data

Parameters:

- name: ueId

In: path

Required/Optional: true

Schema:

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

get:

Responses:

'200' Upon success, a response body containing access and mobility policies shall be returned.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AmPolicyData'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/ues/{ueId}/ue-policy-set

Parameters:

- name: ueId

In: path

Required/Optional: true

Schema:

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

get:

Responses:

'200' Upon success, a response body containing UE policies shall be returned.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/UePolicySet'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

put:

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/UePolicySet'

Responses:

'201' Successful case. The resource has been successfully created and a response body containing a representation of the created UEPolicySet resource shall be returned.

Headers:

Location:

Description: 'Contains the URI of the newly created resource'

Required/Optional: true

Schema:

Type: string

'204' Successful case. The resource has been successfully updated and no additional content is to be sent in the response message.

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

patch:

Request Body:

Content:

application/merge-patch+json:

Schema:

Reference: '#/components/schemas/UePolicySet'

Responses:

'204' Successful case. The resource has been successfully updated and no additional content is to be sent in the response message.

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/ues/{ueId}/sm-data

get:

Parameters:

- name: ueId

In: path

Required/Optional: true

Schema:

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

- name: sssai

In: query

Required/Optional: false

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/Snssai'

- name: dnn

In: query**Required/Optional:** false**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Dnn'

- name: fields

In: query**Description:** attributes to be retrieved**Required/Optional:** false**Schema:****Type:** array**items:****Type:** string**Responses:**

'200' Upon success, a response body containing SmPolicyData shall be returned.

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/SmPolicyData'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'

'414': Reference 'TS29571_CommonData.yaml#/components/responses/414'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'**patch:****Parameters:**

- name: ueId

In: path

Required/Optional: true

Schema:

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

Request Body:

Content:

application/merge-patch+json:

Schema:

Type: object

additionalProperties:

Reference: '#/components/schemas/UsageMonData'

Responses:

'204': Successful case. The resource has been successfully updated and no additional content is to be sent in the response message.

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/ues/{ueId}/sm-data/{usageMonId}

get:

Parameters:

- name: ueId

In: path

Required/Optional: true

Schema:

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

- name: usageMonId

In: path

Required/Optional: true

Schema:

Type: string

Responses:

'200' Successful case. The usage monitoring data is returned.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/UsageMonData'

'204' The resource was found but no usage monitoring data is available.

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'

'414': Reference 'TS29571_CommonData.yaml#/components/responses/414'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

put:

Parameters:

- name: ueId

In: path

Required/Optional: true

Schema:

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

- name: usageMonId

In: path

Required/Optional: true

Schema:

Type: string

Request Body:

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/UsageMonData'**Responses:****'201'** Successful case. The resource has been successfully created and a response body is returned containing a representation of the resource.**Headers:****Location:****Description:** 'Contains the URI of the newly created resource'**Required/Optional:** true**Schema:****Type:** string**'400'**: Reference 'TS29571_CommonData.yaml#/components/responses/400'**'401'**: Reference 'TS29571_CommonData.yaml#/components/responses/401'**'403'**: Reference 'TS29571_CommonData.yaml#/components/responses/403'**'404'**: Reference 'TS29571_CommonData.yaml#/components/responses/404'**'411'**: Reference 'TS29571_CommonData.yaml#/components/responses/411'**'413'**: Reference 'TS29571_CommonData.yaml#/components/responses/413'**'414'**: Reference 'TS29571_CommonData.yaml#/components/responses/414'**'415'**: Reference 'TS29571_CommonData.yaml#/components/responses/415'**'429'**: Reference 'TS29571_CommonData.yaml#/components/responses/429'**'500'**: Reference 'TS29571_CommonData.yaml#/components/responses/500'**'503'**: Reference 'TS29571_CommonData.yaml#/components/responses/503'**default:** Reference 'TS29571_CommonData.yaml#/components/responses/default'**delete:****Parameters:**

- name: ueId

In: path**Required/Optional:** true**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/VarUeId'

- name: usageMonId

In: path**Required/Optional:** true

Schema:**Type:** string**Responses:****'204'** Successful case. The resource has been successfully deleted.**'400'**: Reference 'TS29571_CommonData.yaml#/components/responses/400'**'401'**: Reference 'TS29571_CommonData.yaml#/components/responses/401'**'403'**: Reference 'TS29571_CommonData.yaml#/components/responses/403'**'404'**: Reference 'TS29571_CommonData.yaml#/components/responses/404'**'429'**: Reference 'TS29571_CommonData.yaml#/components/responses/429'**'500'**: Reference 'TS29571_CommonData.yaml#/components/responses/500'**'503'**: Reference 'TS29571_CommonData.yaml#/components/responses/503'**default**: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/sponsor-connectivity-data/{sponsorId}

Parameters:

- name: sponsorId

In: path**Required/Optional:** true**Schema:****Type:** string**get:****Responses:****'200'** Upon success, a response body containing Sponsor Connectivity Data shall be returned.**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/SponsorConnectivityData'**'204'** The resource was found but no Sponsor Connectivity Data is available.**'400'**: Reference 'TS29571_CommonData.yaml#/components/responses/400'**'401'**: Reference 'TS29571_CommonData.yaml#/components/responses/401'**'403'**: Reference 'TS29571_CommonData.yaml#/components/responses/403'**'404'**: Reference 'TS29571_CommonData.yaml#/components/responses/404'**'406'**: Reference 'TS29571_CommonData.yaml#/components/responses/406'**'429'**: Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/bdt-data

get:

Responses:

'200' Upon success, a response body containing the BDT data shall be returned.

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/BdtData'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/bdt-data/{bdtReferenceId}

Parameters:

- name: bdtReferenceId

In: path

Required/Optional: true

Schema:

Type: string

get:

Responses:

'200' Upon success, a response body containing the BDT data shall be returned.

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/BdtData'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'**put:****Request Body:****Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/BdtData'**Responses:**

'201' Successful case. The resource has been successfully created.

Headers:**Location:****Description:** 'Contains the URI of the newly created resource'**Required/Optional:** true**Schema:****Type:** string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'414': Reference 'TS29571_CommonData.yaml#/components/responses/414'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'
 '429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
 '500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
 '503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
default: Reference 'TS29571_CommonData.yaml#/components/responses/default'
delete:
Responses:
 '204' Successful case. The resource has been successfully deleted.
 '400': Reference 'TS29571_CommonData.yaml#/components/responses/400'
 '401': Reference 'TS29571_CommonData.yaml#/components/responses/401'
 '403': Reference 'TS29571_CommonData.yaml#/components/responses/403'
 '404': Reference 'TS29571_CommonData.yaml#/components/responses/404'
 '429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
 '500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
 '503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/subs-to-notify

Method: Post

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PolicyDataSubscription'

Responses:

'201' Upon success, a response body containing a representation of each Individual subscription resource shall be returned.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PolicyDataSubscription'

Headers:

Location:

Description: 'Contains the URI of the newly created resource'

Required/Optional: true

Schema:**Type:** string**'400':** Reference 'TS29571_CommonData.yaml#/components/responses/400'**'401':** Reference 'TS29571_CommonData.yaml#/components/responses/401'**'403':** Reference 'TS29571_CommonData.yaml#/components/responses/403'**'404':** Reference 'TS29571_CommonData.yaml#/components/responses/404'**'411':** Reference 'TS29571_CommonData.yaml#/components/responses/411'**'413':** Reference 'TS29571_CommonData.yaml#/components/responses/413'**'415':** Reference 'TS29571_CommonData.yaml#/components/responses/415'**'429':** Reference 'TS29571_CommonData.yaml#/components/responses/429'**'500':** Reference 'TS29571_CommonData.yaml#/components/responses/500'**'503':** Reference 'TS29571_CommonData.yaml#/components/responses/503'**default:** Reference 'TS29571_CommonData.yaml#/components/responses/default'**Callbacks:****policyDataChangeNotification:****'{\$request.body#/notificationUri}':****Method:** Post**Request Body:****Required/Optional:** true**Content:****Application/JSON:****Schema:****Type:** array**items:****Reference:** '#/components/schemas/PolicyDataChangeNotification'**minItems:** 1**Responses:****'204'** No Content, Notification was successful**'400':** Reference 'TS29571_CommonData.yaml#/components/responses/400'**'401':** Reference 'TS29571_CommonData.yaml#/components/responses/401'**'403':** Reference 'TS29571_CommonData.yaml#/components/responses/403'**'404':** Reference 'TS29571_CommonData.yaml#/components/responses/404'**'411':** Reference 'TS29571_CommonData.yaml#/components/responses/411'**'413':** Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/subs-to-notify/{subsid}

Parameters:

- name: subsid

In: path

Required/Optional: true

Schema:

Type: string

put:

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PolicyDataSubscription'

Responses:

'200' The individual subscription resource was updated successfully.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PolicyDataSubscription'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
default: Reference 'TS29571_CommonData.yaml#/components/responses/default'
delete:
Responses:
'204' Upon success, an empty response body shall be returned.
'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'
'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'
'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'
'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'
'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/ues/{ueId}/operator-specific-data

get:

Parameters:

- name: ueId

In: path

Description: UE Id

Required/Optional: true

Schema:

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

- name: fields

In: query

Description: attributes to be retrieved

Required/Optional: false

Schema:

Type: array

items:

Type: string

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:**Schema:****Type:** object**additionalProperties:****Reference:** 'TS29505_Subscription_Data.yaml#/components/schemas/OperatorSpecificDataContainer'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'

'414': Reference 'TS29571_CommonData.yaml#/components/responses/414'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'**patch:****Parameters:**

- name: ueId

In: path**Description:** UE Id**Required/Optional:** true**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/VarUeId'**Request Body:****Content:**

application/json-patch+json:

Schema:**Type:** array**items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PatchItem'**Required/Optional:** true**Responses:**

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'
'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'
'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'
'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'
'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'
'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

put:

Parameters:

- name: ueId

In: path

Description: UE Id

Required/Optional: true

Schema:

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

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Type: object

additionalProperties:

Reference: 'TS29505_Subscription_Data.yaml#/components/schemas/OperatorSpecificDataContainer'

Responses:

'200' OK

Content:

Application/JSON:

Schema:

Reference: 'TS29505_Subscription_Data.yaml#/components/schemas/OperatorSpecificDataContainer'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'
 '411': Reference 'TS29571_CommonData.yaml#/components/responses/411'
 '413': Reference 'TS29571_CommonData.yaml#/components/responses/413'
 '415': Reference 'TS29571_CommonData.yaml#/components/responses/415'
 '429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
 '500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
 '503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/policy-data/plmns/{plmnId}/ue-policy-set

Parameters:

- name: plmnId

In: path

Required/Optional: true

Schema:

Type: string

get:

Responses:

'200' Upon success, a response body containing UE policies shall be returned.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/UePolicySet'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'
 '401': Reference 'TS29571_CommonData.yaml#/components/responses/401'
 '403': Reference 'TS29571_CommonData.yaml#/components/responses/403'
 '404': Reference 'TS29571_CommonData.yaml#/components/responses/404'
 '406': Reference 'TS29571_CommonData.yaml#/components/responses/406'
 '412': Reference 'TS29571_CommonData.yaml#/components/responses/412'
 '429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
 '500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
 '503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

components

schemas

AmPolicyData

Description: Contains the AM policy data for a given subscriber.

Type: object

Properties:

subscCats:

Type: array

Items:

Type: string

minItems: 1

UePolicySet

Description: Contains the UE policy data for a given subscriber.

Type: object

Properties:

subscCats:

Type: array

Items:

Type: string

minItems: 1

uePolicySections:

Type: object

additionalProperties:

Reference: '#/components/schemas/UePolicySection'

minProperties: 1

upsis:

Type: array

Items:

Type: string

minItems: 1

UePolicySetPatch

Description: Contains the UE policy set for a given subscriber.

Type: object

Properties:

uePolicySections:

Type: object

additionalProperties:

Reference: '#/components/schemas/UePolicySection'

minProperties: 1

upsis:

Type: array

Items:

Type: string

minItems: 1

UePolicySection

Description: Contains the UE policy section.

Type: object

Properties:

uePolicySectionInfo:

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

upsi:

Type: string

Required:

- uePolicySectionInfo

- upsi

SmPolicyData

Description: Contains the SM policy data for a given subscriber.

Type: object

Properties:

smPolicySnssaiData:

Type: object

additionalProperties:

Reference: '#/components/schemas/SmPolicySnssaiData'

minProperties: 1

umDataLimits:

Type: object

additionalProperties:

Reference: '#/components/schemas/UsageMonDataLimit'

minProperties: 1

umData:

Type: object

additionalProperties:

Reference: '#/components/schemas/UsageMonData'

minProperties: 1

Required:

- smPolicySnssaiData

SmPolicySnssaiData

Description: Contains the SM policy data for a given subscriber and S-NSSAI.

Type: object

Properties:

snssai:

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

smPolicyDnnData:

Type: object

additionalProperties:

Reference: '#/components/schemas/SmPolicyDnnData'

minProperties: 1

Required:

- snssai

SmPolicyDnnData

Description: Contains the SM policy data for a given DNN (and S-NSSAI).

Type: object

Properties:

dnn:

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

allowedServices:

Type: array

Items:

Type: string

minItems: 1

subscCats:

Type: array

Items:

Type: string

minItems: 1

gbrUl:

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

gbrDl:

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

adcSupport:

Type: boolean

subscSpendingLimits:

Type: boolean

ipv4Index:

Reference: '#/components/schemas/IpIndex'

ipv6Index:

Reference: '#/components/schemas/IpIndex'

offline:

Type: boolean

online:

Type: boolean

chfInfo:

Reference: 'TS29512_CommonData.yaml#/components/schemas/ChargingInformation'

refUmDataLimitIds:

Type: object

additionalProperties:

Reference: '#/components/schemas/LimitIdToMonitoringKey'

minProperties: 1

mppsPriority:

Type: boolean

imsSignallingPrio:

Type: boolean

mpsPriorityLevel:

Type: integer

Required:

- dnn

UsageMonDataLimit

Description: Contains usage monitoring control data for a subscriber.

Type: object

Properties:

limitId:

Type: string

scopes:

Type: object

additionalProperties:

Reference: '#/components/schemas/UsageMonDataScope'

minProperties: 1

umLevel:

Reference: '#/components/schemas/UsageMonLevel'

startDate:

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

endDate:

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

usageLimit:

Reference: 'TS29122_CommonData.yaml#/components/schemas/UsageThreshold'

resetPeriod:

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

Required:

- limitId

UsageMonData

Description: Contains remain allowed usage data for a subscriber.

Type: object

Properties:

limitId:

Type: string

scopes:

Type: object

additionalProperties:

Reference: '#/components/schemas/UsageMonDataScope'

minProperties: 1

umLevel:

Reference: '#/components/schemas/UsageMonLevel'

allowedUsage:

Reference: 'TS29122_CommonData.yaml#/components/schemas/UsageThreshold'

resetTime:

Reference: '#/components/schemas/TimePeriod'

Required:

- limitId

LimitIdToMonitoringKey

Description: Contains the limit identifier and the corresponding monitoring key for a given S-NSSAI and DNN.

Type: object

Properties:

limitId:

Type: string

monkey:

Type: array

Items:

Type: string

minItems: 1

Required:

- limitId

UsageMonDataScope

Description: Contains a SNSSAI and DNN combinations to which the UsageMonData instance belongs to.

Type: object

Properties:

snssai:

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

dnn:

Type: array

Items:

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

minItems: 1

Required:

- snssai

TimePeriod

Description: Contains the periodicity for the defined usage monitoring data limits.

Type: object

Properties:

period:

Reference: '#/components/schemas/Periodicity'

maxNumPeriod:

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

Required:

- period

SponsorConnectivityData

Description: Contains the sponsored data connectivity related information for a sponsor identifier.

Type: object

Properties:

aspIds:

Type: array

Items:

Type: string

Required:

- aspIds

BdtData

Description: Contains the background data transfer data.

Type: object

Properties:

aspId:**Type:** string**transPolicy:****Reference:** 'TS29554_Npcf_BDTPolicyControl.yaml#/components/schemas/TransferPolicy'**bdtRefId:****Type:** string**nwAreaInfo:****Reference:** 'TS29554_Npcf_BDTPolicyControl.yaml#/components/schemas/NetworkAreaInfo'**Required:**

- aspIds
- transPolicy

PolicyDataSubscription

Description: Identifies a subscription to policy data change notification.**Type:** object**Properties:****notificationUri:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**monitoredResourceUris:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**supportedFeatures:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Required:**

- notificationUri
- monitoredResourceUris

PolicyDataChangeNotification

Description: Contains changed policy data for which notification was requested.**Type:** object**Properties:****amPolicyData:****Reference:** '#/components/schemas/AmPolicyData'**uePolicySet:**

Reference: '#/components/schemas/UePolicySet'

smPolicyData:

Reference: '#/components/schemas/SmPolicyData'

usageMonData:

Reference: '#/components/schemas/UsageMonData'

SponsorConnectivityData:

Reference: '#/components/schemas/SponsorConnectivityData'

bdtData:

Reference: '#/components/schemas/BdtData'

IpIndex

Type: integer

UsageMonLevel

anyOf:

- type: string

Periodicity

anyOf:

- type: string



CHAPTER 3

CAPIF Access Control Policy

- [OpenAPI](#), on page 33
- [info](#), on page 33
- [externalDocs](#), on page 33
- [servers](#), on page 33
- [paths](#), on page 34
- [components](#), on page 35

OpenAPI

OpenAPI Version: 3.0.0

info

Title: CAPIF_Access_Control_Policy_API

Description: This API enables the API exposing function to obtain the policy to perform access control on the service API invocations.

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/

servers

URL: '{apiRoot}/access-control-policy/v1'

Variables:

API Root:

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/Optional: true

Schema:

Type: string

- name: aef-id

In: query

Required/Optional: 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:

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

Responses:

'200' OK.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/accessControlPolicyList'

'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'

components

schemas

accessControlPolicyList

Type: object

Properties:

apiInvokerPolicies:

Type: array

Items:

Reference: '#/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:****Reference:** '#/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:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/DateTime'**stopTime:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/DateTime'



CHAPTER 4

Common Data

Common data types are applicable to several 5GC SBI API specifications as defined in 3GPP TS 29.571 [5] and should be referenced from individual 5GC SBI API specifications.

- [OpenAPI, on page 37](#)
- [info, on page 37](#)
- [externalDocs, on page 37](#)
- [paths, on page 37](#)
- [components, on page 38](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Version: '1.0.0'

Title: 'Common Data Types'

Description: 'Common Data Types for Service Based Interfaces '

externalDocs

Description: 3GPP TS 29.571 Common Data Types for Service Based Interfaces, version 15.2.0

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.571/'

paths

{

components

schemas

```
# Common Data Types for Generic usage definitions as defined in subclause 5.2  
# COMMON SIMPLE DATA TYPES
```

Binary

```
format: binary  
Type: string
```

BinaryRm

```
format: binary  
Type: string  
nullable: true
```

Bytes

```
format: byte  
Type: string
```

BytesRm

```
format: byte  
Type: string  
nullable: true
```

Date

```
format: date  
Type: string
```

DateRm

```
format: date  
Type: string  
nullable: true
```

DateTime

```
format: date-time  
Type: string
```

DateTimeRm

format: date-time

Type: string

nullable: true

DiameterIdentity

Type: string

Pattern: '^[A-Za-z0-9]+(-[A-Za-z0-9]+)+[a-z]{2,}\$'

DiameterIdentityRm

Type: string

Pattern: '^[A-Za-z0-9]+(-[A-Za-z0-9]+)+[a-z]{2,}\$'

nullable: true

Double

format: double

Type: number

DoubleRm

format: double

Type: number

nullable: true

DurationSec

Type: integer

DurationSecRm

Type: integer

nullable: true

Float

format: float

Type: number

FloatRm

format: float

Type: number

nullable: true

Int32

format: int32

Type: integer

Int32Rm

format: int32

Type: integer

nullable: true

Int64

Type: integer

format: int64

Int64Rm

format: int64

Type: integer

nullable: true

Ipv4Addr

Type: string

Pattern:

```
'^(([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])\.)\{3\}([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])$'
```

example: '198.51.100.1'

Ipv4AddrRm

Type: string

Pattern:

```
'^(([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])\.)\{3\}([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])$'
```

example: '198.51.100.1'

nullable: true

Ipv6Addr

Type: string

allOf:

```
- pattern: '^((:|(0?|[1-9a-f][0-9a-f]{0,3}))*):((0?|[1-9a-f][0-9a-f]{0,3}))*:0,6:(:|(0?|[1-9a-f][0-9a-f]{0,3}))*$'
```

```
- pattern: '^((([^\:]+:)\{7\}([^\:]+))|((([^\:]+)*[^\:]+)?::([^\:]+)*[^\:]+)?))$'
```

example: '2001:db8:85a3::8a2e:370:7334'

Ipv6AddrRm

Type: string

allOf:

- pattern: '^((:(0?|[1-9a-f][0-9a-f]{0,3}))*):((0?|[1-9a-f][0-9a-f]{0,3}))*:0,6):(0?|[1-9a-f][0-9a-f]{0,3}))*\$'

- pattern: '^(((([::]{7}([[::]]+))|((([::]]+)*[::]+)?::([[::]]+)*[::]+)?))\$'

example: '2001:db8:85a3::8a2e:370:7334'

nullable: true

Ipv6Prefix

Type: string

allOf:

- pattern:

'^((:(0?|[1-9a-f][0-9a-f]{0,3}))*):((0?|[1-9a-f][0-9a-f]{0,3}))*:0,6):(0?|[1-9a-f][0-9a-f]{0,3}))*\v{((0-9){2})(1[0-1][0-9])(12[0-8])}\$'

- pattern: '^(((([::]{7}([[::]]+))|((([::]]+)*[::]+)?::([[::]]+)*[::]+)?)(\v.+)\$'

example: '2001:db8:abcd:12::0/64'

Ipv6PrefixRm

Type: string

allOf:

- pattern:

'^((:(0?|[1-9a-f][0-9a-f]{0,3}))*):((0?|[1-9a-f][0-9a-f]{0,3}))*:0,6):(0?|[1-9a-f][0-9a-f]{0,3}))*\v{((0-9){2})(1[0-1][0-9])(12[0-8])}\$'

- pattern: '^(((([::]{7}([[::]]+))|((([::]]+)*[::]+)?::([[::]]+)*[::]+)?)(\v.+)\$'

nullable: true

MacAddr48

Type: string

Pattern: '^([0-9a-fA-F]{2})(-([0-9a-fA-F]{2})){5}\$'

MacAddr48Rm

Type: string

Pattern: '^([0-9a-fA-F]{2})(-([0-9a-fA-F]{2})){5}\$'

nullable: true

SupportedFeatures

Type: string

Pattern: '^[A-Fa-f0-9]*\$'

Uinteger

Type: integer

Minimum: 0

UintegerRm

Type: integer

Minimum: 0

nullable: true

Uint16

Type: integer

Minimum: 0

Maximum: 65535

Uint16Rm

Type: integer

Minimum: 0

Maximum: 65535

nullable: true

Uint32

format: int32

Type: integer

Minimum: 0

Uint32Rm

format: int32

Type: integer

Minimum: 0

nullable: true

Uint64

format: int64

Type: integer

Minimum: 0

Uint64Rm

format: int64
Type: integer
Minimum: 0
nullable: true

Uri

Type: string

UriRm

Type: string
nullable: true

VarUeld

Type: string
Pattern: '^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^\@]+\@[^\@]+\.)\$'

VarUeldRm

Type: string
Pattern: '^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^\@]+\@[^\@]+\.)\$'
nullable: true

TimeZone

Type: string

TimeZoneRm

Type: string
nullable: true

COMMON ENUMERATED DATA TYPES

PatchOperation

anyOf:
- type: string
enum:
- add
- copy
- move

- remove
- replace
- test
- type: string

UriScheme

anyOf:

- type: string

enum:

- http
- https
- type: string

ChangeType

anyOf:

- type: string

enum:

- ADD
- MOVE
- REMOVE
- REPLACE
- type: string

COMMON STRUCTURED DATA TYPES

ProblemDetails

Type: object

Properties:

Type:

Reference: '#/components/schemas/Uri'

title:

Type: string

status:

Type: integer

detail:

Type: string

instance:

Reference: '#/components/schemas/Uri'

cause:

Type: string

invalidParams:

Type: array

Items:

Reference: '#/components/schemas/InvalidParam'

minItems: 1

Link

Type: object

Properties:

href:

Reference: '#/components/schemas/Uri'

LinkRm

Type: object

Properties:

href:

Reference: '#/components/schemas/Uri'

nullable: true

PatchItem

Type: object

Properties:

op:

Reference: '#/components/schemas/PatchOperation'

path:

Type: string

from:

Type: string

value:

nullable: true

Required:

- op

- path

LinksValueSchema

oneOf:

- type: array

Items:

Reference: '#/components/schemas/Link'

minItems: 1

- \$ref: '#/components/schemas/Link'

SelfLink

Type: object

Properties:

self:

Reference: '#/components/schemas/Link'

Required:

- self

InvalidParam

Type: object

Properties:

param:

Type: string

reason:

Type: string

Required:

- param

Changeltem

Type: object

Properties:

op:

Reference: '#/components/schemas/ChangeType'

path:

Type: string

from:

Type: string

origValue: {}

newValue: {}

Required:

- op
- path

NotifyItem

Type: object

Properties:

resourceId:

Reference: '#/components/schemas/Uri'

changes:

Type: array

Items:

Reference: '#/components/schemas/ChangeItem'

minItems: 1

ComplexQuery

oneOf:

- \$ref: '#/components/schemas/Cnf'
- \$ref: '#/components/schemas/Dnf'

Cnf

Type: object

Required:

- cnfUnits

Properties:

cnfUnits:

Type: array

Items:

Reference: '#/components/schemas/CnfUnit'

minItems: 1

Dnf

Type: object

Required:

- dnfUnits

Properties:

dnfUnits:

Type: array

Items:

Reference: '#/components/schemas/DnfUnit'

minItems: 1

CnfUnit

Type: object

Required:

- cnfUnit

Properties:

cnfUnit:

Type: array

Items:

Reference: '#/components/schemas/Atom'

minItems: 1

DnfUnit

Type: object

Required:

- dnfUnit

Properties:

dnfUnit:

Type: array

Items:

Reference: '#/components/schemas/Atom'

minItems: 1

Atom

Type: object

Required:

- attr

- value

Properties:

attr:

Type: string

value: {}

negative:

Type: boolean

Data Types related to Subscription, Identification and Numbering as defined in subclause 5.3

SIMPLE DATA TYPES

Dnn

Type: string

DnnRm

Type: string

nullable: true

Gpsi

Type: string

Pattern: '^(msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+.+)\$'

GpsiRm

Type: string

Pattern: '^(msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+.+)\$'

nullable: true

GroupId

Type: string

Pattern: '^[A-Fa-f0-9]{8}-[0-9]{3}-[0-9]{2,3}-([A-Fa-f0-9][A-Fa-f0-9]){1,10}\$'

GroupIdRm

Type: string

Pattern: '^[A-Fa-f0-9]{8}-[0-9]{3}-[0-9]{2,3}-([A-Fa-f0-9][A-Fa-f0-9]){1,10}\$'

nullable: true

Pei

Type: string

Pattern: '^(imei-[0-9]{15}|imeisv-[0-9]{16}|.+)\$'

PeiRm

Type: string

Pattern: '^(imei-[0-9]{15}|imeisv-[0-9]{16}|.+)\$'

nullable: true

Supi

Type: string

Pattern: '^(imsi-[0-9]{5,15}|nai-.+|.+\$)'

SupiRm

Type: string

Pattern: '^(imsi-[0-9]{5,15}|nai-.+|.+\$)'

nullable: true

NfInstanceId

Type: string

format: uuid

Amfld

Type: string

Pattern: '^[A-Fa-f0-9]{6}\$'

RfspIndex

Type: integer

Minimum: 1

Maximum: 256

RfspIndexRm

Type: integer

Minimum: 1

Maximum: 256

nullable: true

NfGroupId

Type: string

STRUCTURED DATA TYPES

Guami

Type: object

Properties:

plmnId:

Reference: '#/components/schemas/PlmnId'

amfId:

Reference: '#/components/schemas/AmfId'

Required:

- plmnId

- amfId

GuamiRm

Type: object

Properties:

plmnId:

Reference: '#/components/schemas/PlmnId'

amfId:

Reference: '#/components/schemas/AmfId'

Required:

- plmnId

- amfId

nullable: true

NetworkId

Type: object

Properties:

mnc:

Reference: '#/components/schemas/Mnc'

mcc:

Reference: '#/components/schemas/Mcc'

Data Types related to 5G Network as defined in subclause 5.4

SIMPLE DATA TYPES

ApplicationId

Type: string

ApplicationIdRm

Type: string
nullable: true

PduSessionId

Type: integer
Minimum: 0
Maximum: 255

Mcc

Type: string
Pattern: '^d{3}\$'

MccRm

Type: string
Pattern: '^d{3}\$'
nullable: true

Mnc

Type: string
Pattern: '^d{2,3}\$'

MncRm

Type: string
Pattern: '^d{2,3}\$'
nullable: true

Tac

Type: string
Pattern: '([A-Fa-f0-9]{4}\$)([A-Fa-f0-9]{6}\$)'

TacRm

Type: string
Pattern: '([A-Fa-f0-9]{4}\$)([A-Fa-f0-9]{6}\$)'
nullable: true

EutraCellId

Type: string

Pattern: '^[A-Fa-f0-9]{7}\$'

EutraCellIdRm

Type: string

Pattern: '^[A-Fa-f0-9]{7}\$'

nullable: true

NrCellId

Type: string

Pattern: '^[A-Fa-f0-9]{9}\$'

NrCellIdRm

Type: string

Pattern: '^[A-Fa-f0-9]{9}\$'

nullable: true

Dnai

Type: string

DnaiRm

Type: string

nullable: true

5GMmCause

Reference: '#/components/schemas/UInteger'

AmfName

Type: string

AreaCode

Type: string

AreaCodeRm

Type: string

nullable: true

N3lwfId

Type: string

NgeNblId

Type: string

Pattern: '^(MacroNGeNB-[A-Fa-f0-9]{5}|LMacroNGeNB-[A-Fa-f0-9]{6}|SMacroNGeNB-[A-Fa-f0-9]{5})\$'

ENUMERATED DATA TYPES

AccessType

Type: string

enum:

- 3GPP_ACCESS
- NON_3GPP_ACCESS

AccessTypeRm

Type: string

enum:

- 3GPP_ACCESS
- NON_3GPP_ACCESS

nullable: true

RatType

anyOf:

- type: string

enum:

- NR
- EUTRA
- WLAN
- VIRTUAL
- type: string

RatTypeRm

anyOf:

- type: string

enum:

- NR
- EUTRA
- WLAN
- VIRTUAL

- type: string
nullable: true

PduSessionType

anyOf:
- type: string
enum:
- IPV4
- IPV6
- IPV4V6
- UNSTRUCTURED
- ETHERNET
- type: string

PduSessionTypeRm

anyOf:
- type: string
enum:
- IPV4
- IPV6
- IPV4V6
- UNSTRUCTURED
- ETHERNET
- type: string
nullable: true

UplIntegrity

anyOf:
- type: string
enum:
- REQUIRED
- PREFERRED
- NOT_NEEDED
- type: string

UpIntegrityRm

anyOf:

- type: string

enum:

- REQUIRED

- PREFERRED

- NOT_NEEDED

- type: string

nullable: true

UpConfidentiality

anyOf:

- type: string

enum:

- REQUIRED

- PREFERRED

- NOT_NEEDED

- type: string

UpConfidentialityRm

anyOf:

- type: string

enum:

- REQUIRED

- PREFERRED

- NOT_NEEDED

- type: string

nullable: true

SscMode

anyOf:

- type: string

enum:

- SSC_MODE_1

- SSC_MODE_2

- SSC_MODE_3
- type: string

SscModeRm

anyOf:

- type: string

enum:

- SSC_MODE_1
 - SSC_MODE_2
 - SSC_MODE_3
 - type: string
- nullable:** true

DnaiChangeType

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

- EARLY: Early notification of UP path reconfiguration.
- EARLY_LATE: Early and late notification of UP path reconfiguration. This value shall only be present in the subscription to the DNAI change event.
- LATE: Late notification of UP path reconfiguration.

DnaiChangeTypeRm

anyOf:

- type: string

enum:

- EARLY
 - EARLY_LATE
 - LATE
 - type: string
- nullable:** true

RestrictionType

anyOf:

- type: string

enum:

- ALLOWED_AREAS

- NOT_ALLOWED_AREAS

- type: string

RestrictionTypeRm

anyOf:

- type: string

enum:

- ALLOWED_AREAS

- NOT_ALLOWED_AREAS

- type: string

nullable: true

CoreNetworkType

anyOf:

- type: string

enum:

- 5GC

- EPC

- type: string

CoreNetworkTypeRm

anyOf:

- type: string

enum:

- 5GC

- EPC

- type: string

nullable: true

PresenceState

anyOf:

```

- type: string
enum:
- IN_AREA
- OUT_OF_AREA
- UNKNOWN
- INACTIVE
- type: string
# STRUCTURED DATA TYPES

```

Snssai

```

Type: object
Properties:
sst:
Type: integer
Minimum: 0
Maximum: 255
sd:
Type: string
Pattern: '^[A-Za-f0-9]{6}$'
Required:
- sst

```

PImnId

```

Type: object
Properties:
mcc:
Reference: '#/components/schemas/Mcc'
mnc:
Reference: '#/components/schemas/Mnc'
Required:
- mcc
- mnc

```

PImnIdRm

```

Type: object
Properties:

```

mcc:

Reference: '#/components/schemas/Mcc'

mnc:

Reference: '#/components/schemas/Mnc'

Required:

- mcc

- mnc

nullable: true

Tai

Type: object

Properties:

plmnId:

Reference: '#/components/schemas/PlmnId'

tac:

Reference: '#/components/schemas/Tac'

Required:

- plmnId

- tac

TaiRm

Type: object

Properties:

plmnId:

Reference: '#/components/schemas/PlmnId'

tac:

Reference: '#/components/schemas/Tac'

Required:

- plmnId

- tac

nullable: true

Ecgi

Type: object

Properties:

plmnId:

Reference: '#/components/schemas/PlmnId'

PLMN Identity

eutraCellId:

Reference: '#/components/schemas/EutraCellId'

Required:

- plmnId

- eutraCellId

EcgiRm

Type: object

Properties:

plmnId:

Reference: '#/components/schemas/PlmnId'

PLMN Identity

eutraCellId:

Reference: '#/components/schemas/EutraCellId'

Required:

- plmnId

- eutraCellId

nullable: true

Ncgi

Type: object

Properties:

plmnId:

Reference: '#/components/schemas/PlmnId'

nrCellId:

Reference: '#/components/schemas/NrCellId'

Required:

- plmnId

- nrCellId

NcgiRm

Type: object

Properties:

plmnId:

Reference: '#/components/schemas/PlmnId'

nrCellId:

Reference: '#/components/schemas/NrCellId'

Required:

- plmnId

- nrCellId

nullable: true

UserLocation

Type: object

Properties:

eutraLocation:

Reference: '#/components/schemas/EutraLocation'

nrLocation:

Reference: '#/components/schemas/NrLocation'

n3gaLocation:

Reference: '#/components/schemas/N3gaLocation'

EutraLocation

Type: object

Properties:

tai:

Reference: '#/components/schemas/Tai'

ecgi:

Reference: '#/components/schemas/Ecgi'

ageOfLocationInformation:

Type: integer

Minimum: 0

Maximum: 32767

ueLocationTimestamp:

Reference: '#/components/schemas/DateTime'

geographicalInformation:

Type: string

Pattern: '^[0-9A-F]{16}\$'

geodeticInformation:

Type: string

Pattern: '^[0-9A-F]{20}\$'

globalNgenbId:

Reference: '#/components/schemas/GlobalRanNodeId'

Required:

- tai

- ecgi

EutraLocationRm

Type: object

Properties:

tai:

Reference: '#/components/schemas/Tai'

ecgi:

Reference: '#/components/schemas/Ecgi'

ageOfLocationInformation:

Type: integer

Minimum: 0

Maximum: 32767

ueLocationTimestamp:

Reference: '#/components/schemas/DateTime'

geographicalInformation:

Type: string

Pattern: '^[0-9A-F]{16}\$'

geodeticInformation:

Type: string

Pattern: '^[0-9A-F]{20}\$'

globalNgenbId:

Reference: '#/components/schemas/GlobalRanNodeId'

Required:

- tai

- ecgi

nullable: true

NrLocation

Type: object

Properties:

tai:

Reference: '#/components/schemas/Tai'

ncgi:

Reference: '#/components/schemas/Ncgi'

ageOfLocationInformation:

Type: integer

Minimum: 0

Maximum: 32767

ueLocationTimestamp:

Reference: '#/components/schemas/DateTime'

geographicalInformation:

Type: string

Pattern: '^[0-9A-F]{16}\$'

geodeticInformation:

Type: string

Pattern: '^[0-9A-F]{20}\$'

globalGnbId:

Reference: '#/components/schemas/GlobalRanNodeId'

Required:

- tai

- ncgi

NrLocationRm

Type: object

Properties:

tai:

Reference: '#/components/schemas/Tai'

ncgi:

Reference: '#/components/schemas/Ncgi'

ageOfLocationInformation:

Type: integer

Minimum: 0

Maximum: 32767

ueLocationTimestamp:

Reference: '#/components/schemas/DateTime'

geographicalInformation:

Type: string

Pattern: '^[0-9A-F]{16}\$'

geodeticInformation:

Type: string

Pattern: '^[0-9A-F]{20}\$'

globalGnbId:

Reference: '#/components/schemas/GlobalRanNodeId'

Required:

- tai

- ncgi

nullable: true

N3gaLocation

Type: object

Properties:

n3gppTai:

Reference: '#/components/schemas/Tai'

n3IwfId:

Type: string

Pattern: '^[A-Fa-f0-9]+\$'

ueIpv4Addr:

Reference: '#/components/schemas/Ipv4Addr'

ueIpv6Addr:

Reference: '#/components/schemas/Ipv6Addr'

portNumber:

Reference: '#/components/schemas/UInteger'

UpSecurity

Type: object

Properties:

upIntegr:**Reference:** '#/components/schemas/UpIntegrity'**upConfid:****Reference:** '#/components/schemas/UpConfidentiality'**Required:**

- upIntegr
- upConfid

UpSecurityRm

Type: object**Properties:****upIntegr:****Reference:** '#/components/schemas/UpIntegrity'**upConfid:****Reference:** '#/components/schemas/UpConfidentiality'**Required:**

- upIntegr
- upConfid

nullable: true

NgApCause

Type: object**Properties:****group:****Reference:** '#/components/schemas/Uinteger'**value:****Reference:** '#/components/schemas/Uinteger'**Required:**

- group
- value

BackupAmfInfo

Type: object**Properties:****backupAmf:****Reference:** '#/components/schemas/AmfName'

guamiList:
Type: array
Items:
Reference: '#/components/schemas/Guami'
minItems: 1
Required:
- backupAmf

RefToBinaryData

Type: object
Properties:
contentId:
Type: string
Required:
- contentId

RefToBinaryDataRm

Type: object
Properties:
contentId:
Type: string
Required:
- contentId
nullable: true

RouteToLocation

Type: object
Properties:
dnai:
Reference: '#/components/schemas/Dnai'
routeInfo:
Reference: '#/components/schemas/RouteInformation'
routeProfId:
Type: string
nullable: true
Required:

- dnai

nullable: true

RouteInformation

Type: object

Properties:

ipv4Addr:

Reference: '#/components/schemas/Ipv4Addr'

ipv6Addr:

Reference: '#/components/schemas/Ipv6Addr'

portNumber:

Reference: '#/components/schemas/Uinteger'

Required:

- portNumber

nullable: true

SubscribedDefaultQos

Type: object

Required:

- 5qi

- arp

Properties:

5qi:

Reference: '#/components/schemas/5Qi'

arp:

Reference: '#/components/schemas/Arp'

priorityLevel:

Reference: '#/components/schemas/5QiPriorityLevel'

Area

Type: object

oneOf:

- required:

- tacs

- required:

- areaCode

Properties:**tacs:****Type:** array**Items:****Reference:** '#/components/schemas/Tac'**minItems:** 1**areaCodes:****Reference:** '#/components/schemas/AreaCode'**ServiceAreaRestriction****Type:** object**Properties:****restrictionType:****Reference:** '#/components/schemas/RestrictionType'**areas:****Type:** array**Items:****Reference:** '#/components/schemas/Area'**maxNumOfTAs:****Reference:** '#/components/schemas/UInteger'**allOf:**

#

1st condition: restrictionType and areas attributes shall be either both absent

or both present

#

- oneOf:

- not:

Required: [restrictionType]

- required: [areas]

#

2nd condition: if restrictionType takes value NOT_ALLOWED_AREAS,

then maxNumOfTAs shall be absent

#

- anyOf:

- not:

Required: [restrictionType]

Properties:

restrictionType:

Type: string

enum: [NOT_ALLOWED_AREAS]

- not:

Required: [maxNumOfTAs]

PresenceInfo

Type: object

Properties:

praId:

Type: string

presenceState:

Reference: '#/components/schemas/PresenceState'

trackingAreaList:

Type: array

Items:

Reference: '#/components/schemas/Tai'

minItems: 1

ecgiList:

Type: array

Items:

Reference: '#/components/schemas/Ecgi'

minItems: 1

ncgiList:

Type: array

Items:

Reference: '#/components/schemas/Ncgi'

minItems: 1

globalRanNodeIdList:

Type: array

Items:

Reference: '#/components/schemas/GlobalRanNodeId'

minItems: 1

PresenceInfoRm

Type: object

Properties:

praId:

Type: string

presenceState:

Reference: '#/components/schemas/PresenceState'

trackingAreaList:

Type: array

Items:

Reference: '#/components/schemas/Tai'

minItems: 0

ecgiList:

Type: array

Items:

Reference: '#/components/schemas/Ecgi'

minItems: 0

ncgiList:

Type: array

Items:

Reference: '#/components/schemas/Ncgi'

minItems: 0

globalRanNodeIdList:

Type: array

Items:

Reference: '#/components/schemas/GlobalRanNodeId'

nullable: true

GlobalRanNodeId

Type: object

Properties:

plmnId:

Reference: '#/components/schemas/PlmnId'

n3IwfId:

Reference: '#/components/schemas/N3IwfId'

gNbId:

Reference: '#/components/schemas/GNbId'

ngeNbId:

Reference: '#/components/schemas/NgeNbId'

oneOf:

- required: [n3IwfId]

- required: [gNbId]

- required: [ngeNbId]

Required:

- plmnId

GNbId

Type: object

Properties:

bitLength:

Type: integer

Minimum: 22

Maximum: 32

gNBValue:

Type: string

Pattern: '^[A-Fa-f0-9]{6,8}\$'

Required:

- bitLength

- gNBValue

Data Types related to 5G QoS as defined in subclause 5.5

SIMPLE DATA TYPES

Qfi

Type: integer

Minimum: 0

Maximum: 63

QfiRm

Type: integer

Minimum: 0

Maximum: 63
nullable: true

5Qi

Type: integer
Minimum: 0
Maximum: 255

5QiRm

Type: integer
Minimum: 0
Maximum: 255
nullable: true

BitRate

Type: string
Pattern: '^d+(\.d+)? (bps|Kbps|Mbps|Gbps|Tbps)\$'

BitRateRm

Type: string
Pattern: '^d+(\.d+)? (bps|Kbps|Mbps|Gbps|Tbps)\$'
nullable: true

ArpPriorityLevel

Type: integer
Minimum: 1
Maximum: 15
nullable: true

5QiPriorityLevel

Type: integer
Minimum: 1
Maximum: 127

5QiPriorityLevelRm

Type: integer
Minimum: 1

Maximum: 127

nullable: true

PacketDelBudget

Type: integer

Minimum: 1

PacketDelBudgetRm

Type: integer

Minimum: 1

nullable: true

PacketErrRate

Type: string

Pattern: '^([0-9]E-[0-9])\$'

PacketErrRateRm

Type: string

Pattern: '^([0-9]E-[0-9])\$'

nullable: true

PacketLossRate

Type: integer

Minimum: 0

Maximum: 1000

PacketLossRateRm

Type: integer

Minimum: 0

Maximum: 1000

nullable: true

AverWindow

Type: integer

Minimum: 1

Maximum: 4095

Default: 2000

AverWindowRm

Type: integer
Maximum: 4095
Default: 2000
Minimum: 1
nullable: true

MaxDataBurstVol

Type: integer
Minimum: 1
Maximum: 4095

MaxDataBurstVolRm

Type: integer
Minimum: 1
Maximum: 4095
nullable: true
ENUMERATED DATA TYPES

PreemptionCapability

anyOf:
- type: string
enum:
- NOT_PREEMPT
- MAY_PREEMPT
- type: string

PreemptionCapabilityRm

anyOf:
- type: string
enum:
- NOT_PREEMPT
- MAY_PREEMPT
- type: string
nullable: true

PreemptionVulnerability

anyOf:

- type: string

enum:

- NOT_PREEMPTABLE

- PREEMPTABLE

- type: string

PreemptionVulnerabilityRm

anyOf:

- type: string

enum:

- NOT_PREEMPTABLE

- PREEMPTABLE

- type: string

nullable: true

ReflectiveQoSAttribute

anyOf:

- type: string

enum:

- RQOS

- NO_RQOS

- type: string

ReflectiveQoSAttributeRm

anyOf:

- type: string

enum:

- RQOS

- NO_RQOS

- type: string

nullable: true

NotificationControl

anyOf:

- type: string
- enum:**
- REQUESTED
- NOT_REQUESTED
- type: string

NotificationControlRm

- anyOf:**
- type: string
- enum:**
- REQUESTED
- NOT_REQUESTED
- type: string
- nullable:** true

QosResourceType

- anyOf:**
- type: string
- enum:**
- NON_GBR
- NON_CRITICAL_GBR
- CRITICAL_GBR
- type: string

QosResourceTypeRm

- anyOf:**
- type: string
- enum:**
- NON_GBR
- NON_CRITICAL_GBR
- CRITICAL_GBR
- type: string
- nullable:** true

AdditionalQosFlowInfo

- anyOf:**

- type: string
enum:
 - MORE_LIKELY
 - type: string
nullable: true
 # STRUCTURED DATA TYPES

Arp

Type: object
Properties:
priorityLevel:
Reference: '#/components/schemas/ArpPriorityLevel'
preemptCap:
Reference: '#/components/schemas/PreemptionCapability'
preemptVuln:
Reference: '#/components/schemas/PreemptionVulnerability'
Required:
 - priorityLevel
 - preemptCap
 - preemptVuln

ArpRm

Type: object
Properties:
priorityLevel:
Reference: '#/components/schemas/ArpPriorityLevel'
preemptCap:
Reference: '#/components/schemas/PreemptionCapability'
preemptVuln:
Reference: '#/components/schemas/PreemptionVulnerability'
Required:
 - priorityLevel
 - preemptCap
 - preemptVuln
nullable: true

Ambr

Type: object

Properties:

uplink:

Reference: '#/components/schemas/BitRate'

downlink:

Reference: '#/components/schemas/BitRate'

Required:

- uplink
- downlink

AmbrRm

Type: object

Properties:

uplink:

Reference: '#/components/schemas/BitRate'

downlink:

Reference: '#/components/schemas/BitRate'

Required:

- uplink
- downlink

nullable: true

Dynamic5Qi

Type: object

Properties:

resourceType:

Reference: '#/components/schemas/QosResourceType'

priorityLevel:

Reference: '#/components/schemas/5QipriorityLevel'

packetDelayBudget:

Reference: '#/components/schemas/PacketDelBudget'

packetErrRate:

Reference: '#/components/schemas/PacketErrRate'

averWindow:

Reference: '#/components/schemas/AverWindow'

maxDataBurstVol:

Reference: '#/components/schemas/MaxDataBurstVol'

Required:

- resourceType
- priorityLevel
- packetDelayBudget
- packetErrRate

NonDynamic5Qi

Type: object

Properties:

priorityLevel:

Reference: '#/components/schemas/5QiPriorityLevel'

averWindow:

Reference: '#/components/schemas/AverWindow'

maxDataBurstVol:

Reference: '#/components/schemas/MaxDataBurstVol'

minProperties: 0

Data Types related to 5G Trace as defined in subclause 5.6

SIMPLE DATA TYPES

Enumerations

TraceDepth

anyOf:

- type: string

enum:

- MINIMUM
- MEDIUM
- MAXIMUM
- MINIMUM_WO_VENDOR_EXTENSION
- MEDIUM_WO_VENDOR_EXTENSION
- MAXIMUM_WO_VENDOR_EXTENSION
- type: string

TraceDepthRm

anyOf:

- type: string

enum:

- MINIMUM

- MEDIUM

- MAXIMUM

- MINIMUM_WO_VENDOR_EXTENSION

- MEDIUM_WO_VENDOR_EXTENSION

- MAXIMUM_WO_VENDOR_EXTENSION

- type: string

nullable: true

STRUCTURED DATA TYPES

TraceData

Type: object

nullable: true

Properties:

traceRef:

Type: string

Pattern: '^[0-9]{3}[0-9]{2,3}-[A-Fa-f0-9]{6}\$'

traceDepth:

Reference: '#/components/schemas/TraceDepth'

neTypeList:

Type: string

Pattern: '^[A-Fa-f0-9]+\$'

eventList:

Type: string

Pattern: '^[A-Fa-f0-9]+\$'

collectionEntityIpv4Addr:

Reference: '#/components/schemas/Ipv4Addr'

collectionEntityIpv6Addr:

Reference: '#/components/schemas/Ipv6Addr'

interfaceList:

Type: string

Pattern: '^[A-Fa-f0-9]+\$'

Required:

- traceRef
- traceDepth
- neTypeList
- eventList

Data Types related to 5G ODB as defined in subclause 5.7

SIMPLE DATA TYPES

Enumerations

RoamingOdb

anyOf:

- type: string

enum:

- OUTSIDE_HOME_PLMN
- OUTSIDE_HOME_PLMN_COUNTRY
- type: string

OdbPacketServices

anyOf:

- type: string

enum:

- ALL_PACKET_SERVICES
- ROAMER_ACCESS_HPLMN_AP
- ROAMER_ACCESS_VPLMN_AP
- type: string

nullable: true

STRUCTURED DATA TYPES

OdbData

Type: object

Properties:

roamingOdb:

Reference: '#/components/schemas/RoamingOdb'

odbPacketServices:

Reference: '#/components/schemas/OdbPacketServices'

Data Types related to Charging as defined in subclause 5.8
SIMPLE DATA TYPES

ChargingId

Reference: '#/components/schemas/Uint32'

RatingGroup

Reference: '#/components/schemas/Uint32'

ServiceId

Reference: '#/components/schemas/Uint32'

Enumerations

STRUCTURED DATA TYPES

SecondaryRatUsageReport

Type: object

Properties:

secondaryRatType:

Reference: '#/components/schemas/RatType'

qosFlowsUsageData:

Type: array

Items:

Reference: '#/components/schemas/QosFlowUsageReport'

minItems: 1

Required:

- secondaryRatType

- qosFlowsUsageData

QosFlowUsageReport

Type: object

Properties:

qfi:

Reference: '#/components/schemas/Qfi'

startTimeStamp:

Reference: '#/components/schemas/DateTime'

endTimeStamp:

Reference: '#/components/schemas/DateTime'

downlinkVolume:

Reference: '#/components/schemas/Int64'

uplinkVolume:

Reference: '#/components/schemas/Int64'

Required:

- qfi
 - startTimeStamp
 - endTimeStamp
 - downlinkVolume
 - uplinkVolume
- # HTTP responses

responses

'400'

Description: Bad request

content:

application/problem+json:

schema:

Reference: '#/components/schemas/ProblemDetails'

'401'

Description: Unauthorized

content:

application/problem+json:

schema:

Reference: '#/components/schemas/ProblemDetails'

'403'

Description: Forbidden

content:

application/problem+json:

schema:

Reference: '#/components/schemas/ProblemDetails'

'404'**Description:** Not Found**content:**

application/problem+json:

schema:**Reference:** '#/components/schemas/ProblemDetails'**'405'****Description:** Method Not Allowed**'408'****Description:** Request Timeout**content:**

application/problem+json:

schema:**Reference:** '#/components/schemas/ProblemDetails'**'406'****Description:** 406 Not Acceptable**'409'****Description:** Conflict**content:**

application/problem+json:

schema:**Reference:** '#/components/schemas/ProblemDetails'**'410'****Description:** Gone**content:**

application/problem+json:

schema:**Reference:** '#/components/schemas/ProblemDetails'**'411'****Description:** Length Required**content:**

'412'

application/problem+json:

schema:

Reference: '#/components/schemas/ProblemDetails'

'412'

Description: Precondition Failed

content:

application/problem+json:

schema:

Reference: '#/components/schemas/ProblemDetails'

'413'

Description: Payload Too Large

content:

application/problem+json:

schema:

Reference: '#/components/schemas/ProblemDetails'

'414'

Description: URI Too Long

content:

application/problem+json:

schema:

Reference: '#/components/schemas/ProblemDetails'

'415'

Description: Unsupported Media Type

content:

application/problem+json:

schema:

Reference: '#/components/schemas/ProblemDetails'

'429'

Description: Too Many Requests

content:

application/problem+json:

schema:

Reference: '#/components/schemas/ProblemDetails'

'500'

Description: Internal Server Error

content:

application/problem+json:

schema:

Reference: '#/components/schemas/ProblemDetails'

'501'

Description: Not Implemented

content:

application/problem+json:

schema:

Reference: '#/components/schemas/ProblemDetails'

'503'

Description: Service Unavailable

content:

application/problem+json:

schema:

Reference: '#/components/schemas/ProblemDetails'

'504'

Description: Gateway Timeout

content:

application/problem+json:

schema:

Reference: '#/components/schemas/ProblemDetails'

default

Description: Generic Error

content:

application/problem+json:

schema:

Reference: '#/components/schemas/ProblemDetails'



CHAPTER 5

JOSE Protected Message Forwarding

3GPP TS 29.573 [27] specifies protocol for the exchange of the messages described above over N32, the format of the JOSE (see IETF RFC 7516 [25] and IETF RFC 7515 [26]) protected messages and the procedure for forwarding of the JOSE protected messages over N32.

- [OpenAPI, on page 89](#)
- [info, on page 89](#)
- [externalDocs, on page 89](#)
- [servers, on page 89](#)
- [paths, on page 90](#)
- [components, on page 91](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Version: '1.0.0'

Title: 'JOSE Protected Message Forwarding API'

Description: 'N32-f Message Forwarding'

externalDocs

Description: 3GPP TS 29.573 V15.1.0; 5G System; Public Land Mobile Network (PLMN) Interconnection; Stage 3

URL: http://www.3gpp.org/ftp/Specs/archive/29_series/29.573/

servers

URL: '{apiRoot}/n32f-forward/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 4.4 of 3GPP TS 29.501.

paths

/n32f-process

Method: Post

Summary: N32-f Message Forwarding

Tags:

- N32-f Forward

Operation ID: PostN32fProcess

Request Body:

Description: Custom operation N32-f Message Forwarding

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/N32fReformattedReqMsg'

Responses:

'200' OK (Successful forwarding of reformatted message over N32-f)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/N32fReformattedRspMsg'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

components

schemas

FlatJweJson

Type: object

Required:

- ciphertext

Properties:

protected:

Type: string

unprotected:

Type: object

header:

Type: object

encrypted_key:

Type: string

aad:

Type: string

iv:

Type: string

ciphertext:

Type: string

tag:

Type: string

FlatJwsJson

Type: object

Required:

- payload

- signature

Properties:

payload:
Type: string

protected:
Type: string

header:
Type: object

signature:
Type: string

N32fReformattedReqMsg

Type: object

Required:
- reformattedData

Properties:

reformattedData:
Reference: '#/components/schemas/FlatJweJson'

modificationsBlock:
Type: array

Items:
Reference: '#/components/schemas/FlatJwsJson'

minItems: 1

N32fReformattedRspMsg

Type: object

Required:
- reformattedData

Properties:

reformattedData:
Reference: '#/components/schemas/FlatJweJson'

modificationsBlock:
Type: array

Items:
Reference: '#/components/schemas/FlatJwsJson'

minItems: 1

DataToIntegrityProtectAndCipherBlock

Type: object

Required:

- dataToEncrypt

Properties:

dataToEncrypt:

Type: array

Items:

Type: object

minItems: 1

DataToIntegrityProtectBlock

Type: object

Properties:

metaData:

Reference: '#/components/schemas/MetaData'

requestLine:

Reference: '#/components/schemas/RequestLine'

statusLine:

Type: string

headers:

Type: array

Items:

Reference: '#/components/schemas/HTTPHeader'

minItems: 1

payload:

Type: array

Items:

Reference: '#/components/schemas/HttpPayload'

minItems: 1

RequestLine

Type: object

Required:

- method

- scheme
- authority
- path
- protocolVersion

Properties:**method:****Reference:** 'TS29573_N32_Handshake.yaml#/components/schemas/HttpMethod'**scheme:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/UriScheme'**authority:****Type:** string**path:****Type:** string**protocolVersion:****Type:** string**queryFragment:****Type:** string

HttpHeader

Type: object**Required:**

- header
- value

Properties:**header:****Type:** string**value:****Reference:** '#/components/schemas/EncodedHttpHeaderValue'

HttpPayload

Type: object**Required:**

- iePath
- ieValueLocation
- value

Properties:**iePath:**

Type: string

ieValueLocation:**Reference:** 'TS29573_N32_Handshake.yaml#/components/schemas/IeLocation'**value:**

Type: object

MetaData

Type: object

Required:

- n32fContextId

- messageId

- authorizedIpxId

Properties:**n32fContextId:**

Type: string

messageId:

Type: string

authorizedIpxId:

Type: string

Modifications

Type: object

Required:

- identity

Properties:**identity:****Reference:** 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'**operations:**

Type: array

Items:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/PatchItem'**minItems:** 1

IndexToEncryptedValue

Type: object

Required:

- encBlockIndex

Properties:

encBlockIndex:

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

EncodedHeaderValue

oneOf:

- type: string

- \$ref: '#/components/schemas/IndexToEncryptedValue'



CHAPTER 6

N32 Handshake

The N32 handshake procedure is used between the SEPPs in two PLMNs to mutually authenticate each other and negotiate the security mechanism to use over N32-f along with associated security configuration parameters.

A HTTP/2 connection shall be established between the initiating SEPP and the responding SEPP end to end over TLS. The following N32 handshake procedures are specified in the subclauses below:

- Security Capability Negotiation Procedure
- Parameter Exchange Procedure
- N32-f Context Termination Procedure
- N32-f Error Reporting Procedure

N32-c connection: A TLS based connection between a SEPP in one PLMN and a SEPP in another PLMN.



Note This is a long-lived connection that is used between the SEPPs for cipher suite and protection policy exchange, and error notifications.

N32-f connection: Logical connection that exists between a SEPP in one PLMN and a SEPP in another PLMN for exchange of protected HTTP messages.



Note When IPX providers are present in the path between the two SEPPs, an N32-f HTTP connection is setup on each hop towards the other SEPP.

- [OpenAPI, on page 98](#)
- [info, on page 98](#)
- [externalDocs, on page 98](#)
- [servers, on page 98](#)
- [paths, on page 98](#)
- [components, on page 102](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Version: '1.0.0'

Title: 'N32 Handshake API'

Description: 'N32-c Handshake'

externalDocs

Description: 3GPP TS 29.573 V15.1.0; 5G System; Public Land Mobile Network (PLMN) Interconnection; Stage 3

URL: http://www.3gpp.org/ftp/Specs/archive/29_series/29.573/

servers

URL: '{apiRoot}/n32c-handshake/v1'

Variables:

API Root:

Default: <https://example.com>

Description: apiRoot as defined in subclause 4.4 of 3GPP TS 29.501.

paths

/exchange-capability

Method: Post

Summary: Security Capability Negotiation

Tags:

- Security Capability Negotiation

Operation ID: PostExchangeCapability

Request Body:

Description: Custom operation for security capability negotiation

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SecNegotiateReqData'

Responses:

'200' OK (Successful negotiation of security capabilities)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SecNegotiateRspData'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

/exchange-params

Method: Post

Summary: Parameter Exchange

Tags:

- Parameter Exchange

Operation ID: PostExchangeParams

Request Body:

Description: Custom operation for parameter exchange

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SecParamExchReqData'

Responses:

'200' OK (Successful exchange of parameters)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SecParamExchRspData'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

/n32f-terminate

Method: Post

Summary: N32-f Context Terminate

Tags:

- N32-f Context Terminate

Operation ID: PostN32fTerminate

Request Body:

Description: Custom operation for n32-f context termination

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/N32fContextInfo'

Responses:

'200' OK (Successful exchange of parameters)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/N32fContextInfo'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'
'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'
'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'
'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'
'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

/n32f-error

Method: Post

Summary: N32-f Error Reporting Procedure

Tags:

- N32-f Error Report

Operation ID: PostN32fError

Request Body:

Description: Custom operation for n32-f error reporting procedure

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/N32fErrorInfo'

Responses:

'204' successful error reporting

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

components

schemas

SecurityCapability

anyOf:

- type: string

enum:

- TLS

- ALS

- type: string

ApiSignature

oneOf:

- \$ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'

- \$ref: '#/components/schemas/CallbackName'

HttpMethod

anyOf:

- type: string

enum:

- GET

- PUT

- POST

- DELETE

- PATCH

- HEAD

- OPTIONS

- CONNECT

- TRACE

- type: string

leType

anyOf:

- type: string

enum:

- UEID
- LOCATION
- KEY_MATERIAL
- AUTHENTICATION_MATERIAL
- AUTHORIZATION_TOKEN
- OTHER
- NONSENSITIVE
- type: string

IeLocation**anyOf:**

- type: string

enum:

- URI_PARAM
- HEADER
- BODY
- MULTIPART_BINARY
- type: string

IeInfo

Type: object

Required:

- ieLoc
- ieType

Properties:**ieLoc:**

Reference: '#/components/schemas/IeLocation'

ieType:

Reference: '#/components/schemas/IeType'

reqIe:

Type: string

rspIe:

Type: string

isModifiable:

Type: boolean

ApileMapping

Type: object

Required:

- apiSignature

- apiMethod

- IeList

Properties:

apiSignature:

Reference: '#/components/schemas/ApiSignature'

apiMethod:

Reference: '#/components/schemas/HttpMethod'

IeList:

Type: array

Items:

Reference: '#/components/schemas/IeInfo'

minItems: 1

ProtectionPolicy

Type: object

Required:

- apiIeMappingList

Properties:

apiIeMappingList:

Type: array

Items:

Reference: '#/components/schemas/ApiIeMapping'

minItems: 1

dataTypeEncPolicy:

Type: array

Items:

Reference: '#/components/schemas/IeType'

minItems: 1

SecNegotiateReqData

Type: object

Required:

- sender
- supportedSecCapabilityList

Properties:

sender:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'

supportedSecCapabilityList:

Type: array

Items:

Reference: '#/components/schemas/SecurityCapability'

minItems: 1

SecNegotiateRspData

Type: object

Required:

- sender
- selectedSecCapability

Properties:

sender:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'

selectedSecCapability:

Reference: '#/components/schemas/SecurityCapability'

SecParamExchReqData

Type: object

Required:

- n32fContextId

Properties:

n32fContextId:

Type: string

jweCipherSuiteList:

Type: array

Items:

Type: string
minItems: 1
jwsCipherSuiteList:
Type: array
Items:
Type: string
minItems: 1
protectionPolicyInfo:
Reference: '#/components/schemas/ProtectionPolicy'

SecParamExchRspData

Type: object
Required:
 - n32fContextId
Properties:
n32fContextId:
Type: string
selectedJweCipherSuite:
Type: string
selectedJwsCipherSuite:
Type: string
selProtectionPolicyInfo:
Reference: '#/components/schemas/ProtectionPolicy'

N32fContextInfo

Type: object
Required:
 - n32fContextId
Properties:
n32fContextId:
Type: string

CallbackName

Type: object
Required:
 - callbackType

Properties:**callbackType:**

Type: string

N32fErrorInfo

Type: object

Required:

- n32fMessageId

- n32fErrorType

Properties:**n32fMessageId:**

Type: string

n32fErrorType:**Reference:** '#/components/schemas/N32fErrorType'**failedModificationList:**

Type: array

Items:**Reference:** '#/components/schemas/FailedModificationInfo'**minItems:** 1**errorDetailsList:**

Type: array

Items:**Reference:** '#/components/schemas/N32fErrorDetail'**minItems:** 1**FailedModificationInfo**

Type: object

Required:

- ipxId

- n32fErrorType

Properties:**ipxId:****Reference:** 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'**n32fErrorType:****Reference:** '#/components/schemas/N32fErrorType'

N32fErrorDetail

Type: object

Required:

- attribute
- msgReconstructFailReason

Properties:

attribute:

Type: string

msgReconstructFailReason:

Reference: '#/components/schemas/FailureReason'

N32fErrorType

anyOf:

- type: string

enum:

- INTEGRITY_CHECK_FAILED
- INTEGRITY_CHECK_ON_MODIFICATIONS_FAILED
- MODIFICATIONS_INSTRUCTIONS_FAILED
- DECIPHERING_FAILED
- MESSAGE_RECONSTRUCTION_FAILED
- type: string

FailureReason

anyOf:

- type: string

enum:

- INVALID_JSON_POINTER
- INVALID_INDEX_TO_ENCRYPTED_BLOCK
- INVALID_HTTP_HEADER
- type: string



CHAPTER 7

N5g-eir Equipment Identity Check

N5g-eir is a Service-based interface exhibited by 5G-EIR (5G-Equipment Identity Register) which is an optional network function that supports the checking of the status of Equipment's identity. For example, to check that it has not been blacklisted.

Reference: 3GPP TS 29.511 V15.3.0

N5g-eir_EquipmentIdentityCheck: This service offered by the 5G-EIR allows the consumer to check the Permanent Equipment Identifier (PEI) and check whether the PEI is in the black list or not.

- [OpenAPI, on page 109](#)
- [info, on page 109](#)
- [externalDocs, on page 109](#)
- [security, on page 110](#)
- [servers, on page 110](#)
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OpenAPI

OpenAPI Version: 3.0.0

info

Version: '1.0.0'

Title: '5G-EIR Equipment Identity Check'

Description: '5G-EIR Equipment Identity Check Service'

externalDocs

Description: 3GPP TS 29.511 V15.2.0; 5G System; Equipment Identity Register Services; Stage 3

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.511/'

security

- {}
- oAuth2ClientCredentials:
- n5g-eir-eic

servers

URL: '{apiRoot}/n5g-eir-eic/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501

paths

/equipment-status

get:

Summary: Retrieves the status of the UE

Operation ID: GetEquipmentStatus

Tags:

- Equipment Status (Document)

Parameters:

- name: pei

In: query

Description: PEI of the UE

Required/Optional: true

Schema:

Reference: '#/components/schemas/Pei'

- name: supi

In: query

Description: SUPI of the UE

Required/Optional: false

Schema:

Reference: '#/components/schemas/Supi'

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/EirResponseData'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'404' PEI Not Found

Content:

application/problem+json:

Schema:

Reference: '#/components/schemas/ProblemDetails'

'414': Reference 'TS29571_CommonData.yaml#/components/responses/414'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

Reference: '#/components/schemas/ProblemDetails'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

n5g-eir-eic: Access to the N5g-eir_EquipmentIdentityCheck API

schemas

EirResponseData

Type: object

Required:

- status

Properties:

status:

Reference: '#/components/schemas/EquipmentStatus'

Pei

Type: string

Pattern: "([0-9]{14})"

Supi

Type: string

Pattern: "(imsi-[0-9]{5,15}|nai-.+)"

EquipmentStatus

Type: string

enum:

- WHITELISTED

- BLACKLISTED

- GREYLISTED

ProblemDetails

Description: '<https://www.rfc-editor.org/rfc/rfc7807.txt>'

Type: object

Required:

- type

Properties:

Type:

Type: string

title:

Type: string

status:

Type: integer

detail:

Type: string

instance:

Type: string



CHAPTER 8

Namf_Communication

This service enables an NF to communicate with the UE through N1 NAS messages or with the AN (both UE and non UE specific). The service operations defined below allow the NF to communicate with the UE and the AN. The following are the key functionalities of this NF service.

- Provide service operations for transporting N1 messages to the UE;
- Allow NFs to subscribe and unsubscribe for notifications of specific N1 messages from the UE;
- Allow NFs to subscribe and unsubscribe for notifications about specific information from AN;
- Provide service operations for initiating N2 messages towards the AN;
- Security Context Management; and
- UE information management and transfer (including its security context).

Reference: 3GPP TS 29.518 [14]

- [OpenAPI, on page 115](#)
- [info, on page 115](#)
- [externalDocs, on page 116](#)
- [security, on page 116](#)
- [servers, on page 116](#)
- [paths, on page 116](#)
- [components, on page 142](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Version: 1.0.0

Title: Namf_Communication

Description: AMF Communication Service

externalDocs

Description: 3GPP TS 29.518 V15.2.0; 5G System; Access and Mobility Management Services

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.518/'

security

- {}
- oAuth2Clientcredentials:
- namf-comm

servers

URL: '{apiRoot}/namf-comm/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501

paths

/ue-contexts/{ueContextId}

put:

Summary: Namf_Communication CreateUEContext service Operation

Tags:

- Individual ueContext (Document)

Operation ID: CreateUEContext

Parameters:

- name: ueContextId

In: path

Description: UE Context Identifier

Required/Optional: true

Schema:

Type: string

pattern: '^(5g-guti-[0-9]{5,6}[0-9a-fA-F]{14}|imsi-[0-9]{5,15}|nai-.+|imei-[0-9]{15}|imeisv-[0-9]{16}|.+)\$'

Request Body:

Content:

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/UeContextCreateData'

binaryDataN1Message:

Type: string

Format: binary

binaryDataN2Information:

Type: string

Format: binary

binaryDataN2InformationExt1:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1Message:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

binaryDataN2Information:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

binaryDataN2InformationExt1:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

Required/Optional: true

Responses:

'201' UE context successfully created.

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/namf-comm/v1/ue-contexts/{ueContextId}'

Required/Optional: true

Schema:

Type: string

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/UeContextCreatedData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/UeContextCreatedData'

binaryDataN1Message:

Type: string

Format: binary

binaryDataN2Information:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1Message:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

binaryDataN2Information:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

'400' Bad Request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/UeContextCreateError'

'403' Forbidden

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/UeContextCreateError'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500' Internal Server Error

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/UeContextCreateError'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

/ue-contexts/{ueContextId}/release

Method: Post

Summary: Namf_Communication ReleaseUEContext service Operation

Tags:

- Individual ueContext (Document)

Operation ID: ReleaseUEContext

Parameters:

- name: ueContextId

In: path

Description: UE Context Identifier

Required/Optional: true

Schema:

Type: string

pattern: `^(5g-guti-[0-9]{5,6}[0-9a-fA-F]{14}|imsi-[0-9]{5,15}|nai-.+|imei-[0-9]{15}|imeisv-[0-9]{16}|.+)$`

Request Body:

Content:

Application/JSON:

Schema:

Reference: `'#/components/schemas/UEContextRelease'`

Required/Optional: true

Responses:

'204': UE Context successfully released

'400': Reference `'TS29571_CommonData.yaml#/components/responses/400'`

'403': Reference `'TS29571_CommonData.yaml#/components/responses/403'`

'404': Reference `'TS29571_CommonData.yaml#/components/responses/404'`

'411': Reference `'TS29571_CommonData.yaml#/components/responses/411'`

'413': Reference `'TS29571_CommonData.yaml#/components/responses/413'`

'415': Reference `'TS29571_CommonData.yaml#/components/responses/415'`

'429': Reference `'TS29571_CommonData.yaml#/components/responses/429'`

'500': Reference `'TS29571_CommonData.yaml#/components/responses/500'`

'503': Reference `'TS29571_CommonData.yaml#/components/responses/503'`

default:

Description: Unexpected error

/ue-contexts/{ueContextId}/assign-ebi

Method: Post

Summary: Namf_Communication EBI Assignment service Operation

Tags:

- Individual ueContext (Document)

Operation ID: EBIAssignment

Parameters:

- name: ueContextId

In: path

Description: UE Context Identifier

Required/Optional: true

Schema:

Type: string

pattern: `^(5g-guti-[0-9]{5,6}[0-9a-fA-F]{14}|imsi-[0-9]{5,15}|nai-.+|imei-[0-9]{15}|imeisv-[0-9]{16}|.+)$`

Request Body:

Content:

Application/JSON:

Schema:

Reference: `#/components/schemas/AssignEbiData'`

Required/Optional: true

Responses:

'200' EBI Assignment successfully performed.

Content:

Application/JSON:

Schema:

Reference: `#/components/schemas/AssignedEbiData'`

'400' Bad Request

Content:

Application/JSON:

Schema:

Reference: `#/components/schemas/AssignEbiError'`

'403' Forbidden

Content:

Application/JSON:

Schema:**Reference:** '#/components/schemas/AssignEbiError'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500' Internal Server Error

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/AssignEbiError'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:**Description:** Unexpected error

/ue-contexts/{ueContextId}/transfer

Method: Post**Summary:** Namf_Communication UEContextTransfer service Operation**Tags:**

- Individual ueContext (Document)

Operation ID: UEContextTransfer**Parameters:**

- name: ueContextId

In: path**Description:** UE Context Identifier**Required/Optional:** true**Schema:****Type:** string**pattern:** '^((5g-guti-[0-9]{5,6}[0-9a-fA-F]{14}|imsi-[0-9]{5,15}|nai-.+|imei-[0-9]{15}|imeisv-[0-9]{16}|.+)\$'**Request Body:****Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/UeContextTransferReqData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/UeContextTransferReqData'

binaryDataN1Message:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1Message:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

Required/Optional: true

Responses:

'200' UE context transfer successfully initiated.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/UeContextTransferRspData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/UeContextTransferRspData'

binaryDataN2Information:

Type: string

Format: binary

Encoding:**JSON Data:****Content Type:** application/json**binaryDataN2Information:****Content Type:** application/vnd.3gpp.ngap**Headers:****Content ID:****Schema:****Type:** string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:**Description:** Unexpected error

/ue-contexts/{ueContextId}/transfer-update

Method: Post**Summary:** Namf_Communication RegistrationStatusUpdate service Operation**Tags:**

- Individual ueContext (Document)

Operation ID: RegistrationStatusUpdate**Parameters:**

- name: ueContextId

In: path**Description:** UE Context Identifier**Required/Optional:** true**Schema:****Type:** string**pattern:** '^(5g-guti-[0-9]{5,6}[0-9a-fA-F]{14}|imsi-[0-9]{5,15}|nai-+|imei-[0-9]{15}|imeisv-[0-9]{16}|.+)\$'

Request Body:**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/UeRegStatusUpdateReqData'**Required/Optional:** true**Responses:**

'200' UE context transfer status successfully updated.

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/UeRegStatusUpdateRspData'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/ue-contexts/{ueContextId}/n1-n2-messages

Method: Post**Summary:** Namf_Communication N1N2 Message Transfer (UE Specific) service Operation**Tags:**

- n1N2Message collection (Document)

Operation ID: N1N2MessageTransfer**Parameters:**

- name: ueContextId

In: path**Description:** UE Context Identifier**Required/Optional:** true

Schema:**Type:** string**pattern:** '^(\imsi-[0-9]{5,15}|nai-.+|imei-[0-9]{15}|imeisv-[0-9]{16}|cid-.{1,255}|.+)\$'**Request Body:****Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/N1N2MessageTransferReqData'**Multipart/Related:** # message with binary body part(s)**Schema:****Type:** object**Properties:** # Request parts**JSON Data:****Reference:** '#/components/schemas/N1N2MessageTransferReqData'**binaryDataN1Message:****Type:** string**Format:** binary**binaryDataN2Information:****Type:** string**Format:** binary**Encoding:****JSON Data:****Content Type:** application/json**binaryDataN1Message:****Content Type:** application/vnd.3gpp.5gnas**Headers:****Content ID:****Schema:****Type:** string**binaryDataN2Information:****Content Type:** application/vnd.3gpp.ngap**Headers:****Content ID:****Schema:**

Type: string

Required/Optional: true

Responses:

'202' N1N2 Message Transfer accepted.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/N1N2MessageTransferRspData'

'200' N1N2 Message Transfer successfully initiated.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/N1N2MessageTransferRspData'

'307' Temporary Redirect

Content:

application/problem+json:

Schema:

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

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'409' Conflicts

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/N1N2MessageTransferError'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

'504' Gateway Timeout

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/N1N2MessageTransferError'

default:

Description: Unexpected error

Callbacks:

onN1N2TransferFailure:

'{\$request.body#/n1n2FailureTxfNotifURI}':

Method: Post

Summary: Namf_Communication N1N2Transfer Failure Notification service Operation

Tags:

- N1N2 Transfer Failure Notification

Operation ID: N1N2TransferFailureNotification

Request Body:

Description: N1N2Transfer Failure Notification

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/N1N2MsgTxfrFailureNotification'

Responses:

'204': Expected response to a successful callback processing

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

/ue-contexts/{ueContextId}/n1-n2-messages/subscriptions

Method: Post

Summary: Namf_Communication N1N2 Message Subscribe (UE Specific) service Operation

Tags:

- N1N2 Subscriptions Collection for Individual UE Contexts (Document)

Operation ID: N1N2MessageSubscribe

Parameters:

- name: ueContextId

In: path

Description: UE Context Identifier

Required/Optional: true

Schema:

Type: string

pattern: `^(5g-guti-[0-9]{5,6}[0-9a-fA-F]{14}|imsi-[0-9]{5,15}|nai-+|imei-[0-9]{15}|imeisv-[0-9]{16}|.+)$'`

Request Body:

Content:

Application/JSON:

Schema:

Reference: `#/components/schemas/UeN1N2InfoSubscriptionCreateData'`

Required/Optional: true

Responses:

'201' N1N2 Message Subscription successfully created.

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: `{apiRoot}/namf-comm/v1/{ueContextId}/n1-n2-messages/subscriptions/{subscriptionId}'`

Required/Optional: true

Schema:

Type: string

Content:

Application/JSON:

Schema:

Reference: `#/components/schemas/UeN1N2InfoSubscriptionCreatedData'`

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:**Description:** Unexpected error**Callbacks:****onN1N2MessageNotify:**

'\${request.body#/n1NotifyCallbackUri}':

Method: Post**Summary:** Namf_Communication N1 Message Notify service Operation**Tags:**

- N1 Message Notify

Operation ID: N1MessageNotify**Request Body:****Description:** N1 Message Notification**Content:****Multipart/Related:** # message with binary body part(s)**Schema:****Type:** object**Properties:** # Request parts**JSON Data:****Reference:** '#/components/schemas/N1MessageNotification'**binaryDataN1Message:****Type:** string**Format:** binary**Encoding:****JSON Data:****Content Type:** application/json**binaryDataN1Message:****Content Type:** application/vnd.3gpp.5gnas**Headers:****Content ID:****Schema:****Type:** string**Responses:**

'204' Expected response to a successful callback processing

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

'{\$request.body#/n2NotifyCallbackUri}':

Method: Post

Summary: Namf_Communication N2 Info Notify (UE Specific) service Operation

Tags:

- N2 Info Notify

Operation ID: N2InfoNotify

Request Body:

Description: UE Specific N2 Informaiton Notification

Content:

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/N2InformationNotification'

binaryDataN1Message:

Type: string

Format: binary

binaryDataN2Information:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1Message:

Content Type: application/vnd.3gpp.5gnas

Headers:

/ue-contexts/{ueContextId}/n1-n2-messages/subscriptions/{subscriptionId}

Content ID:

Schema:

Type: string

binaryDataN2Information:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

Responses:

'204': Expected response to a successful callback processing

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

/ue-contexts/{ueContextId}/n1-n2-messages/subscriptions/{subscriptionId}

delete:

Summary: Namf_Communication N1N2 Message UnSubscribe (UE Specific) service Operation

Tags:

- N1N2 Individual Subscription (Document)

Operation ID: N1N2MessageUnSubscribe

Parameters:

- name: ueContextId

In: path

Description: UE Context Identifier

Required/Optional: true

Schema:

Type: string

pattern: '^(5g-guti-[0-9]{5,6}[0-9a-fA-F]{14}|imsi-[0-9]{5,15}|nai-.+|imei-[0-9]{15}|imeisv-[0-9]{16}|.+)\$'

- name: subscriptionId

In: path

Description: Subscription Identifier

Required/Optional: true

Schema:

Type: string

Responses:

'204' N1N2 Message Subscription successfully removed.

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

/non-ue-n2-messages/transfer

Method: Post

Summary: Namf_Communication Non UE N2 Message Transfer service Operation

Tags:

- Non UE N2Messages collection (Document)

Operation ID: NonUeN2MessageTransfer

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/N2InformationTransferReqData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/N2InformationTransferReqData'

binaryDataN2Information:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN2Information:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

Required/Optional: true

Responses:

'200' Non UE N2 Message Transfer successfully initiated.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/N2InformationTransferRspData'

'400' Bad Request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/N2InformationTransferError'

'403' Forbidden

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/N2InformationTransferError'

'404' Not Found

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/N2InformationTransferError'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500' Internal Server Error

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/N2InformationTransferError'

'503' Service Unavailable

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/N2InformationTransferError'

default:

Description: Unexpected error

/non-ue-n2-messages/subscriptions

Method: Post

Summary: Namf_Communication Non UE N2 Info Subscribe service Operation

Tags:

- Non UE N2Messages Subscriptions collection (Document)

Operation ID: NonUeN2InfoSubscribe

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NonUeN2InfoSubscriptionCreateData'

Required/Optional: true

Responses:

'201' Non UE N2 Info Subscription successfully created.

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/namf-comm/v1/non-ue-n2-messages/subscriptions/{n2NotifySubscriptionId}'

Required/Optional: true

Schema:

Type: string

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NonUeN2InfoSubscriptionCreatedData'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

Callbacks:

onN2InfoNotify:

'{\$request.body#/n2NotifyCallbackUri}':

Method: Post

Summary: Namf_Communication Non UE N2 Info Notify service Operation

Tags:

- Non UE N2 Info Notify

Operation ID: NonUeN2InfoNotify

Request Body:

Description: Non UE N2 Informaiton Notification

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/N2InformationNotification'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/N2InformationNotification'

binaryDataN2Information:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN2Information:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

Responses:

'204' Expected response to a successful callback processing

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

/non-ue-n2-messages/subscriptions/{n2NotifySubscriptionId}

delete:

Summary: Namf_Communication Non UE N2 Info UnSubscribe service Operation

Tags:

- Non UE N2 Message Notification Individual Subscription (Document)

Operation ID: NonUeN2InfoUnSubscribe

Parameters:

- name: n2NotifySubscriptionId

In: path

Description: N2 info Subscription Identifier

Required/Optional: true

Schema:**Type:** string**Responses:**

'204' Non UE N2 INfo Subscription successfully removed.

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

/subscriptions

Method: Post**Summary:** Namf_Communication AMF Status Change Subscribe service Operation**Tags:**

- subscriptions collection (Document)

Operation ID: AMFStatusChangeSubscribe**Request Body:****Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/SubscriptionData'**Required/Optional:** true**Responses:**

'201' N1N2 Message Subscription successfully created.

Headers:**Location:****Description:** 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/namf-comm/v1/subscriptions/{subscriptionId}'**Required/Optional:** true**Schema:****Type:** string**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/SubscriptionData'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

Callbacks:

onAmfStatusChange:

'{\$request.body#/amfStatusUri}':

Method: Post

Summary: Amf Status Change Notify service Operation

Tags:

- Amf Status Change Notify

Operation ID: AmfStatusChangeNotify

Request Body:

Description: Amf Status Change Notification

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AmfStatusChangeNotification'

Responses:

'204' Expected response to a successful callback processing

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

/subscriptions/{subscriptionId}

delete:

Summary: Namf_Communication AMF Status Change UnSubscribe service Operation

Tags:

- individual subscription (Document)

Operation ID: AMFStatusChangeUnSubscribe

Parameters:

- name: subscriptionId

In: path

Description: AMF Status Change Subscription Identifier

Required/Optional: true

Schema:

Type: string

Responses:

'204': N1N2 Message Subscription successfully removed.

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

put:

Summary: Namf_Communication AMF Status Change Subscribe Modify service Operation

Tags:

- individual subscription (Document)

Operation ID: AMFStatusChangeSubscribeModify

Parameters:

- name: subscriptionId

In: path

Description: AMF Status Change Subscription Identifier

Required/Optional: true

Schema:

Type: string

Request Body:**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/SubscriptionData'**Required/Optional:** true**Responses:**

'202' N1N2 Message Subscription successfully updated.

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/SubscriptionData'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:**Description:** Unexpected error**Callbacks:****OnAmfStatusChange:**

'\${request.body#/amfStatusUri}':

Method: Post**Summary:** Amf Status Change Notify service Operation**Tags:**

- Amf Status Change Notify

Operation ID: AmfStatusChangeNOTify**Request Body:****Description:** Amf Status Change Notification**Content:****Application/JSON:**

Schema:**Reference:** '#/components/schemas/AmfStatusChangeNotification'**Responses:**

'204' Expected response to a successful callback processing

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2**Flows:****clientCredentials:****tokenUrl:** '{nrfApiRoot}/oauth2/token'**scopes:****namf-comm:** Access to the Namf_Communication API

schemas

STRUCTURED DATA TYPES

SubscriptionData

Type: object**Properties:****amfStatusUri:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**guamiList:**

Type: array

Items:

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

minItems: 1

Required:

- amfStatusUri

AmfStatusChangeNotification

Type: object

Properties:

amfStatusInfoList:

Type: array

Items:

Reference: '#/components/schemas/AmfStatusInfo'

minItems: 1

Required:

- amfStatusInfo

AmfStatusInfo

Type: object

Properties:

guamiList:

Type: array

Items:

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

minItems: 1

statusChange:

Reference: '#/components/schemas/StatusChange'

targetAmfRemoval:

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

targetAmfFailure:

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

Required:

- guamis

- statusChange

AssignEbiData

Type: object

Properties:

pduSessionId:

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

arpList:

Type: array

Items:

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

minItems: 1

releasedEbiList:

Type: array

Items:

Reference: '#/components/schemas/EpsBearerId'

minItems: 1

Required:

- pduSessionId

AssignedEbiData

Type: object

Properties:

pduSessionId:

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

assignedEbiList:

Type: array

Items:

Reference: 'TS29502_Nsmf_PDUSession.yaml#/components/schemas/EbiArpMapping'

minItems: 0

failedArpList:

Type: array

Items:

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

minItems: 1

releasedEbiList:

Type: array
Items:
Reference: '#/components/schemas/EpsBearerId'
minItems: 1
Required:
- pduSessionId
- assignedEbis

AssignEbiFailed

Type: object
Properties:
pduSessionId:
Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
failedArpList:
Type: array
Items:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Arp'
minItems: 1
Required:
- pduSessionId

UEContextRelease

Type: object
Properties:
supi:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
unauthenticatedSupi:
Type: boolean
Default: false
ngapCause:
Reference: 'TS29571_CommonData.yaml#/components/schemas/NgapCause'
Required:
- ngapCause

N2InformationTransferReqData

Type: object

Properties:**taiList:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Tai'**minItems:** 1**ratSelector:****Reference:** '#/components/schemas/RatSelector'**ecgiList:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ecgi'**minItems:** 1**ncgiList:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ncgi'**minItems:** 1**globalRanNodeList:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/GlobalRanNodeId'**minItems:** 1**n2Information:****Reference:** '#/components/schemas/N2InfoContainer'**supportedFeatures:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Required:**

- n2Information

NonUeN2InfoSubscriptionCreateData**Type:** object**Properties:****globalRanNodeList:****Type:** array

Items:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/GlobalRanNodeId'**minItems:** 1**anTypeList:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/AccessType'**minItems:** 1**n2InformationClass:****Reference:** '#/components/schemas/N2InformationClass'**n2NotifyCallbackUri:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**nfId:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'**supportedFeatures:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Required:**

- n2InformationClass
- n2NotifyCallbackUri

NonUeN2InfoSubscriptionCreatedData

Type: object**Properties:****n2NotifySubscriptionId:****Type:** string**supportedFeatures:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Required:**

- n2NotifySubscriptionId

UeN1N2InfoSubscriptionCreateData

Type: object**Properties:****n2InformationClass:****Reference:** '#/components/schemas/N2InformationClass'

n2NotifyCallbackUri:

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

n1MessageClass:

Reference: '#/components/schemas/N1MessageClass'

n1NotifyCallbackUri:

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

nfId:

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

supportedFeatures:

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

UeN1N2InfoSubscriptionCreatedData

Type: object

Properties:

n1n2NotifySubscriptionId:

Type: string

supportedFeatures:

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

Required:

- n1n2NotifySubscriptionId

N2InformationNotification

Type: object

Properties:

n2NotifySubscriptionId:

Type: string

n2InfoContainer:

Reference: '#/components/schemas/N2InfoContainer'

toReleaseSessionList:

Type: array

Items:

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

minItems: 1

lcsCorrelationId:

Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/CorrelationID'

notifyReason:**Reference:** '#/components/schemas/N2InfoNotifyReason'**Required:**

- n2NotifySubscriptionId

N2InfoContainer**Type:** object**Properties:****n2InformationClass:****Reference:** '#/components/schemas/N2InformationClass'**smInfo:****Reference:** '#/components/schemas/N2SmInformation'**ranInfo:****Reference:** '#/components/schemas/N2RanInformation'**nrppaInfo:****Reference:** '#/components/schemas/NrppaInformation'**pwsInfo:****Reference:** '#/components/schemas/PwsInformation'**Required:**

- n2InformationClass

N1MessageNotification**Type:** object**Properties:****n1NotifySubscriptionId:****Type:** string**n1MessageContainer:****Reference:** '#/components/schemas/N1MessageContainer'**lcsCorrelationId:****Reference:** 'TS29572_Nlmf_Location.yaml#/components/schemas/CorrelationID'**registrationCtxtContainer:****Reference:** '#/components/schemas/RegistrationContextContainer'**Required:**

- n1MessageContainer

N1MessageContainer

Type: object

Properties:

n1MessageClass:

Reference: '#/components/schemas/N1MessageClass'

n1MessageContent:

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

n1Id:

Reference: 'TS29571_CommonData.yaml#/components/schemas/N1InstanceId'

Required:

- n1MessageClass
- n1MessageContent

N1N2MessageTransferReqData

Type: object

Properties:

n1MessageContainer:

Reference: '#/components/schemas/N1MessageContainer'

n2InfoContainer:

Reference: '#/components/schemas/N2InfoContainer'

skipInd:

Type: boolean

Default: false

lastMsgIndication:

Type: boolean

pduSessionId:

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

lcsCorrelationId:

Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/CorrelationID'

ppi:

Reference: '#/components/schemas/Ppi'

arp:

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

5qi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/5Qi'

n1n2FailureTxfNotifURI:

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

smfReallocationInd:

Type: boolean

Default: false

areaOfValidity:

Reference: '#/components/schemas/AreaOfValidity'

supportedFeatures:

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

N1N2MessageTransferRspData

Type: object

Properties:

cause:

Reference: '#/components/schemas/N1N2MessageTransferCause'

supportedFeatures:

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

Required:

- cause

RegistrationContextContainer

Type: object

Properties:

ueContext:

Reference: '#/components/schemas/UeContext'

localTimeZone:

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

anType:

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

anN2ApId:

Type: integer

ranNodeId:

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

initialAmfName:

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

userLocation:

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

rrcEstCause:

Type: string

Pattern: '^[0-9a-fA-F]+\$'

ueContextRequest:

Type: boolean

Default: false

anN2IPv4Addr:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

anN2IPv6Addr:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'

allowedNssai:

Reference: 'TS29531_Nnssf_NSSelection.yaml#/components/schemas/AllowedNssai'

configuredNssai:

Type: array

Items:

Reference: 'TS29531_Nnssf_NSSelection.yaml#/components/schemas/ConfiguredSnsai'

minItems: 1

rejectedNssaiInPlmn:

Type: array

Items:

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

minItems: 1

rejectedNssaiInTa:

Type: array

Items:

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

minItems: 1

Required:

- ueContext

- anType

- anN2ApId

- ranNodeId
- initialAmfName
- userLocation

AreaOfValidity

Type: object

Properties:

taiList:

Type: array

Items:

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

minItems: 0

Required:

- taiList

UeContextTransferReqData

Type: object

Properties:

reason:

Reference: '#/components/schemas/TransferReason'

accessType:

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

plmnId:

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

regRequest:

Reference: '#/components/schemas/N1MessageContainer'

supportedFeatures:

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

Required:

- reason
- accessType

UeContextTransferRspData

Type: object

Properties:

ueContext:

Reference: '#/components/schemas/UeContext'

ueRadioCapability:

Reference: '#/components/schemas/N2InfoContent'

supportedFeatures:

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

Required:

- ueContext

UeContext

Type: object

Properties:

supi:

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

supiUnauthInd:

Type: boolean

gpsiList:

Type: array

Items:

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

minItems: 1

pei:

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

udmGroupId:

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

ausfGroupId:

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

routingIndicator:

Type: string

groupList:

Type: array

Items:

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

minItems: 1

drxParameter:

Reference: '#/components/schemas/DrxParameter'

subRfsp:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/RfspIndex'**usedRfsp:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/RfspIndex'**subUeAmbr:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ambr'**smsSupport:****Reference:** '#/components/schemas/SmsSupport'**smsfId:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'**seafData:****Reference:** '#/components/schemas/SeafData'**5gMmCapability:****Reference:** '#/components/schemas/5GMmCapability'**pcfId:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'**pcfAmPolicyUri:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**amPolicyReqTriggerList:****Type:** array**Items:****Reference:** '#/components/schemas/AMPolicyReqTrigger'**minItems:** 1**hpcfId:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'**restrictedRatList:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/RatType'**minItems:** 1**forbiddenAreaList:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Area'

minItems: 1

serviceAreaRestriction:

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

restrictedCoreNwTypeList:

Type: array

Items:

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

minItems: 1

eventSubscriptionList:

Type: array

Items:

Reference: 'TS29518_Namf_EventExposure.yaml#/components/schemas/AmfEventSubscription'

minItems: 1

mmContextList:

Type: array

Items:

Reference: '#/components/schemas/MmContext'

minItems: 1

maxItems: 2

sessionContextList:

Type: array

Items:

Reference: '#/components/schemas/PduSessionContext'

minItems: 1

traceData:

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

N2SmlInformation

Type: object

Properties:

pduSessionId:

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

n2InfoContent:

Reference: '#/components/schemas/N2InfoContent'

sNssai:

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

subjectToHo:

Type: boolean

Required:

- pduSessionId

N2InfoContent

Type: object

Properties:

ngapMessageType:

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

ngapIeType:

Reference: '#/components/schemas/NgapIeType'

ngapData:

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

Required:

- ngapIeType

- ngapData

NrppaInformation

Type: object

Properties:

nfId:

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

nrppaPdu:

Reference: '#/components/schemas/N2InfoContent'

Required:

- nfId

- nrppaPdu

PwsInformation

Type: object

Properties:

messageIdentifier:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint16'

serialNumber:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint16'

pwsContainer:

Reference: '#/components/schemas/N2InfoContent'

sendRanResponse:

Type: boolean

Default: false

omcId:

Reference: '#/components/schemas/OmcIdentifier'

Required:

- messageIdentifier
- serialNumber
- pwsContainer

N1N2MsgTxfrFailureNotification

Type: object

Properties:

cause:

Reference: '#/components/schemas/N1N2MessageTransferCause'

n1n2MsgDataUri:

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

Required:

- cause
- n1n2MsgDataUri

N1N2MessageTransferError

Type: object

Properties:

error:

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

errInfo:

Reference: '#/components/schemas/N1N2MsgTxfrErrDetail'

Required:

- error

N1N2MsgTxfrErrDetail

Type: object

Properties:**retryAfter:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uinteger'**highestPrioArp:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Arp'

N2InformationTransferRspData

Type: object**Properties:****result:****Reference:** '#/components/schemas/N2InformationTransferResult'**pwsRspData:****Reference:** '#/components/schemas/PWSResponseData'**supportedFeatures:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Required:**

- result

MmContext

Type: object**Properties:****accessType:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/AccessType'**nasSecurityMode:****Reference:** '#/components/schemas/NasSecurityMode'**nasDownlinkCount:****Reference:** '#/components/schemas/NasCount'**nasUplinkCount:****Reference:** '#/components/schemas/NasCount'**ueSecurityCapability:****Reference:** '#/components/schemas/UeSecurityCapability'**s1UeNetworkCapability:****Reference:** '#/components/schemas/S1UeNetworkCapability'**allowedNssai:****Type:** array

Items:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/Snssai'**minItems:** 1**nssaiMappingList:****Type:** array**Items:****Reference:** '#/components/schemas/NssaiMapping'**minItems:** 1**nsInstanceList:****Type:** array**Items:****Reference:** 'TS29531_Nnssf_NSSelection.yaml#/components/schemas/NsiId'**minItems:** 1**expectedUEbehavior:****Reference:** '#/components/schemas/ExpectedUeBehavior'**Required:**

- accessType

SeafData**Type:** object**Properties:****ngKsi:****Reference:** '#/components/schemas/NgKsi'**keyAmf:****Reference:** '#/components/schemas/KeyAmf'**nh:****Type:** string**Pattern:** '^[A-Fa-f0-9]+\$'**ncc:****Type:** integer**Minimum:** 0**Maximum:** 7**keyAmfChangeInd:****Type:** boolean**keyAmfHDERivationInd:**

Type: boolean

Required:

- ngKsi

- keyAmf

NasSecurityMode

Type: object

Properties:

integrityAlgorithm:

Reference: '#/components/schemas/IntegrityAlgorithm'

cipheringAlgorithm:

Reference: '#/components/schemas/CipheringAlgorithm'

Required:

- integrityAlgorithm

- cipheringAlgorithm

PduSessionContext

Type: object

Properties:

pduSessionId:

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

smContextRef:

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

sNssai:

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

dnn:

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

accessType:

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

allocatedEbiList:

Type: array

Items:

Reference: 'TS29502_Nsmf_PDUSession.yaml#/components/schemas/EbiArpMapping'

minItems: 1

hsmfId:

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

vsmfId:

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

nsInstance:

Reference: 'TS29531_Nnssf_NSSelection.yaml#/components/schemas/NsiId'

Required:

- pduSessionId
- smContextRef
- sNssai
- dnn
- accessType
- allocatedEbiList

NssaiMapping

Type: object

Properties:

mappedSnssai:

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

hSnssai:

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

Required:

- mappedSnssai
- hSnssai

UeRegStatusUpdateReqData

Type: object

Properties:

transferStatus:

Reference: '#/components/schemas/UeContextTransferStatus'

toReleaseSessionList:

Type: array

Items:

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

minItems: 1

pcfReselectedInd:

Type: boolean

Required:

- transferStatus

UeRegStatusUpdateRspData

Type: object

Properties:

regStatusTransferComplete:

Type: boolean

Required:

- regStatusTransferComplete

AssignEbiError

Type: object

Properties:

error:

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

failureDetails:

Reference: '#/components/schemas/AssignEbiFailed'

Required:

- error

- failureDetails

UeContextCreateData

Type: object

Properties:

ueContext:

Reference: '#/components/schemas/UeContext'

targetId:

Reference: '#/components/schemas/NgRanTargetId'

sourceToTargetData:

Reference: '#/components/schemas/N2InfoContent'

pduSessionList:

Type: array

Items:

Reference: '#/components/schemas/N2SmInformation'

minItems: 1

n2NotifyUri:

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

ueRadioCapability:

Reference: '#/components/schemas/N2InfoContent'

ngapCause:

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

supportedFeatures:

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

Required:

- ueContext
- targetId
- sourceToTargetData
- pduSessions

UeContextCreatedData

Type: object

Properties:

ueContext:

Reference: '#/components/schemas/UeContext'

targetToSourceData:

Reference: '#/components/schemas/N2InfoContent'

pduSessionList:

Type: array

Items:

Reference: '#/components/schemas/N2SmInformation'

minItems: 1

ngapCause:

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

failedSessionList:

Type: array

Items:

Reference: '#/components/schemas/N2SmInformation'

minItems: 1

supportedFeatures:

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

pcfReselectedInd:

Type: boolean

Required:

- ueContext
- targetToSourceData
- pduSessions

UeContextCreateError

Type: object

Properties:

error:

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

ngapCause:

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

Required:

- error

NgRanTargetId

Type: object

Properties:

ranNodeId:

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

tai:

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

Required:

- ranNodeId
- tai

PWSResponseData

Type: object

Properties:

ngapMessageType:

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

serialNumber:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint16'

messageIdentifier:

Type: integer

unknownTaiList:

Type: array

Items:

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

minItems: 1

Required:

- ngapMessageType
- serialNumber
- messageIdentifier

PWSErrorData

Type: object

Properties:

namfCause:

Type: integer

Required:

- namfCause

N2InformationTransferError

Type: object

Properties:

error:

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

pwdErrorInfo:

Reference: '#/components/schemas/PWSErrorData'

Required:

- error

NgKsi

Type: object

Properties:

tsc:

Reference: '#/components/schemas/ScType'

ksi:

Type: integer

Minimum: 0

Maximum: 6

Required:

- tsc

- ksi

KeyAmf

Type: object

Properties:

keyType:

Reference: '#/components/schemas/KeyAmfType'

keyVal:

Type: string

Required:

- keyType

- keyVal

ExpectedUeBehavior

Type: object

Properties:

expMoveTrajectory:

Type: array

Items:

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

minItems: 1

validityTime:

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

Required:

- expMoveTrajectory

- validityTime

N2RanInformation

Type: object

Properties:

n2InfoContent:

Reference: '#/components/schemas/N2InfoContent'

Required:

- n2InfoContent

SIMPLE DATA TYPES

EpsBearerId

Type: integer

Minimum: 0

Maximum: 15

Ppi

Type: integer

Minimum: 0

Maximum: 7

NasCount

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

5GMmCapability

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

UeSecurityCapability

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

S1UeNetworkCapability

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

DrxParameter

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

OmIdentifier

Type: string

ENUMERATIONS

StatusChange

anyOf:

- type: string

N2InformationClass

anyOf:

- type: string

N1MessageClass

anyOf:

- type: string

N1N2MessageTransferCause

anyOf:

- type: string

UeContextTransferStatus

anyOf:

- type: string

N2InformationTransferResult

anyOf:

- type: string

CipheringAlgorithm

anyOf:

- type: string

IntegrityAlgorithm

anyOf:

- type: string

SmsSupport

anyOf:

- type: string

ScType

anyOf:

- type: string

KeyAmfType

anyOf:

- type: string

TransferReason

anyOf:

- type: string

AMPolicyReqTrigger

anyOf:

- type: string

RatSelector

anyOf:

- type: string

NgapleType

anyOf:

- type: string

N2InfoNotifyReason

anyOf:

- type: string



CHAPTER 9

Namf_Location

The Namf_Location service is used by NF service consumers to request the AMF for initiating positioning requests and provide the location information. It is also used to subsequently notify the location change events towards the NF service consumers. The following are the key functionalities of this NF service:

- Allow NFs to request the current geodetic and optionally civic location of a target UE.
- Allow NFs to be notified of event information related to emergency sessions.
- Allow NFs to request Network Provided Location Information (NPLI) and/or local time zone corresponding to the location of a target UE.

Reference: 3GPP TS 29.518 [15]

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- [servers](#), on page 172
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- [components](#), on page 175

OpenAPI

OpenAPI Version: 3.0.0

info

Version: 1.0.0

Title: Namf_Location

Description: AMF Location Service

externalDocs

Description: 3GPP TS 29.518 V15.2.0; 5G System; Access and Mobility Management Services

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.518/'

security

- {}
- oAuth2Clientcredentials:
- namf-loc

servers

URL: '{apiRoot}/namf-loc/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501

paths

ueContextId provide pos info

Method: Post

Summary: Namf_Location ProvidePositioningInfo service Operation

Tags:

- Individual UE context (Document)

Operation ID: ProvidePositioningInfo

Parameters:

- name: ueContextId

In: path

Description: UE Context Identifier

Required/Optional: true

Schema:

Type: string

pattern: `^(imsi-[0-9]{5,15}|nai-.+|imei-[0-9]{15}|imeisv-[0-9]{16}|.+)$`

Request Body:

Content:

Application/JSON:

Schema:

Reference: `#/components/schemas/RequestPosInfo'`

Required/Optional: true

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: `#/components/schemas/ProvidePosInfo'`

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

'504': Reference 'TS29571_CommonData.yaml#/components/responses/504'

default:

Description: Unexpected error

Callbacks:

onUELocationNotification:

`'{ $request.body#/locationNotificationUri }':`

Method: Post

Request Body:

Description: UE Location Event Notification

Content:

Application/JSON:

Schema:

Reference: `#/components/schemas/NotifiedPosInfo'`

Responses:

- '204' Expected response to a successful callback processing
- '400': Reference 'TS29571_CommonData.yaml#/components/responses/400'
- '403': Reference 'TS29571_CommonData.yaml#/components/responses/403'
- '411': Reference 'TS29571_CommonData.yaml#/components/responses/411'
- '413': Reference 'TS29571_CommonData.yaml#/components/responses/413'
- '415': Reference 'TS29571_CommonData.yaml#/components/responses/415'
- '429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
- '500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
- '503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

ueContextId provide loc info

Method: Post**Summary:** Namf_Location ProvideLocationInfo service Operation**Tags:**

- Individual UE context (Document)

Operation ID: ProvideLocationInfo**Parameters:**

- name: ueContextId

In: path**Description:** UE Context Identifier**Required/Optional:** true**Schema:****Type:** string**pattern:** '^(imsi-[0-9]{5,15}|nai-.+|imei-[0-9]{15}|imeisv-[0-9]{16}|.+)\$'**Request Body:****Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/RequestLocInfo'**Required/Optional:** true**Responses:**

- '200' Expected response to a valid request

Content:

Application/JSON:**Schema:****Reference:** '#/components/schemas/ProvideLocInfo'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:**Description:** Unexpected error

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2**Flows:****clientCredentials:****tokenUrl:** '{nrfApiRoot}/oauth2/token'**scopes:****namf-loc:** Access to the Namf_Location API

schemas

RequestPosInfo

Type: object**Properties:****lcsClientType:****Reference:** 'TS29572_Nlmf_Location.yaml#/components/schemas/ExternalClientType'

lcsLocation:**Reference:** '#/components/schemas/LocationType'**supi:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Supi'**gpsi:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Gpsi'**priority:****Reference:** 'TS29572_Nlmf_Location.yaml#/components/schemas/LcsPriority'**lcsQoS:****Reference:** 'TS29572_Nlmf_Location.yaml#/components/schemas/LocationQoS'**velocityRequested:****Reference:** 'TS29572_Nlmf_Location.yaml#/components/schemas/VelocityRequested'**lcsSupportedGADShapes:****Reference:** 'TS29572_Nlmf_Location.yaml#/components/schemas/SupportedGADShapes'**locationNotificationUri:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**supportedFeatures:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Required:**

- lcsClientType
- lcsLocation

ProvidePosInfo

Type: object**Properties:****locationEstimate:****Reference:** 'TS29572_Nlmf_Location.yaml#/components/schemas/GeographicArea'**accuracyFulfilmentIndicator:****Reference:** 'TS29572_Nlmf_Location.yaml#/components/schemas/AccuracyFulfilmentIndicator'**ageOfLocationEstimate:****Reference:** 'TS29572_Nlmf_Location.yaml#/components/schemas/AgeOfLocationEstimate'**velocityEstimate:****Reference:** 'TS29572_Nlmf_Location.yaml#/components/schemas/VelocityEstimate'**positioningDataList:****Type:** array

Items:**Reference:** 'TS29572_Nlmf_Location.yaml#/components/schemas/PositioningMethodAndUsage'**minItems:** 0**maxItems:** 9**gnssPositioningDataList:****Type:** array**Items:****Reference:** 'TS29572_Nlmf_Location.yaml#/components/schemas/GnssPositioningMethodAndUsage'**minItems:** 0**maxItems:** 9**ecgi:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ecgi'**ncgi:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ncgi'**targetServingNode:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'**civicAddress:****Reference:** 'TS29572_Nlmf_Location.yaml#/components/schemas/CivicAddress'**barometricPressure:****Reference:** 'TS29572_Nlmf_Location.yaml#/components/schemas/BarometricPressure'**altitude:****Reference:** 'TS29572_Nlmf_Location.yaml#/components/schemas/Altitude'**supportedFeatures:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

NotifiedPosInfo

Type: object**Properties:****locationEvent:****Reference:** '#/components/schemas/LocationEvent'**supi:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Supi'**gpsi:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Gpsi'**pei:**

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

locationEstimate:

Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/GeographicArea'

ageOfLocationEstimate:

Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/AgeOfLocationEstimate'

velocityEstimate:

Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/VelocityEstimate'

positioningDataList:

Type: array

Items:

Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/PositioningMethodAndUsage'

minItems: 0

maxItems: 9

gnssPositioningDataList:

Type: array

Items:

Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/GnssPositioningMethodAndUsage'

minItems: 0

maxItems: 9

ecgi:

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

ncgi:

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

servingNode:

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

civicAddress:

Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/CivicAddress'

barometricPressure:

Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/BarometricPressure'

altitude:

Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/Altitude'

Required:

- locationEvent

RequestLocInfo

Type: object

Properties:

req5gsLoc:

Type: boolean

Default: false

reqCurrentLoc:

Type: boolean

Default: false

reqRatType:

Type: boolean

Default: false

reqTimeZone:

Type: boolean

Default: false

supportedFeatures:

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

ProvideLocInfo

Type: object

Properties:

currentLoc:

Type: boolean

location:

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

geoInfo:

Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/GeographicArea'

locatoInAge:

Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/AgeOfLocationEstimate'

ratType:

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

timezone:

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

supportedFeatures:

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

LocationType

anyOf:

- type: string

LocationEvent

anyOf:

- type: string



CHAPTER 10

Nausf_SoRProtection

The Authentication Server Function (AUSF) acts as NF Service Producer. It provides SoRProtection service to the NF Service Consumer. This service permits to provide the NF Service Consumer (for example, UDM) with the SoR-MAC-IAUSF and CounterSoR to protect the the Steering Information List from being tampered with or removed by the VPLMN.



Note

If the Steering Information List is not available or HPLMN determines that no steering of the UE is required, a SoR transparent container information element with an HPLMN indication that no change of the "Operator Controlled PLMN Selector with Access Technology" list stored in the UE protected by SoR-MAC-IAUSF and CounterSoR is still sent to the UE during registration. The Steering Information List in such a case, the NF Service Consumer shall send an empty list to the AUSF when consuming the Nausf_SoRProtection Service.

The service operation defined for the Nausf_SoRProtection is as follows:

- Protect: The Protect service operation is used in the following procedures:
 - Procedure for steering of UE in VPLMN during registration (see subclause 6.14.2.1 of 3GPP TS 33.501 [8])
 - Procedure for steering of UE in VPLMN after registration (see subclause 6.14.2.2 of 3GPP TS 33.501 [8])

Reference: 3GPP TS 33.501 v15.5.0

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- [servers, on page 182](#)
- [paths, on page 182](#)
- [components, on page 183](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Version: 1.0.0

Title: Nausf_SoRProtection Service

Description: AUSF SoR Protection Service

externalDocs

Description: 3GPP TS 29.509 V15.2.0; 5G System; Authentication Server Services

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.509'

security

- {}
- oAuth2ClientCredentials:
- nausf-sorprotection

servers

URL: '{apiRoot}/nausf-sorprotection/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 4.4 of 3GPP TS 29.501

paths

supi ue-sor

Method: Post

Parameters:

- name: supi

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/Supi'**Request Body:****Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/SorInfo'**Required/Optional:** true**Responses:**

'201' SorSecurityInfo

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/SorSecurityInfo'

'503' Service Unavailable

Content:

application/problem+json:

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2**Flows:****clientCredentials:****tokenUrl:** '{nrfApiRoot}/oauth2/token'**scopes:****nausf-sorprotection:** Access to the Nausf_SoRProtection API

schemas

SorInfo

Type: object

Properties:

steeringContainer:

Reference: '#/components/schemas/SteeringContainer'

ackInd:

Reference: '#/components/schemas/AckInd'

Required:

- ackInd

SorSecurityInfo

Type: object

Properties:

sorMacIausf:

Reference: '#/components/schemas/SorMac'

counterSor:

Reference: '#/components/schemas/CounterSor'

sorXmacIue:

Reference: '#/components/schemas/SorMac'

Required:

- sorMacIausf

- counterSor

SteeringContainer

oneOf:

- type: array

Items:

Reference: 'TS29509_Nausf_SoRProtection.yaml#/components/schemas/SteeringInfo'

minItems: 1

- \$ref: '#/components/schemas/SecuredPacket'

SteeringInfo

Type: object

Properties:

plmnId:

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

accessTechList:

Type: array

Items:

Reference: '#/components/schemas/AccessTech'

minItems: 1

Required:

- plmnId

SorMac

Type: string

Pattern: '^[A-Fa-f0-9]{32}\$'

CounterSor

Type: string

Pattern: '^[A-Fa-f0-9]{4}\$'

AckInd

Type: boolean

SecuredPacket

Type: string

format: base64

AccessTech

anyOf:

- type: string



CHAPTER 11

Nausf_UEAuthentication

The Authentication Server Function (AUSF) acts as NF Service Producer. It provides UE authentication service to the requester NF. The NF Service Consumer is the AMF.

For this service, the following service operations are defined

- Authenticate

This service permits to authenticate the UE and to provide one or more master keys which are used by the AMF to derived subsequent keys.

Reference: 3GPP TS 33.501 v15.5.0

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- [security, on page 188](#)
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OpenAPI

OpenAPI Version: 3.0.0

info

Version: 1.0.0

Title: AUSF API

Description: OpenAPI specification for AUSF

externalDocs

Description: 3GPP TS 29.509 V15.2.0; 5G System; 3GPP TS Authentication Server services.

URL: http://www.3gpp.org/ftp/Specs/archive/29_series/29.509

security

- {}
- oAuth2ClientCredentials:
- nausf-auth

servers

URL: '{apiRoot}/nausf-auth/v1'

Variables:

API Root:

Default: <https://example.com>

Description: apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501.

paths

/ue-authentications

Method: Post

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AuthenticationInfo'

Required/Optional: true

Responses:

'201' UEAAuthenticationCtx

Content:

application/3gppHal+json:

Schema:

Reference: '#/components/schemas/UEAuthenticationCtx'

Headers:

Location:

Description: 'Contains the URI of the newly created resource according to the structure: {apiRoot}/nausf-auth/v1/ue-authentications/{authCtxId}'

Required/Optional: true

Schema:

Type: string

'400' Bad Request from the AMF

Content:

application/problem+json:

Schema:

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

'403' Forbidden due to serving network not authorized

Content:

application/problem+json:

Schema:

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

'500' Internal Server Error

Content:

application/problem+json:

Schema:

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

/ue-authentications/{authCtxId}/5g-aka-confirmation

put:

Parameters:

- name: authCtxId

In: path

Required/Optional: true

Schema:

Type: string

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ConfirmationData'

Responses:

'200' Request processed (EAP success or Failure)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ConfirmationDataResponse'

'400' Bad Request

Content:

application/problem+json:

Schema:

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

'500' Internal Server Error

Content:

application/problem+json:

Schema:

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

/ue-authentications/{authCtxId}/eap-session

Method: Post

Operation ID: EapAuthMethod

Parameters:

- name: authCtxId

In: path

Required/Optional: true

Schema:

Type: string

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/EapSession'

Responses:

'200' Use to handle or close the EAP session

Content:

Application/JSON:

Schema:**Reference:** '#/components/schemas/EapSession'

application/3gppHal+json:

Schema:**Type:** object**Properties:****eapPayload:****Reference:** '#/components/schemas/EapPayload'**_links:****Type:** object**Description:** 'URI : /{eapSessionUri}'**additionalProperties:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/LinksValueSchema'**minProperties:** 1**Required/Optional:**

- eapPayload

- _links

'400' Bad Request

Content:

application/problem+json:

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

'500' Internal Server Error

Content:

application/problem+json:

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:**clientCredentials:****tokenUrl:** '{nrfApiRoot}/oauth2/token'**scopes:****nausf-auth:** Access to Nausf_UEAuthentication API

schemas

AuthenticationInfo

Type: object**Properties:****supiOrSuci:****Reference:** 'TS29503_Nudm_UEAU.yaml#/components/schemas/SupiOrSuci'**servingNetworkName:****Reference:** 'TS29503_Nudm_UEAU.yaml#/components/schemas/ServingNetworkName'**resynchronizationInfo:****Reference:** 'TS29503_Nudm_UEAU.yaml#/components/schemas/ResynchronizationInfo'**traceData:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/TraceData'**Required:**

- supiOrSuci
- servingNetworkName

UEAuthenticationCtx

Type: object**Properties:****authType:****Reference:** '#/components/schemas/AuthType'**5gAuthData:****oneOf:**

- \$ref: '#/components/schemas/Av5gAka'
- \$ref: '#/components/schemas/EapPayload'

_links:**Type:** object**additionalProperties:**

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

servingNetworkName:

Reference: 'TS29503_Nudm_UEAU.yaml#/components/schemas/ServingNetworkName'

Required:

- authType
- 5gAuthData
- _links

Av5gAka

Type: object

Required:

- rand
- hxresStar
- autn

Properties:

rand:

Reference: 'TS29503_Nudm_UEAU.yaml#/components/schemas/Rand'

hxresStar:

Reference: '#/components/schemas/HxresStar'

autn:

Reference: 'TS29503_Nudm_UEAU.yaml#/components/schemas/Autn'

ConfirmationData

Type: object

Required:

- resStar

Properties:

resStar:

Reference: '#/components/schemas/ResStar'

ConfirmationDataResponse

Type: object

Properties:

authResult:

Reference: '#/components/schemas/AuthResult'

supi:

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

kseaf:

Reference: '#/components/schemas/Kseaf'

Required:

- authResult

EapSession

Type: object

Properties:

eapPayload:

Reference: '#/components/schemas/EapPayload'

kSeaf:

Reference: '#/components/schemas/Kseaf'

_links:

Type: object

additionalProperties:

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

authResult:

Reference: '#/components/schemas/AuthResult'

supi:

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

Required:

- eapPayload

AuthResult

Type: string

enum:

- AUTHENTICATION_SUCCESS

- AUTHENTICATION_FAILURE

- AUTHENTICATION_ONGOING

EapPayload

Type: string

format: base64

Description: contains an EAP packet

Kseaf

Type: string

Pattern: '[A-Fa-f0-9]{64}'

ResStar

Type: string

Pattern: '[A-Fa-f0-9]{32}'

HxresStar

Type: string

Pattern: "[A-Fa-f0-9]{32}"

AuthType

anyOf:

- type: string

enum:

- 5G_AKA

- EAP_AKA_PRIME

- EAP_TLS

- type: string



CHAPTER 12

Nchf_ConvergedCharging

The ConvergedCharging service provides charging for session and event based NF services. This ConvergedCharging service offers charging:

- With quota management (online; this includes support for both blocking mode and non-blocking mode)
- Without quota management (offline)
- Charging information record generation

The following table shows the CHF Services and CHF Service Operations:

Table 1: NF services provided by the CHF

Service Name	Service Operations	Operation Semantics	Example
Nchf_ConvergedCharging	Create	Request/Response	SMF
	Update	Request/Response	SMF
	Release	Request/Response	SMF
	Notify	Notify	SMF

Reference: 3GPP TS 32.290 v15.1.0

- [OpenAPI, on page 197](#)
- [info, on page 198](#)
- [externalDocs, on page 198](#)
- [servers, on page 198](#)
- [paths, on page 198](#)
- [components, on page 202](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Description: ConvergedCharging Service

Version: 1.R15.0.0

Title: Nchf_ConvergedCharging

externalDocs

Description:-

3GPP TS 32.291 Telecommunication management; Charging management;
5G system, charging service; Stage 3.

URL: 'http://www.3gpp.org/ftp/Specs/archive/32_series/32.291/'

servers

URL: '{apiRoot}/nchf-convergedcharging/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 4.4 of 3GPP TS 29.501.

paths

/chargingdata

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ChargingDataRequest'

Responses:

'201' Created

Content:

Application/JSON:**Schema:****Reference:** '#/components/schemas/ChargingDataResponse'

'400' Bad request

Content:**Application/JSON:****Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

'403' Forbidden

Content:**Application/JSON:****Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

'404' Not Found

Content:**Application/JSON:****Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'**'410':** Reference 'TS29571_CommonData.yaml#/components/responses/410'**default:** Reference 'TS29571_CommonData.yaml#/components/responses/default'**Callbacks:****myNotification:**

'{\$request.body#/notifyUri}':

Method: Post**Request Body:****Required/Optional:** true**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/ChargingNotifyRequest'**Responses:**

'204' No Content, Notification was succesfull'

'400' Bad request

Content:

'/chargingdata/{ChargingDataRef}/update'

Application/JSON:

Schema:

Reference: >-

TS29571_CommonData.yaml#/components/schemas/ProblemDetails

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

'/chargingdata/{ChargingDataRef}/update'

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ChargingDataRequest'

Parameters:

- name: ChargingDataRef

In: path

Description: a unique identifier for a charging data resource in a PLMN

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK. Updated Charging Data resource is returned

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ChargingDataResponse'

'400' Bad request

Content:

Application/JSON:

Schema:

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

'403' Forbidden

Content:

Application/JSON:

Schema:

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

'404' Not Found

Content:

Application/JSON:

Schema:

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

'410': Reference 'TS29571_CommonData.yaml#/components/responses/410'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

'/chargingdata/{ChargingDataRef}/release'

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ChargingDataRequest'

Parameters:

- name: ChargingDataRef

In: path

Description: a unique identifier for a charging data resource in a PLMN

Required/Optional: true

Schema:

Type: string

Responses:

'204' No Content.

'404' Not Found

Content:

Application/JSON:

Schema:

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

'410': Reference 'TS29571_CommonData.yaml#/components/responses/410'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

components

schemas

ChargingDataRequest

Type: object

Properties:

subscriberIdentifier:

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

nfConsumerIdentification:

Reference: '#/components/schemas/NFConsumerIdentification'

invocationTimeStamp:

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

invocationSequenceNumber:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint32'

oneTimeEvent:

Type: boolean

notifyUri:

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

multipleUnitUsage:

Type: array

Items:

Reference: '#/components/schemas/MultipleUnitUsage'

minItems: 0

triggers:

Type: array

Items:

Reference: '#/components/schemas/Trigger'

minItems: 0

pDUSessionChargingInformation:

Reference: '#/components/schemas/PDUSessionChargingInformation'

roamingQBCInformation:

Reference: '#/components/schemas/RoamingQBCInformation'

sMSChargingInformation:

Reference: '#/components/schemas/SMSChargingInformation'

Required:

- nfConsumerIdentification
- invocationTimeStamp
- invocationSequenceNumber

ChargingDataResponse

Type: object

Properties:

invocationTimeStamp:

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

invocationSequenceNumber:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint32'

invocationResult:

Reference: '#/components/schemas/InvocationResult'

sessionFailover:

Reference: '#/components/schemas/SessionFailover'

multipleUnitInformation:

Type: array

Items:

Reference: '#/components/schemas/MultipleUnitInformation'

minItems: 0

triggers:

Type: array

Items:

Reference: '#/components/schemas/Trigger'

minItems: 0

pDUSessionChargingInformation:

Reference: '#/components/schemas/PDUSessionChargingInformation'

roamingQBCInformation:

Reference: '#/components/schemas/RoamingQBCInformation'

Required:

- invocationTimeStamp

- invocationSequenceNumber

ChargingNotifyRequest

Type: object

Properties:

notificationType:

Reference: '#/components/schemas/NotificationType'

reauthorizationDetails:

Type: array

Items:

Reference: '#/components/schemas/ReauthorizationDetails'

minItems: 0

Required:

- notificationType

NFConsumerIdentification

Type: object

Properties:

nFName:

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

nFIPv4Address:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

nFIPv6Address:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'

nFPLMNID:

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

nodeFunctionality:

Reference: '#/components/schemas/NodeFunctionality'

Required:

- nFName

- nFIPv4Address

- nFIPv6Address

- nodeFunctionality

MultipleUnitUsage

Type: object

Properties:**ratingGroup:****Reference:** '#/components/schemas/RatingGroup'**requestedUnit:****Reference:** '#/components/schemas/RequestedUnit'**UsedUnitContainer:****Type:** array**Items:****Reference:** '#/components/schemas/UsedUnitContainer'**minItems:** 0**uPFID:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'**Required:**

- ratingGroup

InvocationResult

Type: object**Properties:****error:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'**failureHandling:****Reference:** '#/components/schemas/FailureHandling'

Trigger

Type: object**Properties:****triggerType:****Reference:** '#/components/schemas/TriggerType'**triggerCategory:****Reference:** '#/components/schemas/TriggerCategory'**timeLimit:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DurationSec'**volumeLimit:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uint32'**maxNumberOfccc:**

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint32'

Required:

- triggerType
- triggerCategory

MultipleUnitInformation

Type: object

Properties:

resultCode:

Reference: '#/components/schemas/ResultCode'

ratingGroup:

Reference: '#/components/schemas/RatingGroup'

grantedUnit:

Reference: '#/components/schemas/GrantedUnit'

triggers:

Type: array

Items:

Reference: '#/components/schemas/Trigger'

minItems: 0

validityTime:

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

quotaHoldingTime:

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

finalUnitIndication:

Reference: '#/components/schemas/FinalUnitIndication'

timeQuotaThreshold:

Type: integer

volumeQuotaThreshold:

Type: integer

unitQuotaThreshold:

Type: integer

uPFID:

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

Required:

- ratingGroup

RequestedUnit

Type: object

Properties:

time:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint32'

totalVolume:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint64'

uplinkVolume:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint64'

downlinkVolume:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint64'

serviceSpecificUnits:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint64'

UsedUnitContainer

Type: object

Properties:

serviceId:

Reference: '#/components/schemas/ServiceId'

quotaManagementIndicator:

Reference: '#/components/schemas/QuotaManagementIndicator'

triggers:

Type: array

Items:

Reference: '#/components/schemas/Trigger'

minItems: 0

triggerTimestamp:

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

time:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint32'

totalVolume:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint64'

uplinkVolume:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint64'

downlinkVolume:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uint64'**serviceSpecificUnits:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uint64'**eventTimeStamps:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DateTime'**localSequenceNumber:****Type:** integer**pDUContainerInformation:****Reference:** '#/components/schemas/PDUContainerInformation'**Required:**

- localSequenceNumber

GrantedUnit**Type:** object**Properties:****tariffTimeChange:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DateTime'**time:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uint32'**totalVolume:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uint64'**uplinkVolume:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uint64'**downlinkVolume:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uint64'**serviceSpecificUnits:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uint64'**FinalUnitIndication****Type:** object**Properties:****finalUnitAction:****Reference:** '#/components/schemas/FinalUnitAction'**restrictionFilterRule:**

Reference: '#/components/schemas/IPFilterRule'

filterId:

Type: string

redirectServer:

Reference: '#/components/schemas/RedirectServer'

Required:

- finalUnitAction

RedirectServer

Type: object

Properties:

redirectAddressType:

Reference: '#/components/schemas/RedirectAddressType'

redirectServerAddress:

Type: string

Required:

- redirectAddressType

- redirectServerAddress

ReauthorizationDetails

Type: object

Properties:

serviceId:

Reference: '#/components/schemas/ServiceId'

ratingGroup:

Reference: '#/components/schemas/RatingGroup'

quotaManagementIndicator:

Reference: '#/components/schemas/QuotaManagementIndicator'

PDUSessionChargingInformation

Type: object

Properties:

chargingId:

Reference: '#/components/schemas/ChargingId'

userInformation:

Reference: '#/components/schemas/UserInformation'

userLocationInfo:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/UserLocation'**userLocationTime:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DateTime'**presenceReportingAreaInformation:****Type:** object**additionalProperties:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PresenceInfo'**minProperties:** 0**uetimeZone:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/TimeZone'**pduSessionInformation:****Reference:** '#/components/schemas/PDUSessionInformation'**unitCountInactivityTimer:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DurationSec'**rANSecondaryRATUsageReport:****Reference:** '#/components/schemas/RANSecondaryRATUsageReport'**Required:**

- userInformation
- pduSessionInformation

UserInformation

Type: object**Properties:****servedGPSI:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Gpsi'**servedPEI:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Pei'**unauthenticatedFlag:****Type:** boolean**roamerInOut:****Reference:** '#/components/schemas/RoamerInOut'**Required:**

- servedGPSI

PDUSessionInformation

Type: object

Properties:

networkSlicingInfo:

Reference: '#/components/schemas/NetworkSlicingInfo'

pduSessionID:

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

pduType:

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

sscMode:

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

hPlmnId:

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

servingNetworkFunctionID:

Reference: '#/components/schemas/ServingNetworkFunctionID'

ratType:

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

dnnId:

Type: string

chargingCharacteristics:

Type: string

chargingCharacteristicsSelectionMode:

Reference: '#/components/schemas/ChargingCharacteristicsSelectionMode'

startTime:

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

stopTime:

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

3gppPSDataOffStatus:

Reference: '#/components/schemas/3GPPPSDataOffStatus'

sessionStopIndicator:

Type: boolean

pduAddress:

Reference: '#/components/schemas/PDUAddress'

diagnostics:

Reference: '#/components/schemas/Diagnostics'

qoSInformation:

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

servingCNPlmnId:

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

Required:

- pduSessionID

- dnnId

PDUContainerInformation

Type: object

Properties:

timeofFirstUsage:

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

timeofLastUsage:

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

qoSInformation:

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

aFCorrelationInformation:

Type: string

userLocationInformation:

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

uetimeZone:

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

rATType:

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

servingNodeID:

Type: array

Items:

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

minItems: 0

presenceReportingAreaInformation:

Type: object

additionalProperties:

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

minProperties: 0

3gppPSDataOffStatus:

Reference: '#/components/schemas/3GPPPSDataOffStatus'

sponsorIdentity:

Type: string

applicationserviceProviderIdentity:

Type: string

chargingRuleBaseName:

Type: string

NetworkSlicingInfo

Type: object

Properties:

sNSSAI:

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

Required:

- sNSSAI

PDUAddress

Type: object

Properties:

pduIPv4Address:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

pduIPv6Address:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'

pduAddressprefixlength:

Type: integer

IPv4dynamicAddressFlag:

Type: boolean

IPv6dynamicAddressFlag:

Type: boolean

ServingNetworkFunctionID

Type: object

Properties:

servingNetworkFunctionName:

Type: string

servingNetworkFunctionInstanceId:

Type: string

gUAMI:

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

RoamingQBCInformation

Type: object

Properties:

multipleQFIcontainer:

Type: array

Items:

Reference: '#/components/schemas/MultipleQFIcontainer'

minItems: 0

uPFID:

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

roamingChargingProfile:

Reference: '#/components/schemas/RoamingChargingProfile'

MultipleQFIcontainer

Type: object

Properties:

triggers:

Type: array

Items:

Reference: '#/components/schemas/Trigger'

minItems: 0

triggerTimestamp:

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

time:

Reference: 'TS29571_CommonData.yaml#/components/schemas/UInt32'

totalVolume:

Reference: 'TS29571_CommonData.yaml#/components/schemas/UInt64'

uplinkVolume:

Reference: 'TS29571_CommonData.yaml#/components/schemas/UInt64'

localSequenceNumber:

Type: integer

qFIContainerInformation:

Reference: '#/components/schemas/QFIContainerInformation'

Required:

- localSequenceNumber

QFIContainerInformation

Type: object

Properties:

qFI:

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

timeofFirstUsage:

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

timeofLastUsage:

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

qoSInformation:

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

userLocationInformation:

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

uetimeZone:

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

presenceReportingAreaInformation:

Type: object

additionalProperties:

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

minProperties: 0

rATType:

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

servingNetworkFunctionID:

Type: array

Items:

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

minItems: 0

3gppPSDataOffStatus:

Reference: '#/components/schemas/3GPPPSDataOffStatus'

RoamingChargingProfile

Type: object

Properties:

triggers:

Type: array

Items:

Reference: '#/components/schemas/Trigger'

minItems: 0

partialRecordMethod:

Reference: '#/components/schemas/PartialRecordMethod'

SMSChargingInformation

Type: object

Properties:

originatorInfo:

Reference: '#/components/schemas/OriginatorInfo'

recipientInfo:

Type: array

Items:

Reference: '#/components/schemas/RecipientInfo'

minItems: 0

userEquipmentInfo:

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

userLocationinfo:

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

uetimeZone:

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

rATType:

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

sMSCAddress:

Type: string

sMDataCodingScheme:

Type: integer

sMMessageType:

Reference: '#/components/schemas/SMMessageType'

sMReplyPathRequested:

Reference: '#/components/schemas/ReplyPathRequested'

sMUserDataHeader:

Type: string

sMStatus:

Type: string

sMDischargeTime:

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

numberOfMessagesSent:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint32'

sMServiceType:

Reference: '#/components/schemas/SMServiceType'

sMSequenceNumber:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint32'

sMResult:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint32'

submissionTime:

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

sMPriority:

Reference: '#/components/schemas/SMPriority'

messageReference:

Type: string

messageSize:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint32'

messageClass:

Reference: '#/components/schemas/MessageClass'

deliveryReportRequested:

Reference: '#/components/schemas/DeliveryReportRequested'

OriginatorInfo

Type: object

Properties:

originatorSUPI:

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

originatorGPSI:

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

originatorOtherAddress:

Reference: '#/components/schemas/SMAddressInfo'

originatorReceivedAddress:

Reference: '#/components/schemas/SMAddressInfo'

originatorSCCPAddress:

Type: string

sMOriginatorInterface:

Reference: '#/components/schemas/SMInterface'

sMOriginatorProtocolId:

Type: string

RecipientInfo

Type: object

Properties:

recipientSUPI:

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

recipientGPSI:

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

recipientOtherAddress:

Reference: '#/components/schemas/SMAddressInfo'

recipientReceivedAddress:

Reference: '#/components/schemas/SMAddressInfo'

recipientSCCPAddress:

Type: string

sMDestinationInterface:

Reference: '#/components/schemas/SMInterface'

sMrecipientProtocolId:

Type: string

SMAddressInfo

Type: object

Properties:

sMaddressType:

Reference: '#/components/schemas/SMAddressType'

sMaddressData:

Type: string

sMaddressDomain:

Reference: '#/components/schemas/SMAddressDomain'

RecipientAddress

Type: object

Properties:

recipientAddressInfo:

Reference: '#/components/schemas/SMAddressInfo'

sMaddresseeType:

Reference: '#/components/schemas/SMAddresseeType'

MessageClass

Type: object

Properties:

classIdentifier:

Reference: '#/components/schemas/ClassIdentifier'

tokenText:

Type: string

SMAddressDomain

Type: object

Properties:

domainName:

Type: string

3GPPIMSIMCCMNC:

Type: string

SMInterface

Type: object

Properties:

interfaceId:

Type: string

interfaceText:

Type: string

interfacePort:

Type: string

interfaceType:

Reference: '#/components/schemas/InterfaceType'

RANSecondaryRATUsageReport

Type: object

Properties:

rANSecondaryRATType:

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

qosFlowsUsageReports:

Type: array

Items:

Reference: '#/components/schemas/QosFlowsUsageReport'

RatingGroup

Type: Uint32

ServiceId

Type: Uint32

Diagnostics

Type: integer

IPFilterRule

Type: string

ChargingId

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uint32'

QosFlowsUsageReport

Type: object

Properties:

qFI:

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

startTimestamp:

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

endTimestamp:

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

uplinkVolume:

Reference: 'TS29571_CommonData.yaml#/components/schemas/UInt64'

downlinkVolume:

Reference: 'TS29571_CommonData.yaml#/components/schemas/UInt64'

NotificationType

anyOf:

- type: string

enum:

- REAUTHORIZATION

- ABORT_CHARGING

- type: string

NodeFunctionality

anyOf:

- type: string

enum:

- SMF

- type: string

ChargingCharacteristicsSelectionMode

anyOf:

- type: string

enum:

- HOME_DEFAULT

- ROAMING_DEFAULT

- VISITING_DEFAULT

- type: string

TriggerType

anyOf:

- type: string

enum:

- QUOTA_THRESHOLD
- QHT
- FINAL
- QUOTA_EXHAUSTED
- VALIDITY_TIME
- OTHER_QUOTA_TYPE
- FORCED_REAUTHORISATION
- UNUSED_QUOTA_TIMER
- ABNORMAL_RELEASE
- QOS_CHANGE
- VOLUME_LIMIT
- TIME_LIMIT
- PLMN_CHANGE
- USER_LOCATION_CHANGE
- RAT_CHANGE
- UE_TIMEZONE_CHANGE
- TARIFF_TIME_CHANGE
- MAX_NUMBER_OF_CHANGES_IN CHARGING_CONDITIONS
- MANAGEMENT_INTERVENTION
- CHANGE_OF_UE_PRESENCE_IN PRESENCE_REPORTING_AREA
- CHANGE_OF_3GPP_PS_DATA_OFF_STATUS
- SERVING_NODE_CHANGE
- REMOVAL_OF_UPF
- ADDITION_OF_UPF
- type: string

FinalUnitAction**anyOf:**

- type: string

enum:

- TERMINATE
- REDIRECT
- RESTRICT_ACCESS
- type: string

RedirectAddressType

anyOf:

- type: string

enum:

- IPV4

- IPV6

- URL

- type: string

TriggerCategory

anyOf:

- type: string

enum:

- IMMEDIATE_REPORT

- DEFERRED_REPORT

- type: string

QuotaManagementIndicator

anyOf:

- type: string

enum:

- ONLINE_CHARGING

- OFFLINE_CHARGING

- type: string

FailureHandling

anyOf:

- type: string

enum:

- TERMINATE

- CONTINUE

- RETRY_AND_TERMINATE

- type: string

SessionFailover

anyOf:

- type: string

enum:

- FAILOVER_NOT_SUPPORTED

- FAILOVER_SUPPORTED

- type: string

3GPPPSDataOffStatus

anyOf:

- type: string

enum:

- ACTIVE

- INACTIVE

- type: string

ResultCode

anyOf:

- type: string

enum:

- SUCCESS

- END_USER_SERVICE_DENIED

- QUOTA_MANAGEMENT_NOT_APPLICABLE

- QUOTA_LIMIT_REACHED

- END_USER_SERVICE_REJECTED

- USER_UNKNOWN

- RATING_FAILED

- type: string

PartialRecordMethod

anyOf:

- type: string

enum:

- DEFAULT

- INDIVIDUAL

- type: string

RoamerInOut

anyOf:

- type: string

enum:

- IN_BOUND

- OUT_BOUND

- type: string

SMMessageType

anyOf:

- type: string

enum:

- SUBMISSION

- DELIVERY_REPORT

- SM_SERVICE_REQUEST

- type: string

SMPriority

anyOf:

- type: string

enum:

- LOW

- NORMAL

- HIGH

- type: string

DeliveryReportRequested

anyOf:

- type: string

enum:

- YES

- NO

- type: string

InterfaceType

anyOf:

- type: string
- enum:**
- UNKNOWN
- MOBILE_ORIGINATING
- MOBILE_TERMINATING
- APPLICATION_ORIGINATING
- APPLICATION_TERMINATING
- type: string

ClassIdentifier

- anyOf:**
- type: string
- enum:**
- PERSONAL
- ADVERTISEMENT
- INFORMATIONAL
- AUTO
- type: string

SMAddressType

- anyOf:**
- type: string
- enum:**
- EMAIL_ADDRESS
- MSISDN
- IPV4_ADDRESS
- IPV6_ADDRESS
- NUMERIC_SHORTCODE
- ALPHANUMERIC_SHORTCODE
- OTHER
- IMSI
- type: string

SMAddresseeType

- anyOf:**
- type: string

enum:

- TO
- CC
- BCC
- type: string

SMSericeType**anyOf:**

- type: string

enum:

- VAS4SMS_SHORT_MESSAGE_CONTENT_PROCESSING
- VAS4SMS_SHORT_MESSAGE_FORWARDING
- VAS4SMS_SHORT_MESSAGE_FORWARDING_MULTIPLE_SUBSCRIPTIONS
- VAS4SMS_SHORT_MESSAGE_FILTERING
- VAS4SMS_SHORT_MESSAGE_RECEIPT
- VAS4SMS_SHORT_MESSAGE_NETWORK_STORAGE
- VAS4SMS_SHORT_MESSAGE_TO_MULTIPLE_DESTINATIONS
- VAS4SMS_SHORT_MESSAGE_VIRTUAL_PRIVATE_NETWORK(VPN)
- VAS4SMS_SHORT_MESSAGE_AUTO_REPLY
- VAS4SMS_SHORT_MESSAGE_PERSONAL_SIGNATURE
- VAS4SMS_SHORT_MESSAGE_DEFERRED_DELIVERY
- VAS4SMS_SHORT_MESSAGE_CONTENT_PROCESSING
- type: string

ReplyPathRequested**anyOf:**

- type: string

enum:

- NO_REPLY_PATH_SET
- REPLY_PATH_SET
- type: string



CHAPTER 13

Nchf_SpendingLimitControl

This service enables transfer of policy counter status information relating to subscriber spending limits from CHF to the NF consumer.

Reference: 3GPP TS 23.502 [202] clause 5.2.17.2

- [OpenAPI, on page 229](#)
- [info, on page 229](#)
- [externalDocs, on page 229](#)
- [security, on page 229](#)
- [servers, on page 230](#)
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OpenAPI

OpenAPI Version: 3.0.0

info

Description: Spending Limit Control Service API

Version: "1.0.0"

Title: Nchf_SpendingLimitControl

externalDocs

Description: 3GPP TS 29.594 V15.2.0; 5G System; Spending Limit Control Service.

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.594/'

security

- {}

- oAuth2ClientCredentials:
- nchf-spendinglimitcontrol

servers

URL: 'http://{apiRoot}/nchf-spendinglimitcontrol/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501

paths

/subscriptions

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SpendingLimitContext'

Responses:

'201' Success

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SpendingLimitStatus'

Headers:

Location:

Description: 'Contains the URI of the created individual spending limit resource, according to the structure: {apiRoot}/nchf-spendinglimitcontrol/v1/subscriptions/{subscriptionId}'

Required/Optional: true

Schema:

Type: string

'400': Reference './TS29571_CommonData.yaml#/components/responses/400'
'401': Reference './TS29571_CommonData.yaml#/components/responses/401'
'403': Reference './TS29571_CommonData.yaml#/components/responses/403'
'404': Reference './TS29571_CommonData.yaml#/components/responses/404'
'411': Reference './TS29571_CommonData.yaml#/components/responses/411'
'413': Reference './TS29571_CommonData.yaml#/components/responses/413'
'415': Reference './TS29571_CommonData.yaml#/components/responses/415'
'429': Reference './TS29571_CommonData.yaml#/components/responses/429'
'500': Reference './TS29571_CommonData.yaml#/components/responses/500'
'503': Reference './TS29571_CommonData.yaml#/components/responses/503'
default: Reference './TS29571_CommonData.yaml#/components/responses/default'

Callbacks:**statusNotification:**

'{\$request.body#/notifUri}/notify':

Method: Post

Request Body:

Required/Optional: true

Content:**Application/JSON:****Schema:**

Reference: '#/components/schemas/SpendingLimitStatus'

Responses:

'204' No Content, Notification was successful

'400': Reference './TS29571_CommonData.yaml#/components/responses/400'
'401': Reference './TS29571_CommonData.yaml#/components/responses/401'
'403': Reference './TS29571_CommonData.yaml#/components/responses/403'
'404': Reference './TS29571_CommonData.yaml#/components/responses/404'
'411': Reference './TS29571_CommonData.yaml#/components/responses/411'
'413': Reference './TS29571_CommonData.yaml#/components/responses/413'
'415': Reference './TS29571_CommonData.yaml#/components/responses/415'
'429': Reference './TS29571_CommonData.yaml#/components/responses/429'
'500': Reference './TS29571_CommonData.yaml#/components/responses/500'
'503': Reference './TS29571_CommonData.yaml#/components/responses/503'
default: Reference './TS29571_CommonData.yaml#/components/responses/default'

subscriptionTermination:

'{\$request.body#/notifUri}/terminate':

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SubscriptionTerminationInfo'

Responses:

'204': No Content, Notification was successful

'400': Reference './TS29571_CommonData.yaml#/components/responses/400'

'401': Reference './TS29571_CommonData.yaml#/components/responses/401'

'403': Reference './TS29571_CommonData.yaml#/components/responses/403'

'404': Reference './TS29571_CommonData.yaml#/components/responses/404'

'411': Reference './TS29571_CommonData.yaml#/components/responses/411'

'413': Reference './TS29571_CommonData.yaml#/components/responses/413'

'415': Reference './TS29571_CommonData.yaml#/components/responses/415'

'429': Reference './TS29571_CommonData.yaml#/components/responses/429'

'500': Reference './TS29571_CommonData.yaml#/components/responses/500'

'503': Reference './TS29571_CommonData.yaml#/components/responses/503'

default: Reference './TS29571_CommonData.yaml#/components/responses/default'

/subscriptions/{subscriptionId}

Parameters:

- in: path

name: subscriptionId

Description: Identifies an individual spending limit retrieval subscription.

Required/Optional: true

Schema:

Type: string

put:

Request Body:

Required/Optional: true

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/SpendingLimitContext'**Responses:**

'200' OK. Resource was successfully modified and representation is returned

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/SpendingLimitStatus'

'400': Reference './TS29571_CommonData.yaml#/components/responses/400'

'401': Reference './TS29571_CommonData.yaml#/components/responses/401'

'403': Reference './TS29571_CommonData.yaml#/components/responses/403'

'404': Reference './TS29571_CommonData.yaml#/components/responses/404'

'411': Reference './TS29571_CommonData.yaml#/components/responses/411'

'413': Reference './TS29571_CommonData.yaml#/components/responses/413'

'415': Reference './TS29571_CommonData.yaml#/components/responses/415'

'429': Reference './TS29571_CommonData.yaml#/components/responses/429'

'500': Reference './TS29571_CommonData.yaml#/components/responses/500'

'503': Reference './TS29571_CommonData.yaml#/components/responses/503'

default: Reference './TS29571_CommonData.yaml#/components/responses/default'**delete:****Responses:**

'204' No Content. Resource was successfully deleted

'400': Reference './TS29571_CommonData.yaml#/components/responses/400'

'401': Reference './TS29571_CommonData.yaml#/components/responses/401'

'403': Reference './TS29571_CommonData.yaml#/components/responses/403'

'404': Reference './TS29571_CommonData.yaml#/components/responses/404'

'429': Reference './TS29571_CommonData.yaml#/components/responses/429'

'500': Reference './TS29571_CommonData.yaml#/components/responses/500'

'503': Reference './TS29571_CommonData.yaml#/components/responses/503'

default: Reference './TS29571_CommonData.yaml#/components/responses/default'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

nchf-spendinglimitcontrol: Access to the Nchf_SpendingLimitControl API

schemas

SpendingLimitContext

Type: object

Properties:

supi:

Description: The Subscription Permanent Identifier (Supi) shall be present within the initial spending limit retrieval procedure (creation of a new individual subscription).

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

gpsi:

Description: The Generic Public Subscription Identifier (Gpsi) may be present within the initial spending limit retrieval procedure (creation of a new individual subscription).

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

policyCounterIds:

Type: array

Items:

Reference: './#/components/schemas/PolicyCounterId'

minItems: 1

Description: This is a list of policy counter identifier(s), which identifies policy counters maintained per subscriber within the CHF.

notifUri:

Description: This attribute identifies the recipient of spending limit notifications sent to the NF service consumer by the CHF. The notifUri shall be present within the initial spending limit retrieval procedure

(creation of a new individual subscription). It may be present within the intermediate spending limit retrieval procedure (modification of an existing subscription).

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

supportedFeatures:

Description: The list of supported features as described in subclause 5.8 shall be supplied by the NF service consumer in the POST request that request the creation of a spending limit report resource.

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

SpendingLimitStatus

Type: object

Properties:

supi:

Description: The Subscription Permanent Identifier (Supi) shall be present within the callback notify service operation (notification of the status of subscribed policy counters).

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

statusInfos:

Type: object

additionalProperties:

Reference: './#/components/schemas/PolicyCounterInfo'

minProperties: 1

Description: Status of the requested policy counters. The key of the map is the attribute "policyCounterId".

supportedFeatures:

Description: If the supportedFeatures is included in the request by the NF service consumer, it shall be supplied in the reply of the corresponding request by the CHF.

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

Required:

- statusInfos

PolicyCounterInfo

Type: object

Properties:

policyCounterId:

Reference: './#/components/schemas/PolicyCounterId'

currentStatus:

Type: string

Description: Identifies the policy counter status applicable for a specific policy counter identified by the policyCounterId. The values (e.g. valid, invalid or any other status) are not specified. The interpretation and actions related to the defined values are out of scope of 3GPP.

penPolCounterStatuses:

Type: array

Items:

Reference: '#/components/schemas/PendingPolicyCounterStatus'

minItems: 1

Description: Provides the pending policy counter status.

Required:

- policyCounterId
- currentStatus

PendingPolicyCounterStatus

Type: object

Properties:

policyCounterStatus:

Type: string

Description: Identifies the policy counter status applicable for a specific policy counter identified by the policyCounterId. The values (e.g. valid, invalid or any other status) are not specified. The interpretation and actions related to the defined values are out of scope of 3GPP.

activationTime:

Description: Indicates the activation times per required policy counter.

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

Required:

- policyCounterStatus
- activationTime

PolicyCounterId

Type: string

Description: Identifies a policy counter.

SubscriptionTerminationInfo

Type: object

Properties:

supi:

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

termCause:

Reference: '#/components/schemas/TerminationCause'

Required:

- supi

TerminationCause

Type: string

enum:

- REMOVED_SUBSCRIBER



CHAPTER 14

Nchf_SpendingLimitControl_Callbacks

-
- [OpenAPI](#), on page 239
- [info](#), on page 239
- [externalDocs](#), on page 239
- [security](#), on page 239
- [servers](#), on page 240
- [paths](#), on page 240
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OpenAPI

OpenAPI Version: 3.0.0

info

Description: Spending Limit Control Service API Callbacks

Version: "1.0.0"

Title: Nchf_SpendingLimitControl Callbacks

externalDocs

Description: 3GPP TS 29.594 V15.2.0; 5G System; Spending Limit Control Service.

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.594/'

security

- {}
- oAuth2ClientCredentials:

- nchf-spendinglimitcontrol

servers

URL: 'http://{apiRoot}'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501

paths

/npcf/callbacks/nchf-spendinglimitcontrol/v1/subscriptions/{subscriptionId}/notify

Method: Post

Parameters:

- in: path

name: subscriptionId

Description: Identifies an individual spending limit retrieval subscription.

Required/Optional: true

Schema:

Type: string

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: './TS29594_Nchf_SpendingLimitControl.yaml#/components/schemas/SpendingLimitStatus'

Responses:

'204': No Content, Notification was succesfull

'400': Reference './TS29571_CommonData.yaml#/components/responses/400'

'401': Reference './TS29571_CommonData.yaml#/components/responses/401'

'403': Reference './TS29571_CommonData.yaml#/components/responses/403'

'404': Reference './TS29571_CommonData.yaml#/components/responses/404'

'411': Reference './TS29571_CommonData.yaml#/components/responses/411'

'413': Reference './TS29571_CommonData.yaml#/components/responses/413'
 '415': Reference './TS29571_CommonData.yaml#/components/responses/415'
 '429': Reference './TS29571_CommonData.yaml#/components/responses/429'
 '500': Reference './TS29571_CommonData.yaml#/components/responses/500'
 '503': Reference './TS29571_CommonData.yaml#/components/responses/503'
 default: Reference './TS29571_CommonData.yaml#/components/responses/default'

/npcf/callbacks/nchf-spendinglimitcontrol/v1/subscriptions/{subscriptionId}/terminate

Method: Post

Parameters:

- in: path

name: subscriptionId

Description: Identifies an individual spending limit retrieval subscription.

Required/Optional: true

Schema:

Type: string

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: './TS29594_Nchf_SpendingLimitControl.yaml#/components/schemas/SubscriptionTerminationInfo'

Responses:

'204' No Content, Notification was successful

'400': Reference './TS29571_CommonData.yaml#/components/responses/400'

'401': Reference './TS29571_CommonData.yaml#/components/responses/401'

'403': Reference './TS29571_CommonData.yaml#/components/responses/403'

'404': Reference './TS29571_CommonData.yaml#/components/responses/404'

'411': Reference './TS29571_CommonData.yaml#/components/responses/411'

'413': Reference './TS29571_CommonData.yaml#/components/responses/413'

'415': Reference './TS29571_CommonData.yaml#/components/responses/415'

'429': Reference './TS29571_CommonData.yaml#/components/responses/429'

'500': Reference './TS29571_CommonData.yaml#/components/responses/500'

'503': Reference './TS29571_CommonData.yaml#/components/responses/503'

default: Reference './TS29571_CommonData.yaml#/components/responses/default'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

nchf-spendinglimitcontrol: Access to the Nchf_SpendingLimitControl API



CHAPTER 15

Nlmf_Location

The Nlmf_Location service enables an NF to request location determination (current geodetic and optionally civic location) for a target UE.

Reference: 3GPP TS 129 572 V15.0.0

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- [servers, on page 244](#)
- [paths, on page 244](#)
- [components, on page 245](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Version: '1.0.0'

Title: 'LMF Location'

Description: 'LMF Location Service'

externalDocs

Description: 3GPP TS 29.572 V15.2.0; 5G System; Location Management Services; Stage 3

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.572/'

security

- {}

- oAuth2ClientCredentials:
- nlmf-loc

servers

URL: '{apiRoot}/nlmf-loc/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501

paths

/determine-location

Method: Post

Summary: Determine Location of an UE

Operation ID: DetermineLocation

Tags:

- Determine Location

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/InputData'

Required/Optional: true

Responses:

'200': Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/LocationData'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'
'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'
'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'
'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
'501': Reference 'TS29571_CommonData.yaml#/components/responses/501'
'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2
Flows:
clientCredentials:
tokenUrl: '{nrfApiRoot}/oauth2/token'
scopes:
nlmf-loc: Access to the Nlmf_Location API

schemas

COMPLEX TYPES

InputData

Type: object
not:
Required: [ecgi, ncgi]
Properties:
externalClientType:
Reference: '#/components/schemas/ExternalClientType'
correlationID:
Reference: '#/components/schemas/CorrelationID'
amfId:
Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'

locationQoS:**Reference:** '#/components/schemas/LocationQoS'**supportedGADShapes:****Type:** array**Items:****Reference:** '#/components/schemas/SupportedGADShapes'**minItems:** 1**supi:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Supi'**pei:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Pei'**gpsi:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Gpsi'**ecgi:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ecgi'**ncgi:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ncgi'**priority:****Reference:** '#/components/schemas/LcsPriority'**velocityRequested:****Reference:** '#/components/schemas/VelocityRequested'**LocationData****Type:** object**Required:**

- locationEstimate

Properties:**locationEstimate:****Reference:** '#/components/schemas/GeographicArea'**accuracyFulfilmentIndicator:****Reference:** '#/components/schemas/AccuracyFulfilmentIndicator'**ageOfLocationEstimate:****Reference:** '#/components/schemas/AgeOfLocationEstimate'**velocityEstimate:****Reference:** '#/components/schemas/VelocityEstimate'

civicAddress:

Reference: '#/components/schemas/CivicAddress'

positioningDataList:

Type: array

Items:

Reference: '#/components/schemas/PositioningMethodAndUsage'

minItems: 1

gnssPositioningDataList:

Type: array

Items:

Reference: '#/components/schemas/GnssPositioningMethodAndUsage'

minItems: 1

ecgi:

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

ncgi:

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

altitude:

Reference: '#/components/schemas/Altitude'

barometricPressure:

Reference: '#/components/schemas/BarometricPressure'

GeographicArea

oneOf:

- \$ref: '#/components/schemas/Point'
- \$ref: '#/components/schemas/PointUncertaintyCircle'
- \$ref: '#/components/schemas/PointUncertaintyEllipse'
- \$ref: '#/components/schemas/Polygon'
- \$ref: '#/components/schemas/PointAltitude'
- \$ref: '#/components/schemas/PointAltitudeUncertainty'
- \$ref: '#/components/schemas/EllipsoidArc'

GADShape

Type: object

Required:

- shape

Properties:**shape:****Reference:** '#/components/schemas/SupportedGADShapes'**discriminator:****propertyName:** shape**mapping:****POINT:** '#/components/schemas/Point'

POINT_UNCERTAINTY_CIRCLE: '#/components/schemas/PointUncertaintyCircle'

POINT_UNCERTAINTY_ELLIPSE: '#/components/schemas/PointUncertaintyEllipse'

POLYGON: '#/components/schemas/Polygon'

POINT_ALTITUDE: '#/components/schemas/PointAltitude'

POINT_ALTITUDE_UNCERTAINTY: '#/components/schemas/PointAltitudeUncertainty'

ELLIPSOID_ARC: '#/components/schemas/EllipsoidArc'

Point

allOf:

- \$ref: '#/components/schemas/GADShape'

- type: object

Required:

- point

Properties:**point:****Reference:** '#/components/schemas/GeographicalCoordinates'

PointUncertaintyCircle

allOf:

- \$ref: '#/components/schemas/GADShape'

- type: object

Required:

- point

- uncertainty

Properties:**point:****Reference:** '#/components/schemas/GeographicalCoordinates'**uncertainty:**

Reference: '#/components/schemas/Uncertainty'

PointUncertaintyEllipse

allOf:

- \$ref: '#/components/schemas/GADShape'
- type: object

Required:

- point
- uncertaintyEllipse
- confidence

Properties:

point:

Reference: '#/components/schemas/GeographicalCoordinates'

uncertaintyEllipse:

Reference: '#/components/schemas/UncertaintyEllipse'

confidence:

Reference: '#/components/schemas/Confidence'

Polygon

allOf:

- \$ref: '#/components/schemas/GADShape'
- type: object

Required:

- pointList

Properties:

pointList:

Reference: '#/components/schemas/PointList'

PointAltitude

allOf:

- \$ref: '#/components/schemas/GADShape'
- type: object

Required:

- point
- altitude

Properties:

point:**Reference:** '#/components/schemas/GeographicalCoordinates'**altitude:****Reference:** '#/components/schemas/Altitude'**PointAltitudeUncertainty****allOf:**

- \$ref: '#/components/schemas/GADShape'
- type: object

Required:

- point
- altitude
- uncertaintyEllipse
- uncertaintyAltitude
- confidence

Properties:**point:****Reference:** '#/components/schemas/GeographicalCoordinates'**altitude:****Reference:** '#/components/schemas/Altitude'**uncertaintyEllipse:****Reference:** '#/components/schemas/UncertaintyEllipse'**uncertaintyAltitude:****Reference:** '#/components/schemas/Uncertainty'**confidence:****Reference:** '#/components/schemas/Confidence'**EllipsoidArc****allOf:**

- \$ref: '#/components/schemas/GADShape'
- type: object

Required:

- point
- innerRadius
- uncertaintyRadius

- offsetAngle
- includedAngle
- confidence

Properties:**point:****Reference:** '#/components/schemas/GeographicalCoordinates'**innerRadius:****Reference:** '#/components/schemas/InnerRadius'**uncertaintyRadius:****Reference:** '#/components/schemas/Uncertainty'**offsetAngle:****Reference:** '#/components/schemas/Angle'**includedAngle:****Reference:** '#/components/schemas/Angle'**confidence:****Reference:** '#/components/schemas/Confidence'

GeographicalCoordinates

Type: object**Required:**

- lon
- lat

Properties:**lon:****Type:** number**format:** float**Minimum:** -180**Maximum:** 180**lat:****Type:** number**format:** float**Minimum:** -90**Maximum:** 90

UncertaintyEllipse

Type: object

Required:

- semiMajor
- semiMinor
- orientationMajor

Properties:

semiMajor:

Reference: '#/components/schemas/Uncertainty'

semiMinor:

Reference: '#/components/schemas/Uncertainty'

orientationMajor:

Reference: '#/components/schemas/Orientation'

PointList

Type: array

Items:

Reference: '#/components/schemas/GeographicalCoordinates'

minItems: 3

maxItems: 15

LocationQoS

Type: object

Properties:

hAccuracy:

Reference: '#/components/schemas/Accuracy'

vAccuracy:

Reference: '#/components/schemas/Accuracy'

verticalRequested:

Type: boolean

responseTime:

Reference: '#/components/schemas/ResponseTime'

PositioningMethodAndUsage

Type: object

Required:

- method
- mode
- usage

Properties:**method:**

Reference: '#/components/schemas/PositioningMethod'

mode:

Reference: '#/components/schemas/PositioningMode'

usage:

Reference: '#/components/schemas/Usage'

GnssPositioningMethodAndUsage

Type: object

Required:

- mode
- gnss
- usage

Properties:**mode:**

Reference: '#/components/schemas/PositioningMode'

gnss:

Reference: '#/components/schemas/GnssId'

usage:

Reference: '#/components/schemas/Usage'

CivicAddress

Type: object

Properties:**country:**

Type: string

A1:

Type: string

A2:

Type: string

A3:

Type: string

A4:

Type: string

A5:

Type: string

A6:

Type: string

PRD:

Type: string

POD:

Type: string

STS:

Type: string

HNO:

Type: string

HNS:

Type: string

LMK:

Type: string

LOC:

Type: string

NAM:

Type: string

PC:

Type: string

BLD:

Type: string

UNIT:

Type: string

ROOM:

Type: string

PLC:

Type: string

PCN:

Type: string

POBOX:

Type: string

ADDCODE:

Type: string

SEAT:

Type: string

RD:

Type: string

RDSEC:

Type: string

RDBR:

Type: string

RDSUBBR:

Type: string

PRM:

Type: string

POM:

Type: string

VelocityEstimate

oneOf:

- \$ref: '#/components/schemas/HorizontalVelocity'

- \$ref: '#/components/schemas/HorizontalWithVerticalVelocity'

- \$ref: '#/components/schemas/HorizontalVelocityWithUncertainty'

- \$ref: '#/components/schemas/HorizontalWithVerticalVelocityAndUncertainty'

HorizontalVelocity

Type: object

Required:

- hSpeed

- bearing

Properties:

hSpeed:

Reference: '#/components/schemas/HorizontalSpeed'

bearing:

Reference: '#/components/schemas/Angle'

HorizontalWithVerticalVelocity

Type: object

Required:

- hSpeed
- bearing
- vSpeed
- vDirection

Properties:

hSpeed:

Reference: '#/components/schemas/HorizontalSpeed'

bearing:

Reference: '#/components/schemas/Angle'

vSpeed:

Reference: '#/components/schemas/VerticalSpeed'

vDirection:

Reference: '#/components/schemas/VerticalDirection'

HorizontalVelocityWithUncertainty

Type: object

Required:

- hSpeed
- bearing
- hUncertainty

Properties:

hSpeed:

Reference: '#/components/schemas/HorizontalSpeed'

bearing:

Reference: '#/components/schemas/Angle'

hUncertainty:

Reference: '#/components/schemas/SpeedUncertainty'

HorizontalWithVerticalVelocityAndUncertainty

Type: object

Required:

- hSpeed
- bearing
- vSpeed
- vDirection
- hUncertainty
- vUncertainty

Properties:

hSpeed:

Reference: '#/components/schemas/HorizontalSpeed'

bearing:

Reference: '#/components/schemas/Angle'

vSpeed:

Reference: '#/components/schemas/VerticalSpeed'

vDirection:

Reference: '#/components/schemas/VerticalDirection'

hUncertainty:

Reference: '#/components/schemas/SpeedUncertainty'

vUncertainty:

Reference: '#/components/schemas/SpeedUncertainty'

SIMPLE TYPES

Altitude

Type: number

format: float

Minimum: -32767

Maximum: 32767

Angle

Type: integer

Minimum: 0

Maximum: 360

Uncertainty

Type: number

format: float

Minimum: 0

Orientation

Type: integer

Minimum: 0

Maximum: 180

Confidence

Type: integer

Minimum: 0

Maximum: 100

Accuracy

Type: number

format: float

Minimum: 0

InnerRadius

Type: integer

format: int32

Minimum: 0

CorrelationID

Type: string

minLength: 1

maxLength: 255

AgeOfLocationEstimate

Type: integer

Minimum: 0

Maximum: 32767

HorizontalSpeed

Type: number

format: float

Minimum: 0

Maximum: 2047

VerticalSpeed

Type: number

format: float

Minimum: 0

Maximum: 255

SpeedUncertainty

Type: number

format: float

Minimum: 0

Maximum: 255

BarometricPressure

Type: integer

Minimum: 30000

Maximum: 115000

ENUMS

ExternalClientType

anyOf:

- type: string

enum:

- EMERGENCY_SERVICES

- VALUE_ADDED_SERVICES

- PLMN_OPERATOR_SERVICES

- LAWFUL_INTERCEPT_SERVICES

- PLMN_OPERATOR_BROADCAST_SERVICES

- PLMN_OPERATOR_OM

- PLMN_OPERATOR_ANONYMOUS_STATISTICS

- PLMN_OPERATOR_TARGET_MS_SERVICE_SUPPORT

- type: string

SupportedGADShapes

anyOf:

- type: string

enum:

- POINT

- POINT_UNCERTAINTY_CIRCLE

- POINT_UNCERTAINTY_ELLIPSE

- POLYGON

- POINT_ALTITUDE

- POINT_ALTITUDE_UNCERTAINTY

- ELLIPSOID_ARC

- type: string

ResponseTime

anyOf:

- type: string

enum:

- LOW_DELAY

- DELAY_TOLERANT

- type: string

PositioningMethod

anyOf:

- type: string

enum:

- CELLID

- ECID

- OTDOA

- BAROMETRIC_PRESSURE

- WLAN

- BLUETOOTH

- MBS

- type: string

PositioningMode

anyOf:

- type: string

enum:

- UE_BASED
 - UE_ASSISTED
 - CONVENTIONAL
- type: string

GnssId

anyOf:

- type: string

enum:

- GPS
 - GALILEO
 - SBAS
 - MODERNIZED_GPS
 - QZSS
 - GLONASS
- type: string

Usage

anyOf:

- type: string

enum:

- UNSUCCESS
 - SUCCESS_RESULTS_NOT_USED
 - SUCCESS_RESULTS_USED_TO_VERIFY_LOCATION
 - SUCCESS_RESULTS_USED_TO_GENERATE_LOCATION
 - SUCCESS_METHOD_NOT_DETERMINED
- type: string

LcsPriority

anyOf:

- type: string

enum:

- HIGHEST_PRIORITY
- NORMAL_PRIORITY
- type: string

VelocityRequested**anyOf:**

- type: string

enum:

- VELOCITY_IS_NOT_REQUESTED
- VELOCITY_IS_REQUESTED
- type: string

AccuracyFulfilmentIndicator**anyOf:**

- type: string

enum:

- REQUESTED_ACCURACY_FULFILLED
- REQUESTED_ACCURACY_NOT_FULFILLED
- type: string

VerticalDirection

Type: string

enum:

- UPWARD
- DOWNWARD



CHAPTER 16

Nnef_PFDmanagement

Service operations defined for the Nnef_PFDmanagement Service are shown in table:

Table 2: Nnef_PFDmanagement Service Operations

Service Operation Name	Description	Initiated by
Nnef_PFDmanagement_Fetch	Provides the PFDs for application identifier(s) to the NF service consumer.	SMF
Nnef_PFDmanagement_Subscribe	Allows NF service consumers to subscribe the notification of events when the PFDs for application identifier change.	SMF
Nnef_PFDmanagement_Notify	Notifies NF service consumer to update and/or delete the PFDs for application identifier(s).	PFDF
Nnef_PFDmanagement_Unsubscribe	Allows NF service consumers to unsubscribe the notification of events.	SMF

Reference: 3GPP TS 29.551 version 15.0.0 Release 15

- [OpenAPI](#), on page 263
- [info](#), on page 264
- [externalDocs](#), on page 264
- [security](#), on page 264
- [servers](#), on page 264
- [paths](#), on page 264
- [components](#), on page 269

OpenAPI

OpenAPI Version: 3.0.0

info

Title: Nnef_PFDmanagement Service API

Version: "1.0.0"

Description: Packet Flow Description Management Service

externalDocs

Description: 3GPP TS 29.551 v15.1.0, 5G System; Packet Flow Description Management Service

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.551/'

security

- {}
- oAuth2ClientCredentials:
- nnef-pfdmanagement

servers

URL: '{apiRoot}/nnef-pfdmanagement/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 4.4 of 3GPP TS 29.501

paths

/applications

get:

Summary: Retrieve PFDs for all applications or for one or multiple applications with query parameter.

Tags:

- PFD of applications

Operation ID: Nnef_PFDmanagement_Fetch

Parameters:

- name: application-ids

Description: The required application identifier(s) for the returned PFDs.

In: query

Required/Optional: true

Schema:

Type: array

items:

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

minItems: 1

- name: supported-features

In: query

Description: To filter irrelevant responses related to unsupported features

Schema:

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

Responses:

'200' The PFDs for one or more application identifier(s) in the request URI are returned.

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/PfdDataForApp'

minItems: 0

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'

'414': Reference 'TS29571_CommonData.yaml#/components/responses/414'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

/applications/{appId}

get:

Summary: Retrieve the PFD for an application.

Tags:

- Individual application PFD

Operation ID: Nnef_PFDmanagement_Fetch

Parameters:

- name: appId

Description: The required application identifier(s) for the returned PFDs.

In: path

Required/Optional: true

Schema:

Type: string

- name: supported-features

In: query

Description: To filter irrelevant responses related to unsupported features

Schema:

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

Responses:

'200': A representation of PFDs for an application in the request URI is returned.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PfdDataForApp'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'414': Reference 'TS29571_CommonData.yaml#/components/responses/414'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

/subscriptions

Method: Post

Summary: Subscribe the notification of PFD changes.

Tags:

- PFD subscriptions

Operation ID: Nnef_PFDmanagement_Subscribe

Request Body:

Description: a PfdSubscription resource to be created.

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PfdSubscription'

Callbacks:

PfdChangeNotification:

'{request.body#/notifyUri}':

Method: Post

Summary: Notification of PFD change.

Tags:

- PfdChangeNotification data

Operation ID: Nnef_PFDmanagement_Notify

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/PfdChangeNotification'

minItems: 1

Responses:

'200' The PFD operation in the notification is performed and the PfdChangeReport indicates failure reason.

Content:

Application/JSON:

Schema:**Type:** array**items:****Reference:** '#/components/schemas/PfdChangeReport'**minItems:** 1**'204'** The PFD operation in the notification is performed successfully.**'400'**: Reference 'TS29571_CommonData.yaml#/components/responses/400'**'401'**: Reference 'TS29571_CommonData.yaml#/components/responses/401'**'403'**: Reference 'TS29571_CommonData.yaml#/components/responses/403'**'404'**: Reference 'TS29571_CommonData.yaml#/components/responses/404'**'411'**: Reference 'TS29571_CommonData.yaml#/components/responses/411'**'413'**: Reference 'TS29571_CommonData.yaml#/components/responses/413'**'415'**: Reference 'TS29571_CommonData.yaml#/components/responses/415'**'429'**: Reference 'TS29571_CommonData.yaml#/components/responses/429'**'500'**: Reference 'TS29571_CommonData.yaml#/components/responses/500'**'503'**: Reference 'TS29571_CommonData.yaml#/components/responses/503'**Responses:****'201'** The creation of a PfdSubscription resource is confirmed and a representation of that resource is returned.**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/PfdSubscription'**Headers:****Location:****Description:** 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nnef-pfdmanagement/v1/subscriptions/{subscriptionId}'**Required/Optional:** true**Schema:****Type:** string**'400'**: Reference 'TS29571_CommonData.yaml#/components/responses/400'**'401'**: Reference 'TS29571_CommonData.yaml#/components/responses/401'**'403'**: Reference 'TS29571_CommonData.yaml#/components/responses/403'**'404'**: Reference 'TS29571_CommonData.yaml#/components/responses/404'**'411'**: Reference 'TS29571_CommonData.yaml#/components/responses/411'**'413'**: Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

/subscriptions/{subscriptionId}

delete:

Summary: Delete a subscription of PFD change notification.

Tags:

- Individual PFD subscription

Operation ID: Nnef_PFDmanagement_Unsubscribe

Parameters:

- name: subscriptionId

Description: Identify the subscription.

In: path

Required/Optional: true

Schema:

Type: string

Responses:

'204' The PfdSubscription resource matching the subscriptionId was deleted successfully.

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:**clientCredentials:****tokenUrl:** '{nrfApiRoot}/oauth2/token'**scopes:****nnef-pfdmanagement:** Access to the Nnef_PFDmanagement API

schemas

STRUCTURED DATA TYPES

PfdContent

Type: object**Properties:****pfdId:****Type:** string**Description:** Identifies a PDF of an application identifier.**flowDescriptions:****Type:** array**Items:****Type:** string**minItems:** 1**Description:** Represents a 3-tuple with protocol, server ip and server port for UL/DL application traffic.**urls:****Type:** array**Items:****Type:** string**minItems:** 1**Description:** Indicates a URL or a regular expression which is used to match the significant parts of the URL.**domainNames:****Type:** array**Items:****Type:** string**minItems:** 1**Description:** Indicates an FQDN or a regular expression as a domain name matching criteria.

PfdDataForApp

Type: object

Properties:

applicationId:

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

pfds:

Type: array

Items:

Reference: '#/components/schemas/PfdContent'

minItems: 1

cachingTime:

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

Required:

- applicationId
- pfds

PfdSubscription

Type: object

Properties:

applicationIds:

Type: array

Items:

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

minItems: 1

notifyUri:

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

supportedFeatures:

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

Required:

- notifyUri
- supportedFeatures

PfdChangeNotification

Type: object

Properties:

applicationId:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/ApplicationId'**removalFlag:****Type:** boolean**Default:** false**partialFlag:****Type:** boolean**Default:** false**pfd:****Type:** array**Items:****Reference:** '#/components/schemas/PfdContent'**minItems:** 1**Required:**

- applicationId

PfdChangeReport

Type: object**Properties:****pfdError:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'**applicationId:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/ApplicationId'**minItems:** 1**Required:**

- pfdError

- applicationId



CHAPTER 17

Nnrf_AccessToken

The NRF offers an Nnrf_AccessToken service (used for OAuth2 authorization, see IETF RFC 6749 [16]), following the "Client Credentials" authorization grant, as specified in 3GPP TS 33.501 [15]. It exposes a "Token Endpoint" where the Access Token Request service can be requested by NF Service Consumers.

Reference: 3GPP TS 33.501 [15]

- [OpenAPI, on page 273](#)
- [info, on page 273](#)
- [externalDocs, on page 273](#)
- [paths, on page 274](#)
- [components, on page 275](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Version: '1.0.0'

Title: 'NRF OAuth2'

Description: 'NRF OAuth2 Authorization'

externalDocs

Description: 3GPP TS 29.510 V15.2.0; 5G System; Network Function Repository Services; Stage 3

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.510/'

paths

/oauth2/token

Method: Post

Summary: Access Token Request

Operation ID: AccessTokenRequest

Tags:

- Access Token Request

Request Body:

Content:

application/x-www-form-urlencoded:

Schema:

Reference: '#/components/schemas/AccessTokenReq'

Required/Optional: true

Responses:

'200' Successful Access Token Request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AccessTokenRsp'

Headers:

Cache-Control:

Reference: '#/components/headers/cache-control'

Pragma:

Reference: '#/components/headers/pragma'

'400' Error in the Access Token Request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AccessTokenErr'

Headers:

Cache-Control:

Reference: '#/components/headers/cache-control'

Pragma:

Reference: '#/components/headers/pragma'

components

headers

cache-control

Required: true

schema:

Type: string

enum:

- no-store

pragma

Required: true

schema:

Type: string

enum:

- no-cache

schemas

AccessTokenReq

Type: object

Required:

- grant_type

- nfInstanceId

- scope

Properties:

grant_type:

Type: string

enum:

- client_credentials

nfInstanceId:

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

nfType:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/NFType'

targetNfType:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/NFType'

scope:

Type: string

Pattern: '^([a-zA-Z0-9_-]+)([a-zA-Z0-9_-]+)*\$'

targetNfInstanceId:

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

requesterPlmn:

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

targetPlmn:

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

Access token Rsp

Type: object

Required:

- access_token

- token_type

Properties:

access_token:

Type: string

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

token_type:

Type: string

expires_in:

Type: integer

scope:

Type: string

Pattern: '^([a-zA-Z0-9_-]+)([a-zA-Z0-9_-]+)*\$'

AccessTokenClaims

Type: object

Required:

- issuer
- subject
- audience
- scope
- expiration

Properties:**issuer:**

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

subject:

Type: string

audience:**anyOf:**

- \$ref: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/NFType'
- type: array

Items:

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

minItems: 1

scope:

Type: string

Pattern: '^([a-zA-Z0-9_-]+)([a-zA-Z0-9_-]+)*\$'

expiration:

Type: integer

AccessTokenErr

Type: object

Required:

- error

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



CHAPTER 18

Nnrf_NFDiscovery

The Nnrf_NFDiscovery service allows a Network Function Instance to discover services offered by other Network Function Instances, by querying the local NRF.

It also allows an NRF in a PLMN to re-issue a discovery request towards an NRF in another PLMN (e.g., the HPLMN of a certain UE).

Reference: 3GPP TS 29.510 version 15.0.0 Release 15

- [OpenAPI, on page 279](#)
- [info, on page 279](#)
- [externalDocs, on page 279](#)
- [security, on page 280](#)
- [servers, on page 280](#)
- [paths, on page 280](#)
- [components, on page 287](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Version: '1.0.0'

Title: 'NRF NFDiscovery Service'

Description: 'NRF NFDiscovery Service'

externalDocs

Description: 3GPP TS 29.510 V15.2.0; 5G System; Network Function Repository Services; Stage 3

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.510/'

security

- {}
- oAuth2ClientCredentials:
- nnrf-disc

servers

URL: '{apiRoot}/nnrf-disc/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501

paths

/nf-instances

get:

Summary: Search a collection of NF Instances

Operation ID: SearchNFInstances

Tags:

- NF Instances (Store)

Parameters:

- name: target-nf-type

In: query

Description: Type of the target NF

Required/Optional: true

Schema:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/NFType'

- name: requester-nf-type

In: query

Description: Type of the requester NF

Required/Optional: true

Schema:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/NFType'

- name: service-names

In: query

Description: Name of the service offered by the NF

Schema:

Type: array

items:

Type: string

minItems: 1

style: form

explode: false

- name: requester-nf-instance-fqdn

In: query

Description: FQDN of the requester NF

Schema:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'

- name: target-plmn-list

In: query

Description: Id of the PLMN where the target NF is located

Content:

Application/JSON:

Schema:

Type: array

items:

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

minItems: 1

- name: requester-plmn-list

In: query

Description: Id of the PLMN where the NF issuing the Discovery request is located

Content:

Application/JSON:

Schema:

Type: array

items:

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

minItems: 1

- name: target-nf-instance-id

In: query

Description: Identity of the NF instance being discovered

Schema:

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

- name: target-nf-fqdn

In: query

Description: FQDN of the NF instance being discovered

Schema:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'

- name: hnr-uri

In: query

Description: Uri of the home NRF

Schema:

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

- name: snssais

In: query

Description: Slice info of the target NF

Content:

Application/JSON:

Schema:

Type: array

items:

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

minItems: 1

- name: dnn

In: query

Description: Dnn supported by the BSF, SMF or UPF

Schema:

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

- name: nsi-list

In: query

Description: NSI IDs that are served by the services being discovered

Schema:

Type: array

items:

Type: string

minItems: 1

style: form

explode: false

- name: smf-serving-area

In: query

Schema:

Type: string

- name: tai

In: query

Description: Tracking Area Identity

Content:

Application/JSON:

Schema:

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

- name: amf-region-id

In: query

Description: AMF Region Identity

Schema:

Type: string

- name: amf-set-id

In: query

Description: AMF Set Identity

Schema:

Type: string

- name: guami

In: query

Description: Guami used to search for an appropriate AMF

Schema:

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

- name: supi

In: query

Description: SUPI of the user

Schema:

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

- name: ue-ipv4-address

In: query

Description: IPv4 address of the UE

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

- name: ip-domain

In: query

Description: IP domain of the UE, which supported by BSF

Schema:

Type: string

- name: ue-ipv6-prefix

In: query

Description: IPv6 prefix of the UE

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'

- name: pgw-ind

In: query

Description: Combined PGW-C and SMF or a standalone SMF

Schema:

Type: boolean

- name: pgw

In: query

Description: PGW FQDN of a combined PGW-C and SMF

Schema:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'

- name: gpsi

In: query

Description: GPSI of the user

Schema:

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

- name: external-group-identity

In: query

Description: external group identifier of the user

Schema:

Type: string

- name: data-set

In: query

Description: data set supported by the NF

Schema:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/DataSetId'

- name: routing-indicator

In: query

Description: routing indicator in SUCI

Schema:

Type: string

pattern: '^[0-9]{1,4}\$'

- name: group-id-list

In: query

Description: Group IDs of the NFs being discovered

Schema:

Type: array

items:

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

minItems: 1

style: form

explode: false

- name: dnai-list

In: query

Description: Data network access identifiers of the NFs being discovered

Schema:

Type: array

items:

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

minItems: 1

style: form

explode: false

- name: supported-features

In: query

Description: Features required to be supported by the target NF

Schema:

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

- name: upf-iwk-eps-ind

In: query

Description: UPF supporting interworking with EPS or not

Schema:

Type: boolean

- name: chf-supported-plmn

In: query

Description: PLMN ID supported by a CHF

Content:

Application/JSON:

Schema:

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

- name: preferred-locality

In: query

Description: preferred target NF location

Schema:

Type: string

- name: access-type

In: query

Description: AccessType supported by the target NF

Schema:

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

- name: If-None-Match

In: header

Description: Validator for conditional requests, as described in IETF RFC 7232, 3.2

Schema:

Type: string

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SearchResult'

Headers:

Cache-Control:

Description: Cache-Control containing max-age, described in IETF RFC 7234, 5.2

Schema:

Type: string

ETag:

Description: Entity Tag containing a strong validator, described in IETF RFC 7232, 2.3

Schema:

Type: string

'307' Temporary Redirect

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'501': Reference 'TS29571_CommonData.yaml#/components/responses/501'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:**clientCredentials:****tokenUrl:** '/oauth2/token'**scopes:****nnrf-disc:** Access to the Nnrf_NFDiscovery API

schemas

SearchResult

Type: object**Required:**

- nfInstances

Properties:**validityPeriod:****Type:** integer**nfInstances:****Type:** array**Items:****Reference:** '#/components/schemas/NFProfile'

NFProfile

Type: object**Required:**

- nfInstanceId

- nfType

- nfStatus

Properties:**nfInstanceId:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'**nfType:****Reference:** 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/NFType'**nfStatus:****Reference:** 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/NFStatus'**plmnList:****Type:** array

Items:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/PlmnId'**minItems:** 1**sNssais:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Snssai'**minItems:** 1**nsiList:****Type:** array**Items:****Type:** string**minItems:** 1**fqdn:****Reference:** 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'**ipv4Addresses:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'**minItems:** 1**ipv6Addresses:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'**minItems:** 1**capacity:****Type:** integer**Minimum:** 0**Maximum:** 65535**load:****Type:** integer**Minimum:** 0**Maximum:** 100**locality:**

Type: string

priority:

Type: integer

Minimum: 0

Maximum: 65535

udrInfo:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/UdrInfo'

udmInfo:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/UdmInfo'

ausfInfo:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/AusfInfo'

amfInfo:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/AmfInfo'

smfInfo:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/SmfInfo'

upfInfo:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/UpfInfo'

pcfInfo:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/PcfInfo'

bsfInfo:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/BsfInfo'

chfInfo:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ChfInfo'

customInfo:

Type: object

recoveryTime:

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

nfServicePersistence:

Type: boolean

Default: false

nfServices:

Type: array

Items:

Reference: '#/components/schemas/NFService'

minItems: 1

NFService

Type: object

Required:

- serviceInstanceId
- serviceName
- versions
- scheme
- nfServiceStatus

Properties:

serviceInstanceId:

Type: string

serviceName:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ServiceName'

versions:

Type: array

Items:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/NFServiceVersion'

minItems: 1

scheme:

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

nfServiceStatus:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/NFServiceStatus'

fqdn:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'

ipEndpoints:

Type: array

Items:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/IpEndPoint'

minItems: 1

apiPrefix:

Type: string

defaultNotificationSubscriptions:

Type: array

Items:**Reference:** 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/DefaultNotificationSubscription'**minItems:** 1**capacity:****Type:** integer**Minimum:** 0**Maximum:** 65535**load:****Type:** integer**Minimum:** 0**Maximum:** 100**priority:****Type:** integer**Minimum:** 0**Maximum:** 65535**recoveryTime:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DateTime'**chfServiceInfo:****Reference:** 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ChfServiceInfo'**supportedFeatures:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'



CHAPTER 19

Nnrf_NFManagement

The Nnrf_NFManagement service allows a Network Function instance in the serving PLMN to register, update or deregister its profile in the NRF.

It also allows an NF to subscribe to be notified of newly registered NF instances along with their NF services.

The NF profile consists of NF instance parameters. It also consists of different services parameters exposed by the NF Instance.

Reference: 3GPP TS 29.510 version 15.1.0 Release 15

- [OpenAPI, on page 293](#)
- [info, on page 293](#)
- [externalDocs, on page 293](#)
- [security, on page 294](#)
- [servers, on page 294](#)
- [paths, on page 294](#)
- [components, on page 303](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Version: '1.0.0'

Title: 'NRF NFManagement Service'

Description: 'NRF NFManagement Service'

externalDocs

Description: 3GPP TS 29.510 V15.2.0; 5G System; Network Function Repository Services; Stage 3

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.510/'

security

- {}
- oAuth2ClientCredentials:
- nnrf-nfm

servers

URL: '{apiRoot}/nnrf-nfm/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501

paths

/nf-instances

get:

Summary: Retrieves a collection of NF Instances

Operation ID: GetNFInstances

Tags:

- NF Instances (Store)

Parameters:

- name: nf-type

In: query

Description: Type of NF

Required/Optional: false

Schema:

Reference: '#/components/schemas/NFType'

- name: limit

In: query

Description: How many items to return at one time

Required/Optional: false

Schema:

Type: integer

Responses:

'200' Expected response to a valid request

Content:

application/3gppHal+json:

Schema:

Type: object

Properties:

_links:

Type: object

Description: 'List of the URI of NF instances. It has two members whose names are item and self. The item one contains an array of URIs.'

additionalProperties:

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

minProperties: 1

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'501': Reference 'TS29571_CommonData.yaml#/components/responses/501'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/nf-instances/{nfInstanceId}

get:

Summary: Read the profile of a given NF Instance

Operation ID: GetNFInstance

Tags:

- NF Instance ID (Document)

Parameters:

- name: nfInstanceId

In: path

Description: Unique ID of the NF Instance

Required/Optional: true

Schema:

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

Responses:

'200': Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NFProfile'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'501': Reference 'TS29571_CommonData.yaml#/components/responses/501'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

put:

Summary: Register a new NF Instance

Operation ID: RegisterNFInstance

Tags:

- NF Instance ID (Document)

Parameters:

- name: nfInstanceId

In: path

Required/Optional: true

Description: Unique ID of the NF Instance to register

Schema:

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

Request Body:

Content:

Application/JSON:**Schema:****Reference:** '#/components/schemas/NFProfile'**Required/Optional:** true**Responses:**

'200' OK (Profile Replacement)

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/NFProfile'

'201' Expected response to a valid request

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/NFProfile'**Headers:****Location:****Description:** 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nnrf-nfm/v1/nf-instances/{nfInstanceId}'**Required/Optional:** true**Schema:****Type:** string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'501': Reference 'TS29571_CommonData.yaml#/components/responses/501'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'**patch:****Summary:** Update NF Instance profile**Operation ID:** UpdateNFInstance

Tags:

- NF Instance ID (Document)

Parameters:

- name: nfInstanceId

In: path

Required/Optional: true

Description: Unique ID of the NF Instance to update

Schema:

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

Request Body:**Content:**

application/json-patch+json:

Schema:

Type: array

items:

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

minItems: 1

Required/Optional: true

Responses:

'200' Expected response to a valid request

Content:**Application/JSON:****Schema:**

Reference: '#/components/schemas/NFProfile'

'204' Expected response with empty body

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'501': Reference 'TS29571_CommonData.yaml#/components/responses/501'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

delete:

Summary: Deregisters a given NF Instance

Operation ID: DeregisterNFInstance

Tags:

- NF Instance ID (Document)

Parameters:

- name: nfInstanceId

In: path

Required/Optional: true

Description: Unique ID of the NF Instance to deregister

Schema:

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

Responses:

'204' Expected response to a successful deregistration

/subscriptions

Method: Post

Summary: Create a new subscription

Operation ID: CreateSubscription

Tags:

- Subscriptions (Collection)

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SubscriptionData'

Required/Optional: true

Responses:

'201' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SubscriptionData'

Headers:**Location:**

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nnrf-nfm/v1/subscriptions/{subscriptionId}'

Required/Optional: true

Schema:

Type: string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'501': Reference 'TS29571_CommonData.yaml#/components/responses/501'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

Callbacks:**onNFStatusEvent:**

'{\$request.body#/nfStatusNotificationUri}':

Method: Post

Request Body:

Description: Notification Payload

Content:**Application/JSON:****Schema:**

Reference: '#/components/schemas/NotificationData'

Responses:

'204' Expected response to a successful callback processing

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'501': Reference 'TS29571_CommonData.yaml#/components/responses/501'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/subscriptions/{subscriptionID}

patch:

Summary: Updates a subscription

Operation ID: UpdateSubscription

Tags:

- Subscription ID (Document)

Parameters:

- name: subscriptionID

In: path

Required/Optional: true

Description: Unique ID of the subscription to update

Schema:

Type: string

pattern: '^([0-9]{5,6}-)?[^-]+\$'

Request Body:

Content:

application/json-patch+json:

Schema:

Type: array

items:

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

Required/Optional: true

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SubscriptionData'

'204' No Content

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'501': Reference 'TS29571_CommonData.yaml#/components/responses/501'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

delete:

Summary: Deletes a subscription

Operation ID: RemoveSubscription

Tags:

- Subscription ID (Document)

Parameters:

- name: subscriptionID

In: path

Required/Optional: true

Description: Unique ID of the subscription to remove

Schema:

Type: string

pattern: '^[0-9]{5,6}-?[^-]+\$'

Responses:

'204' Expected response to a successful subscription removal

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'501': Reference 'TS29571_CommonData.yaml#/components/responses/501'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '/oauth2/token'

scopes:

nnrf-nfm: Access to the Nnrf_NFManagement API

schemas

NFProfile

Type: object

Required:

- nfInstanceId

- nfType

- nfStatus

anyOf:

- required: [fqdn]

- required: [ipv4Addresses]

- required: [ipv6Addresses]

Properties:

nfInstanceId:

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

nfType:

Reference: '#/components/schemas/NFType'

nfStatus:

Reference: '#/components/schemas/NFStatus'

heartBeatTimer:

Type: integer

plmnList:

Type: array

Items:

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

minItems: 1

sNssais:

Type: array

Items:

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

minItems: 1

nsiList:

Type: array

Items:

Type: string

minItems: 1

fqdn:

Reference: '#/components/schemas/Fqdn'

interPlmnFqdn:

Reference: '#/components/schemas/Fqdn'

ipv4Addresses:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

minItems: 1

ipv6Addresses:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'

minItems: 1

allowedPlmns:

Type: array

Items:

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

minItems: 1

allowedNFTypes:

Type: array

Items:

Reference: '#/components/schemas/NFType'

minItems: 1

allowedNFDomains:

Type: array

Items:

Type: string

minItems: 1

allowedNssais:

Type: array

Items:

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

minItems: 1

priority:

Type: integer

Minimum: 0

Maximum: 65535

capacity:

Type: integer

Minimum: 0

Maximum: 65535

load:

Type: integer

Minimum: 0

Maximum: 100

locality:

Type: string

udrInfo:

Reference: '#/components/schemas/UdrInfo'

udmInfo:

Reference: '#/components/schemas/UdmInfo'

ausfInfo:**Reference:** '#/components/schemas/AusfInfo'**amfInfo:****Reference:** '#/components/schemas/AmfInfo'**smfInfo:****Reference:** '#/components/schemas/SmfInfo'**upfInfo:****Reference:** '#/components/schemas/UpfInfo'**pcfInfo:****Reference:** '#/components/schemas/PcfInfo'**bsfInfo:****Reference:** '#/components/schemas/BsfInfo'**chfInfo:****Reference:** '#/components/schemas/ChfInfo'**nrfInfo:****Reference:** '#/components/schemas/NrfInfo'**customInfo:****Type:** object**recoveryTime:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DateTime'**nfServicePersistence:****Type:** boolean**Default:** false**nfServices:****Type:** array**Items:****Reference:** '#/components/schemas/NFService'**minItems:** 1

NFService

Type: object**Required:**

- serviceInstanceId
- serviceName
- versions

- scheme
- nfServiceStatus

Properties:

serviceInstanceId:
Type: string

serviceName:
Reference: '#/components/schemas/ServiceName'

versions:
Type: array

Items:
Reference: '#/components/schemas/NFServiceVersion'

minItems: 1

scheme:
Reference: 'TS29571_CommonData.yaml#/components/schemas/UriScheme'

nfServiceStatus:
Reference: '#/components/schemas/NFServiceStatus'

fqdn:
Reference: '#/components/schemas/Fqdn'

interPlmnFqdn:
Reference: '#/components/schemas/Fqdn'

ipEndPoints:
Type: array

Items:
Reference: '#/components/schemas/IpEndPoint'

minItems: 1

apiPrefix:
Type: string

defaultNotificationSubscriptions:
Type: array

Items:
Reference: '#/components/schemas/DefaultNotificationSubscription'

minItems: 1

allowedPlmns:
Type: array

Items:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/PlmnId'**minItems:** 1**allowedNfTypes:****Type:** array**Items:****Reference:** '#/components/schemas/NFType'**minItems:** 1**allowedNfDomains:****Type:** array**Items:****Type:** string**minItems:** 1**allowedNssais:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Snssai'**minItems:** 1**priority:****Type:** integer**Minimum:** 0**Maximum:** 65535**capacity:****Type:** integer**Minimum:** 0**Maximum:** 65535**load:****Type:** integer**Minimum:** 0**Maximum:** 100**recoveryTime:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DateTime'**chfServiceInfo:****Reference:** '#/components/schemas/ChfServiceInfo'

supportedFeatures:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**NFType****anyOf:**

- type: string

enum:

- NRF

- UDM

- AMF

- SMF

- AUSF

- NEF

- PCF

- SMSF

- NSSF

- UDR

- LMF

- GMLC

- 5G_EIR

- SEPP

- UPF

- N3IWF

- AF

- UDSF

- BSF

- CHF

- NWDAF

- type: string

Fqdn**Type:** string**IpEndPoint****Type:** object**Properties:**

ipv4Address:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

ipv6Address:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'

transport:

Reference: '#/components/schemas/TransportProtocol'

port:

Type: integer

Minimum: 0

Maximum: 65535

SubscriptionData

Type: object

Required:

- nfStatusNotificationUri
- subscriptionId

Properties:

nfStatusNotificationUri:

Type: string

subscrCond:

oneOf:

- \$ref: '#/components/schemas/NfInstanceIdCond'
- \$ref: '#/components/schemas/NfTypeCond'
- \$ref: '#/components/schemas/ServiceNameCond'
- \$ref: '#/components/schemas/AmfCond'
- \$ref: '#/components/schemas/GuamiListCond'
- \$ref: '#/components/schemas/NetworkSliceCond'
- \$ref: '#/components/schemas/NfGroupCond'

subscriptionId:

Type: string

Pattern: '^[0-9]{5,6}-?[^-]+\$'

readOnly: true

validityTime:

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

reqNotifEvents:

Type: array

Items:

Reference: '#/components/schemas/NotificationEventType'

minItems: 1

plmnId:

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

notifCondition:

Reference: '#/components/schemas/NotifCondition'

reqNfType:

Reference: '#/components/schemas/NFType'

reqNfFqdn:

Reference: '#/components/schemas/Fqdn'

NfInstanceIdCond

Type: object

Required:

- nfInstanceId

Properties:

nfInstanceId:

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

NfTypeCond

Type: object

Required:

- nfType

Properties:

nfType:

Reference: '#/components/schemas/NFType'

ServiceNameCond

Type: object

Required:

- serviceName

Properties:

serviceName:

Reference: '#/components/schemas/ServiceName'

AmfCond

Type: object

anyOf:

- required: [amfSetId]

- required: [amfRegionId]

Properties:

amfSetId:

Type: string

amfRegionId:

Type: string

GuamiListCond

Type: object

Required:

- guamiList

Properties:

guamiList:

Type: array

Items:

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

NetworkSliceCond

Type: object

Required:

- snssaiList

Properties:

snssaiList:

Type: array

Items:

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

nsiList:

Type: array

Items:

Type: string

NfGroupCond

Type: object

Required:

- nfType

- nfGroupId

Properties:

nfType:

Type: string

enum:

- UDM

- AUSF

- UDR

nfGroupId:

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

NotifCondition

Type: object

not:

Required: [monitoredAttributes, unmonitoredAttributes]

Properties:

monitoredAttributes:

Type: array

Items:

Type: string

minItems: 1

unmonitoredAttributes:

Type: array

Items:

Type: string

minItems: 1

UdrInfo

Type: object

Properties:

groupId:

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

supiRanges:

Type: array

Items:

Reference: '#/components/schemas/SupiRange'

minItems: 1

gpsiRanges:

Type: array

Items:

Reference: '#/components/schemas/IdentityRange'

minItems: 1

externalGroupIdentifiersRanges:

Type: array

Items:

Reference: '#/components/schemas/IdentityRange'

minItems: 1

supportedDataSets:

Type: array

Items:

Reference: '#/components/schemas/DataSetId'

minItems: 1

SupiRange

Type: object

Properties:

start:

Type: string

Pattern: '^[0-9]+\$'

end:

Type: string

Pattern: '^[0-9]+\$'

Pattern:

Type: string

IdentityRange

Type: object

Properties:

start:

Type: string

Pattern: '^[0-9]+\$'

end:

Type: string

Pattern: '^[0-9]+\$'

Pattern:

Type: string

DataSetId

anyOf:

- type: string

enum:

- SUBSCRIPTION

- POLICY

- EXPOSURE

- APPLICATION

- type: string

UdmlInfo

Type: object

Properties:

groupId:

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

supiRanges:

Type: array

Items:

Reference: '#/components/schemas/SupiRange'

minItems: 1

gpsiRanges:

Type: array

Items:

Reference: '#/components/schemas/IdentityRange'

minItems: 1

externalGroupIdentifiersRanges:

Type: array

Items:

Reference: '#/components/schemas/IdentityRange'

minItems: 1

routingIndicators:

Type: array

Items:

Type: string

Pattern: '^[0-9]{1,4}\$'

minItems: 1

AusfInfo

Type: object

Properties:

groupId:

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

supiRanges:

Type: array

Items:

Reference: '#/components/schemas/SupiRange'

minItems: 1

routingIndicators:

Type: array

Items:

Type: string

Pattern: '^[0-9]{1,4}\$'

minItems: 1

AmfInfo

Type: object

Required:

- amfSetId

- amfRegionId

- guamiList

Properties:

amfSetId:

Type: string

amfRegionId:

Type: string

guamiList:

Type: array

Items:

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

minItems: 1

taiList:

Type: array

Items:

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

minItems: 1

taiRangeList:

Type: array

Items:

Reference: '#/components/schemas/TaiRange'

minItems: 1

backupInfoAmfFailure:

Type: array

Items:

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

minItems: 1

backupInfoAmfRemoval:

Type: array

Items:

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

minItems: 1

n2InterfaceAmfInfo:

Reference: '#/components/schemas/N2InterfaceAmfInfo'

SmfInfo

Type: object

Required:

- sNssaiSmfInfoList

Properties:

sNssaiSmfInfoList:

Type: array

Items:

Reference: '#/components/schemas/SnssaiSmfInfoItem'

minItems: 1

taiList:

Type: array

Items:

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

minItems: 1

taiRangeList:

Type: array

Items:

Reference: '#/components/schemas/TaiRange'

minItems: 1

pgwFqdn:

Reference: '#/components/schemas/Fqdn'

accessType:

Type: array

Items:

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

minItems: 1

SnssaiSmfInfoItem

Type: object

Required:

- sNssai

- dnnSmfInfoList

Properties:

sNssai:

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

dnnSmfInfoList:

Type: array

Items:

Reference: '#/components/schemas/DnnSmfInfoItem'

minItems: 1

DnnSmfInfoItem

Type: object

Required:

- dnn

Properties:

dnn:

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

UpfInfo

Type: object

Required:

- sNssaiUpfInfoList

Properties:

sNssaiUpfInfoList:

Type: array

Items:

Reference: '#/components/schemas/SnssaiUpfInfoItem'

minItems: 1

smfServingArea:

Type: array

Items:

Type: string

minItems: 1

interfaceUpfInfoList:

Type: array

Items:

Reference: '#/components/schemas/InterfaceUpfInfoItem'

minItems: 1
iwkEpsInd:
Type: boolean
Default: false

SnsaiUpfInfoItem

Type: object
Required:
 - sNssai
 - dnnUpfInfoList
Properties:
sNssai:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Snsai'
dnnUpfInfoList:
Type: array
Items:
Reference: '#/components/schemas/DnnUpfInfoItem'
minItems: 1

DnnUpfInfoItem

Type: object
Required:
 - dnn
Properties:
dnn:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
dnaiList:
Type: array
Items:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnai'
minItems: 1

InterfaceUpfInfoItem

Type: object
Required:
 - interfaceType

Properties:**interfaceType:****Reference:** '#/components/schemas/UPInterfaceType'**ipv4EndpointAddresses:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'**minItems:** 1**ipv6EndpointAddresses:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'**minItems:** 1**endpointFqdn:****Reference:** '#/components/schemas/Fqdn'**networkInstance:****Type:** string

UPInterfaceType

anyOf:

- type: string

enum:

- N3

- N6

- N9

- type: string

PcflInfo

Type: object**Properties:****dnnList:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Dnn'**minItems:** 1

supiRanges:**Type:** array**Items:****Reference:** '#/components/schemas/SupiRange'**minItems:** 1**rxDiamHost:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DiameterIdentity'**rxDiamRealm:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DiameterIdentity'

BsflInfo

Type: object**Properties:****dnnList:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Dnn'**minItems:** 1**ipDomainList:****Type:** array**Items:****Type:** string**minItems:** 1**ipv4AddressRanges:****Type:** array**Items:****Reference:** '#/components/schemas/Ipv4AddressRange'**minItems:** 1**ipv6PrefixRanges:****Type:** array**Items:****Reference:** '#/components/schemas/Ipv6PrefixRange'**minItems:** 1

ChfInfo

Type: object

Properties:

supiRangeList:

Type: array

Items:

Reference: '#/components/schemas/SupiRange'

minItems: 1

gpsiRangeList:

Type: array

Items:

Reference: '#/components/schemas/IdentityRange'

minItems: 1

plmnRangeList:

Type: array

Items:

Reference: '#/components/schemas/PlmnRange'

minItems: 1

Ipv4AddressRange

Type: object

Properties:

start:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

end:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

Ipv6PrefixRange

Type: object

Properties:

start:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'

end:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'

DefaultNotificationSubscription

Type: object

Required:

- notificationType
- callbackUri

Properties:

notificationType:

Reference: '#/components/schemas/NotificationType'

callbackUri:

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

n1MessageClass:

Reference: 'TS29518_Namf_Communication.yaml#/components/schemas/N1MessageClass'

n2InformationClass:

Reference: 'TS29518_Namf_Communication.yaml#/components/schemas/N2InformationClass'

NotificationType

anyOf:

- type: string

enum:

- N1_MESSAGES
- N2_INFORMATION
- LOCATION_NOTIFICATION
- DATA_REMOVAL_NOTIFICATION
- DATA_CHANGE_NOTIFICATION
- type: string

TransportProtocol

anyOf:

- type: string

enum:

- TCP
- type: string

NotificationEventType

anyOf:

- type: string
- enum:**
- NF_REGISTERED
- NF_DEREGISTERED
- NF_PROFILE_CHANGED
- type: string

NotificationData

Type: object

Required:

- event
- nfInstanceUri

allOf:

- anyOf:
- not:

Properties:

event:

Type: string

enum:

- NF_PROFILE_CHANGED
- oneOf:
- required: [nfProfile]
- required: [profileChanges]
- anyOf:
- not:

Properties:

event:

Type: string

enum:

- NF_REGISTERED
- required: [nfProfile]

Properties:

event:

Reference: '#/components/schemas/NotificationEventType'

nfInstanceUri:

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

nfProfile:

allOf:

- \$ref: '#/components/schemas/NFProfile'

- not:

Required: [interPlmnFqdn]

- properties:

nfServices:

Type: array

Items:

allOf:

- \$ref: '#/components/schemas/NFService'

- not:

Required: [interPlmnFqdn]

- not:

Required: [allowedPlmns]

- not:

Required: [allowedNfTypes]

- not:

Required: [allowedNfDomains]

- not:

Required: [allowedNssais]

profileChanges:

Type: array

Items:

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

minItems: 1

NFStatus

anyOf:

- type: string

enum:

- REGISTERED

- SUSPENDED

- type: string

NFServiceVersion

Type: object

Required:

- apiVersionInUri
- apiFullVersion

Properties:

apiVersionInUri:

Type: string

apiFullVersion:

Type: string

expiry:

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

ServiceName

anyOf:

- type: string

enum:

- nnrf-nfm
- nnrf-disc
- nudm-sdm
- nudm-uecm
- nudm-ueau
- nudm-ee
- nudm-pp
- namf-comm
- namf-evts
- namf-mt
- namf-loc
- nsmf-pdusession
- nsmf-event-exposure
- nausf-auth
- nausf-sorprotection
- nnef-pfdmanagement
- npcfc-am-policy-control
- npcfc-smpolicycontrol

- npcf-policyauthorization
- npcf-bdtpolicycontrol
- npcf-eventexposure
- npcf-ue-policy-control
- nsmsf-sms
- mnssf-nssselection
- mnssf-nssaiavailability
- nudr-dr
- nlmf-loc
- n5g-eir-eic
- nbsf-management
- nchf-spendinglimitcontrol
- nchf-convergedcharging
- nnwdaf-eventssubscription
- nnwdaf-analyticsinfo
- type: string

N2InterfaceAmfInfo

Type: object

Properties:

ipv4EndpointAddress:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

minItems: 1

ipv6EndpointAddress:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'

minItems: 1

amfName:

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

NFServiceStatus

anyOf:

- type: string
enum:
 - REGISTERED
 - SUSPENDED
 - type: string

TaiRange

Type: object
Required:
 - plmnId
 - tacRangeList
Properties:
plmnId:
Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
tacRangeList:
Type: array
Items:
Reference: '#/components/schemas/TacRange'
minItems: 1

TacRange

Type: object
Properties:
start:
Type: string
Pattern: '^([A-Fa-f0-9]{4}|[A-Fa-f0-9]{6})\$'
end:
Type: string
Pattern: '^([A-Fa-f0-9]{4}|[A-Fa-f0-9]{6})\$'
Pattern:
Type: string

ChfServiceInfo

Type: object
not:
Required: [primaryChfServiceInstance, secondaryChfServiceInstance]

Properties:**primaryChfServiceInstance:****Type:** string**secondaryChfServiceInstance:****Type:** string**PlmnRange****Type:** object**Properties:****start:****Type:** string**Pattern:** '^[0-9]{3}[0-9]{2,3}\$'**end:****Type:** string**Pattern:** '^[0-9]{3}[0-9]{2,3}\$'**Pattern:****Type:** string**NrfInfo****Type:** object**Properties:****servedUdrInfo:****Type:** object**additionalProperties:****Reference:** '#/components/schemas/UdrInfo'**minProperties:** 1**servedUdmInfo:****Type:** object**additionalProperties:****Reference:** '#/components/schemas/UdmInfo'**minProperties:** 1**servedAusfInfo:****Type:** object**additionalProperties:****Reference:** '#/components/schemas/AusfInfo'

minProperties: 1
servedAmfInfo:
Type: object
additionalProperties:
Reference: '#/components/schemas/AmfInfo'

minProperties: 1
servedSmfInfo:
Type: object
additionalProperties:
Reference: '#/components/schemas/SmfInfo'

minProperties: 1
servedUpfInfo:
Type: object
additionalProperties:
Reference: '#/components/schemas/UpfInfo'

minProperties: 1
servedPcfInfo:
Type: object
additionalProperties:
Reference: '#/components/schemas/PcfInfo'

minProperties: 1
servedBsfInfo:
Type: object
additionalProperties:
Reference: '#/components/schemas/BsfInfo'

minProperties: 1
servedChfInfo:
Type: object
additionalProperties:
Reference: '#/components/schemas/ChfInfo'

minProperties: 1



CHAPTER 20

Nnssf_NSSelection

The Nnssf_NSSelection service is used by an NF Service Consumer (for example, AMF or NSSF in a different PLMN) to retrieve the information related to network slice in the non-roaming and roaming case. It also enables the NSSF to provide to the AMF the allowed NSSAI and the configured NSSAI for the serving PLMN. The NF service consumer discovers the NSSF based on the local configuration. The NSSF in a different PLMN is discovered based on the self-constructed FQDN as specified in 3GPP TS 23.003[9].

Reference: 3GPP TS 29.531 version 15.1.0 Release 15

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OpenAPI

OpenAPI Version: 3.0.0

info

Version: '1.0.0'

Title: 'NSSF NS Selection'

Description: 'NSSF Network Slice Selection Service'

externalDocs

Description: 3GPP TS 29.531 V15.2.0; 5G System; Network Slice Selection Services; Stage 3

URL: http://www.3gpp.org/ftp/Specs/archive/29_series/29.531/

security

- {}
- oAuth2Clientcredentials:
- nnssf-nssselection

servers

URL: '{apiRoot}/nnssf-nssselection/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 4.4 of 3GPP TS 29.501

paths

/network-slice-information

get:

Summary: Retrieve the Network Slice Selection Information

Tags:

- Network Slice Information (Document)

Operation ID: NSSelectionGet

Parameters:

- name: nf-type

In: query

Description: NF type of the NF service consumer

Required/Optional: true

Schema:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/NFType'

- name: nf-id

In: query

Description: NF Instance ID of the NF service consumer

Required/Optional: true

Schema:

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

- name: slice-info-request-for-registration

In: query

Description: Requested network slice information during Registration procedure

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SliceInfoForRegistration'

- name: slice-info-request-for-pdu-session

In: query

Description: Requested network slice information during PDU session establishment procedure

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SliceInfoForPDUSession'

- name: home-plmn-id

In: query

Description: PLMN ID of the HPLMN

Content:

Application/JSON:

Schema:

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

- name: tai

In: query

Description: TAI of the UE

Content:

Application/JSON:

Schema:

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

- name: supported-features

In: query

Description: Features required to be supported by the NFs in the target slice instance

Schema:

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

Responses:**'200'** OK (Successful Network Slice Selection)**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/AuthorizedNetworkSliceInfo'**'400'**: Reference 'TS29571_CommonData.yaml#/components/responses/400'**'401'**: Reference 'TS29571_CommonData.yaml#/components/responses/401'**'403'**: Reference 'TS29571_CommonData.yaml#/components/responses/403'**'404'**: Reference 'TS29571_CommonData.yaml#/components/responses/404'**'406'**: Reference 'TS29571_CommonData.yaml#/components/responses/406'**'414'**: Reference 'TS29571_CommonData.yaml#/components/responses/414'**'429'**: Reference 'TS29571_CommonData.yaml#/components/responses/429'**'500'**: Reference 'TS29571_CommonData.yaml#/components/responses/500'**'503'**: Reference 'TS29571_CommonData.yaml#/components/responses/503'**default:****Description:** Unexpected error

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2**Flows:****clientCredentials:****tokenUrl:** '{nrfApiRoot}/oauth2/token'**scopes:****nssf-nssselection:** Access to the Nnssf_NSSelection API

schemas

AuthorizedNetworkSliceInfo

Type: object

Properties:**allowedNssaiList:**

Type: array

Items:

Reference: '#/components/schemas/AllowedNssai'

minItems: 1

configuredNssai:

Type: array

Items:

Reference: '#/components/schemas/ConfiguredSnsai'

minItems: 1

targetAmfSet:

Type: string

candidateAmfList:

Type: array

Items:

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

minItems: 1

rejectedNssaiInPlmn:

Type: array

Items:

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

minItems: 1

rejectedNssaiInTa:

Type: array

Items:

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

minItems: 1

nsiInformation:

Reference: '#/components/schemas/NsiInformation'

supportedFeatures:

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

nrfAmfSet:

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

SubscribedSnssai

Type: object

Required:

- subscribedSnssai

Properties:

subscribedSnssai:

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

defaultIndication:

Type: boolean

AllowedSnssai

Type: object

Required:

- allowedSnssai

Properties:

allowedSnssai:

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

nsiInformationList:

Type: array

Items:

Reference: '#/components/schemas/NsiInformation'

minItems: 1

mappedHomeSnssai:

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

AllowedNssai

Type: object

Required:

- allowedSnssaiList

- accessType

Properties:

allowedSnssaiList:

Type: array

Items:

Reference: '#/components/schemas/AllowedSnssai'

minItems: 1

accessType:

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

NsiInformation

Type: object

Required:

- nrfId

Properties:

nrfId:

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

nsiId:

Reference: '#/components/schemas/NsiId'

MappingOfSnssai

Type: object

Required:

- servingSnssai

- homeSnssai

Properties:

servingSnssai:

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

homeSnssai:

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

SliceInfoForRegistration

Type: object

Properties:

subscribedNssai:

Type: array

Items:

Reference: '#/components/schemas/SubscribedSnssai'

minItems: 1

allowedNssaiCurrentAccess:

Reference: '#/components/schemas/AllowedNssai'

allowedNssaiOtherAccess:

Reference: '#/components/schemas/AllowedNssai'

sNssaiForMapping:

Type: array

Items:

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

minItems: 1

requestedNssai:

Type: array

Items:

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

minItems: 1

defaultConfiguredSnssaiInd:

Type: boolean

mappingOfNssai:

Type: array

Items:

Reference: '#/components/schemas/MappingOfSnssai'

minItems: 1

requestMapping:

Type: boolean

SliceInfoForPDUSession

Type: object

Required:

- sNssai

- roamingIndication

Properties:

sNssai:

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

roamingIndication:

Reference: '#/components/schemas/RoamingIndication'

homeSnssai:

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

ConfiguredSnssai

Type: object

Required:

- configuredSnssai

Properties:

configuredSnssai:

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

mappedHomeSnssai:

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

RoamingIndication

anyOf:

- type: string

enum:

- NON_ROAMING

- LOCAL_BREAKOUT

- HOME_ROUTED_ROAMING

- type: string

Nsild

Type: string



CHAPTER 21

Npcf_AMPolicyControl

The Access and Mobility Policy Control Service (Npcf_AMPolicyControl) is part of the Npcf service-based interface exhibited by the Policy Control Function (PCF).

The known consumers of the Npcf_AMPolicyControl service are the Access and Mobility Management Function (AMF) and the Visited Policy Control Function (V-PCF).

Reference: 3GPP TS 29.507 version 15.0.0 Release 15

- [OpenAPI, on page 343](#)
- [info, on page 343](#)
- [externalDocs, on page 343](#)
- [security, on page 344](#)
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OpenAPI

OpenAPI Version: 3.0.0

info

Description: Access and Mobility Policy Control Service API

Version: "1.0.0"

Title: Npcf_AMPolicyControl

externalDocs

Description: 3GPP TS 29.507 V15.2.0; 5G System; Access and Mobility Policy Control Service.

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.507/'

security

- {}
- oAuth2ClientCredentials:
- npcf-am-policy-control

servers

URL: '{apiRoot}/npcf-am-policy-control/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501

paths

/policies

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PolicyAssociationRequest'

Responses:

'201' Created

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PolicyAssociation'

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/npcf-am-policy-control/v1/policies/{polAssId}'

Required/Optional: true

Schema:

Type: string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

Callbacks:

policyUpdateNotification:

'{\$request.body#/notificationUri}/update':

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PolicyUpdate'

Responses:

'204' No Content, Notification was successful

'307' temporary redirect

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

policyAssociationTerminationRequestNotification:

'{\$request.body#/notificationUri}/terminate':

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TerminationNotification'

Responses:

'204' No Content, Notification was successful

'307' temporary redirect

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/policies/{polAssold}

get:

Parameters:

- name: polAssold

In: path

Description: Identifier of a policy association

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK. Resource representation is returned

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PolicyAssociation'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

delete:

Parameters:

- name: polAssoid

In: path

Description: Identifier of a policy association

Required/Optional: true

Schema:

Type: string

Responses:

'204' No Content. Resource was successfully deleted

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/policies/{polAssold}/update

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PolicyAssociationUpdateRequest'

Parameters:

- name: polAssoId

In: path

Description: Identifier of a policy association

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK. Updated policies are returned

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PolicyUpdate'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

npcf-am-policy-control: Access to the Npcf_AMPolicyControl API

schemas

PolicyAssociation

Type: object

Properties:

request:

Reference: '#/components/schemas/PolicyAssociationRequest'

triggers:

Type: array

Items:

Reference: '#/components/schemas/RequestTrigger'

minItems: 1

Description: Request Triggers that the PCF subscribes. Only values "LOC_CH" and "PRA_CH" are permitted.

servAreaRes:

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

rfsp:

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

pras:

Type: object

additionalProperties:

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

minProperties: 1

suppFeat:

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

Required:

- suppFeat

PolicyAssociationRequest

Type: object

Properties:

notificationUri:

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

altNotifIpv4Addrs:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

minItems: 1

Description: Alternate or backup IPv4 Address(es) where to send Notifications.

altNotifIpv6Addrs:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'

minItems: 1

Description: Alternate or backup IPv6 Address(es) where to send Notifications.

supi:

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

gpsi:

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

accessType:

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

pei:

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

userLoc:

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

timeZone:

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

servingPlmn:

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

ratType:

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

groupIds:

Type: array

Items:

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

minItems: 1

servAreaRes:

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

rfsp:

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

guami:

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

serviveName:

Type: string

Description: If the NF service consumer is an AMF, it should provide the name of a service produced by the AMF that makes use of information received within the Npcf_AMPolicyControl_UpdateNotify service operation.

traceReq:

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

suppFeat:

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

Required:

- notificationUri
- suppFeat
- supi

PolicyAssociationUpdateRequest

Type: object

Properties:

notificationUri:

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

altNotifIpv4Addrs:**Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'**minItems:** 1**Description:** Alternate or backup IPv4 Address(es) where to send Notifications.**altNotifIpv6Addrs:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'**minItems:** 1**Description:** Alternate or backup IPv6 Address(es) where to send Notifications.**triggers:****Type:** array**Items:****Reference:** '#/components/schemas/RequestTrigger'**minItems:** 1**Description:** Request Triggers that the NF service consumer observes.**servAreaRes:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/ServiceAreaRestriction'**rfsp:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/RfspIndex'**praStatuses:****Type:** object**additionalProperties:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PresenceInfo'**minProperties:** 1**Description:** Map of PRA status information.**userLoc:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/UserLocation'**traceReq:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/TraceData'

PolicyUpdate

Type: object

Properties:**resourceUri:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**triggers:****Type:** array**Items:****Reference:** '#/components/schemas/RequestTrigger'**minItems:** 1**nullable:** true**Description:** Request Triggers that the PCF subscribes. Only values "LOC_CH" and "PRA_CH" are permitted.**servAreaRes:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/ServiceAreaRestriction'**rfsp:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/RfspIndex'**pras:****Type:** object**additionalProperties:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PresenceInfoRm'**Description:** Map of PRA information.**minProperties:** 1**nullable:** true**Required:**

- resourceUri

TerminationNotification**Type:** object**Properties:****resourceUri:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**cause:****Reference:** '#/components/schemas/PolicyAssociationReleaseCause'**Required:**

- resourceUri

- cause

RequestTrigger

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

- LOC_CH: Location change (tracking area). The tracking area of the UE has changed.
- PRA_CH: Change of UE presence in PRA. The UE is entering/leaving a Presence Reporting Area.
- SERV_AREA_CH: Service Area Restriction change. The UDM notifies the AMF that the subscribed service area restriction information has changed.
- RFSP_CH: RFSP index change. The UDM notifies the AMF that the subscribed RFSP index has changed.

PolicyAssociationReleaseCause

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

- UNSPECIFIED: This value is used for unspecified reasons.
- UE_SUBSCRIPTION: This value is used to indicate that the session needs to be terminated because the subscription of UE has changed (e.g. was removed).
- INSUFFICIENT_RES: This value is used to indicate that the server is overloaded and needs to abort the session.



CHAPTER 22

Npcf_BDTPolicyControl

The Npcf_BDTPolicyControl service is used by an NF service consumer to retrieve background data transfer policies from the PCF and to update the PCF with the background data transfer policy selected by the NF service consumer.

Reference: 3GPP TS 29.554 V16.0.0

- [OpenAPI, on page 355](#)
- [info, on page 355](#)
- [externalDocs, on page 355](#)
- [security, on page 356](#)
- [servers, on page 356](#)
- [paths, on page 356](#)
- [components, on page 359](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Title: Npcf_BDTPolicyControl Service API

Version: "1.0.0"

Description: The Npcf_BDTPolicyControl Service is used by an NF service consumer to retrieve background data transfer policies from the PCF and to update the PCF with the background data transfer policy selected by the NF service consumer.

externalDocs

Description: 3GPP TS 29.554 V15.2.0; 5G System; Background Data Transfer Policy Control Service.

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.554/'

security

- {}
- oAuth2ClientCredentials:
- npcf-bdtpolicycontrol

servers

URL: '{apiRoot}/npcf-bdtpolicycontrol/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 4.4 of 3GPP TS 29.501.

paths

/bdtpolicies

Method: Post

Summary: Create a new Individual BDT policy

Operation ID: CreateBDTPolicy

Tags:

- BDT policies (Collection)

Request Body:

Description: Contains information for the creation of a new Individual BDT policy resource.

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/BdtReqData'

Responses:

'201' Background data transfer policies offered to an ASP.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/BdtPolicy'

Headers:

Location:

Description: 'Contains the URI of the created individual BDT policy resource, according to the structure: {apiRoot}/npcf-bdtpolicycontrol/v1/bdtpolicies/{bdtPolicyId}'

Required/Optional: true

Schema:

Type: string

Error scenarios POST

'303' See Other. The result of the POST request would be equivalent to the existing Individual BDT policy resource. The HTTP response shall contain a Location header field set to the URI of the existing individual BDT policy resource.

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

End error scenarios POST

/bdtpolicies/{bdtPolicyId}

get:

Summary: Read an Individual BDT policy

Operation ID: GetBDTPolicy

Tags:

- Individual BDT policy (Document)

Parameters:

- name: bdtPolicyId

Description: String identifying the individual BDT policy resource in the PCF.

In: path

Required/Optional: true

Schema:

Type: string

Responses:

'200': Background data transfer policies offered to and selected by an ASP.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/BdtPolicy'

Error scenarios GET

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

End error scenarios GET

patch:

Summary: Update an Individual BDT policy

Operation ID: UpdateBDTPolicy

Tags:

- Individual BDT policy (Document)

Parameters:

- name: bdtPolicyId

Description: String identifying the individual BDT policy resource in the PCF.

In: path

Required/Optional: true

Schema:

Type: string

Request Body:

Description: Contains modification instruction to be performed on the BdtPolicy data structure to select a transfer policy.

Required/Optional: true

Content:

application/merge-patch+json:

Schema:

Reference: '#/components/schemas/BdtPolicyDataPatch'

Responses:

'200' The Individual BDT Policy resource is modified and a representation of that resource is returned.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/BdtPolicy'

'204' The Individual BDT Policy resource is modified.

Error scenarios PATCH

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

End error scenarios PATCH

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

npcf-bdtpolicycontrol: Access to the Npcf_BDTPolicyControl API

schemas

Structured data types

BdtPolicy

Description: Represents an Individual BDT policy resource.

Type: object

Properties:

bdtPolData:

Reference: '#/components/schemas/BdtPolicyData'

bdtReqData:

Reference: '#/components/schemas/BdtReqData'

BdtReqData

Description: Contains service requirements for creation a new Individual BDT policy resource.

Type: object

Required:

- aspId
- desTimeInt
- numOfUes
- volPerUe

Properties:

aspId:

Reference: '#/components/schemas/AspId'

desTimeInt:

Reference: 'TS29122_CommonData.yaml#/components/schemas/TimeWindow'

nwAreaInfo:

Reference: '#/components/schemas/NetworkAreaInfo'

numOfUes:

Description: Indicates a number of UEs.

Type: integer

volPerUe:

Reference: 'TS29122_CommonData.yaml#/components/schemas/UsageThreshold'

suppFeat:

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

BdtPolicyData

Description: Describes the authorization data of an Individual BDT policy resource.

Type: object

Required:

- bdtRefId
- transfPolicies

Properties:

bdtRefId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/BdtReferenceId'

transfPolicies:

Description: Contains transfer policies.

Type: array

Items:

Reference: '#/components/schemas/TransferPolicy'

minItems: 1

selTransPolicyId:

Description: Contains an identity of the selected transfer policy.

Type: integer

suppFeat:

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

BdtPolicyDataPatch

Description: A JSON Merge Patch body schema containing modification instruction to be performed on the BdtPolicy data structure to select a transfer policy. Adds selTransPolicyId to BdtPolicyData data structure.

Type: object

Required:

- selTransPolicyId

Properties:

selTransPolicyId:

Description: Contains an identity (i.e. transPolicyId value) of the selected transfer policy.

Type: integer

TransferPolicy

Description: Describes a transfer policy.

Type: object

Required:

- ratingGroup

- recTimeInt

- transPolicyId

Properties:

maxBitRateDL:

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

maxBitRateUL:

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

ratingGroup:

Description: Indicates a rating group for the recommended time window.

Type: integer

recTimeInt:

Reference: 'TS29122_CommonData.yaml#/components/schemas/TimeWindow'

transPolicyId:

Description: Contains an identity of a transfer policy.

Type: integer

NetworkAreaInfo

Description: Describes a network area information in which the NF service consumer requests the number of UEs.

Type: object

Properties:

ecgis:

Description: Contains a list of E-UTRA cell identities.

Type: array

Items:

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

minItems: 1

ncgis:

Description: Contains a list of NR cell identities.

Type: array

Items:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ncgi'**minItems:** 1**gRanNodeIds:****Description:** Contains a list of NG RAN nodes.**Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/GlobalRanNodeId'**minItems:** 1**tais:****Description:** Contains a list of tracking area identities.**Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Tai'**minItems:** 1

Simple data types

Aspld

Description: Contains an identity of an application service provider.**Type:** string



CHAPTER 23

Npcf_PolicyAuthorization

The Npcf_PolicyAuthorization Service, as defined in 3GPP TS 23.502 [3] and in 3GPP TS 23.503 [4], is provided by the Policy Control Function (PCF).

The Npcf_PolicyAuthorization service authorises an AF request and creates policies as requested by the authorised NF service consumer for the PDU session to which the AF session is bound to. This service allows the NF service consumer to subscribe/unsubscribe to the notification of events (for example, Access Type and RAT type, PLMN identifier, access network information, usage report).

Reference: 3GPP TS 29.514 V15.4.0

- [OpenAPI, on page 365](#)
- [info, on page 365](#)
- [externalDocs, on page 365](#)
- [security, on page 366](#)
- [servers, on page 366](#)
- [paths, on page 366](#)
- [components, on page 375](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Title: "Npcf_PolicyAuthorization Service API"

Version: "1.0.0"

Description: "This is the Policy Authorization Service"

externalDocs

Description: 3GPP TS 29.514 V15.2.0; 5G System; Policy Authorization Service;Stage 3.

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.514/'

security

- {}
- oAuth2ClientCredentials:
- npcf-policyauthorization

servers

URL: '{apiRoot}/npcf-policyauthorization/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 4.4 of 3GPP TS 29.501

paths

/app-sessions

Method: Post

Summary: Creates a new Individual Application Session Context resource

Operation ID: PostAppSessions

Tags:

- Application Sessions (Collection)

Request Body:

Description: Contains the information for the creation the resource

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AppSessionContext'

Responses:

'201' Successful creation of the resource

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AppSessionContext'

Headers:

Location:

Description: 'Contains the URI of the created individual application session context resource, according to the structure: {apiRoot}/npcf-policyauthorization/v1/app-sessions/{appSessionId} or the URI of the created events subscription sub-resource, according to the structure: {apiRoot}/npcf-policyauthorization/v1/app-sessions/{appSessionId}/events-subscription}'

Required/Optional: true

Schema:

Type: string

'303' See Other. The result of the HTTP POST request would be equivalent to the existing Application Session Context. The HTTP response shall contain a Location header field set to the URI of the existing individual Application Session Context resource

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

Callbacks:

terminationRequest:

'{\$request.body#/notifUri}/terminate':

Method: Post

Request Body:

Description: Request of the termination of the Individual Application Session Context

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TerminationInfo'

Responses:

'204' The receipt of the notification is acknowledged.

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

eventNotification:

'{\$request.body#/evSubsc/notifUri}/notify':

Method: Post

Request Body:

Description: Notification of an event occurrence in the PCF.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/EventsNotification'

Responses:

'204' The receipt of the notification is acknowledged

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/app-sessions/{appSessionId}

get:

Summary: "Reads an existing Individual Application Session Context"

Operation ID: GetAppSession

Tags:

- Individual Application Session Context (Document)

Parameters:

- name: appSessionId

Description: string identifying the resource

In: path

Required/Optional: true

Schema:

Type: string

Responses:

'200' A representation of the resource is returned.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AppSessionContext'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

patch:

Summary: "Modifies an existing Individual Application Session Context"

Operation ID: ModAppSession

Tags:

- Individual Application Session Context (Document)

Parameters:

- name: appSessionId

Description: string identifying the resource

In: path

Required/Optional: true

Schema:

Type: string

Request Body:

Description: modification of the resource.

Required/Optional: true

Content:

application/merge-patch+json:

Schema:

Reference: '#/components/schemas/AppSessionContextUpdateData'

Responses:

'200' successful modification of the resource and a representation of that resource is returned

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AppSessionContext'

'204' The successful modification

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

Callbacks:

eventNotification:

'{\$request.body#/evSubsc/notifUri}/notify':

Method: Post

Request Body:

Description: Notification of an event occurrence in the PCF.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/EventsNotification'

Responses:

'204': The receipt of the notification is acknowledged

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/app-sessions/{appSessionId}/delete

Method: Post

Summary: "Deletes an existing Individual Application Session Context"

Operation ID: DeleteAppSession

Tags:

- Individual Application Session Context (Document)

Parameters:

- name: appSessionId

Description: string identifying the Individual Application Session Context resource

In: path

Required/Optional: true

Schema:

Type: string

Request Body:**Description:** deletion of the Individual Application Session Context resource, req notification**Required/Optional:** false**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/EventsSubscReqData'**Responses:****'200'** The deletion of the resource is confirmed and a resource is returned**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/AppSessionContext'**'204'** The deletion is confirmed without returning additional data.**'400'**: Reference 'TS29571_CommonData.yaml#/components/responses/400'**'401'**: Reference 'TS29571_CommonData.yaml#/components/responses/401'**'403'**: Reference 'TS29571_CommonData.yaml#/components/responses/403'**'404'**: Reference 'TS29571_CommonData.yaml#/components/responses/404'**'411'**: Referencehttps://raw.githubusercontent.com/jdegre/5GC_APIs/master/TS29571_CommonData.yaml#/components/responses/411**'413'**: Reference 'TS29571_CommonData.yaml#/components/responses/413'**'415'**: Reference 'TS29571_CommonData.yaml#/components/responses/415'**'429'**: Referencehttps://raw.githubusercontent.com/jdegre/5GC_APIs/master/TS29571_CommonData.yaml#/components/responses/429**'500'**: Reference 'TS29571_CommonData.yaml#/components/responses/500'**'503'**: Reference 'TS29571_CommonData.yaml#/components/responses/503'**default**: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/app-sessions/{appSessionId}/events-subscription

put:**Summary:** "creates or modifies an Events Subscription subresource"**Operation ID:** updateEventsSubsc**Tags:**

- Events Subscription (Document)

Parameters:

- name: appSessionId

Description: string identifying the Events Subscription resource

In: path

Required/Optional: true

Schema:

Type: string

Request Body:

Description: Creation or modification of an Events Subscription resource.

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/EventsSubscReqData'

Responses:

'201' The creation of the Events Subscription resource is confirmed and its representation is returned.

Content:

Application/JSON:

Schema:

anyOf:

- \$ref: '#/components/schemas/EventsSubscReqData'

- \$ref: '#/components/schemas/EventsNotification'

Headers:

Location:

Description: 'Contains the URI of the created Events Subscription resource, according to the structure: {apiRoot}/npcf-policyauthorization/v1/app-sessions/{appSessionId}/events-subscription'

Required/Optional: true

Schema:

Type: string

'200' The modification of the of the Events Subscription resource is confirmed its representation is returned.

Content:

Application/JSON:

Schema:

anyOf:

- \$ref: '#/components/schemas/EventsSubscReqData'

- \$ref: '#/components/schemas/EventsNotification'

'204' The modification of the Events Subscription subresource is confirmed without returning additional data.

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

Callbacks:

eventNotification:

'{\$request.body#/notifUri}/notify':

Method: Post

Request Body:

Description: Contains the information for the notification of an event occurrence in the PCF.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/EventsNotification'

Responses:

'204' The receipt of the notification is acknowledged.

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

delete:

Summary: deletes the Events Subscription subresource

Operation ID: DeleteEventsSubsc

Tags:

- Events Subscription (Document)

Parameters:

- name: appSessionId

Description: string identifying the Individual Application Session Context resource

In: path

Required/Optional: true

Schema:

Type: string

Responses:

'204': The deletion of the of the Events Subscription sub-resource is confirmed without returning additional data.

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

npcf-policyauthorization: Access to the Npcf_PolicyAuthorization API

schemas

AppSessionContext

Description: Represents an Individual Application Session Context resource.

Type: object

Properties:

ascReqData:

Reference: '#/components/schemas/AppSessionContextReqData'

ascRespData:

Reference: '#/components/schemas/AppSessionContextRespData'

evsNotif:

Reference: '#/components/schemas/EventsNotification'

AppSessionContextReqData

Description: Identifies the service requirements of an Individual Application Session Context.

Type: object

Required:

- notifUri

- suppFeat

oneOf:

- required: [ueIpv4]

- required: [ueIpv6]

- required: [ueMac]

Properties:

afAppId:

Reference: '#/components/schemas/AfAppId'

afRoutReq:

Reference: '#/components/schemas/AfRoutingRequirement'

aspId:

Reference: '#/components/schemas/AspId'

bdtRefId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/BdtReferenceId'

dnn:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/Dnn'**evSubsc:****Reference:** '#/components/schemas/EventsSubscReqData'**medComponents:****Type:** object**additionalProperties:****Reference:** '#/components/schemas/MediaComponent'**minProperties:** 1**ipDomain:****Type:** string**mppsId:****Description:** indication of MPS service request**Type:** string**notifUri:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/Uri'**sliceInfo:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Snssai'**sponId:****Reference:** '#/components/schemas/SponId'**sponStatus:****Reference:** '#/components/schemas/SponsoringStatus'**supi:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Supi'**suppFeat:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**ueIpv4:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'**ueIpv6:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'**ueMac:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/MacAddr48'

AppSessionContextRespData

Description: Describes the authorization data of an Individual Application Session Context created by the PCF.

Type: object

Properties:

servAuthInfo:

Reference: '#/components/schemas/ServAuthInfo'

suppFeat:

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

AppSessionContextUpdateData

Description: Identifies the modifications to an Individual Application Session Context and may include the modifications to the sub-resource Events Subscription.

Type: object

Properties:

afAppId:

Reference: '#/components/schemas/AfAppId'

afRoutReq:

Reference: '#/components/schemas/AfRoutingRequirementRm'

aspId:

Reference: '#/components/schemas/AspId'

bdtRefId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/BdtReferenceId'

evSubsc:

Reference: '#/components/schemas/EventsSubscReqDataRm'

medComponents:

Type: object

additionalProperties:

Reference: '#/components/schemas/MediaComponentRm'

minProperties: 1

mpsId:

Description: indication of MPS service request

Type: string

sponId:

Reference: '#/components/schemas/SponId'

sponStatus:

Reference: '#/components/schemas/SponsoringStatus'

EventsSubscReqData

Description: Identifies the events the application subscribes to.

Type: object

Required:

- events

Properties:

events:

Type: array

Items:

Reference: '#/components/schemas/AfEventSubscription'

minItems: 1

notifUri:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Uri'

usgThres:

Reference: 'TS29122_CommonData.yaml#/components/schemas/UsageThreshold'

EventsSubscReqDataRm

Description: this data type is defined in the same way as the EventsSubscReqData data type, but with the OpenAPI nullable property set to true.

Type: object

Required:

- events

Properties:

events:

Type: array

Items:

Reference: '#/components/schemas/AfEventSubscription'

notifUri:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Uri'

usgThres:

Reference: 'TS29122_CommonData.yaml#/components/schemas/UsageThresholdRm'

nullable: true

MediaComponent

Description: Identifies a media component.

Type: object

Required:

- medCompN

Properties:

afAppId:

Reference: '#/components/schemas/AfAppId'

afRoutReq:

Reference: '#/components/schemas/AfRoutingRequirement'

contVer:

Reference: '#/components/schemas/ContentVersion'

codecs:

Type: array

Items:

Reference: '#/components/schemas/CodecData'

minItems: 1

maxItems: 2

fStatus:

Reference: '#/components/schemas/FlowStatus'

marBwDI:

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

marBwUI:

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

medCompN:

Type: integer

medSubComps:

Type: object

additionalProperties:

Reference: '#/components/schemas/MediaSubComponent'

minProperties: 1

medType:

Reference: '#/components/schemas/MediaType'

mirBwDI:

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

mirBwUI:

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

resPrio:

Reference: '#/components/schemas/ReservPriority'

MediaComponentRm

Description: This data type is defined in the same way as the MediaComponent data type, but with the OpenAPI nullable property set to true

Type: object

Required:

- medCompN

Properties:

afAppId:

Reference: '#/components/schemas/AfAppId'

afRoutReq:

Reference: '#/components/schemas/AfRoutingRequirementRm'

contVer:

Reference: '#/components/schemas/ContentVersion'

codecs:

Type: array

Items:

Reference: '#/components/schemas/CodecData'

minItems: 1

maxItems: 2

fStatus:

Reference: '#/components/schemas/FlowStatus'

marBwDI:

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

marBwUI:

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

medCompN:

Type: integer

medSubComps:

Type: object

additionalProperties:**Reference:** '#/components/schemas/MediaSubComponentRm'**minProperties:** 1**medType:****Reference:** '#/components/schemas/MediaType'**mirBwDL:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/BitRateRm'**mirBwUL:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/BitRateRm'**resPrio:****Reference:** '#/components/schemas/ReservPriority'**nullable:** true

MediaSubComponent

Description: Identifies a media subcomponent**Type:** object**Required:**

- fNum

Properties:**ethfDescs:****Type:** array**Items:****Reference:** '#/components/schemas/EthFlowDescription'**minItems:** 1**maxItems:** 2**fNum:****Type:** integer**fDescs:****Type:** array**Items:****Reference:** '#/components/schemas/FlowDescription'**minItems:** 1**maxItems:** 2**fStatus:****Reference:** '#/components/schemas/FlowStatus'

marBwDI:

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

marBwUI:

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

tosTrCl:

Reference: '#/components/schemas/TosTrafficClass'

flowUsage:

Reference: '#/components/schemas/FlowUsage'

MediaSubComponentRm

Description: This data type is defined in the same way as the MediaSubComponent data type, but with the OpenAPI nullable property set to true. Removable attributes marBwDI and marBwUI are defined with the corresponding removable data type.

Type: object

Required:

- fNum

Properties:

ethfDescs:

Type: array

Items:

Reference: '#/components/schemas/EthFlowDescription'

minItems: 1

maxItems: 2

nullable: true

fNum:

Type: integer

fDescs:

Type: array

Items:

Reference: '#/components/schemas/FlowDescription'

minItems: 1

maxItems: 2

nullable: true

fStatus:

Reference: '#/components/schemas/FlowStatus'

marBwDI:

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

marBwUI:

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

tosTrCl:

Reference: '#/components/schemas/TosTrafficClassRm'

flowUsage:

Reference: '#/components/schemas/FlowUsage'

nullable: true

EventsNotification

Description: describes the notification of a matched event

Type: object

Required:

- evSubsUri
- evNotifs

Properties:

accessType:

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

anGwAddr:

Reference: '#/components/schemas/AnGwAddress'

evSubsUri:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Uri'

evNotifs:

Type: array

Items:

Reference: '#/components/schemas/AfEventNotification'

minItems: 1

failedResourceAllocReports:

Type: array

Items:

Reference: '#/components/schemas/ResourcesAllocationInfo'

minItems: 1

plmnId:

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

qncReports:**Type:** array**Items:****Reference:** '#/components/schemas/QosNotificationControlInfo'**minItems:** 1**ratType:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/RatType'**usgRep:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/AccumulatedUsage'

AfEventSubscription

Description: describes the event information delivered in the subscription**Type:** object**Required:**

- event

Properties:**event:****Reference:** '#/components/schemas/AfEvent'**notifMethod:****Reference:** '#/components/schemas/AfNotifMethod'

AfEventNotification

Description: describes the event information delivered in the notification**Type:** object**Required:**

- event

Properties:**event:****Reference:** '#/components/schemas/AfEvent'**Flows:****Type:** array**Items:****Reference:** '#/components/schemas/Flows'**minItems:** 1

TerminationInfo

Description: indicates the cause for requesting the deletion of the Individual Application Session Context resource

Type: object

Required:

- termCause

- resUri

Properties:

termCause:

Reference: '#/components/schemas/TerminationCause'

resUri:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Uri'

AfRoutingRequirement

Description: describes the event information delivered in the subscription

Type: object

Properties:

appReloc:

Type: boolean

routeToLocs:

Type: array

Items:

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

minItems: 1

spVal:

Reference: '#/components/schemas/SpatialValidity'

tempVals:

Type: array

Items:

Reference: '#/components/schemas/TemporalValidity'

minItems: 1

upPathChgSub:

Reference: 'TS29512_Npcf_SMPolicyControl.yaml#/components/schemas/UpPathChgEvent'

SpatialValidity

Description: describes explicitly the route to an Application location

Type: object

Required:

- presenceInfoList

Properties:

presenceInfoList:

Type: object

additionalProperties:

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

minProperties: 1

SpatialValidityRm

Description: this data type is defined in the same way as the SpatialValidity data type, but with the OpenAPI nullable property set to true

Type: object

Required:

- presenceInfoList

Properties:

presenceInfoList:

Type: object

additionalProperties:

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

minProperties: 1

nullable: true

AfRoutingRequirementRm

Description: this data type is defined in the same way as the AfRoutingRequirement data type, but with the OpenAPI nullable property set to true and the spVal and tempVals attributes defined as removable.

Type: object

Properties:

appReloc:

Type: boolean

routeToLocs:

Type: array

Items:

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

minItems: 1

nullable: true

spVal:

Reference: '#/components/schemas/SpatialValidityRm'

tempVals:

Type: array

Items:

Reference: '#/components/schemas/TemporalValidity'

minItems: 1

nullable: true

upPathChgSub:

Reference: 'TS29512_Npcf_SMPolicyControl.yaml#/components/schemas/UpPathChgEvent'

nullable: true

AnGwAddress

Description: describes the address of the access network gateway control node

Type: object

anyOf:

- required: [anGwIpv4Addr]

- required: [anGwIpv6Addr]

Properties:

anGwIpv4Addr:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

anGwIpv6Addr:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'

Flows

Description: Identifies the flows

Type: object

Required:

- medCompN

Properties:

contVers:

Type: array

Items:**Reference:** '#/components/schemas/ContentVersion'**minItems:** 1**fNums:****Type:** array**Items:****Type:** integer**minItems:** 1**medCompN:****Type:** integer

EthFlowDescription

Description: Identifies an Ethernet flow**Type:** object**Required:**

- ethType

Properties:**destMacAddr:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/MacAddr48'**ethType:****Type:** string**fDesc:****Reference:** '#/components/schemas/FlowDescription'**fDir:****Reference:** 'TS29512_Npcf_SMPolicyControl.yaml#/components/schemas/FlowDirection'**sourceMacAddr:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/MacAddr48'**vlanTags:****Type:** array**Items:****Type:** string**minItems:** 1**maxItems:** 2

ResourcesAllocationInfo

Description: describes the status of the PCC rule(s) related to certain media components.

Type: object

Required:

- mcResourceStatus

Properties:

mcResourceStatus:

Reference: '#/components/schemas/MediaComponentResourcesStatus'

Flows:

Type: array

Items:

Reference: '#/components/schemas/Flows'

minItems: 1

TemporalValidity

Description: Indicates the time interval(s) during which the AF request is to be applied

Type: object

Properties:

startTime:

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

stopTime:

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

QosNotificationControlInfo

Description: Indicates whether the QoS targets for a GRB flow are not guaranteed or guaranteed again

Type: object

Required:

- notifType

Properties:

notifType:

Reference: '#/components/schemas/QosNotifType'

Flows:

Type: array

Items:

Reference: '#/components/schemas/Flows'

minItems: 1

SIMPLE DATA TYPES

AfAppld

Description: Contains an AF application identifier.

Type: string

Aspld

Description: Contains an identity of an application service provider.

Type: string

CodecData

Description: Contains codec related information.

Type: string

ContentVersion

Description: Represents the content version of some content.

Type: integer

FlowDescription

Description: Defines a packet filter of an IP flow.

Type: string

SponId

Description: Contains an identity of a sponsor.

Type: string

TosTrafficClass

Description: 2-octet string, where each octet is encoded in hexadecimal representation. The first octet contains the IPv4 Type-of-Service or the IPv6 Traffic-Class field and the second octet contains the ToS/Traffic Class mask field.

Type: string

TosTrafficClassRm

Description: this data type is defined in the same way as the TosTrafficClass data type, but with the OpenAPI nullable property set to true

Type: string

nullable: true

ENUMERATIONS DATA TYPES

Media Type

anyOf:

- type: string

enum:

- AUDIO

- VIDEO

- DATA

- APPLICATION

- CONTROL

- TEXT

- MESSAGE

- OTHER

- type: string

ReservPriority

anyOf:

- type: string

enum:

- Prio_1

- Prio_2

- Prio_3

- Prio_4

- Prio_5

- Prio_6

- Prio_7

- Prio_8

- Prio_9

- Prio_10

- Prio_11

- Prio_12

- Prio_13

- Prio_14

- Prio_15

- Prio_16

- type: string

ServAuthInfo

anyOf:
- type: string

SponsoringStatus

anyOf:
- type: string

AfEvent

anyOf:
- type: string

AfNotifMethod

anyOf:
- type: string

QosNotifType

anyOf:
- type: string

TerminationCause

anyOf:
- type: string

MediaComponentResourcesStatus

anyOf:
- type: string

FlowUsage

anyOf:
- type: string

FlowStatus

anyOf:
- type: string



CHAPTER 24

Npcf_SMPolicyControl

The Session Management Policy Control Service performs provisioning, update and removal of session related policies and PCC rules by the Policy Control Function (PCF) to the NF service consumer (i.e. SMF). The Session Management Policy Control Service can be used for charging control, policy control and/or application detection and control. Session Management Policy Control Service applies to the cases where the SMF interacts with the PCF in the non-roaming scenario. The V-SMF interacts with the V-PCF in the local breakout roaming scenario and the H-SMF interacts with the H-PCF in the home-routed scenario.

Reference: 3GPP TS 29.512 version 15.0.0 Release 15

- [OpenAPI, on page 395](#)
- [info, on page 395](#)
- [externalDocs, on page 395](#)
- [security, on page 396](#)
- [servers, on page 396](#)
- [paths, on page 396](#)
- [components, on page 402](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Description: Session Management Policy Control Service

Version: "1.0.0"

Title: Npcf_SMPolicyControl

externalDocs

Description: 3GPP TS 29.512 V15.2.0; 5G System; Session Management Policy Control Service.

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.512/'

security

- {}
- oAuth2Clientcredentials:
- npcf-smpolicycontrol

servers

URL: '{apiRoot}/npcf-smpolicycontrol/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 4.4 of 3GPP TS 29.501

paths

/sm-policies

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmPolicyContextData'

Responses:

'201' Created

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmPolicyDecision'

Headers:

Location:

Description: 'Contains the URI of the newly created resource'

Required/Optional: true

Schema:**Type:** string**'400':** Reference 'TS29571_CommonData.yaml#/components/responses/400'**'401':** Reference 'TS29571_CommonData.yaml#/components/responses/401'**'403':** Reference 'TS29571_CommonData.yaml#/components/responses/403'**'404'** Not Found**'411':** Reference 'TS29571_CommonData.yaml#/components/responses/411'**'413':** Reference 'TS29571_CommonData.yaml#/components/responses/413'**'415':** Reference 'TS29571_CommonData.yaml#/components/responses/415'**'429':** Reference 'TS29571_CommonData.yaml#/components/responses/429'**'500':** Reference 'TS29571_CommonData.yaml#/components/responses/500'**'503':** Reference 'TS29571_CommonData.yaml#/components/responses/503'**default:** Reference 'TS29571_CommonData.yaml#/components/responses/default'**Callbacks:****SmPolicyUpdateNotification:**

'{\$request.body#/notificationUri}/update':

Method: Post**Request Body:****Required/Optional:** true**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/SmPolicyNotification'**Responses:****'200'** OK. The current applicable values corresponding to the policy control request trigger is reported**Content:****Application/JSON:****Schema:****oneOf:**

- \$ref: '#/components/schemas/UeCampingRep'

- type: array

items:**Reference:** '#/components/schemas/PartialSuccessReport'**minItems:** 1

'204' No Content, Notification was successful

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/RuleReport'

'400' Bad Request.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ErrorResponse'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

SmPolicyControlTerminationRequestNotification:

'{\$request.body#/notificationUri}/terminate':

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TerminationNotification'

Responses:

'204' No Content, Notification was successful

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'
 '411': Reference 'TS29571_CommonData.yaml#/components/responses/411'
 '413': Reference 'TS29571_CommonData.yaml#/components/responses/413'
 '415': Reference 'TS29571_CommonData.yaml#/components/responses/415'
 '429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
 '500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
 '503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/sm-policies/{smPolicyId}

get:

Parameters:

- name: smPolicyId

In: path

Description: Identifier of a policy association

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK. Resource representation is returned

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmPolicyControl'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'
 '401': Reference 'TS29571_CommonData.yaml#/components/responses/401'
 '403': Reference 'TS29571_CommonData.yaml#/components/responses/403'
 '404': Reference 'TS29571_CommonData.yaml#/components/responses/404'
 '406': Reference 'TS29571_CommonData.yaml#/components/responses/406'
 '429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
 '500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
 '503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/sm-policies/{smPolicyId}/update

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmPolicyUpdateContextData'

Parameters:

- name: smPolicyId

In: path

Description: Identifier of a policy association

Required/Optional: true

Schema:

Type: string

Responses:

'200': OK. Updated policies are returned

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmPolicyDecision'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/sm-policies/{smPolicyId}/delete

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmPolicyDeleteData'

Parameters:

- name: smPolicyId

In: path

Description: Identifier of a policy association

Required/Optional: true

Schema:

Type: string

Responses:

'204': No content

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

npcf-smpolicycontrol: Access to the Npcf_SMPolicyControl API

schemas

SmPolicyControl :

Type: object

Properties:

context:

Reference: '#/components/schemas/SmPolicyContextData'

policy:

Reference: '#/components/schemas/SmPolicyDecision'

Required:

- context

- policy

SmPolicyContextData

Type: object

Properties:

accNetChId:

Reference: '#/components/schemas/AccNetChId'

chargEntityAddr:

Reference: '#/components/schemas/AccNetChargingAddress'

gpsi:

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

supi:

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

interGrpIds:

Type: array

Items:

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

minItems: 1

pduSessionId:

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

pduSessionType:

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

chargingcharacteristics:

Type: string

dnn:

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

notificationUri:

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

accessType:

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

ratType:

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

servingNetwork:

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

userLocationInfo:

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

ueTimeZone:

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

pei:

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

ipv4Address:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

ipv6AddressPrefix:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'

ipDomain:

Type: string

Description: Indicates the IPv4 address domain

subsSessAmbr:

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

subsDefQos:

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

numOfPackFilter:

Type: integer

Description: Contains the number of supported packet filter for signalled QoS rules.

online:

Type: boolean

Description: If it is included and set to true, the online charging is applied to the PDU session.

offline:

Type: boolean

Description: If it is included and set to true, the offline charging is applied to the PDU session.

3gppPsDataOffStatus:

Type: boolean

Description: If it is included and set to true, the 3GPP PS Data Off is activated by the UE.

refQosIndication:

Type: boolean

Description: If it is included and set to true, the reflective QoS is supported by the UE.

traceReq:

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

sliceInfo:

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

qosFlowUsage:

Reference: '#/components/schemas/QosFlowUsage'

suppFeat:

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

Required:

- supi
- pduSessionId
- pduSessionType
- dnn
- notificationUri

- sliceInfo

SmPolicyDecision

Type: object

Properties:

sessRules:

Type: object

additionalProperties:

Reference: '#/components/schemas/SessionRule'

minProperties: 1

Description: A map of Sessionrules with the content being the SessionRule as described in subclause 5.6.2.7.

pccRules:

Type: object

additionalProperties:

Reference: '#/components/schemas/PccRule'

minProperties: 1

Description: A map of PCC rules with the content being the PCCRule as described in subclause 5.6.2.6.

nullable: true

pcscfRestIndication:

Type: boolean

Description: If it is included and set to true, it indicates the P-CSCF Restoration is requested.

qosDecs:

Type: object

additionalProperties:

Reference: '#/components/schemas/QosData'

minProperties: 1

Description: Map of QoS data policy decisions.

chgDecs:

Type: object

additionalProperties:

Reference: '#/components/schemas/ChargingData'

minProperties: 1

Description: Map of Charging data policy decisions.

nullable: true

chargingInfo:

Reference: '#/components/schemas/ChargingInformation'

traffContDecs:

Type: object

additionalProperties:

Reference: '#/components/schemas/TrafficControlData'

minProperties: 1

Description: Map of Traffic Control data policy decisions.

umDecs:

Type: object

additionalProperties:

Reference: '#/components/schemas/UsageMonitoringData'

minProperties: 1

Description: Map of Usage Monitoring data policy decisions.

nullable: true

qosChars:

Type: object

additionalProperties:

Reference: '#/components/schemas/QosCharacteristics'

minProperties: 1

Description: Map of QoS characteristics for non standard 5QIs. This map uses the 5QI values as keys.

reflectiveQoSTimer:

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

conds:

Type: object

additionalProperties:

Reference: '#/components/schemas/ConditionData'

minProperties: 1

Description: A map of condition data with the content being as described in subclause 5.6.2.9.

nullable: true

revalidationTime:

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

offline:

Type: boolean

Description: Indicates the offline charging is applicable to the PDU session or PCC rule.

online:**Type:** boolean**Description:** Indicates the online charging is applicable to the PDU session or PCC rule.**policyCtrlReqTriggers:****Type:** array**Items:****Reference:** '#/components/schemas/PolicyControlRequestTrigger'**minItems:** 1**Description:** Defines the policy control request triggers subscribed by the PCF.**nullable:** true**lastReqRuleData:****Type:** array**Items:****Reference:** '#/components/schemas/RequestedRuleData'**minItems:** 1**Description:** Defines the last list of rule control data requested by the PCF.**lastReqUsageData:****Reference:** '#/components/schemas/RequestedUsageData'**praInfos:****Type:** object**additionalProperties:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PresenceInfoRm'**minProperties:** 1**Description:** Map of PRA information.**nullable:** true**ipv4Index:****Reference:** 'TS29519_ApplicationData.yaml#/components/schemas/IpIndex'**Description:** Information that identifies which IP pool or external server is used to allocate the IPv4 address.**ipv6Index:****Reference:** 'TS29519_ApplicationData.yaml#/components/schemas/IpIndex'**Description:** Information that identifies which IP pool or external server is used to allocate the IPv6 address.**qosFlowUsage:****Reference:** '#/components/schemas/QosFlowUsage'**suppFeat:**

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

SmPolicyNotification

Type: object

Properties:

resourceUri:

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

smPolicyDecision:

Reference: '#/components/schemas/SmPolicyDecision'

PccRule

Type: object

Properties:

flowInfos:

Type: array

Items:

Reference: '#/components/schemas/FlowInformation'

minItems: 1

Description: An array of IP flow packet filter information.

appId:

Type: string

Description: A reference to the application detection filter configured at the UPF.

contVer:

Reference: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/ContentVersion'

pccRuleId:

Type: string

Description: Univocally identifies the PCC rule within a PDU session.

precedence:

Type: integer

Description: Determines the order in which this PCC rule is applied relative to other PCC rules within the same PDU session.

afSigProtocol:

Reference: '#/components/schemas/AfSigProtocol'

nullable: true

appReloc:

Type: boolean

Description: Indication of application relocation possibility.

refQosData:

Type: array

Items:

Type: string

minItems: 1

maxItems: 1

Description: A reference to the QoSData policy type decision type. It is the qosId described in subclause 5.6.2.8. (NOTE)

refTcData:

Type: array

Items:

Type: string

minItems: 1

maxItems: 1

Description: A reference to the TrafficControlData policy decision type. It is the tcId described in subclause 5.6.2.10. (NOTE)

refChgData:

Type: array

Items:

Type: string

minItems: 1

maxItems: 1

Description: A reference to the ChargingData policy decision type. It is the chgId described in subclause 5.6.2.11. (NOTE)

nullable: true

refUmData:

Type: array

Items:

Type: string

minItems: 1

maxItems: 1

Description: A reference to UsageMonitoringData policy decision type. It is the umId described in subclause 5.6.2.12. (NOTE)

nullable: true

refCondData:**Type:** string**Description:** A reference to the condition data. It is the condId described in subclause 5.6.2.9.**nullable:** true**Required:**

- pccRuleId

nullable: true

SessionRule

Type: object**Properties:****authSessAmbr:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ambr'**authDefQos:****Reference:** '#/components/schemas/AuthorizedDefaultQos'**sessRuleId:****Type:** string**Description:** Univocally identifies the session rule within a PDU session.**refUmData:****Type:** string**Description:** A reference to UsageMonitoringData policy decision type. It is the umId described in subclause 5.6.2.12.**nullable:** true**refCondData:****Type:** string**Description:** A reference to the condition data. It is the condId described in subclause 5.6.2.9.**nullable:** true**Required:**

- sessRuleId

nullable: true

QosData

Type: object**Properties:****qosId:**

Type: string

Description: Univocally identifies the QoS control policy data within a PDU session.

5qi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/5Qi'

maxbrUL:

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

maxbrDL:

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

gbrUL:

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

gbrDL:

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

arp:

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

qnc:

Type: boolean

Description: Indicates whether notifications are requested from 3GPP NG-RAN when the GFBR can no longer (or again) be guaranteed for a QoS Flow during the lifetime of the QoS Flow.

priorityLevel:

Reference: 'TS29571_CommonData.yaml#/components/schemas/5QiPriorityLevelRm'

averWindow:

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

maxDataBurstVol:

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

reflectiveQos:

Type: boolean

Description: Indicates whether the QoS information is reflective for the corresponding service data flow.

sharingKeyDL:

Type: string

Description: Indicates, by containing the same value, what PCC rules may share resource in downlink direction.

sharingKeyUL:

Type: string

Description: Indicates, by containing the same value, what PCC rules may share resource in uplink direction.

maxPacketLossRateDL:

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

maxPacketLossRateUl:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/PacketLossRateRm'**defQosFlowIndication:****Type:** boolean**Description:** Indicates that the dynamic PCC rule shall always have its binding with the QoS Flow associated with the default QoS rule**Required:**

- qosId

nullable: true

ConditionData

Type: object**Properties:****condId:****Type:** string**Description:** Uniquely identifies the condition data within a PDU session.**activationTime:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DateTimeRm'**deactivationTime:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DateTimeRm'**Required:**

- condId

nullable: true

TrafficControlData

Type: object**Properties:****tcId:****Type:** string**Description:** Univocally identifies the traffic control policy data within a PDU session.**flowStatus:****Reference:** 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/FlowStatus'**redirectInfo:****Reference:** '#/components/schemas/RedirectInformation'**muteNotif:**

Type: boolean

Description: Indicates whether applicat'on's start or stop notification is to be muted.

trafficSteeringPolIdDI:

Type: string

Description: Reference to a pre-configured traffic steering policy for downlink traffic at the SMF.

nullable: true

trafficSteeringPolIdUI:

Type: string

Description: Reference to a pre-configured traffic steering policy for uplink traffic at the SMF.

nullable: true

routeToLocs:

Type: array

Items:

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

minItems: 1

Description: A list of location which the traffic shall be routed to for the AF request

upPathChgEvent:

Reference: '#/components/schemas/UpPathChgEvent'

Required:

- tcId

nullable: true

ChargingData

Type: object

Properties:

chgId:

Type: string

Description: Univocally identifies the charging control policy data within a PDU session.

meteringMethod:

Reference: '#/components/schemas/MeteringMethod'

nullable: true

offline:

Type: boolean

Description: Indicates the offline charging is applicable to the PDU session or PCC rule.

online:

Type: boolean

Description: Indicates the online charging is applicable to the PDU session or PCC rule.

ratingGroup:

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

reportingLevel:

Reference: '#/components/schemas/ReportingLevel'

nullable: true

serviceId:

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

sponsorId:

Type: string

Description: Indicates the sponsor identity.

appSvcProvId:

Type: string

Description: Indicates the application service provider identity.

afChargingIdentifier:

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

Required:

- chgId

nullable: true

UsageMonitoringData

Type: object

Properties:

umId:

Type: string

Description: Univocally identifies the usage monitoring policy data within a PDU session.

volumeThreshold:

Reference: 'TS29122_CommonData.yaml#/components/schemas/VolumeRm'

volumeThresholdUplink:

Reference: 'TS29122_CommonData.yaml#/components/schemas/VolumeRm'

volumeThresholdDownlink:

Reference: 'TS29122_CommonData.yaml#/components/schemas/VolumeRm'

timeThreshold:

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

monitoringTime:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/DateTimeRm'**nextVolThreshold:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/VolumeRm'**nextVolThresholdUplink:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/VolumeRm'**nextVolThresholdDownlink:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/VolumeRm'**nextTimeThreshold:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DurationSecRm'**inactivityTime:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DurationSecRm'**exUsagePccRuleIds:****Type:** array**Items:****Type:** string**minItems:** 1**Description:** Contains the PCC rule identifier(s) which corresponding service data flow(s) shall be excluded from PDU Session usage monitoring. It is only included in the UsageMonitoringData instance for session level usage monitoring.**nullable:** true**Required:**

- umId

nullable: true

RedirectInformation

Type: object**Properties:****redirectEnabled:****Type:** boolean**Description:** Indicates the redirect is enable.**redirectAddressType:****Reference:** '#/components/schemas/RedirectAddressType'**redirectServerAddress:****Type:** string

Description: Indicates the address of the redirect server.

FlowInformation

Type: object

Properties:

flowDescription:

Reference: '#/components/schemas/FlowDescription'

ethFlowDescription:

Reference: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/EthFlowDescription'

Description: Defines a packet filter for an Ethernet flow. "fDir" attribute is not applicable.

packFiltId:

Type: string

Description: An identifier of packet filter.

packetFilterUsage:

Type: boolean

Description: The packet shall be sent to the UE.

tosTrafficClass:

Type: string

Description: Contains the Ipv4 Type-of-Service and mask field or the Ipv6 Traffic-Class field and mask field.

nullable: true

spi:

Type: string

Description: the security parameter index of the IPSec packet.

nullable: true

flowLabel:

Type: string

Description: the Ipv6 flow label header field.

nullable: true

flowDirection:

Reference: '#/components/schemas/FlowDirectionRm'

SmPolicyDeleteData

Type: object

Properties:

userLocationInfo:

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

ueTimeZone:

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

servingNetwork:

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

userLocationInfoTime:

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

ranNasRelCauses:

Type: array

Items:

Reference: '#/components/schemas/RanNasRelCause'

minItems: 1

Description: Contains the RAN and/or NAS release cause.

accuUsageReports:

Type: array

Items:

Reference: '#/components/schemas/AccuUsageReport'

minItems: 1

Description: Contains the usage report

QosCharacteristics

Type: object

Properties:

5qi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/5Qi'

resourceType:

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

priorityLevel:

Reference: 'TS29571_CommonData.yaml#/components/schemas/5QiPriorityLevel'

packetDelayBudget:

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

packetErrorRate:

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

averagingWindow:

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

maxDataBurstVol:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/MaxDataBurstVol'**Required:**

- 5qi
- resourceType
- priorityLevel
- packetDelayBudget
- packetErrorRate

ChargingInformation

Type: object**Properties:****primaryChfAddress:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**secondaryChfAddress:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**Required:**

- primaryChfAddress
- secondaryChfAddress

AccuUsageReport

Type: object**Properties:****refUmIds:****Type:** string**Description:** An id referencing UsageMonitoringData objects associated with this usage report.**volUsage:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/Volume'**volUsageUplink:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/Volume'**volUsageDownlink:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/Volume'**timeUsage:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DurationSec'**nextVolUsage:**

Reference: 'TS29122_CommonData.yaml#/components/schemas/Volume'

nextVolUsageUplink:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Volume'

nextVolUsageDownlink:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Volume'

nextTimeUsage:

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

Required:

- refUmIds

SmPolicyUpdateContextData

Type: object

Properties:

repPolicyCtrlReqTriggers:

Type: array

Items:

Reference: '#/components/schemas/PolicyControlRequestTrigger'

minItems: 1

Description: The policy control request triggers which are met.

accNetChIds:

Type: array

Items:

Reference: '#/components/schemas/AccNetChId'

minItems: 1

Description: Indicates the access network charging identifier for the PCC rule(s) or whole PDU session.

accessType:

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

ratType:

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

servingNetwork:

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

userLocationInfo:

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

ueTimeZone:

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

relIpv4Address:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'**ipv4Address:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'**ipv6AddressPrefix:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'**relIpv6AddressPrefix:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'**relUeMac:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/MacAddr48'**ueMac:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/MacAddr48'**subsSessAmbr:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ambr'**subsDefQos:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SubscribedDefaultQos'**numOfPackFilter:****Type:** integer**Description:** Contains the number of supported packet filter for signalled QoS rules.**accuUsageReports:****Type:** array**Items:****Reference:** '#/components/schemas/AccuUsageReport'**minItems:** 1**Description:** Contains the usage report**3gppPsDataOffStatus:****Type:** boolean**Description:** If it is included and set to true, the 3GPP PS Data Off is activated by the UE.**appDetectionInfos:****Type:** array**Items:****Reference:** '#/components/schemas/AppDetectionInfo'**minItems:** 1**Description:** Report the start/stop of the application traffic and detected SDF descriptions if applicable.

ruleReports:**Type:** array**Items:****Reference:** '#/components/schemas/RuleReport'**minItems:** 1**Description:** Used to report the PCC rule failure.**qncReports:****Type:** array**Items:****Reference:** '#/components/schemas/QosNotificationControlInfo'**minItems:** 1**Description:** QoS Notification Control information.**userLocationInfoTime:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DateTime'**repPraInfos:****Type:** object**additionalProperties:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PresenceInfo'**minProperties:** 1**Description:** Reports the changes of presence reporting area.**ueInitResReq:****Reference:** '#/components/schemas/UeInitiatedResourceRequest'**Description:** Indicates a UE requests specific QoS handling for selected SDF.**refQosIndication:****Type:** boolean**Description:** If it is included and set to true, the reflective QoS is supported by the UE. If it is included and set to false, the reflective QoS is revoked by the UE.**qosFlowUsage:****Reference:** '#/components/schemas/QosFlowUsage'**traceReq:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/TraceData'

UpPathChgEvent

Type: object**Properties:**

notificationUri:

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

notifCorreId:

Type: string

Description: It is used to set the value of Notification Correlation ID in the notification sent by the SMF.

dnaiChgType:

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

Required:

- notificationUri
- notifCorreId
- dnaiChgType

nullable: true

TerminationNotification

Type: object

Properties:

resourceUri:

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

cause:

Reference: 'TS29507_Npcf_AMPolicyControl.yaml#/components/schemas/PolicyAssociationReleaseCause'

Required:

- resourceUri
- cause

AppDetectionInfo :

Type: object

Properties:

appId:

Type: string

Description: A reference to the application detection filter configured at the UPF

instanceId:

Type: string

Description: Identifier dynamically assigned by the SMF in order to allow correlation of application Start and Stop events to the specific service data flow description, if service data flow descriptions are deducible.

sdfDescriptions:

Type: array

Items:**Reference:** '#/components/schemas/FlowInformation'**minItems:** 1**Description:** Contains the detected service data flow descriptions if they are deducible.**Required:**

- appId

AccNetChId

Type: object**Properties:****accNetChaIdValue:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/ChargingId'**refPccRuleIds:****Type:** array**Items:****Type:** string**minItems:** 1**Description:** Contains the identifier of the PCC rule(s) associated to the provided Access Network Charging Identifier.**sessionChScope:****Type:** boolean**Description:** When it is included and set to true, indicates the Access Network Charging Identifier applies to the whole PDU Session**Required:**

- accNetChaIdValue

AccNetChargingAddress

Description: Describes the network entity within the access network performing charging**Type:** object**anyOf:**

- required: [anChargIpv4Addr]

- required: [anChargIpv6Addr]

Properties:**anChargIpv4Addr:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'**anChargIpv6Addr:**

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'

RequestedRuleData

Type: object

Properties:

refPccRuleIds:

Type: array

Items:

Type: string

minItems: 1

Description: An array of PCC rule id references to the PCC rules associated with the control data.

reqData:

Type: array

Items:

Reference: '#/components/schemas/RequestedRuleDataType'

minItems: 1

Description: Array of requested rule data type elements indicating what type of rule data is requested for the corresponding referenced PCC rules.

Required:

- refPccRuleIds
- reqData

RequestedUsageData

Type: object

Properties:

refUmIds:

Type: array

Items:

Type: string

minItems: 1

Description: An array of usage monitoring data id references to the usage monitoring data instances for which the PCF is requesting a usage report. This attribute shall only be provided when allUmIds is not set to true.

allUmIds:

Type: boolean

Description: Th oolean indicates whether requested usage data applies to all usage monitoring data instances. When it's not included, it means requested usage data shall only apply to the usage monitoring data instances referenced by the refUmIds attribute.

UeCampingRep

Type: object

Properties:

accessType:

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

Description: The Access Type where the served UE is camping

ratType:

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

servingNetwork:

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

userLocationInfo:

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

ueTimeZone:

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

RuleReport

Type: object

Properties:

pccRuleIds:

Type: array

Items:

Type: string

minItems: 1

Description: Contains the identifier of the affected PCC rule(s).

ruleStatus:

Reference: '#/components/schemas/RuleStatus'

Description: Indicates the status of the PCC rule(s).

contVers:

Type: array

Items:

Reference: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/ContentVersion'

minItems: 1

Description: Indicates the version of a PCC rule.

failureCode:

Reference: '#/components/schemas/FailureCode'

Description: Indicates the reason tha the PCC Rule is being reported.

finUnitAct:

Reference: 'TS32291_Nchf_ConvergedCharging.yaml#/components/schemas/FinalUnitAction'

Description: Contains the related filter parameters and redirect address parameters (if available), when the user's account cannot cover the service cost.

ranNasRelCauses:

Type: array

Items:

Reference: '#/components/schemas/RanNasRelCause'

minItems: 1

Description: indicates the RAN or NAS release cause code information.

Required:

- pccRuleIds
- ruleStatus
- failureCode

RanNasRelCause

Type: object

Properties:

ngApCause:

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

Description: Indicate the cause value for NGAP protocol.

5gMmCause:

Reference: 'TS29571_CommonData.yaml#/components/schemas/5GMmCause'

Description: Indicate the cause value for 5GMM protocol.

5gSmCause:

Reference: '#/components/schemas/5GSmCause'

Description: Indicate the cause value for 5GSM protocol.

UeInitiatedResourceRequest

Type: object

Properties:

packFiltOp:

Reference: '#/components/schemas/PacketFilterOperation'

Description: Indicates a UE requests specific QoS handling for selected SDF.

packFiltInfo:

Type: array

Items:

Reference: '#/components/schemas/PacketFilterInfo'

Description: Contains the information from a single packet filter sent from the SMF to the PCF.

minItems: 1

reqQos:

Reference: '#/components/schemas/RequestedQos'

Description: Contains the QoS information requested by the UE.

Required:

- packFiltOp
- packFiltInfo

PacketFilterInfo

Type: object

Properties:

packFiltId:

Type: string

Description: An identifier of packet filter.

precedence:

Type: integer

Description: The requested order for the PCC rule generated from the packet filter information.

packFiltCont:

Reference: '#/components/schemas/PacketFilterContent'

Description: Contains the content of the packet filter as requested by the UE and required by the PCF to create the PCC rules.

tosTrafficClass:

Type: string

Description: Contains the Ipv4 Type-of-Service and mask field or the Ipv6 Traffic-Class field and mask field.

spi:

Type: string

Description: The security parameter index of the IPSec packet.

flowLabel:

Type: string

Description: The Ipv6 flow label header field.

flowDirection:

Reference: '#/components/schemas/FlowDirection'

Description: Indicates the direction/directions that a filter is applicable, downlink only, uplink only or both down- and uplink (bidirectional).

RequestedQos

Type: object

Properties:

5qi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/5Qi'

Description: Identifier for the authorized QoS parameters for the service data flow.

gbrUl:

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

Description: Indicates the guaranteed bandwidth in uplink requested by the UE.

gbrDl:

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

Description: Indicates the guaranteed bandwidth in downlink requested by the UE.

Required:

- 5qi

QosNotificationControlInfo

Type: object

Properties:

refPccRuleIds:

Type: array

Items:

Type: string

minItems: 1

Description: An array of PCC rule id references to the PCC rules associated with the QoS notification control info.

notifType:

Reference: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/QosNotifType'

contVer:

Reference: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/ContentVersion'

Required:

- refPccRuleIds
- notifType

PartialSuccessReport

Type: object

Properties:

failureCause:

Type: string

Description: Application error cause specific to this report.

ruleReports:

Type: array

Items:

Reference: '#/components/schemas/RuleReport'

minItems: 1

Description: Information about the PCC rules provisioned by the PCF not successfully installed/activated.

ueCampingRep:

Reference: '#/components/schemas/UeCampingRep'

Description: Includes the current applicable values corresponding to the provisioned policy control request triggers.

Required:

- failureCause
- ruleReports

AuthorizedDefaultQos

Type: object

Properties:

5qi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/5Qi'

Description: Identifier for the 5QI.

arp:

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

priorityLevel:

Reference: 'TS29571_CommonData.yaml#/components/schemas/5QIPriorityLevelRm'

averWindow:

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

maxDataBurstVol:

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

ErrorReport

Type: object

Properties:

error:

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

ruleReports:

Type: array

Items:

Reference: '#/components/schemas/RuleReport'

minItems: 1

Description: Used to report the PCC rule failure.

5GSmCause

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

Description: Indicating the cause value of 5GSM protocol.

PacketFilterContent

Type: string

Description: Defines a packet filter for an IP flow. Refer to subclause 5.3.54 of 3GPP TS 29.212 [23] for encoding.

FlowDescription

Type: string

Description: Defines a packet filter for an IP flow. Refer to subclause 5.4.2 of 3GPP TS 29.212 [23] for encoding.

FlowDirection

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

- DOWNLINK: The corresponding filter applies for traffic to the UE.
- UPLINK: The corresponding filter applies for traffic from the UE.

- **BIDIRECTIONAL**: The corresponding filter applies for traffic both to and from the UE.
- **UNSPECIFIED**: The corresponding filter applies for traffic to the UE (downlink), but has no specific direction declared. The service data flow detection shall apply the filter for uplink traffic as if the filter was bidirectional. The PCF shall not use the value UNSPECIFIED in filters created by the network in NW-initiated procedures. The PCF shall only include the value UNSPECIFIED in filters in UE-initiated procedures if the same value is received from the SMF.

FlowDirectionRm

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

- **DOWNLINK**: The corresponding filter applies for traffic to the UE.
- **UPLINK**: The corresponding filter applies for traffic from the UE.
- **BIDIRECTIONAL**: The corresponding filter applies for traffic both to and from the UE.
- **UNSPECIFIED**: The corresponding filter applies for traffic to the UE (downlink), but has no specific direction declared. The service data flow detection shall apply the filter for uplink traffic as if the filter was bidirectional. The PCF shall not use the value UNSPECIFIED in filters created by the network in NW-initiated procedures. The PCF shall only include the value UNSPECIFIED in filters in UE-initiated procedures if the same value is received from the SMF.

nullable: true

ReportingLevel

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

- **SER_ID_LEVEL**: Indicates that the usage shall be reported on service id and rating group combination level.
- **RAT_GR_LEVEL**: Indicates that the usage shall be reported on rating group level.
- **SPON_CON_LEVEL**: Indicates that the usage shall be reported on sponsor identity and rating group combination level.

MeteringMethod

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

- DURATION: Indicates that the duration of the service data flow traffic shall be metered.
- VOLUME: Indicates that volume of the service data flow traffic shall be metered.
- DURATION_VOLUME: Indicates that the duration and the volume of the service data flow traffic shall be metered.
- EVENT: Indicates that events of the service data flow traffic shall be metered.

PolicyControlRequestTrigger

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

- PLMN_CH: PLMN Change
- RES_MO_RE: A request for resource modification has been received by the SMF. The SMF always reports to the PCF.
- AC_TY_CH: Access Type Change
- UE_IP_CH: UE IP address change. The SMF always reports to the PCF.
- UE_MAC_CH: A new UE MAC address is detected or a used UE MAC address is inactive for a specific period
- AN_CH_COR: Access Network Charging Correlation Information
- US_RE: The PDU Session or the Monitoring key specific resources consumed by a UE either reached the threshold or needs to be reported for other reasons.
- APP_STA: The start of application traffic has been detected.
- APP_STO: The stop of application traffic has been detected.
- AN_INFO: Access Network Information report
- CM_SES_FAIL: Credit management session failure
- PS_DA_OFF: The SMF reports when the 3GPP PS Data Off status changes. The SMF always reports to the PCF.
- DEF_QOS_CH: Default QoS Change. The SMF always reports to the PCF.
- SE_AMBR_CH: Session AMBR Change. The SMF always reports to the PCF.

- QOS_NOTIF: The SMF notify the PCF when receiving notification from RAN that QoS targets of the QoS Flow cannot be guaranteed or guaranteed again.
- NO_CREDIT: Out of credit
- PRA_CH: Change of UE presence in Presence Reporting Area
- SAREA_CH: Location Change with respect to the Serving Area
- SCNN_CH: Location Change with respect to the Serving CN node
- RE_TIMEOUT: Indicates the SMF generated the request because there has been a PCC revalidation timeout
- RES_RELEASE: Indicate that the SMF can inform the PCF of the outcome of the release of resources for those rules that require so.
- SUCC_RES_ALLO: Indicates that the requested rule data is the successful resource allocation.
- RAT_TY_CH: RAT Type Change.
- REF_QOS_IND_CH: Reflective QoS indication Change

RequestedRuleDataType

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

- CH_ID: Indicates that the requested rule data is the charging identifier.
- MS_TIME_ZONE: Indicates that the requested access network info type is the UE's timezone.
- USER_LOC_INFO: Indicates that the requested access network info type is the UE's location.
- RES_RELEASE: Indicates that the requested rule data is the result of the release of resource.
- SUCC_RES_ALLO: Indicates that the requested rule data is the successful resource allocation.

RuleStatus

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

- ACTIVE: Indicates that the PCC rule(s) are successfully installed (for those provisioned from PCF) or activated (for those pre-defined in SMF), or the session rule(s) are successfully installed
- INACTIVE: Indicates that the PCC rule(s) are removed (for those provisioned from PCF) or inactive (for those pre-defined in SMF) or the session rule(s) are removed.

FailureCode

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

- UNK_RULE_ID: Indicates that the pre-provisioned PCC rule could not be successfully activated because the PCC rule identifier is unknown to the SMF.
- RA_GR_ERR: Indicate that the PCC rule could not be successfully installed or enforced because the Rating Group specified within the Charging Data policy decision which the PCC rule refers to is unknown or, invalid.
- SER_ID_ERR: Indicate that the PCC rule could not be successfully installed or enforced because the Service Identifier specified within the Charging Data policy decision which the PCC rule refers to is invalid, unknown, or not applicable to the service being charged.
- NF_MAL: Indicate that the PCC rule could not be successfully installed (for those provisioned from the PCF) or activated (for those pre-defined in SMF) or enforced (for those already successfully installed) due to SMF/UPF malfunction.
- RES_LIM: Indicate that the PCC rule could not be successfully installed (for those provisioned from PCF) or activated (for those pre-defined in SMF) or enforced (for those already successfully installed) due to a limitation of resources at the SMF/UPF.
- MAX_NR_QoS_FLOW: Indicate that the PCC rule could not be successfully installed (for those provisioned from PCF) or activated (for those pre-defined in SMF) or enforced (for those already successfully installed) due to the fact that the maximum number of QoS flows has been reached for the PDU session.
- MISS_FLOW_INFO: Indicate that the PCC rule could not be successfully installed or enforced because the Flow Information AVP is not specified within the "pccRule" attribute by the PCF during the first install request of the PCC rule.
- RES_ALLO_FAIL: Indicate that the PCC rule could not be successfully installed or maintained since the QoS flow establishment/modification failed, or the QoS flow was released.
- UNSUCC_QOS_VAL: indicate that the QoS validation has failed or when Guaranteed Bandwidth > Max-Requested-Bandwidth.
- INCOR_FLOW_INFO: Indicate that the PCC rule could not be successfully installed or modified at the SMF because the provided flow information is not supported by the network (e.g. the provided IP address(es) or Ipv6 prefix(es) do not correspond to an IP version applicable for the PDU session).
- PS_TO_CS_HAN: Indicate that the PCC rule could not be maintained because of PS to CS handover.
- APP_ID_ERR: Indicate that the rule could not be successfully installed or enforced because the Application Identifier is invalid, unknown, or not applicable to the application required for detection.
- NO_QOS_FLOW_BOUND: Indicate that there is no QoS flow which the SMF can bind the PCC rule(s) to.
- FILTER_RES: Indicate that the Flow Information cannot be handled by the SMF because any of the restrictions was not met.

- MISS_REDI_SER_ADDR: Indicate that the PCC rule could not be successfully installed or enforced at the SMF because there is no valid Redirect Server Address within the Traffic Control Data policy decision which the PCC rule refers to provided by the PCF and no preconfigured redirection address for this PCC rule at the SMF.
- CM_END_USER_SER_DENIED: Indicate that the charging system denied the service request due to service restrictions (e.g. terminate rating group) or limitations related to the end-user, for example the end-user's account could not cover the requested service.
- CM_CREDIT_CON_NOT_APP: Indicate that the charging system determined that the service can be granted to the end user but no further credit control is needed for the service (e.g. service is free of charge or is treated for offline charging).
- CM_AUTH_REJ: Indicate that the charging system denied the service request in order to terminate the service for which credit is requested.
- CM_USER_UNK: Indicate that the specified end user could not be found in the charging system.
- CM_RAT_FAILED: Indicate that the charging system cannot rate the service request due to insufficient rating input, incorrect AVP combination or due to an attribute or an attribute value that is not recognized or supported in the rating.
- SESS_AMBR_FAILURE: Indicate that the session AMBR update is failure.
- DEF_QOS_FAILURL: Indicate that the default QoS update is failure.

AfSigProtocol

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

- NO_INFORMATION: Indicate that no information about the AF signalling protocol is being provided.
- SIP: Indicate that the signalling protocol is Session Initiation Protocol.

PacketFilterOperation

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

- DELETION: Indicates that the resources reserved for the provided packet filter identifiers are to be deleted and are no longer used by the UE.
- ADDITION: Indicates that the UE requests resources allocated for the provided packet filters.

- MODIFICATION: Indicates that the reserved QoS, the filter, the precedence, or any of the fields for the provided packet filter identifiers are being modified.

RedirectAddressType

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

- IPV4_ADDR: Indicates that the address type is in the form of "dotted-decimal" IPv4 address.
- IPV6_ADDR: Indicates that the address type is in the form of IPv6 address.
- URL: Indicates that the address type is in the form of Uniform Resource Locator.
- SIP_URI: Indicates that the address type is in the form of SIP Uniform Resource Identifier.

QoSFlowUsage

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

- GENERAL: Indicate no specific QoS flow usage information is available.
- IMS_SIG: Indicate that the QoS flow is used for IMS signalling only.



CHAPTER 25

Nsmf_EventExposure

The Session Management Event Exposure Service (Nsmf_EventExposure) is part of the Nsmf service-based interface exhibited by the Session Management Function (SMF).

Reference: 3GPP TS 29.508 version 15.3.0

- [OpenAPI, on page 437](#)
- [info, on page 437](#)
- [externalDocs, on page 437](#)
- [security, on page 437](#)
- [servers, on page 438](#)
- [paths, on page 438](#)
- [components, on page 442](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Description: Session Management Event Exposure Service API

Version: "1.0.0"

Title: Nsmf_EventExposure

externalDocs

Description: 3GPP TS 29.508 V15.2.0; 5G System; Session Management Event Exposure Service.

URL: http://www.3gpp.org/ftp/Specs/archive/29_series/29.508/

security

- {}

- oAuth2ClientCredentials:
- nsmf-event-exposure

servers

URL: '{apiRoot}/nsmf_event-exposure/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 4.4 of 3GPP TS 29.501

paths

/subscriptions

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NsmfEventExposure'

Responses:

'201' Success

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NsmfEventExposure'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

Callbacks:

myNotification:

'{\$request.body#/notifUri}':

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NsmfEventExposureNotification'

Responses:

'204' No Content, Notification was succesfull

'307' temporary redirect

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'
'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'
'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'
'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'
'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'
'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'
'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'
'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/subscriptions/{subId}

get:

Parameters:

- name: subId

In: path

Description: Event Subscription ID

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK. Resource representation is returned

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NsmfEventExposure'

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/npcf-event-exposure/v1/subscriptions/{subId}'

Required/Optional: true

Schema:

Type: string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

put:

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NsmfEventExposure'

Parameters:

- name: subId

In: path

Description: Event Subscription ID

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK. Resource was successfully modified and representation is returned

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NsmfEventExposure'

'204' No Content. Resource was successfully modified

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

delete:

Parameters:

- name: subId

In: path

Description: Event Subscription ID

Required/Optional: true

Schema:

Type: string

Responses:

'204' No Content. Resource was successfully deleted

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'
 '403': Reference 'TS29571_CommonData.yaml#/components/responses/403'
 '404': Reference 'TS29571_CommonData.yaml#/components/responses/404'
 '429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
 '500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
 '503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
 default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2
Flows:
clientCredentials:
tokenUrl: '{nrfApiRoot}/oauth2/token'
scopes:
 nsmf_event-exposure: Access to the Nsmf_EventExposure API

schemas

NsmfEventExposure

Type: object
Properties:
supi:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
gpsi:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
anyUeInd:
Type: boolean
Description: Any UE indication. This IE shall be present if the event subscription is applicable to any UE. Default value "FALSE" is used, if not present.
groupId:
Reference: 'TS29571_CommonData.yaml#/components/schemas/GroupId'

pduSeId:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'**subId:****Reference:** '#/components/schemas/SubId'**notifId:****Type:** string**Description:** Notification Correlation ID assigned by the NF service consumer.**notifUri:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**altNotifIpv4Addrs:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'**Description:** Alternate or backup IPv4 Address(es) where to send Notifications.**minItems:** 1**altNotifIpv6Addrs:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'**Description:** Alternate or backup IPv6 Address(es) where to send Notifications.**minItems:** 1**eventSubs:****Type:** array**Items:****Reference:** '#/components/schemas/EventSubscription'**minItems:** 1**Description:** Subscribed events**ImmeRep:****Type:** boolean**notifMethod:****Reference:** '#/components/schemas/NotificationMethod'**maxReportNbr:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/UInteger'**expiry:**

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

repPeriod:

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

guami:

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

serviveName:

Type: string

Description: If the NF service consumer is an AMF, it should provide the name of a service produced by the AMF that makes use of notifications about subscribed events.

supportedFeatures:

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

Required:

- notifId
- notifUri
- eventSubs

NsmfEventExposureNotification

Type: object

Properties:

notifId:

Type: string

Description: Notification correlation ID

eventNotifs:

Type: array

Items:

Reference: '#/components/schemas/EventNotification'

minItems: 1

Description: Notifications about Individual Events

Required:

- notifId
- eventNotifs

EventSubscription

Type: object

Properties:

event:

Reference: '#/components/schemas/SmfEvent'

dnaiChgType:

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

Required:

- event

EventNotification

Type: object

Properties:

event:

Reference: '#/components/schemas/SmfEvent'

timeStamp:

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

supi:

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

gpsi:

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

sourceDnai:

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

targetDnai:

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

dnaiChgType:

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

sourceUeIpv4Addr:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

sourceUeIpv6Prefix:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'

targetUeIpv4Addr:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

targetUeIpv6Prefix:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'

sourceTraRouting:

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

targetTraRouting:

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

ueMac:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/MacAddr48'**adIpv4Addr:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'**adIpv6Prefix:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'**reIpv4Addr:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'**reIpv6Prefix:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'**plmnId:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PlmnId'**accType:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/AccessType'**pduSeId:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'**Required:**

- event
- timeStamp

SubId

Type: string**format:** SubId

Description: Identifies an Individual SMF Notification Subscription. To enable that the value is used as part of a URI, the string shall only contain characters allowed according to the "lower-with-hyphen" naming convention defined in 3GPP TS 29.501 [2]. In an OpenAPI [10] schema, the format shall be designated as "SubId".

SmfEvent

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

- AC_TY_CH: Access Type Change

- UP_PATH_CH: UP Path Change
- PDU_SES_REL: PDU Session Release
- PLMN_CH: PLMN Change
- UE_IP_CH: UE IP address change

NotificationMethod

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

- PERIODIC
- ONE_TIME
- ON_EVENT_DETECTION



CHAPTER 26

Nsmf_PDUSession

The Nsmf_PDUSession service operates on the PDU Sessions. The service operations exposed by this service allows other NFs to establish, modify and release the PDU Sessions. The following are the key functionalities of this NF service:

- Creation, modification and deletion of SM contexts for PDU Sessions upon receiving N1 message notification from AMF carrying the NAS SM messages. An SM context represents an association between the NF Service Consumer (for example, AMF) and the SMF for a PDU session;
- Retrieval of SM contexts of PDU sessions, for example, to move PDU sessions towards the EPC using the N26 interface;
- Creation, modification and deletion of PDU sessions between the V-SMF and H-SMF, in HR roaming scenarios;
- Association of policy and charging rules with PDU Sessions and binding the policy and charging rules to flows;
- Interacting with the UPF over N4 for creating, modifying and releasing user plane sessions;
- Process user plane events from the UPF and apply the corresponding policy and charging rules.

Reference: 3GPP TS 29.502 version 15.0.0 Release 15

- [info, on page 449](#)
- [externalDocs, on page 450](#)
- [security, on page 450](#)
- [paths, on page 450](#)
- [components, on page 479](#)

info

Version: '1.0.0'

Title: 'Nsmf_PDUSession'

Description: 'SMF PDU Session Service'

externalDocs

Description: 3GPP TS 29.502 V15.2.1; 5G System; Session Management Services; Stage 3

URL: http://www.3gpp.org/ftp/Specs/archive/29_series/29.502/

security

- {}
- oAuth2Clientcredentials:
- nsmf-pdusession

paths

/sm-contexts:

Method: Post

Summary: Create SM Context

Tags:

- SM contexts collection

Operation ID: PostSmContexts

Request Body:

Description: representation of the SM context to be created in the SMF

Required/Optional: true

Content:

Multipart/Related:

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextCreateData'

binaryDataN1SmMessage:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

Callbacks:

smContextStatusNotification:

'{\$request.body#/smContextStatusUri}':

Method: Post

Request Body: # contents of the callback message

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmContextStatusNotification'

Responses:

'204':

Description: successful notification

'307':

Description: temporary redirect

'400':

Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'403':

Reference: 'TS29571_CommonData.yaml#/components/responses/403'

'404':

Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'411':

Reference: 'TS29571_CommonData.yaml#/components/responses/411'

'413':

Reference: 'TS29571_CommonData.yaml#/components/responses/413'

'415':

Reference: 'TS29571_CommonData.yaml#/components/responses/415'

'429':

Reference: 'TS29571_CommonData.yaml#/components/responses/429'

'500':

Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':

Reference: 'TS29571_CommonData.yaml#/components/responses/503'

Responses:

'201':

Description: successful creation of an SM context

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextCreatedData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextCreatedData'

binaryDataN2SmInformation:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN2SmInformation:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nsmf-pdusession/v1/smf-contexts/{smContextRef}'

Required/Optional: true

Schema:

Type: string

'307':

Description: temporary redirect

'308':

Description: permanent redirect

'400':

Description: unsuccessful creation of an SM context - bad request

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextCreateError'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextCreateError'

binaryDataN1SmMessage:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

'403':

Description: unsuccessful creation of an SM context - forbidden

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextCreateError'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextCreateError'

binaryDataN1SmMessage:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

'404':

Description: unsuccessful creation of an SM context - not found

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextCreateError'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextCreateError'

binaryDataN1SmMessage:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

'411':

Reference: 'TS29571_CommonData.yaml#/components/responses/411'

'413':

Reference: 'TS29571_CommonData.yaml#/components/responses/413'

'415':

Reference: 'TS29571_CommonData.yaml#/components/responses/415'

'429':

Reference: 'TS29571_CommonData.yaml#/components/responses/429'

'500':

Description: unsuccessful creation of an SM context - internal server error

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextCreateError'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextCreateError'

binaryDataN1SmMessage:

Type: string

Format: binary

Encoding:**JSON Data:****Content Type:** application/json**binaryDataN1SmMessage:****Content Type:** application/vnd.3gpp.5gnas**Headers:****Content ID:****Schema:****Type:** string**'503':****Description:** unsuccessful creation of an SM context - service unavailable**Content:****Application/JSON:** # message without binary body part**Schema:****Reference:** '#/components/schemas/SmContextCreateError'**Multipart/Related:** # message with binary body part(s)**Schema:****Type:** object**Properties:** # Request parts**JSON Data:****Reference:** '#/components/schemas/SmContextCreateError'**binaryDataN1SmMessage:****Type:** string**Format:** binary**Encoding:****JSON Data:****Content Type:** application/json**binaryDataN1SmMessage:****Content Type:** application/vnd.3gpp.5gnas**Headers:****Content ID:****Schema:****Type:** string**'504':**

Description: unsuccessful creation of an SM context - gateway timeout

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextCreateError'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextCreateError'

binaryDataN1SmMessage:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

default:

Reference: 'TS29571_CommonData.yaml#/components/responses/default'

/sm-contexts/{smContextRef}/retrieve:

Method: Post

Summary: Retrieve SM Context

Tags:

- Individual SM context

Operation ID: RetrieveSmContext

Parameters:

- name: smContextRef

In: path

Description: SM context reference

Required/Optional: true

Schema:

Type: string

Request Body:

Description: parameters used to retrieve the SM context

Required/Optional: false

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmContextRetrieveData'

Responses:

'200':

Description: successful retrieval of an SM context

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmContextRetrievedData'

'400':

Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'403':

Reference: 'TS29571_CommonData.yaml#/components/responses/403'

'404':

Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'411':

Reference: 'TS29571_CommonData.yaml#/components/responses/411'

'413':

Reference: 'TS29571_CommonData.yaml#/components/responses/413'

'415':

Reference: 'TS29571_CommonData.yaml#/components/responses/415'

'429':

Reference: 'TS29571_CommonData.yaml#/components/responses/429'

'500':

Reference: 'TS29571_CommonData.yaml#/components/responses/500'
'503':

Reference: 'TS29571_CommonData.yaml#/components/responses/503'
default:

Reference: 'TS29571_CommonData.yaml#/components/responses/default'

/sm-contexts/{smContextRef}/modify:

Method: Post

Summary: Update SM Context

Tags:

- Individual SM context

Operation ID: UpdateSmContext

Parameters:

- name: smContextRef

In: path

Description: SM context reference

Required/Optional: true

Schema:

Type: string

Request Body:

Description: representation of the updates to apply to the SM context

Required/Optional: true

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextUpdateData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextUpdateData'

binaryDataN1SmMessage:

Type: string

Format: binary

binaryDataN2SmInformation:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

binaryDataN2SmInformation:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

Responses:

'200':

Description: successful update of an SM context with content in the response

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextUpdatedData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextUpdatedData'

binaryDataN1SmMessage:

Type: string

Format: binary

binaryDataN2SmInformation:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

binaryDataN2SmInformation:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

'204':

Description: successful update of an SM context without content in the response

'400':

Description: unsuccessful update of an SM context - bad request

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextUpdateError'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextUpdateError'

binaryDataN1SmMessage:

Type: string

Format: binary

binaryDataN2SmInformation:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

binaryDataN2SmInformation:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

'403':

Description: unsuccessful update of an SM context - forbidden

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextUpdateError'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextUpdateError'

binaryDataN1SmMessage:

Type: string

Format: binary

binaryDataN2SmInformation:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

binaryDataN2SmInformation:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

'404':

Description: unsuccessful update of an SM context - not found

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextUpdateError'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextUpdateError'

binaryDataN1SmMessage:

Type: string

Format: binary

binaryDataN2SmInformation:**Type:** string**Format:** binary**Encoding:****JSON Data:****Content Type:** application/json**binaryDataN1SmMessage:****Content Type:** application/vnd.3gpp.5gnas**Headers:****Content ID:****Schema:****Type:** string**binaryDataN2SmInformation:****Content Type:** application/vnd.3gpp.ngap**Headers:****Content ID:****Schema:****Type:** string**'411':****Reference:** 'TS29571_CommonData.yaml#/components/responses/411'**'413':****Reference:** 'TS29571_CommonData.yaml#/components/responses/413'**'415':****Reference:** 'TS29571_CommonData.yaml#/components/responses/415'**'429':****Reference:** 'TS29571_CommonData.yaml#/components/responses/429'**'500':****Description:** unsuccessful update of an SM context - Internal server error**Content:****Application/JSON:** # message without binary body part**Schema:****Reference:** '#/components/schemas/SmContextUpdateError'**Multipart/Related:** # message with binary body part(s)**Schema:**

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextUpdateError'

binaryDataN1SmMessage:

Type: string

Format: binary

binaryDataN2SmInformation:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

binaryDataN2SmInformation:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

'503':

Description: unsuccessful update of an SM context - Service Unavailable

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextUpdateError'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

/sm-contexts/{smContextRef}/release:

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextUpdateError'

binaryDataN1SmMessage:

Type: string

Format: binary

binaryDataN2SmInformation:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

binaryDataN2SmInformation:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

default:

Reference: 'TS29571_CommonData.yaml#/components/responses/default'

/sm-contexts/{smContextRef}/release:

Method: Post

Summary: Release SM Context

Tags:

- Individual SM context

Operation ID: ReleaseSmContext

Parameters:

- name: smContextRef

In: path

Description: SM context reference

Required/Optional: true

Schema:

Type: string

Request Body:

Description: representation of the data to be sent to the SMF when releasing the SM context

Required/Optional: false

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextReleaseData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextReleaseData'

binaryDataN2SmInformation:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN2SmInformation:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

Responses:

'204':

Description: successful release of an SM context without content in the response

'400':

Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'403':

Reference: 'TS29571_CommonData.yaml#/components/responses/403'

'404':

Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'411':

Reference: 'TS29571_CommonData.yaml#/components/responses/411'

'413':

Reference: 'TS29571_CommonData.yaml#/components/responses/413'

'415':

Reference: 'TS29571_CommonData.yaml#/components/responses/415'

'429':

Reference: 'TS29571_CommonData.yaml#/components/responses/429'

'500':

Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':

Reference: 'TS29571_CommonData.yaml#/components/responses/503'

default:

Reference: 'TS29571_CommonData.yaml#/components/responses/default'

/pdu-sessions:

Method: Post

Summary: Create

Tags:

- PDU sessions collection

Operation ID: PostPduSessions

Request Body:

Description: representation of the PDU session to be created in the H-SMF

Required/Optional: true

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/PduSessionCreateData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/PduSessionCreateData'

binaryDataN1SmInfoFromUe:

Type: string

Format: binary

binaryDataUnknownN1SmInfo:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmInfoFromUe:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

binaryDataUnknownN1SmInfo:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

Callbacks:

statusNotification:

'{\$request.body#/vsmfPduSessionUri}':

Method: Post

Summary: Notify Status

Tags:

- Individual PDU session (V-SMF)

Operation ID: NotifyStatus

Request Body:

Description: representation of the status notification

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/StatusNotification'

Responses:

'204':

Description: successful notification of the status change

'400':

Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'403':

Reference: 'TS29571_CommonData.yaml#/components/responses/403'

'404':

Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'411':

Reference: 'TS29571_CommonData.yaml#/components/responses/411'

'413':

Reference: 'TS29571_CommonData.yaml#/components/responses/413'

'415':

Reference: 'TS29571_CommonData.yaml#/components/responses/415'

'429':

Reference: 'TS29571_CommonData.yaml#/components/responses/429'

'500':

Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':

Reference: 'TS29571_CommonData.yaml#/components/responses/503'

default:

Reference: 'TS29571_CommonData.yaml#/components/responses/default'

update:

'\${request.body#/vsmfPduSessionUri}/modify':

Method: Post

Summary: Update (initiated by H-SMF)

Tags:

- Individual PDU session (V-SMF)

Operation ID: ModifyPduSession

Request Body:

Description: representation of updates to apply to the PDU session

Required/Optional: true

Content:

application/+json: # message without binary body part

Schema:

Reference: '#/components/schemas/VsmfUpdateData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/VsmfUpdateData'

binaryDataN1SmInfoToUe:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmInfoToUe:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

Responses:

'200':

Description: successful update of a PDU session with content in the response

Content:

Application/JSON: # message without binary body part

Schema:**Reference:** '#/components/schemas/VsmfUpdatedData'**Multipart/Related:** # message with binary body part(s)**Schema:****Type:** object**Properties:** # Request parts**JSON Data:****Reference:** '#/components/schemas/VsmfUpdatedData'**binaryDataN1SmInfoFromUe:****Type:** string**Format:** binary**binaryDataUnknownN1SmInfo:****Type:** string**Format:** binary**Encoding:****JSON Data:****Content Type:** application/json**binaryDataN1SmInfoFromUe:****Content Type:** application/vnd.3gpp.5gnas**Headers:****Content ID:****Schema:****Type:** string**binaryDataUnknownN1SmInfo:****Content Type:** application/vnd.3gpp.5gnas**Headers:****Content ID:****Schema:****Type:** string**'204':****Description:** successful update of a PDU session without content in the response**'400':****Reference:** '#/components/responses/VsmfUpdateError'**'403':**

Reference: '#/components/responses/VsmfUpdateError'

'404':

Reference: '#/components/responses/VsmfUpdateError'

'411':

Reference: 'TS29571_CommonData.yaml#/components/responses/411'

'413':

Reference: 'TS29571_CommonData.yaml#/components/responses/413'

'415':

Reference: 'TS29571_CommonData.yaml#/components/responses/415'

'429':

Reference: 'TS29571_CommonData.yaml#/components/responses/429'

'500':

Reference: '#/components/responses/VsmfUpdateError'

'503':

Reference: '#/components/responses/VsmfUpdateError'

'504':

Reference: '#/components/responses/VsmfUpdateError'

default:

Reference: 'TS29571_CommonData.yaml#/components/responses/default'

Responses:

'201':

Description: successful creation of a PDU session

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/PduSessionCreatedData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/PduSessionCreatedData'

binaryDataN1SmInfoToUe:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmInfoToUe:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}'

Required/Optional: true

Schema:

Type: string

'307':

Description: temporary redirect

'308':

Description: permanent redirect

'400':

Reference: '#/components/responses/PduSessionCreateError'

'403':

Reference: '#/components/responses/PduSessionCreateError'

'404':

Reference: '#/components/responses/PduSessionCreateError'

'411':

Reference: 'TS29571_CommonData.yaml#/components/responses/411'

'413':

Reference: 'TS29571_CommonData.yaml#/components/responses/413'

'415':

Reference: 'TS29571_CommonData.yaml#/components/responses/415'

'429':

Reference: 'TS29571_CommonData.yaml#/components/responses/429'

'500':

Reference: '#/components/responses/PduSessionCreateError'

'503':

Reference: '#/components/responses/PduSessionCreateError'

default:

Reference: 'TS29571_CommonData.yaml#/components/responses/default'

/pdu-sessions/{pduSessionRef}/modify:

Method: Post

Summary: Update (initiated by V-SMF)

Tags:

- Individual PDU session (H-SMF)

Operation ID: UpdatePduSession

Parameters:

- name: pduSessionRef

In: path

Description: PDU session reference

Required/Optional: true

Schema:

Type: string

Request Body:

Description: representation of the updates to apply to the PDU session

Required/Optional: true

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/HsmfUpdateData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/HsmfUpdateData'

binaryDataN1SmInfoFromUe:

Type: string

Format: binary

binaryDataUnknownN1SmInfo:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmInfoFromUe:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

binaryDataUnknownN1SmInfo:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

Responses:

'200':

Description: successful update of a PDU session with content in the response

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/HsmfUpdatedData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/HsmfUpdatedData'

binaryDataN1SmInfoToUe:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmInfoToUe:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

'204':

Description: successful update of a PDU session without content in the response

'400':

Reference: '#/components/responses/HsmfUpdateError'

'403':

Reference: '#/components/responses/HsmfUpdateError'

'404':

Reference: '#/components/responses/HsmfUpdateError'

'411':

Reference: 'TS29571_CommonData.yaml#/components/responses/411'

'413':

Reference: 'TS29571_CommonData.yaml#/components/responses/413'

'415':

Reference: 'TS29571_CommonData.yaml#/components/responses/415'

'429':

Reference: 'TS29571_CommonData.yaml#/components/responses/429'

'500':

Reference: '#/components/responses/HsmfUpdateError'

'503':

Reference: '#/components/responses/HsmfUpdateError'

default:

Reference: 'TS29571_CommonData.yaml#/components/responses/default'

/pdu-sessions/{pduSessionRef}/release:

Method: Post

Summary: Release

Tags:

- Individual PDU session (H-SMF)

Operation ID: ReleasePduSession

Parameters:

- name: pduSessionRef

In: path

Description: PDU session reference

Required/Optional: true

Schema:

Type: string

Request Body:

Description: representation of the data to be sent to H-SMF when releasing the PDU session

Required/Optional: false

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ReleaseData'

Responses:

'204':

Description: successful release of a PDU session

'400':

Reference: 'TS29571_CommonData.yaml#/components/responses/400'

'403':

Reference: 'TS29571_CommonData.yaml#/components/responses/403'

'404':

Reference: 'TS29571_CommonData.yaml#/components/responses/404'

'411':

Reference: 'TS29571_CommonData.yaml#/components/responses/411'

'413':

Reference: 'TS29571_CommonData.yaml#/components/responses/413'

'415':

Reference: 'TS29571_CommonData.yaml#/components/responses/415'

'429':

Reference: 'TS29571_CommonData.yaml#/components/responses/429'

'500':

Reference: 'TS29571_CommonData.yaml#/components/responses/500'

'503':

Reference: 'TS29571_CommonData.yaml#/components/responses/503'

default:

Reference: 'TS29571_CommonData.yaml#/components/responses/default'

components

securitySchemes:

oAuth2ClientCredentials:

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

nsmf-pdusession: Access to the nsmf-pdusession API

schemas:

STRUCTURED DATA TYPES

SmContextCreateData:

Type: object

Properties:

supi:

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

unauthenticatedSupi:

Type: boolean

Default: false

pei:

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

gpsi:

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

pduSessionId:

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

dnn:

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

sNssai:

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

hplmnSnssai:

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

servingNfId:

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

guami:

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

serviceName:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ServiceName'

servingNetwork:

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

requestType:

Reference: '#/components/schemas/RequestType'

n1SmMsg:

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

anType:

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

ratType:

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

presenceInLadn:

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

ueLocation:

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

ueTimeZone:

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

addUeLocation:

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

smContextStatusUri:

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

hSmfUri:

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

additionalHsmfUri:

Type: array

Items:

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

minItems: 1

oldPduSessionId:

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

pduSessionsActivateList:

Type: array

Items:

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

minItems: 1

ueEpsPdnConnection:

Reference: '#/components/schemas/EpsPdnCnxContainer'

hoState:

Reference: '#/components/schemas/HoState'

pcfId:

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

nrfUri:

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

supportedFeatures:

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

selMode:

Reference: '#/components/schemas/DnnSelectionMode'

backupAmfInfo:

Type: array

Items:

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

minItems: 1

traceData:

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

udmGroupId:

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

routingIndicator:

Type: string

epsInterworkingInd:

Reference: '#/components/schemas/EpsInterworkingIndication'

indirectForwardingFlag:

Type: boolean

required:

- servingNfId
- servingNetwork
- anType
- smContextStatusUri

SmContextCreatedData:

Type: object

Properties:

hSmfUri:

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

pduSessionId:

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

sNssai:

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

upCnxState:

Reference: '#/components/schemas/UpCnxState'

n2SmInfo:

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

n2SmInfoType:

Reference: '#/components/schemas/N2SmInfoType'

allocatedEbiList:

Type: array

Items:

Reference: '#/components/schemas/EbiArpMapping'

minItems: 1

hoState:

Reference: '#/components/schemas/HoState'

smfServiceInstanceId:

Type: string

recoveryTime:

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

supportedFeatures:

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

SmContextUpdateData:

Type: object

Properties:

pei:

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

gpsi:

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

servingNfId:

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

guami:

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

servingNetwork:

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

backupAmfInfo:

Type: array

Items:

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

minItems: 1

nullable: true

anType:

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

ratType:

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

presenceInLadn:

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

ueLocation:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/UserLocation'**ueTimeZone:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/TimeZone'**addUeLocation:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/UserLocation'**upCnxState:****Reference:** '#/components/schemas/UpCnxState'**hoState:****Reference:** '#/components/schemas/HoState'**toBeSwitched:****Type:** boolean**Default:** false**failedToBeSwitched:****Type:** boolean**n1SmMsg:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'**n2SmInfo:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'**n2SmInfoType:****Reference:** '#/components/schemas/N2SmInfoType'**targetServingNfId:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'**smContextStatusUri:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**dataForwarding:****Type:** boolean**Default:** false**epsBearerSetup:****Type:** array**Items:****Reference:** '#/components/schemas/EpsBearerContainer'**minItems:** 0**revokeEbiList:**

Type: array

Items:

Reference: '#/components/schemas/EpsBearerId'

minItems: 1

release:

Type: boolean

Default: false

cause:

Reference: '#/components/schemas/Cause'

ngApCause:

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

5gMmCauseValue:

Reference: 'TS29571_CommonData.yaml#/components/schemas/5GMmCause'

sNssai:

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

traceData:

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

epsInterworkingInd:

Reference: '#/components/schemas/EpsInterworkingIndication'

anTypeCanBeChanged:

Type: boolean

Default: false

SmContextUpdatedData:

Type: object

Properties:

upCnxState:

Reference: '#/components/schemas/UpCnxState'

hoState:

Reference: '#/components/schemas/HoState'

releaseEbiList:

Type: array

Items:

Reference: '#/components/schemas/EpsBearerId'

minItems: 1

allocatedEbiList:**Type:** array**Items:****Reference:** '#/components/schemas/EbiArpMapping'**minItems:** 1**modifiedEbiList:****Type:** array**Items:****Reference:** '#/components/schemas/EbiArpMapping'**minItems:** 1**n1SmMsg:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'**n2SmInfo:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'**n2SmInfoType:****Reference:** '#/components/schemas/N2SmInfoType'**epsBearerSetup:****Type:** array**Items:****Reference:** '#/components/schemas/EpsBearerContainer'**minItems:** 1**dataForwarding:****Type:** boolean**SmContextReleaseData:****Type:** object**Properties:****cause:****Reference:** '#/components/schemas/Cause'**ngApCause:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NgApCause'**5gMmCauseValue:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/5GMmCause'**ueLocation:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/UserLocation'

ueTimeZone:

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

addUeLocation:

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

vsmfReleaseOnly:

Type: boolean

Default: false

SmContextStatusNotification:

Type: object

Properties:

statusInfo :

Reference: '#/components/schemas/StatusInfo'

required:

- statusInfo

PduSessionCreateData:

Type: object

Properties:

supi:

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

unauthenticatedSupi:

Type: boolean

Default: false

pei:

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

pduSessionId:

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

dnn:

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

sNssai:

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

vsmfId:

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

servingNetwork:

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

requestType:

Reference: '#/components/schemas/RequestType'

epsBearerId:

Type: array

Items:

Reference: '#/components/schemas/EpsBearerId'

minItems: 1

pgwS8cFteid:

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

vsmfPduSessionUri:

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

vcnTunnelInfo:

Reference: '#/components/schemas/TunnelInfo'

anType:

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

ratType:

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

ueLocation:

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

ueTimeZone:

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

addUeLocation:

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

gpsi:

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

n1SmInfoFromUe:

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

unknownN1SmInfo:

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

supportedFeatures:

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

hPcfId:

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

hoPreparationIndication:**Type:** boolean**selMode:****Reference:** '#/components/schemas/DnnSelectionMode'**alwaysOnRequested:****Type:** boolean**Default:** false**udmGroupId:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'**routingIndicator:****Type:** string**epsInterworkingInd:****Reference:** '#/components/schemas/EpsInterworkingIndication'**vSmfServiceInstanceId:****Type:** string**recoveryTime:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DateTime'**roamingChargingProfile:****Reference:** 'TS32291_Nchf_ConvergedCharging.yaml#/components/schemas/RoamingChargingProfile'**chargingId:****Type:** string**oldPduSessionId:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'**required:**

- dnn
- vsmfId
- servingNetwork
- vsmfPduSessionUri
- vcnTunnelInfo
- anType

PduSessionCreatedData:**Type:** object**Properties:****pduSessionType:**

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

sscMode:

Type: string

Pattern: '^[0-7]\$'

hcnTunnelInfo:

Reference: '#/components/schemas/TunnelInfo'

sessionAmbr:

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

qosFlowsSetupList:

Type: array

Items:

Reference: '#/components/schemas/QosFlowSetupItem'

minItems: 1

hSmfInstanceId:

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

pduSessionId:

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

sNssai:

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

enablePauseCharging:

Type: boolean

Default: false

ueIpv4Address:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

ueIpv6Prefix:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'

n1SmInfoToUe:

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

epsPdnCnxInfo:

Reference: '#/components/schemas/EpsPdnCnxInfo'

epsBearerInfo:

Type: array

Items:

Reference: '#/components/schemas/EpsBearerInfo'

minItems: 1

supportedFeatures:

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

maxIntegrityProtectedDataRate:

Reference: '#/components/schemas/MaxIntegrityProtectedDataRate'

alwaysOnGranted:

Type: boolean

Default: false

upSecurity:

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

roamingChargingProfile:

Reference: 'TS32291_Nchf_ConvergedCharging.yaml#/components/schemas/RoamingChargingProfile'

hSmfServiceInstanceId:

Type: string

recoveryTime:

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

required:

- pduSessionType
- sscMode
- hcnTunnelInfo
- sessionAmbr
- qosFlowsSetupList
- hSmfInstanceId

HsmfUpdateData:

Type: object

Properties:

requestIndication:

Reference: '#/components/schemas/RequestIndication'

pei:

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

vcnTunnelInfo:

Reference: '#/components/schemas/TunnelInfo'

servingNetwork:

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

anType:

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

ratType:

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

ueLocation:

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

ueTimeZone:

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

addUeLocation:

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

pauseCharging:

Type: boolean

pti:

Reference: '#/components/schemas/ProcedureTransactionId'

n1SmInfoFromUe:

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

unknownN1SmInfo:

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

qosFlowsRelNotifyList:

Type: array

Items:

Reference: '#/components/schemas/QosFlowItem'

minItems: 1

qosFlowsNotifyList:

Type: array

Items:

Reference: '#/components/schemas/QosFlowNotifyItem'

minItems: 1

NotifyList:

Type: array

Items:

Reference: '#/components/schemas/PduSessionNotifyItem'

minItems: 1

epsBearerId:

Type: array

Items:

Reference: '#/components/schemas/EpsBearerId'

minItems: 0

hoPreparationIndication:

Type: boolean

revokeEbiList:

Type: array

Items:

Reference: '#/components/schemas/EpsBearerId'

minItems: 1

cause:

Reference: '#/components/schemas/Cause'

ngApCause:

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

5gMmCauseValue:

Reference: 'TS29571_CommonData.yaml#/components/schemas/5GMmCause'

alwaysOnRequested:

Type: boolean

Default: false

epsInterworkingInd:

Reference: '#/components/schemas/EpsInterworkingIndication'

secondaryRatUsageReport:

Type: array

Items:

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

minItems: 1

required:

- requestIndication

HsmfUpdatedData:

Type: object

Properties:

n1SmInfoToUe:

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

ReleaseData:

Type: object

Properties:

cause:

Reference: '#/components/schemas/Cause'

ngApCause:

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

5gMmCauseValue:

Reference: 'TS29571_CommonData.yaml#/components/schemas/5GMmCause'

ueLocation:

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

ueTimeZone:

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

addUeLocation:

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

secondaryRatUsageReport:

Type: array

Items:

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

minItems: 1

ReleasedData:

Type: object

VsmfUpdateData:

Type: object

Properties:

requestIndication:

Reference: '#/components/schemas/RequestIndication'

sessionAmbr:

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

qosFlowsAddModRequestList:

Type: array

Items:

Reference: '#/components/schemas/QosFlowAddModifyRequestItem'

minItems: 1

qosFlowsRelRequestList:

Type: array

Items:

Reference: '#/components/schemas/QosFlowReleaseRequestItem'

minItems: 1

epsBearerInfo:

Type: array

Items:

Reference: '#/components/schemas/EpsBearerInfo'

minItems: 1

assignEbiList:

Type: array

Items:

Reference: '#/components/schemas/EpsBearerId'

minItems: 1

revokeEbiList:

Type: array

Items:

Reference: '#/components/schemas/EpsBearerId'

minItems: 1

modifiedEbiList:

Type: array

Items:

Reference: '#/components/schemas/EbiArpMapping'

minItems: 1

pti:

Reference: '#/components/schemas/ProcedureTransactionId'

n1SmInfoToUe:

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

alwaysOnGranted:

Type: boolean

Default: false

cause:

VsmfUpdatedData:

Reference: '#/components/schemas/Cause'

n1smCause:

Type: string

backOffTimer:

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

required:

- requestIndication

VsmfUpdatedData:

Type: object

Properties:

qosFlowsAddModList:

Type: array

Items:

Reference: '#/components/schemas/QosFlowItem'

minItems: 1

qosFlowsRelList:

Type: array

Items:

Reference: '#/components/schemas/QosFlowItem'

minItems: 1

qosFlowsFailedtoAddModList:

Type: array

Items:

Reference: '#/components/schemas/QosFlowItem'

minItems: 1

qosFlowsFailedtoRelList:

Type: array

Items:

Reference: '#/components/schemas/QosFlowItem'

minItems: 1

n1SmInfoFromUe:

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

unknownN1SmInfo:

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

ueLocation:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/UserLocation'**ueTimeZone:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/TimeZone'**addUeLocation:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/UserLocation'**assignedEbiList:****Type:** array**Items:****Reference:** '#/components/schemas/EbiArpMapping'**minItems:** 1**failedToAssignEbiList:****Type:** array**Items:****Reference:** '#/components/schemas/EpsBearerId'**minItems:** 1**releasedEbiList:****Type:** array**Items:****Reference:** '#/components/schemas/EpsBearerId'**minItems:** 1**secondaryRatUsageReport:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SecondaryRatUsageReport'**minItems:** 1**StatusNotification:****Type:** object**Properties:**

statusInfo :

Reference: '#/components/schemas/StatusInfo'**required:**

- statusInfo

QosFlowItem:

Type: object

Properties:

qfi:

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

cause:

Reference: '#/components/schemas/Cause'

required:

- qfi

QosFlowSetupItem:

Type: object

Properties:

qfi:

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

qosRules:

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

ebi:

Reference: '#/components/schemas/EpsBearerId'

qosFlowDescription:

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

qosFlowProfile:

Reference: '#/components/schemas/QosFlowProfile'

required:

- qfi

- qosRules

QosFlowAddModifyRequestItem:

Type: object

Properties:

qfi:

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

ebi:

Reference: '#/components/schemas/EpsBearerId'

qosRules:

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

qosFlowDescription:

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

qosFlowProfile:

Reference: '#/components/schemas/QosFlowProfile'

required:

- qfi

QosFlowReleaseRequestItem:

Type: object

Properties:

qfi:

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

qosRules:

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

qosFlowDescription:

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

required:

- qfi

QosFlowProfile:

Type: object

Properties:

5qi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/5Qi'

nonDynamic5Qi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/NonDynamic5Qi'

dynamic5Qi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Dynamic5Qi'

arp:

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

gbrQosFlowInfo:

Reference: '#/components/schemas/GbrQosFlowInformation'

rqa:

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

additionalQosFlowInfo:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/AdditionalQosFlowInfo'**required:**

- 5qi

GbrQosFlowInformation:**Type:** object**Properties:****maxFbrDI:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/BitRate'**maxFbrUI:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/BitRate'**guaFbrDI:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/BitRate'**guaFbrUI:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/BitRate'**notifControl:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NotificationControl'**maxPacketLossRateDI:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PacketLossRate'**maxPacketLossRateUI:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PacketLossRate'**required:**

- maxFbrDI

- maxFbrUI

- guaFbrDI

- guaFbrUI

QosFlowNotifyItem:**Type:** object**Properties:****qfi:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Qfi'**notificationCause:****Reference:** '#/components/schemas/NotificationCause'

required:

- qfi
- notificationCause

SmContextRetrieveData:

Type: object

Properties:**targetMmeCap:**

Reference: '#/components/schemas/MmeCapabilities'

SmContextRetrievedData:

Type: object

Properties:**ueEpsPdnConnection:**

Reference: '#/components/schemas/EpsPdnCnxContainer'

required:

- ueEpsPdnConnection

MmeCapabilities:

Type: object

Properties:**nonIpSupported:**

Type: boolean

Default: false

TunnelInfo:

Type: object

Properties:**ipv4Addr:**

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

ipv6Addr:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'

gtpTeid:

Reference: '#/components/schemas/Teid'

required:

- gtpTeid

StatusInfo:

Type: object

Properties:

resourceStatus:

Reference: '#/components/schemas/ResourceStatus'

cause:

Reference: '#/components/schemas/Cause'

required:

- resourceStatus

EpsPdnCnxInfo:

Type: object

Properties:

pgwS8cFteid:

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

pgwNodeName:

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

required:

- pgwS8cFteid

EpsBearerInfo:

Type: object

Properties:

ebi:

Reference: '#/components/schemas/EpsBearerId'

pgwS8uFteid:

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

bearerLevelQoS:

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

required:

- ebi

- pgwS8uFteid

- bearerLevelQoS

PduSessionNotifyItem:

Type: object

Properties:

notificationCause:

Reference: '#/components/schemas/NotificationCause'

required:

- notificationCause

EbiArpMapping:

Type: object

Properties:

epsBearerId:

Reference: '#/components/schemas/EpsBearerId'

arp:

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

required:

- epsBearerId

- arp

SmContextCreateError:

Type: object

Properties:

error:

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

n1SmMsg:

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

recoveryTime:

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

required:

- error

SmContextUpdateError:

Type: object

Properties:

error:

'PduSessionCreateError':

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

n1SmMsg:

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

n2SmInfo:

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

n2SmInfoType:

Reference: '#/components/schemas/N2SmInfoType'

upCnxState:

Reference: '#/components/schemas/UpCnxState'

recoveryTime:

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

required:

- error

'PduSessionCreateError':

description: unsuccessful creation of a PDU session

content:

application/json: # message without binary body part

schema:

Reference: '#/components/schemas/PduSessionCreateError'

multipart/related: # message with binary body part(s)

schema:

Type: object

Properties: # Request parts

jsonData:

Reference: '#/components/schemas/PduSessionCreateError'

binaryDataN1SmInfoToUe:

Type: string

format: binary

encoding:

jsonData:

contentType: application/json

binaryDataN1SmInfoToUe:

contentType: application/vnd.3gpp.5gnas

headers:

Content-Id:**schema:****Type:** string**'HsmfUpdateError':****description:** unsuccessful update of a PDU session**content:****application/json:** # message without binary body part**schema:****Reference:** '#/components/schemas/HsmfUpdateError'**multipart/related:** # message with binary body part(s)**schema:****Type:** object**Properties:** # Request parts**jsonData:****Reference:** '#/components/schemas/HsmfUpdateError'**binaryDataN1SmInfoToUe:****Type:** string**format:** binary**encoding:****jsonData:****contentType:** application/json**binaryDataN1SmInfoToUe:****contentType:** application/vnd.3gpp.5gnas**headers:****Content-Id:****schema:****Type:** string**'VsmfUpdateError':****description:** unsuccessful update of a PDU session**content:****application/json:** # message without binary body part**schema:****Reference:** '#/components/schemas/VsmfUpdateError'

ProcedureTransactionId:

multipart/related: # message with binary body part(s)

schema:

Type: object

Properties: # Request parts

jsonData:

Reference: '#/components/schemas/VsmfUpdateError'

binaryDataN1SmInfoFromUe:

Type: string

format: binary

binaryDataUnknownN1SmInfo:

Type: string

format: binary

encoding:

jsonData:

contentType: application/json

binaryDataN1SmInfoFromUe:

contentType: application/vnd.3gpp.5gnas

headers:

Content-Id:

schema:

Type: string

binaryDataUnknownN1SmInfo:

contentType: application/vnd.3gpp.5gnas

headers:

Content-Id:

schema:

Type: string

ProcedureTransactionId:

Type: integer

minimum: 0

maximum: 255

EpsBearerId:

Type: integer

minimum: 0

maximum: 15

EpsPdnCnxContainer:

Type: string

EpsBearerContainer:

Type: string

Teid:

Type: string

Pattern: '^[A-F0-9]{8}\$'

ENUMERATIONS

UpCnxState:

anyOf:

- type: string

enum:

- ACTIVATED

- DEACTIVATED

- ACTIVATING

- 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

- ACTIVATED

- DEACTIVATED

- ACTIVATING

HoState:

anyOf:

- type: string

enum:

- NONE

RequestType:

- PREPARING
- PREPARED
- COMPLETED
- CANCELLED
- 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

- NONE
- PREPARING
- PREPARED
- COMPLETED
- CANCELLED

RequestType:**anyOf:**

- type: string

enum:

- INITIAL_REQUEST
- EXISTING_PDU_SESSION
- INITIAL_EMERGENCY_REQUEST
- EXISTING_EMERGENCY_PDU_SESSION
- 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

- INITIAL_REQUEST
- EXISTING_PDU_SESSION
- INITIAL_EMERGENCY_REQUEST

- EXISTING_EMERGENCY_PDU_SESSION

RequestIndication:

anyOf:

- type: string

enum:

- UE_REQ_PDU_SES_MOD
- UE_REQ_PDU_SES_REL
- PDU_SES_MOB
- NW_REQ_PDU_SES_AUTH
- NW_REQ_PDU_SES_MOD
- NW_REQ_PDU_SES_REL
- EBI_ASSIGNMENT_REQ

- 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

- UE_REQ_PDU_SES_MOD
- UE_REQ_PDU_SES_REL
- PDU_SES_MOB
- NW_REQ_PDU_SES_AUTH
- NW_REQ_PDU_SES_MOD
- NW_REQ_PDU_SES_REL
- EBI_ASSIGNMENT_REQ

NotificationCause:

anyOf:

- type: string

enum:

- QOS_FULFILLED
- QOS_NOT_FULFILLED
- UP_SEC_FULFILLED

Cause:

- UP_SEC_NOT_FULFILLED

- 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

- QOS_FULFILLED

- QOS_NOT_FULFILLED

- UP_SEC_FULFILLED

- UP_SEC_NOT_FULFILLED

Cause:**anyOf:**

- type: string

enum:

- REL_DUE_TO_HO

- EPS_FALLBACK

- REL_DUE_TO_UP_SEC

- DNN_CONGESTION

- S-NSSAI_CONGESTION

- REL_DUE_TO_REACTIVATION

- 5G_AN_NOT_RESPONDING

- REL_DUE_TO_SLICE_NOT_AVAILABLE

- REL_DUE_TO_DUPLICATE_SESSION_ID

- PDU_SESSION_STATUS_MISMATCH

- HO_FAILURE

- 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

- REL_DUE_TO_HO
- EPS_FALLBACK
- REL_DUE_TO_UP_SEC
- DNN_CONGESTION
- S-NSSAI_CONGESTION
- REL_DUE_TO_REACTIVATION
- 5G_AN_NOT_RESPONDING
- REL_DUE_TO_SLICE_NOT_AVAILABLE
- REL_DUE_TO_DUPLICATE_SESSION_ID
- PDU_SESSION_STATUS_MISMATCH
- HO_FAILURE

ResourceStatus:

anyOf:

- type: string

enum:

- RELEASED

- 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

- RELEASED

DnnSelectionMode:

anyOf:

- type: string

enum:

- VERIFIED

- UE_DNN_NOT_VERIFIED

- NW_DNN_NOT_VERIFIED

- type: string

description:

EpsInterworkingIndication:

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

- VERIFIED
- UE_DNN_NOT_VERIFIED
- NW_DNN_NOT_VERIFIED

EpsInterworkingIndication:**anyOf:**

- type: string

enum:

- NONE
- WITH_N26
- WITHOUT_N26
- 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

- NONE
- WITH_N26
- WITHOUT_N26

N2SmlInfoType:**anyOf:**

- type: string

enum:

- PDU_RES_SETUP_REQ
- PDU_RES_SETUP_RSP
- PDU_RES_SETUP_FAIL
- PDU_RES_REL_CMD

- PDU_RES_REL_RSP
- PDU_RES_MOD_REQ
- PDU_RES_MOD_RSP
- PDU_RES_MOD_FAIL
- PDU_RES_NTY
- PDU_RES_NTY_REL
- PDU_RES_MOD_IND
- PDU_RES_MOD_CFM
- PATH_SWITCH_REQ
- PATH_SWITCH_SETUP_FAIL
- PATH_SWITCH_REQ_ACK
- PATH_SWITCH_REQ_FAIL
- HANDOVER_REQUIRED
- HANDOVER_CMD
- HANDOVER_PREP_FAIL
- HANDOVER_REQ_ACK
- HANDOVER_RES_ALLOC_FAIL
- 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

- PDU_RES_SETUP_REQ
- PDU_RES_SETUP_RSP
- PDU_RES_SETUP_FAIL
- PDU_RES_REL_CMD
- PDU_RES_REL_RSP
- PDU_RES_MOD_REQ
- PDU_RES_MOD_RSP
- PDU_RES_MOD_FAIL
- PDU_RES_NTY
- PDU_RES_NTY_REL

MaxIntegrityProtectedDataRate:

- PDU_RES_MOD_IND
- PDU_RES_MOD_CFM
- PATH_SWITCH_REQ
- PATH_SWITCH_SETUP_FAIL
- PATH_SWITCH_REQ_ACK
- PATH_SWITCH_REQ_FAIL
- HANDOVER_REQUIRED
- HANDOVER_CMD
- HANDOVER_PREP_FAIL
- HANDOVER_REQ_ACK
- HANDOVER_RES_ALLOC_FAIL

MaxIntegrityProtectedDataRate:**anyOf:**

- type: string

enum:

- 64_KBPS
- MAX_UE_RATE
- 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

- 64_KBPS
- MAX_UE_RATE
- # HTTP responses

responses:**'PduSessionCreateError':**

description: unsuccessful creation of a PDU session

content:

application/json: # message without binary body part

schema:**Reference:** '#/components/schemas/PduSessionCreateError'**multipart/related:** # message with binary body part(s)**schema:****Type:** object**Properties:** # Request parts**jsonData:****Reference:** '#/components/schemas/PduSessionCreateError'**binaryDataN1SmInfoToUe:****Type:** string**format:** binary**encoding:****jsonData:****contentType:** application/json**binaryDataN1SmInfoToUe:****contentType:** application/vnd.3gpp.5gnas**headers:****Content-Id:****schema:****Type:** string**'HsmfUpdateError':****description:** unsuccessful update of a PDU session**content:****application/json:** # message without binary body part**schema:****Reference:** '#/components/schemas/HsmfUpdateError'**multipart/related:** # message with binary body part(s)**schema:****Type:** object**Properties:** # Request parts**jsonData:****Reference:** '#/components/schemas/HsmfUpdateError'**binaryDataN1SmInfoToUe:****Type:** string

'VsmfUpdateError':

format: binary
encoding:
jsonData:
contentType: application/json
binaryDataN1SmInfoToUe:
contentType: application/vnd.3gpp.5gnas
headers:
Content-Id:
schema:
Type: string

'VsmfUpdateError':

description: unsuccessful update of a PDU session
content:
application/json: # message without binary body part
schema:
Reference: '#/components/schemas/VsmfUpdateError'
multipart/related: # message with binary body part(s)
schema:
Type: object
Properties: # Request parts
jsonData:
Reference: '#/components/schemas/VsmfUpdateError'
binaryDataN1SmInfoFromUe:
Type: string
format: binary
binaryDataUnknownN1SmInfo:
Type: string
format: binary
encoding:
jsonData:
contentType: application/json
binaryDataN1SmInfoFromUe:
contentType: application/vnd.3gpp.5gnas
headers:

Content-Id:

schema:

Type: string

binaryDataUnknownN1SmInfo:

contentType: application/vnd.3gpp.5gnas

headers:

Content-Id:

schema:

Type: string

'VsmfUpdateError':



CHAPTER 27

Nsmsf_SMSservice

The Nsmsf_SMSservice service provides the service capability for the NF Service Consumer (for example, AMF) to authorize SMS and activate SMS for a service user on SMSF. The following are the key functionalities of this NF service:

- Activation or deactivation of SMS service for a given service user, which results in creating/updating/deleting an UE Context for SMS in SMSF.
- Send SMS payload in uplink direction to SMSF.

Reference: 3GPP TS 29.540 version 15.0.0 Release 15

- [OpenAPI, on page 519](#)
- [info, on page 519](#)
- [externalDocs, on page 519](#)
- [servers, on page 520](#)
- [paths, on page 520](#)
- [components, on page 524](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Version: '1.0.0'

Title: 'Nsmsf_SMSservice Service API'

Description: 'SMSF SMSservice Service API'

externalDocs

Description: 3GPP TS 29.540 V15.2.0; 5G System; SMS Services; Stage 3

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.540/'

servers

URL: '{apiRoot}/nsmf-sms/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501.

paths

/ue-contexts/{supi}

put:

Summary: Activate SMS Service for a given UE

Operation ID: SMSserviceActivation

Tags:

- UEContext (Document)

Parameters:

- name: supi

In: path

Required/Optional: true

Description: Subscriber Permanent Identifier (SUPI)

Schema:

Type: string

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/UeSmsContextData'

Required/Optional: true

Responses:

'201' UE Context for SMS is created in SMSF

Content:

Application/JSON:

Schema:**Reference:** '#/components/schemas/UeSmsContextData'**Headers:****Location:****Description:** 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nsmf-sms/v1/ue-contexts/{supi}'**Required/Optional:** true**Schema:****Type:** string

'204' UE Context for SMS is updated in SMSF

'400' Invalid Service Request

Content:

application/problem+json:

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

'403' Unable to create/update UE Context for SMS in SMSF

Content:

application/problem+json:

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

'404' Unable to found subscription for service user or UE Context for SMS in SMSF

Content:

application/problem+json:

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

'503' Service Unavailable

Content:

application/problem+json:

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'**default:****Description:** Unexpected error**Content:**

application/problem+json:

Schema:

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

delete:

Summary: Deactivate SMS Service for a given UE

Operation ID: SMSserviceDeactivation

Tags:

- UEContext (Document)

Parameters:

- name: supi

In: path

Required/Optional: true

Description: Subscriber Permanent Identifier (SUPI)

Schema:

Type: string

Responses:

'204' UE Context for SMS is deleted from SMSF

'400' Invalid Service Request

Content:

application/problem+json:

Schema:

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

'404' Unable to found UE Context for SMS in SMSF

Content:

application/problem+json:

Schema:

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

'503' Service Unavailable

Content:

application/problem+json:

Schema:

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

/ue-contexts/{supi}/sendsms

Method: Post

Summary: Send SMS payload for a given UE

Operation ID: SendSMS

Tags:

- UEContext (Document)

Parameters:

- name: supi

In: path

Required/Optional: true

Description: Subscriber Permanent Identifier (SUPI)

Schema:

Type: string

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmsRecordData'

Required/Optional: true

Responses:

'200' SMS payload is received by SMSF, and is being delivered out

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmsRecordDeliveryData'

'400' Invalid Service Request

Content:

application/problem+json:

Schema:

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

'403' Unable to deliver SMS at SMSF

Content:

application/problem+json:

Schema:

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

'404' Unable to found UE Context for SMS in SMSF

Content:

application/problem+json:

Schema:

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

'503' Service Unavailable

Content:

application/problem+json:

Schema:

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

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

nsmsf-sms: Access to the nsmsf-sms API

schemas

UeSmsContextData

Type: object

Required:

- supi

- amfId

- accessType

Properties:

supi:

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

pei:

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

amfId:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'**guamis:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Guami'**minItems:** 1**accessType:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/AccessType'**gpsi:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Gpsi'**ueLocation:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/UserLocation'**ueTimeZone:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/TimeZone'**traceData:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/TraceData'**backupAmfInfo:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/BackupAmfInfo'**minItems:** 1**udmGroupId:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'**routingIndicator:****Type:** string

SmsRecordData

Type: object**Required:**

- smsRecordId
- smsPayloads

Properties:**smsRecordId:****Reference:** '#/components/schemas/RecordId'

smsPayloads:**Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'**accessType:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/AccessType'**gpsi:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Gpsi'**pei:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Pei'**ueLocation:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/UserLocation'**ueTimeZone:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/TimeZone'

RecordId

Type: string

SmsRecordDeliveryData

Type: object**Required:**

- smsRecordId
- deliveryStatus

Properties:**smsRecordId:****Reference:** '#/components/schemas/RecordId'**deliveryStatus:****Reference:** '#/components/schemas/SmsDeliveryStatus'

SmsDeliveryStatus

Type: string**enum:**

- SMS_DELIVERY_PENDING
- SMS_DELIVERY_COMPLETED
- SMS_DELIVERY_FAILED



CHAPTER 28

Nudr_DataRepository

The UDR is acting as NF Service Producer. It provides Unified Data Repository service to the NF service consumer. The NF Service Consumers are the UDM, PCF and NEF.

For the Nudr_DataRepository service, the following service operations are defined:

- Query
- Create
- Delete
- Update
- Subscribe
- Unsubscribe
- Notify

This service allows NF service consumers to retrieve, create, update, modify and delete data stored in the UDR.

This service allows the NF service consumers to subscribe/unsubscribe the data change notification and to be notified of the data change

Reference: 3GPP TS 29.504 version 15.3.0 Release 15

- [OpenAPI, on page 527](#)
- [info, on page 528](#)
- [externalDocs, on page 528](#)
- [security, on page 528](#)
- [servers, on page 528](#)
- [paths, on page 528](#)
- [components, on page 533](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Version: 1.0.0

Title: 'Nudr_DataRepository API OpenAPI file'

Description: 'Unified Data Repository Service'

externalDocs

Description: 3GPP TS 29.504 V15.2.0; 5G System; Unified Data Repository Services; Stage 3

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.504/'

security

- {}
- oAuth2ClientCredentials:
- nudr-dr

servers

- description: API root
- url:** '{apiRoot}/nudr-dr/v1'
- Variables:**
- API Root:**
- Default:** https://example.com

paths

/subscription-data/{ueId}/authentication-data

Reference:

'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1%7BueId%7D~1authentication-data'

/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/am-data

Reference:

'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1%7BueId%7D~1%7BservingPlmnId%7D~1provisioned-data~1am-data'

/subscription-data/{ueid}/{servingPlmnId}/provisioned-data/smf-selection-subscri

Reference:

'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1%7Bueid%7D~1%7BservingPlmnId%7D~1provisioned-data~1smf-selection-subscription-data'

/subscription-data/{ueid}/{servingPlmnId}/provisioned-data/smf-data

Reference:

'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1%7Bueid%7D~1%7BservingPlmnId%7D~1provisioned-data~1smf-data'

/subscription-data/{ueid}/context-data/amf-3gpp-access

Reference:

'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1%7Bueid%7D~1context-data~1amf-3gpp-access'

/subscription-data/{ueid}/context-data/amf-non-3gpp-access

Reference:

'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1%7Bueid%7D~1context-data~1amf-non-3gpp-access'

/subscription-data/{ueid}/context-data/smf-registrations

Reference:

'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1%7Bueid%7D~1context-data~1smf-registrations'

/subscription-data/{ueid}/context-data/smf-registrations/{pduSessionId}

Reference:

'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1%7Bueid%7D~1context-data~1smf-registrations~1%7BpduSessionId%7D'

/subscription-data/{ueid}/operator-specific-data

Reference:

'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1%7Bueid%7D~1operator-specific-data'

/subscription-data/{ueid}/context-data/smf-3gpp-access

Reference:

'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1%7Bueid%7D~1context-data~1smf-3gpp-access'

/subscription-data/{ueid}/context-data/smf-non-3gpp-access

Reference:

'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1%7Bueid%7D~1context-data~1smf-non-3gpp-access'

/subscription-data/{ueld}/{servingPlmnId}/provisioned-data/sms-mng-data

Reference:

'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1%7BueId%7D~1%7BservngPlmnId%7D~1provisioned-data~1sms-mng-data'

/subscription-data/{ueld}/{servingPlmnId}/provisioned-data/sms-data

Reference:

'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1%7BueId%7D~1%7BservngPlmnId%7D~1provisioned-data~1sms-data'

/subscription-data/{ueld}/pp-data

Reference: 'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1%7BueId%7D~1pp-data'

/subscription-data/{ueld}/context-data/ee-subscriptions

Reference:

'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1%7BueId%7D~1context-data~1ee-subscriptions'

/subscription-data/{ueld}/context-data/ee-subscriptions/{subId}

Reference:

'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1%7BueId%7D~1context-data~1ee-subscriptions~1%7BsubId%7D'

/subscription-data/{ueld}/context-data/sdm-subscriptions

Reference:

'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1%7BueId%7D~1context-data~1sdm-subscriptions'

/subscription-data/{ueld}/context-data/sdm-subscriptions/{subId}

Reference:

'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1%7BueId%7D~1context-data~1sdm-subscriptions~1%7BsubId%7D'

/subscription-data/subs-to-notify

Reference: 'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1subs-to-notify'

/subscription-data/subs-to-notify/{subId}

Reference: 'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1subs-to-notify~1%7BsubId%7D'

/subscription-data/{ueld}/{servingPlmnId}/provisioned-data/trace-data

Reference:

'TS29505_Subscription_Data.yaml#/paths/~1subscription-data~1%7BueId%7D~1%7BservngPlmnId%7D~1provisioned-data~1trace-data'

/policy-data/{ueId}/am-data

Reference: 'TS29519_Policy_Data.yaml#/paths/~1policy-data~1%7BueId%7D~1am-data'

/policy-data/{ueId}/ue-policy-set

Reference: 'TS29519_Policy_Data.yaml#/paths/~1policy-data~1%7BueId%7D~1ue-policy-set'

/policy-data/{ueId}/sm-data

Reference: 'TS29519_Policy_Data.yaml#/paths/~1policy-data~1%7BueId%7D~1sm-data'

/policy-data/{ueId}/sm-data/{usageMonId}

Reference:

'TS29519_Policy_Data.yaml#/paths/~1policy-data~1%7BueId%7D~1sm-data~1%7BusageMonId%7D'

/policy-data/sponsor-connectivity-data/{sponsorId}

Reference:

'TS29519_Policy_Data.yaml#/paths/~1policy-data~1sponsor-connectivity-data~1%7BsponsorId%7D'

/policy-data/bdt-data

Reference: 'TS29519_Policy_Data.yaml#/paths/~1policy-data~1bdt-data'

/policy-data/bdt-data/{bdtReferenceId}

Reference: 'TS29519_Policy_Data.yaml#/paths/~1policy-data~1bdt-data~1%7BbdtReferenceId%7D'

/policy-data/subs-to-notify

Reference: 'TS29519_Policy_Data.yaml#/paths/~1policy-data~1subs-to-notify'

/policy-data/subs-to-notify/{subsid}

Reference: 'TS29519_Policy_Data.yaml#/paths/~1policy-data~1subs-to-notify~1%7Bsubsid%7D'

/policy-data/{ueId}/operator-specific-data

Reference: 'TS29519_Policy_Data.yaml#/paths/~1policy-data~1%7BueId%7D~1operator-specific-data'

/application-data/pfds

Reference: 'TS29519_Application_Data.yaml#/paths/~1application-data~1pfd'

/application-data/pfds/{application-identifier}

Reference:

'TS29519_Application_Data.yaml#/paths/~1application-data~1pfds~1%7Bapplication-identifier%7D'

/application-data/influenceData

Reference: 'TS29519_Application_Data.yaml#/paths/~1application-data~1influenceData'

/application-data/influenceData/{afServiceId}

Reference:

'TS29519_Application_Data.yaml#/paths/~1application-data~1influenceData~1%7BafServiceId%7D'

/application-data/influenceData/subscriptions

Reference: 'TS29519_Application_Data.yaml#/paths/~1application-data~1influenceData~1subscriptions'

/application-data/influenceData/subscriptions/{subscriptionId}

Reference:

'TS29519_Application_Data.yaml#/paths/~1application-data~1influenceData~1subscriptions~1%7BsubscriptionId%7D'

/exposure-data/{ueId}/access-and-mobility-data

Reference:

'TS29519_Exposure_Data.yaml#/paths/~1exposure-data~1%7BueId%7D~1access-and-mobility-data'

/exposure-data/{ueId}/session-management-data

Reference:

'TS29519_Exposure_Data.yaml#/paths/~1exposure-data~1%7BueId%7D~1session-management-data'

/exposure-data/{ueId}/session-management-data/{pduSessionId}

Reference:

'TS29519_Exposure_Data.yaml#/paths/~1exposure-data~1%7BueId%7D~1session-management-data~1%7BpduSessionId%7D'

/exposure-data/subs-to-notify

Reference: 'TS29519_Exposure_Data.yaml#/paths/~1exposure-data~1subs-to-notify'

/exposure-data/subs-to-notify/{subId}

Reference: 'TS29519_Exposure_Data.yaml#/paths/~1exposure-data~1subs-to-notify~1%7BsubId%7D'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

nudr-dr: Access to the Nudr_DataRepository API



CHAPTER 29

Subscription_Data

The data model and usage of the subscription data is specified in 3GPP TS 29.505 [2].

- [OpenAPI, on page 535](#)
- [info, on page 535](#)
- [externalDocs, on page 535](#)
- [paths, on page 535](#)
- [components, on page 595](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Version: '-'

Title: 'Unified Data Repository Service API file for subscription data'

Description: 'The API version is defined in 3GPP TS 29.504'

externalDocs

Description: 3GPP TS 29.505 V15.2.0; 5G System; Usage of the Unified Data Repository services for Subscription Data; Stage 3

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.505/'

paths

/subscription-data/{ueld}/authentication-data/authentication-subscription

get:

Summary: Retrieves the authentication subscription data of a UE

Operation ID: QueryAuthSubsData

Tags:

- Authentication Data (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

- name: supported-features

In: query

Description: Supported Features

Schema:

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

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AuthenticationSubscription'

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

patch:

Summary: modify the authentication subscription data of a UE

Operation ID: ModifyAuthentication

Tags:

- Authentication Data (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

Request Body:

Content:

application/json-patch+json:

Schema:

Type: array

items:

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

Required/Optional: true

Responses:

'204' Expected response to a valid request

'403' modification is rejected

Content:

application/problem+json:

Schema:

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

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/{ueId}/authentication-data/authentication-status

put:

Summary: To store the Authentication Status data of a UE

Operation ID: CreateAuthenticationStatus

Tags:

- Authentication Status (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

Request Body:**Content:****Application/JSON:****Schema:**

Reference: 'TS29503_Nudm_UEAU.yaml#/components/schemas/AuthEvent'

Responses:

'204' Upon success, an empty response body shall be returned

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

get:

Summary: Retrieves the Authentication Status of a UE

Operation ID: QueryAuthenticationStatus

Tags:

- AuthEvent (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

- name: fields

In: query

Description: attributes to be retrieved

Required/Optional: false

Schema:

Type: array

items:

Type: string

minItems: 1

style: form

explode: false

- name: supportedFeatures

Description: Supported Features

In: query

Schema:

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

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: 'TS29503_Nudm_UEAU.yaml#/components/schemas/AuthEvent'

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/{ueId}/ue-update-confirmation-data/sor-data

put:

Summary: To store the SoR acknowledgement information of a UE

Operation ID: CreateAuthenticationSoR

Tags:

- Authentication SoR (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

- name: supported-features

In: query

Description: Supported Features

Schema:

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

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SorData'

Responses:

'204' Expected response to a valid request

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

get:

Summary: Retrieves the SoR acknowledgement information of a UE

Operation ID: QueryAuthSoR

Tags:

- Authentication SoR (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/VarUeId'

- name: supportedFeatures

In: query**Description:** Supported Features**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Responses:**

'200' Expected response to a valid request

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/SorData'**default:****Description:** Unexpected error**Content:**

application/problem+json:

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueId}/{servingPlmnId}/provisioned-data

get:**Summary:** Retrieve multiple provisioned data sets of a UE**Operation ID:** QueryProvisionedData**Tags:**

- Provisioned Data (Document)

Parameters:

- name: ueId

In: path**Description:** UE id**Required/Optional:** true**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/VarUeId'

- name: servingPlmnId

In: path

Description: PLMN ID

Required/Optional: true

Schema:

Reference: '#/components/schemas/VarPlmnId'

- name: dataset-names

In: query

Description: List of dataset names

Schema:

Reference: '#/components/schemas/DatasetNames'

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ProvisionedDataSets'

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/{ueld}/{servingPlmnId}/provisioned-data/am-data

get:

Summary: Retrieves the access and mobility subscription data of a UE

Operation ID: QueryAmData

Tags:

- Access And Mobility Subscription Data (Document)

Parameters:

- name: ueld

In: path

Description: UE id

Required/Optional: true

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/VarUeId'

- name: servingPlmnId

In: path**Description:** PLMN ID**Required/Optional:** true**Schema:****Reference:** '#/components/schemas/VarPlmnId'

- name: fields

In: query**Description:** attributes to be retrieved**Required/Optional:** false**Schema:****Type:** array**items:****Type:** string**minItems:** 1**style:** form**explode:** false

- name: supported-features

In: query**Description:** Supported Features**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

- name: If-None-Match

In: header**Description:** Validator for conditional requests, as described in RFC 7232, 3.2**Schema:****Type:** string

- name: If-Modified-Since

In: header**Description:** Validator for conditional requests, as described in RFC 7232, 3.3**Schema:****Type:** string

Responses:

'200' Expected response to a valid request

Content:**Application/JSON:****Schema:**

Reference: '#/components/schemas/AccessAndMobilitySubscriptionData'

Headers:**Cache-Control:**

Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

Schema:

Type: string

ETag:

Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

Schema:

Type: string

Last-Modified:

Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

Schema:

Type: string

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/smf-selection-subscript**get:**

Summary: Retrieves the SMF selection subscription data of a UE

Operation ID: QuerySmfSelectData

Tags:

- SMF Selection Subscription Data (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

- name: servingPlmnId

In: path

Description: PLMN ID

Required/Optional: true

Schema:

Reference: '#/components/schemas/VarPlmnId'

- name: fields

In: query

Description: attributes to be retrieved

Required/Optional: false

Schema:

Type: array

items:

Type: string

minItems: 1

style: form

explode: false

- name: supported-features

In: query

Description: Supported Features

Schema:

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

- name: If-None-Match

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.2

Schema:

Type: string

- name: If-Modified-Since

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.3

Schema:

Type: string

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmfSelectionSubscriptionData'

Headers:

Cache-Control:

Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

Schema:

Type: string

ETag:

Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

Schema:

Type: string

Last-Modified:

Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

Schema:

Type: string

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/{uclid}/{servingPlmnId}/provisioned-data/sm-data

get:

Summary: Retrieves the Session Management subscription data of a UE

Operation ID: QuerySmData

Tags:

- Session Management Subscription Data

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

- name: servingPlmnId

In: path

Description: PLMN ID

Required/Optional: true

Schema:

Reference: '#/components/schemas/VarPlmnId'

- name: single-nssai

In: query

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/VarSnssai'

Description: single NSSAI

Required/Optional: false

- name: dnn

In: query

Description: DNN

Required/Optional: false

Schema:

Reference: '#/components/schemas/Dnn'

- name: fields

In: query

Description: attributes to be retrieved

Required/Optional: false

Schema:

Type: array

items:**Type:** string**minItems:** 1**style:** form**explode:** false

- name: supported-features

In: query**Description:** Supported Features**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

- name: If-None-Match

In: header**Description:** Validator for conditional requests, as described in RFC 7232, 3.2**Schema:****Type:** string

- name: If-Modified-Since

In: header**Description:** Validator for conditional requests, as described in RFC 7232, 3.3**Schema:****Type:** string**Responses:**

'200' Expected response to a valid request

Content:**Application/JSON:****Schema:****Type:** array**items:****Reference:** '#/components/schemas/SessionManagementSubscriptionData'**minItems:** 1**Headers:****Cache-Control:****Description:** Cache-Control containing max-age, as described in RFC 7234, 5.2**Schema:****Type:** string

ETag:

Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

Schema:

Type: string

Last-Modified:

Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

Schema:

Type: string

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/{ueId}/context-data/amf-3gpp-access

get:

Summary: Retrieves the AMF context data of a UE using 3gpp access

Operation ID: QueryAmfContext3gpp

Tags:

- AMF 3GPP Access Registration (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

- name: fields

In: query

Description: attributes to be retrieved

Required/Optional: false

Schema:

Type: array

items:**Type:** string**minItems:** 1**style:** form**explode:** false

- name: supported-features

In: query**Description:** Supported Features**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Responses:**

'200' Expected response to a valid request

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/Amf3GppAccessRegistration'**default:****Description:** Unexpected error**Content:**

application/problem+json:

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'**put:****Summary:** To store the AMF context data of a UE using 3gpp access in the UDR**Operation ID:** CreateAmfContext3gpp**Tags:**

- AMF 3GPP Access Registration (Document)

Parameters:

- name: ueId

In: path**Description:** UE id**Required/Optional:** true**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/VarUeId'

Request Body:**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/Amf3GppAccessRegistration'**Responses:**

'204' Upon success, an empty response body shall be returned

default:**Description:** Unexpected error**Content:**

application/problem+json:

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'**patch:****Summary:** To modify the AMF context data of a UE using 3gpp access in the UDR**Operation ID:** AmfContext3gpp**Tags:**

- AMF 3GPP Access Registration (Document)

Parameters:

- name: ueId

In: path**Description:** UE id**Required/Optional:** true**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/VarUeId'**Request Body:****Content:**

application/json-patch+json:

Schema:**Type:** array**items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PatchItem'**Required/Optional:** true**Responses:**

'204' Expected response to a valid request

'403' modification is rejected

Content:

application/problem+json:

Schema:

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

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/{ueId}/context-data/amf-non-3gpp-access

get:

Summary: Retrieves the AMF context data of a UE using non-3gpp access

Operation ID: QueryAmfContextNon3gpp

Tags:

- AMF Non-3GPP Access Registration (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

- name: fields

In: query

Description: attributes to be retrieved

Required/Optional: false

Schema:

Type: array

items:

Type: string

minItems: 1

style: form

explode: false

- name: supported-features

In: query

Description: Supported Features

Schema:

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

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AmfNon3GppAccessRegistration'

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

put:

Summary: To store the AMF context data of a UE using non-3gpp access in the UDR

Operation ID: CreateAmfContextNon3gpp

Tags:

- AMF Non-3GPP Access Registration (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

Request Body:

Content:

Application/JSON:**Schema:****Reference:** '#/components/schemas/AmfNon3GppAccessRegistration'**Responses:**

'204' Upon success, an empty response body shall be returned

default:**Description:** Unexpected error**Content:**

application/problem+json:

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'**patch:****Summary:** To modify the AMF context data of a UE using non 3gpp access in the UDR**Operation ID:** AmfContextNon3gpp**Tags:**

- AMF Non-3GPP Access Registration (Document)

Parameters:

- name: ueId

In: path**Description:** UE id**Required/Optional:** true**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/VarUeId'**Request Body:****Content:**

application/json-patch+json:

Schema:**Type:** array**items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PatchItem'**Required/Optional:** true**Responses:**

'204' Expected response to a valid request

'403' modification is rejected

Content:

application/problem+json:

Schema:

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

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/{ueId}/context-data/smf-registrations

get:

Summary: Retrieves the SMF registration list of a UE

Operation ID: QuerySmfRegList

Tags:

- SMF Registrations (Collection)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

- name: supported-features

In: query

Description: Supported Features

Schema:

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

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmfRegList'

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/{ueId}/context-data/smf-registrations/{pduSessionId}

get:

Summary: Retrieves the individual SMF registration of a UE

Operation ID: QuerySmfRegistration

Tags:

- SMF Registration (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

- name: pduSessionId

In: path

Description: PDU session id

Required/Optional: true

Schema:

Type: string

- name: fields

In: query

Description: attributes to be retrieved

Required/Optional: false

Schema:

Type: array

items:

Type: string

minItems: 1

style: form

explode: false

- name: supported-features

In: query

Description: Supported Features

Schema:

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

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmfRegistration'

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

put:

Summary: To create an individual SMF context data of a UE in the UDR

Operation ID: CreateSmfContextNon3gpp

Tags:

- SMF Registration (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

- name: pduSessionId

In: path

Description: PDU session id

Required/Optional: true

Schema:

Type: integer

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmfRegistration'

Responses:

'201' Upon success, a response body containing a representation of the created Individual SmfRegistration resource shall be returned

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure:
{apiRoot}/nsmf-pdusession/v1/smf-contexts/{smContextRef}/subscription-data/{ueId}/context-data/smf-registrations/{pduSessionId}'

Required/Optional: true

Schema:

Type: string

delete:

Summary: To remove an individual SMF context data of a UE the UDR

Operation ID: DeleteSmfContext

Tags:

- SMF Registration (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

- name: pduSessionId

In: path

Description: PDU session id

Required/Optional: true

Schema:

Type: string

Responses:

'204' Upon success, an empty response body shall be returned.

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/{ueId}/operator-specific-data

get:

Summary: Retrieves the operator specific data of a UE

Operation ID: QueryOperSpecData

Tags:

- Operator-Specific Data Container (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

- name: fields

In: query

Description: attributes to be retrieved

Required/Optional: false

Schema:

Type: array

items:

Type: string

minItems: 1

style: form

explode: false

- name: supported-features

In: query

Description: Supported Features

Schema:

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

- name: If-None-Match

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.2

Schema:

Type: string

- name: If-Modified-Since

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.3

Schema:

Type: string

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/OperatorSpecificDataContainer'

Headers:

Cache-Control:

Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

Schema:

Type: string

ETag:

Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

Schema:

Type: string

Last-Modified:

Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

Schema:

Type: string

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

patch:

Summary: To modify operator specific data of a UE

Operation ID: AmfContext3gpp

Tags:

- Operator-Specific Data Container (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

Request Body:**Content:**

application/json-patch+json:

Schema:

Type: array

items:

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

Required/Optional: true

Responses:

'204' Expected response to a valid request

'403' modification is rejected

Content:

application/problem+json:

Schema:

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

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/{ueld}/context-data/smsf-3gpp-access

put:

Summary: Create the SMSF context data of a UE via 3GPP access

Operation ID: CreateSmsfContext3gpp

Tags:

- SMSF 3GPP Registration (Document)

Parameters:

- name: ueld

In: path

Description: UE id

Required/Optional: true

Schema:

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

Request Body:**Content:**

Application/JSON:

Schema:

Reference: '#/components/schemas/SmsfRegistration'

Responses:

'204' Upon success, an empty response body shall be returned

default:**Description:** Unexpected error**Content:**

application/problem+json:

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'**delete:****Summary:** To remove the SMSF context data of a UE via 3GPP access**Operation ID:** DeleteSmsfContext3gpp**Tags:**

- SMSF 3GPP Registration (Document)

Parameters:

- name: ueId

In: path**Description:** UE id**Required/Optional:** true**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/VarUeId'**Responses:**

'204' Upon success, an empty response body shall be returned

default:**Description:** Unexpected error**Content:**

application/problem+json:

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'**get:****Summary:** Retrieves the SMSF context data of a UE using 3gpp access**Operation ID:** QuerySmsfContext3gpp**Tags:**

- SMSF 3GPP Registration (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

- name: fields

In: query

Description: attributes to be retrieved

Required/Optional: false

Schema:

Type: array

items:

Type: string

minItems: 1

style: form

explode: false

- name: supported-features

In: query

Description: Supported Features

Schema:

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

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmsfRegistration'

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/{ueId}/context-data/smsf-non-3gpp-access

put:

Summary: Create the SMSF context data of a UE via non-3GPP access

Operation ID: CreateSmsfContextNon3gpp

Tags:

- SMSF Non-3GPP Registration (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmsfRegistration'

Responses:

'204' Upon success, an empty response body shall be returned

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

delete:

Summary: To remove the SMSF context data of a UE via non-3GPP access

Operation ID: DeleteSmsfContextNon3gpp

Tags:

- SMSF Non-3GPP Registration (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

Responses:

'204' Upon success, an empty response body shall be returned

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

get:

Summary: Retrieves the SMSF context data of a UE using non-3gpp access

Operation ID: QuerySmsfContextNon3gpp

Tags:

- SMSF Non-3GPP Registration (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

- name: fields

In: query

Description: attributes to be retrieved

Required/Optional: false

Schema:

Type: array

items:

Type: string

minItems: 1

style: form

explode: false

- name: supported-features

In: query

Description: Supported Features

Schema:

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

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmsfRegistration'

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sms-mng-data

get:

Summary: Retrieves the SMS management subscription data of a UE

Operation ID: QuerySmsMngData

Tags:

- SMS Management Subscription Data (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

- name: servingPlmnId

In: path

Description: PLMN ID

Required/Optional: true

Schema:

Reference: '#/components/schemas/VarPlmnId'

- name: supported-features

In: query

Description: Supported Features

Schema:

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

- name: If-None-Match

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.2

Schema:

Type: string

- name: If-Modified-Since

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.3

Schema:

Type: string

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmsManagementSubscriptionData'

Headers:

Cache-Control:

Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

Schema:

Type: string

ETag:

Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

Schema:

Type: string

Last-Modified:

Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

Schema:

Type: string

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/{ueId}/{servingPlmnId}/provisioned-data/sms-data

get:

Summary: Retrieves the SMS subscription data of a UE

Operation ID: QuerySmsData

Tags:

- SMS Subscription Data (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

- name: servingPlmnId

In: path

Description: PLMN ID

Required/Optional: true

Schema:

Reference: '#/components/schemas/VarPlmnId'

- name: supported-features

In: query

Description: Supported Features

Schema:

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

- name: If-None-Match

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.2

Schema:

Type: string

- name: If-Modified-Since

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.3

Schema:

Type: string

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmsSubscriptionData'

Headers:

Cache-Control:

Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

Schema:

Type: string

ETag:

Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

Schema:

Type: string

Last-Modified:

Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

Schema:

Type: string

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/{ueId}/pp-data

get:

Summary: Read the profile of a given UE

Operation ID: GetppData

Tags:

- Parameter Provision (Document)

Parameters:

- name: ueId

In: path

Description: pp data for a UE

Required/Optional: true

Schema:

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

- name: supported-features

In: query

Description: Supported Features

Schema:

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

- name: If-None-Match

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.2

Schema:

Type: string

- name: If-Modified-Since

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.3

Schema:

Type: string

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:**Schema:****Reference:** '#/components/schemas/PpData'**Headers:****Cache-Control:****Description:** Cache-Control containing max-age, as described in RFC 7234, 5.2**Schema:****Type:** string**ETag:****Description:** Entity Tag, containing a strong validator, as described in RFC 7232, 2.3**Schema:****Type:** string**Last-Modified:****Description:** Timestamp for last modification of the resource, as described in RFC 7232, 2.2**Schema:****Type:** string**'403'** Forbidden**Content:**

application/problem+json:

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'**default:****Description:** Unexpected error**Content:**

application/problem+json:

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'**patch:****Summary:** modify the provisioned parameter data**Operation ID:** ModifyPpData**Tags:**

- ProvisionedParameterData (Document)

Parameters:

- name: ueId

In: path

Description: pp data for a UE

Required/Optional: true

Schema:

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

Request Body:

Content:

application/json-patch+json:

Schema:

Type: array

items:

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

Required/Optional: true

Responses:

'204' Expected response to a valid request

'403' modification is rejected

Content:

application/problem+json:

Schema:

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

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/{ueid}/context-data/ee-subscriptions

get:

Summary: Retrieves the ee subscriptions of a UE

Operation ID: Queryeesubscriptions

Tags:

- Event Exposure Subscriptions (Collection)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

- name: supported-features

In: query

Description: Supported Features

Schema:

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

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/EeSubscription'

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

Method: Post

Summary: Create individual EE subscription

Operation ID: CreateEeSubscriptions

Tags:

- Event Exposure Subscriptions (Collection)

Parameters:

- name: ueId

In: path

Description: UE ID

Required/Optional: true

Schema:

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

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/EeSubscription'

Required/Optional: true

Responses:

'201' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/EeSubscription'

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}'

Required/Optional: true

Schema:

Type: string

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}

put:

Summary: Stores an individual ee subscriptions of a UE

Operation ID: UpdateEesubscriptions

Tags:

- Event Exposure Subscription (Document)

Parameters:

- name: ueId

In: path

Required/Optional: true

Schema:

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

- name: subsId

In: path

Required/Optional: true

Schema:

Type: string

Request Body:**Content:****Application/JSON:****Schema:**

Reference: '#/components/schemas/EeSubscription'

Responses:

'204' Upon success, an empty response body shall be returned

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

delete:

Summary: Deletes a eeSubscription

Operation ID: RemoveeeSubscriptions

Tags:

- Event Exposure Subscription (Document)

Parameters:

- name: ueId

In: path

Required/Optional: true

Schema:

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

- name: subsId

In: path

Required/Optional: true

Description: Unique ID of the subscription to remove

Schema:

Type: string

Responses:

'204' Expected response to a successful subscription removal

/subscription-data/{ueId}/context-data/ee-subscriptions/{subsId}/amf-subscription

put:

Summary: Create AmfSubscriptions for an individual ee subscriptions of a UE

Operation ID: Create AMF Subscriptions

Tags:

- AMF Subscription Info (Document)

Parameters:

- name: ueId

In: path

Required/Optional: true

Schema:

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

- name: subsId

In: path

Required/Optional: true

Schema:

Type: string

Request Body:

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/AmfSubscriptionInfo'

minItems: 1

Required/Optional: true

Responses:

'204' Upon success, an empty response body shall be returned

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

delete:

Summary: Deletes AMF Subscription Info for an eeSubscription

Operation ID: RemoveAmfSubscriptionsInfo

Tags:

- Event AMF Subscription Info (Document)

Parameters:

- name: ueId

In: path

Required/Optional: true

Schema:

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

- name: subsId

In: path

Required/Optional: true

Schema:

Type: string

Responses:

'204' Expected response to a successful subscription removal

patch:

Summary: modify the AMF Subscription Info

Operation ID: ModifyAmfSubscriptionInfo

Tags:

- AmfSubscriptionInfo (Document)

Parameters:

- name: ueId

In: path

Required/Optional: true

Schema:

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

- name: subsId

In: path

Required/Optional: true

Schema:

Type: string

Request Body:

Content:

application/json-patch+json:

Schema:

Type: array

items:

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

Required/Optional: true

Responses:

'204' Expected response to a valid request

'403' modification is rejected

Content:

application/problem+json:

Schema:

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

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

get:

Summary: Retrieve AMF subscription Info

Operation ID: GetAmfSubscriptionInfo

Tags:

- Query AMF Subscription Info (Document)

Parameters:

- name: ueId

In: path

Required/Optional: true

Schema:

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

- name: subsId

In: path

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK

Content:**Application/JSON:****Schema:**

Type: array

items:

Reference: '#/components/schemas/AmfSubscriptionInfo'

minItems: 1

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/group-data/{ueGroupId}/ee-subscriptions

get:

Summary: Retrieves the ee subscriptions of a group of UEs or any UE

Operation ID: QueryEeGroupSubscriptions

Tags:

- Event Exposure Group Subscriptions (Collection)

Parameters:

- name: ueGroupId

In: path

Description: Group of UEs or any UE

Required/Optional: true

Schema:

Reference: '#/components/schemas/VarUeGroupId'

- name: supported-features

In: query

Description: Supported Features

Schema:

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

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/EeSubscription'

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

Method: Post

Summary: Create individual EE subscription for a group of UEs or any UE

Operation ID: CreateEeGroupSubscriptions

Tags:

- Event Exposure Group Subscriptions (Collection)

Parameters:

- name: ueGroupId

/subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subslId}

In: path

Description: Group of UEs or any UE

Required/Optional: true

Schema:

Reference: '#/components/schemas/VarUeGroupId'

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/EeSubscription'

Required/Optional: true

Responses:

'201' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/EeSubscription'

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/v1/subscription-data/group-data/{ueGroupId}/ee-subscriptions '

Required/Optional: true

Schema:

Type: string

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/group-data/{ueGroupId}/ee-subscriptions/{subslId}

put:

Summary: Stores an individual ee subscription of a group of UEs or any UE

Operation ID: UpdateEeGroupSubscriptions

Tags:

- Event Exposure Subscription (Document)

Parameters:

- name: ueGroupId

In: path

Required/Optional: true

Schema:

Reference: '#/components/schemas/VarUeGroupId'

- name: subsId

In: path

Required/Optional: true

Schema:

Type: string

Request Body:**Content:****Application/JSON:****Schema:**

Reference: '#/components/schemas/EeSubscription'

Responses:

'204' Upon success, an empty response body shall be returned

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

delete:

Summary: Deletes a eeSubscription for a group of UEs or any UE

Operation ID: RemoveEeGroupSubscriptions

Tags:

- Event Exposure Subscription (Document)

Parameters:

- name: ueGroupId

In: path

Required/Optional: true

Schema:

Reference: '#/components/schemas/VarUeGroupId'

- name: subsId

In: path

Required/Optional: true

Description: Unique ID of the subscription to remove

Schema:

Type: string

Responses:

'204' Expected response to a successful subscription removal

/subscription-data/{ueld}/ee-profile-data

get:

Summary: Retrieves the ee profile data of a UE

Operation ID: QueryEEData

Tags:

- Event Exposure Data (Document)

Parameters:

- name: ueld

In: path

Description: UE id

Required/Optional: true

Schema:

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

- name: fields

In: query

Description: attributes to be retrieved

Required/Optional: false

Schema:

Type: array

items:

Type: string

style: form

explode: false

- name: supportedFeatures

In: query

Description: Supported Features

Schema:

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

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/EeProfileData'

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/{ueId}/context-data/sdm-subscriptions

get:

Summary: Retrieves the sdm subscriptions of a UE

Operation ID: Querysdmsubscriptions

Tags:

- SDM Subscriptions (Collection)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

- name: supported-features

In: query

Description: Supported Features

Schema:

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

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/SdmSubscription'

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

Method: Post

Summary: Create individual sdm subscription

Operation ID: CreateSdmSubscriptions

Tags:

- SDM Subscriptions (Collection)

Parameters:

- name: ueId

In: path

Description: UE ID

Required/Optional: true

Schema:

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

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SdmSubscription'

Required/Optional: true

Responses:

'201' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SdmSubscription'

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/subscription-data/{ueId}/context-data/sdm-subscriptions/{subId}'

Required/Optional: true

Schema:

Type: string

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

/subscription-data/{ueId}/context-data/sdm-subscriptions/{subId}

put:

Summary: Stores an individual sdm subscriptions of a UE

Operation ID: Updatesdmsubscriptions

Tags:

- SDM Subscription (Document)

Parameters:

- name: ueId

In: path

Required/Optional: true

Schema:

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

- name: subId

In: path

Required/Optional: true

Schema:

Type: string

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SdmSubscription'

Responses:

'204' Upon success, an empty response body shall be returned

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

delete:

Summary: Deletes a sdmsubscriptions

Operation ID: RemovesdmSubscriptions

Tags:

- SDM Subscription (Document)

Parameters:

- name: ueId

In: path

Required/Optional: true

Schema:

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

- name: subsId

In: path

Required/Optional: true

Description: Unique ID of the subscription to remove

Schema:

Type: string

Responses:

'204' Expected response to a successful subscription removal

/subscription-data/shared-data

get:

Summary: retrieve shared data

Operation ID: GetSharedData

Tags:

- Retrieval of shared data

Parameters:

- name: shared-data-ids

In: query

Description: List of shared data ids

Required/Optional: true

style: form

explode: false

Schema:

Reference: 'TS29503_Nudm_SDM.yaml#/components/schemas/SharedDataIds'

- name: supportedFeatures

In: query

Description: Supported Features

Schema:

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

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: 'TS29503_Nudm_SDM.yaml#/components/schemas/SharedData'

minItems: 1

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

/subscription-data/subs-to-notify

Method: Post

Summary: Subscription data subscriptions

Operation ID: SubscriptionDataSubscriptions

Tags:

- Subs To Notify (Collection)

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SubscriptionDataSubscriptions'

Required/Optional: true

Responses:

'201' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SubscriptionDataSubscriptions'

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/subscription-data/subs-to-notify/{subsId}'

Required/Optional: true

Schema:

Type: string

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

Callbacks:**onDataChange:**

'{request.body#/callbackReference}':

Method: Post

Request Body:

Required/Optional: true

Content:**Application/JSON:****Schema:**

Reference: '#/components/schemas/DataChangeNotify'

Responses:

'204' Expected response to a valid request

/subscription-data/subs-to-notify/{subsid}

delete:

Summary: Deletes a subscriptionDataSubscriptions

Operation ID: RemovesubscriptionDataSubscriptions

Tags:

- Subs To Notify (Document)

Parameters:

- name: subsId

In: path

Required/Optional: true

Description: Unique ID of the subscription to remove

Schema:

Type: string

Responses:

'204' Expected response to a successful subscription removal

/subscription-data/{ueid}/{servingPlmnid}/provisioned-data/trace-data

get:

Summary: Retrieves the trace configuration data of a UE

Operation ID: QueryTraceData

Tags:

- Trace Data (Document)

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

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

- name: servingPlmnId

In: path

Description: PLMN ID

Required/Optional: true

Schema:

Reference: '#/components/schemas/VarPlmnId'

- name: If-None-Match

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.2

Schema:

Type: string

- name: If-Modified-Since

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.3

Schema:

Type: string

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

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

Headers:

Cache-Control:

Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

Schema:

Type: string

ETag:

Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

Schema:

Type: string

Last-Modified:

Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

Schema:

Type: string

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/subscription-data/{ueId}/identity-data

get:

Summary: Retrieve identity data by SUPI or GPSI

Operation ID: GetIdentityData

Tags:

- Query Identity Data by SUPI or GPSI (Document)

Parameters:

- name: ueId

In: path

Description: UE ID

Required/Optional: true

Schema:

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

- name: If-None-Match

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.2

Schema:

Type: string

- name: If-Modified-Since

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.3

Schema:

Type: string

Responses:**'200'** OK**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/IdentityData'**Headers:****Cache-Control:****Description:** Cache-Control containing max-age, as described in RFC 7234, 5.2**Schema:****Type:** string**ETag:****Description:** Entity Tag, containing a strong validator, as described in RFC 7232, 2.3**Schema:****Type:** string**Last-Modified:****Description:** Timestamp for last modification of the resource, as described in RFC 7232, 2.2**Schema:****Type:** string**default:****Description:** Unexpected error**Content:**

application/problem+json:

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

/subscription-data/{ueld}/operator-determined-barring-data

get:**Summary:** Retrieve ODB Data data by SUPI or GPSI**Operation ID:** GetOdbData**Tags:**

- Query ODB Data by SUPI or GPSI (Document)

Parameters:

- name: ueld

In: path

Description: UE ID

Required/Optional: true

Schema:

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

Responses:

'200' OK

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/OperatorDeterminedBarringData'

default:

Description: Unexpected error

Content:

application/problem+json:

Schema:

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

components

schemas

AuthenticationSubscription

Type: object

Required:

- authenticationMethod
- permanentKey
- sequenceNumber

Properties:

authenticationMethod:

Reference: '#/components/schemas/AuthMethod'

permanentKey:

Reference: '#/components/schemas/PermanentKey'

sequenceNumber:

Reference: '#/components/schemas/SequenceNumber'

authenticationManagementField:

Reference: '#/components/schemas/AuthenticationManagementField'

vectorAlgorithm:

Reference: '#/components/schemas/VectorAlgorithm'

milenage:

Reference: '#/components/schemas/Milenage'

tuak:

Reference: '#/components/schemas/Tuak'

opc:

Reference: '#/components/schemas/Opc'

topc:

Reference: '#/components/schemas/Topc'

sharedAuthenticationSubscriptionId:

Reference: 'TS29503_Nudm_SDM.yaml#/components/schemas/SharedData'

SharedAuthenticationSubscription

Type: object

Required:

- authenticationMethod
- vectorAlgorithm

Properties:

authenticationManagementField:

Reference: '#/components/schemas/AuthenticationManagementField'

vectorAlgorithm:

Reference: '#/components/schemas/VectorAlgorithm'

milenage:

Reference: '#/components/schemas/Milenage'

tuak:

Reference: '#/components/schemas/Tuak'

PermanentKey

Type: object

Required:

- permanentKeyValue

- encryptionKey

- encryptionAlgorithm

Properties:

permanentKeyValue:

Reference: '#/components/schemas/PermanentKeyValue'

encryptionKey:

Reference: '#/components/schemas/EncryptionKey'

encryptionAlgorithm:

Reference: '#/components/schemas/EncryptionAlgorithm'

Milenage

Type: object

Properties:

op:

Reference: '#/components/schemas/Op'

rotations:

Reference: '#/components/schemas/Rotations'

constants:

Reference: '#/components/schemas/Constants'

Tuak

Type: object

Properties:

top:

Reference: '#/components/schemas/Top'

keccakIterations:

Type: integer

Minimum: 1

Maximum: 255

Op

Type: object

Required:

- opValue

- encryptionKey

- encryptionAlgorithm

Properties:**opValue:****Reference:** '#/components/schemas/OpValue'**encryptionKey:****Reference:** '#/components/schemas/EncryptionKey'**encryptionAlgorithm:****Reference:** '#/components/schemas/EncryptionAlgorithm'**Opc****Type:** object**Required:**

- opValue
- encryptionKey
- encryptionAlgorithm

Properties:**opcValue:****Reference:** '#/components/schemas/OpcValue'**encryptionKey:****Reference:** '#/components/schemas/EncryptionKey'**encryptionAlgorithm:****Reference:** '#/components/schemas/EncryptionAlgorithm'**Top****Type:** object**Required:**

- topValue
- encryptionKey
- encryptionAlgorithm

Properties:**topValue:****Reference:** '#/components/schemas/TopValue'**encryptionKey:****Reference:** '#/components/schemas/EncryptionKey'**encryptionAlgorithm:****Reference:** '#/components/schemas/EncryptionAlgorithm'

Topc

Type: object

Required:

- topcValue
- encryptionKey
- encryptionAlgorithm

Properties:

topcValue:

Reference: '#/components/schemas/TopcValue'

encryptionKey:

Reference: '#/components/schemas/EncryptionKey'

encryptionAlgorithm:

Reference: '#/components/schemas/EncryptionAlgorithm'

Rotations

Type: object

Required:

- r1
- r2
- r3
- r4
- r5

Properties:

r1:

Reference: '#/components/schemas/RValue'

r2:

Reference: '#/components/schemas/RValue'

r3:

Reference: '#/components/schemas/RValue'

r4:

Reference: '#/components/schemas/RValue'

r5:

Reference: '#/components/schemas/RValue'

Constants

Type: object

Required:

- c1

- c2

- c3

- c4

- c5

Properties:

c1:

Reference: '#/components/schemas/CValue'

c2:

Reference: '#/components/schemas/CValue'

c3:

Reference: '#/components/schemas/CValue'

c4:

Reference: '#/components/schemas/CValue'

c5:

Reference: '#/components/schemas/CValue'

PermanentKeyValue

Type: string

Pattern: '^[A-Za-f0-9]+\$'

SequenceNumber

Type: string

Pattern: '^[A-Za-f0-9]{12}\$'

AuthenticationManagementField

Type: string

Pattern: '^[A-Za-f0-9]{4}\$'

OpValue

Type: string

Pattern: '^[A-Za-f0-9]+\$'

OpcValue

Type: string

Pattern: '^[A-Za-f0-9]+\$'

TopValue

Type: string

Pattern: '^[A-Za-f0-9]+\$'

TopcValue

Type: string

Pattern: '^[A-Za-f0-9]+\$'

RValue

Type: string

Pattern: '^[A-Za-f0-9]+\$'

CValue

Type: string

Pattern: '^[A-Za-f0-9]+\$'

EncryptionKey

Type: integer

EncryptionAlgorithm

Type: integer

VectorAlgorithm

Type: string

enum:

- MILENAGE

- TUAK

VarPlmnId

Type: string

Pattern: '^[0-9]{5,6}\$'

DatasetNames

Type: array

Items:

Reference: '#/components/schemas/DataSetName'

minItems: 1

uniqueItems: true

DataSetName

anyOf:

- type: string

ProvisionedDataSets

Type: object

Properties:

amData:

Reference: '#/components/schemas/AccessAndMobilitySubscriptionData'

smfSelData:

Reference: '#/components/schemas/SmfSelectionSubscriptionData'

smsSubsData:

Reference: '#/components/schemas/SmsSubscriptionData'

smData:

Type: array

Items:

Reference: '#/components/schemas/SessionManagementSubscriptionData'

traceData:

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

smsMngData:

Reference: '#/components/schemas/SmsManagementSubscriptionData'

AccessAndMobilitySubscriptionData

Reference: 'TS29503_Nudm_SDM.yaml#/components/schemas/AccessAndMobilitySubscriptionData'

SmfSelectionSubscriptionData

Reference: 'TS29503_Nudm_SDM.yaml#/components/schemas/SmfSelectionSubscriptionData'

VarSnsai

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

Dnn

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

SessionManagementSubscriptionData

Reference: 'TS29503_Nudm_SDM.yaml#/components/schemas/SessionManagementSubscriptionData'

Amf3GppAccessRegistration

Reference: 'TS29503_Nudm_UECM.yaml#/components/schemas/Amf3GppAccessRegistration'

AmfNon3GppAccessRegistration

Reference: 'TS29503_Nudm_UECM.yaml#/components/schemas/AmfNon3GppAccessRegistration'

SmfRegistration

Reference: 'TS29503_Nudm_UECM.yaml#/components/schemas/SmfRegistration'

SmsfRegistration

Reference: 'TS29503_Nudm_UECM.yaml#/components/schemas/SmsfRegistration'

SmsManagementSubscriptionData

Reference: 'TS29503_Nudm_SDM.yaml#/components/schemas/SmsManagementSubscriptionData'

SmsSubscriptionData

Reference: 'TS29503_Nudm_SDM.yaml#/components/schemas/SmsSubscriptionData'

OperatorSpecificDataContainer

Type: object

Properties:

StringTypeElements:

Type: object

additionalProperties:

Type: string

IntegerTypeElements:

Type: object

additionalProperties:

Type: integer

NumberTypeElements:

Type: object

additionalProperties:

Type: number

BooleanTypeElements:

Type: object

additionalProperties:

Type: boolean

AuthMethod

Type: string

enum:

- 5G_AKA

- EAP_AKA_PRIME

PpData

Reference: 'TS29503_Nudm_PP.yaml#/components/schemas/PpData'

EeSubscription

Reference: 'TS29503_Nudm_EE.yaml#/components/schemas/EeSubscription'

VarUeGroupId

Type: string

Pattern: '^(extgroupid-[^@]+@[^@]+|anyUE)\$'

SdmSubscription

Reference: 'TS29503_Nudm_SDM.yaml#/components/schemas/SdmSubscription'

SmfRegList

Type: array

Items:

Reference: '#/components/schemas/SmfRegistration'

SubscriptionDataSubscriptions

Type: object

Required:

- ueId

- callbackReference

- originalCallbackReference

- supported-features

Properties:**ueId:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/VarUeId'**callbackReference:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**originalCallbackReference:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**monitoredResourceUri:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**expiry:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DateTime'**supported-features:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

DataChangeNotify

Type: object**Properties:****originalCallbackReference:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**minItems:** 1**ueId:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/VarUeId'**notifyItems:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NotifyItem'**minItems:** 1

IdentityData

Type: object**Properties:**

supiList:

Type: array

Items:

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

minItems: 1

maxItems: 2

gpsiList:

Type: array

Items:

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

minItems: 1

SorData

Type: object

Properties:

sorXmacIue:

Reference: 'TS29509_Nausf_SoRProtection.yaml#/components/schemas/SorMac'

Required:

- sorXmacIue

OperatorDeterminedBarringData

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

EeProfileData

Type: object

Properties:

restrictedEventTypes:

Type: array

Items:

Reference: 'TS29503_Nudm_EE.yaml#/components/schemas/EventType'

supportedFeatures:

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

AmfSubscriptionInfo

Type: object

Required:

- amfInstanceId

- subscriptionId

Properties:

amfInstanceId:

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

subscriptionId:

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

subsChangeNotifyCorrelationId:

Type: string



CHAPTER 30

ChargeableParty

API for Chargeable Party management.

- [OpenAPI](#), on page 609
- [info](#), on page 609
- [externalDocs](#), on page 609
- [security](#), on page 609
- [servers](#), on page 610
- [paths](#), on page 610
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OpenAPI

OpenAPI Version: 3.0.0

info

Title: 3gpp-chargeable-party

Version: "1.0.0"

externalDocs

Description: 3GPP TS 29.122 V15.2.0 T8 reference point for Northbound APIs

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.122/'

security

- {}

- oAuth2ClientCredentials: []

servers

URL: '{apiRoot}/3gpp-chargeable-party/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 5.2.4 of 3GPP TS 29.122.

paths

{scsAsId}/transactions

get:

Summary: Read all chargeable party transaction resources for a given SCS/AS

Tags:

- Chargeable Party Transaction Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK (successful query of Chargeable Party resource)

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/ChargeableParty'

minItems: 0

Description: individual BDT policy 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'
'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'

Method: Post

Summary: Create a new chargeable party transaction resource

Tags:

- Chargeable Party Transaction Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:

Type: string

Request Body:

Description: representation of the Chargeable Party resource to be Created in the SCEF

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ChargeableParty'

Callbacks:

eventNotification:

'{\$request.body#/notificationDestination}':

Method: Post

Request Body: # contents of the callback message

Required/Optional: true

Content:

Application/JSON:

Schema:**Reference:** 'TS29122_CommonData.yaml#/components/schemas/NotificationData'**Responses:**

'200': OK (The successful acknowledgement of the notification with a body)

'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 creation of a chargeable party resource

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/ChargeableParty'**Headers:****Location:****Description:** 'Contains the URI of the newly created resource'**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'

'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'

/{scsAsId}/transactions/{transactionId}

get:

Summary: read a chargeable party resource for a given SCS/AS and a transaction Id

Tags:

- Individual chargeable party resource Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:

Type: string

- name: transactionId

In: path

Description: Identifier of transaction

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK (successful query of a chargeable party resource)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ChargeableParty'

'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'

patch:

Summary: Updates a existing chargeable party resource for a given SCS/AS and transaction Id.

Tags:

- Individual chargeable party resource Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:

Type: string

- name: transactionId

In: path

Description: Identifier of transaction

Required/Optional: true

Schema:

Type: string

Request Body:

Description: representation of the chargeable party resource to be updated in the SCEF

Required/Optional: true

Content:

application/merge-patch+json:

Schema:

Reference: '#/components/schemas/ChargeablePartyPatch'

Responses:

'200' successful update of a chargeable party resource

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ChargeableParty'

'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:

Summary: deletes a chargeable party resource for a given SCS/AS and a transaction Id.

Tags:

- Individual chargeable party resource Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:

Type: string

- name: transactionId

In: path

Description: Identifier of transaction

Required/Optional: true

Schema:

Type: string

Responses:

'200' successful deletion of an resource of chargeable party

'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

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas

ChargeableParty

Type: object

Properties:

self:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

supportedFeatures:

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

notificationDestination:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

requestTestNotification:

Type: boolean

Description: Set to true by the SCS/AS to request the SCEF to send a test notification as defined in subclause 5.2.5.3. Set to false or omitted otherwise.

websocketNotifConfig:

Reference: 'TS29122_CommonData.yaml#/components/schemas/WebsocketNotifConfig'

ipv4Addr:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Ipv4Addr'

ipv6Addr :

Reference: 'TS29122_CommonData.yaml#/components/schemas/Ipv6Addr'

macAddr:

Reference: 'TS29571_CommonData.yaml#/components/schemas/macAddr48'

flowInfo:

Type: array

Items:

Reference: 'TS29122_CommonData.yaml#/components/schemas/FlowInfo'

minItems: 1

Description: Describes the application flows.

ethFlowInfo:

Type: array

Items:

Reference: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/EthFlowDescription'

minItems: 1

Description: Identifies Ethernet packet flows.

sponsorInformation:

Reference: 'TS29122_CommonData.yaml#/components/schemas/SponsorInformation'

sponsoringEnabled:

Type: boolean

Description: Indicates sponsoring status.

referenceId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/BdtReferenceId'

usageThreshold:

Reference: 'TS29122_CommonData.yaml#/components/schemas/UsageThreshold'

Required:

- notificationDestination
- sponsorInformation
- sponsoringEnabled

ChargeablePartyPatch

Type: object

Properties:

flowInfo:

Type: array

Items:

Reference: 'TS29122_CommonData.yaml#/components/schemas/FlowInfo'

minItems: 1

Description: Describes the application flows.

ethFlowInfo:

Type: array

Items:

Reference: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/EthFlowDescription'

minItems: 1

Description: Identifies Ethernet packet flows.

sponsoringEnabled:

Type: boolean

Description: Indicates sponsoring status.

referenceId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/BdtReferenceId'

usageThreshold:

Reference: 'TS29122_CommonData.yaml#/components/schemas/UsageThresholdRm'



CHAPTER 31

AsSessionWithQoS

API for setting us an AS session with required QoS.

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- [info](#), on page 619
- [externalDocs](#), on page 619
- [security](#), on page 619
- [servers](#), on page 620
- [paths](#), on page 620
- [components](#), on page 627

OpenAPI

OpenAPI Version: 3.0.0

info

Title: 3gpp-as-session-with-qos

Version: "1.0.0"

externalDocs

Description: 3GPP TS 29.122 V15.2.0 T8 reference point for Northbound APIs

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.122/'

security

- {}

- oAuth2ClientCredentials: []

servers

URL: '{apiRoot}/3gpp-as-session-with-qos/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 5.2.4 of 3GPP TS 29.122.

paths

{scsAsId}/subscriptions

get:

Summary: read all of the active subscriptions for the SCS/AS

Tags:

- AsSessionWithQoS API SCS/AS level GET Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK.

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/AsSessionWithQoSSubscription'

'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'

Method: Post

Summary: Creates a new subscription resource

Tags:

- AsSessionWithQoS API Subscription level POST Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

Request Body:

Description: Request to create a new subscription resource

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AsSessionWithQoSSubscription'

Callbacks:

notificationDestination:

'{request.body#/notificationDestination}':

Method: Post

Request Body: # contents of the callback message

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: 'TS29122_CommonData.yaml#/components/schemas/NotificationData'

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' Created (Successful creation of subscription)

Content:**Application/JSON:****Schema:**

Reference: '#/components/schemas/AsSessionWithQoSSubscription'

Headers:**Location:**

Description: 'Contains the URI of the newly created resource'

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'

'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'

{scsAsId}/subscriptions/{subscriptionId}

get:

Summary: read an active subscriptions for the SCS/AS and the subscription Id

Tags:

- AsSessionWithQoS API Subscription level GET Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

- name: subscriptionId

In: path

Description: Identifier of the subscription resource

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK (Successful get the active subscription)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AsSessionWithQoSSubscription'

'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:

Summary: Updates/replaces an existing subscription resource

Tags:

- AsSessionWithQoS API subscription level PUT Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

- name: subscriptionId

In: path

Description: Identifier of the subscription resource

Required/Optional: true

Schema:

Type: string

Request Body:

Description: Parameters to update/replace the existing subscription

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AsSessionWithQoSSubscription'

Responses:

'200' OK (Successful update of the subscription)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AsSessionWithQoSSubscription'

'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'

patch:

Summary: Updates/replaces an existing subscription resource

Tags:

- AsSessionWithQoS API subscription level PATCH Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

- name: subscriptionId

In: path

Description: Identifier of the subscription resource

Required/Optional: true

Schema:

Type: string

Request Body:

Required/Optional: true

Content:

application/merge-patch+json:

Schema:

Reference: '#/components/schemas/AsSessionWithQoSSubscriptionPatch'

Responses:

'200' OK. The subscription was modified successfully.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AsSessionWithQoSSubscription'

'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:

Summary: Deletes an already existing subscription

Tags:

- AsSessionWithQoS API Subscription level DELETE Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

- name: subscriptionId

In: path

Description: Identifier of the subscription resource

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'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2
Flows:
clientCredentials:
tokenUrl: '{tokenUrl}'
scopes: {}

schemas

AsSessionWithQoSSubscription

Type: object
Properties:
self:
Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'
supportedFeatures:
Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
notificationDestination:
Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'
flowInfo:
Type: array
Items:

Reference: 'TS29122_CommonData.yaml#/components/schemas/FlowInfo'

minItems: 1

Description: Describe the data flow which requires QoS.

ethFlowInfo:

Type: array

Items:

Reference: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/EthFlowDescription'

minItems: 1

Description: Identifies Ethernet packet flows.

qosReference:

Type: string

Description: Identifies a pre-defined QoS information

ueIpv4Addr:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Ipv4Addr'

ueIpv6Addr:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Ipv6Addr'

macAddr:

Reference: 'TS29571_CommonData.yaml#/components/schemas/macAddr48'

usageThreshold:

Reference: 'TS29122_CommonData.yaml#/components/schemas/UsageThreshold'

sponsorInfo:

Reference: 'TS29122_CommonData.yaml#/components/schemas/SponsorInformation'

requestTestNotification:

Type: boolean

Description: Set to true by the SCS/AS to request the SCEF to send a test notification as defined in subclause 5.2.5.3. Set to false or omitted otherwise.

websockNotifConfig:

Reference: 'TS29122_CommonData.yaml#/components/schemas/WebsockNotifConfig'

Required:

- notificationDestination

AsSessionWithQoSSubscriptionPatch

Type: object

Properties:

flowInfo:

Type: array

Items:

Reference: 'TS29122_CommonData.yaml#/components/schemas/FlowInfo'

minItems: 1

Description: Describe the data flow which requires QoS.

ethFlowInfo:

Type: array

Items:

Reference: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/EthFlowDescription'

minItems: 1

Description: Identifies Ethernet packet flows.

qosReference:

Type: string

Description: Pre-defined QoS reference

usageThreshold:

Reference: 'TS29122_CommonData.yaml#/components/schemas/UsageThresholdRm'



CHAPTER 32

CpProvisioning

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OpenAPI

OpenAPI Version: 3.0.0

info

Title: 3gpp-cp-parameter-provisioning

Version: "1.0.0"

externalDocs

Description: 3GPP TS 29.122 V15.2.0 T8 reference point for Northbound APIs

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.122/'

security

- {}

- oAuth2ClientCredentials: []

servers

URL: '{apiRoot}/3gpp-cp-parameter-provisioning/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 5.2.4 of 3GPP TS 29.122.

paths

{scsAsId}/subscriptions

get:

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

Required/Optional: true

Schema:

Type: string

Responses:

'200': OK. The subscription information related to the request URI is returned.

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/CpInfo'

minItems: 0

'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'

Method: Post

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

Required/Optional: true

Schema:

Type: string

Request Body:

Description: create new subscriptions for a given SCS/AS and the provisioning CP parameter sets.

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/CpInfo'

Responses:

'201' Created. The subscription was created successfully. The SCEF shall return the created subscription in the response payload body.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/CpInfo'

Headers:

Location:

Description: 'Contains the URI of the newly created resource'

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'

'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' The CP parameters for all sets were not created successfully. CpReport may be included with detailed information.

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/CpReport'

minItems: 1

application/problem+json:

Schema:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ProblemDetails'

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

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

/{scsAsId}/subscriptions/{subscriptionId}

get:

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

Required/Optional: true

Schema:

Type: string

- name: subscriptionId

In: path

Description: Subscription ID

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK. The subscription information related to the request URI is returned.

Content:**Application/JSON:****Schema:**

Reference: '#/components/schemas/CpInfo'

'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:**Request Body:**

Description: Modify a CP parameter provisioning subscription resource.

Required/Optional: true

Content:**Application/JSON:****Schema:**

Reference: '#/components/schemas/CpInfo'

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

Required/Optional: true

Schema:

Type: string

- name: subscriptionId

In: path

Description: Subscription ID

Required/Optional: true

Schema:**Type:** string**Responses:**

'200' OK. The subscription was modified successfully. The SCEF shall return an updated subscription in the response payload body.

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/CpInfo'

'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' The CP parameters for all sets were not updated successfully. CpReport may be included with detailed information.

Content:**Application/JSON:****Schema:****Type:** array**items:****Reference:** '#/components/schemas/CpReport'**minItems:** 1

application/problem+json:

Schema:**Reference:** 'TS29122_CommonData.yaml#/components/schemas/ProblemDetails'

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

default: Reference 'TS29122_CommonData.yaml#/components/responses/default'**delete:****Parameters:**

- name: scsAsId

In: path

Description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

Required/Optional: true

Schema:

Type: string

- name: subscriptionId

In: path

Description: Subscription ID

Required/Optional: true

Schema:

Type: string

Responses:

'204': No Content. The subscription was deleted successfully. The payload body shall be empty.

'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'

/{scsAsId}/subscriptions/{subscriptionId}/cpSets/{setId}

get:

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

Required/Optional: true

Schema:

Type: string

- name: subscriptionId

In: path

Description: Subscription ID

Required/Optional: true

Schema:**Type:** string

- name: setId

In: path**Description:** Identifier of the CP parameter set**Required/Optional:** true**Schema:****Type:** string**Responses:****'200'** OK. The subscription information related to the request URI is returned.**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/CpParameterSet'**'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:****Request Body:****Description:** Change information for a CP parameter set.**Required/Optional:** true**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/CpParameterSet'**Parameters:**

- name: scsAsId

In: path

Description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

Required/Optional: true

Schema:

Type: string

- name: subscriptionId

In: path

Description: Subscription ID

Required/Optional: true

Schema:

Type: string

- name: setId

In: path

Description: Identifier of the CP parameter set

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK. The CP parameter set resource was modified successfully. The SCEF shall return an updated CP parameter set resource in the response payload body.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/CpParameterSet'

'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'

'409' The CP parameters for the CP set were not updated successfully.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/CpReport'

application/problem+json:

Schema:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ProblemDetails'

'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' The CP parameters for the CP set were not updated successfully.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/CpReport'

application/problem+json:

Schema:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ProblemDetails'

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

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

delete:

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS as defined in subclause subclause 5.2.4 of 3GPP TS 29.122.

Required/Optional: true

Schema:

Type: string

- name: subscriptionId

In: path

Description: Subscription ID

Required/Optional: true

Schema:

Type: string

- name: setId

In: path

Description: Identifier of the CP parameter set

Required/Optional: true

Schema:

Type: string

Responses:

'204': No Content. The subscription was deleted successfully. The payload body shall be empty.

'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

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas

CpInfo

Type: object

Properties:

self:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

supportedFeatures:

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

externalId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalId'

msisdn:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Msisdn'

externalGroupId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalGroupId'

cpParameterSets:

Type: object

additionalProperties:

Reference: '#/components/schemas/CpParameterSet'

minProperties: 1

Description: Identifies a set of CP parameter information that may be part of this CpInfo structure.

cpReports:

Type: object

additionalProperties:

Reference: '#/components/schemas/CpReport'

minProperties: 1

Description: Supplied by the SCEF and contains the CP set identifiers for which CP parameter(s) are not added or modified successfully. The failure reason is also included. Each element provides the related information for one or more CP set identifier(s) and is identified in the map via the failure identifier as key.

readOnly: true

Required: cpParameterSets

oneOf:

- required: [externalId]
- required: [msisdn]
- required: [externalGroupId]

CpParameterSet

Type: object

Properties:

setId:

Type: string

Description: SCS/AS-chosen correlator provided by the SCS/AS in the request to create a resource fo CP parameter set(s).

self:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

validityTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTime'

periodicCommunicationIndicator:**Reference:** '#/components/schemas/CommunicationIndicator'**communicationDurationTime:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/DurationSec'**periodicTime:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/DurationSec'**scheduledCommunicationTime:****Reference:** '#/components/schemas/ScheduledCommunicationTime'**stationaryIndication:****Reference:** '#/components/schemas/StationaryIndication'**expectedUmts:****Type:** array**Items:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/LocationArea5G'**minItems:** 1**Description:** Identifies the UE's expected geographical movement. The attribute is only applicable in 5G.**Required:** setId

ScheduledCommunicationTime

Type: object**Properties:****daysOfWeek:****Type:** array**Items:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/DayOfWeek'**minItems:** 1**maxItems:** 6**Description:** Identifies the day(s) of the week. If absent, it indicates every day of the week.**timeOfDayStart:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/TimeOfDay'**timeOfDayEnd:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/TimeOfDay'

CpReport

Type: object

Properties:**setIds:****Type:** array**Items:****Type:** string**minItems:** 1**Description:** Identifies the CP set identifier(s) which CP parameter(s) are not added or modified successfully**failureCode:****Reference:** '#/components/schemas/CpFailureCode'**Required:** failureCode

CommunicationIndicator

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:

- PERIODICALLY: Identifies the UE communicates periodically
- ON_DEMAND: Identifies the UE communicates on demand

StationaryIndication

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:

- STATIONARY: Identifies the UE is stationary
- MOBILE: Identifies the UE is mobile

CpFailureCode

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

- MALFUNCTION: This value indicates that something functions wrongly in CP parameter provisioning or the CP parameter provisioning does not function at all.
- SET_ID_DUPLICATED: The received CP set identifier(s) are already provisioned.

- OTHER_REASON: Other reason unspecified.



CHAPTER 33

DeviceTriggering

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OpenAPI

OpenAPI Version: 3.0.0

info

Title: 3gpp-device-triggering

Version: "1.0.0"

externalDocs

Description: 3GPP TS 29.122 V15.2.0 T8 reference point for Northbound APIs

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.122/'

security

- {}

- oAuth2ClientCredentials: []

servers

URL: '{apiRoot}/3gpp-device-triggering/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 5.2.4 of 3GPP TS 29.122.

paths

{scsAsId}/transactions

get:

Summary: read all active device triggering transactions for a given SCS/AS.

Tags:

- Device Triggering API SCS/AS level GET Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ScsAsId'

Responses:

'200' OK (Successful get all of the active device triggering transactions for the SCS/AS)

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/DeviceTriggering'

'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'

Method: Post

Summary: Create a long-term transaction for a device triggering.

Tags:

- DeviceTriggering API Transaction level POST Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ScsAsId'

Request Body:

Description: Parameters to request a device triggering delivery.

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/DeviceTriggering'

Callbacks:

notificationDestination:

'{request.body#/notificationDestination}':

Method: Post

Request Body: # contents of the callback message

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/DeviceTriggeringDeliveryReportNotification'

Responses:**'200'** OK (successful notification)**Content:****Application/JSON:****Schema:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/Acknowledgement'**'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'** Created (Successful creation of subscription)**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/DeviceTriggering'**Headers:****Location:****Description:** 'Contains the URI of the newly created resource'**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'
'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'

/{scsAsId}/transactions/{transactionId}

get:

Summary: Read a device triggering transaction resource.

Tags:

- DeviceTriggering API Transaction level GET Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ScsAsId'

- name: transactionId

In: path

Description: Identifier of the transaction resource

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK (Successful get the active subscription)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/DeviceTriggering'

'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:

Summary: Replace an existing device triggering transaction resource and the corresponding device trigger request.

Tags:

- DeviceTriggering API transaction level PUT Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ScsAsId'

- name: transactionId

In: path

Description: Identifier of the transaction resource

Required/Optional: true

Schema:

Type: string

Request Body:

Description: Parameters to update/replace the existing device triggering

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/DeviceTriggering'

Responses:

'200' OK (Successful update of the device triggering)

Content:

Application/JSON:**Schema:****Reference:** '#/components/schemas/DeviceTriggering'

'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:****Summary:** Deletes an already existing device triggering transaction.**Tags:**

- DeviceTriggering API Transaction level DELETE Operation

Parameters:

- name: scsAsId

In: path**Description:** Identifier of the SCS/AS**Required/Optional:** true**Schema:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/ScsAsId'

- name: transactionId

In: path**Description:** Identifier of the transaction resource**Required/Optional:** true**Schema:****Type:** string**Responses:**

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

'200' OK (Successful deletion of the existing subscription)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/DeviceTriggering'

'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

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas

DeviceTriggering

Type: object

Properties:

self:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

externalId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalId'

msisdn:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Msisdn'

supportedFeatures:

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

validityPeriod:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DurationSec'

priority:

Reference: '#/components/schemas/Priority'

applicationPortId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Port'

triggerPayload:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Bytes'

notificationDestination:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

requestTestNotification:

Type: boolean

Description: Set to true by the SCS/AS to request the SCEF to send a test notification as defined in subclause 5.2.5.3. Set to false or omitted otherwise.

websocketNotifConfig:

Reference: 'TS29122_CommonData.yaml#/components/schemas/WebsocketNotifConfig'

deliveryResult:

Reference: '#/components/schemas/DeliveryResult'

Required:

- validityPeriod
- priority
- applicationPortId
- triggerPayload
- notificationDestination

oneOf:

- required: [externalId]
- required: [msisdn]

DeviceTriggeringDeliveryReportNotification

Type: object

Properties:

transaction:**Reference:** 'TS29122_CommonData.yaml#/components/schemas/Link'**result:****Reference:** '#/components/schemas/DeliveryResult'**Required:**

- transaction
- result

DeliveryResult

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:

- SUCCESS: This value indicates that the device action request was successfully completed.
- UNKNOWN: This value indicates any unspecified errors.
- FAILURE: This value indicates that this trigger encountered a delivery error and is deemed permanently undeliverable.
- TRIGGERED: This value indicates that device triggering request is accepted by the SCEF.
- EXPIRED: This value indicates that the validity period expired before the trigger could be delivered.
- UNCONFIRMED: This value indicates that the delivery of the device action request is not confirmed.
- REPLACED: This value indicates that the device triggering replacement request is accepted by the SCEF.
- TERMINATE: This value indicates that the delivery of the device action request is terminated by the SCS/AS.

readOnly: true

Priority

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:

- NO_PRIORITY: This value indicates that the device trigger has no priority.
- PRIORITY: This value indicates that the device trigger has priority.



CHAPTER 34

ECRControl

API for enhanced coverage restriction control.

- [OpenAPI](#), on page 657
- [info](#), on page 657
- [externalDocs](#), on page 657
- [security](#), on page 657
- [servers](#), on page 658
- [paths](#), on page 658
- [components](#), on page 660

OpenAPI

OpenAPI Version: 3.0.0

info

Title: 3gpp-ecr-control

Version: "1.0.0"

externalDocs

Description: 3GPP TS 29.122 V15.2.0 T8 reference point for Northbound APIs

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.122/'

security

- {}

- oAuth2ClientCredentials: []

servers

URL: '{apiRoot}/3gpp-ecr-control/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 5.2.4 of 3GPP TS 29.122.

paths

/query

Method: Post

Summary: Query the status of enhanced coverage restriction for a UE.

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ECRControl'

Responses:

'200': The requested information was returned successfully.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ECRData'

'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'

/configure

Method: Post

Summary: Configure the enhanced coverage restriction for a UE.

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ECRControl'

Responses:

'200' The Enhanced Coverage Restriction setting was configured successfully..

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ECRData'

'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'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas

ECRControl

Type: object

Properties:

supportedFeatures:

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

externalId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalId'

msisdn:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Msisdn'

restrictedPlmnIds:

Type: array

Items:

Reference: 'TS29122_CommonData.yaml#/components/schemas/PlmnId'

minItems: 0

Description: Indicates a complete list (and possibly empty) of serving PLMNs where Enhanced Coverage shall be restricted. This attribute shall not be present for the query custom operation.

allowedPlmnIds:

Type: array

Items:

Reference: 'TS29122_CommonData.yaml#/components/schemas/PlmnId'

minItems: 0

Description: Indicates a complete list (and possibly empty) of serving PLMNs where Enhanced Coverage shall be allowed. This attribute shall not be present for the query custom operation.

Required: supportedFeatures

oneOf:

- required: [externalId]
- required: [msisdn]

not Required: [restrictedPlmnIds, allowedPlmnIds]

ECRData

Type: object

Properties:

supportedFeatures:

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

visitedPlmnId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/PlmnId'

restrictedPlmnIds:

Type: array

Items:

Reference: 'TS29122_CommonData.yaml#/components/schemas/PlmnId'

minItems: 0

Description: Indicates a complete list (and possibly empty) of serving PLMNs where Enhanced Coverage shall be restricted.

allowedPlmnIds:

Type: array

Items:

Reference: 'TS29122_CommonData.yaml#/components/schemas/PlmnId'

minItems: 0

Description: Indicates a complete list (and possibly empty) of serving PLMNs where Enhanced Coverage shall be allowed.

Required: supportedFeatures

not Required: [restrictedPlmnIds, allowedPlmnIds]



CHAPTER 35

GMDviaMBMSbyMB2

API for Group Message Delivery via MBMS by MB2.

- [OpenAPI](#), on page 663
- [info](#), on page 663
- [externalDocs](#), on page 663
- [security](#), on page 663
- [servers](#), on page 664
- [paths](#), on page 664
- [components](#), on page 678

OpenAPI

OpenAPI Version: 3.0.0

info

Title: GMDviaMBMSbyMB2

Description: API for Group Message Delivery via MBMS by MB2

Version: "1.0.0"

externalDocs

Description: 3GPP TS 29.122 V15.2.0 T8 reference point for Northbound APIs

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.122/'

security

- {}
- oAuth2ClientCredentials: []

servers

URL: '{apiRoot}/3gpp-group-message-delivery-mb2/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 5.2.4 of 3GPP TS 29.122.

paths

scsAsId tmgi allocation

get:

Summary: read all TMGI Allocation resource for a given SCS/AS

Tags:

- TMGI Allocatin Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK (successful query of TMGI Allocation resource)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TMGIAAllocation'

'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'

Method: Post

Summary: creates a new TMGI Allocation resource for a given SCS/AS

Tags:

- TMGI Allocatin Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:

Type: string

Request Body:

Description: representation of the TMGI Allocation to be created in the SCEF

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TMGIAAllocation'

Responses:

'201' successful creation of an TMGI Allocation

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TMGIAAllocation'

Headers:

Location:

Description: 'Contains the URI of the newly created resource'

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'
 '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'

scsAsId tmgi allocation tmgi

get:

Summary: read a TMGI Allocation resource for a given SCS/AS and a TMGI

Tags:

- Individual TMGI Allocatin Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:

Type: string

- name: tmgi

In: path

Description: TMGI

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK (successful query of TMGI Allocation resource)

Content:

Application/JSON:

Schema:**Reference:** '#/components/schemas/TMGIAAllocation'

'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:****Summary:** Updates an existing TMGI Allocation resource for a given SCS/AS and a TMGI**Tags:**

- Individual TMGI Allocatin Operation

Parameters:

- name: scsAsId

In: path**Description:** Identifier of SCS/AS**Required/Optional:** true**Schema:****Type:** string

- name: tmgi

In: path**Description:** TMGI**Required/Optional:** true**Schema:****Type:** string**Request Body:****Description:** representation of the TMGI Allocation to be updated in the SCEF**Required/Optional:** true**Content:****Application/JSON:****Schema:**

Reference: '#/components/schemas/TMGIAAllocation'

Responses:

'200': successful creation of an TMGI Allocation

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TMGIAAllocation'

'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'

patch:

Summary: Updates an existing TMGI Allocation resource for a given SCS/AS and a TMGI

Tags:

- Individual TMGI Allocatin Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:

Type: string

- name: tmgi

In: path

Description: TMGI

Required/Optional: true

Schema:

Type: string

Request Body:

Description: representation of the TMGI Allocation to be updated in the SCEF

Required/Optional: true

Content:

application/merge-patch+json:

Schema:

Reference: '#/components/schemas/TMGIAAllocationPatch'

Responses:

'200' successful creation of an TMGI Allocation

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TMGIAAllocation'

'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:

Summary: deletes an existing TMGI Allocation resource for a given SCS/AS and a TMGI

Tags:

- Individual TMGI Allocatin Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:**Type:** string

- name: tmgi

In: path**Description:** TMGI**Required/Optional:** true**Schema:****Type:** string**Responses:****'204'** No Content, successful deletion of an TMGI Allocation**'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'

scsAsId tmgi-allocation tmgi delivery via mbms

get:**Summary:** read all group message delivery via MBMS resource for a given SCS/AS and a TMGI**Tags:**

- Delivery via MBMS Operation

Parameters:

- name: scsAsId

In: path**Description:** Identifier of SCS/AS**Required/Optional:** true**Schema:****Type:** string

- name: tmgi

In: path**Description:** TMGI

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK (successful query of Delivery via MBMS resource)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/GMDViaMBMSByMb2'

'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'

Method: Post

Summary: Creates a new delivery via MBMS for a given SCS/AS and a TMGI

Tags:

- Delivery via MBMS Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:

Type: string

- name: tmgi

In: path

Description: TMGI

Required/Optional: true

Schema:

Type: string

Request Body:

Description: representation of the GMD via MBMS by MB2 resource to be Created in the SCEF

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/GMDViaMBMSByMb2'

Callbacks:

gMDByMb2Notification:

'\${request.body#/notificationDestination}':

Method: Post

Request Body: # contents of the callback message

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/GMDByMb2Notification'

Responses:

'200' OK (The successful acknowledgement of the notification with a body)

Content:

Application/JSON:

Schema:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Acknowledgement'

'204' 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 creation of an GMD via MBMS by MB2 resource

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/GMDViaMBMSByMb2'

Headers:

Location:

Description: 'Contains the URI of the newly created resource'

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'

'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'

scsAsId tmgi allocation tmgi delivery via mbms transactionId

get:

Summary: read all group message delivery via MBMS resource for a given SCS/AS and a TMGI

Tags:

- Individual Delivery via MBMS resource Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:

Type: string

- name: tmgi

In: path

Description: TMGI

Required/Optional: true

Schema:

Type: string

- name: transactionId

In: path

Description: Identifier of transaction

Required/Optional: true

Schema:

Type: string

Responses:

'200': OK (successful query of an Delivery via MBMS resource)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/GMDViaMBMSByMb2'

'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:

Summary: Updates a existing delivery via MBMS for a given SCS/AS, a TMGI and transaction Id.

Tags:

- Individual Delivery via MBMS resource Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:

Type: string

- name: tmgi

In: path

Description: TMGI

Required/Optional: true

Schema:

Type: string

- name: transactionId

In: path

Description: Identifier of transaction

Required/Optional: true

Schema:

Type: string

Request Body:

Description: representation of the GMD via MBMS by MB2 resource to be updated in the SCEF

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/GMDViaMBMSByMb2'

Responses:

'200' successful update of an individual GMD via MBMS by MB2 resource

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/GMDViaMBMSByMb2'

'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'

patch:

Summary: Updates a existing delivery via MBMS for a given SCS/AS, a TMGI and transaction Id.

Tags:

- Individual Delivery via MBMS resource Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:

Type: string

- name: tmgi

In: path

Description: TMGI

Required/Optional: true

Schema:

Type: string

- name: transactionId

In: path

Description: Identifier of transaction

Required/Optional: true

Schema:

Type: string

Request Body:

Description: representation of the GMD via MBMS by MB2 resource to be updated in the SCEF

Required/Optional: true

Content:

application/merge-patch+json:

Schema:

Reference: '#/components/schemas/GMDViaMBMSByMb2Patch'

Responses:

'200': successful update of an individual GMD via MBMS by MB2 resource

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/GMDViaMBMSByMb2'

'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:

Summary: deletes a delivery via MBMS resource for a given SCS/AS, a TMGI and a transaction Id.

Tags:

- Individual Delivery via MBMS resource Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:

Type: string

- name: tmgi

In: path

Description: TMGI

Required/Optional: true

Schema:

Type: string

- name: transactionId

In: path

Description: Identifier of transaction

Required/Optional: true

Schema:

Type: string

Responses:

'204': No Content, successful deletion of an resource of deliery via MBMS

'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

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas

TMGIAAllocation

Type: object

Properties:

self:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

supportedFeatures:

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

externalGroupId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalGroupId'

mbmsLocArea:

Reference: '#/components/schemas/MbmsLocArea'

tmgiExpiration:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTimeRo'

GMDViaMBMSByMb2

Type: object

Properties:

self:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

notificationDestination:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

requestTestNotification:

Type: boolean

Description: Set to true by the SCS/AS to request the SCEF to send a test notification as defined in subclause 5.2.5.3. Set to false or omitted otherwise.

websocketNotifConfig:

Reference: 'TS29122_CommonData.yaml#/components/schemas/WebsocketNotifConfig'

externalGroupId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalGroupId'

mbmsLocArea:

Reference: '#/components/schemas/MbmsLocArea'

messageDeliveryStartTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTime'

groupMessagePayload:**Reference:** 'TS29122_CommonData.yaml#/components/schemas/Bytes'**scefMessageDeliveryIPv4:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/Ipv4AddrRo'**scefMessageDeliveryIPv6:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/Ipv6AddrRo'**scefMessageDeliveryPort:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/PortRo'**Required:**

- notificationDestination

GMDByMb2Notification

Type: object**Properties:****transaction:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/Link'**deliveryTriggerStatus:****Type:** boolean**Description:** Indicates whether delivery of group message payload corresponding to the TMGI was successful (TRUE) or not (FALSE)**Required:**

- transaction
- deliveryTriggerStatus

TMGIAAllocationPatch

Type: object**Properties:****externalGroupId:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/ExternalGroupId'**mbmsLocArea:****Reference:** '#/components/schemas/MbmsLocArea'

GMDViaMBMSByMb2Patch

Type: object**Properties:****externalGroupId:**

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalGroupId'

mbmsLocArea:

Reference: '#/components/schemas/MbmsLocArea'

messageDeliveryStartTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTime'

groupMessagePayload:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Bytes'

MbmsLocArea

Type: object

Properties:

cellId:

Type: array

Items:

Type: string

minItems: 1

Description: Indicates a Cell Global Identification of the user which identifies the cell the UE is registered.

eNodeBId:

Type: array

Items:

Type: string

minItems: 1

Description: Indicates an eNodeB in which the UE is currently located.

geographicArea:

Type: array

Items:

Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/GeographicArea'

minItems: 1

Description: Identifies a geographic area of the user where the UE is located.

mbmsServiceAreaId:

Type: array

Items:

Type: string

minItems: 1

Description: Identifies an MBMS Service Area Identity of the user where the UE is located.

civicAddress:**Type:** array**Items:****Reference:** 'TS29572_Nlmf_Location.yaml#/components/schemas/CivicAddress'**minItems:** 1**Description:** Identifies a civic address of the user where the UE is located.



CHAPTER 36

GMDviaMBMSbyxMB API

GMDviaMBMSbyxMB APIs is RESTful API that allow the SCS/AS to deliver the group message to the SCEF. It defines a set of data models, resources and the related procedures for the creation and management of the group message delivery.

- [OpenAPI, on page 683](#)
- [info, on page 683](#)
- [externalDocs, on page 683](#)
- [security, on page 683](#)
- [servers, on page 684](#)
- [paths, on page 684](#)
- [components, on page 696](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Title: GMDviaMBMSbyxMB

Description: API for Group Message Delivery via MBMS by xMB

Version: "1.0.0"

externalDocs

Description: 3GPP TS 29.122 V15.2.0 T8 reference point for Northbound APIs

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.122/'

security

- {}

- oAuth2ClientCredentials: []

servers

URL: '{apiRoot}/3gpp-group-message-delivery-xmb/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 5.2.4 of 3GPP TS 29.122.

paths

scsAsId services

get:

Summary: read all service resources for a given SCS/AS

Tags:

- Service Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK (successful query of service creation resource)

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/ServiceCreation'

minItems: 0

Description: The service resource for the SCS/AS in the request URI is returned.

'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'

Method: Post

Summary: creates a new service creation resource for a given SCS/AS

Tags:

- Service Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:

Type: string

Request Body:

Description: representation of the service to be created in the SCEF

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ServiceCreation'

Responses:

'201' successful creation of a service

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ServiceCreation'

Headers:

Location:**Description:** 'Contains the URI of the newly created resource'**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'

'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'

scsAsId services serviceld

get:**Summary:** read a service resource for a given SCS/AS and a Service Id**Tags:**

- Individual Service Operation

Parameters:

- name: scsAsId

In: path**Description:** Identifier of SCS/AS**Required/Optional:** true**Schema:****Type:** string

- name: serviceld

In: path**Description:** Service Id**Required/Optional:** true**Schema:**

Type: string

Responses:

'200' OK (successful query of service resource)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ServiceCreation'

'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'

delete:

Summary: deletes an existing service resource for a given SCS/AS and a service id

Tags:

- Individual service Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:

Type: string

- name: serviceId

In: path

Description: Service Id

Required/Optional: true

Schema:

Type: string

Responses:

'204': No Content, successful deletion of a service resource
 '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'

scsAsId services serviceld delivery via mbms

get:

Summary: read all group message delivery via MBMS resource for a given SCS/AS and a service id

Tags:

- Delivery via MBMS Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:

Type: string

- name: serviceld

In: path

Description: Service Id

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK (successful query of Delivery via MBMS resource)

Content:

Application/JSON:

Schema:

Type: array

items:**Reference:** '#/components/schemas/GMDViaMBMSByxMB'**minItems:** 0

'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'**Method:** Post**Summary:** Creates a new delivery via MBMS for a given SCS/AS and a service Id**Tags:**

- Delivery via MBMS Operation

Parameters:

- name: scsAsId

In: path**Description:** Identifier of SCS/AS**Required/Optional:** true**Schema:****Type:** string

- name: serviceId

In: path**Description:** Service Id**Required/Optional:** true**Schema:****Type:** string**Request Body:****Description:** representation of the GMD via MBMS by xMB resource to be Created in the SCEF**Required/Optional:** true**Content:****Application/JSON:**

Schema:**Reference:** '#/components/schemas/GMDViaMBMSByxMB'**Callbacks:****gMDByxMBNotification:**

'\${request.body#/notificationDestination}':

Method: Post**Request Body:** # contents of the callback message**Required/Optional:** true**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/GMDByxMBNotification'**Responses:**

'200' OK (The successful acknowledgement of the notification with a body)

Content:**Application/JSON:****Schema:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/Acknowledgement'

'204' 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 creation of an GMD via MBMS by xMB resource

Content:**Application/JSON:**

Schema:**Reference:** '#/components/schemas/GMDViaMBMSByxMB'**Headers:****Location:****Description:** 'Contains the URI of the newly created resource'**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'**'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'

scsAsId services serviceld delivery via mbms transactionId

get:**Summary:** read all group message delivery via MBMS resource for a given SCS/AS and a service Id**Tags:**

- Individual Delivery via MBMS resource Operation

Parameters:

- name: scsAsId

In: path**Description:** Identifier of SCS/AS**Required/Optional:** true**Schema:****Type:** string

- name: serviceld

In: path

Description: Service Id

Required/Optional: true

Schema:

Type: string

- name: transactionId

In: path

Description: Identifier of transaction

Required/Optional: true

Schema:

Type: string

Responses:

'200': OK (successful query of an Delivery via MBMS resource)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/GMDViaMBMSByxMB'

'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:

Summary: Updates an existing delivery via MBMS for a given SCS/AS, a service Id and transaction Id.

Tags:

- Individual Delivery via MBMS resource Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:**Type:** string

- name: serviceId

In: path**Description:** Service Id**Required/Optional:** true**Schema:****Type:** string

- name: transactionId

In: path**Description:** Identifier of transaction**Required/Optional:** true**Schema:****Type:** string**Request Body:****Description:** representation of the GMD via MBMS by xMB resource to be updated in the SCEF**Required/Optional:** true**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/GMDViaMBMSByxMB'**Responses:**

'200': successful update of an individual GMD via MBMS by xMB resource

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/GMDViaMBMSByxMB'

'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'

patch:

Summary: Updates an existing delivery via MBMS for a given SCS/AS, a service Id and transaction Id.

Tags:

- Individual Delivery via MBMS resource Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:

Type: string

- name: serviceId

In: path

Description: Service Id

Required/Optional: true

Schema:

Type: string

- name: transactionId

In: path

Description: Identifier of transaction

Required/Optional: true

Schema:

Type: string

Request Body:

Description: representation of the GMD via MBMS by xMB resource to be updated in the SCEF

Required/Optional: true

Content:

application/merge-patch+json:

Schema:

Reference: '#/components/schemas/GMDViaMBMSByxMBPatch'

Responses:

'200': successful update of an individual GMD via MBMS by xMB resource

Content:**Application/JSON:****Schema:**

Reference: '#/components/schemas/GMDViaMBMSByxMB'

'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:

Summary: deletes a delivery via MBMS resource for a given SCS/AS, a service Id and a transaction Id.

Tags:

- Individual Delivery via MBMS resource Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of SCS/AS

Required/Optional: true

Schema:

Type: string

- name: serviceId

In: path

Description: Service Id

Required/Optional: true

Schema:

Type: string

- name: transactionId

In: path

Description: Identifier of transaction

Required/Optional: true

Schema:

Type: string

Responses:

'204': No Content, successful deletion of an resource of deliery via MBMS

'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

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas

ServiceCreation

Type: object

Properties:

self:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

supportedFeatures:

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

externalGroupId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalGroupId'

userServiceId:

Type: string

Description: Identifies the MBMS User Service supplied by the SCEF.

readOnly: true

serviceClass:

Type: string

Description: The service class that service belongs to supplied by the SCEF.

readOnly: true

serviceLanguages:

Type: array

Items:

Type: string

minItems: 1

Description: List of language of the service content supplied by the SCEF.

readOnly: true

serviceNames:

Type: array

Items:

Type: string

minItems: 1

Description: List of Service Names supplied by the SCEF.

readOnly: true

receiveOnlyMode:

Type: boolean

Description: When set to 'true', the Content Provider indicates that the service is a Receive Only Mode service. This parameter is supplied by the SCEF.

readOnly: true

serviceAnnouncementMode:

Reference: '#/components/schemas/ServiceAnnouncementMode'

GMDViaMBMSByxMB

Type: object

Properties:

self:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

notificationDestination:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

requestTestNotification:

Type: boolean

Description: Set to true by the SCS/AS to request the SCEF to send a test notification as defined in subclause 5.2.5.3. Set to false or omitted otherwise.

websocketNotifConfig:

Reference: 'TS29122_CommonData.yaml#/components/schemas/WebsocketNotifConfig'

mbmsLocArea:

Reference: '#/components/schemas/MbmsLocArea'

messageDeliveryStartTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTime'

messageDeliveryStopTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTime'

groupMessagePayload:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Bytes'

scefMessageDeliveryIPv4:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Ipv4AddrRo'

scefMessageDeliveryIPv6:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Ipv6AddrRo'

scefMessageDeliveryPort:

Reference: 'TS29122_CommonData.yaml#/components/schemas/PortRo'

Required:

- scsAsId
- notificationDestination

GMDByxMBNotification

Type: object

Properties:

transaction:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

deliveryTriggerStatus:

Type: boolean

Description: Indicates whether delivery of group message payload was successful(TRUE) or not (FALSE)

Required:

- transaction

- deliveryTriggerStatus

GMDViaMBMSByxMBPatch

Type: object

Properties:

mbmsLocArea:

Reference: '#/components/schemas/MbmsLocArea'

messageDeliveryStartTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTime'

messageDeliveryStopTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTime'

groupMessagePayload:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Bytes'

MbmsLocArea

Type: object

Properties:

cellId:

Type: array

Items:

Type: string

minItems: 1

Description: Indicates a Cell Global Identification of the user which identifies the cell the UE is registered.

eNodeBId:

Type: array

Items:

Type: string

minItems: 1

Description: Indicates an eNodeB in which the UE is currently located.

geographicArea:**Type:** array**Items:****Reference:** 'TS29572_Nlmf_Location.yaml#/components/schemas/GeographicArea'**minItems:** 1**Description:** Identifies a geographic area of the user where the UE is located.**mbmsServiceAreaId:****Type:** array**Items:****Type:** string**minItems:** 1**Description:** Identifies an MBMS Service Area Identity of the user where the UE is located.**civicAddress:****Type:** array**Items:****Reference:** 'TS29572_Nlmf_Location.yaml#/components/schemas/CivicAddress'**minItems:** 1**Description:** Identifies a civic address of the user where the UE is located.

ServiceAnnouncementMode

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

- SACH: BM-SC performs the service announcement for the current service using the SACH channel.
- CONTENT_PROVIDER: BM-SC provides the necessary service access information used by the Content Provider to create the service announcement information.

readOnly: true



CHAPTER 37

Monitoring Event

API for Monitoring Event.

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- [security](#), on page 701
- [servers](#), on page 702
- [paths](#), on page 702
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OpenAPI

OpenAPI Version: 3.0.0

info

Title: 3gpp-monitoring-event

Version: "1.0.0"

externalDocs

Description: 3GPP TS 29.122 V15.2.0 T8 reference point for Northbound APIs

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.122/'

security

- {}

- oAuth2ClientCredentials: []

servers

URL: '{apiRoot}/3gpp-monitoring-event/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 5.2.4 of 3GPP TS 29.122.

paths

{scsAsId}/subscriptions

get:

Summary: read all of the active subscriptions for the SCS/AS

Tags:

- MonitoringEvent API SCS/AS level GET Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK (Successful get all of the active subscriptions for the SCS/AS)

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/MonitoringEventSubscription'

minItems: 0

Description: Monitoring event subscriptions

'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'

Method: Post

Summary: Creates a new subscription resource for monitoring event notification

Tags:

- MonitoringEvent API Subscription level POST Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

Request Body:

Description: Subscription for notification about monitoring event

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/MonitoringEventSubscription'

Callbacks:

notificationDestination:

'{request.body#/notificationDestination}':

Method: Post

Request Body: # contents of the callback message

Required/Optional: true

Content:

Application/JSON:

Schema:**Reference:** '#/components/schemas/MonitoringNotification'**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'** Created (Successful creation of subscription)**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/MonitoringEventSubscription'**Headers:****Location:****Description:** 'Contains the URI of the newly created resource'**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'**'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'

scsAsId subscriptions subscriptionId

get:

Summary: read an active subscriptions for the SCS/AS and the subscription Id

Tags:

- MonitoringEvent API Subscription level GET Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

- name: subscriptionId

In: path

Description: Identifier of the subscription resource

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK (Successful get the active subscription)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/MonitoringEventSubscription'

'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:

Summary: Updates/replaces an existing subscription resource

Tags:

- MonitoringEvent API subscription level PUT Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

- name: subscriptionId

In: path

Description: Identifier of the subscription resource

Required/Optional: true

Schema:

Type: string

Request Body:

Description: Parameters to update/replace the existing subscription

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/MonitoringEventSubscription'

Responses:

'200' OK (Successful update of the subscription)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/MonitoringEventSubscription'

'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:

Summary: Deletes an already existing monitoring event subscription

Tags:

- MonitoringEvent API Subscription level DELETE Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

- name: subscriptionId

In: path

Description: Identifier of the subscription resource

Required/Optional: true

Schema:

Type: string

Responses:

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

'200' OK (Successful deletion of the existing subscription)

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/MonitoringEventReport'

minItems: 1

Description: The subscription was terminated successfully, the monitoring event report(s) shall be included if received.

'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

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas

MonitoringEventSubscription

Type: object

Properties:

self:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

supportedFeatures:

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

externalId:**Reference:** 'TS29122_CommonData.yaml#/components/schemas/ExternalId'**msisdn:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/Msisdn'**externalGroupId:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/ExternalGroupId'**addExtGroupId:****Type:** array**Items:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/ExternalGroupId'**minItems:** 2**ipv4Addr:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/Ipv4Addr'

ipv6Addr :

Reference: 'TS29122_CommonData.yaml#/components/schemas/Ipv6Addr'**notificationDestination:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/Link'**requestTestNotification:****Type:** boolean**Description:** Set to true by the SCS/AS to request the SCEF to send a test notification as defined in subclause 5.2.5.3. Set to false or omitted otherwise.**websocketNotifConfig:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/WebsocketNotifConfig'**monitoringType:****Reference:** '#/components/schemas/MonitoringType'**maximumNumberOfReports:****Type:** integer**Minimum:** 1**Description:** Identifies the maximum number of event reports to be generated by the HSS, MME/SGSN as specified in subclause 5.6.0 of 3GPP TS 23.682 [2].**monitorExpireTime:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/DateTime'**groupReportGuardTime:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/DurationSec'**maximumDetectionTime:**

Reference: 'TS29122_CommonData.yaml#/components/schemas/DurationSec'

reachabilityType:

Reference: '#/components/schemas/ReachabilityType'

maximumLatency:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DurationSec'

maximumResponseTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DurationSec'

suggestedNumberOfDIPackets:

Type: integer

Minimum: 0

Description: If "monitoringType" is "UE_REACHABILITY", this parameter may be included to identify the number of packets that the serving gateway shall buffer in case that the UE is not reachable.

idleStatusIndication:

Type: boolean

Description: If "monitoringType" is set to "UE_REACHABILITY" or "AVAILABILITY_AFTER_DDN_FAILURE", this parameter may be included to indicate the notification of when a UE, for which PSM is enabled, transitions into idle mode. - "true" indicate enabling of notification - "false" indicate no need to notify Default "false".

locationType:

Reference: '#/components/schemas/LocationType'

accuracy:

Reference: '#/components/schemas/Accuracy'

minimumReportInterval:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DurationSec'

associationType:

Reference: '#/components/schemas/AssociationType'

plmnIndication:

Type: boolean

Description: If "monitoring-Type" is "ROAMING_STATUS", this parameter may be included to indicate the notification of UE's Serving PLMN ID. - "true" The value shall be used to indicate enabling of notification; - "false" The value shall be used to indicate disabling of notification. Default "false".

locationArea:

Reference: 'TS29122_CommonData.yaml#/components/schemas/LocationArea'

LocationArea5G:

Reference: 'TS29122_CommonData.yaml#/components/schemas/LocationArea5G'

monitoringEventReport:

Reference: '#/components/schemas/MonitoringEventReport'

Required:

- notificationDestination
- monitoringType

anyOf:

- required: [maximumNumberOfReports]
- required: [monitorExpireTime]

MonitoringNotification

Type: object

Properties:

subscription:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

configResults:

Type: array

Items:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ConfigResult'

minItems: 1

Description: Each element identifies a notification of grouping configuration result.

monitoringEventReports:

Type: array

Items:

Reference: '#/components/schemas/MonitoringEventReport'

minItems: 1

Description: Monitoring event reports.

cancelInd:

Type: boolean

Description: Indicates whether to request to cancel the corresponding monitoring subscription. Set to false or omitted otherwise.

Required: subscription

MonitoringEventReport

Type: object

Properties:

imeiChange:

Reference: '#/components/schemas/AssociationType'

externalId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalId'

idleStatusInfo:

Reference: '#/components/schemas/IdleStatusInfo'

locationInfo:

Reference: '#/components/schemas/LocationInfo'

lossOfConnectReason:

Type: integer

Description: If "monitoring-Type" is "LOSS_OF_CONNECTIVITY", this parameter shall be included if available to identify the reason why loss of connectivity is reported. Refer to 3GPP TS 29.336 [11] Subclause 8.4.58.

maxUEAvailabilityTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTime'

msisdn:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Msisdn'

monitoringType:

Reference: '#/components/schemas/MonitoringType'

uePerLocationReport:

Reference: '#/components/schemas/UePerLocationReport'

plmnId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/PlmnId'

reachabilityType:

Reference: '#/components/schemas/ReachabilityType'

roamingStatus:

Type: boolean

Description: If "monitoringType" is "ROAMING_STATUS", this parameter shall be set to "true" if the UE is on roaming status. Set to false or omitted otherwise.

failureCause:

Reference: '#/components/schemas/FailureCause'

eventTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTime'

Required: monitoringType

IdleStatusInfo

Type: object

Properties:**activeTime:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/DurationSec'**edrxCycleLength:****format:** float**Type:** number**Minimum:** 0**suggestedNumberOfDIpackets:****Type:** integer**Minimum:** 0**Description:** Identifies the number of packets shall be buffered in the serving gateway. It shall be present if the idle status indication is requested by the SCS/AS with "idleStatusIndication" in the "monitoringEventSubscription" sets to "true".**idleStatusTimestamp:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/DateTime'**periodicAUTimer:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/DurationSec'

UePerLocationReport

Type: object**Properties:****ueCount:****Type:** integer**Minimum:** 0**Description:** Identifies the number of UEs.**externalIds:****Type:** array**Items:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/ExternalId'**minItems:** 1**Description:** Each element uniquely identifies a user.**msisdns:****Type:** array**Items:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/Msisdn'

minItems: 1

Description: Each element identifies the MS internal PSTN/ISDN number allocated for a UE.

Required: ueCount

LocationInfo

Type: object

Properties:

ageOfLocationInfo:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DurationMin'

cellId:

Type: string

Description: Indicates the Cell Global Identification of the user which identifies the cell the UE is registered.

enodeBId:

Type: string

Description: Indicates the eNodeB in which the UE is currently located.

routingAreaId:

Type: string

Description: Identifies the Routing Area Identity of the user where the UE is located.

trackingAreaId:

Type: string

Description: Identifies the Tracking Area Identity of the user where the UE is located.

plmnId:

Type: string

Description: Identifies the PLMN Identity of the user where the UE is located.

twanId:

Type: string

Description: Identifies the TWAN Identity of the user where the UE is located.

geographicArea:

Reference: 'TS29572_Nlmf_Location.yaml#/components/schemas/GeographicArea'

FailureCause

Type: object

Properties:

bssgpCause:

Type: integer

Description: Identifies a non-transparent copy of the BSSGP cause code. Refer to 3GPP TS 29.128 [12].

causeType:

Type: integer

Description: Identify the type of the S1AP-Cause. Refer to 3GPP TS 29.128 [12].

gmmCause:

Type: integer

Description: Identifies a non-transparent copy of the GMM cause code. Refer to 3GPP TS 29.128 [12].

ranapCause:

Type: integer

Description: Identifies a non-transparent copy of the RANAP cause code. Refer to 3GPP TS 29.128 [12].

ranNasCause:

Type: string

Description: Indicates RAN and/or NAS release cause code information, TWAN release cause code information or untrusted WLAN release cause code information. Refer to 3GPP TS 29.214 [10].

s1ApCause:

Type: integer

Description: Identifies a non-transparent copy of the S1AP cause code. Refer to 3GPP TS 29.128 [12].

smCause:

Type: integer

Description: Identifies a non-transparent copy of the SM cause code. Refer to 3GPP TS 29.128 [12].

MonitoringType

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

- **LOSS_OF_CONNECTIVITY:** The SCS/AS requests to be notified when the 3GPP network detects that the UE is no longer reachable for signalling or user plane communication
- **UE_REACHABILITY:** The SCS/AS requests to be notified when the UE becomes reachable for sending either SMS or downlink data to the UE
- **LOCATION_REPORTING:** The SCS/AS requests to be notified of the current location or the last known location of the UE
- **CHANGE_OF_IMSI_IMEI_ASSOCIATION:** The SCS/AS requests to be notified when the association of an ME (IMEI(SV)) that uses a specific subscription (IMSI) is changed
- **ROAMING_STATUS:** The SCS/AS queries the UE's current roaming status and requests to get notified when the status changes
- **COMMUNICATION_FAILURE:** The SCS/AS requests to be notified of communication failure events

- **AVAILABILITY_AFTER_DDN_FAILURE**: The SCS/AS requests to be notified when the UE has become available after a DDN failure
- **NUMBER_OF_UES_IN_AN_AREA**: The SCS/AS requests to be notified the number of UEs in a given geographic area

ReachabilityType

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

- **SMS** : The SCS/AS requests to be notified when the UE becomes reachable for sending SMS to the UE
- **DATA**: The SCS/AS requests to be notified when the UE becomes reachable for sending downlink data to the UE

LocationType

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

- **CURRENT_LOCATION**: The SCS/AS requests to be notified for current location
- **LAST_KNOWN_LOCATION**: The SCS/AS requests to be notified for last known location

AssociationType

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

- **IMEI**: The value shall be used when the change of IMSI-IMEI association shall be detected
- **IMEISV**: The value shall be used when the change of IMSI-IMEISV association shall be detected

Accuracy

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

- **CGI_ECGI**: The SCS/AS requests to be notified at cell level location accuracy.
- **ENODEB**: The SCS/AS requests to be notified at eNodeB level location accuracy.

- TA_RA: The SCS/AS requests to be notified at TA/RA level location accuracy.
- PLMN: The SCS/AS requests to be notified at PLMN level location accuracy.
- TWAN_ID: The SCS/AS requests to be notified at TWAN identifier level location accuracy.
- GEO_AREA: The SCS/AS requests to be notified of the geographical area accuracy.



CHAPTER 38

MsisdnLessMoSms

API for MSISDN-less Mobile Originated SMS.

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OpenAPI

OpenAPI Version: 3.0.0

info

Title: 3gpp-msisdn-less-mo-sms

Version: "1.0.0"

externalDocs

Description: 3GPP TS 29.122 V15.2.0 T8 reference point for Northbound APIs

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.122/'

security

- {}

- oAuth2ClientCredentials: []

servers

URL: '{apiRoot}'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 5.2.4 of 3GPP TS 29.122.

paths

/

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/MsisdnLessMoSmsNotification'

Responses:

'200' Success

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/MsisdnLessMoSmsNotificationReply'

'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'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas

MsisdnLessMoSmsNotification

Type: object

Properties:

supportedFeatures:

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

sms:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Bytes'

externalId:

Type: string

Description: External identifier has the form username@realm.

applicationPort:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Port'

Required:

- supportedFeatures
- sms
- externalId
- applicationPort

MsisdnLessMoSmsNotificationReply

Type: object

Properties:

supportedFeatures:

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

Required: supportedFeatures



CHAPTER 39

NIDD

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OpenAPI

OpenAPI Version: 3.0.0

info

Title: 3gpp-nidd

Version: "1.0.0"

externalDocs

Description: 3GPP TS 29.122 V15.2.0 T8 reference point for Northbound APIs

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.122/'

security

- {}

- oAuth2ClientCredentials: []

servers

URL: '{apiRoot}/3gpp-nidd/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 5.2.4 of 3GPP TS 29.122.

paths

scsAsId configurations

Parameters:

- name: scsAsId

Description: String identifying the SCS/AS.

In: path

Required/Optional: true

Schema:

Type: string

get:

Responses:

'200': all NIDD configurations.

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/NiddConfiguration'

minItems: 0

Description: individual NIDD configuration.

'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'

Method: Post

Request Body:

Description: Contains the data to create a NIDD configuration.

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddConfiguration'

Responses:

'201' NIDD configuration is successfully created.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddConfiguration'

Headers:

Location:

Description: 'Contains the URI of the newly created resource'

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'
'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'

Callbacks:

niddNotifications:

'{\$request.body#/notificationDestination}':

Method: Post

Request Body:

Description: Notification for NIDD configuration status, MO NIDD, MT NIDD delivery report.

Content:

Application/JSON:

Schema:

oneOf:

- \$ref: '#/components/schemas/NiddConfigurationStatusNotification'
- \$ref: '#/components/schemas/NiddUplinkDataNotification'
- \$ref: '#/components/schemas/NiddDownlinkDataDeliveryStatusNotification'
- \$ref: '#/components/schemas/GmdNiddDownlinkDataDeliveryNotification'

Responses:

'204' Expected response to a successful callback processing without a body

'200' Expected response to a successful callback processing with a body

Content:

Application/JSON:

Schema:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Acknowledgement'

'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'

scsAsId configurations configurationId

Parameters:

- name: scsAsId

Description: String identifying the SCS/AS.

In: path

Required/Optional: true

Schema:

Type: string

- name: configurationId

Description: String identifying the individual NIDD configuration resource in the SCEF.

In: path

Required/Optional: true

Schema:

Type: string

get:

Responses:

'200': The individual NIDD configuration is successfully retrieved.

Content:

Application/JSON:

Schema:

Reference: [#/components/schemas/NiddConfiguration](#)

'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'](#)

patch:

Request Body:

Description: Contains information to be applied to the individual NIDD configuration.

Required/Optional: true

Content:

application/merge-patch+json:

Schema:

Reference: '#/components/schemas/NiddConfigurationPatch'

Responses:

'200' The Individual NIDD configuration is modified successfully and a representation of that resource is returned.

Content:**Application/JSON:****Schema:**

Reference: '#/components/schemas/NiddConfiguration'

'204' The Individual NIDD configuration is modified successfully.

'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:**Responses:**

'204' The Individual NIDD configuration 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'

scsAsId configurations configurationId downlink-data-deliveries

Parameters:

- name: scsAsId

Description: String identifying the SCS/AS.

In: path

Required/Optional: true

Schema:

Type: string

- name: configurationId

Description: String identifying the individual NIDD configuration resource in the SCEF.

In: path

Required/Optional: true

Schema:

Type: string

get:

Responses:

'200': all NIDD downlink data deliveries.

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: `#/components/schemas/NiddDownlinkDataTransfer'`

minItems: 0

Description: individual NIDD downlink data delivery.

'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'

Method: Post

Request Body:

Description: Contains the data to create a NIDD downlink data delivery.

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddDownlinkDataTransfer'

Responses:

'200' NIDD downlink data delivery is successful.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddDownlinkDataTransfer'

'201' NIDD downlink data delivery is pending.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddDownlinkDataTransfer'

Headers:

Location:

Description: 'Contains the URI of the newly created resource'

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'

'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' The NIDD downlink data delivery request was not successful.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddDownlinkDataDeliveryFailure'

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

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

scsAsId configurations configurationId downlink data deliveries downlinkDataDeliveryId

Parameters:

- name: scsAsId

Description: String identifying the SCS/AS.

In: path

Required/Optional: true

Schema:

Type: string

- name: configurationId

Description: String identifying the individual NIDD configuration resource in the SCEF.

In: path

Required/Optional: true

Schema:

Type: string

- name: downlinkDataDeliveryId

Description: String identifying the individual NIDD downlink data delivery in the SCEF.

In: path

Required/Optional: true

Schema:

Type: string

get:

Responses:

'200' The individual NIDD downlink data delivery is successfully retrieved.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddDownlinkDataTransfer'

'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:

Request Body:

Description: Contains information to be applied to the individual NIDD downlink data delivery.

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddDownlinkDataTransfer'

Responses:

'200' The pending NIDD downlink data is replaced successfully but delivery is pending.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddDownlinkDataTransfer'

'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'

'409': Reference 'TS29122_CommonData.yaml#/components/responses/409'

'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' The NIDD downlink data replacement request was not successful.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddDownlinkDataDeliveryFailure'

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

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

delete:

Responses:

'204' The pending NIDD downlink data 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'

'409': Reference 'TS29122_CommonData.yaml#/components/responses/409'

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

'500' The NIDD downlink data cancellation request was not successful.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddDownlinkDataDeliveryFailure'

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

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

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas

NiddConfiguration

Type: object

Properties:

self:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

supportedFeatures:

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

externalId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalId'

msisdn:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Msisdn'

externalGroupId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalGroupId'

duration:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTime'

reliableDataService:

Type: boolean

Description: The reliable data service (as defined in subclause 4.5.15.3 of 3GPP TS 23.682) to indicate if a reliable data service acknowledgment is enabled or not.

rdsPorts:

Type: array

Items:

Reference: '#/components/schemas/RdsPort'

minItems: 1

Description: Indicates the port configuration that is used for reliable data transfer between specific applications using RDS (as defined in subclause 5.2.4 and 5.2.5 of 3GPP TS 24.250).

pdnEstablishmentOption:

Reference: '#/components/schemas/PdnEstablishmentOptions'

notificationDestination:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

requestTestNotification:

Type: boolean

Description: Set to true by the SCS/AS to request the SCEF to send a test notification as defined in subclause 5.2.5.3. Set to false or omitted otherwise.

websocketNotifConfig:

Reference: 'TS29122_CommonData.yaml#/components/schemas/WebsocketNotifConfig'

maximumPacketSize:

Type: integer

Minimum: 1

Description: The Maximum Packet Size is the maximum NIDD packet size that was transferred to the UE by the SCEF in the PCO, see subclause 4.5.14.1 of 3GPP TS 23.682. If no maximum packet size was provided to the UE by the SCEF, the SCEF sends a default configured max packet size to SCS/AS. Unit bit.

readOnly: true

niddDownlinkDataTransfers:

Type: array

Items:

Reference: '#/components/schemas/NiddDownlinkDataTransfer'

minItems: 1

Description: The downlink data deliveries that needed to be executed by the SCEF. The cardinality of the property shall be 0..1 in the request and 0..N in the response (i.e. response may contain multiple buffered MT NIDD).

status:

Reference: '#/components/schemas/NiddStatus'

Required:

- notificationDestination

oneOf:

- required: [externalId]

- required: [msisdn]

- required: [externalGroupId]

NiddDownlinkDataTransfer

Type: object

Properties:

externalId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalId'

externalGroupId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalGroupId'

msisdn:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Msisdn'

self:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

data:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Bytes'

reliableDataService:

Type: boolean

Description: The reliable data service (as defined in subclause 4.5.15.3 of 3GPP TS 23.682) to indicate if a reliable data service acknowledgment is enabled or not.

rdsPort:

Reference: '#/components/schemas/RdsPort'

maximumLatency:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DurationSec'

priority:

Type: integer

Description: It is used to indicate the priority of the non-IP data packet relative to other non-IP data packets.

pdnEstablishmentOption:

Reference: '#/components/schemas/PdnEstablishmentOptions'

deliveryStatus:

Reference: '#/components/schemas/DeliveryStatus'

requestedRetransmissionTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTime'

Required: data

oneOf:

- required: [externalId]
- required: [msisdn]
- required: [externalGroupId]

NiddUplinkDataNotification

Type: object

Properties:

niddConfiguration:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

externalId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalId'

msisdn:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Msisdn'

data:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Bytes'

reliableDataService:

Type: boolean

Description: Indicates whether the reliable data service is enabled.

rdsPort:

Reference: '#/components/schemas/RdsPort'

Required:

- niddConfiguration

- data

oneOf:

- required: [externalId]

- required: [msisdn]

NiddDownlinkDataDeliveryStatusNotification

Type: object

Properties:

niddDownlinkDataTransfer:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

deliveryStatus:

Reference: '#/components/schemas/DeliveryStatus'

requestedRetransmissionTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTime'

Required:

- niddDownlinkDataTransfer

- deliveryStatus

NiddConfigurationStatusNotification

Type: object

Properties:

niddConfiguration:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

externalId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalId'

msisdn:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Msisdn'

status:

Reference: '#/components/schemas/NiddStatus'

rdsCapIndication:

Type: boolean

Description: It indicates whether the network capability for the reliable data service is enabled or not.

Required:

- niddConfiguration

- status

oneOf:

- required: [externalId]

- required: [msisdn]

GmdNiddDownlinkDataDeliveryNotification

Type: object

Properties:

niddDownlinkDataTransfer:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

gmdResults:

Type: array

Items:

Reference: '#/components/schemas/GmdResult'

minItems: 1

Description: Indicates the group message delivery result.

Required:

- niddDownlinkDataTransfer
- gmdResults

RdsPort

Type: object

Properties:

portUE:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Port'

portSCEF:**Reference:** 'TS29122_CommonData.yaml#/components/schemas/Port'**Required:**

- portUE
- portSCEF

GmdResult

Type: object**Properties:****externalId:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/ExternalId'**msisdn:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/Msisdn'**deliveryStatus:****Reference:** '#/components/schemas/DeliveryStatus'**requestedRetransmissionTime:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/DateTime'**Required:**

- deliveryStatus

oneOf:

- required: [externalId]
- required: [msisdn]

NiddDownlinkDataDeliveryFailure

Type: object**Properties:****problemDetail:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/ProblemDetails'**requestedRetransmissionTime:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/DateTime'**Required:** problemDetail

PdnEstablishmentOptions

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

- WAIT_FOR_UE: wait for the UE to establish the PDN connection
- INDICATE_ERROR: respond with an error cause
- SEND_TRIGGER: send a device trigger

PdnEstablishmentOptionsRm

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

- WAIT_FOR_UE: wait for the UE to establish the PDN connection
- INDICATE_ERROR: respond with an error cause
- SEND_TRIGGER: send a device trigger

nullable: true

DeliveryStatus

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:

- SUCCESS: Success but details not provided.
- SUCCESS_NEXT_HOP_ACKNOWLEDGED: Successful delivery to the next hop with acknowledgment
- SUCCESS_NEXT_HOP_UNACKNOWLEDGED: Successful delivery to the next hop without acknowledgment
- SUCCESS_ACKNOWLEDGED: Reliable delivery was acknowledged by the UE
- SUCCESS_UNACKNOWLEDGED: Reliable delivery was not acknowledged by the UE
- TRIGGERED: The SCEF triggered the device and is buffering the data.
- BUFFERING: The SCEF is buffering the data due to no PDN connection established.
- BUFFERING_TEMPORARILY_NOT_REACHABLE: The SCEF has been informed that the UE is temporarily not reachable but is buffering the data
- SENDING: The SCEF has forwarded the data, but they may be stored elsewhere
- FAILURE: Delivery failure but details not provided

- FAILURE_RDS_DISABLED: RDS was disabled
- FAILURE_NEXT_HOP: Unsuccessful delivery to the next hop.
- FAILURE_TIMEOUT: Unsuccessful delivery due to timeout.

readOnly: true

NiddStatus

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

- ACTIVE: The NIDD configuration is active.
- TERMINATED_UE_NOT_AUTHORIZED: The NIDD configuration was terminated because the UExB4s authorisation was revoked.
- TERMINATED: The NIDD configuration was terminated.

readOnly: true

NiddConfigurationPatch

Type: object

Properties:

duration:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTimeRm'

reliableDataService:

Type: boolean

Description: The reliable data service (as defined in subclause 4.5.15.3 of 3GPP TS 23.682) to indicate if a reliable data service acknowledgment is enabled or not.

nullable: true

rdsPorts:

Type: array

Items:

Reference: '#/components/schemas/RdsPort'

minItems: 1

Description: Indicates the port configuration that is used for reliable data transfer between specific applications using RDS (as defined in subclause 5.2.4 and 5.2.5 of 3GPP TS 24.250).

pdnEstablishmentOption:

Reference: '#/components/schemas/PdnEstablishmentOptionsRm'



CHAPTER 40

NpConfiguration

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- [security](#), on page 743
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OpenAPI

OpenAPI Version: 3.0.0

info

Title: 3gpp-network-parameter-configuration

Version: "1.0.0"

externalDocs

Description: 3GPP TS 29.122 V15.2.0 T8 reference point for Northbound APIs

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.122/'

security

- {}

- oAuth2ClientCredentials: []

servers

URL: '{apiRoot}/3gpp-network-parameter-configuration/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause of 3GPP TS 29.122.

paths

scsAsId configurations

get:

Summary: read all of the active configurations for the SCS/AS

Tags:

- NpConfiguration API SCS/AS level GET Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK (Successful get all of the active NpConfigurations for the SCS/AS)

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/NpConfiguration'

minItems: 0

Description: Network Parameter configurations

'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'

Method: Post

Summary: Creates a new configuration resource for network parameter configuration

Tags:

- NpConfiguration API Configuration level POST Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

Request Body:

Description: new configuration creation

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NpConfiguration'

Callbacks:

notificationDestination:

'{request.body#/notificationDestination}':

Method: Post

Request Body: # contents of the callback message

Required/Optional: true

Content:

Application/JSON:

Schema:**Reference:** '#/components/schemas/ConfigurationNotification'**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'** Created (Successful creation of configuration)**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/NpConfiguration'**Headers:****Location:****Description:** 'Contains the URI of the newly created resource'**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'**'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'

scsAsId configurations configurationId

get:

Summary: read an active configuration for the SCS/AS and the configuration Id

Tags:

- NpConfiguration API Configuration level GET Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

- name: configurationId

In: path

Description: Identifier of the configuration resource

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK (Successful get the active configuration)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NpConfiguration'

'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:

Summary: Updates/replaces an existing configuration resource

Tags:

- NpConfiguration API Configuration level PUT Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

- name: configurationId

In: path

Description: Identifier of the configuration resource

Required/Optional: true

Schema:

Type: string

Request Body:

Description: Parameters to update/replace the existing configuration

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NpConfiguration'

Responses:

'200' OK (Successful deletion of the existing configuration)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NpConfiguration'

'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'

patch:

Summary: Updates/replaces an existing configuration resource

Tags:

- NpConfiguration API Configuration level PATCH Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

- name: configurationId

In: path

Description: Identifier of the configuration resource

Required/Optional: true

Schema:

Type: string

Request Body:

Required/Optional: true

Content:

application/merge-patch+json:

Schema:

Reference: '#/components/schemas/NpConfigurationPatch'

Responses:

'200': OK. The configuration was modified successfully.

Content:**Application/JSON:****Schema:**

Reference: '#/components/schemas/NpConfiguration'

'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:

Summary: Deletes an already existing configuration

Tags:

- NpConfiguration API Configuration level DELETE Operation

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Type: string

- name: configurationId

In: path

Description: Identifier of the configuration resource

Required/Optional: true

Schema:

Type: string

Responses:

'204' No Content (Successful deletion of the existing configuration)

'200' OK. (Successful deletion of the existing configuration)

Content:**Application/JSON:****Schema:**

Type: array

items:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ConfigResult'

minItems: 1

Description: The configuration was terminated successfully, the configuration failure information for group members shall be included if received.

'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

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas

NpConfiguration

Type: object

Properties:

self:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

supportedFeatures:

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

externalId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalId'

msisdn:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Msisdn'

externalGroupId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalGroupId'

maximumLatency:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DurationSec'

maximumResponseTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DurationSec'

suggestedNumberOfDIPackets:

Type: integer

Minimum: 0

Description: This parameter may be included to identify the number of packets that the serving gateway shall buffer in case that the UE is not reachable.

groupReportingGuardTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DurationSec'

notificationDestination:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

requestTestNotification:

Type: boolean

Description: Set to true by the SCS/AS to request the SCEF to send a test notification as defined in subclause 5.2.5.3. Set to false or omitted otherwise.

websocketNotifConfig:

Reference: 'TS29122_CommonData.yaml#/components/schemas/WebsocketNotifConfig'

oneOf:

- required: [externalId]
- required: [msisdn]
- required: [externalGroupId]

NpConfigurationPatch

Type: object

Properties:

maximumLatency:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DurationSecRm'

maximumResponseTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DurationSecRm'

suggestedNumberOfDIIPackets:

Type: integer

Minimum: 0

Description: This parameter may be included to identify the number of packets that the serving gateway shall buffer in case that the UE is not reachable.

nullable: true

groupReportGuardTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DurationSecRm'

ConfigurationNotification

Type: object

Properties:

configuration:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

configResults:

Type: array

Items:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ConfigResult'

minItems: 1

Description: The grouping configuration result notification provided by the SCEF.

Required: configuration



CHAPTER 41

Reporting Network Status

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- [externalDocs](#), on page 755
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OpenAPI

OpenAPI Version: 3.0.0

info

Title: 3gpp-network-status-reporting

Version: "1.0.0"

externalDocs

Description: 3GPP TS 29.122 V15.2.0 T8 reference point for Northbound APIs

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.122/'

security

- {}

- oAuth2ClientCredentials: []

servers

URL: '{apiRoot}/3gpp-net-stat-report/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 5.2.4 of 3GPP TS 29.122.

paths

scsAsId subscriptions

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ScsAsId'

get:

Summary: Read all network status reporting subscription resources for a given SCS/AS.

Responses:

'200' The requested information was returned successfully.

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/NetworkStatusReportingSubscription'

minItems: 0

'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'

Method: Post

Summary: Create a new network status reporting subscription resource.

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NetworkStatusReportingSubscription'

Callbacks:

notificationDestination:

'{request.body#/notificationDestination}':

Method: Post

Request Body: # contents of the callback message

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NetworkStatusReportingNotification'

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' The subscription was created successfully. The URI of the created resource shall be returned in the "Location" HTTP header.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NetworkStatusReportingSubscription'

Headers:

Location:

Description: 'Contains the URI of the newly created resource'

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'

'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'

scsAsId subscriptions subscriptionId

Parameters:

- name: scsAsId

In: path

Description: Identifier of the SCS/AS

Required/Optional: true

Schema:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ScsAsId'

- name: subscriptionId

In: path

Description: Identifier of the subscription resource of type string

Required/Optional: true

Schema:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ResourceId'

get:

Summary: Read an active network status reporting subscription resource.

Responses:

'200' The requested information was returned successfully.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NetworkStatusReportingSubscription'

'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:

Summary: Modify an existing subscription resource to update a subscription.

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NetworkStatusReportingSubscription'

Responses:

'200' The subscription was updated successfully.

Content:

Application/JSON:**Schema:****Reference:** '#/components/schemas/NetworkStatusReportingSubscription'

'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:****Summary:** Delete an existing continuous network status reporting subscription resource.**Responses:**

'204' The subscription was updated successfully.

'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

securitySchemes

oAuth2ClientCredentials

Type: oauth2**Flows:**

clientCredentials:
tokenUrl: '{tokenUrl}'
scopes: {}

schemas

NetworkStatusReportingSubscription

Type: object

Properties:

self:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

supportedFeatures:

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

notificationDestination:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

requestTestNotification:

Type: boolean

Description: Set to true by the SCS/AS to request the SCEF to send a test notification as defined in subclause 5.2.5.3. Set to false or omitted otherwise.

websocketNotifConfig:

Reference: 'TS29122_CommonData.yaml#/components/schemas/WebsocketNotifConfig'

locationArea:

Reference: 'TS29122_CommonData.yaml#/components/schemas/LocationArea'

timeDuration:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTime'

thresholdValues:

Type: array

Items:

Reference: '#/components/schemas/CongestionValue'

minItems: 1

Description: Identifies a list of congestion level(s) with exact value that the SCS/AS requests to be informed of when reached.

thresholdTypes:

Type: array

Items:

Reference: '#/components/schemas/CongestionType'

minItems: 1

Description: Identifies a list of congestion level(s) with abstracted value that the SCS/AS requests to be informed of when reached.

Required:

- notificationDestination

- locationArea

not:

Required: [thresholdValues, thresholdTypes]

NetworkStatusReportingNotification

Type: object

Properties:

subscription:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

nsiValue:

Reference: '#/components/schemas/CongestionValue'

nsiType:

Reference: '#/components/schemas/CongestionType'

Required:

- subscription

not:

Required: [nsiValue, nsiType]

CongestionValue

Type: integer

Minimum: 0

Maximum: 31

Description: Unsigned integer with valid values between 0 and 31. The value 0 indicates that there is no congestion. The value 1 is the lowest congestion level and value 31 is the highest congestion level.

CongestionType

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

- HIGH: The congestion status is high.

- MEDIUM: The congestion status is medium.
- LOW: The congestion status is low.



CHAPTER 42

ResourceManagementOfBdt

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OpenAPI

OpenAPI Version: 3.0.0

info

Title: 3gpp-bdt

Version: "1.0.0"

externalDocs

Description: 3GPP TS 29.122 V15.2.0 T8 reference point for Northbound APIs

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.122/'

security

- {}

- oAuth2ClientCredentials: []

servers

URL: '{apiRoot}/3gpp-bdt/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 5.2.4 of 3GPP TS 29.122.

paths

scsAsId subscriptions

Parameters:

- name: scsAsId

Description: String identifying the SCS/AS.

In: path

Required/Optional: true

Schema:

Type: string

get:

Responses:

'200': all BDT policy subscriptions.

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/Bdt'

minItems: 0

Description: individual BDT policy 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'

'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'

Method: Post

Request Body:

Description: Contains the data to create a BDT subscription.

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/Bdt'

Responses:

'201' Background data transfer policies offered to the SCS/AS.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/Bdt'

Headers:

Location:

Description: 'Contains the URI of the newly created resource'

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'
'409': Reference 'TS29122_CommonData.yaml#/components/responses/409'
'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'

scsAsId subscriptions subscriptionId

Parameters:

- name: scsAsId

Description: String identifying the SCS/AS.

In: path

Required/Optional: true

Schema:

Type: string

- name: subscriptionId

Description: String identifying the individual BDT policy resource in the SCEF.

In: path

Required/Optional: true

Schema:

Type: string

get:

Responses:

'200' Background data transfer policies offered to and selected by the SCEF.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/Bdt'

'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'

patch:**Request Body:**

Description: Contains information to be performed on the Bdt data structure to select a transfer policy.

Required/Optional: true

Content:

application/merge-patch+json:

Schema:

Reference: '#/components/schemas/BdtPatch'

Responses:

'200' The Individual BDT Policy resource is modified with a selected policy and a representation of that resource is returned.

Content:**Application/JSON:****Schema:**

Reference: '#/components/schemas/Bdt'

'204' The Individual BDT Policy resource is modified with a selected policy.

'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:**Responses:**

'204' The Individual BDT Policy resource 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

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas

Bdt

Type: object

Properties:

self:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

supportedFeatures:

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

volumePerUE:

Reference: 'TS29122_CommonData.yaml#/components/schemas/UsageThreshold'

numberOfUEs:

Type: integer

Minimum: 1

Description: Identifies the number of UEs.

desiredTimeWindow:

Reference: 'TS29122_CommonData.yaml#/components/schemas/TimeWindow'

locationArea:

Reference: 'TS29122_CommonData.yaml#/components/schemas/LocationArea'

LocationArea5G:

Reference: 'TS29122_CommonData.yaml#/components/schemas/LocationArea5G'

referenceId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/BdtReferenceId'

transferPolicies:

Type: array

Items:

Reference: '#/components/schemas/TransferPolicy'

minItems: 1

Description: Identifies an offered transfer policy.

readOnly: true

selectedPolicy:

Type: integer

Description: Identity of the selected background data transfer policy. Shall not be present in initial message exchange, can be provided by NF service consumer in a subsequent message exchange.

Required:

- volumePerUE
- numberOfUEs
- desiredTimeWindow

BdtPatch

Type: object

Properties:**selectedPolicy:**

Type: integer

Description: Identity of the selected background data transfer policy.

Required:

- selectedPolicy

TransferPolicy

Type: object

Properties:**bdtPolicyId:**

Type: integer

Description: Identifier for the transfer policy

maxUplinkBandwidth:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Bandwidth'

maxDownlinkBandwidth:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Bandwidth'

ratingGroup:

Type: integer

Minimum: 0

Description: Indicates the rating group during the time window.

timeWindow:

Reference: 'TS29122_CommonData.yaml#/components/schemas/TimeWindow'

Required:

- bdtPolicyId
- ratingGroup
- timeWindow



CHAPTER 43

CAPIF_API_Invoker_Management_API

API for API invoker management.

- [OpenAPI, on page 773](#)
- [info, on page 773](#)
- [externalDocs, on page 773](#)
- [servers, on page 773](#)
- [paths, on page 774](#)
- [components, on page 776](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Title: CAPIF_API_Invoker_Management_API

Description: This API enables the API invoker to communicate with the CAPIF core function to negotiate security methods and obtain authorizations to access service APIs.

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/

servers

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

Variables:

API Root:

Default: https://example.com

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

paths

/onboardedInvokers

Method: Post

Description: Creates a new individual API Invoker profile.

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/APIInvokerEnrolmentDetails'

Callbacks:

notificationDestination:

'{request.body#/notificationDestination}':

Method: Post

Description: Notify the API Invoker about the onboarding completion

Request Body: # contents of the callback message

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/OnboardingNotification'

Responses:

'204': No Content (successful onboarding 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' API invoker on-boarded successfully

Content:**Application/JSON:****Schema:**

Reference: '#/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/Optional: true

Schema:

Type: string

'202' The CAPIF core has accepted the Onboarding request and is processing it.

'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'

/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/Optional: true

Schema:

Type: string

Responses:

'204': The individual API Invoker matching onboardingId was offboarded.

'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

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:

Reference: '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:

Reference: '#/components/schemas/OnboardingInformation'

notificationDestination:

Reference: '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.

websocketNotifConfig:

Reference: 'TS29122_CommonData.yaml#/components/schemas/WebsocketNotifConfig'

apiList:

Reference: '#/components/schemas/APIList'

apiInvokerInformation:

Type: string

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

supportedFeatures:

Reference: '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:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Uri'

apiInvokerEnrolmentDetails:

Reference: '#/components/schemas/APIInvokerEnrolmentDetails'

apiList:

Reference: '#/components/schemas/APIList'

Required:

- result



CHAPTER 44

CAPIF_Auditing_API

- [OpenAPI](#), on page 779
- [info](#), on page 779
- [externalDocs](#), on page 779
- [servers](#), on page 779
- [paths](#), on page 780

OpenAPI

OpenAPI Version: 3.0.0

info

Title: CAPIF_Auditing_API

Description: This API enables the API management function to communicate with the CAPIF core function to retrieve the log information related to service API invocations.

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/

servers

URL: '{apiRoot}/logs/v1'

Variables:

API Root:

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:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTime'

- name: time-range-end

In: query

Description: End time of the invocation time range.

Schema:

Reference: '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:

Reference: 'TS29222_CAPIF_Publish_Service_API.yaml#/components/schemas/Protocol'

- name: operation

In: query

Description: Operation that was invoked on the API.

Schema:

Reference: '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:**Reference:** '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:****Reference:** 'TS29222_CAPIF_Publish_Service_API.yaml#/components/schemas/InterfaceDescription'

- name: supported-features

In: query**Description:** To filter irrelevant responses related to unsupported features**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Responses:**

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

Content:**Application/JSON:****Schema:****Reference:** 'TS29222_CAPIF_Logging_API_Invocation_API.yaml#/components/schemas/InvocationLog'

'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'



CHAPTER 45

CAPIF_Discover_Service_API

API for discovering service APIs.

- [OpenAPI, on page 783](#)
- [info, on page 783](#)
- [externalDocs, on page 783](#)
- [servers, on page 783](#)
- [paths, on page 784](#)
- [components, on page 786](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Title: CAPIF_Discover_Service_API

Description: This API enables the API invoker to communicate with the CAPIF core function to discover the published service API information.

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/

servers

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

Variables:

API Root:

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.

Required/Optional: 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:

Reference: 'TS29222_CAPIF_Publish_Service_API.yaml#/components/schemas/CommunicationType'

- name: protocol

In: query

Description: Protocol used by the API.

Schema:

Reference: 'TS29222_CAPIF_Publish_Service_API.yaml#/components/schemas/Protocol'

- name: aef-id

In: query

Description: AEF identifier.

Schema:

Type: string

- name: data-format

In: query

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

Schema:

Reference: 'TS29222_CAPIF_Publish_Service_API.yaml#/components/schemas/DataFormat'

- name: supported-features

In: query

Description: To filter irrelevant responses related to unsupported features

Schema:

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

Responses:

'200' The response body contains the result of the search over the list of registered APIs.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/DiscoveredAPIs'

'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'

components

schemas

DiscoveredAPIs

Type: object

Properties:

serviceAPIDescriptions:

Type: array

Items:

Reference: '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.



CHAPTER 46

CAPIF_Events_API

This API enables the Subscriber to communicate with the CAPIF core function to subscribe to and unsubscribe from CAPIF events, and receive subsequent notifications of CAPIF events.

- [OpenAPI, on page 787](#)
- [info, on page 787](#)
- [externalDocs, on page 787](#)
- [servers, on page 787](#)
- [paths, on page 788](#)
- [components, on page 790](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Title: CAPIF_Events_API

Description: This API enables the Subscriber to communicate with the CAPIF core function to subscribe to and unsubscribe from CAPIF events, and receive subsequent notifications of CAPIF events.

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/

servers

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

Variables:

API Root:

Default: https://example.com

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

paths

subscriberId and subscriptions

Method: Post

Description: Creates a new individual CAPIF Event Subscription.

Parameters:

- name: subscriberId

In: path

Description: Identifier of the Subscriber

Required/Optional: true

Schema:

Type: string

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/EventSubscription'

Callbacks:

notificationDestination:

'{request.body#/notificationDestination}':

Method: Post

Request Body: # contents of the callback message

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/EventNotification'

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' Created (Successful creation of subscription)

Content:**Application/JSON:****Schema:**

Reference: '#/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/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'
 '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'

subscriberId, subscriptions and subscriptionId

delete:

Description: Deletes an individual CAPIF Event Subscription.

Parameters:

- name: subscriberId

In: path

Description: Identifier of the Subscriber

Required/Optional: true

Schema:

Type: string

- name: subscriptionId

In: path

Description: Identifier of an individual Events Subscription

Required/Optional: true

Schema:

Type: string

Responses:

'204': The individual CAPIF Events Subscription matching the subscriptionId 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

schemas

EventSubscription

Type: object

Properties:

events:**Type:** array**Items:****Reference:** '#/components/schemas/CAPIFEvent'**minItems:** 1**Description:** Subscribed events**notificationDestination:****Reference:** '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.**websocketNotifConfig:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/WebsocketNotifConfig'**supportedFeatures:****Reference:** '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:****Reference:** '#/components/schemas/CAPIFEvent'**Required:**

- subscriptionId
- events

CAPIFEvent

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

- 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.



CHAPTER 47

CAPIF_Logging_API_Invocation_API

This API enables the API exposing function to communicate with the CAPIF core function to log the information related to service API invocations.

- [OpenAPI, on page 793](#)
- [info, on page 793](#)
- [externalDocs, on page 793](#)
- [servers, on page 793](#)
- [paths, on page 794](#)
- [components, on page 796](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Title: CAPIF_Logging_API_Invocation_API

Description: This API enables the API exposing function to communicate with the CAPIF core function to log the information related to service API invocations.

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/

servers

URL: '{apiRoot}/api-invocation-logs/v1'

Variables:

API Root:

Default: https://example.com

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

paths

aeId and logs

Method: Post

Description: Creates a new log entry for service API invocations.

Parameters:

- name: aeId

In: path

Description: Identifier of the API exposing function

Required/Optional: true

Schema:

Type: string

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/InvocationLog'

Responses:

'201' Log of service API invocations provided by API exposing function successfully stored on the CAPIF core function.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/InvocationLog'

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/api-invocation-logs/v1/{aeId}/logs/{logId}'

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'**'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'

aeFld, logs and logId

Description: Creates a new log entry for service API invocations.**Parameters:**

- name: aeFld

In: path**Description:** Identifier of the API exposing function**Required/Optional:** true**Schema:****Type:** string

- name: logId

In: path**Description:** Identifier of individual log entry**Required/Optional:** true**Schema:****Type:** string

components

schemas

InvocationLog

Type: object

Properties:

aeId:

Type: string

Description: Identity information of the API exposing function requesting logging of service API invocations

apiInvokerId:

Type: string

Description: Identity of the API invoker which invoked the service API

logs:

Type: array

Items:

Reference: '#/components/schemas/Log'

minItems: 1

Description: Service API invocation log

supportedFeatures:

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

Required:

- aeId
- apiInvokerId
- log

Log

Type: object

Properties:

apiId:

Type: string

Description: String identifying the API invoked.

apiName:

Type: string

Description: Name of the API which was invoked, it is set as {apiName} part of the URI structure as defined in subclause 4.4 of 3GPP TS 29.501.

apiVersion:

Type: string

Description: Version of the API which was invoked

resourceName:

Type: string

Description: Name of the specific resource invoked

uri:

Reference: 'TS29122_CommonData_API.yaml#/components/schemas/Uri'

protocol:

Reference: 'TS29222_CAPIF_Publish_Service_API.yaml#/components/schemas/Protocol'

operation:

Reference: 'TS29222_CAPIF_Publish_Service_API.yaml#/components/schemas/Operation'

result:

Type: string

Description: For HTTP protocol, it contains HTTP status code of the invocation

invocationTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTime'

invocationLatency:

Reference: '#/components/schemas/DurationMs'

inputParameters:

Description: List of input parameters. Can be any value - string, number, boolean, array or object.

outputParameters:

Description: List of output parameters. Can be any value - string, number, boolean, array or object.

srcInterface:

Reference: 'TS29222_CAPIF_Publish_Service_API.yaml#/components/schemas/InterfaceDescription'

destInterface:

Reference: 'TS29222_CAPIF_Publish_Service_API.yaml#/components/schemas/InterfaceDescription'

fwdInterface:

Type: string

Description: It includes the node identifier (as defined in IETF RFC 7239) of all forwarding entities between the API invoker and the AEF, concatenated with comma and space, e.g. 192.0.2.43:80, unknown:_OBFport, 203.0.113.60

Required:

- apiId
- apiName
- apiVersion
- resourceName
- protocol
- result

DurationMs

Type: integer

Description: Unsigned integer identifying a period of time in units of milliseconds.

Minimum: 0



CHAPTER 48

CAPIF_Publish_Service_API

API for publishing service APIs.

- [OpenAPI](#), on page 799
- [info](#), on page 799
- [externalDocs](#), on page 799
- [servers](#), on page 799
- [paths](#), on page 800
- [components](#), on page 804

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"

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/

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

apfld and service-apis

Method: Post

Description: Publish a new API.

Parameters:

- name: apfld

In: path

Required/Optional: true

Schema:

Reference: '#/components/schemas/apfld'

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ServiceAPIDescription'

Responses:

'201' 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/{apfld}/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'**'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: apfld

In: path**Required/Optional:** true**Schema:****Reference:** '#/components/schemas/apfld'**Responses:****'200'** 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 and serviceApiId

get:

Description: Retrieve a published service API.

Parameters:

- name: serviceApiId

In: path

Required/Optional: true

Schema:

Reference: '#/components/schemas/serviceApiId'

- name: apfld

In: path

Required/Optional: true

Schema:

Reference: '#/components/schemas/apfld'

Responses:

'200' 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:

Reference: '#/components/schemas/serviceApiId'

- name: apfld

In: path

Required/Optional: true

Schema:

Reference: '#/components/schemas/apfld'

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ServiceAPIDescription'

Responses:

'200' 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

In: path

Required/Optional: true

Schema:

Reference: '#/components/schemas/apfId'

Responses:

'204': 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.

serviceApild

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).

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.

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.

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

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

- HTTP_1_1: HTTP version 1.1

- HTTP_2: HTTP version 2

CommunicationType

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

- REQUEST_RESPONSE: The communication is of the type request-response
- SUBSCRIBE_NOTIFY: The communication is of the type subscribe-notify

DataFormat

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

- JSON: JavaScript Object Notation

SecurityMethod

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

- 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

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

- GET: HTTP GET method
- POST: HTTP POST method
- PUT: HTTP PUT method
- PATCH: HTTP PATCH method
- DELETE: HTTP DELETE method



CHAPTER 49

CAPIF_Security_API

API for CAPIF security management.

- [OpenAPI](#), on page 811
- [info](#), on page 811
- [externalDocs](#), on page 811
- [servers](#), on page 811
- [paths](#), on page 812
- [components](#), on page 818

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/

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'

aeId:

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: [aeId]

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.



CHAPTER 50

Nsmf_PDUSession

SMF PDU Session Service.

- [OpenAPI](#), on page 823
- [info](#), on page 823
- [externalDocs](#), on page 823
- [security](#), on page 823
- [servers](#), on page 824
- [paths](#), on page 824
- [components](#), on page 850

OpenAPI

OpenAPI Version: 3.0.0

info

Version: '1.0.0'

Title: 'Nsmf_PDUSession'

Description: 'SMF PDU Session Service'

externalDocs

Description: 3GPP TS 29.502 V15.2.1; 5G System; Session Management Services; Stage 3

URL: http://www.3gpp.org/ftp/Specs/archive/29_series/29.502/

security

- {}

- oAuth2Clientcredentials:

- nsmf-pdusession

servers

URL: '{apiRoot}/nsmf-pdusession/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 4.4 of 3GPP TS 29.501. The sm-contexts and pdu-sessions resources can be distributed on different processing instances or hosts. Thus the authority and/or deployment-specific string of the apiRoot of the created individual sm context and pdu-session resources' URIs may differ from the authority and/or deployment-specific string of the apiRoot of the sm-contexts and pdu-sessions collections' URIs.

paths

/sm-contexts

Method: Post

Summary: Create SM Context

Tags:

- SM contexts collection

Operation ID: PostSmContexts

Request Body:

Description: representation of the SM context to be created in the SMF

Required/Optional: true

Content:

Multipart/Related:

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextCreateData'

binaryDataN1SmMessage:

Type: string

Format: binary

Encoding:**JSON Data:****Content Type:** application/json**binaryDataN1SmMessage:****Content Type:** application/vnd.3gpp.5gnas**Headers:****Content ID:****Schema:****Type:** string**Callbacks:****smContextStatusNotification:**

'{\$request.body#/smContextStatusUri}':

Method: Post**Request Body:** # contents of the callback message**Required/Optional:** true**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/SmContextStatusNotification'**Responses:**

'204' successful notification

'307' temporary redirect

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

Responses:

'201' successful creation of an SM context

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextCreatedData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextCreatedData'

binaryDataN2SmInformation:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN2SmInformation:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nsmf-pdusession/v1/sm-contexts/{smContextRef}'

Required/Optional: true

Schema:

Type: string

'307' temporary redirect

'308' permanent redirect

'400' unsuccessful creation of an SM context - bad request

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextCreateError'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextCreateError'

binaryDataN1SmMessage:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

'403' unsuccessful creation of an SM context - forbidden

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextCreateError'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextCreateError'

binaryDataN1SmMessage:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

'404' unsuccessful creation of an SM context - not found

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextCreateError'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextCreateError'

binaryDataN1SmMessage:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500' unsuccessful creation of an SM context - internal server error

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextCreateError'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextCreateError'

binaryDataN1SmMessage:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

'503' unsuccessful creation of an SM context - service unavailable

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextCreateError'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextCreateError'

binaryDataN1SmMessage:**Type:** string**Format:** binary**Encoding:****JSON Data:****Content Type:** application/json**binaryDataN1SmMessage:****Content Type:** application/vnd.3gpp.5gnas**Headers:****Content ID:****Schema:****Type:** string**'504'** unsuccessful creation of an SM context - gateway timeout**Content:****Application/JSON:** # message without binary body part**Schema:****Reference:** '#/components/schemas/SmContextCreateError'**Multipart/Related:** # message with binary body part(s)**Schema:****Type:** object**Properties:** # Request parts**JSON Data:****Reference:** '#/components/schemas/SmContextCreateError'**binaryDataN1SmMessage:****Type:** string**Format:** binary**Encoding:****JSON Data:****Content Type:** application/json**binaryDataN1SmMessage:****Content Type:** application/vnd.3gpp.5gnas**Headers:****Content ID:****Schema:**

Type: string

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/sm-contexts/{smContextRef}/retrieve

Method: Post

Summary: Retrieve SM Context

Tags:

- Individual SM context

Operation ID: RetrieveSmContext

Parameters:

- name: smContextRef

In: path

Description: SM context reference

Required/Optional: true

Schema:

Type: string

Request Body:

Description: parameters used to retrieve the SM context

Required/Optional: false

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmContextRetrieveData'

Responses:

'200' successful retrieval of an SM context

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmContextRetrievedData'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/sm-contexts/{smContextRef}/modify

Method: Post

Summary: Update SM Context

Tags:

- Individual SM context

Operation ID: UpdateSmContext

Parameters:

- name: smContextRef

In: path

Description: SM context reference

Required/Optional: true

Schema:

Type: string

Request Body:

Description: representation of the updates to apply to the SM context

Required/Optional: true

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextUpdateData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextUpdateData'

binaryDataN1SmMessage:

Type: string

Format: binary

binaryDataN2SmInformation:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

binaryDataN2SmInformation:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

Responses:

'200' successful update of an SM context with content in the response

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextUpdatedData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextUpdatedData'

binaryDataN1SmMessage:

Type: string

Format: binary

binaryDataN2SmInformation:**Type:** string**Format:** binary**Encoding:****JSON Data:****Content Type:** application/json**binaryDataN1SmMessage:****Content Type:** application/vnd.3gpp.5gnas**Headers:****Content ID:****Schema:****Type:** string**binaryDataN2SmInformation:****Content Type:** application/vnd.3gpp.ngap**Headers:****Content ID:****Schema:****Type:** string**'204'** successful update of an SM context without content in the response**'400'** unsuccessful update of an SM context - bad request**Content:****Application/JSON:** # message without binary body part**Schema:****Reference:** '#/components/schemas/SmContextUpdateError'**Multipart/Related:** # message with binary body part(s)**Schema:****Type:** object**Properties:** # Request parts**JSON Data:****Reference:** '#/components/schemas/SmContextUpdateError'**binaryDataN1SmMessage:****Type:** string**Format:** binary**binaryDataN2SmInformation:**

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

binaryDataN2SmInformation:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

'403' unsuccessful update of an SM context - forbidden

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextUpdateError'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextUpdateError'

binaryDataN1SmMessage:

Type: string

Format: binary

binaryDataN2SmInformation:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

binaryDataN2SmInformation:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

'404' unsuccessful update of an SM context - not found

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextUpdateError'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextUpdateError'

binaryDataN1SmMessage:

Type: string

Format: binary

binaryDataN2SmInformation:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

binaryDataN2SmInformation:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500' unsuccessful update of an SM context - Internal server error

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextUpdateError'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextUpdateError'

binaryDataN1SmMessage:

Type: string

Format: binary

binaryDataN2SmInformation:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

binaryDataN2SmInformation:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

'503' unsuccessful update of an SM context - Service Unavailable

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextUpdateError'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextUpdateError'

binaryDataN1SmMessage:

Type: string

Format: binary

binaryDataN2SmInformation:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmMessage:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

binaryDataN2SmInformation:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/sm-contexts/{smContextRef}/release

Method: Post

Summary: Release SM Context

Tags:

- Individual SM context

Operation ID: ReleaseSmContext

Parameters:

- name: smContextRef

In: path

Description: SM context reference

Required/Optional: true

Schema:

Type: string

Request Body:

Description: representation of the data to be sent to the SMF when releasing the SM context

Required/Optional: false

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/SmContextReleaseData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/SmContextReleaseData'

binaryDataN2SmInformation:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN2SmInformation:

Content Type: application/vnd.3gpp.ngap

Headers:

Content ID:

Schema:

Type: string

Responses:

'204': successful release of an SM context without content in the response

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/pdu-sessions

Method: Post

Summary: Create

Tags:

- PDU sessions collection

Operation ID: PostPduSessions

Request Body:

Description: representation of the PDU session to be created in the H-SMF

Required/Optional: true

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/PduSessionCreateData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/PduSessionCreateData'

binaryDataN1SmInfoFromUe:

Type: string

Format: binary

binaryDataUnknownN1SmInfo:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmInfoFromUe:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

binaryDataUnknownN1SmInfo:

Content Type: application/vnd.3gpp.5gnas

Headers:**Content ID:****Schema:****Type:** string**Callbacks:****statusNotification:**

'{\$request.body#/vsmfPduSessionUri}':

Method: Post**Summary:** Notify Status**Tags:**

- Individual PDU session (V-SMF)

Operation ID: NotifyStatus**Request Body:****Description:** representation of the status notification**Required/Optional:** true**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/StatusNotification'**Responses:**

'204': successful notification of the status change

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'**update:**

'{\$request.body#/vsmfPduSessionUri}/modify':

Method: Post

Summary: Update (initiated by H-SMF)

Tags:

- Individual PDU session (V-SMF)

Operation ID: ModifyPduSession

Request Body:

Description: representation of updates to apply to the PDU session

Required/Optional: true

Content:

application/+json: # message without binary body part

Schema:

Reference: '#/components/schemas/VsmfUpdateData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/VsmfUpdateData'

binaryDataN1SmInfoToUe:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmInfoToUe:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

Responses:

'200' successful update of a PDU session with content in the response

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/VsmfUpdatedData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/VsmfUpdatedData'

binaryDataN1SmInfoFromUe:

Type: string

Format: binary

binaryDataUnknownN1SmInfo:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmInfoFromUe:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

binaryDataUnknownN1SmInfo:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

'204': successful update of a PDU session without content in the response

'400': Reference '#/components/responses/VsmfUpdateError'

'403': Reference '#/components/responses/VsmfUpdateError'

'404': Reference '#/components/responses/VsmfUpdateError'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference '#/components/responses/VsmfUpdateError'

'503': Reference '#/components/responses/VsmfUpdateError'

'504': Reference '#/components/responses/VsmfUpdateError'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

Responses:

'201' successful creation of a PDU session

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/PduSessionCreatedData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/PduSessionCreatedData'

binaryDataN1SmInfoToUe:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmInfoToUe:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}'

Required/Optional: true

Schema:**Type:** string

'307': temporary redirect

'308': permanent redirect

'400': Reference '#/components/responses/PduSessionCreateError'

'403': Reference '#/components/responses/PduSessionCreateError'

'404': Reference '#/components/responses/PduSessionCreateError'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference '#/components/responses/PduSessionCreateError'

'503': Reference '#/components/responses/PduSessionCreateError'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/pdu-sessions/{pduSessionRef}/modify

Method: Post**Summary:** Update (initiated by V-SMF)**Tags:**

- Individual PDU session (H-SMF)

Operation ID: UpdatePduSession**Parameters:**

- name: pduSessionRef

In: path**Description:** PDU session reference**Required/Optional:** true**Schema:****Type:** string**Request Body:****Description:** representation of the updates to apply to the PDU session**Required/Optional:** true**Content:****Application/JSON:** # message without binary body part**Schema:**

Reference: '#/components/schemas/HsmfUpdateData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/HsmfUpdateData'

binaryDataN1SmInfoFromUe:

Type: string

Format: binary

binaryDataUnknownN1SmInfo:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmInfoFromUe:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

binaryDataUnknownN1SmInfo:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

Responses:

'200' successful update of a PDU session with content in the response

Content:

Application/JSON: # message without binary body part

Schema:

Reference: '#/components/schemas/HsmfUpdatedData'

Multipart/Related: # message with binary body part(s)

Schema:

Type: object

Properties: # Request parts

JSON Data:

Reference: '#/components/schemas/HsmfUpdatedData'

binaryDataN1SmInfoToUe:

Type: string

Format: binary

Encoding:

JSON Data:

Content Type: application/json

binaryDataN1SmInfoToUe:

Content Type: application/vnd.3gpp.5gnas

Headers:

Content ID:

Schema:

Type: string

'204': successful update of a PDU session without content in the response

'400': Reference '#/components/responses/HsmfUpdateError'

'403': Reference '#/components/responses/HsmfUpdateError'

'404': Reference '#/components/responses/HsmfUpdateError'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference '#/components/responses/HsmfUpdateError'

'503': Reference '#/components/responses/HsmfUpdateError'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/pdu-sessions/{pduSessionRef}/release

Method: Post

Summary: Release

Tags:

- Individual PDU session (H-SMF)

Operation ID: ReleasePduSession

Parameters:

- name: pduSessionRef

In: path

Description: PDU session reference

Required/Optional: true

Schema:

Type: string

Request Body:

Description: representation of the data to be sent to H-SMF when releasing the PDU session

Required/Optional: false

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ReleaseData'

Responses:

'204': successful release of a PDU session

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2
Flows:
clientCredentials:
tokenUrl: '{nrfApiRoot}/oauth2/token'
scopes:
nsmf-pdusession: Access to the nsmf-pdusession API

schemas

STRUCTURED DATA TYPES

SmContextCreateData

Type: object
Properties:
supi:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
unauthenticatedSupi:
Type: boolean
Default: false
pei:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'
gpsi:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
pduSessionId:
Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
dnn:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
sNssai:
Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
hplmnSnssai:

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

servingNfId:

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

guami:

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

serviceName:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ServiceName'

servingNetwork:

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

requestType:

Reference: '#/components/schemas/RequestType'

n1SmMsg:

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

anType:

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

ratType:

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

presenceInLadn:

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

ueLocation:

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

ueTimeZone:

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

addUeLocation:

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

smContextStatusUri:

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

hSmfUri:

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

additionalHsmfUri:

Type: array

Items:

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

minItems: 1

oldPduSessionId:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'**pduSessionsActivateList:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'**minItems:** 1**ueEpsPdnConnection:****Reference:** '#/components/schemas/EpsPdnCnxContainer'**hoState:****Reference:** '#/components/schemas/HoState'**pcfId:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'**nrfUri:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**supportedFeatures:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**selMode:****Reference:** '#/components/schemas/DnnSelectionMode'**backupAmfInfo:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/BackupAmfInfo'**minItems:** 1**traceData:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/TraceData'**udmGroupId:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'**routingIndicator:****Type:** string**epsInterworkingInd:****Reference:** '#/components/schemas/EpsInterworkingIndication'**indirectForwardingFlag:****Type:** boolean

Required:

- servingNfId
- servingNetwork
- anType
- smContextStatusUri

SmContextCreatedData

Type: object

Properties:**hSmfUri:**

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

pduSessionId:

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

sNssai:

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

upCnxState:

Reference: '#/components/schemas/UpCnxState'

n2SmInfo:

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

n2SmInfoType:

Reference: '#/components/schemas/N2SmInfoType'

allocatedEbiList:

Type: array

Items:

Reference: '#/components/schemas/EbiArpMapping'

minItems: 1**hoState:**

Reference: '#/components/schemas/HoState'

smfServiceInstanceId:

Type: string

recoveryTime:

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

supportedFeatures:

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

SmContextUpdateData

Type: object

Properties:

pei:

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

gpsi:

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

servingNfId:

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

guami:

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

servingNetwork:

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

backupAmfInfo:

Type: array

Items:

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

minItems: 1

nullable: true

anType:

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

ratType:

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

presenceInLadn:

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

ueLocation:

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

ueTimeZone:

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

addUeLocation:

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

upCnxState:

Reference: '#/components/schemas/UpCnxState'

hoState:

Reference: '#/components/schemas/HoState'

toBeSwitched:

Type: boolean

Default: false

failedToBeSwitched:

Type: boolean

n1SmMsg:

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

n2SmInfo:

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

n2SmInfoType:

Reference: '#/components/schemas/N2SmInfoType'

targetServingNfId:

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

smContextStatusUri:

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

dataForwarding:

Type: boolean

Default: false

epsBearerSetup:

Type: array

Items:

Reference: '#/components/schemas/EpsBearerContainer'

minItems: 0

revokeEbiList:

Type: array

Items:

Reference: '#/components/schemas/EpsBearerId'

minItems: 1

release:

Type: boolean

Default: false

cause:

Reference: '#/components/schemas/Cause'

ngApCause:

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

5gMmCauseValue:

Reference: 'TS29571_CommonData.yaml#/components/schemas/5GMmCause'

sNssai:

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

traceData:

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

epsInterworkingInd:

Reference: '#/components/schemas/EpsInterworkingIndication'

anTypeCanBeChanged:

Type: boolean

Default: false

SmContextUpdatedData

Type: object

Properties:

upCnxState:

Reference: '#/components/schemas/UpCnxState'

hoState:

Reference: '#/components/schemas/HoState'

releaseEbiList:

Type: array

Items:

Reference: '#/components/schemas/EpsBearerId'

minItems: 1

allocatedEbiList:

Type: array

Items:

Reference: '#/components/schemas/EbiArpMapping'

minItems: 1

modifiedEbiList:

Type: array

Items:

Reference: '#/components/schemas/EbiArpMapping'

minItems: 1

n1SmMsg:

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

n2SmInfo:

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

n2SmInfoType:

Reference: '#/components/schemas/N2SmInfoType'

epsBearerSetup:

Type: array

Items:

Reference: '#/components/schemas/EpsBearerContainer'

minItems: 1

dataForwarding:

Type: boolean

SmContextReleaseData

Type: object

Properties:

cause:

Reference: '#/components/schemas/Cause'

ngApCause:

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

5gMmCauseValue:

Reference: 'TS29571_CommonData.yaml#/components/schemas/5GMmCause'

ueLocation:

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

ueTimeZone:

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

addUeLocation:

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

vsmfReleaseOnly:

Type: boolean

Default: false

SmContextStatusNotification

Type: object

Properties:

statusInfo :

Reference: '#/components/schemas/StatusInfo'

Required:

- statusInfo

PduSessionCreateData

Type: object

Properties:

supi:

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

unauthenticatedSupi:

Type: boolean

Default: false

pei:

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

pduSessionId:

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

dnn:

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

sNssai:

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

vsmfId:

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

servingNetwork:

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

requestType:

Reference: '#/components/schemas/RequestType'

epsBearerId:

Type: array

Items:

Reference: '#/components/schemas/EpsBearerId'

minItems: 1

pgwS8cFteid:

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

vsmfPduSessionUri:

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

vcnTunnelInfo:

Reference: '#/components/schemas/TunnelInfo'

anType:

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

ratType:

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

ueLocation:

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

ueTimeZone:

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

addUeLocation:

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

gpsi:

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

n1SmInfoFromUe:

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

unknownN1SmInfo:

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

supportedFeatures:

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

hPcfId:

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

hoPreparationIndication:

Type: boolean

selMode:

Reference: '#/components/schemas/DnnSelectionMode'

alwaysOnRequested:

Type: boolean

Default: false

udmGroupId:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfGroupId'**routingIndicator:****Type:** string**epsInterworkingInd:****Reference:** '#/components/schemas/EpsInterworkingIndication'**vSmfServiceInstanceId:****Type:** string**recoveryTime:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DateTime'**roamingChargingProfile:****Reference:** 'TS32291_Nchf_ConvergedCharging.yaml#/components/schemas/RoamingChargingProfile'**chargingId:****Type:** string**oldPduSessionId:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'**Required:**

- dnn
- vsmfId
- servingNetwork
- vsmfPduSessionUri
- vcnTunnelInfo
- anType

PduSessionCreatedData**Type:** object**Properties:****pduSessionType:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PduSessionType'**sscMode:****Type:** string**Pattern:** '^[0-7]\$'**hcnTunnelInfo:****Reference:** '#/components/schemas/TunnelInfo'**sessionAmbr:**

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

qosFlowsSetupList:

Type: array

Items:

Reference: '#/components/schemas/QosFlowSetupItem'

minItems: 1

hSmfInstanceId:

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

pduSessionId:

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

sNssai:

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

enablePauseCharging:

Type: boolean

Default: false

ueIpv4Address:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

ueIpv6Prefix:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'

n1SmInfoToUe:

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

epsPdnCnxInfo:

Reference: '#/components/schemas/EpsPdnCnxInfo'

epsBearerInfo:

Type: array

Items:

Reference: '#/components/schemas/EpsBearerInfo'

minItems: 1

supportedFeatures:

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

maxIntegrityProtectedDataRate:

Reference: '#/components/schemas/MaxIntegrityProtectedDataRate'

alwaysOnGranted:

Type: boolean

Default: false

upSecurity:

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

roamingChargingProfile:

Reference: 'TS32291_Nchf_ConvergedCharging.yaml#/components/schemas/RoamingChargingProfile'

hSmfServiceInstanceId:

Type: string

recoveryTime:

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

Required:

- pduSessionType
- sscMode
- hcnTunnelInfo
- sessionAmbr
- qosFlowsSetupList
- hSmfInstanceId

HsmfUpdateData

Type: object

Properties:

requestIndication:

Reference: '#/components/schemas/RequestIndication'

pei:

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

vcnTunnelInfo:

Reference: '#/components/schemas/TunnelInfo'

servingNetwork:

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

anType:

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

ratType:

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

ueLocation:

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

ueTimeZone:

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

addUeLocation:

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

pauseCharging:

Type: boolean

pti:

Reference: '#/components/schemas/ProcedureTransactionId'

n1SmInfoFromUe:

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

unknownN1SmInfo:

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

qosFlowsRelNotifyList:

Type: array

Items:

Reference: '#/components/schemas/QosFlowItem'

minItems: 1

qosFlowsNotifyList:

Type: array

Items:

Reference: '#/components/schemas/QosFlowNotifyItem'

minItems: 1

NotifyList:

Type: array

Items:

Reference: '#/components/schemas/PduSessionNotifyItem'

minItems: 1

epsBearerId:

Type: array

Items:

Reference: '#/components/schemas/EpsBearerId'

minItems: 0

hoPreparationIndication:

Type: boolean

revokeEbiList:

Type: array

Items:

Reference: '#/components/schemas/EpsBearerId'

minItems: 1

cause:

Reference: '#/components/schemas/Cause'

ngApCause:

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

5gMmCauseValue:

Reference: 'TS29571_CommonData.yaml#/components/schemas/5GMmCause'

alwaysOnRequested:

Type: boolean

Default: false

epsInterworkingInd:

Reference: '#/components/schemas/EpsInterworkingIndication'

secondaryRatUsageReport:

Type: array

Items:

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

minItems: 1

Required:

- requestIndication

HsmfUpdatedData

Type: object

Properties:

n1SmInfoToUe:

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

ReleaseData

Type: object

Properties:

cause:

Reference: '#/components/schemas/Cause'

ngApCause:

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

5gMmCauseValue:

Reference: 'TS29571_CommonData.yaml#/components/schemas/5GMmCause'

ueLocation:

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

ueTimeZone:

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

addUeLocation:

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

secondaryRatUsageReport:

Type: array

Items:

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

minItems: 1

ReleasedData

Type: object

VsmfUpdateData

Type: object

Properties:

requestIndication:

Reference: '#/components/schemas/RequestIndication'

sessionAmbr:

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

qosFlowsAddModRequestList:

Type: array

Items:

Reference: '#/components/schemas/QosFlowAddModifyRequestItem'

minItems: 1

qosFlowsRelRequestList:

Type: array

Items:

Reference: '#/components/schemas/QosFlowReleaseRequestItem'

minItems: 1

epsBearerInfo:**Type:** array**Items:****Reference:** '#/components/schemas/EpsBearerInfo'**minItems:** 1**assignEbiList:****Type:** array**Items:****Reference:** '#/components/schemas/EpsBearerId'**minItems:** 1**revokeEbiList:****Type:** array**Items:****Reference:** '#/components/schemas/EpsBearerId'**minItems:** 1**modifiedEbiList:****Type:** array**Items:****Reference:** '#/components/schemas/EbiArpMapping'**minItems:** 1**pti:****Reference:** '#/components/schemas/ProcedureTransactionId'**n1SmInfoToUe:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'**alwaysOnGranted:****Type:** boolean**Default:** false**cause:****Reference:** '#/components/schemas/Cause'**n1smCause:****Type:** string**backOffTimer:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DurationSec'**Required:**

- requestIndication

VsmfUpdatedData

Type: object

Properties:

qosFlowsAddModList:

Type: array

Items:

Reference: '#/components/schemas/QosFlowItem'

minItems: 1

qosFlowsRelList:

Type: array

Items:

Reference: '#/components/schemas/QosFlowItem'

minItems: 1

qosFlowsFailedtoAddModList:

Type: array

Items:

Reference: '#/components/schemas/QosFlowItem'

minItems: 1

qosFlowsFailedtoRelList:

Type: array

Items:

Reference: '#/components/schemas/QosFlowItem'

minItems: 1

n1SmInfoFromUe:

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

unknownN1SmInfo:

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

ueLocation:

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

ueTimeZone:

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

addUeLocation:

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

assignedEbiList:**Type:** array**Items:****Reference:** '#/components/schemas/EbiArpMapping'**minItems:** 1**failedToAssignEbiList:****Type:** array**Items:****Reference:** '#/components/schemas/EpsBearerId'**minItems:** 1**releasedEbiList:****Type:** array**Items:****Reference:** '#/components/schemas/EpsBearerId'**minItems:** 1**secondaryRatUsageReport:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SecondaryRatUsageReport'**minItems:** 1**StatusNotification****Type:** object**Properties:**

statusInfo :

Reference: '#/components/schemas/StatusInfo'**Required:**

- statusInfo

QosFlowItem**Type:** object**Properties:**

qfi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Qfi'**cause:**

Reference: '#/components/schemas/Cause'

Required:

- qfi

QosFlowSetupItem

Type: object

Properties:

qfi:

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

qosRules:

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

ebi:

Reference: '#/components/schemas/EpsBearerId'

qosFlowDescription:

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

qosFlowProfile:

Reference: '#/components/schemas/QosFlowProfile'

Required:

- qfi

- qosRules

QosFlowAddModifyRequestItem

Type: object

Properties:

qfi:

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

ebi:

Reference: '#/components/schemas/EpsBearerId'

qosRules:

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

qosFlowDescription:

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

qosFlowProfile:

Reference: '#/components/schemas/QosFlowProfile'

Required:

- qfi

QosFlowReleaseRequestItem

Type: object

Properties:

qfi:

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

qosRules:

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

qosFlowDescription:

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

Required:

- qfi

QosFlowProfile

Type: object

Properties:

5qi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/5Qi'

nonDynamic5Qi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/NonDynamic5Qi'

dynamic5Qi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Dynamic5Qi'

arp:

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

gbrQosFlowInfo:

Reference: '#/components/schemas/GbrQosFlowInformation'

rqa:

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

additionalQosFlowInfo:

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

Required:

- 5qi

GbrQosFlowInformation

Type: object

Properties:**maxFbrDI:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/BitRate'**maxFbrUI:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/BitRate'**guaFbrDI:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/BitRate'**guaFbrUI:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/BitRate'**notifControl:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NotificationControl'**maxPacketLossRateDI:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PacketLossRate'**maxPacketLossRateUI:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PacketLossRate'**Required:**

- maxFbrDI
- maxFbrUI
- guaFbrDI
- guaFbrUI

QosFlowNotifyItem

Type: object**Properties:****qfi:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Qfi'**notificationCause:****Reference:** '#/components/schemas/NotificationCause'**Required:**

- qfi
- notificationCause

SmContextRetrieveData

Type: object**Properties:**

targetMmeCap:

Reference: '#/components/schemas/MmeCapabilities'

SmContextRetrievedData

Type: object

Properties:

ueEpsPdnConnection:

Reference: '#/components/schemas/EpsPdnCnxContainer'

Required:

- ueEpsPdnConnection

MmeCapabilities

Type: object

Properties:

nonIpSupported:

Type: boolean

Default: false

TunnelInfo

Type: object

Properties:

ipv4Addr:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

ipv6Addr:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'

gtpTeid:

Reference: '#/components/schemas/Teid'

Required:

- gtpTeid

StatusInfo

Type: object

Properties:

resourceStatus:

Reference: '#/components/schemas/ResourceStatus'

cause:

Reference: '#/components/schemas/Cause'

Required:

- resourceStatus

EpsPdnCnxInfo

Type: object

Properties:

pgwS8cFteid:

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

pgwNodeName:

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

Required:

- pgwS8cFteid

EpsBearerInfo

Type: object

Properties:

ebi:

Reference: '#/components/schemas/EpsBearerId'

pgwS8uFteid:

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

bearerLevelQoS:

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

Required:

- ebi

- pgwS8uFteid

- bearerLevelQoS

PduSessionNotifyItem

Type: object

Properties:

notificationCause:

Reference: '#/components/schemas/NotificationCause'

Required:

- notificationCause

EbiArpMapping

Type: object

Properties:

epsBearerId:

Reference: '#/components/schemas/EpsBearerId'

arp:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Arp'

Required:

- epsBearerId
- arp

SmContextCreateError

Type: object

Properties:

error:

Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

n1SmMsg:

Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'

recoveryTime:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

Required:

- error

SmContextUpdateError

Type: object

Properties:

error:

Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

n1SmMsg:

Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'

n2SmInfo:

Reference: 'TS29571_CommonData.yaml#/components/schemas/RefToBinaryData'

n2SmInfoType:

Reference: '#/components/schemas/N2SmInfoType'

upCnxState:

Reference: '#/components/schemas/UpCnxState'

recoveryTime:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

Required:

- error

'PduSessionCreateError'

Description: unsuccessful creation of a PDU session

content:

application/json: # message without binary body part

schema:

Reference: '#/components/schemas/PduSessionCreateError'

multipart/related: # message with binary body part(s)

schema:

Type: object

Properties: # Request parts

jsonData:

Reference: '#/components/schemas/PduSessionCreateError'

binaryDataN1SmInfoToUe:

Type: string

format: binary

encoding:

jsonData:

contentType: application/json

binaryDataN1SmInfoToUe:

contentType: application/vnd.3gpp.5gnas

headers:

Content-Id:

schema:

Type: string

'HsmfUpdateError'

Description: unsuccessful update of a PDU session

content:

application/json: # message without binary body part

schema:

Reference: '#/components/schemas/HsmfUpdateError'

multipart/related: # message with binary body part(s)

schema:

Type: object

Properties: # Request parts

jsonData:

Reference: '#/components/schemas/HsmfUpdateError'

binaryDataN1SmInfoToUe:

Type: string

format: binary

encoding:

jsonData:

contentType: application/json

binaryDataN1SmInfoToUe:

contentType: application/vnd.3gpp.5gnas

headers:

Content-Id:

schema:

Type: string

'VsmfUpdateError'

Description: unsuccessful update of a PDU session

content:

application/json: # message without binary body part

schema:

Reference: '#/components/schemas/VsmfUpdateError'

multipart/related: # message with binary body part(s)

schema:

Type: object

Properties: # Request parts

jsonData:

Reference: '#/components/schemas/VsmfUpdateError'

binaryDataN1SmInfoFromUe:

Type: string

format: binary
binaryDataUnknownN1SmInfo:
Type: string
format: binary
encoding:
jsonData:
contentType: application/json
binaryDataN1SmInfoFromUe:
contentType: application/vnd.3gpp.5gnas
headers:
Content-Id:
schema:
Type: string
binaryDataUnknownN1SmInfo:
contentType: application/vnd.3gpp.5gnas
headers:
Content-Id:
schema:
Type: string

ProcedureTransactionId

Type: integer
Minimum: 0
Maximum: 255

EpsBearerId

Type: integer
Minimum: 0
Maximum: 15

EpsPdnCnxContainer

Type: string

EpsBearerContainer

Type: string

Teid

Type: string

Pattern: '^[A-F0-9]{8}\$'

ENUMERATIONS

UpCnxState

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

- ACTIVATED
- DEACTIVATED
- ACTIVATING

HoState

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

- NONE
- PREPARING
- PREPARED
- COMPLETED
- CANCELLED

RequestType

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

- INITIAL_REQUEST
- EXISTING_PDU_SESSION
- INITIAL_EMERGENCY_REQUEST
- EXISTING_EMERGENCY_PDU_SESSION

RequestIndication

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

- UE_REQ_PDU_SES_MOD
- UE_REQ_PDU_SES_REL
- PDU_SES_MOB
- NW_REQ_PDU_SES_AUTH
- NW_REQ_PDU_SES_MOD
- NW_REQ_PDU_SES_REL
- EBI_ASSIGNMENT_REQ

NotificationCause

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

- QOS_FULFILLED
- QOS_NOT_FULFILLED
- UP_SEC_FULFILLED
- UP_SEC_NOT_FULFILLED

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

- REL_DUE_TO_HO
- EPS_FALLBACK
- REL_DUE_TO_UP_SEC
- DNN_CONGESTION
- S-NSSAI_CONGESTION
- REL_DUE_TO_REACTIVATION
- 5G_AN_NOT_RESPONDING
- REL_DUE_TO_SLICE_NOT_AVAILABLE
- REL_DUE_TO_DUPLICATE_SESSION_ID
- PDU_SESSION_STATUS_MISMATCH
- HO_FAILURE

ResourceStatus

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

- RELEASED

DnnSelectionMode

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

- VERIFIED
- UE_DNN_NOT_VERIFIED
- NW_DNN_NOT_VERIFIED

EpsInterworkingIndication

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

- NONE
- WITH_N26
- WITHOUT_N26

N2SmlInfoType

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

- PDU_RES_SETUP_REQ
- PDU_RES_SETUP_RSP
- PDU_RES_SETUP_FAIL
- PDU_RES_REL_CMD
- PDU_RES_REL_RSP
- PDU_RES_MOD_REQ
- PDU_RES_MOD_RSP
- PDU_RES_MOD_FAIL
- PDU_RES_NTY
- PDU_RES_NTY_REL
- PDU_RES_MOD_IND
- PDU_RES_MOD_CFM
- PATH_SWITCH_REQ
- PATH_SWITCH_SETUP_FAIL
- PATH_SWITCH_REQ_ACK
- PATH_SWITCH_REQ_FAIL
- HANDOVER_REQUIRED

- HANDOVER_CMD
- HANDOVER_PREP_FAIL
- HANDOVER_REQ_ACK
- HANDOVER_RES_ALLOC_FAIL

MaxIntegrityProtectedDataRate

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

- 64_KBPS
- MAX_UE_RATE

HTTP responses

responses

'PduSessionCreateError'

Description: unsuccessful creation of a PDU session

content:

application/json: # message without binary body part

schema:

Reference: '#/components/schemas/PduSessionCreateError'

multipart/related: # message with binary body part(s)

schema:

Type: object

Properties: # Request parts

jsonData:

Reference: '#/components/schemas/PduSessionCreateError'

binaryDataN1SmInfoToUe:

Type: string

format: binary

encoding:

jsonData:

contentType: application/json
binaryDataN1SmInfoToUe:
contentType: application/vnd.3gpp.5gnas
headers:
Content-Id:
schema:
Type: string

'HsmfUpdateError'

Description: unsuccessful update of a PDU session
content:
application/json: # message without binary body part
schema:
Reference: '#/components/schemas/HsmfUpdateError'
multipart/related: # message with binary body part(s)
schema:
Type: object
Properties: # Request parts
jsonData:
Reference: '#/components/schemas/HsmfUpdateError'
binaryDataN1SmInfoToUe:
Type: string
format: binary
encoding:
jsonData:
contentType: application/json
binaryDataN1SmInfoToUe:
contentType: application/vnd.3gpp.5gnas
headers:
Content-Id:
schema:
Type: string

'VsmfUpdateError'

Description: unsuccessful update of a PDU session

content:

application/json: # message without binary body part

schema:

Reference: '#/components/schemas/VsmfUpdateError'

multipart/related: # message with binary body part(s)

schema:

Type: object

Properties: # Request parts

jsonData:

Reference: '#/components/schemas/VsmfUpdateError'

binaryDataN1SmInfoFromUe:

Type: string

format: binary

binaryDataUnknownN1SmInfo:

Type: string

format: binary

encoding:

jsonData:

contentType: application/json

binaryDataN1SmInfoFromUe:

contentType: application/vnd.3gpp.5gnas

headers:

Content-Id:

schema:

Type: string

binaryDataUnknownN1SmInfo:

contentType: application/vnd.3gpp.5gnas

headers:

Content-Id:

schema:

Type: string



CHAPTER 51

Nudm_EE

Nudm Event Exposure Service.

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- [info](#), on page 885
- [externalDocs](#), on page 885
- [security](#), on page 885
- [servers](#), on page 886
- [paths](#), on page 886
- [components](#), on page 889

OpenAPI

OpenAPI Version: 3.0.0

info

Version: '1.0.0'

Title: 'Nudm_EE'

Description: 'Nudm Event Exposure Service'

externalDocs

Description: 3GPP TS 29.503 Unified Data Management Services, version 15.2.1

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.503/'

security

- oAuth2ClientCredentials:
- nudm-ee

- {}

servers

URL: '{apiRoot}/nudm-ee/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501.

paths

ueidentity and ee subscriptions

Method: Post

Summary: Subscribe

Operation ID: CreateEeSubscription

Tags:

- Create EE Subscription

Parameters:

- name: ueIdentity

In: path

Description: Represents the scope of the UE for which the subscription is applied. Contains the GPSI of the user or the external group ID or any UE.

Required/Optional: true

Schema:

Type: string

pattern: '^(msisdn-[0-9]{5,15}|.+|extid-[^@]+@[^@]+|extgroupid-[^@]+@[^@]+|anyUE)\$'

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/EeSubscription'

Required/Optional: true

Responses:

'201' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/CreatedEeSubscription'

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudm-ee/v1/{ueIdentity}/ee-subscriptions/{subscriptionId}'

Required/Optional: true

Schema:

Type: string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'501': Reference 'TS29571_CommonData.yaml#/components/responses/501'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

Callbacks:

eventOccurrenceNotification:

'{request.body#/callbackReference}':

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/MonitoringReport'

minItems: 1

Responses:

'204' Successful Notification response

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

ueidentity, ee subscriptions and subscriptionId

delete:

Summary: Unsubscribe

Operation ID: DeleteEeSubscription

Tags:

- Delete EE Subscription

Parameters:

- name: ueIdentity

In: path

Description: Represents the scope of the UE for which the subscription is applied. Contains the GPSI of the user or the external group ID or any UE.

Required/Optional: true

Schema:

Type: string

pattern: '^(msisdn-[0-9]{5,15}|.+|extid-[^@]+@[^@]+|extgroupid-[^@]+@[^@]+|anyUE)\$'

- name: subscriptionId

In: path

Description: Id of the EE Subscription

Required/Optional: true

Schema:

Type: string

Responses:

'204' Successful response

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

nudm-ee: Access to the nudm-ee API

schemas

COMPLEX TYPES:

CreatedEeSubscription

Type: object

Required:

- eeSubscription

Properties:

eeSubscription:

Reference: '#/components/schemas/EeSubscription'

numberOfUes:

Reference: 'TS29571_CommonData.yaml#/components/schemas/UInteger'

eventReports:

Type: array

Items:

Reference: '#/components/schemas/MonitoringReport'

minItems: 1

EeSubscription

Type: object

Required:

- callbackReference
- monitoringConfigurations

Properties:**callbackReference:**

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'

monitoringConfigurations:

Description: A map (list of key-value pairs where ReferenceId serves as key) of MonitoringConfigurations

Type: object

additionalProperties:

Reference: '#/components/schemas/MonitoringConfiguration'

minProperties: 1

reportingOptions:

Reference: '#/components/schemas/ReportingOptions'

supportedFeatures:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

MonitoringConfiguration

Type: object

Required:

- eventType

Properties:**eventType:**

Reference: '#/components/schemas/EventType'

immediateFlag:

Type: boolean

locationReportingConfiguration:

Reference: '#/components/schemas/LocationReportingConfiguration'

LocationReportingConfiguration

Type: object

Required:

- currentLocation

Properties:**currentLocation:**

Type: boolean

oneTime:

Type: boolean

accuracy:

Reference: '#/components/schemas/LocationAccuracy'

ReportingOptions

Type: object

Properties:

maxNumOfReports:

Reference: '#/components/schemas/MaxNumOfReports'

expiry:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

MonitoringReport

Type: object

Required:

- referencId

- eventType

- timeStamp

Properties:

referencId:

Reference: '#/components/schemas/ReferenceId'

eventType:

Reference: '#/components/schemas/EventType'

report:

Reference: '#/components/schemas/Report'

gpsi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'

timeStamp:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

Report

oneOf:

- \$ref: '#/components/schemas/ChangeOfSupiPeiAssociationReport'

- \$ref: '#/components/schemas/RoamingStatusReport'

ChangeOfSupiPeiAssociationReport

Type: object

Required:

- newPei

Properties:

newPei:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'

RoamingStatusReport

Type: object

Required:

- roaming

- newServingPlmn

Properties:

roaming:

Type:

boolean

newServingPlmn:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

SIMPLE TYPES:

Referenceld

Type: integer

MaxNumOfReports

Type: integer

ENUMS:

EventType

anyOf:

- type: string

enum:

- LOSS_OF_CONNECTIVITY

- UE_REACHABILITY_FOR_DATA

- UE_REACHABILITY_FOR_SMS

- LOCATION_REPORTING

- CHANGE_OF_SUPI_PEI_ASSOCIATION
- ROAMING_STATUS
- COMMUNICATION_FAILURE
- AVAILABILITY_AFTER_DNN_FAILURE
- type: string

LocationAccuracy

anyOf:

- type: string

enum:

- CELL_LEVEL
- TA_LEVEL
- type: string



CHAPTER 52

Nudm_PP

Nudm Parameter Provision Service.

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- [info](#), on page 895
- [externalDocs](#), on page 895
- [security](#), on page 895
- [servers](#), on page 896
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OpenAPI

OpenAPI Version: 3.0.0

info

Version: '1.0.0'

Title: 'Nudm_PP'

Description: 'Nudm Parameter Provision Service'

externalDocs

Description: 3GPP TS 29.503 Unified Data Management Services, version 15.2.1

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.503/'

security

- oAuth2ClientCredentials:
- nudm-pp

- {}

servers

URL: '{apiRoot}/nudm-pp/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501.

paths

gpsi and pp-data

patch:

Summary: provision parameters

Operation ID: Update

Tags:

- Subscription Data Update

Parameters:

- name: gpsi

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'

Request Body:

Content:

application/merge-patch+json:

Schema:

Reference: '#/components/schemas/PpData'

Required/Optional: true

Responses:

'204' Expected response to a valid request

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

nudm-pp: Access to the nudm-pp API

schemas

COMPLEX TYPES:

PpData

Type: object

Properties:

communicationCharacteristics:

Reference: '#/components/schemas/CommunicationCharacteristics'

supportedFeatures:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

CommunicationCharacteristics

Type: object

Properties:

ppSubsRegTimer:

Reference: '#/components/schemas/PpSubsRegTimer'

ppActiveTime:

Reference: '#/components/schemas/PpActiveTime'

ppDIAPacketCount:

Reference: '#/components/schemas/PpDIAPacketCount'

PpSubsRegTimer

Type: object

Required:

- subsRegTimer
- afInstanceId
- referenceId

Properties:

subsRegTimer:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DurationSec'

afInstanceId:

Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'

referenceId:

Reference: '#/components/schemas/ReferenceId'

nullable: true

PpActiveTime

Type: object

Required:

- activeTime
- afInstanceId
- referenceId

Properties:

activeTime:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DurationSec'

afInstanceId:

Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'

referenceId:

Reference: '#/components/schemas/ReferenceId'

nullable: true

SIMPLE TYPES:

Referenceld

Type: integer

PpDIPacketCount

Type: integer

nullable: true

ENUMS:



CHAPTER 53

NUDM SDM

This service is used by Consumer NFs (AMF, SMF, and SMSF) to retrieve the UEs individual subscription data relevant to the consumer NF from the UDM.

- [OpenAPI](#), on page 901
- [info](#), on page 901
- [externalDocs](#), on page 901
- [security](#), on page 901
- [servers](#), on page 902
- [paths](#), on page 902
- [components](#), on page 928

OpenAPI

OpenAPI Version: 3.0.0

info

Version: '1.0.0'

Title: 'Nudm_SDM'

Description: 'Nudm Subscriber Data Management Service'

externalDocs

Description: 3GPP TS 29.503 Unified Data Management Services, version 15.2.1

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.503/'

security

- oAuth2ClientCredentials:
- nudm-sdm

- {}

servers

URL: '{apiRoot}/nudm-sdm/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501.

paths

supi

get:

Summary: retrieve multiple data sets

Operation ID: Get

Tags:

- Retrieval of multiple data sets

Parameters:

- name: supi

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

- name: dataset-names

In: query

style: form

explode: false

Description: List of dataset names

Required/Optional: true

Schema:

Reference: '#/components/schemas/DatasetNames'

- name: plmn-id

In: query

Description: serving PLMN ID

Content:

Application/JSON:

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

- name: supported-features

In: query

Description: Supported Features

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

- name: If-None-Match

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.2

Schema:

Type: string

- name: If-Modified-Since

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.3

Schema:

Type: string

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SubscriptionDataSets'

Headers:

Cache-Control:

Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

Schema:

Type: string

ETag:

Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

Schema:**Type:** string**Last-Modified:****Description:** Timestamp for last modification of the resource, as described in RFC 7232, 2.2**Schema:****Type:** string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:**Description:** Unexpected error

supi nssai

get:**Summary:** retrieve a UE's subscribed NSSAI**Operation ID:** Get**Tags:**

- Slice Selection Subscription Data Retrieval

Parameters:

- name: supi

In: path**Description:** Identifier of the UE**Required/Optional:** true**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Supi'

- name: supported-features

In: query**Description:** Supported Features**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

- name: plmn-id

In: query**Description:** serving PLMN ID

Content:**Application/JSON:****Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

- name: If-None-Match

In: header**Description:** Validator for conditional requests, as described in RFC 7232, 3.2**Schema:****Type:** string

- name: If-Modified-Since

In: header**Description:** Validator for conditional requests, as described in RFC 7232, 3.3**Schema:****Type:** string**Responses:**

'200' Expected response to a valid request

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/Nssai'**Headers:****Cache-Control:****Description:** Cache-Control containing max-age, as described in RFC 7234, 5.2**Schema:****Type:** string**ETag:****Description:** Entity Tag, containing a strong validator, as described in RFC 7232, 2.3**Schema:****Type:** string**Last-Modified:****Description:** Timestamp for last modification of the resource, as described in RFC 7232, 2.2**Schema:****Type:** string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

supi am data

get:

Summary: retrieve a UE's Access and Mobility Subscription Data

Operation ID: Get

Tags:

- Access and Mobility Subscription Data Retrieval

Parameters:

- name: supi

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

- name: supported-features

In: query

Description: Supported Features

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

- name: plmn-id

In: query

Description: serving PLMN ID

Content:

Application/JSON:

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

- name: If-None-Match

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.2

Schema:**Type:** string

- name: If-Modified-Since

In: header**Description:** Validator for conditional requests, as described in RFC 7232, 3.3**Schema:****Type:** string**Responses:**

'200' Expected response to a valid request

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/AccessAndMobilitySubscriptionData'**Headers:****Cache-Control:****Description:** Cache-Control containing max-age, as described in RFC 7234, 5.2**Schema:****Type:** string**ETag:****Description:** Entity Tag, containing a strong validator, as described in RFC 7232, 2.3**Schema:****Type:** string**Last-Modified:****Description:** Timestamp for last modification of the resource, as described in RFC 7232, 2.2**Schema:****Type:** string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:**Description:** Unexpected error

supi smf select data

get:

Summary: retrieve a UE's SMF Selection Subscription Data

Operation ID: Get

Tags:

- SMF Selection Subscription Data Retrieval

Parameters:

- name: supi

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

- name: supported-features

In: query

Description: Supported Features

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

- name: plmn-id

In: query

Description: serving PLMN ID

Content:

Application/JSON:

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

- name: If-None-Match

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.2

Schema:

Type: string

- name: If-Modified-Since

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.3

Schema:

Type: string

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmfSelectionSubscriptionData'

Headers:

Cache-Control:

Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

Schema:

Type: string

ETag:

Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

Schema:

Type: string

Last-Modified:

Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

Schema:

Type: string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

supi ue context in smf data

get:

Summary: retrieve a UE's UE Context In SMF Data

Operation ID: Get

Tags:

- UE Context In SMF Data Retrieval

Parameters:

- name: supi

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

- name: supported-features

In: query

Description: Supported Features

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/UeContextInSmfData'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

supi ue context in smsf data

get:

Summary: retrieve a UE's UE Context In SMSF Data

Operation ID: Get

Tags:

- UE Context In SMSF Data Retrieval

Parameters:

- name: supi

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

- name: supported-features

In: query

Description: Supported Features

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/UeContextInSmsfData'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

supi trace data

get:

Summary: retrieve a UE's Trace Configuration Data

Operation ID: Get

Tags:

- Trace Configuration Data Retrieval

Parameters:

- name: supi

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

- name: supported-features

In: query

Description: Supported Features

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

- name: plmn-id

In: query

Description: serving PLMN ID

Content:

Application/JSON:

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

- name: If-None-Match

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.2

Schema:

Type: string

- name: If-Modified-Since

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.3

Schema:

Type: string

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TraceDataResponse'

Headers:

Cache-Control:

Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

Schema:

Type: string

ETag:

Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

Schema:

Type: string

Last-Modified:

Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

Schema:

Type: string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

supi sm data

get:

Summary: retrieve a UE's Session Management Subscription Data

Operation ID: Get

Tags:

- Session Management Subscription Data Retrieval

Parameters:

- name: supi

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

- name: supported-features

In: query

Description: Supported Features

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

- name: single-nssai

In: query

Content:**Application/JSON:****Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Snssai'

- name: dnn

In: query**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Dnn'

- name: plmn-id

In: query**Content:****Application/JSON:****Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

- name: If-None-Match

In: header**Description:** Validator for conditional requests, as described in RFC 7232, 3.2**Schema:****Type:** string

- name: If-Modified-Since

In: header**Description:** Validator for conditional requests, as described in RFC 7232, 3.3**Schema:****Type:** string**Responses:**

'200' Expected response to a valid request

Content:**Application/JSON:****Schema:****Type:** array**items:****Reference:** '#/components/schemas/SessionManagementSubscriptionData'**minItems:** 1**Headers:**

Cache-Control:**Description:** Cache-Control containing max-age, as described in RFC 7234, 5.2**Schema:****Type:** string**ETag:****Description:** Entity Tag, containing a strong validator, as described in RFC 7232, 2.3**Schema:****Type:** string**Last-Modified:****Description:** Timestamp for last modification of the resource, as described in RFC 7232, 2.2**Schema:****Type:** string**'400':** Reference 'TS29571_CommonData.yaml#/components/responses/400'**'404':** Reference 'TS29571_CommonData.yaml#/components/responses/404'**'500':** Reference 'TS29571_CommonData.yaml#/components/responses/500'**'503':** Reference 'TS29571_CommonData.yaml#/components/responses/503'**default:****Description:** Unexpected error

supi sms data

get:**Summary:** retrieve a UE's SMS Subscription Data**Operation ID:** Get**Tags:**

- SMS Subscription Data Retrieval

Parameters:

- name: supi

In: path**Description:** Identifier of the UE**Required/Optional:** true**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Supi'

- name: supported-features

In: query

Description: Supported Features

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

- name: plmn-id

In: query

Content:

Application/JSON:

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

- name: If-None-Match

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.2

Schema:

Type: string

- name: If-Modified-Since

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.3

Schema:

Type: string

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmsSubscriptionData'

Headers:

Cache-Control:

Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

Schema:

Type: string

ETag:

Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

Schema:

Type: string

Last-Modified:

Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

Schema:

Type: string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

supi sms mng data

get:

Summary: retrieve a UE's SMS Management Subscription Data

Operation ID: Get

Tags:

- SMS Management Subscription Data Retrieval

Parameters:

- name: supi

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

- name: supported-features

In: query

Description: Supported Features

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

- name: plmn-id

In: query

Content:

Application/JSON:

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

- name: If-None-Match

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.2

Schema:

Type: string

- name: If-Modified-Since

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.3

Schema:

Type: string

Responses:

'200': Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmsManagementSubscriptionData'

Headers:

Cache-Control:

Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

Schema:

Type: string

ETag:

Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

Schema:

Type: string

Last-Modified:

Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

Schema:

Type: string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

supi sdm subscriptions

Method: Post

Summary: subscribe to notifications

Operation ID: Subscribe

Tags:

- Subscription Creation

Parameters:

- name: supi

In: path

Description: SUPI of the user

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SdmSubscription'

Required/Optional: true

Responses:

'201' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SdmSubscription'

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudm-sdm/v1/{supi}/sdm-subscriptions/{subscriptionId}'

Required/Optional: true

Schema:

Type: string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'501': Reference 'TS29571_CommonData.yaml#/components/responses/501'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

Callbacks:

datachangeNotification:

'{request.body#/callbackReference}':

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ModificationNotification'

Responses:

'204' Successful Notification response

'307' Temporary Redirect

Content:

application/problem+json:

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

'308' Permanent Redirect

Content:

application/problem+json:

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

supi sdm subscriptions subscriptionId

delete:

Summary: unsubscribe from notifications

Operation ID: Unsubscribe

Tags:

- Subscription Deletion

Parameters:

- name: supi

In: path

Description: SUPI of the user

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

- name: subscriptionId

In: path

Description: Id of the SDM Subscription

Required/Optional: true

Schema:

Type: string

Responses:

'204' Successful response

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

gpsi id translation result

get:

Summary: retrieve a UE's SUPI

Operation ID: Get

Tags:

- GPSI to SUPI Translation

Parameters:

- name: gpsi

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'

- name: supported-features

In: query

Description: Supported Features

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

- name: If-None-Match

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.2

Schema:

Type: string

- name: If-Modified-Since

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.3

Schema:

Type: string

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/IdTranslationResult'

Headers:

Cache-Control:

Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

Schema:

Type: string

ETag:

Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

Schema:

Type: string

Last-Modified:

Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

Schema:

Type: string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

supi am data sor ack

put:

Summary: Nudm_Sdm Info service operation

Operation ID: Info

Tags:

- Providing acknowledgement of Steering of Roaming

Parameters:

- name: supi

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

Request Body:**Content:**

Application/JSON:

Schema:

Reference: '#/components/schemas/AcknowledgeInfo'

Responses:

'204' Successful acknowledgement

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

/shared-data

get:

Summary: retrieve shared data

Operation ID: GetSharedData

Tags:

- Retrieval of shared data

Parameters:

- name: shared-data-ids

In: query

Description: List of shared data ids

Required/Optional: true

style: form

explode: false

Schema:

Reference: '#/components/schemas/SharedDataIds'

- name: supportedFeatures

In: query

Description: Supported Features

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

- name: If-None-Match

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.2

Schema:

Type: string

- name: If-Modified-Since

In: header

Description: Validator for conditional requests, as described in RFC 7232, 3.3

Schema:

Type: string

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/SharedData'

minItems: 1

Headers:

Cache-Control:

Description: Cache-Control containing max-age, as described in RFC 7234, 5.2

Schema:

Type: string

ETag:

Description: Entity Tag, containing a strong validator, as described in RFC 7232, 2.3

Schema:

Type: string

Last-Modified:

Description: Timestamp for last modification of the resource, as described in RFC 7232, 2.2

Schema:

Type: string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

/shared-data-subscriptions

Method: Post

Summary: subscribe to notifications for shared data

Operation ID: Subscribe to shared data

Tags:

- Subscription Creation for shared data

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SdmSubscription'

Required/Optional: true

Responses:

'201' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SdmSubscription'

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudm-sdm/v1/shared-data-subscriptions/{subscriptionId}'

Required/Optional: true

Schema:

Type: string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

default:

Description: Unexpected error

Callbacks:

datachangeNotification:

'{request.body#/callbackReference}':

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:**Reference:** '#/components/schemas/ModificationNotification'**Responses:**

'204' Successful Notification response

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:**Description:** Unexpected error

/shared-data-subscriptions/{subscriptionId}

delete:**Summary:** unsubscribe from notifications for shared data**Operation ID:** Unsubscribe for shared data**Tags:**

- Subscription Deletion for shared data

Parameters:

- name: subscriptionId

In: path**Description:** Id of the Shared data Subscription**Required/Optional:** true**Schema:****Type:** string**Responses:**

'204' Successful response

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:**Description:** Unexpected error

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

nudm-sdm: Access to the nudm-sdm API

schemas

COMPLEX TYPES:

DatasetNames

Type: array

Items:

Reference: '#/components/schemas/DataSetName'

minItems: 2

uniqueItems: true

SubscriptionDataSets

Type: object

Properties:

amData:

Reference: '#/components/schemas/AccessAndMobilitySubscriptionData'

smfSelData:

Reference: '#/components/schemas/SmfSelectionSubscriptionData'

uecSmfData:

Reference: '#/components/schemas/UeContextInSmfData'

uecSmsfData:

Reference: '#/components/schemas/UeContextInSmsfData'

smsSubsData:

Reference: '#/components/schemas/SmsSubscriptionData'

smData:

Type: array

Items:

Reference: '#/components/schemas/SessionManagementSubscriptionData'

minItems: 1

traceData:

Reference: 'TS29571_CommonData.yaml#/components/schemas/TraceData'

smsMngData:

Reference: '#/components/schemas/SmsManagementSubscriptionData'

UeContextInSmsfData

Type: object

Properties:

smsfInfo3GppAccess:

Reference: '#/components/schemas/SmsfInfo'

smsfInfoNon3GppAccess:

Reference: '#/components/schemas/SmsfInfo'

SmsfInfo

Type: object

Required:

- smsfInstanceId

- plmnId

Properties:

smsfInstanceId:

Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'

plmnId:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

AccessAndMobilitySubscriptionData

Type: object

Properties:

supportedFeatures:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

gpsis:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'

internalGroupIds:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/GroupId'

minItems: 1

subscribedUeAmbr:

Reference: 'TS29571_CommonData.yaml#/components/schemas/AmbrRm'

nssai:

Reference: '#/components/schemas/Nssai'

ratRestrictions:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'

forbiddenAreas:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Area'

serviceAreaRestriction:

Reference: 'TS29571_CommonData.yaml#/components/schemas/ServiceAreaRestriction'

coreNetworkTypeRestrictions:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/CoreNetworkType'

rfspIndex:

Reference: 'TS29571_CommonData.yaml#/components/schemas/RfspIndexRm'

subsRegTimer:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DurationSecRm'

ueUsageType:

Reference: '#/components/schemas/UeUsageType'

mpsPriority:

Reference: '#/components/schemas/MpsPriorityIndicator'

mcsPriority:

Reference: '#/components/schemas/McsPriorityIndicator'

activeTime:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DurationSecRm'

dIPacketCount:

Reference: '#/components/schemas/DIPacketCount'

sorInfo:

Reference: '#/components/schemas/SorInfo'

micoAllowed:

Reference: '#/components/schemas/MicoAllowed'

sharedAmDataIds:

Type: array

Items:

Reference: '#/components/schemas/SharedDataId'

minItems: 1

odbPacketServices:

Reference: 'TS29571_CommonData.yaml#/components/schemas/OdbPacketServices'

SmfSelectionSubscriptionData

Type: object

Properties:

supportedFeatures:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

subscribedSnssaiInfos:

Type: object

additionalProperties:

Reference: '#/components/schemas/SnssaiInfo'

sharedSnssaiInfosId:

Reference: '#/components/schemas/SharedDataId'

SnssaiInfo

Type: object

Required:

- dnnInfos

Properties:

dnnInfos:

Type: array

Items:

Reference: '#/components/schemas/DnnInfo'

minItems: 1

DnnInfo

Type: object

Required:

- dnn

Properties:

dnn:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'

defaultDnnIndicator:

Reference: '#/components/schemas/DnnIndicator'

lboRoamingAllowed:

Reference: '#/components/schemas/LboRoamingAllowed'

iwkEpsInd:

Reference: '#/components/schemas/IwkEpsInd'

ladnIndicator:

Reference: '#/components/schemas/LadnIndicator'

Nssai

Type: object

Required:

- defaultSingleNssais

Properties:

supportedFeatures:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

defaultSingleNssais:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'

minItems: 1

singleNssais:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'

minItems: 1

nullable: true

UeContextInSmfData

Type: object

Properties:

pduSessions:

Description: A map (list of key-value pairs where PduSessionId serves as key) of PduSessions

Type: object

additionalProperties:

Reference: '#/components/schemas/PduSession'

pgwInfo:

Type: array

Items:

Reference: '#/components/schemas/PgwInfo'

minItems: 1

PduSession

Type: object

Required:

- dnn

- smfInstanceId

- plmnId

Properties:

dnn:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'

smfInstanceId:

Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'

plmnId:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

PgwInfo

Type: object

Required:

- dnn
- pgwFqdn

Properties:**dnn:**

Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'

pgwFqdn:

Type: string

plmnId:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

SessionManagementSubscriptionData

Type: object

Required:

- singleNssai

Properties:**singleNssai:**

Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'

dnnConfigurations:

Description: A map (list of key-value pairs where Dnn serves as key) of DnnConfigurations

Type: object

additionalProperties:

Reference: '#/components/schemas/DnnConfiguration'

internalGroupIds:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/GroupId'

minItems: 1

sharedDnnConfigurationsIds:

Reference: '#/components/schemas/SharedDataId'

DnnConfiguration

Type: object

Required:

- pduSessionTypes

- sscModes

Properties:

pduSessionTypes:

Reference: '#/components/schemas/PduSessionTypes'

sscModes:

Reference: '#/components/schemas/SscModes'

iwkEpsInd:

Reference: '#/components/schemas/IwkEpsInd'

ladnIndicator:

Reference: '#/components/schemas/LadnIndicator'

5gQosProfile:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SubscribedDefaultQos'

sessionAmbr:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ambr'

3gppChargingCharacteristics:

Reference: '#/components/schemas/3GppChargingCharacteristics'

staticIpAddress:

Type: array

Items:

Reference: '#/components/schemas/IpAddress'

minItems: 1

maxItems: 2

upSecurity:

Reference: 'TS29571_CommonData.yaml#/components/schemas/UpSecurity'

IpAddress

Type: object

oneOf:

- required:

- ipv4Address

- required:

- ipv6Address

- required:

- ipv6Prefix

Properties:

ipv4Addr:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

ipv6Addr:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'

ipv6Prefix:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'

PduSessionTypes

Type: object

Required:

- defaultSessionType

Properties:

defaultSessionType:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionType'

allowedSessionTypes:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionType'

minItems: 1

SscModes

Type: object

Required:

- defaultSscMode

Properties:

defaultSscMode:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SscMode'

allowedSscModes:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SscMode'

minItems: 1

maxItems: 2

SmsSubscriptionData

Type: object

Properties:**smsSubscribed:****Reference:** '#/components/schemas/SmsSubscribed'**sharedSmsSubsDataId:****Reference:** '#/components/schemas/SharedDataIds'**SmsManagementSubscriptionData****Type:** object**Properties:****supportedFeatures:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**mtSmsSubscribed:****Type:** boolean**mtSmsBarringAll:****Type:** boolean**mtSmsBarringRoaming:****Type:** boolean**moSmsSubscribed:****Type:** boolean**moSmsBarringAll:****Type:** boolean**moSmsBarringRoaming:****Type:** boolean**sharedSmsMngDataIds:****Type:** array**Items:****Reference:** '#/components/schemas/SharedDataId'**minItems:** 1**SdmSubscription****Type:** object**Required:**

- nfInstanceId

- callbackUri

- monitoredResourceUri

Properties:**nfInstanceId:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'**implicitUnsubscribe:****Type:** boolean**expires:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DateTime'**callbackReference:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**amfServiceName:****Reference:** 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ServiceName'**monitoredResourceUris:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**minItems:** 1**singleNssai:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Snssai'**dnn:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Dnn'**ModificationNotification****Type:** object**Required:**

- notifyItems

Properties:**notifyItems:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/NotifyItem'**minItems:** 1**IdTranslationResult****Type:** object**Required:**

- supi

Properties:

supportedFeatures:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

supi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

gpsi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'

AcknowledgeInfo

Type: object

Properties:

sorMacIue:

Reference: 'TS29509_Nausf_SoRProtection.yaml#/components/schemas/SorMac'

securedPacket:

Reference: '#/components/schemas/SecuredPacket'

SorInfo

Type: object

Properties:

steeringContainer:

Reference: '#/components/schemas/SteeringContainer'

ackInd:

Reference: 'TS29509_Nausf_SoRProtection.yaml#/components/schemas/AckInd'

sorMacIausf:

Reference: 'TS29509_Nausf_SoRProtection.yaml#/components/schemas/SorMac'

countersor:

Reference: 'TS29509_Nausf_SoRProtection.yaml#/components/schemas/CounterSor'

Required:

- ackInd

- sorMacIausf

- countersor

SharedDataIds

Type: array

Items:

Reference: '#/components/schemas/SharedDataId'

SharedData

Type: object

Required:

- sharedDataId

Properties:

sharedDataId:

Reference: '#/components/schemas/SharedDataId'

sharedAmData:

Reference: '#/components/schemas/AccessAndMobilitySubscriptionData'

sharedSmsSubsData:

Reference: '#/components/schemas/SmsSubscriptionData'

sharedSmsMngSubsData:

Reference: '#/components/schemas/SmsManagementSubscriptionData'

sharedDnnConfigurations:

Type: object

additionalProperties:

Reference: '#/components/schemas/DnnConfiguration'

sharedTraceData:

Reference: 'TS29571_CommonData.yaml#/components/schemas/TraceData'

sharedSnssaiInfos:

Type: object

additionalProperties:

Reference: '#/components/schemas/SnssaiInfo'

sharedAuthenticationSubscription:

Reference: 'TS29505_Subscription_Data.yaml#/components/schemas/SharedAuthenticationSubscription'

TraceDataResponse

Type: object

Properties:

traceData:

Reference: 'TS29571_CommonData.yaml#/components/schemas/TraceData'

sharedTraceDataId:

Reference: '#/components/schemas/SharedDataId'

SteeringContainer

oneOf:

- type: array

Items:

Reference: 'TS29509_Nausf_SoRProtection.yaml#/components/schemas/SteeringInfo'

minItems: 1

- \$ref: '#/components/schemas/SecuredPacket'

SIMPLE TYPES:

UeUsageType

Type: integer

MpsPriorityIndicator

Type: boolean

McsPriorityIndicator

Type: boolean

DnnIndicator

Type: boolean

LboRoamingAllowed

Type: boolean

LadnIndicator

Type: boolean

SmsSubscribed

Type: boolean

3GppChargingCharacteristics

Type: string

DIPacketCount

Type: integer

Minimum: -1

MicoAllowed

Type: boolean

SharedDataId

Type: string

Pattern: '^[0-9]{5,6}-.+'

IwkEpsInd

Type: boolean

SecuredPacket

Type: string

format: base64

ENUMS:

DataSetName

anyOf:

- type: string

enum:

- AM

- SMF_SEL

- UEC_SMF

- UEC_SMSF

- SMS_SUB

- SM

- TRACE

- SMS_MNG

- type: string



CHAPTER 54

NUDM UEAU

The Nudm_UEAuthentication service is used by the AUSF to request the UDM to select an authentication method, calculate a fresh authentication vector (AV) if required for the selected method, and provide it to the AUSF by means of the Get service operation. The Nudm_UEAuthentication service is also used by the AUSF to inform the UDM about the occurrence of a successful or unsuccessful authentication by means of the ResultConfirmation service operation

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OpenAPI

OpenAPI Version: 3.0.0

info

Version: '1.0.0'

Title: 'NudmUEAU'

Description: 'UDM UE Authentication Service'

externalDocs

Description: 3GPP TS 29.503 Unified Data Management Services, version 15.2.1

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.503/'

security

- oAuth2ClientCredentials:
- nudm-ueau
- {}

servers

URL: '{apiRoot}/nudm-ueau/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501.

paths

supi or Suci security information generate auth data

Method: Post

Summary: Generate authentication data for the UE

Operation ID: GenerateAuthData

Tags:

- Generate Auth Data

Parameters:

- name: supiOrSuci

In: path

Description: SUPI or SUCI of the user

Required/Optional: true

Schema:

Reference: '#/components/schemas/SupiOrSuci'

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AuthenticationInfoRequest'

Required/Optional: true

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AuthenticationInfoResult'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'501': Reference 'TS29571_CommonData.yaml#/components/responses/501'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

supi auth events

Method: Post

Summary: Create a new confirmation event

Operation ID: ConfirmAuth

Tags:

- Confirm Auth

Parameters:

- name: supi

In: path

Description: SUPI of the user

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AuthEvent'

Required/Optional: true

Responses:

'201': Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AuthEvent'

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudm-ueau/v1/{supi}/auth-events/{authEventId}'

Required/Optional: true

Schema:

Type: string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

nudm-ueau: Access to the nudm-ueau API

schemas

COMPLEX TYPES:

AuthenticationInfoRequest

Type: object

Required:

- servingNetworkName
- ausfInstanceId

Properties:

supportedFeatures:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

servingNetworkName:

Reference: '#/components/schemas/ServingNetworkName'

resynchronizationInfo:

Reference: '#/components/schemas/ResynchronizationInfo'

ausfInstanceId:

Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'

AuthenticationInfoResult

Type: object

Required:

- authType

Properties:

authType:

Reference: '#/components/schemas/AuthType'

supportedFeatures:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

authenticationVector:

Reference: '#/components/schemas/AuthenticationVector'

supi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

AuthenticationVector

oneOf:

- \$ref: '#/components/schemas/AvEapAkaPrime'

- \$ref: '#/components/schemas/Av5GHeAka'

discriminator:

propertyName: avType

mapping:

5G_HE_AKA: '#/components/schemas/Av5GHeAka'

EAP_AKA_PRIME: '#/components/schemas/AvEapAkaPrime'

AvEapAkaPrime

Type: object

Required:

- avType

- rand

- xres

- autn

- ckPrime

- ikPrime

Properties:

avType:

Reference: '#/components/schemas/AvType'

rand:

Reference: '#/components/schemas/Rand'

xres:

Reference: '#/components/schemas/Xres'

autn:

Reference: '#/components/schemas/Autn'

ckPrime:

Reference: '#/components/schemas/CkPrime'

ikPrime:

Reference: '#/components/schemas/IkPrime'

Av5GHeAka

Type: object

Required:

- avType

- rand

- xresStar

- autn

- kauf

Properties:

avType:

Reference: '#/components/schemas/AvType'

rand:

Reference: '#/components/schemas/Rand'

xresStar:

Reference: '#/components/schemas/XresStar'

autn:

Reference: '#/components/schemas/Autn'

kauf:

Reference: '#/components/schemas/Kauf'

ResynchronizationInfo

Type: object

Required:

- rand

- auts

Properties:

rand:

Reference: '#/components/schemas/Rand'

auts:

Reference: '#/components/schemas/Auts'

AuthEvent

Type: object

Required:

- nfInstanceId

- success

- timeStamp

- authType

- servingNetworkName

Properties:

nfInstanceId:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'**success:****Reference:** '#/components/schemas/Success'**timeStamp:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DateTime'**authType:****Reference:** '#/components/schemas/AuthType'**servingNetworkName:****Reference:** '#/components/schemas/ServingNetworkName'

SIMPLE TYPES:

Autn**Type:** string**Pattern:** '^[A-Za-f0-9]{32}\$'**Auts****Type:** string**Pattern:** '^[A-Za-f0-9]{28}\$'**CkPrime****Type:** string**Pattern:** '^[A-Za-f0-9]{32}\$'**IkPrime****Type:** string**Pattern:** '^[A-Za-f0-9]{32}\$'**Kausf****Type:** string**Pattern:** '^[A-Za-f0-9]{64}\$'**Rand****Type:** string**Pattern:** '^[A-Za-f0-9]{32}\$'

Xres

Type: string

Pattern: '^[A-Za-f0-9]{8,32}\$'

XresStar

Type: string

Pattern: '^[A-Za-f0-9]{32}\$'

SupiOrSuci

Type: string

Pattern: '^((imsi-[0-9]{5,15}|nai-.+|

suci(0-[0-9]{3}-[0-9]{2,3}[[1-7]-.+] [0-9]{1,4}-(0-0.+[[a-fA-F1-9]-([1-9]][1-9][0-9]1[0-9]{2}2[0-4][0-9]25[0-5])-[a-fA-F0-9]+).+)\$'

ServingNetworkName

Type: string

Pattern: '^5G:mnc[0-9]{3}[.].mcc[0-9]{3}[.].3gppnetwork[.]org\$'

Success

Type: boolean

ENUMS:

AuthType

anyOf:

- type: string

enum:

- 5G_AKA

- EAP_AKA_PRIME

- EAP_TLS

- type: string

AvType

anyOf:

- type: string

enum:

- 5G_HE_AKA

- EAP_AKA_PRIME

- type: string



CHAPTER 55

NUDM UECM

Information regarding the UEs current session is managed by the UECM service. The network functions that serve a UE register that information with the UDM, along with status information when appropriate and deregister after they are no longer serving that UE. A network function may also be notified that it has been deregistered when the UDM has determined that it is no longer the registered service provider for a particular UE. Additionally, this service is used by the AMF to update the UEs Permanent Equipment Identifier (PEI) and is used by the UDM to notify a registered AMF or SMF that P-CSCF restoration is required. Interested network functions can obtain context information on request to learn, for example, which AMF is currently serving a particular UE.

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OpenAPI

OpenAPI Version: 3.0.0

info

Version: '1.0.0'

Title: 'Nudm_UECM'

Description: 'Nudm Context Management Service'

externalDocs

Description: 3GPP TS 29.503 Unified Data Management Services, version 15.2.1

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.503/'

security

- oAuth2ClientCredentials:
- nudm-uecm
- {}

servers

URL: '{apiRoot}/nudm-uecm/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501.

paths

ueld registrations amf 3gpp access

put:

Summary: register as AMF for 3GPP access

Operation ID: Registration

Tags:

- AMF registration for 3GPP access

Parameters:

- name: ueld

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/Amf3GppAccessRegistration'

Required/Optional: true

Responses:

'201' Created

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/Amf3GppAccessRegistration'

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access'

Required/Optional: true

Schema:

Type: string

'200' OK

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/Amf3GppAccessRegistration'

'204' No content

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

Callbacks:

deregistrationNotification:

'{request.body#/deregCallbackUri}':

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:**Reference:** '#/components/schemas/DeregistrationData'**Responses:**

'204' Successful Notification response

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:**Description:** Unexpected error**pcscfRestorationNotification:**

'{request.body#/pcscfRestorationCallbackUri}':

Method: Post**Request Body:****Required/Optional:** true**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/PcscfRestorationNotification'**Responses:**

'204' Successful Notification response

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:**Description:** Unexpected error**patch:****Summary:** Update a parameter in the AMF registration for 3GPP access**Operation ID:** Update**Tags:**

- Parameter update in the AMF registration for 3GPP access

Parameters:

- name: ueId

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

Request Body:

Content:

application/merge-patch+json:

Schema:

Reference: '#/components/schemas/Amf3GppAccessRegistrationModification'

Required/Optional: true

Responses:

'204' Expected response to a valid request

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'422' Unprocessable Request

Content:

application/problem+json:

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

get:

Summary: retrieve the AMF registration for 3GPP access information

Operation ID: Get

Tags:

- AMF 3Gpp-access Registration Info Retrieval

Parameters:

- name: ueId

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'

- name: supported-features

In: query

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/Amf3GppAccessRegistration'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

ueid registrations amf non 3gpp access

put:

Summary: register as AMF for non-3GPP access

Operation ID: Register

Tags:

- AMF registration for non-3GPP access

Parameters:

- name: ueid

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

Request Body:**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/AmfNon3GppAccessRegistration'**Required/Optional:** true**Responses:**

'201' Created

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/AmfNon3GppAccessRegistration'**Headers:****Location:****Description:** 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access'**Required/Optional:** true**Schema:****Type:** string

'200' OK

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/AmfNon3GppAccessRegistration'

'204' No Content

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:**Description:** Unexpected error**Callbacks:****deregistrationNotification:**

'{request.body#/deregCallbackUri}':

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/DeregistrationData'

Responses:

'204': Successful Notification response

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

pcscfRestorationNotification:

'{request.body#/pcscfRestorationCallbackUri}':

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PscfRestorationNotification'

Responses:

'204': Successful Notification response

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

patch:

Summary: update a parameter in the AMF registration for non-3GPP access

Operation ID: Update

Tags:

- Parameter update in the AMF registration for non-3GPP access

Parameters:

- name: ueId

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

Request Body:

Content:

application/merge-patch+json:

Schema:

Reference: '#/components/schemas/AmfNon3GppAccessRegistrationModification'

Required/Optional: true

Responses:

'204' Expected response to a valid request

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'422' Unprocessable Request

Content:

application/problem+json:

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

get:

Summary: retrieve the AMF registration for non-3GPP access information

Operation ID: Get

Tags:

- AMF non-3GPP-access Registration Info Retrieval

Parameters:

- name: ueId

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'

- name: supported-features

In: query

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Responses:

'200' Expected response to a valid request

Content:**Application/JSON:****Schema:**

Reference: '#/components/schemas/AmfNon3GppAccessRegistration'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

ueId registrations smf registrations pduSessionId

put:

Summary: register as SMF

Operation ID: Registration

Tags:

- SMF Registration

Parameters:

- name: ueId

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

- name: pduSessionId

In: path

Description: Identifier of the PDU session

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmfRegistration'

Required/Optional: true

Responses:

'201' Created

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmfRegistration'

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudm-uecm/v1/{ueId}/registrations/smf-registrations/{pduSessionId}'

Required/Optional: true

Schema:

Type: string

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmfRegistration'

'204' No content

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

Callbacks:

pcscfRestorationNotification:

'{request.body#/pcscfRestorationCallbackUri}':

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PcscfRestorationNotification'

Responses:

'204' Successful Notification response

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

delete:

Summary: delete an SMF registration

Operation ID: Deregistration

Tags:

- SMF Deregistration

Parameters:

- name: ueId

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

- name: pduSessionId

In: path

Description: Identifier of the PDU session

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'

Responses:

'204' Expected response to a valid request

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'422' Unprocessable Request

Content:

application/problem+json:

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

ueId registrations smsf 3gpp access

put:

Summary: register as SMSF for 3GPP access

Operation ID: Update SMSF Reg 3GPP

Tags:

- SMSF registration for 3GPP access

Parameters:

- name: ueId

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/Supi'**Request Body:****Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/SmsfRegistration'**Required/Optional:** true**Responses:**

'201' Created

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/SmsfRegistration'**Headers:****Location:****Description:** 'Contains the URI of the newly created resource, according to the structure:
{apiRoot}/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access'**Required/Optional:** true**Schema:****Type:** string

'200' Expected response to a valid request

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/SmsfRegistration'

'204' No content

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:**Description:** Unexpected error**delete:**

Summary: delete the SMSF registration for 3GPP access

Operation ID: Deregistration

Tags:

- SMSF Deregistration for 3GPP Access

Parameters:

- name: ueId

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

Responses:

'204' Expected response to a valid request

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'422' Unprocessable Request

Content:

application/problem+json:

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

get:

Summary: retrieve the SMSF registration for 3GPP access information

Operation ID: Get

Tags:

- SMSF 3GPP access Registration Info Retrieval

Parameters:

- name: ueId

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/Gpsi'

- name: supported-features

In: query**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Responses:**

'200' Expected response to a valid request

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/SmsfRegistration'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:**Description:** Unexpected error

ueld registrations smsf non 3gpp access

put:**Summary:** register as SMSF for non-3GPP access**Operation ID:** Registration**Tags:**

- SMSF registration for non-3GPP access

Parameters:

- name: ueld

In: path**Description:** Identifier of the UE**Required/Optional:** true**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Supi'**Request Body:**

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmsfRegistration'

Required/Optional: true

Responses:

'201' Created

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmsfRegistration'

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-access'

Required/Optional: true

Schema:

Type: string

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmsfRegistration'

'204' No content

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

delete:

Summary: delete SMSF registration for non 3GPP access

Operation ID: Deregistration

Tags:

- SMSF Deregistration for non-3GPP access

Parameters:

- name: ueId

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

Responses:

'204': Expected response to a valid request

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'422': Unprocessable Request

Content:

application/problem+json:

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

get:

Summary: retrieve the SMSF registration for non-3GPP access information

Operation ID: Get

Tags:

- SMSF non-3GPP access Registration Info Retrieval

Parameters:

- name: ueId

In: path

Description: Identifier of the UE

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'

- name: supported-features

In: query

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Responses:

'200' Expected response to a valid request

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/SmsfRegistration'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

nudm-uecm: Access to the nudm-uecm API

schemas

COMPLEX TYPES:

Amf3GppAccessRegistration

Type: object

Required:

- amfInstanceId
- deregCallbackUri
- guami
- ratType

Properties:**amfInstanceId:**

Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'

supportedFeatures:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

purgeFlag:

Reference: '#/components/schemas/PurgeFlag'

pei:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'

imsVoPs:

Reference: '#/components/schemas/ImsVoPs'

deregCallbackUri:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'

amfServiceNameDereg:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ServiceName'

pcscfRestorationCallbackUri:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'

amfServiceNamePcscfRest:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ServiceName'

initialRegistrationInd:

Type: boolean

guami:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'

backupAmfInfo:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/BackupAmfInfo'

minItems: 1

drFlag:

Reference: '#/components/schemas/DualRegistrationFlag'

ratType:

Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'

Amf3GppAccessRegistrationModification

Type: object

Required:

- guami

Properties:

guami:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'

purgeFlag:

Reference: '#/components/schemas/PurgeFlag'

pei:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'

imsVoPs:

Reference: '#/components/schemas/ImsVoPs'

backupAmfInfo:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/BackupAmfInfo'

AmfNon3GppAccessRegistration

Type: object

Required:

- amfInstanceId

- imsVoPs

- deregCallbackUri

- guami

- ratType

Properties:

amfInstanceId:

Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'

supportedFeatures:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

purgeFlag:**Reference:** '#/components/schemas/PurgeFlag'**pei:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Pei'**imsVoPs:****Reference:** '#/components/schemas/ImsVoPs'**deregCallbackUri:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**amfServiceNameDereg:****Reference:** 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ServiceName'**pcscfRestorationCallbackUri:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**amfServiceNamePcsfRest:****Reference:** 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ServiceName'**guami:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Guami'**backupAmfInfo:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/BackupAmfInfo'**minItems:** 1**ratType:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/RatType'

AmfNon3GppAccessRegistrationModification

Type: object**Required:**

- guami

Properties:**guami:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Guami'**purgeFlag:****Reference:** '#/components/schemas/PurgeFlag'**pei:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Pei'

imsVoPs:

Reference: '#/components/schemas/ImsVoPs'

backupAmfInfo:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/BackupAmfInfo'

SmfRegistration

Type: object

Required:

- smfInstanceId
- pduSessionId
- singleNssai
- dnn
- plmnId

Properties:

smfInstanceId:

Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'

supportedFeatures:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

pduSessionId:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'

singleNssai:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'

dnn:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'

pcscfRestorationCallbackUri:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'

plmnId:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

pgwFqdn:

Type: string

SmsfRegistration

Type: object

Required:

- smsfInstanceId
- plmnId

Properties:**smsfInstanceId:**

Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'

supportedFeatures:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

plmnId:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

smsfMAPAddress:

Reference: '#/components/schemas/E164Number'

smsfDiameterAddress:

Reference: '#/components/schemas/NetworkNodeDiameterAddress'

DeregistrationData

Type: object

Required:

- deregReason
- accessType

Properties:**deregReason:**

Reference: '#/components/schemas/DeregistrationReason'

accessType:

Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'

PcscfRestorationNotification

Type: object

Required:

- supi

Properties:**supi:**

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

NetworkNodeDiameterAddress

Type: object

Required:

- name
- realm

Properties:**name:**

Reference: 'TS29571_CommonData.yaml#/components/schemas/DiameterIdentity'

realm:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DiameterIdentity'

SIMPLE TYPES:

PurgeFlag

Type: boolean

E164Number

Type: string

Pattern: '^[0-9]{1,15}\$'

DualRegistrationFlag

Type: boolean

ENUMS:

ImsVoPs

anyOf:

- type: string

enum:

- HOMOGENEOUS_SUPPORT
- HOMOGENEOUS_NON_SUPPORT
- NON_HOMOGENEOUS_OR_UNKNOWN
- type: string

DeregistrationReason

anyOf:

- type: string

enum:

- UE_INITIAL_REGISTRATION
- UE_REGISTRATION_AREA_CHANGE
- SUBSCRIPTION_WITHDRAWN

DeregistrationReason

- 5GS_TO_EPS_MOBILITY
- 5GS_TO_EPS_MOBILITY_UE_INITIAL_REGISTRATION
- REREGISTRATION_REQUIRED
- type: string



CHAPTER 56

Namf_MT

Namf_MT service allows a NF to request information related to capabilities to send MT signalling or data to a target UE. The following are the key functionalities of this NF service:

- Paging UE if UE is in IDLE state and respond other NF after the UE enters CM-CONNECTED state.
- Response to the requester NF if UE is in CONNECTED state.
- Providing the terminating domain selection information for IMS voice to the consumer NF.
- [OpenAPI, on page 979](#)
- [info, on page 979](#)
- [externalDocs, on page 979](#)
- [security, on page 980](#)
- [servers, on page 980](#)
- [paths, on page 980](#)
- [components, on page 983](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Version: 1.0.0

Title: Namf_MT

Description: AMF Mobile Termination Service

externalDocs

Description: 3GPP TS 29.518 V15.2.0; 5G System; Access and Mobility Management Services

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.518/'

security

- {}
- oAuth2Clientcredentials:
- namf-mt

servers

URL: '{apiRoot}/namf-mt/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501

paths

'/ue-contexts/{ueContextId}'

get:

Summary: Namf_MT Provide Domain Selection Info service Operation

Tags:

- ueContext (Document)

Operation ID: Provide Domain Selection Info

Parameters:

- name: ueContextId

In: path

Description: UE Context Identifier

Required/Optional: true

Schema:

Type: string

pattern: '^(\imsi-[0-9]{5,15}|nai-.\+|.+)\$\$'

- name: info-class

In: query

Description: UE Context Information Class

Schema:

Reference: '#/components/schemas/UeContextInfoClass'

- name: supported-features

In: query

Description: Supported Features

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Responses:

'200' Requested UE Context Information returned

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/UeContextInfo'

'307' Temporary Redirect

Content:

application/problem+json:

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'414': Reference 'TS29571_CommonData.yaml#/components/responses/414'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

/ue-contexts/{ueContextId}/ue-reachind

Method: Post

Summary: Namf_MT EnableUERachability service Operation

Tags:

- ueReachInd (Document)

Operation ID: EnableUeReachability

Parameters:

- name: ueContextId

In: path

Description: UE Context Identifier

Required/Optional: true

Schema:

Type: string

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/EnableUeReachabilityReqData'

Required/Optional: true

Responses:

'200' UE has become reachable as desired

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/EnableUeReachabilityRspData'

'307' Temporary Redirect

Content:

application/problem+json:

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

'504': Reference 'TS29571_CommonData.yaml#/components/responses/504'

default:

Description: Unexpected error

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

namf-mt: Access to the Namf_MT API

schemas

EnableUeReachabilityReqData

Type: object

Properties:

reachability:

Reference: 'TS29518_Namf_EventExposure.yaml#/components/schemas/UeReachability'

supportedFeatures:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Required:

- reachability

EnableUeReachabilityRspData

Type: object

Properties:

reachability:

Reference: 'TS29518_Namf_EventExposure.yaml#/components/schemas/UeReachability'

supportedFeatures:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Required:

- reachability

UeContextInfo

Type: object

Properties:

supportVoPS:

Type: boolean

supportVoPSn3gpp:

Type: boolean

lastActTime:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

accessType:

Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'

ratType:

Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'

supportedFeatures:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

UeContextInfoClass

anyOf:

- type: string



CHAPTER 57

ExposureData

- [OpenAPI](#), on page 985
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OpenAPI

OpenAPI Version: 3.0.0

info

Version: '-'

Title: 'Unified Data Repository Service API file for structured data for exposure'

Description: 'The API version is defined in 3GPP TS 29.504'

externalDocs

Description: 3GPP TS 29.519 V15.2.0; 5G System; Usage of the Unified Data Repository Service for Policy Data, Application Data and Structured Data for Exposure.

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.519/'

paths

/exposure-data/{ueld}/access-and-mobility-data

put:

Summary: Creates and updates the access and mobility exposure data for a UE

Operation ID: CreateAccessAndMobilityData

Tags:

- AccessAndMobilityData

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AccessAndMobilityData'

Responses:

'201' Upon success, a response body is returned containing a representation of the access and mobility data

Headers:

Location:

Description: 'Contains the URI of the newly created resource'

Required/Optional: true

Schema:

Type: string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

get:

Summary: Retrieves the access and mobility exposure data for a UE

Operation ID: QueryAccessAndMobilityData

Tags:

- AccessAndMobilityData

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'

- name: supp-feat

In: query

Description: Supported Features

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Responses:

'200' The response body contains the access and mobility data

Content:**Application/JSON:****Schema:**

Reference: '#/components/schemas/AccessAndMobilityData'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'

'414': Reference 'TS29571_CommonData.yaml#/components/responses/414'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

delete:

Summary: Deletes the access and mobility exposure data for a UE

Operation ID: DeleteAccessAndMobilityData

Tags:

- AccessAndMobilityData

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'

Responses:

'204': Upon success, an empty response body shall be returned

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/exposure-data/{ueId}/session-management-data/{pduSessionId}

put:

Summary: Creates and updates the session management data for a UE and for an individual PDU session

Operation ID: CreateSessionManagementData

Tags:

- PduSessionManagementData

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'

- name: pduSessionId

In: path

Description: PDU session id

Required/Optional: true

Schema:

Type: integer

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PduSessionManagementData'

Responses:

'201' Upon success, a response body is returned containing a representation of the session management data

Headers:

Location:

Description: 'Contains the URI of the newly created resource'

Required/Optional: true

Schema:

Type: string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

get:

Summary: Retrieves the session management data for a UE and for an individual PDU session

Operation ID: QuerySessionManagementData

Tags:

- PduSessionManagementData

Parameters:

- name: ueId

In: path

Description: UE id

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'

- name: pduSessionId

In: path

Description: PDU session id

Required/Optional: true

Schema:

Type: integer

- name: ipv4-addr

In: query

Description: IPv4 Address of the UE

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

- name: ipv6-prefix

In: query

Description: IPv6 Address Prefix of the UE

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'

- name: dnn

In: query

Description: DNN of the UE

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'

- name: fields

In: query

Description: attributes to be retrieved

Required/Optional: false

Schema:**Type:** array**items:****Type:** string

- name: supp-feat

In: query**Description:** Supported Features**Schema:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Responses:**

'200' The response body contains the session management data

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/PduSessionManagementData'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'

'414': Reference 'TS29571_CommonData.yaml#/components/responses/414'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'**delete:****Summary:** Deletes the session management data for a UE and for an individual PDU session**Operation ID:** DeleteSessionManagementData**Tags:**

- PduSessionManagementData

Parameters:

- name: ueId

In: path**Description:** UE id

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'

- name: pduSessionId

In: path

Description: PDU session id

Required/Optional: true

Schema:

Type: integer

Responses:

'204': Upon success, an empty response body shall be returned

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/exposure-data/subs-to-notify

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ExposureDataSubscription'

Responses:

'201' Created

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ExposureDataSubscription'

Headers:**Location:****Description:** 'Contains the URI of the newly created resource'**Required/Optional:** true**Schema:****Type:** string**'400':** Reference 'TS29571_CommonData.yaml#/components/responses/400'**'401':** Reference 'TS29571_CommonData.yaml#/components/responses/401'**'403':** Reference 'TS29571_CommonData.yaml#/components/responses/403'**'404':** Reference 'TS29571_CommonData.yaml#/components/responses/404'**'411':** Reference 'TS29571_CommonData.yaml#/components/responses/411'**'413':** Reference 'TS29571_CommonData.yaml#/components/responses/413'**'415':** Reference 'TS29571_CommonData.yaml#/components/responses/415'**'429':** Reference 'TS29571_CommonData.yaml#/components/responses/429'**'500':** Reference 'TS29571_CommonData.yaml#/components/responses/500'**'503':** Reference 'TS29571_CommonData.yaml#/components/responses/503'**default:** Reference 'TS29571_CommonData.yaml#/components/responses/default'**Callbacks:****exposureDataChangeNotification:****'{\$request.body#/notificationUri}':****Method:** Post**Request Body:****Required/Optional:** true**Content:****Application/JSON:****Schema:****Type:** array**items:****Reference:** '#/components/schemas/ExposureDataChangeNotification'**minItems:** 1**Responses:****'204'** No Content, Notification was successful**'400':** Reference 'TS29571_CommonData.yaml#/components/responses/400'**'401':** Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'
 '404': Reference 'TS29571_CommonData.yaml#/components/responses/404'
 '411': Reference 'TS29571_CommonData.yaml#/components/responses/411'
 '413': Reference 'TS29571_CommonData.yaml#/components/responses/413'
 '415': Reference 'TS29571_CommonData.yaml#/components/responses/415'
 '429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
 '500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
 '503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
 default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/exposure-data/subs-to-notify/{subId}

put:

Summary: updates a subscription for notifications

Parameters:

- name: subId

In: path

Description: Subscription id

Required/Optional: true

Schema:

Type: string

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ExposureDataSubscription'

Responses:

'200' Resource was successfully modified.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/ExposureDataSubscription'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'
'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'
'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'
'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'
'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'
'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

delete:

Summary: Deletes a subscription for notifications

Parameters:

- name: subId

In: path

Description: Subscription id

Required/Optional: true

Schema:

Type: string

Responses:

'204' Resource was successfully deleted.

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'
'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'
'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'
'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'
'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

components

schemas

AccessAndMobilityData

Type: object

Properties:

location:

Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'

locationTs:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

timeZone:

Reference: 'TS29571_CommonData.yaml#/components/schemas/TimeZone'

timeZoneTs:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

accessType:

Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'

regStates:

Type: array

Items:

Reference: 'TS29518_Namf_EventExposure.yaml#/components/schemas/RmInfo'

regStatesTs:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

connStates:

Type: array

Items:

Reference: 'TS29518_Namf_EventExposure.yaml#/components/schemas/CmInfo'

connStatesTs:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

reachabilityStatus:

Reference: 'TS29518_Namf_EventExposure.yaml#/components/schemas/UeReachability'

reachabilityStatusTs:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

smsOverNasStatus:

Reference: 'TS29518_Namf_Communication.yaml#/components/schemas/SmsSupport'

smsOverNasStatusTs:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

roamingStatus:

Type: boolean

Description: True The serving PLMN of the UE is different from the HPLMN of the UE; False The serving PLMN of the UE is the HPLMN of the UE.

roamingStatusTs:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

currentPlmn:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

currentPlmnTs:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

ratType:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'

ratTypesTs:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

PduSessionManagementData

Type: object

Properties:

pduSessionStatus:

Reference: '#/components/schemas/PduSessionStatus'

pduSessionStatusTs:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

dnai:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnai'

dnaiTs:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

n6TrafficRoutingInfo:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/RouteToLocation'

n6TrafficRoutingInfoTs:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

ipv4Addr:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

ipv6Prefix:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'

minItems: 1

Description: UE IPv6 prefix.

ipAddrTs:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

dnn:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'

ExposureDataSubscription

Type: object

Properties:

notificationUri:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'

monitoredResourceUris:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'

minItems: 1

supportedFeatures:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Required:

- notificationUri
- monitoredResourceUris

ExposureDataChangeNotification

Type: object

Properties:

ueId:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/VarUeId'**accessAndMobilityData:****Reference:** '#/components/schemas/AccessAndMobilityData'**pduSessionManagementData:****Type:** array**Items:****Reference:** '#/components/schemas/PduSessionManagementData'**minItems:** 1

PduSessionStatus

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

- "ACTIVE"

- "RELEASED"



CHAPTER 58

PolicyData

- [OpenAPI](#), on page 1001
- [info](#), on page 1001
- [externalDocs](#), on page 1001
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OpenAPI

OpenAPI Version: 3.0.0

info

Version: "-"

Title: 'Unified Data Repository Service API file for Application Data'

Description: 'The API version is defined in 3GPP TS 29.504'

externalDocs

Description: 3GPP TS 29.519 V15.2.0; 5G System; Usage of the Unified Data Repository Service for Policy Data, Application Data and Structured Data for Exposure.

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.519/'

paths

/application-data/pfds

get:

Parameters:

- name: appld

In: query

Description: Contains the information of the application identifier(s) for the querying PFD Data resource. If none appld is included in the URI, it applies to all application identifier(s) for the querying PFD Data resource.

Required/Optional: false

Schema:

Type: array

items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/ApplicationId'

Responses:

'200': A representation of PFDs for request applications is returned.

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: 'TS29551_Nnef_PFDmanagement.yaml#/components/schemas/PfdDataForApp'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'

'414': Reference 'TS29571_CommonData.yaml#/components/responses/414'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/pfds/{appld}

get:

Parameters:

- name: appld

In: path

Description: Indicate the application identifier for the request pfd(s). It shall apply the format of Data type ApplicationId.

Required/Optional: true

Schema:

Type: string

Responses:

'200' A representation of PFDs for the request application identified by the application identifier is returned.

Content:

Application/JSON:

Schema:

Reference: 'TS29551_Nnef_PFDmanagement.yaml#/components/schemas/PfdDataForApp'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

delete:

Parameters:

- name: appld

In: path

Description: Indicate the application identifier for the request pfd(s).It shall apply the format of Data type ApplicationId.

Required/Optional: true

Schema:

Type: string

Responses:

'204' Successful case.The Individual PFD Data resource related to the application identifier was deleted.

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

put:

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: 'TS29551_Nnef_PFDmanagement.yaml#/components/schemas/PfdDataForApp'

Parameters:

- name: appId

In: path

Description: Indicate the application identifier for the request pfd(s).It shall apply the format of Data type ApplicationId.

Required/Optional: true

Schema:

Type: string

Responses:

'201' The creation of an Individual PFD Data resource related to the application-identifier is confirmed and a representation of that resource is returned.

Content:

Application/JSON:

Schema:

Reference: 'TS29551_Nnef_PFDmanagement.yaml#/components/schemas/PfdDataForApp'

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/v1/application-data/pfds/{application-identifier}'

Required/Optional: true

Schema:

Type: string

'200' Successful case.The upgrade of an Individual PFD Data resource related to the application identifier is confirmed and a representation of that resource is returned.

Content:

Application/JSON:

Schema:

Reference: 'TS29551_Nnef_PFDmanagement.yaml#/components/schemas/PfdDataForApp'

'204' No content

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'414': Reference 'TS29571_CommonData.yaml#/components/responses/414'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/influenceData

get:

Parameters:

- name: influence-Ids

In: query

Description: Each element identifies a service.

Required/Optional: false

Schema:

Type: array

items:

Type: string

- name: dnns

In: query

Description: Each element identifies a DNN.

Required/Optional: false

Schema:

Type: array

items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'

- name: snssais

In: query

Description: Each element identifies a slice.

Required/Optional: false

Schema:

Type: array

items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'

- name: internal-Group-Ids

In: query

Description: Each element identifies a group of users.

Required/Optional: false

Schema:

Type: array

items:

Type: string

- name: supis

In: query

Description: Each element identifies the user.

Required/Optional: false

Schema:

Type: array

items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

Responses:

'200' The Traffic Influence Data stored in the UDR are returned.

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/TrafficInfluData'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'
'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'
'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'
'414': Reference 'TS29571_CommonData.yaml#/components/responses/414'
'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/influenceData/{influenceId}

put:

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TrafficInfluData'

Parameters:

- name: influenceId

In: path

Description: The Identifier of an Individual Influence Data to be created or updated. It shall apply the format of Data type string.

Required/Optional: true

Schema:

Type: string

Responses:

'201' The creation of an Individual Traffic Influence Data resource is confirmed and a representation of that resource is returned.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TrafficInfluData'

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nudr-dr/v1/application-data/influenceData/{influenceId}'

Required/Optional: true

Schema:

Type: string

'200' The update of an Individual Traffic Influence Data resource is confirmed and a response body containing Traffic Influence Data shall be returned.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TrafficInfluData'

'204' No content

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'414': Reference 'TS29571_CommonData.yaml#/components/responses/414'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

patch:

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TrafficInfluDataPatch'

Parameters:

- name: influenceId

In: path

Description: The Identifier of an Individual Influence Data to be updated.It shall apply the format of Data type string.

Required/Optional: true

Schema:

Type: string

Responses:

'200' The update of an Individual Traffic Influence Data resource is confirmed and a response body containing Traffic Influence Data shall be returned.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TrafficInfluData'

'204' No content

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

delete:

Parameters:

- name: influenceId

In: path

Description: The Identifier of an Individual Influence Data to be updated.It shall apply the format of Data type string.

Required/Optional: true

Schema:

Type: string

Responses:

'204' The Individual Influence Data was deleted successfully.

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'
 '401': Reference 'TS29571_CommonData.yaml#/components/responses/401'
 '403': Reference 'TS29571_CommonData.yaml#/components/responses/403'
 '404': Reference 'TS29571_CommonData.yaml#/components/responses/404'
 '429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
 '500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
 '503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
 default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/influenceData/subs-to-notify

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TrafficInfluSub'

Responses:

'201' The subscription was created successfully.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TrafficInfluSub'

Headers:

Location:

Description: 'Contains the URI of the newly created resource'

Required/Optional: true

Schema:

Type: string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'
 '401': Reference 'TS29571_CommonData.yaml#/components/responses/401'
 '403': Reference 'TS29571_CommonData.yaml#/components/responses/403'
 '404': Reference 'TS29571_CommonData.yaml#/components/responses/404'
 '411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'
'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'
'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

Callbacks:**trafficInfluenceDataChangeNotification:**

'\${request.body#/notificationUri}':

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/TrafficInfluData'

minItems: 1

Responses:

'204' No Content, Notification was successful

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'403': Reference 'TS29122_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29122_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

get:

Parameters:

- name: dnn

In: query

Description: Identifies a DNN.

Required/Optional: false

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'

- name: snssai

In: query

Description: Identifies a slice.

Required/Optional: false

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'

- name: internal-Group-Id

In: query

Description: Identifies a group of users.

Required/Optional: false

Schema:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalGroupId'

- name: supi

In: query

Description: Identifies a user.

Required/Optional: false

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

Responses:

'200' The subscription information as request in the request URI query parameter(s) are returned.

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/TrafficInfluSub'

minItems: 0

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'
'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'
'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'
'414': Reference 'TS29571_CommonData.yaml#/components/responses/414'
'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/application-data/influenceData/subs-to-notify/{subscriptionId}

get:

Parameters:

- name: subscriptionId

In: path

Description: String identifying a subscription to the Individual Influence Data Subscription

Required/Optional: true

Schema:

Type: string

Responses:

'200' The subscription information is returned.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TrafficInfluSub'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'
'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'
'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'
'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'
'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'
'414': Reference 'TS29571_CommonData.yaml#/components/responses/414'
'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

put:

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TrafficInfluSub'

Parameters:

- name: subscriptionId

In: path

Description: String identifying a subscription to the Individual Influence Data Subscription

Required/Optional: true

Schema:

Type: string

Responses:

'200' The subscription was updated successfully.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TrafficInfluSub'

'204' No content

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

delete:

Parameters:

- name: subscriptionId

In: path

Description: String identifying a subscription to the Individual Influence Data Subscription

Required/Optional: true

Schema:

Type: string

Responses:

'204': The subscription was terminated successfully.

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

components

schemas

TrafficInfluData

Type: object

Properties:

upPathChgNotifCorreId:

Type: string

Description: Contains the Notification Correlation Id allocated by the NEF for the UP path change notification.

appReloInd:

Type: boolean

Description: Identifies whether an application can be relocated once a location of the application has been selected.

afAppId:

Type: string

Description: Identifies an application.

dnn:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/Dnn'**ethTrafficFilters:****Type:** array**Items:****Reference:** 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/EthFlowDescription'**minItems:** 1**Description:** Identifies Ethernet packet filters. Either "trafficFilters" or "ethTrafficFilters" shall be included if applicable.**snsai:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Snsai'**interGroupId:****Type:** string**Description:** Identifies a group of users.**supi:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Supi'**trafficFilters:****Type:** array**Items:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/FlowInfo'**minItems:** 1**Description:** Identifies IP packet filters. Either "trafficFilters" or "ethTrafficFilters" shall be included if applicable.**trafficRoutes:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/RouteToLocation'**minItems:** 1**Description:** Identifies the N6 traffic routing requirement.**validStartTime:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DateTime'**validEndTime:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DateTime'**nwAreaInfo:****Reference:** 'TS29554_Npcf_BDTPolicyControl.yaml#/components/schemas/NetworkAreaInfo'

upPathChgNotifUri:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**Required:**

- trafficRoutes

allOf:

- oneOf:

- required: [afAppId]

- required: [trafficFilters]

- required: [ethTrafficFilters]

- oneOf:

- required: [supi]

- required: [interGroupId]

TrafficInfluDataPatch

Type: object**Properties:****upPathChgNotifCorreId:****Type:** string**Description:** Contains the Notification Correlation Id allocated by the NEF for the UP path change notification.**appReloInd:****Type:** boolean**Description:** Identifies whether an application can be relocated once a location of the application has been selected.**dnn:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Dnn'**ethTrafficFilters:****Type:** array**Items:****Reference:** 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/EthFlowDescription'**minItems:** 1**Description:** Identifies Ethernet packet filters. Either "trafficFilters" or "ethTrafficFilters" shall be included if applicable.**snssai:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Snssai'**internalGroupId:**

Type: string

Description: Identifies a group of users.

supi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

trafficFilters:

Type: array

Items:

Reference: 'TS29122_CommonData.yaml#/components/schemas/FlowInfo'

minItems: 1

Description: Identifies IP packet filters. Either "trafficFilters" or "ethTrafficFilters" shall be included if applicable.

trafficRoutes:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/RouteToLocation'

minItems: 1

Description: Identifies the N6 traffic routing requirement.

validStartTime:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

validEndTime:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

nwAreaInfo:

Reference: 'TS29554_Npcf_BDTPolicyControl.yaml#/components/schemas/NetworkAreaInfo'

upPathChgNotifUri:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'

TrafficInfluSub

Type: object

Properties:

dnns:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'

minItems: 1

Description: Each element identifies a DNN.

snssais:**Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Snssai'**minItems:** 1**Description:** Each element identifies a slice.**internalGroupIds:****Type:** array**Items:****Type:** string**minItems:** 1**Description:** Each element identifies a group of users.**supis:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Supi'**minItems:** 1**Description:** Each element identifies the user.**notificationUri:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Uri'**supportedFeatures:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Required:**

- notificationUri

oneOf:

- required: [dnns]
- required: [snssais]
- required: [internalGroupIds]
- required: [supis]



CHAPTER 59

Nnwdaf_AnalyticsInfo

The NWDAF slice congestion events notification Service is provided by the Network Data Analytics Function (NWDAF).

- Allows NF consumers to subscribe to and unsubscribe from load events of network slice instance.
- Notifies NF consumers with a corresponding subscription about observed events.
- [OpenAPI, on page 1021](#)
- [info, on page 1021](#)
- [externalDocs, on page 1021](#)
- [security, on page 1022](#)
- [servers, on page 1022](#)
- [paths, on page 1022](#)
- [components, on page 1023](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Description: Nnwdaf_AnalyticsInfo Service API

Version: "1.0.0"

Title: Nnwdaf_AnalyticsInfo

externalDocs

Description: 3GPP TS 29.520 V15.2.0; 5G System; Network Data Analytics Services.

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.520/'

security

- {}
- oAuth2ClientCredentials:
- nnwdaf-analyticsinfo

servers

URL: '{apiRoot}/nnwdaf-analyticsinfo/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 4.4 of 3GPP TS 29.501.

paths

/analytics

get:

Parameters:

- name: event-id

In: query

Description: Identify the analytics.

Required/Optional: true

Schema:

Reference: '#/components/schemas/EventId'

- name: event-filter

In: query

Description: Identify the analytics when the eventId is "Load_Level_Information".

Required/Optional: false

Schema:

Reference: '#/components/schemas/EventFilter'

- name: supported-features

In: query

Description: To filter irrelevant responses related to unsupported features

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'**Responses:****'200'** The individual PCF session binding session binding information resource matching the query parameter(s) is returned.**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/AnalyticsData'**'400':** Reference 'TS29571_CommonData.yaml#/components/responses/400'**'401':** Reference 'TS29571_CommonData.yaml#/components/responses/401'**'403':** Reference 'TS29571_CommonData.yaml#/components/responses/403'**'404'** Indicates that the NWDAF Analytics resource does not exist.**Content:**

application/problem+json:

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'**'406':** Reference 'TS29571_CommonData.yaml#/components/responses/406'**'414':** Reference 'TS29571_CommonData.yaml#/components/responses/414'**'429':** Reference 'TS29571_CommonData.yaml#/components/responses/429'**'500':** Reference 'TS29571_CommonData.yaml#/components/responses/500'**'503':** Reference 'TS29571_CommonData.yaml#/components/responses/503'**default:** Reference 'TS29571_CommonData.yaml#/components/responses/default'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2**Flows:****clientCredentials:****tokenUrl:** '{nrfApiRoot}/oauth2/token'**scopes:**

nnwdaf-analyticsinfo: Access to the Nnwdaf_AnalyticsInfo API

schemas

AnalyticsData

Type: object

Properties:

sliceLoadLevelInfos:

Type: array

Items:

Reference: 'TS29520_Nnwdaf_EventsSubscription.yaml#/components/schemas/SliceLoadLevelInformation'

minItems: 1

Description: The slices and there load level information.

EventFilter

Type: object

Properties:

anySlice:

Reference: 'TS29520_Nnwdaf_EventsSubscription.yaml#/components/schemas/AnySlice'

snssais:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'

minItems: 1

Description: Identification(s) of network slice to which the subscription belongs. When eventId is "Load_level_Information", either information about slice(s) identified by snssai, or anySlice set to "TRUE" shall be included.

not:

Required: [anySlice, snssais]

EventId

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

- LOAD_LEVEL_INFORMATION: Represent the analytics of load level information of corresponding network slice instance.



CHAPTER 60

Nnwdaf_EventsSubscription

The NWDAF slice congestion events notification Service is provided by the Network Data Analytics Function (NWDAF).

- Allows NF consumers to subscribe to and unsubscribe from load events of network slice instance.
- Notifies NF consumers with a corresponding subscription about observed events.
- [OpenAPI, on page 1027](#)
- [info, on page 1027](#)
- [externalDocs, on page 1027](#)
- [security, on page 1028](#)
- [servers, on page 1028](#)
- [paths, on page 1028](#)
- [components, on page 1032](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Description: Nnwdaf_EventsSubscription Service API

Version: "1.0.0"

Title: Nnwdaf_EventsSubscription

externalDocs

Description: 3GPP TS 29.520 V15.2.0; 5G System; Network Data Analytics Services.

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.520/'

security

- {}
- oAuth2ClientCredentials:
- nnwdaf-eventssubscription

servers

URL: '{apiRoot}/nnwdaf-eventssubscription/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 4.4 of 3GPP TS 29.501.

paths

/subscriptions

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NnwdafEventsSubscription'

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nnwdaf-eventssubscription/v1/subscriptions/{subscriptionId}'

Required/Optional: true

Schema:

Type: string

Responses:

'201' Create a new Individual NWDAF Event Subscription resource.

Content:

Application/JSON:**Schema:****Reference:** '#/components/schemas/NnwdafEventsSubscription'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'**Callbacks:****myNotification:**

'{\$request.body#/notificationURI}':

Method: Post**Request Body:****Required/Optional:** true**Content:****Application/JSON:****Schema:****Type:** array**items:****Reference:** '#/components/schemas/NnwdafEventsSubscriptionNotification'**minItems:** 1**Responses:**

'204': The receipt of the Notification is acknowledged.

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/subscriptions/{subscriptionId}

delete:

Parameters:

- name: subscriptionId

In: path

Description: String identifying a subscription to the Nnwdaf_EventsSubscription Service

Required/Optional: true

Schema:

Type: string

Responses:

'204' No Content. The Individual NWDAF Event Subscription resource matching the subscriptionId was deleted.

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404' The Individual NWDAF Event Subscription resource does not exist.

Content:

application/problem+json:

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'501': Reference 'TS29571_CommonData.yaml#/components/responses/501'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

put:

Request Body:

Required/Optional: true

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/NnwdafEventsSubscription'**Parameters:**

- name: subscriptionId

In: path**Description:** String identifying a subscription to the Nnwdaf_EventsSubscription Service**Required/Optional:** true**Schema:****Type:** string**Responses:****'200'** The Individual NWDAF Event Subscription resource was modified successfully and a representation of that resource is returned.**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/NnwdafEventsSubscription'**'204'** The Individual NWDAF Event Subscription resource was modified successfully.**'400'**: Reference 'TS29571_CommonData.yaml#/components/responses/400'**'401'**: Reference 'TS29571_CommonData.yaml#/components/responses/401'**'403'**: Reference 'TS29571_CommonData.yaml#/components/responses/403'**'404'** The Individual NWDAF Event Subscription resource does not exist.**Content:**

application/problem+json:

Schema:**Reference:** 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'**'411'**: Reference 'TS29571_CommonData.yaml#/components/responses/411'**'413'**: Reference 'TS29571_CommonData.yaml#/components/responses/413'**'415'**: Reference 'TS29571_CommonData.yaml#/components/responses/415'**'429'**: Reference 'TS29571_CommonData.yaml#/components/responses/429'**'500'**: Reference 'TS29571_CommonData.yaml#/components/responses/500'**'501'**: Reference 'TS29571_CommonData.yaml#/components/responses/501'**'503'**: Reference 'TS29571_CommonData.yaml#/components/responses/503'**default**: Reference 'TS29571_CommonData.yaml#/components/responses/default'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

nnwdaf-eventssubscription: Access to the Nnwdaf_EventsSubscription API

schemas

NnwdafEventsSubscription

Type: object

Properties:

eventSubscriptions:

Type: array

Items:

Reference: '#/components/schemas/EventSubscription'

minItems: 1

Description: Subscribed events

notificationURI:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'

supportedFeatures:

Reference: 'TS29571_CommonData.yaml#/components/schema/SupportedFeature'

Required:

- eventSubscriptions

EventSubscription

Type: object

Properties:

anySlice:

Reference: '#/components/schemas/AnySlice'

event:

Reference: '#/components/schemas/NwdafEvent'

loadLevelThreshold:

Type: integer

Description: Shall be supplied for notification method "THRESHOLD". Indicates that the NWDAF shall report the corresponding network slice load level to the NF service consumer where the load level of the network slice instance identified by snssai is reached.

notificationMethod:

Reference: '#/components/schemas/NotificationMethod'

repetitionPeriod:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DurationSec'

snssaia:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'

minItems: 1

Description: Identification(s) of network slice to which the subscription applies. When subscribed event is "SLICE_LOAD_LEVEL", either information about slice(s) identified by snssai, or anySlice set to "TRUE" shall be included.

Required:

- event

NnwdafEventsSubscriptionNotification

Type: object

Properties:

eventNotifications:

Type: array

Items:

Reference: '#/components/schemas/EventNotification'

minItems: 1

Description: Notifications about Individual Events

subscriptionId:

Type: string

Description: String identifying a subscription to the Nnwdaf_EventsSubscription Service

Required:

- eventNotifications
- subscriptionId

EventNotification

Type: object

Properties:

event:

Reference: '#/components/schemas/NwdafEvent'

sliceLoadLevelInfo:

Reference: '#/components/schemas/SliceLoadLevelInformation'

Required:

- event
- sliceLoadLevelInfo

SliceLoadLevelInformation

Type: object

Properties:

loadLevelInformation:

Reference: '#/components/schemas/LoadLevelInformation'

snsais:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Snsai'

minItems: 1

Description: Identification(s) of network slice to which the subscription.

Required:

- loadLevelInformation
- snsais

AnySlice

Type: boolean

Description: FALSE represents not applicable for all slices. TRUE represents applicable for all slices.

LoadLevelInformation

Type: integer

Description: Load level information of the network slice instance.

NotificationMethod

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

- PERIODIC: The subscribe of NWDAF Event is periodically. The periodic of the notification is identified by repetitionPeriod defined in subclause 5.1.6.2.3.
- THRESHOLD: The subscribe of NWDAF Event is upon threshold exceeded. The threshold of the notification is identified by loadLevelThreshold defined in subclause 5.1.6.2.3.

NwdafEvent

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

- SLICE_LOAD_LEVEL: Indicates that the event subscribed is load level information of Network Slice instance



CHAPTER 61

TS29521_Nbsf_Management

The Nbsf_Management service is used for the BSF to provide a PDU session binding functionality, which ensures that an AF request for a certain PDU session reaches the relevant PCF holding the PDU session information.

- Allows NF service consumers to register, update, and remove the binding information.
- Allows NF service consumers to retrieve the binding information.
- [OpenAPI, on page 1037](#)
- [info, on page 1037](#)
- [externalDocs, on page 1037](#)
- [security, on page 1038](#)
- [servers, on page 1038](#)
- [paths, on page 1038](#)
- [components, on page 1042](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Description: Binding Support Management Service API

Version: "1.0.0"

Title: Nbsf_Management

externalDocs

Description: 3GPP TS 29.521 V15.2.0; 5G System; Binding Support Management Service.

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.521/'

security

- {}
- oAuth2ClientCredentials:
- nbsf-management

servers

URL: '{apiRoot}/nbsf-management/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 4.4 of 3GPP TS 29.501.

paths

/pcfBindings

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PcfBinding'

Responses:

'201' The creation of an individual PCF session binding.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PcfBinding'

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nbsf-management/v1/pcfBindings/{bindingId}'

Required/Optional: true

Schema:

Type: string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

get:

Parameters:

- name: ipv4Addr

In: query

Description: The IPv4 Address of the served UE.

Required/Optional: false

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

- name: ipv6Prefix

In: query

Description: The IPv6 Address Prefix of the served UE.

Required/Optional: false

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'

- name: macAddr48

In: query

Description: The MAC Address of the served UE.

Required/Optional: false

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/MacAddr48'

- name: dnn

In: query

Description: DNN.

Required/Optional: false

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'

- name: supi

In: query

Description: Subscription Permanent Identifier.

Required/Optional: false

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

- name: gpsi

In: query

Description: Generic Public Subscription Identifier

Required/Optional: false

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'

- name: snssai

In: query

Description: The identification of slice.

Required/Optional: false

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'

- name: ipDomain

In: query

Description: The IPv4 address domain identifier.

Required/Optional: false

Schema:

Type: string

Responses:

'200' The individual PCF session binding session binding information resource matching the query parameter(s) is returned.

Content:

Application/JSON:

Schema:**Reference:** '#/components/schemas/PcfBinding'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'

'414': Reference 'TS29571_CommonData.yaml#/components/responses/414'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/pcfBindings/{bindingId}

delete:**Parameters:**

- name: bindingId

In: path**Description:** Represents the individual PCF Session Binding.**Required/Optional:** true**Schema:****Type:** string**Responses:**

'204' No Content. The Individual PCF session binding information resource is deleted.

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

nbsf-management: Access to the Nbsf_Management API

schemas

PcfBinding

Type: object

Properties:

supi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

gpsi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'

ipv4Addr:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

ipv6Prefix:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'

ipDomain:

Type: string

macAddr48:

Reference: 'TS29571_CommonData.yaml#/components/schemas/MacAddr48'

dnn:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'

pcfFqdn:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'

pcfIpEndpoints:

Type: array

Items:

Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/IpEndPoint'

minItems: 1

Description: IP end points of the PCF or the IP end points of the PCF hosting the Npcf_PolicyAuthorization service. At least one of pcfFqdn or pcfIpEndPoints shall be included if the PCF supports N5 interface. If the pcfIpEndPoints is provided at the PCF level, the transport and port in the pcfIpEndPoints are not required.

pcfDiamHost:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DiameterIdentity'

pcfDiamRealm:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DiameterIdentity'

snssai:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'

Required:

- dnn
- snssai

oneOf:

- anyOf:
- required: [ipv4Addr]
- required: [ipv6Prefix]
- required: [macAddr48]



CHAPTER 62

TrafficInfluence

This resource allows an AF to read all active traffic influence subscriptions for the given AF.

- [OpenAPI](#), on page 1045
- [info](#), on page 1045
- [externalDocs](#), on page 1045
- [security](#), on page 1045
- [servers](#), on page 1046
- [paths](#), on page 1046
- [components](#), on page 1052

OpenAPI

OpenAPI Version: 3.0.0

info

Title: 3gpp-traffic-influence

Version: "1.0.0"

externalDocs

Description: 3GPP TS 29.522 V15.2.0; 5G System; Network Exposure Function Northbound APIs.

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.522/'

security

- {}

- oAuth2ClientCredentials: []

servers

URL: '{apiRoot}/3gpp-traffic-influence/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 5.2.4 of 3GPP TS 29.122.

paths

{afld}/subscriptions

Parameters:

- name: afld

In: path

Description: Identifier of the AF

Required/Optional: true

Schema:

Type: string

get:

Summary: read all of the active subscriptions for the AF

Tags:

- TrafficInfluence API SCS/AS level GET Operation

Responses:

'200' OK.

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/TrafficInfluSub'

'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'

Method: Post

Summary: Creates a new subscription resource

Tags:

- TrafficInfluence API Subscription level POST Operation

Request Body:

Description: Request to create a new subscription resource

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TrafficInfluSub'

Callbacks:

notificationDestination:

'{request.body#/notificationDestination}':

Method: Post

Request Body: # contents of the callback message

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/EventNotification'

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' Created (Successful creation of subscription)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TrafficInfluSub'

Headers:

Location:

Description: 'Contains the URI of the newly created resource'

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'

'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'

{afld}/subscriptions/{subscriptionId}

Parameters:

- name: afld

In: path

Description: Identifier of the AF

Required/Optional: true

Schema:

Type: string

- name: subscriptionId

In: path

Description: Identifier of the subscription resource

Required/Optional: true

Schema:

Type: string

get:

Summary: read an active subscriptions for the SCS/AS and the subscription Id

Tags:

- TrafficInfluence API Subscription level GET Operation

Responses:

'200' OK (Successful get the active subscription)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TrafficInfluSub'

'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:

Summary: Updates/replaces an existing subscription resource

Tags:

- TrafficInfluence API subscription level PUT Operation

Request Body:

Description: Parameters to update/replace the existing subscription

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TrafficInfluSub'

Responses:

'200': OK (Successful update of the subscription)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TrafficInfluSub'

'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'

patch:

Summary: Updates/replaces an existing subscription resource

Tags:

- TrafficInfluence API subscription level PATCH Operation

Request Body:

Required/Optional: true

Content:

application/merge-patch+json:

Schema:

Reference: '#/components/schemas/TrafficInfluSubPatch'

Responses:

'200' OK. The subscription was modified successfully.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TrafficInfluSub'

'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:

Summary: Deletes an already existing subscription

Tags:

- TrafficInfluence API Subscription level DELETE Operation

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'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas

TrafficInfluSub

Type: object

Properties:

afServiceId:

Type: string

Description: Identifies a service on behalf of which the AF is issuing the request.

afAppId:

Type: string

Description: Identifies an application.

afTransId:

Type: string

Description: Identifies an NEF Northbound interface transaction, generated by the AF.

appReloInd:

Type: boolean

Description: Identifies whether an application can be relocated once a location of the application has been selected.

dnn:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'

snssai:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'

externalGroupId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalGroupId'

anyUeInd:

Type: boolean

Description: Identifies whether the AF request applies to any UE. This attribute shall set to "true" if applicable for any UE, otherwise, set to "false".

subscribedEvents:

Type: array

Items:

Reference: '#/components/schemas/SubscribedEvent'

minItems: 1

Description: Identifies the requirement to be notified of the event(s).

gpsi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'

ipv4Addr:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Ipv4Addr'

ipv6Addr:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Ipv6Addr'

macAddr:

Reference: 'TS29571_CommonData.yaml#/components/schemas/macAddr48'

dnaiChgType:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DnaiChangeType'

notificationDestination:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

requestTestNotification:

Type: boolean

Description: Set to true by the SCS/AS to request the NEF to send a test notification as defined in subclause 5.2.5.3. Set to false or omitted otherwise.

websocketNotifConfig:

Reference: 'TS29122_CommonData.yaml#/components/schemas/WebsocketNotifConfig'

self:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

trafficFilters:

Type: array

Items:

Reference: 'TS29122_CommonData.yaml#/components/schemas/FlowInfo'

minItems: 1

Description: Identifies IP packet filters.

ethTrafficFilters:

Type: array

Items:

Reference: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/EthFlowDescription'

minItems: 1

Description: Identifies Ethernet packet filters.

trafficRoutes:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/RouteToLocation'

minItems: 1

Description: Identifies the N6 traffic routing requirement.

tempValidities:

Type: array

Items:

Reference: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/TemporalValidity'

validGeoZoneIds:

Type: array

Items:

Type: string

minItems: 1

Description: Identifies a geographic zone that the AF request applies only to the traffic of UE(s) located in this specific zone.

suppFeat:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

allof:

- oneOf:
- required: [afAppId]
- required: [trafficFilters]
- required: [ethTrafficFilters]
- oneOf:
- required: [ipv4Addr]
- required: [ipv6Addr]

- required: [macAddr]
 - required: [gpsi]
 - required: [externalGroupId]
 - required: [anyUeInd]
- anyOf:**
- not:
- Required:** [subscribedEvents]
- required: [notificationDestination]

TrafficInfluSubPatch

Type: object

Properties:

appReloInd:

Type: boolean

Description: Identifies whether an application can be relocated once a location of the application has been selected.

nullable: true

trafficFilters:

Type: array

Items:

Reference: 'TS29122_CommonData.yaml#/components/schemas/FlowInfo'

minItems: 1

Description: Identifies IP packet filters.

ethTrafficFilters:

Type: array

Items:

Reference: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/EthFlowDescription'

minItems: 1

Description: Identifies Ethernet packet filters.

trafficRoutes:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/RouteToLocation'

minItems: 1

Description: Identifies the N6 traffic routing requirement.

tempValidities:**Type:** array**Items:****Reference:** 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/TemporalValidity'**minItems:** 1**nullable:** true**validGeoZoneIds:****Type:** array**Items:****Type:** string**minItems:** 1**Description:** Identifies a geographic zone that the AF request applies only to the traffic of UE(s) located in this specific zone.**nullable:** true

EventNotification

Type: object**Properties:****afTransId:****Type:** string**Description:** Identifies an NEF Northbound interface transaction, generated by the AF.**dnaiChgType:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DnaiChangeType'**sourceTrafficRoute:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/RouteToLocation'**subscribedEvent:****Reference:** '#/components/schemas/SubscribedEvent'**targetTrafficRoute:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/RouteToLoaction'**gpsi:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Gpsi'**srcUeIpv4Addr:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/Ipv4Addr'**srcUeIpv6Prefix:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'

tgtUeIpv4Addr:**Reference:** 'TS29122_CommonData.yaml#/components/schemas/Ipv4Addr'**tgtUeIpv6Prefix:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'**ueMac:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/MacAddr48'**Required:**

- dnaiChgType
- subscribedEvent

SubscribedEvent

anyOf:

- type: string

Possible values are

- CHANGE_OF_DNAI: The AF requests to be notified when the UP path changes for the PDU session.



CHAPTER 63

Npcf_EventExposure

The Policy Event Exposure Service is provided by the Policy Control Function (PCF).

- Allows NF service consumers to subscribe, modify, and unsubscribe for policy control events.
- Notifies NF service consumers with a corresponding subscription about observed events on the PCF.
- [OpenAPI, on page 1059](#)
- [info, on page 1059](#)
- [externalDocs, on page 1059](#)
- [security, on page 1060](#)
- [servers, on page 1060](#)
- [paths, on page 1060](#)
- [components, on page 1064](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Description: Policy Control Event Exposure Service API

Version: "1.0.0"

Title: Npcf_EventExposure

externalDocs

Description: 3GPP TS 29.523 V15.0.0; 5G System; Policy Control Event Exposure Service; Stage 3.

URL: http://www.3gpp.org/ftp/Specs/archive/29_series/29.523/

security

- {}
- oAuth2ClientCredentials:
- npcf-eventexposure

servers

URL: '{apiRoot}/npcf-eventexposure/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 4.4 of 3GPP TS 29.501

paths

/subscriptions

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PcEventExposureSubsc'

Responses:

'201' Success

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PcEventExposureSubsc'

Headers:

Location:

Description: 'Contains the URI of the created individual policy control events subscription resource, according to the structure: {apiRoot}/npcf-eventexposure/v1/subscriptions/{subscriptionId}'

Required/Optional: true

Schema:

Type: string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

Callbacks:

PcEventNotification:

'{\$request.body#/notifUri}':

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PcEventExposureNotif'

Responses:

'204' No Content, Notification was successful

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/subscriptions/{subscriptionId}

get:

Parameters:

- name: subscriptionId

In: path

Description: Policy Control Event Subscription ID

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK. Resource representation is returned

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PcEventExposureSubsc'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

put:

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PcEventExposureSubsc'

Parameters:

- name: subscriptionId

In: path

Description: Policy Control Event Subscription ID

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK. Resource was successfully modified and representation is returned

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PcEventExposureSubsc'

'204' No Content. Resource was successfully modified

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

delete:

Parameters:

- name: subscriptionId

In: path

Description: Policy Control Event Subscription ID

Required/Optional: true

Schema:

Type: string

Responses:

'204': No Content. Resource was successfully deleted

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

npcf-eventexposure: Access to the Npcf_EventExposure API.

schemas

PcEventExposureNotif

Type: object

Properties:

notifId:

Type: string

eventNotifs:

Type: array

Items:

Reference: '#/components/schemas/PcEventNotification'

minItems: 1

Required:

- notifId

- eventNotifs

PcEventExposureSubsc

Type: object

Properties:

eventSubscs:

Type: array

Items:

Reference: '#/components/schemas/PcEvent'

minItems: 1

eventsRepInfo:

Reference: '#/components/schemas/ReportingInformation'

groupId:

Reference: 'TS29571_CommonData.yaml#/components/schemas/GroupId'

filterDnns:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'

minItems: 1

filterSnssais:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'

minItems: 1

filterServices:

Type: array

Items:

Reference: '#/components/schemas/ServiceIdentification'

minItems: 1

notifUri:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Link'

notifId:

Type: string

suppFeat:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Required:

- eventSubs

- notifId

- notifUri

ReportingInformation

Type: object

Properties:

immRep:

Type: boolean

notifMethod:

Reference: 'TS29508_Nsmf_EventExposure.yaml#/components/schemas/NotificationMethod'

maxReportNbr:

Reference: 'TS29571_CommonData.yaml#/components/schemas/UInteger'

monDur:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

repPeriod:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DurationSec'

ServiceIdentification

Type: object

Properties:

servEthFlows:

Type: array

Items:

Reference: '#/components/schemas/EthernetFlowInfo'

minItems: 1

servIpFlows:

Type: array

Items:

Reference: '#/components/schemas/IpFlowInfo'

minItems: 1

afAppId:

Reference: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/AfAppId'

EthernetFlowInfo

Type: object

Properties:

ethFlows:

Type: array

Items:

Reference: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/EthFlowDescription'

minItems: 1

maxItems: 2

flowNumber:

Type: integer

Required:

- flowNumber

IpFlowInfo

Type: object

Properties:

ipFlows:

Type: array

Items:

Reference: 'TS29514_Npcf_PolicyAuthorization.yaml#/components/schemas/FlowDescription'

minItems: 1

maxItems: 2

flowNumber:

Type: integer

Required:

- flowNumber

PcEventNotification

Type: object

Properties:

event:

Reference: '#/components/schemas/PcEvent'

accType:

Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'

ratType:

Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'

plmnId:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

timeStamp:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

pduSessionInfo:

Reference: '#/components/schemas/PduSessionInformation'

repServices:

Reference: '#/components/schemas/ServiceIdentification'

Required:

- event
- timeStamp

PduSessionInformation

Type: object

Properties:

snsai:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Snsai'

dnn:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'

ueIpv4:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

ueIpv6:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Prefix'

ipDomain:

Type: string

ueMac:

Reference: 'TS29571_CommonData.yaml#/components/schemas/MacAddr48'

Required:

- snsai
- dnn

Simple data types and Enumerations

PcEvent

anyOf:

- type: string



CHAPTER 64

Npcf_UEPolicyControl

NF service consumer (for example, AMF) can create and manage a UE Policy Association in the PCF through which the NF service consumer receives policy information for a UE.

- [OpenAPI, on page 1071](#)
- [info, on page 1071](#)
- [externalDocs, on page 1071](#)
- [security, on page 1071](#)
- [servers, on page 1072](#)
- [paths, on page 1072](#)
- [components, on page 1077](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Description: UE Policy Control Service API

Version: "1.0.0"

Title: Npcf_UEPolicyControl

externalDocs

Description: 3GPP TS 29.525 V15.0.0; 5G System; UE Policy Control Service.

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.525/'

security

- {}

- oAuth2ClientCredentials:

- npcf-ue-policy-control

servers

URL: '{apiRoot}/npcf-ue-policy-control/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause subclause 4.4 of 3GPP TS 29.501

paths

/policies

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PolicyAssociationRequest'

Responses:

'201' Created

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/PolicyAssociation'

Headers:

Location:

Description: 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/npcf-ue-policy-control/v1/policies/{polAssoId}'

Required/Optional: true

Schema:

Type: string

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'
'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'
'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'
'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'
'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'
'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'
'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

Callbacks:**policyUpdateNotification:**

'{\$request.body#/notificationUri}/update':

Method: Post

Request Body:

Required/Optional: true

Content:**Application/JSON:****Schema:**

Reference: '#/components/schemas/PolicyUpdate'

Responses:

'204' No Content, Notification was successful

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'
'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'
'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'
'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'
'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'
'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'
'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'
'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'
'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'
'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'
default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

policyAssociationTerminationRequestNotification:

'\${request.body#/notificationUri}/terminate':

Method: Post

Request Body:

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/TerminationNotification'

Responses:

'204': No Content, Notification was successful

'307': temporary redirect

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/policies/{polAssold}

get:

Parameters:

- name: polAssold

In: path

Description: Identifier of a policy association

Required/Optional: true

Schema:

Type: string

Responses:

'200' OK. Resource representation is returned

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/PolicyAssociation'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29571_CommonData.yaml#/components/responses/406'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'**delete:****Parameters:**

- name: polAssold

In: path**Description:** Identifier of a policy association**Required/Optional:** true**Schema:****Type:** string**Responses:**

'204' No Content. Resource was successfully deleted

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

/policies/{polAssold}/update

Method: Post

Request Body:**Required/Optional:** true**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/PolicyAssociationUpdateRequest'**Parameters:**

- name: polAssoid

In: path**Description:** Identifier of a policy association**Required/Optional:** true**Schema:****Type:** string**Responses:**

'200': OK. Updated policies are returned

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/PolicyUpdate'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default: Reference 'TS29571_CommonData.yaml#/components/responses/default'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{nrfApiRoot}/oauth2/token'

scopes:

npcf-ue-policy-control: Access to the Npcf_AMPolicyControl API

schemas

PolicyAssociation

Type: object

Properties:

request:

Reference: '#/components/schemas/PolicyAssociationRequest'

uePolicy:

Reference: '#/components/schemas/UePolicy'

triggers:

Type: array

Items:

Reference: '#/components/schemas/RequestTrigger'

minItems: 1

Description: Request Triggers that the PCF subscribes. Only values "LOC_CH" and "PRA_CH" are permitted.

pras:

Type: object

additionalProperties:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PresenceInfo'

minProperties: 1

suppFeat:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Required:

- suppFeat

PolicyAssociationRequest

Type: object

Properties:**notificationUri:**

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'

altNotifIpv4Addrs:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

minItems: 1

Description: Alternate or backup IPv4 Address(es) where to send Notifications.

altNotifIpv6Addrs:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'

minItems: 1

Description: Alternate or backup IPv6 Address(es) where to send Notifications.

supi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'

gpsi:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'

accessType:

Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'

pei:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'

userLoc:

Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'

timeZone:

Reference: 'TS29571_CommonData.yaml#/components/schemas/TimeZone'

servingPlmn:

Reference: 'TS29571_CommonData.yaml#/components/schemas/NetworkId'

ratType:

Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'

groupId:

Reference: 'TS29571_CommonData.yaml#/components/schemas/GroupId'

hPcfId:

Type: string

Description: H-PCF Identifier. Shall be provided when available.

uePolReq:

Reference: '#/components/schemas/UePolicyRequest'

guami:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'

serviveName:

Type: string

Description: If the NF service consumer is an AMF, it should provide the name of a service produced by the AMF that makes use of information received within the Npcf_UEPolicyControl_UpdateNotify service operation.

suppFeat:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

Required:

- notificationUri

- suppFeat

PolicyAssociationUpdateRequest

Type: object

Properties:

notificationUri:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'

altNotifIpv4Addr:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'

minItems: 1

Description: Alternate or backup IPv4 Address(es) where to send Notifications.

altNotifIpv6Addr:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'

minItems: 1

Description: Alternate or backup IPv6 Address(es) where to send Notifications.

triggers:

Type: array

Items:

Reference: '#/components/schemas/RequestTrigger'

minItems: 1

Description: Request Triggers that the NF service consumer observes.

praStatuses:

Type: object

additionalProperties:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PresenceInfo'

Description: Map of PRA status information.

minProperties: 1

userLoc:

Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'

uePolDelResult:

Reference: '#/components/schemas/UePolicyDeliveryResult'

PolicyUpdate

Type: object

Properties:

resourceUri:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'

uePolicy:

Reference: '#/components/schemas/UePolicy'

triggers:

Type: array

Items:

Reference: '#/components/schemas/RequestTrigger'

minItems: 1

nullable: true

Description: Request Triggers that the PCF subscribes. Only values "LOC_CH" and "PRA_CH" are permitted.

pras:

Type: object

additionalProperties:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PresenceInfo'

Description: Map of PRA information.

minProperties: 1

nullable: true

Required:

- resourceUri

TerminationNotification

Type: object

Properties:

resourceUri:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'

cause:

Reference: '#/components/schemas/PolicyAssociationReleaseCause'

Required:

- resourceUri

- cause

UePolicy

Reference: 'TS29571_CommonData.yaml#/components/schemas/Bytes'

UePolicyDeliveryResult

Reference: 'TS29571_CommonData.yaml#/components/schemas/Bytes'

UePolicyRequest

Reference: 'TS29571_CommonData.yaml#/components/schemas/Bytes'

RequestTrigger

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

- LOC_CH: Location change (tracking area). The tracking area of the UE has changed.
- PRA_CH: Change of UE presence in PRA. The UE is entering/leaving a Presence Reporting Area.
- UE_POLICY: A MANAGE UE POLICY COMPLETE message or a MANAGE UE POLICY COMMAND REJECT message, as defined in Annex D.5 of 3GPP TS 24.501, has been received by the AMF and is being forwarded.

PolicyAssociationReleaseCause

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

- UNSPECIFIED: This value is used for unspecified reasons.
- UE_SUBSCRIPTION: This value is used to indicate that the session needs to be terminated because the subscription of UE has changed (e.g. was removed).
- INSUFFICIENT_RES: This value is used to indicate that the server is overloaded and needs to abort the session.



CHAPTER 65

Nnssf_NSSAIAvailability

This service updates the S-NSSAIs NF service consumer (for example, AMF) on a per TA basis on the NSSF and provides support to subscribe and notify any change in the status on a per TA basis of the SNSSAIs available per TA (unrestricted) and the restricted SNSSAIs per PLMN in that TA in the serving PLMN of the UE.

- [OpenAPI, on page 1083](#)
- [info, on page 1083](#)
- [externalDocs, on page 1083](#)
- [security, on page 1084](#)
- [servers, on page 1084](#)
- [paths, on page 1084](#)
- [components, on page 1089](#)

OpenAPI

OpenAPI Version: 3.0.0

info

Version: '1.0.0'

Title: 'NSSF NSSAI Availability'

Description: 'NSSF NSSAI Availability Service'

externalDocs

Description: 3GPP TS 29.531 V15.2.0; 5G System; Network Slice Selection Services; Stage 3

URL: http://www.3gpp.org/ftp/Specs/archive/29_series/29.531/

security

- {}
- oAuth2Clientcredentials:
- nssf-nssaiavailability

servers

URL: '{apiRoot}/nssf-nssaiavailability/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 4.4 of 3GPP TS 29.501

paths

/nssai-availability/{nflId}

put:

Summary: Updates/replaces the NSSF with the S-NSSAIs the NF service consumer (e.g AMF)supports per TA

Tags:

- NF Instance ID (Document)

Operation ID: NSSAIAvailabilityPut

Parameters:

- name: nflId

In: path

Description: Identifier of the NF service consumer instance

Required/Optional: true

Schema:

Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'

Request Body:

Description: Parameters to update/replace at the NSSF, the S-NSSAIs supported per TA

Required/Optional: true

Content:

Application/JSON:**Schema:****Reference:** '#/components/schemas/NssaiAvailabilityInfo'**Responses:**

'200' OK (Successful update of SNSSAI information per TA)

Content:**Application/JSON:****Schema:****Reference:** '#/components/schemas/AuthorizedNssaiAvailabilityInfo'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:**Description:** Unexpected error**patch:****Summary:** Updates an already existing S-NSSAIs per TA provided by the NF service consumer (e.g AMF)**Tags:**

- NF Instance ID (Document)

Operation ID: NSSAIAvailabilityPatch**Parameters:**

- name: nfId

In: path**Description:** Identifier of the NF service consumer instance**Required/Optional:** true**Schema:****Type:** string**Request Body:**

Description: JSON Patch instructions to update at the NSSF, the S-NSSAIs supported per TA

Required/Optional: true

Content:

application/json-patch+json::

Schema:

Reference: '#/components/schemas/PatchDocument'

Responses:

'200': OK (Successful update of SNSSAI information per TA)

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AuthorizedNssaiAvailabilityInfo'

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29571_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29571_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29571_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29571_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

delete:

Summary: Deletes an already existing S-NSSAIs per TA provided by the NF service consumer (e.g AMF)

Tags:

- NF Instance ID (Document)

Operation ID: NSSAIAvailabilityDelete

Parameters:

- name: nfd

In: path

Description: Identifier of the NF service consumer instance

Required/Optional: true

Schema:**Type:** string**Responses:****'204'** No Content (Successful deletion of SNSSAI information per TA)**'400'**: Reference 'TS29571_CommonData.yaml#/components/responses/400'**'401'**: Reference 'TS29571_CommonData.yaml#/components/responses/401'**'404'**: Reference 'TS29571_CommonData.yaml#/components/responses/404'**'429'**: Reference 'TS29571_CommonData.yaml#/components/responses/429'**'500'**: Reference 'TS29571_CommonData.yaml#/components/responses/500'**'503'**: Reference 'TS29571_CommonData.yaml#/components/responses/503'**default:****Description:** Unexpected error

/nssai-availability/subscriptions

Method: Post**Summary:** Creates subscriptions for notification about updates to NSSAI availability information**Tags:**

- Subscriptions (Collection)

Operation ID: NSSAIAvailabilityPost**Request Body:****Description:** Subscription for notification about updates to NSSAI availability information**Required/Optional:** true**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/NssfEventSubscriptionCreateData'**Callbacks:****nssaiAvailabilityNotification:**

'{request.body#/nfNssaiAvailabilityUri}':

Method: Post**Request Body:** # contents of the callback message**Required/Optional:** true**Content:****Application/JSON:**

Schema:**Reference:** '#/components/schemas/NssfEventNotification'**Responses:****'204'** No Content (successful notification)**'400'**: Reference 'TS29571_CommonData.yaml#/components/responses/400'**'411'**: Reference 'TS29571_CommonData.yaml#/components/responses/411'**'413'**: Reference 'TS29571_CommonData.yaml#/components/responses/413'**'415'**: Reference 'TS29571_CommonData.yaml#/components/responses/415'**'429'**: Reference 'TS29571_CommonData.yaml#/components/responses/429'**'500'**: Reference 'TS29571_CommonData.yaml#/components/responses/500'**'503'**: Reference 'TS29571_CommonData.yaml#/components/responses/503'**default:****Description:** Unexpected error**Responses:****'201'** Created (Successful creation of subscription for notification)**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/NssfEventSubscriptionCreatedData'**Headers:****Location:****Description:** 'Contains the URI of the newly created resource, according to the structure: {apiRoot}/nssf-nssaiavailability/v1/nssai-availability/subscriptions/{subscriptionId}'**Required/Optional:** true**Schema:****Type:** string**'400'**: Reference 'TS29571_CommonData.yaml#/components/responses/400'**'401'**: Reference 'TS29571_CommonData.yaml#/components/responses/401'**'403'**: Reference 'TS29571_CommonData.yaml#/components/responses/403'**'404'**: Reference 'TS29571_CommonData.yaml#/components/responses/404'**'411'**: Reference 'TS29571_CommonData.yaml#/components/responses/411'**'413'**: Reference 'TS29571_CommonData.yaml#/components/responses/413'**'415'**: Reference 'TS29571_CommonData.yaml#/components/responses/415'**'429'**: Reference 'TS29571_CommonData.yaml#/components/responses/429'**'500'**: Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

/nssai-availability/subscriptions/{subscriptionId}

delete:

Summary: Deletes an already existing NSSAI availability notification subscription

Tags:

- Subscription ID (Document)

Operation ID: NSSAIAvailabilityUnsubscribe

Parameters:

- name: subscriptionId

In: path

Description: Identifier of the subscription for notification

Required/Optional: true

Schema:

Type: string

Responses:

'204': No Content (Successful deletion of subscription for NSSAI Availability notification)

'400': Reference 'TS29571_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29571_CommonData.yaml#/components/responses/401'

'404': Reference 'TS29571_CommonData.yaml#/components/responses/404'

'429': Reference 'TS29571_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29571_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29571_CommonData.yaml#/components/responses/503'

default:

Description: Unexpected error

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:**clientCredentials:****tokenUrl:** '{nrfApiRoot}/oauth2/token'**scopes:****nssf-nssaiavailability:** Access to the Nnssf_NSSAIAvailability API

schemas

NssaiAvailabilityInfo

Type: object**Required:**

- supportedNssaiAvailabilityData

Properties:**supportedNssaiAvailabilityData:****Type:** array**Items:****Reference:** '#/components/schemas/SupportedNssaiAvailabilityData'**minItems:** 1**supportedFeatures:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

SupportedNssaiAvailabilityData

Type: object**Required:**

- tai

- supportedSnssaiList

Properties:**tai:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Tai'**supportedSnssaiList:****Type:** array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/Snssai'**minItems:** 1

AuthorizedNssaiAvailabilityData

Type: object

Required:

- tai

- supportedSnssaiList

Properties:

tai:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Tai'

supportedSnssaiList:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'

minItems: 1

restrictedSnssaiList:

Type: array

Items:

Reference: '#/components/schemas/RestrictedSnssai'

minItems: 1

RestrictedSnssai

Type: object

Required:

- homePlmnId

- sNssaiList

Properties:

homePlmnId:

Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'

sNssaiList:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'

minItems: 1

AuthorizedNssaiAvailabilityInfo

Type: object

Required:

- authorizedNssaiAvailabilityData

Properties:**authorizedNssaiAvailabilityData:**

Type: array

Items:

Reference: '#/components/schemas/AuthorizedNssaiAvailabilityData'

minItems: 1

supportedFeatures:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

NssfEventSubscriptionCreateData

Type: object

Required:

- nfNssaiAvailabilityUri

- taiList

- event

Properties:**nfNssaiAvailabilityUri:**

Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'

taiList:

Type: array

Items:

Reference: 'TS29571_CommonData.yaml#/components/schemas/Tai'

minItems: 1

event:

Reference: '#/components/schemas/NssfEventType'

expiry:

Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'

NssfEventSubscriptionCreatedData

Type: object

Required:

- subscriptionId

Properties:

subscriptionId:**Type:** string**expiry:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/DateTime'**authorizedNssaiAvailabilityData:****Type:** array**Items:****Reference:** '#/components/schemas/AuthorizedNssaiAvailabilityData'**minItems:** 1

NssfEventNotification

Type: object**Required:**

- subscriptionId
- authorizedNssaiAvailabilityData

Properties:**subscriptionId:****Type:** string**authorizedNssaiAvailabilityData:****Type:** array**Items:****Reference:** '#/components/schemas/AuthorizedNssaiAvailabilityData'**minItems:** 1

NssfEventType

anyOf:

- type: string

enum:

- SNSSAI_STATUS_CHANGE_REPORT
- type: string

PatchDocument

Type: array**Items:****Reference:** 'TS29571_CommonData.yaml#/components/schemas/PatchItem'**minItems:** 1

