

Django on AWS

Prerequisite:

- A django application created and pushed to github
- An aws account

Note: For this demo

- Project name: aws_demo_project
- main folder : django_aws_demo

Create an aws instance

- create an instance of ubuntu 20.04 instance
- download and save the .pem file provided by them
- connect to instance through ssh

Installing mysql in the server

```
sudo apt-get update
sudo apt-get upgrade

sudo apt install mysql-server
sudo mysql_secure_installation

sudo mysql
CREATE USER 'rahul'@'localhost' IDENTIFIED BY '123456';
GRANT ALL PRIVILEGES ON * . * TO 'rahul'@'localhost';
```

Lets install python virtual env

```
sudo apt-get install python3-venv
```

clone the repository of django project you created, here for demo

```
git clone https://github.com/rawho/django_aws_demo.git
```

Create a virtual env and activate it:

```
python3 -m venv env
source env/bin/activate
```

Install all the requirements

```
pip install -r requirements.txt
```

If this shows any error

```
sudo apt-get install python-dev python3-dev  
sudo apt-get install libmysqlclient-dev  
pip install -r requirements.txt
```

Then create a database :

```
mysql -u rahul -p  
  
# Lets create a database  
CREATE DATABASE aws_demo_db;
```

mysql username, password, db name should match with the code that we cloned

then lets migrate the database

```
python manage.py makemigrations  
python manage.py migrate
```

Setting up the server

```
pip install gunicorn  
sudo apt-get install nginx
```

Then allow the http, https, 8000 traffic in the inbound rule

```
gunicorn --bind 0.0.0.0:8000 aws_demo_project.wsgi:application
```

When the terminal is closed the application also stops working

There the supervisor comes into play

```
sudo apt-get install supervisor
```

Lets configure the Supervisor

```
cd /etc/supervisor/conf.d/  
sudo touch gunicorn.conf
```

copy this in `gunicorn.conf` file:

```
[program:gunicorn]
directory=/home/ubuntu/django_aws_demo
command=/home/ubuntu/env/bin/gunicorn --workers 3 --bind
unix:/home/ubuntu/django_aws_demo/app.sock
aws_demo_project.wsgi:application

autostart=true
autorestart=true
stderr_logfile=/var/log/gunicorn/gunicorn.err.log
stdout_logfile=/var/log/gunicorn/gunicorn.out.log

[group:guni]
programs:gunicorn
```

```
sudo mkdir /var/log/gunicorn
sudo supervisorctl reread
sudo supervisorctl update
sudo supervisorctl status
```

Lets configure the nginx

```
cd /etc/nginx/sites-available/
sudo touch django.conf
```

copy this in `django.conf`

```
server {
    client_max_body_size 4G;
    server_name ec2-3-89-131-161.compute-1.amazonaws.com
    githubstats.xyz www.githubstats.xyz 3.89.131.161;

    location / {
        include proxy_params;
        proxy_pass
http://unix:/home/ubuntu/django_aws_demo/app.sock;
    }
    location /static/ {
        autoindex on;
        alias /home/ubuntu/django_aws_demo/static/;
    }
    location /media/ {
        autoindex on;
        alias /home/ubuntu/django_aws_demo/media/;
    }
}
```

```
    }  
  
}
```

```
sudo nginx -t  
sudo ln django.conf /etc/nginx/sites-enabled/
```

```
sudo service nginx reload  
sudo service supervisor reload
```

if you go to the ip adress you can see the application