



# Nnef\_PFDmanagement

Service operations defined for the Nnef\_PFDmanagement Service are shown in table:

**Table 1: 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

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## 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