



# Npcf\_AMPolicyControl

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The PCF uses the Npcf\_AMPolicyControl API to communicate with the Access and Mobility Management Function (AMF) over the N15 Interface.

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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/'

## 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

## security

- {}
- oAuth2ClientCredentials:
- npcf-am-policy-control

## 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/{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

'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: polAssold

**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.