

---

# **intuit-oauth Documentation**

***Release 1.0***

**Intuit Inc**

**Oct 02, 2018**



---

## Contents

---

<b>1</b>	<b>Install Client</b>	<b>3</b>
<b>2</b>	<b>Docs</b>	<b>5</b>
2.1	User Guide . . . . .	5
2.2	Reference . . . . .	7
<b>3</b>	<b>Note</b>	<b>13</b>
<b>4</b>	<b>License</b>	<b>15</b>
<b>5</b>	<b>Indices and tables</b>	<b>17</b>
	<b>Python Module Index</b>	<b>19</b>



[View on GitHub](#)

This client library is meant to work with Intuit's OAuth and OpenID implementation. The *bearer\_token* response can be used for User Info API, Accounting API and Payments API. It supports:

- Generating Authorization URL
- Getting OAuth2 Bearer Token
- Getting User Info
- Validating OpenID token
- Refreshing OAuth2 Token
- Revoking OAuth2 Token
- Migrating tokens from OAuth1.0 to OAuth2



# CHAPTER 1

---

## Install Client

---

This library can be installed using [pip](#):

```
$ pip install intuit-oauth
```

View it on GitHub [here](#)





## 2.1 User Guide

### 2.1.1 Authorize your app

#### Step 1: Instantiate AuthClient object

```
auth_client = AuthClient(  
    client_id,  
    client_secret,  
    redirect_uri,  
    environment,  
)
```

Valid values for environment include *sandbox* and *production*. *redirect\_uri* should be set in your Intuit Developer app's Keys tab under the right environment.

#### Step 2: Get Authorization URL

Get authorization url by specifying list of *intuitlib.enums.Scopes*

```
url = auth_client.get_authorization_url([Scopes.Accounting])
```

After user connects to the app, the callback URL has params for *state*, *auth\_code* and *realm\_id* (*realm\_id* for Accounting and Payments scopes only)

#### Step 3: Get Tokens and Expiry details

The *auth\_code* from URL params from Step 2 is used to get bearer tokens. Optionally, *realm\_id* is passed to set this property for *auth\_client* object.

```
auth_client.get_bearer_token(auth_code, realm_id=realm_id)
```

After successful response, *access\_token*, *refresh\_token*, etc properties of *auth\_client* object are set.

### Step 4 (OAuth): Sample API Call

Here's a sample API call to show how to use *access\_token* to get CompanyInfo for Accounting API.

```
base_url = 'https://sandbox-quickbooks.api.intuit.com'
url = '{0}/v3/company/{1}/companyinfo/{1}'.format(base_url, auth_client.realm_id)
auth_header = 'Bearer {0}'.format(auth_client.access_token)
headers = {
    'Authorization': auth_header,
    'Accept': 'application/json'
}
response = requests.get(url, headers=headers)
```

### Step 4 (OpenID): User Info API call

User Info is returned by this method for OpenID scope only:

```
response = auth_client.get_user_info()
```

Or by passing the *access\_token* as a parameter:

```
response = auth_client.get_user_info(access_token='EnterAccessTokenHere')
```

## 2.1.2 Refresh Tokens

Validity for Intuit's *access\_token* is 60 min and *refresh\_token* is 24 hours. A fresh *access\_token* and *refresh\_token* can be retrieved by calling the refresh token endpoint. If *auth\_client.refresh\_token* property is already set, this can be done by:

```
auth_client.refresh()
```

Or by passing the *refresh\_token* as a parameter:

```
auth_client.refresh(refresh_token='EnterRefreshTokenHere')
```

## 2.1.3 Revoke Tokens

If *auth\_client.refresh\_token* or *auth\_client.access\_token* property is already set, this can be done by:

```
auth_client.revoke()
```

Alternatively, pass the *refresh\_token* or *access\_token* as a parameter:

```
auth_client.revoke(token='EnterAccessOrRefreshTokenHere')
```

If successfully revoked, this method returns *True*

## 2.1.4 Migrate OAuth 1.0a Tokens

*Migration* module migrates OAuth 1.0a token to OAuth2 tokens. The method takes in valid OAuth 1.0a tokens (consumer\_key, consumer\_secret, access\_key, access\_secret), *auth\_client* object from *intuitlib.client.AuthClient* object as well as list of *intuitlib.enum.Scopes*

```
migrate(
    consumer_key,
    consumer_secret,
    access_key,
    access_secret,
    auth_client,
    [Scopes.ACCOUNTING]
)
```

## 2.1.5 Error Handling

In case of HTTP Errors, the client raises *intuitlib.exceptions.AuthClientError* which has properties *status\_code*, *intuit\_tid*, *timestamp*, etc which can be used for troubleshooting or while contacting [Support](#)

```
try:
    auth_client.get_bearer_token(auth_code, realm_id=realm_id)
except AuthClientError as e:
    # just printing here but it can be used for retry workflows, logging, etc
    print(e.status_code)
    print(e.content)
    print(e.intuit_tid)
```

## 2.2 Reference

### 2.2.1 AuthClient

**class** *intuitlib.client.AuthClient* (*client\_id*, *client\_secret*, *redirect\_uri*, *environment*, *state\_token=None*, *access\_token=None*, *refresh\_token=None*, *id\_token=None*, *realm\_id=None*)

Bases: *requests.sessions.Session*

Handles OAuth 2.0 and OpenID Connect flows to get access to User Info API, Accounting APIs and Payments APIs

**get\_authorization\_url** (*scopes*, *state\_token=None*)

Generates authorization url using scopes specified where user is redirected to

#### Parameters

- **scopes** (list of enum, *intuitlib.enums.Scopes*) – Scopes for OAuth/OpenId flow
- **state\_token** – CSRF token, defaults to None

**Returns** Authorization url

**get\_bearer\_token** (*auth\_code*, *realm\_id=None*)

Gets access\_token and refresh\_token using authorization code

#### Parameters

- **auth\_code** – Authorization code received from redirect\_uri
- **realm\_id** – Realm ID/Company ID of the QBO company

Raises `intuitlib.exceptions.AuthClientError` – if response status != 200

**get\_user\_info** (*access\_token=None*)

Gets User Info based on OpenID scopes specified

**Parameters** **access\_token** – Access token

**Raises**

- **ValueError** – if Refresh Token or Access Token value not specified
- `intuitlib.exceptions.AuthClientError` – if response status != 200

**Returns** Requests object

**refresh** (*refresh\_token=None*)

Gets fresh access\_token and refresh\_token

**Parameters** **refresh\_token** – Refresh Token

**Raises**

- **ValueError** – if Refresh Token value not specified
- `intuitlib.exceptions.AuthClientError` – if response status != 200

**revoke** (*token=None*)

Revokes access to QBO company/User Info using either valid Refresh Token or Access Token

**Parameters** **token** – Refresh Token or Access Token to revoke

**Raises**

- **ValueError** – if Refresh Token or Access Token value not specified
- `intuitlib.exceptions.AuthClientError` – if response status != 200

**Returns** True if token successfully revoked

## 2.2.2 OAuth Migration

This module helps in migrating OAuth 1.0a tokens to OAuth 2.0

`intuitlib.migration.migrate` (*consumer\_key, consumer\_secret, access\_token, access\_secret, auth\_client, scopes*)

Migrates OAuth1 tokens to OAuth2 tokens

**Parameters**

- **consumer\_key** – OAuth1 Consumer Key
- **consumer\_secret** – OAuth1 Consumer Secret
- **access\_token** – OAuth1 Access Token
- **access\_secret** – OAuth1 Access Secret
- **auth\_client** (`intuitlib.client.AuthClient`) – AuthClient for OAuth2 specs
- **scopes** – list of `intuitlib.enum.Scopes`

**Raises** `AuthClientError` – if response status != 200

### 2.2.3 Scopes Enum

```
class intuitlib.enums.Scopes
    Bases: enum.Enum

    Scopes supported by Intuit for OAuth and OpenID flows

    ACCOUNTING = 'com.intuit.quickbooks.accounting'
    ADDRESS = 'address'
    EMAIL = 'email'
    OPENID = 'openid'
    PAYMENT = 'com.intuit.quickbooks.payment'
    PHONE = 'phone'
    PROFILE = 'profile'
```

### 2.2.4 Exceptions

```
class intuitlib.exceptions.AuthClientError(response)
    Bases: exceptions.Exception

    AuthClient Error object in case API response status != 200
```

### 2.2.5 Helper Module

This module contains utility methods used by this library

```
intuitlib.utils.generate_token(length=30, allowed_chars='abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789')
    Generates random CSRF token
```

#### Parameters

- **length** – Length of CSRF token, defaults to 30
- **allowed\_chars** – Characters to use, defaults to ‘abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789’

**Returns** Token string

```
intuitlib.utils.get_auth_header(client_id, client_secret)
    Gets authorization header
```

#### Parameters

- **client\_id** – Client ID
- **client\_secret** – Client Secret

**Returns** Authorization header

```
intuitlib.utils.get_discovery_doc(environment, session=None)
    Gets discovery doc based on environment specified.
```

#### Parameters

- **environment** – App environment, accepted values: ‘sandbox’, ‘production’, ‘prod’, ‘e2e’
- **session** – *requests.Session* object if a session is already being used, defaults to None

**Returns** Discovery doc response

**Raises** **HTTPError** – if response status != 200

`intuitlib.utils.get_jwk(kid, jwk_uri)`

Get JWK for public key information

**Parameters**

- **kid** – KID
- **jwk\_uri** – JWK URI

**Raises** **HTTPError** – if response status != 200

**Returns** dict containing keys

`intuitlib.utils.scopes_to_string(scopes)`

Converts list of enum to string

**Parameters** **scopes** (list of *intuitlib.enums.Scopes*) – Scopes specified for OAuth/OpenID flow

**Raises** **TypeError** – for invalid input for scope

**Returns** Scopes string

`intuitlib.utils.send_request(method, url, header, obj, body=None, session=None, oauth1_header=None)`

Makes API request using requests library, raises *intuitlib.exceptions.AuthClientError* if request not successful and sets specified object attributes from API response if request successful

**Parameters**

- **method** – HTTP method type
- **url** – request URL
- **header** – request headers
- **obj** – object to set the attributes to
- **body** – request body, defaults to None
- **session** – requests session, defaults to None
- **oauth1\_header** – OAuth1 auth header, defaults to None

**Raises** **AuthClientError** – In case response != 200

**Returns** requests object

`intuitlib.utils.set_attributes(obj, response_json)`

Sets attribute to an object from a dict

**Parameters**

- **obj** – Object to set the attributes to
- **response\_json** – dict with key names same as object attributes

`intuitlib.utils.validate_id_token(id_token, client_id, intuit_issuer, jwk_uri)`

Validates ID Token returned by Intuit

**Parameters**

- **id\_token** – ID Token
- **client\_id** – Client ID
- **intuit\_issuer** – Intuit Issuer

- `jwk_uri` – JWK URI

**Returns** True/False





## CHAPTER 3

---

### Note

---

The API endpoints in this library only work with TLS 1.2



## CHAPTER 4

---

### License

---

This library is provided under Apache 2.0 which is found [here](#)



## CHAPTER 5

---

### Indices and tables

---

- `genindex`
- `modindex`
- `search`



### i

`intuitlib.migration`, 8  
`intuitlib.utils`, 9





### A

ACCOUNTING (intuitlib.enums.Scopes attribute), 9  
ADDRESS (intuitlib.enums.Scopes attribute), 9  
AuthClient (class in intuitlib.client), 7  
AuthClientError (class in intuitlib.exceptions), 9

### E

EMAIL (intuitlib.enums.Scopes attribute), 9

### G

generate\_token() (in module intuitlib.utils), 9  
get\_auth\_header() (in module intuitlib.utils), 9  
get\_authorization\_url() (intuitlib.client.AuthClient method), 7  
get\_bearer\_token() (intuitlib.client.AuthClient method), 7  
get\_discovery\_doc() (in module intuitlib.utils), 9  
get\_jwk() (in module intuitlib.utils), 10  
get\_user\_info() (intuitlib.client.AuthClient method), 8

### I

intuitlib.migration (module), 8  
intuitlib.utils (module), 9

### M

migrate() (in module intuitlib.migration), 8

### O

OPENID (intuitlib.enums.Scopes attribute), 9

### P

PAYMENT (intuitlib.enums.Scopes attribute), 9  
PHONE (intuitlib.enums.Scopes attribute), 9  
PROFILE (intuitlib.enums.Scopes attribute), 9

### R

refresh() (intuitlib.client.AuthClient method), 8  
revoke() (intuitlib.client.AuthClient method), 8

### S

Scopes (class in intuitlib.enums), 9  
scopes\_to\_string() (in module intuitlib.utils), 10  
send\_request() (in module intuitlib.utils), 10  
set\_attributes() (in module intuitlib.utils), 10

### V

validate\_id\_token() (in module intuitlib.utils), 10