



# 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

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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

## 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':

**Description:** 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':
          Description: No Content, Notification was succesfull
        '307':
          Description: 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':****Description:** No Content, Notification was succesfull**'307':****Description:** 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}

**delete:****Parameters:****- Name:** polAssoId**In:** path**Description:** Identifier of a policy association**Required/Optional:** true**Schema:****Type:** string**Responses:****'204':****Description:** No Content. Resource was succesfully 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-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
    enum:
    - LOC_CH
    - PRA_CH
    - SERV_AREA_CH
    - RFSP_CH
  - 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
  - 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
    enum:
    - UNSPECIFIED
    - UE_SUBSCRIPTION
    - INSUFFICIENT_RES
  - 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

- 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.

