

# LocalShiny Web

[LocalShiny Web](#) is a platform for developers to share [Shiny applications](#) 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](#)

## 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`.

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

Clone the [webServer](#) repository then change name to `LocalShinyweb`.

```
1 git clone git@github.com:localshiny/webServer.git
2 mv webServer LocalShinyweb
```

Install `virtualenv` and set environment variables.

```
1 pip install virtualenv
2 pip install virtualenvwrapper
3 sudo vim ~/.bashrc
```

Add the following three lines in `~/.bashrc`.

```
1 VIRTUALENVWRAPPER_PYTHON=/usr/bin/python3
2 export WORKON_HOME=$HOME/.virtualenvs
3 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.

```
1 sudo apt update
2 sudo apt install redis-server
3 sudo service redis restart
4 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 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

```
1 sudo ufw app list
2 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

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### 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

```
1 | cd /var/www/localshiny.org/LocalShinyweb/  
2 | uwsgi --ini uwsgi.ini # start uwsgi  
3 | uwsgi --reload uwsgi.pid # reload uwsgi.ini  
4 | uwsgi --stop uwsgi.pid # stop uwsgi  
5 | sudo kill -f uwsgi -9 # force kill uwsgi
```

### About Nginx

```
1 | sudo nginx -t # check nginx.conf syntax errors  
2 | sudo nginx # start nginx  
3 | sudo nginx -s reload # reload nginx.conf
```

### About Nginx service

```
1 | sudo service nginx start # start nginx service  
2 | sudo service nginx status # check nginx service status  
3 | sudo service nginx stop # stop nginx service  
4 | sudo service nginx restart # restart nginx service
```

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