



## Nnrf\_AccessToken

---

The NRF offers an Nnrf\_AccessToken service (used for OAuth2 authorization, see IETF RFC 6749 [16]), following the "Client Credentials" authorization grant, as specified in 3GPP TS 33.501 [15]. It exposes a "Token Endpoint" where the Access Token Request service can be requested by NF Service Consumers.

**Reference:** 3GPP TS 33.501 [15]

- [OpenAPI, on page 1](#)
- [info, on page 1](#)
- [externalDocs, on page 1](#)
- [paths, on page 2](#)
- [components, on page 3](#)

## OpenAPI

OpenAPI Version: 3.0.0

## info

**Version:** '1.0.0'

**Title:** 'NRF OAuth2'

**Description:** 'NRF OAuth2 Authorization'

## externalDocs

**Description:** 3GPP TS 29.510 V15.2.0; 5G System; Network Function Repository Services; Stage 3

**URL:** 'http://www.3gpp.org/ftp/Specs/archive/29\_series/29.510/'

# paths

## /oauth2/token

**Method:** Post

**Summary:** Access Token Request

**Operation ID:** AccessTokenRequest

**Tags:**

- Access Token Request

**Request Body:**

**Content:**

**application/x-www-form-urlencoded:**

**Schema:**

**Reference:** '#/components/schemas/AccessTokenReq'

**Required/Optional:** true

**Responses:**

'200' Successful Access Token Request

**Content:**

**Application/JSON:**

**Schema:**

**Reference:** '#/components/schemas/AccessTokenRsp'

**Headers:**

**Cache-Control:**

**Reference:** '#/components/headers/cache-control'

**Pragma:**

**Reference:** '#/components/headers/pragma'

'400' Error in the Access Token Request

**Content:**

**Application/JSON:**

**Schema:**

**Reference:** '#/components/schemas/AccessTokenErr'

**Headers:**

**Cache-Control:**

**Reference:** '#/components/headers/cache-control'

**Pragma:**

**Reference:** '#/components/headers/pragma'

## components

### headers

#### cache-control

**Required:** true

**schema:**

**Type:** string

**enum:**

- no-store

#### pragma

**Required:** true

**schema:**

**Type:** string

**enum:**

- no-cache

## schemas

### AccessTokenReq

**Type:** object

**Required:**

- grant\_type

- nfiInstanceId

- scope

**Properties:**

grant\_type:

**Type:** string

**enum:**

- client\_credentials

**nfiInstanceId:**

**Reference:** 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

**nfType:**

**Reference:** 'TS29510\_Nnrf\_NFManagement.yaml#/components/schemas/NFType'

**targetNfType:**

**Reference:** 'TS29510\_Nnrf\_NFManagement.yaml#/components/schemas/NFType'

**scope:**

**Type:** string

**Pattern:** '^([a-zA-Z0-9\_-]+)( [a-zA-Z0-9\_-]+)\*\$'

**targetNfInstanceId:**

**Reference:** 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

**requesterPlmn:**

**Reference:** 'TS29571\_CommonData.yaml#/components/schemas/PlmnId'

**targetPlmn:**

**Reference:** 'TS29571\_CommonData.yaml#/components/schemas/PlmnId'

## Access token response

**Type:** object

**Required:**

- access\_token

- token\_type

**Properties:**

access\_token:

**Type:** string

**Description:** JWS Compact Serialized representation of JWS signed JSON object (AccessTokenClaims)

token\_type:

**Type:** string

expires\_in:

**Type:** integer

**scope:**

**Type:** string

**Pattern:** '^([a-zA-Z0-9\_-]+)( [a-zA-Z0-9\_-]+)\*\$'

## Access token claims

**Type:** object

**Required:**

- issuer
- subject
- audience
- scope
- expiration

**Properties:****issuer:**

**Reference:** 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

**subject:**

**Type:** string

**audience:****anyOf:**

- \$ref: 'TS29510\_Nnrf\_NFManagement.yaml#/components/schemas/NFType'
- type: array

**Items:**

**Reference:** 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

**minItems:** 1

**scope:**

**Type:** string

**Pattern:** '^[a-zA-Z0-9\_-]+([a-zA-Z0-9\_-]+)\*\$'

**expiration:**

**Type:** integer

## AccessTokenErr

**Type:** object

**Required:**

- error

**Properties:****error:**

**Type:** string

**enum:**

- invalid\_request
- invalid\_client
- invalid\_grant
- unauthorized\_client

- unsupported\_grant\_type

- invalid\_scope

error\_description:

**Type:** string

error\_uri:

**Type:** string