

Free tier eligible

▼ Key pair (login) [Info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - *required*

22792191-key ▼



[Create new key pair](#)

▼ Network settings [Info](#)

[Edit](#)

Network [Info](#)

vpc-0b754f714cd1af245

Subnet [Info](#)

No preference (Default subnet in any availability zone)

Auto-assign public IP [Info](#)

Enable

Firewall (security groups) [Info](#)

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

☐ Create security group

☒ Select existing security group

Common security groups [Info](#)

Select security groups ▼



[Compare security group rules](#)

22792191-sg sg-0625d7c77737ad40c ✕
VPC: vpc-0b754f714cd1af245

Security groups that you add or remove here will be added to or removed from all your network interfaces.

[EC2](#) > [Instances](#) > Launch an instance



Success

Successfully initiated launch of instance (i-0d9171fbd4d1740cf)

► [Launch log](#)

[Step 2] Install and configure Fabric on your VM

```

moebuta@Lenovo-MoeBuTa:~/2022s2/cits5503/labs/lab7$ pip install fabric
Defaulting to user installation because normal site-packages is not writeable
Collecting fabric
  Downloading fabric-2.7.1-py2.py3-none-any.whl (53 kB)
    53.5/53.5 kB 5.7 MB/s eta 0:00:00
Collecting pathlib2
  Downloading pathlib2-2.3.7.post1-py2.py3-none-any.whl (18 kB)
Collecting paramiko>=2.4
  Downloading paramiko-2.11.0-py2.py3-none-any.whl (212 kB)
    212.9/212.9 kB 8.1 MB/s eta 0:00:00
Collecting invoke<2.0,>=1.3
  Downloading invoke-1.7.1-py3-none-any.whl (215 kB)
    215.4/215.4 kB 8.7 MB/s eta 0:00:00
Collecting bcrypt>=3.1.3
  Downloading bcrypt-4.0.0-cp36-abi3-manylinux_2_28_x86_64.whl (594 kB)
    594.4/594.4 kB 9.8 MB/s eta 0:00:00

```

Create a file named `config` in `~/.ssh` and add the following contents to it:

```

config
ssh > config
1 Host 22792191
2     Hostname ec2-3-26-10-223.ap-southeast-2.compute.amazonaws.com
3     User ubuntu
4     UserKnownHostsFile /dev/null
5     StrictHostKeyChecking no
6     PasswordAuthentication no
7     IdentityFile /home/moebuta/2022s2/cits5503/labs/lab7/22792191-key.pem
8

```

Test fabric from the command line:

```

moebuta@Lenovo-MoeBuTa:~/2022s2/cits5503/labs/lab7$ 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('22792191')
>>> result = c.run('uname -s')
Linux

```

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

Write a script `config_nginx.py` for automate installation of nginx.

```
config_nginx.py X
2022s2 > cits5503 > labs > lab7 > config_nginx.py > ...
1  import os
2  from fabric import Connection
3
4
5  with Connection('22792191') as c:
6      c.sudo('apt update -y')
7      c.sudo('apt upgrade -y')
8      c.sudo('apt install nginx -y')
```

PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE

moebuta@Lenovo-MoeBuTa:~/2022s2/cits5503/labs/lab7\$ python3 config_nginx.py

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

Create a file named `default` and edit the content to prepare for uploading to the ec2 instance.

```
GNU nano 6.2 default *
# include snippets/snakeoil.conf;

root /var/www/html;

# Add index.php to the list if you are using PHP
index index.html index.htm index.nginx-debian.html;

server_name _;

location / {
    # First attempt to serve request as file, then
    # as directory, then fall back to displaying a 404.
    # try_files $uri $uri/ =404;
    proxy_set_header X-Forwarded-Host $host;
    proxy_set_header X-Real-IP $remote_addr;
    proxy_pass http://127.0.0.1:8001;
}
```

Extend `config_nginx.py` script for replace the default file with local file.

```
config_nginx.py X
2022s2 > cits5503 > labs > lab7 > config_nginx.py > ...
1  import os
2  from fabric import Connection
3
4
5  with Connection('22792191') as c:
6      c.sudo('apt update -y')
7      c.sudo('apt upgrade -y')
8      c.sudo('apt install nginx -y')
9      c.sudo('rm /etc/nginx/sites-enabled/default')
10     os.system('scp default 22792191:/home/ubuntu')
11     c.sudo('mv /home/ubuntu/default /etc/nginx/sites-enabled/')
12     c.sudo('service nginx restart')
```

PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE

moebuta@Lenovo-MoeBuTa:~/2022s2/cits5503/labs/lab7\$ python3 config_nginx.py



Write another script to config and run Django.






```
config_nginx.py X config_django.py X
2022s2 > cits5503 > labs > lab7 > config_django.py > ...
1  from fabric import Connection
2
3  with Connection('22792191') as c:
4      c.run('mkdir -p /opt/www/mysites')
5      c.sudo('apt-get install python3-pip -y')
6      c.sudo('apt install python3-django -y')
7      c.sudo('pip3 install django')
8      c.run('django-admin startproject lab')
9      c.sudo('chmod 777 ./lab')
10     c.run('cd ./lab && python3 manage.py startapp polls')
11     c.sudo('mv ./lab /opt/www/mysites')
12     c.run('cd /opt/www/mysites/lab && python3 manage.py runserver 8001')
```

PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE


moebuta@Lenovo-MoeBuTa:~/2022s2/cits5503/labs/lab7\$ python3 config_django.py

We can see the django server is deployed successfully by accessing the ip address of the instance.

The install worked successfully!  


← → ↻  Not secure | 3.26.10.223    Incognito 


django View [release notes](#) for Django 4.1




The install worked successfully! Congratulations!

You are seeing this page because `DEBUG=True` is in your settings file and you have not configured any URLs.

 **Django Documentation**
Topics, references, & how-to's

 **Tutorial: A Polling App**
Get started with Django

 **Django Community**
Connect, get help, or contribute

Now we need to write code to update the code in the django. We will edit `polls/views.py`, `polls/urls.py`, and `lab/urls.py`

```
update_django.py  views.py 2 X  urls.py ~/.../polls 1  urls.py ~/.../lab 3
2022s2 > cits5503 > labs > lab7 > polls > views.py > ...
1  from django.shortcuts import render
2  from django.http import HttpResponse
3
4  def index(request):
5      return HttpResponse('Hello world!!')
6
7
```

```
update_django.py  views.py 2  urls.py ~/.../polls 1 X  urls.py ~/.../lab 3
2022s2 > cits5503 > labs > lab7 > polls > urls.py > ...
1  from django.urls import path
2  from . import views
3  urlpatterns = []
4      path('', views.index, name='index'),
5  ]
6
```

```
update_django.py  views.py 2  urls.py ~/.../polls 1  urls.py ~/.../lab 3 X
2022s2 > cits5503 > labs > lab7 > lab > urls.py > ...
1  from django.contrib import admin
2  from django.urls import include, path
3
4  urlpatterns = []
5      path('polls/', include('polls.urls')),
6      path('admin/', admin.site.urls),
7  ]
8
```

Then we write a script to update the code to the instance:

```
update_django.py X
2022s2 > cits5503 > labs > lab7 > update_django.py > ...
1  from fabric import Connection
2  import os
3
4  with Connection('22792191') as c:
5      c.sudo('rm /opt/wwc/mysites/lab/polls/views.py')
6      c.sudo('rm /opt/wwc/mysites/lab/lab/urls.py')
7      os.system('scp ./polls/views.py 22792191:/opt/wwc/mysites/lab/polls')
8      os.system('scp ./polls/urls.py 22792191:/opt/wwc/mysites/lab/polls')
9      os.system('scp ./lab/urls.py 22792191:/opt/wwc/mysites/lab/lab')
10 c.run('cd /opt/wwc/mysites/lab && python3 manage.py runserver 8001')
```

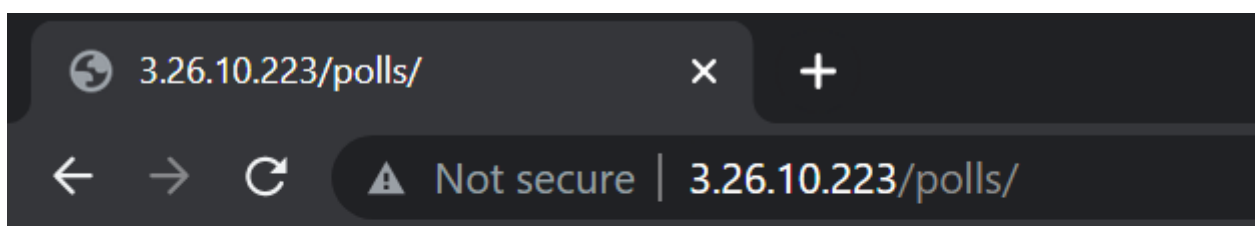
PROBLEMS OUTPUT **TERMINAL** JUPYTER DEBUG CONSOLE

```
moebuta@Lenovo-MoeBuTa:~/2022s2/cits5503/labs/lab7$ python3 update_django.py
Warning: Permanently added 'ec2-3-26-10-223.ap-southeast-2.compute.amazonaws.com,3.26.10.223' (ECDSA) to the list of known hosts.
views.py 100% 136 2.8KB/s 00:00
Warning: Permanently added 'ec2-3-26-10-223.ap-southeast-2.compute.amazonaws.com,3.26.10.223' (ECDSA) to the list of known hosts.
urls.py 100% 108 2.2KB/s 00:00
Warning: Permanently added 'ec2-3-26-10-223.ap-southeast-2.compute.amazonaws.com,3.26.10.223' (ECDSA) to the list of known hosts.
urls.py 100% 170 3.5KB/s 00:00
Watching for file changes with StatReloader
Performing system checks...

System check identified no issues (0 silenced).

You have 18 unapplied migration(s). Your project may not work properly until you apply the migrations for app(s): admin, auth, contenttypes, sessions.
Run 'python manage.py migrate' to apply them.
September 30, 2022 - 09:30:37
Django version 4.1.1, using settings 'lab.settings'
Starting development server at http://127.0.0.1:8001/
Quit the server with CONTROL-C.
```

We can see the 'Hello world!!!' is displayed in the webpage by accessing the ip address of the instance.



Hello world!!

[Step 5] Terminate the instance

Terminate instance?



On an EBS-backed instance, the default action is for the root EBS volume to be deleted when the instance is terminated. Storage on any local drives will be lost.

Are you sure you want to terminate these instances?



i-0d9171fbd4d1740cf (22792191)

To confirm that you want to terminate the instances, choose the terminate button below. Terminating the instance cannot be undone.

Cancel

Terminate



Successfully terminated i-0d9171fbd4d1740cf

[EC2](#) > [Instances](#) > i-0d9171fbd4d1740cf

Instance summary for i-0d9171fbd4d1740cf (22792191)

[Info](#)

Updated less than a minute ago