LocalShiny Web

<u>LocalShiny Web</u> is a platform for developers to share <u>Shiny applications</u> built in R. With the LocalShiny package, developers create clones of applications and share the applications in the LocalShiny Web easily.

About LocalShiny

LocalShiny Website

LocalShiny Documentation

LocalShiny Github

Required Environments

- OS: Linux server (>= 18.04)
- Python3 (>= 3.6)

Deploy LocalShiny Web

Install Dependencies

Create working directory localshiny.org and change permissions, then enter localshiny.org.

```
sudo mkdir -p /var/www/localshiny.org
sudo chown -R $USER:$USER /var/www/localshiny.org
sudo chmod -R 755 /var/www/localshiny.org
cd /var/www/localshiny.org
```

Clone the <u>WebServe</u> repository then change name to <u>LocalShinyWeb</u>.

```
git clone git@github.com:localshiny/WebServer.git
mv WebServer LocalShinyWeb
```

Install virtualenv and set environment variables.

```
pip install virtualenv
pip install virtualenvwrapper
sudo vim ~/.bashrc
```

Add the following three lines in ~/.bashrc.

```
VIRTUALENVWRAPPER_PYTHON=/usr/bin/python3
export WORKON_HOME=$HOME/.virtualenvs
source ~/.local/bin/virtualenvwrapper.sh
```

```
1 :wq
2 source ~/.bashrc
```

Create and enter localshiny virtual environment.

```
1 | mkvirtualenv -p python3 localshiny
2 | workon localshiny
```

Install Redis and start redis service.

```
sudo apt update
sudo apt install redis-server
sudo service redis restart
redis-cli
```

Install other Python packages.

LocalShiny Web requires the following python packages.

```
1  email-validator==1.1.2
2  Flask==1.1.2
3  Flask-Session==0.3.2
4  passlib==1.7.4
5  redis==3.5.3
6  Werkzeug==1.0.1
7  WTForms==2.3.3
8  uwsgi==2.0.18
```

Use the command pip install -r requirements.txt to install them.

Install Nginx

```
1 | sudo apt update
2 | sudo apt install nginx
```

Nginx configuration

Copy the SSL certificate to the Nginx directory.

```
1 cp -r cert /etc/nginx/cert
```

Copy nginx.conf to the Nginx directory.

```
1 cp nginx.conf /etc/nginx/
```

Firewall settings

```
sudo ufw app list
sudo ufw allow 'Nginx Full' # allow 80 and 443 port
```

Start LocalShiny Web

Start uwsgi

```
1 | uwsgi --ini uwsgi.ini
```

Start Nginx service

```
1 | sudo service nginx restart
```

Now, you can visit www.localshiny.org in your browser.

Appendix

About Directory

- LocalShinyWeb directory: /var/www/localshiny.org/LocalShinyWeb
- SSL file: LocalShinyWeb/cert
- logs: LocalShinyWeb/logs
- uwsgi configuration file: LocalShinyWeb/uwsgi.ini
- Nginx configuration file: /etc/nginx

About uwsgi

```
cd /var/www/localshiny.org/LocalShinyWeb/
uwsgi --ini uwsgi.ini # start uwsgi
uwsgi --reload uwsgi.pid # reload uwsgi.ini
uwsgi --stop uwsgi.pid # stop uwsgi
sudo pkill -f uwsgi -9 # force kill uwsgi
```

About Nginx

```
sudo nginx -t # check nginx.conf syntax errors
sudo nginx # start nginx
sudo nginx -s reload # reload nginx.conf
```

About Nginx service

```
sudo service nginx start # start nginx service
sudo service nginx status # check nginx service status
sudo service nginx stop # stop nginx service
sudo service nginx restart # restart nginx service
```