

Lab 7 Notes

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[Step 1] Create an EC2 instance

Create an EC2 instance. The public IPv4 is 13.236.136.79.

The screenshot shows the AWS Management Console interface. At the top, there's a filter bar with 'Instance ID = i-08d4cecfecdd856c' and a 'Clear filters' button. Below this is a table of EC2 instances. The table has columns: Name, Instance ID, Instance state, Instance type, Status check, Alarm status, and Availability Zone. One instance is listed: '22994257-lab' with Instance ID 'i-08d4cecfecdd856c', state 'Running', type 't2.micro', status check '-', alarm status 'User: arn:aws:iam::123456789012:user:root', and availability zone 'ap-southeast-2a'. Below the table, the details for instance 'i-08d4cecfecdd856c' are shown. The 'Details' tab is selected, showing a summary of the instance: Instance ID 'i-08d4cecfecdd856c', Instance type 't2.micro', Public IPv4 address '13.236.136.79', Private IPv4 addresses '172.31.14.155', Instance state 'Running', Public IPv4 DNS 'ec2-13-236-136-79.ap-southeast-2.compute.amazonaws.com', and Private IP DNS name 'i-08d4cecfecdd856c.ap-southeast-2.compute.amazonaws.com'.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
22994257-lab	i-08d4cecfecdd856c	Running	t2.micro	-	User: arn:aws:iam::123456789012:user:root	ap-southeast-2a

Instance: i-08d4cecfecdd856c

Details	Security	Networking	Storage	Status checks	Monitoring	Tags									
<p>▼ Instance summary Info</p> <table border="1"><tbody><tr><td>Instance ID i-08d4cecfecdd856c</td><td>Public IPv4 address 13.236.136.79 open address</td><td>Private IPv4 addresses 172.31.14.155</td></tr><tr><td>IPv6 address -</td><td>Instance state Running</td><td>Public IPv4 DNS ec2-13-236-136-79.ap-southeast-2.compute.amazonaws.com open address</td></tr><tr><td>Instance type t2.micro</td><td>Private IP DNS name (IPv4 only) i-08d4cecfecdd856c.ap-southeast-2.compute.amazonaws.com</td><td></td></tr></tbody></table>							Instance ID i-08d4cecfecdd856c	Public IPv4 address 13.236.136.79 open address	Private IPv4 addresses 172.31.14.155	IPv6 address -	Instance state Running	Public IPv4 DNS ec2-13-236-136-79.ap-southeast-2.compute.amazonaws.com open address	Instance type t2.micro	Private IP DNS name (IPv4 only) i-08d4cecfecdd856c.ap-southeast-2.compute.amazonaws.com	
Instance ID i-08d4cecfecdd856c	Public IPv4 address 13.236.136.79 open address	Private IPv4 addresses 172.31.14.155													
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Instance type t2.micro	Private IP DNS name (IPv4 only) i-08d4cecfecdd856c.ap-southeast-2.compute.amazonaws.com														

[Step 2] Install and configure Fabric on my VM

Install the fabric and config files.

```
mjieli@mjieli-VirtualBox: ~/.ssh
Host 22994257-lab
    Hostname ec2-13-236-136-79.ap-southeast-2.compute.amazonaws.com
    User ubuntu
    UserKnownHostsFile /dev/null
    StrictHostKeyChecking no
    PasswordAuthentication no
    IdentityFile ~/.ssh/22994257-key.pem

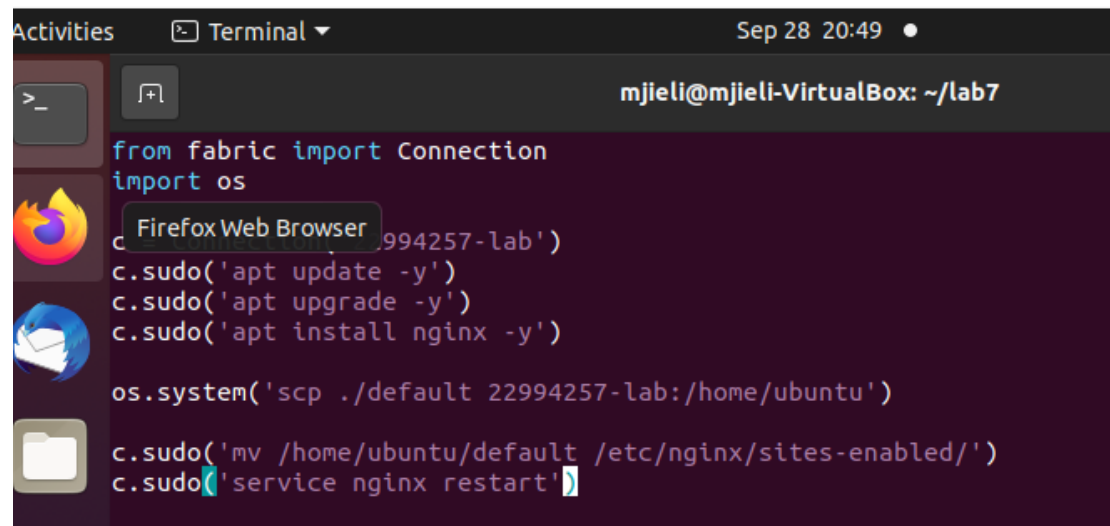
mjieli@mjieli-VirtualBox:~/.ssh$ vim config
mjieli@mjieli-VirtualBox:~/.ssh$ python3
Python 3.8.10 (default, Jun 22 2022, 20:18:18)
[GCC 9.4.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> from fabric import Connection
>>> c = Connection('22994257-lab')
>>> result = c.run('uname -s')
Linux
>>> exit()
```

[Step 3] Write a python script to automate the installation of nginx

Install nginx, transfer the file and run the sever.

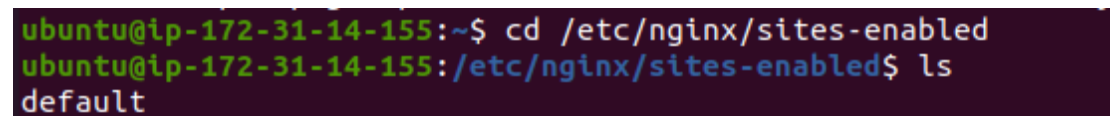
Ubuntu 20.04 LTS [正在运行] - Oracle VM VirtualBox

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```
mjieli@mjieli-VirtualBox: ~/lab7
from fabric import Connection
import os
c = Connection('22994257-lab')
c.sudo('apt update -y')
c.sudo('apt upgrade -y')
c.sudo('apt install nginx -y')
os.system('scp ./default 22994257-lab:/home/ubuntu')
c.sudo('mv /home/ubuntu/default /etc/nginx/sites-enabled/')
c.sudo('service nginx restart')
```

ssh -i 22994257-key.pem ubuntu@13.236.136.79



```
ubuntu@ip-172-31-14-155:~$ cd /etc/nginx/sites-enabled
ubuntu@ip-172-31-14-155:/etc/nginx/sites-enabled$ ls
default
```

Open the browser.



[Step 4] Update the python script to install Django app

Install and config the Django.

```
mjieli@mjieli-VirtualBox: ~/lab7 × ubuntu@ip-172-31-14-155: /opt/
from fabric import Connection
import os

c = Connection('22994257-lab')
DIR = '/opt/www/mysites'

c.sudo(f'mkdir -p {DIR}')
c.sudo('apt install python3-pip -y')
c.sudo('apt install python-django -y')
c.sudo('sudo pip3 install django')

c.run('django-admin startproject lab')

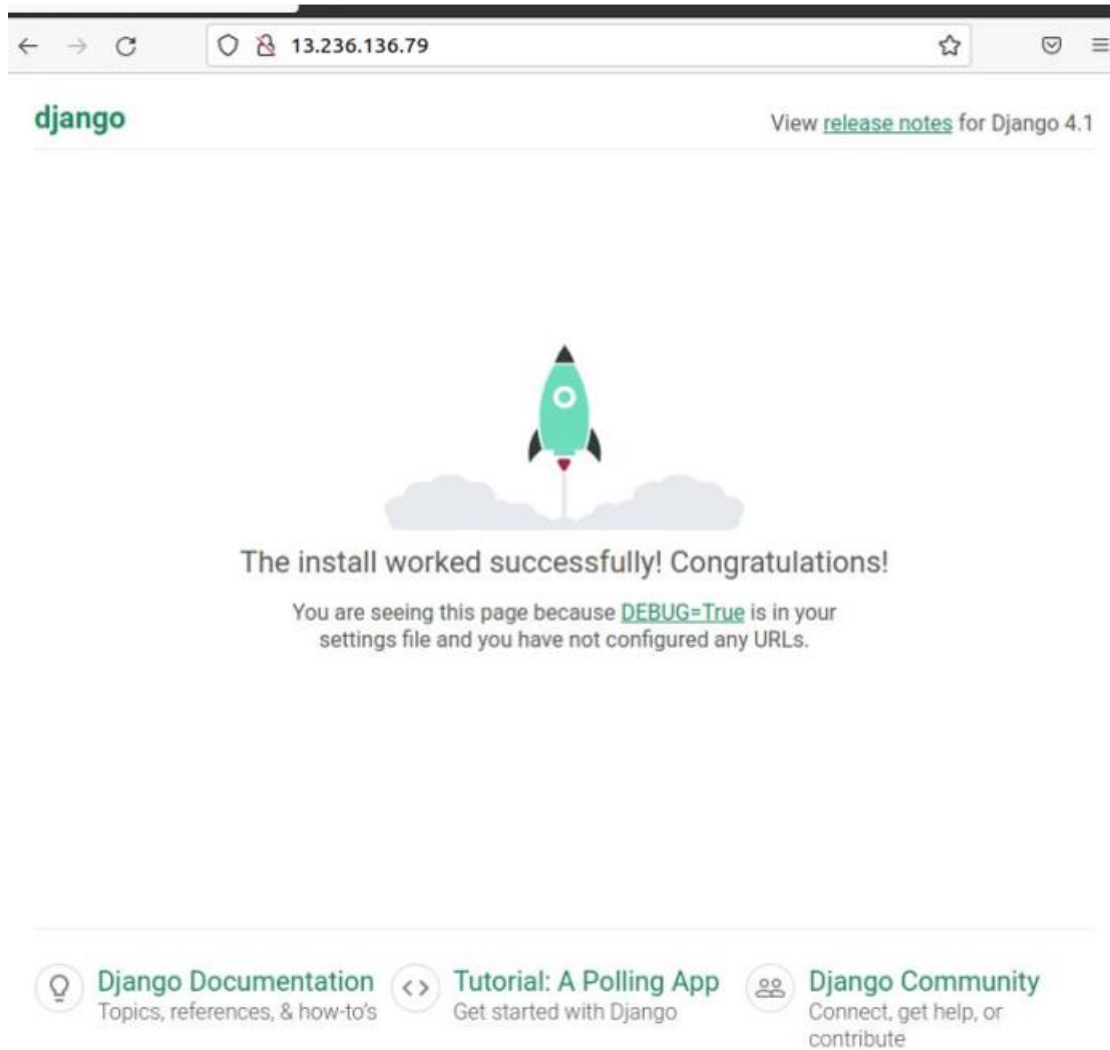
c.run('cd ./lab && python3 manage.py startapp polls')
c.sudo(f'mv ./lab {DIR}')

c.sudo('cd /opt/www/mysites/lab && python3 manage.py runserver 8000')
~
```

Check the document.

```
mjieli@mjieli-VirtualBox: ~/lab7 × ubuntu@ip-172-31-14-155: /opt/www/
ubuntu@ip-172-31-14-155:/$ cd /opt/www/mysites
-bash: cd: /opt/www/mysites: No such file or directory
ubuntu@ip-172-31-14-155:/$ cd /opt/www/mysites
ubuntu@ip-172-31-14-155:/opt/www/mysites$ ls
lab
ubuntu@ip-172-31-14-155:/opt/www/mysites$ cd lab
ubuntu@ip-172-31-14-155:/opt/www/mysites/lab$ ls
lab manage.py polls
ubuntu@ip-172-31-14-155:/opt/www/mysites/lab$ cd polls
ubuntu@ip-172-31-14-155:/opt/www/mysites/lab/polls$ ls
admin.py apps.py __init__.py migrations models.py tests.py views.py
```

Open the browser.



[Step 5] Terminate the instance.

