



# Npcf\_UEPolicyControl

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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.

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## 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.