



# PFDmanagement

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## OpenAPI

OpenAPI Version: 3.0.0

## Info

**Title:** Nnef\_PFDmanagement Sevice API

**Version:** "1.0.0"

**Description:** Packet Flow Description Management Service

## 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

## Security

- {}

- OAuth2ClientCredentials:
  - nef-pfdmanagement

# 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'  
**Min Items:** 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':  
**Description:** 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'  
**Min Items:** 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/{appld}

### 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':

**Description:** 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'

**Min Items:** 1

**Responses:**

'200':

**Description:** 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'
        Min Items: 1
    '204':
      Description: 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':
    Description: 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':**

**Description:** 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'
    pfd:
      Type: array
      Items:
        Reference: '#/components/schemas/PfdContent'
      minItems: 1

```

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    cachingTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  Required:
    - applicationId
    - pfd
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

```



## External Docs

**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/](http://www.3gpp.org/ftp/Specs/archive/29_series/29.551/)'

