1. Quick Start

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1.2. Introduction

FXCM provides a **RESTful API** (henceforth the "API") to interact with its trading platform. Among others, it allows the retrieval of **historical data** as well as of **streaming data**. In addition, it allows to place different types of **orders** and to read out **account information**. The overall goal is to allow the implementation **automated, algortithmic trading programs**.

In this documentation, you learn all about the `fxcmpy` Python wrapper package (henceforth just `fxcmpy` or "package").

1.3. Demo Account

To get started with the the API and the package, a **demo account** with FXCM is sufficient. You can open such an account under https://www.fxcm.com/uk/forex-trading-demo/.

1.4. Python Installation

`fxcmpy` works with **Python 3.4** and later. If you need to install **Python** itself and/or additional **packages**, we recommend the use of the `conda` package and environment manager.

To this end, you can download the `Miniconda` installer from https://conda.io/miniconda.html for your operating system and get it installed.

You can then download and use the following `yaml` file to create a Python environment:

http://fxcmpy.tpq.io/_static/fxcm.yml

Having downloaded this file, the **environment** is created on the command line as follows:

```
conda env create -f fxcm.yml -n fxcm
```

Activate it under Mac OS/Linux via:

```
conda activate fxcm
```

And under Windows via:

```
activate fxcm
```

You can then start, for instance, **Jupyter** to interactively explore the examples of this documentation.

1.5. Package Installation

The code of the package is hosted under https://github.com/fxcm/fxcmpy. You can clone the Git repository and install the `fxcmpy` package locally via

```
git clone https://github.com/fxcm/fxcmpy/
cd fxcmpy
```

```
python setup.py install
```

However, installation in general is easiest via `pip` install on the command line.

```
pip install fxcmpy
```

Make sure to update/upgrade regularly via

```
pip install fxcmpy --upgrade
```

Working in an interactive context (e.g. `IPython` or `Jupyter`), you can then check whether the package is installed via

In [1]:

```
import fxcmpy
```

In [2]:

```
fxcmpy.__version__
```

Out[2]:

```
'1.1.24'
```

1.6. API Token

To connect to the API, you need an **API token** that you can create or revoke from within your (demo) account in the Trading Station https://tradingstation.fxcm.com/.

Important: Please send **an email with you user name** to api@fxcm.com to get RESTful API access and to activate your token, respectively.

In an interactive context, you can use e.g. a variable called `TOKEN` to reference your unique API token.

```
TOKEN = YOUR_FXCM_API_TOKEN
```

Connecting to the server, then boils down to the following line of code.

```
con = fxcmpy.fxcmpy(access_token=TOKEN, log_level='error')
```

However, it is recommended to store the API token in a **configuration file** which allows for re-usability and hides the token on the GUI level. The file should contain the following lines.

```
[FXCM]
log_level = error
log_file = PATH_TO_AND_NAME_OF_LOG_FILE
access_token = YOUR_FXCM_API_TOKEN
```

It is assumed onwards that this file is in the current working directory and that its name is `fxcm.cfg`.

With such a configuration file in the current working directory, only the filename need to be passed as a parameter to **connect to the API**.

In [3]:

```
con = fxcmpy.fxcmpy(config_file='fxcm.cfg')
```

By default, the class connects to the `demo` server.

```
con = fxcmpy.fxcmpy(config_file='fxcm.cfg', server='demo')
```

To connect to the live server, the `server` parameter must be set to `real`.

```
con = fxcmpy.fxcmpy(config_file='fxcm.cfg', server='real')
```

1.7. First Steps

Having established the connection to the API, data retrieval is straightforward.

For example, you can look up which **instruments** are available via the `con.get_instruments()` method.

In [4]:

```
print(con.get_instruments())
```

```
['EUR/USD', 'USD/JPY', 'GBP/USD', 'USD/CHF', 'EUR/CHF', 'AUD/USD', 'USD/CAD', 'NZD/USD', 'EUR/GBP', 'EUR/JPY', '
```

Simlarly, **historical data** is retrieved via the `con.get_cancles()` method.

In [5]:

```
data = con.get_candles('EUR/USD', period='m1', number=250)
```

In [6]:

```
data.head()
```

Out[6]:

date	bidopen	bidclose	bidhigh	bidlow	askopen	askclose	askhigh	asklow	tickqty
2018-07-13 16:50:00	1.16700	1.16715	1.16718	1.16700	1.16724	1.16738	1.16741	1.16724	122
2018-07-13 16:51:00	1.16716	1.16741	1.16748	1.16716	1.16739	1.16765	1.16771	1.16739	309
2018-07-13 16:52:00	1.16741	1.16762	1.16765	1.16741	1.16765	1.16785	1.16789	1.16765	201
2018-07-13 16:53:00	1.16762	1.16752	1.16763	1.16752	1.16785	1.16776	1.16785	1.16776	162
2018-07-13 16:54:00	1.16751	1.16724	1.16752	1.16721	1.16775	1.16748	1.16775	1.16744	321

In [7]:

```
data.tail()
```

Out[7]:

date	bidopen	bidclose	bidhigh	bidlow	askopen	askclose	askhigh	asklow	tickqty
2018-07-13 20:55:00	1.16848	1.16850	1.16851	1.16841	1.16874	1.16877	1.16878	1.16868	61
2018-07-13 20:56:00	1.16850	1.16846	1.16854	1.16844	1.16877	1.16874	1.16879	1.16872	67
2018-07-13 20:57:00	1.16846	1.16842	1.16846	1.16841	1.16874	1.16870	1.16874	1.16868	13
2018-07-13 20:58:00	1.16842	1.16847	1.16855	1.16842	1.16870	1.16878	1.16883	1.16870	37
2018-07-13 20:59:00	1.16847	1.16831	1.16847	1.16831	1.16878	1.16879	1.16879	1.16878	5

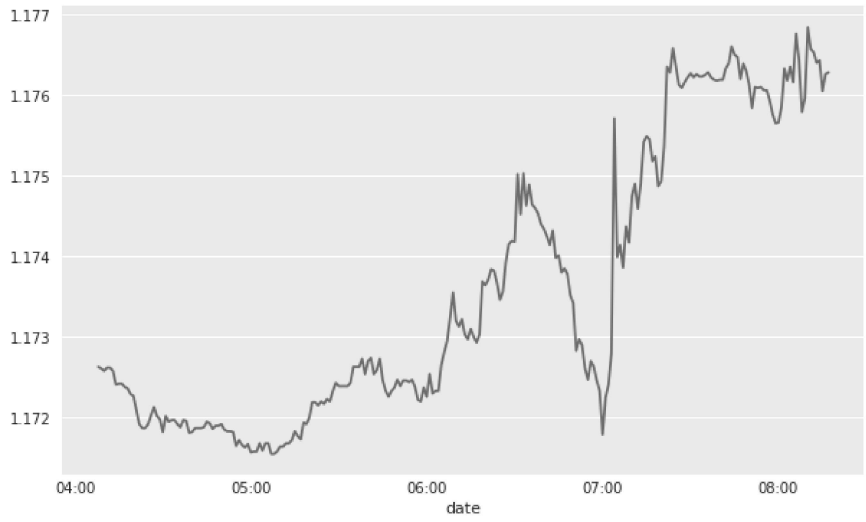
Such data can be **visualized** with standard functionality of Python and pandas, for instance.

In [8]:

```
from pylab import plt
plt.style.use('seaborn')
%matplotlib inline
```

In [9]:

```
data['askclose'].plot(figsize=(10, 6));
```



As last step, it is recommended to close the connection to free resources.

In [10]:

```
con.close()
```

1.8. Resources

If you have questions regarding **demo or full accounts**, reach out to:

- info@fxcm.co.uk
- +44 (0) 207 398 4050

If you have questions regarding the **RESTful API**, reach out to:

- api@fxcm.com

The **detailed documentation of the API** is found under:

- https://github.com/fxcm/RestAPI

The book *Python for Finance – Mastering Data-Driven Finance* (O'Reilly) provides detailed information about the use of **Python in Finance**:

- http://pff.tpq.io/.

In-depth courses and programs about **Python for Algorithmic Trading**:

- http://pyalgo.tpq.io
- http://certificate.tpq.io.

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