
Quetzal Python Client Documentation

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Python client for the Quetzal API.

If you are not familiar with the Quetzal API, read its [documentation](#) first. This Python package provides a command-line and helper functions to interact with the Quetzal API.

Note that this package depends on an auto-generated package `quetzal.openapi_client`, which is also a client to this API. You can use the latter as a pure Python client, but `quetzal.client` provides some helpers and small fixes.

CHAPTER 1

Installation

You can install *quetzal-client*, with `pip`:

```
pip install quetzal-client
```

Alternatively, add this line to your `requirements.txt`:

```
quetzal-client
```

and then do `pip install -r requirements.txt`.

If you are using `conda`, add the following structure to your `environment.yaml`:

```
...
dependencies:
  - pip
  - pip:
    - quetzal-client
```

and create or update your environment with `conda env create -f environment.yaml` or `conda env update -f environment.yaml`, respectively.

CHAPTER 2

Getting started

In order to use *quetzal.client*, you need to know the URL of the API server, your username and password. You can set these on the command-line interface, through a configuration object, or using environment variables:

Table 1: Environment variables considered by *quetzal-client*.

Variable	Description	Default if not set
QUETZAL_URL	Complete URL of the Quetzal server + API version.	'https://api.quetzal.al/api/v1'
QUETZAL_USER	Quetzal username.	' '
QUETZAL_PASSWORD	Quetzal password.	' '
QUETZAL_API_KEY	Quetzal API key.	' '

There are two ways this package helps you: with a command-line interface or by providing some helper modules that you can use in Python.

3.1 Command-line interface

The command-line interface is available through the `quetzal-client` command. Use the `--help` or `--help-all` options to get a detailed description of each command.

```
$ quetzal-client --help

Usage: quetzal-client [GLOBAL OPTIONS] COMMAND [ARGS]...

    Command-line utility for the Quetzal API client.

Options:
  --url TEXT           Quetzal URL. If not set, uses environment variable
                       QUETZAL_URL if this variable is defined. [default:
                       https://api.quetz.al/api/v1]
  --username TEXT     Quetzal username. If not set, uses environment variable
                       QUETZAL_USER. Option is mutually exclusive with token,
                       api_key.
  --password TEXT     Quetzal password. If not set, uses environment variable
                       QUETZAL_PASSWORD. Option is mutually exclusive with token,
                       api_key.
  --token TEXT        Quetzal bearer token. If not set, uses environment variable
                       QUETZAL_TOKEN. Option is mutually exclusive with username,
                       password, api_key.
  --api-key TEXT      Quetzal API key. If not set, uses environment variable
                       QUETZAL_API_KEY. Option is mutually exclusive with username,
                       password, token.
  --insecure          Do not verify HTTPS certificates.
  -v, --verbose       Verbosity level. Use -v for verbose, -vv for even more
```

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```

                                verbosity
--help-all                    Show a detailed help message with all options and exit.
--help                        Show help message for this command and exit.
--version                      Show the version and exit.

Commands:
  auth      Authentication operations.
  file      File operations.
  query     Query metadata.
  workspace Workspace operations.
```

3.2 Python

To start using *quetzal.client* on Python code, use the following template:

```

from quetzal.client import Client, Configuration, QuetzalAPIException
from quetzal.client import helpers

config = Configuration()
# ... change config as needed or fallback to the environment variables ...
# config.verify_ssl = False # Use this for servers without certificates (dev servers)
client = Client(config)

# A simple test using the helpers to verify that we can login to Quetzal
try:
    helpers.auth.login(client)
    print('Logged in successfully!')
except QuetzalAPIException as ex:
    print(f'Operation failed. {ex.title} - {ex.detail}')
```

CHAPTER 4

Documentation

There are more details on *quetzal.client* on its official documentation at [readthedocs](#).

CHAPTER 5

Contribute

- Issue Tracker: <https://github.com/quetz-al/quetzal-client/issues>
- Source Code: <https://github.com/quetz-al/quetzal-client>

Note to package maintainer

To build and send this package to PyPI:

```
# Clean previous builds!
rm -rf dist/
# Build
python setup.py sdist bdist_wheel

# Install helper module for uploading to PyPI
pip install twine
# First, send to test PyPI
twine upload --repository-url https://test.pypi.org/legacy/ dist/*
# If that works ok, then send to PyPI
python -m twine upload dist/*
```


The project is under the BSD 3-clause license.

7.1 Examples

7.1.1 Command-line examples

- example 1
- example 2

7.1.2 Python examples

- example 1
- example 2

7.2 Changelog

This document list all important changes to quetzal-client.

Quetzal-client version numbers follow [semantic versioning](#).

7.2.1 0.5.3 (2020-06-05)

- Fix incorrect pathlib handling on file download.
- Fix incorrect exception handling that impacted retry logic.

7.2.2 0.5.2 (2020-03-13)

This is just a re-release of 0.5.1 code due to problem when uploading to PyPI.

7.2.3 0.5.1 (2020-03-13)

- Add `data_url` to workspace details on the CLI
- Fix permission error when using query history on the CLI
- Update backoff requirement to avoid problems when used by dask

7.2.4 0.5.1-rc3 (2020-03-04)

- Fix incorrect management of auto retry backoff for 503 errors and a recursive auto-login that was also incorrect

7.2.5 0.5.1-rc2 (2020-02-28)

- Fix incorrect management of output and `output_dir` in download helper.

7.2.6 0.5.1-rc1 (2020-02-27)

- Fix problem with API key authentication when requesting file details.
- Fix API key management on configuration object.
- Fix lack of default format on CLI for file metadata.
- Add file delete CLI.

7.2.7 0.5.0 (2019-10-17)

- Update to API version 0.5.0.
- Add API key authentication.

7.2.8 0.3.0 (2019-07-02)

- Update to API version 0.3.0.
- Add more helper functions (query and client).
- Fix incorrect call to derived configuration object.
- Fix unpickeable exception types.
- Fix bugs on file download checksum verification and file upload parameters.

7.2.9 0.2.0 (2019-03-21)

- Update dependency *quetzal-openapi-client* to match Quetzal API version 0.2.0.
- Fix `dependency_links` to correctly link to *quetzal-openapi-client*.

7.2.10 0.1.1 (2019-03-08)

- `quetzal.client.api` has been renamed to `quetzal.client.helpers`.
- File download, with verification of known files, added to helpers.
- File download falls back to user data directory if output not set.
- Config default to environment variable values when created.
- Initial structure of Sphinx documentation.

7.2.11 0.1.0 (2019-03-05)

- First iteration of the Quetzal Python client.
- Delegates the *automatic* code to `quetzal-openapi-client`.
- Command-line interface implemented with `Click` for most operations available on the Quetzal API.
- Incomplete implementation of a helper module `quetzal.client.api` that encapsulates the usage of the auto-generated client.

7.3 Modules

7.3.1 quetzal.client package

7.3.1.1 Subpackages

7.3.1.1.1 quetzal.client.cli package

7.3.1.1.1.1 Submodules

7.3.1.1.1.2 quetzal.client.cli.auth module

7.3.1.1.1.3 quetzal.client.cli.file module

7.3.1.1.1.4 quetzal.client.cli.main module

7.3.1.1.1.5 quetzal.client.cli.query module

7.3.1.1.1.6 quetzal.client.cli.workspace module

7.3.1.1.2 quetzal.client.helpers package

7.3.1.1.2.1 Submodules

7.3.1.1.2.2 quetzal.client.helpers.auth module

7.3.1.1.2.3 quetzal.client.helpers.file module

7.3.1.1.2.4 quetzal.client.helpers.query module

7.3.1.1.2.5 quetzal.client.helpers.workspace module

7.3.1.2 Submodules

7.3.1.3 quetzal.client.base module

7.3.1.4 quetzal.client.config module

7.3.1.5 quetzal.client.exceptions module

7.3.1.6 quetzal.client.utils module