

Set up a personal python package index

Overview

This document describes setting up a private package index as a more convenient way to distribute python packages.

The need to use something like this grows as we add maintainers and packages to maintain.

Our python packages need to be compatible with the standard python package index PyPi.

We use a private package index until we are ready to make a package available to the general public, then we switch to PyPi.

This tool we are using keeps our packages compatible with PyPi for when we do make it available there.

[devpi](#)

It is a conforming package index system.

We will use it to serve our private package index.

Configuring the SW for devpi

This howto is derived from the following tutorial:

<<https://devpi.net/docs/devpi/devpi/stable/+doc/quickstart-releaseprocess.html>>_

We are working with python3. We want to setup up a virtual environment that conforms to our assumptions, and then install within that. We call the environment devpi_venv. We create a directory for our setup first.

```
mkdir ${HOME}/devpi_setup  
cd ${HOME}/devpi_setup
```

We install the bare essentials.

```
python3 -m venv devpi_venv  
source devpi_venv/bin/activate  
python -m pip install -U pip  
pip install wheel  
pip install setuptools  
pip install twine
```

restview is A Restructured Text format viewer I find usefull. (optional)

```
pip install restview
```

You invoke it and it keeps re-rendering your file as you modify it.

Like this:

```
restview README.rst
```

rst2pdf is convenient for generating pdf copies of .rst documuments.

```
pip install rst2pdf  
rst2pdf doc/privatepyi.rst -o reformattdocs/privatepyi.pdf
```

Set up devpi server on our laptop

Install devpi client and web server The non web server - devpi-server - is installed as a consequence.

```
pip install -U devpi-web devpi-client
```

Initialize an empty index (at /var/devpi-server by default) Note I had a permissions problem with the init one. So first I manually do this:

```
sudo mkdir /var/devpi-server  
sudo chown ubuntu:ubuntu /var/devpi-server
```

```
devpi-init
```

We want a config file for supervisor daemon to use. This will generate a bunch of config files under the current directory, the one we want included.

```
cd ${HOME}/devpi_setup  
devpi-gen-config
```

This gives us the file gen-config/supervisor-devpi.conf to copy to /etc/supervisor/conf so that we can start up the server. I started by editing it to say start=False so that it would need to be started up manually. Then I copied it to the right place for it.

```
sudo cp gen-config/supervisor-devpi.conf /etc/supervisor/conf.d/devpi-server.conf  
sudo supervisorctl update  
sudo supervisorctl start devpi-server
```

Create a user, login as him and create the 'dev' index

```
devpi user -c pbernatchez password=foobar  
devpi login pbernatchez --password=foobar  
devpi index -c dev bases=root/pypi
```

Use our dev index

```
devpi use testuser/dev
```

Now we can make use of the private index.

We are using flit to publish to our index and it relies on the file : ~/.pypirc.

So we make an entry there for our index.

I gave it the name 'mypypi':

```
[distutils]
index-servers =
    mypypi
    testpypi

[mypypi]
repository = http://localhost:3141/pbernatchez/dev
username = pbernatchez

[testpypi]
repository = https://test.pypi.org/legacy/
username = pbernatchez
```

From here on, using flit, we can refer it as 'mypypi'.

```
deactivate
cd /home/ubuntu/allrepos/animbboard
source ${HOME}/venv_animbboard/bin/activate
flit build
flit publish --repository mypypi
pip uninstall animbboard
pip install -i http://localhost:3141/pbernatchez/dev animbboard
```