

Title: Getting Started Python, Flask, Nginx, uWSGI  
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**\*\*Environment\*\***

OS: ubuntu 14.04.1 LTS 64bit server  
python 3.4.3  
nginx 1.8.0  
uwsgi  
flask  
sqlalchemy

Let's Start...

```
// build-essential / libssl-dev installation (to compile and build sources)
$ sudo apt-get install build-essential
$ sudo apt-get install libssl-dev
( troubleshooting: ImportError: No module named _ssl )
```

1. python installation

```
$ mkdir /home/kevin/download
$ cd /home/kevin/download
$ wget https://www.python.org/ftp/python/3.4.3/Python-3.4.3.tgz
$ tar zxvf Python-3.4.3.tgz
$ cd Python-3.4.3.tgz
$ ./configure
$ sudo make
$ sudo make install
$ cd /usr/bin
$ ll python*
$ python3 ( <= execute it, you will see the python version, 3.4.3 )
```

## 2. pip installation

```
$ sudo apt-get -y install python-pip
```

```
$ sudo pip3.4 install --upgrade pip
```

**\*\*reference\*\***

( <http://www.liquidweb.com/kb/how-to-install-pip-on-ubuntu-14-04-lts/> )

## 3. flask installation

```
$ sudo pip3.4 install flask
```

## 4. sqlalchemy installation ( no need for this guide, you can skip )

```
$ sudo pip3.4 install sqlalchemy
```

## 5. pcre instalation ( to compile and build a nginx, <http://www.pcre.org/> )

```
$ cd /home/kevin/download
```

```
$ wget http://sourceforge.net/projects/pcre/files/pcre/8.37/pcre-8.37.tar.gz
```

```
$ tar zxvf pcre-8.37.tar.gz
```

```
$ cd pcre-8.37
```

```
$ ./configure
```

```
$ sudo make
```

```
$ sudo make install
```

## 6. nginx installation( <http://nginx.org> )

```
$ cd /home/kevin/download
```

```
$ wget http://nginx.org/download/nginx-1.8.0.tar.gz
$ tar zxvf nginx-1.8.0.tar.gz
$ cd nginx-1.8.0
$ ./configure --prefix=/home/kevin/app/nginx/nginx-1.8.0
$ make
$ make install
$ sudo ldconfig
## troubleshooting ##
problem) ./nginx: error while loading shared libraries: libpcre.so.1: cannot open shared object file: No such file or directory
solve) $ sudo ldconfig
( http://stackoverflow.com/questions/8501163/error-while-loading-shared-libraries-libpcre-so-0-cannot-open-shared-object-fi )
( or see /etc/ld.so.conf )
( http://wiki.nginx.org/CommandLine )
$ cd /home/kevin/app/nginx/nginx-1.8.0/sbin
$ sudo ./nginx          <= start nginx
$ sudo netstat -nap | grep 80 <= check
$ sudo ./nginx -s stop   <= stop nginx
$ sudo netstat -nap | grep 80 <= check
```

7. uwsgi installation ( <https://library.linode.com/web-servers/nginx/python-uwsgi> )

```
$ sudo pip3.4 install uwsgi
( http://uwsgi-docs.readthedocs.org/en/latest/index.html )
```

## 8. Configure and Run Flask App

1) edit a config file

```
$ vi /home/kevin/app/nginx/nginx-1.8.0/conf/nginx.conf
```

```
-----
add blue lines in the file
```

```
-----  
server {  
    listen    80;  
    server_name localhost;  
  
    #charset koi8-r;  
  
    #access_log logs/host.access.log main;  
  
#    location / {  
#        root html;  
#        index index.html index.htm;  
#    }  
    location / {  
        try_files $uri @myflaskapp;  
    }  
    location @myflaskapp {  
        include uwsgi_params;  
        uwsgi_pass unix:/tmp/uwsgi.sock;  
    }  
.  
.  
.
```

2) how to start a nginx

```
$ cd /home/kevin/app/nginx/nginx-1.8.0/sbin
```

```
$ sudo ./nginx          <= how to start
```

```
( $ sudo ./nginx -s stop    <= how to stop )
```

3) create a test flask app file

```
$ mkdir -p /home/kevin/app/server/HelloFlaskApp
```

```
$ cd /home/kevin/app/server/HelloFlaskApp
```

```
$ vi HelloFlaskApp.py
```

```
-----  
from flask import Flask
```

```
app = Flask(__name__)
```

```
@app.route('/')  
def hello_world():
```

```
    return 'Hello World!'
```

```
@app.route('/hi')
```

```
def hi():
```

```
    return 'Hi, Kevin'
```

```
if __name__ == '__main__':
```

```
    app.run()  
-----
```

4) how to start a uwsgi

```
$ uwsgi -s /tmp/uwsgi.sock --wsgi-file HelloFlaskApp.py --callable app
```

```
( $ uwsgi -s /tmp/uwsgi.sock --chmod-socket=666 --wsgi-file HelloFlaskApp.py --callable app )
```

```
( $ uwsgi -s /tmp/uwsgi.sock --module yourapplication --callable app --venv .venv )
```

5) how to see a access log file

```
$ $ tail -f /home/kevin/app/nginx/nginx-1.8.0/logs/access.log
```

6) open the url

<http://localhost:80/>

<http://localhost:80/hi>

7) does it work? yeah,,,