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Create instance from AWS console selecting Ubuntu
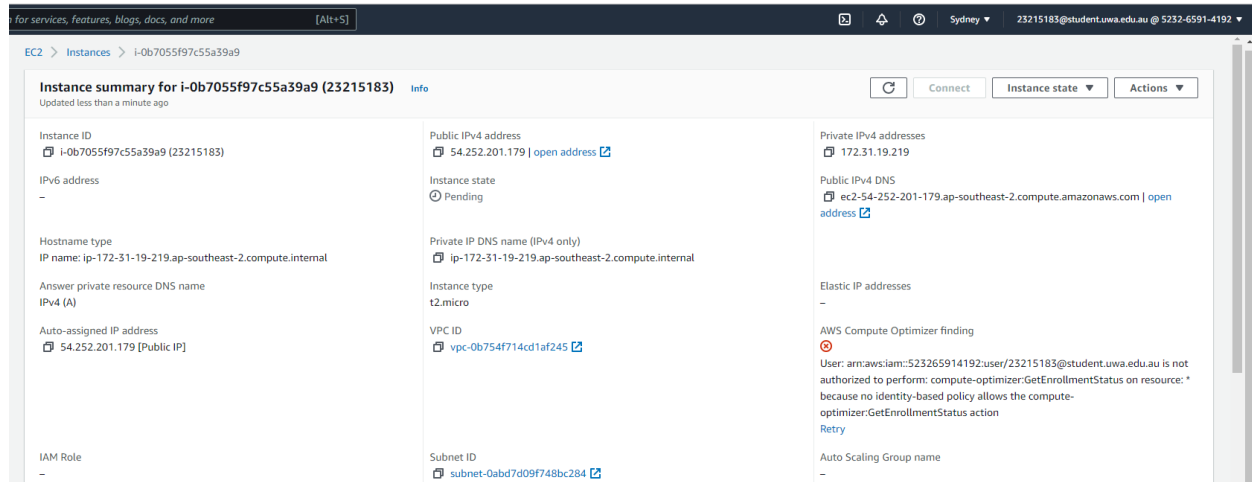

Fig 1: Instance details

Install fabric

The figure shows that fabric is already installed.

Fig 2: Install fabric

Configuration for fabric

Fig 3: Code for config file

Also write a python file to run the command

```
1 from fabric import Connection
2 c = Connection('lab7')
3 result = c.run('uname -s')
```

Fig 4: Code for python

After run the python file the output is

```
ronjon@ronjon-VirtualBox:~/.ssh$ ls
23215183-keylab7.pem  config  c.py  known_hosts
ronjon@ronjon-VirtualBox:~/.ssh$ python3 c.py
Linux
ronjon@ronjon-VirtualBox:~/.ssh$ █
```

Fig 5: Linux run in public DNS

Then I create a code folder with polls and lab within it.

```
ronjon@ronjon-VirtualBox:~/.ssh$ cd code
ronjon@ronjon-VirtualBox:~/.ssh/code$ ls
lab  polls
ronjon@ronjon-VirtualBox:~/.ssh/code$ cd lab
ronjon@ronjon-VirtualBox:~/.ssh/code/lab$ ls
urls.py
ronjon@ronjon-VirtualBox:~/.ssh/code/lab$ cd ..
ronjon@ronjon-VirtualBox:~/.ssh/code$ cd polls/
ronjon@ronjon-VirtualBox:~/.ssh/code/polls$ ls
urls.py  views.py
ronjon@ronjon-VirtualBox:~/.ssh/code/polls$ █
```

Fig 6: Code folder

Create a default file

```
    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://127.0.0.1:8000;
    }
```

Fig 7: Default file with proxy setting

Then create installation python script for nginx and django

```python
from fabric import Connection
import os

c = Connection('lab7')

# Update Packages
c.sudo('apt update -y')
c.sudo('apt upgrade -y')

# Install nginx
c.sudo('apt install nginx -y')

### Edit /etc/nginx/sites-enabled/default
# Delete first if exists
try:
    c.sudo('rm /etc/nginx/sites-enabled/default')
except:
    print('Delete error')

# Transfer default file
os.system('scp ./default lab7:/home/ubuntu')

# Replace default file
c.sudo('mv /home/ubuntu/default /etc/nginx/sites-enabled/')

c.sudo('service nginx restart')
```

Fig 8: Code for nginx install

```python
from fabric import Connection
import os

c = Connection('lab7')

DIR = '/opt/wwc/mysites'

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

# Step 1: Create Project
c.run('django-admin startproject lab')
c.run('cd ./lab && python3 manage.py startapp polls')
c.sudo(f'mv ./lab {DIR}')

# Run Server

c.sudo('python3 /opt/wwc/mysites/lab/manage.py runserver 8000')
```

Fig 9: Code for Django install

Not secure | 54.252.201.179

502 Bad Gateway
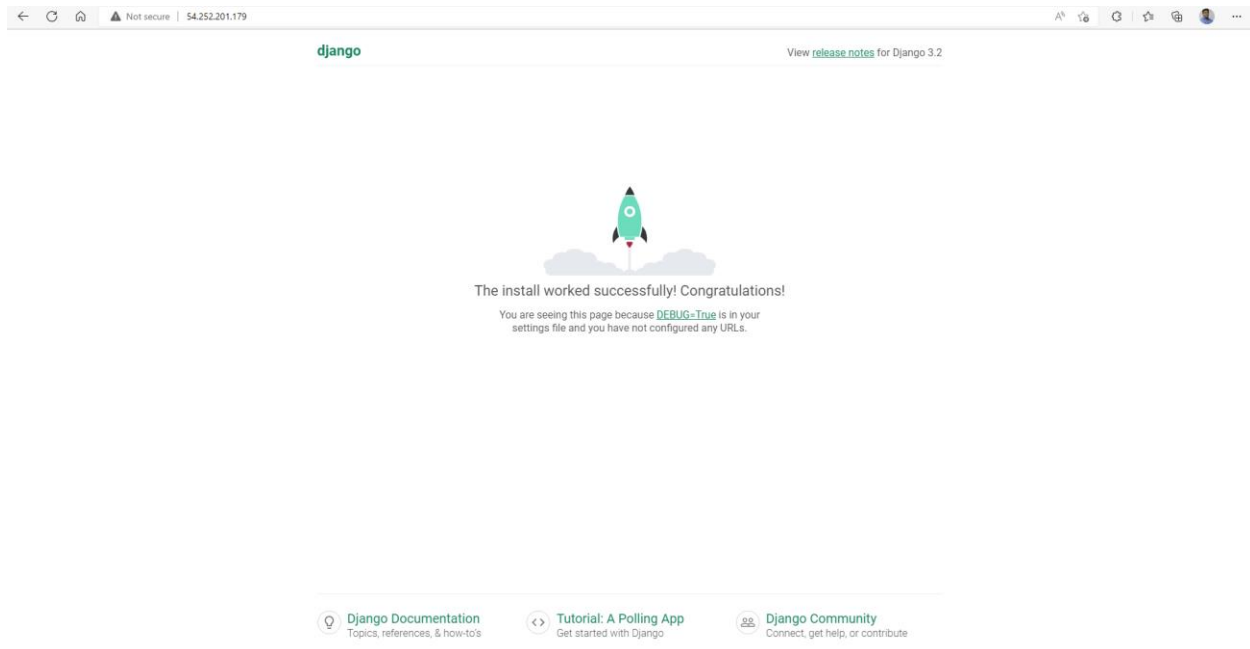
nginx/1.14.0 (Ubuntu)

Fig 10: nginx installed

Fig 11: Django installed

After edit the polls/views.py file with the code:

from django.http import HttpResponse
def index(request):
*   return HttpResponse("Hello, world.")*
edit polls/urls.py

from django.urls import path
from . import views
urlpatterns = [
*   path('', views.index, name='index'),*
]
edit lab/urls.py

from django.urls import include, path
from django.contrib import admin
urlpatterns = [
*   path('polls/', include('polls.urls')),*
*   path('admin/', admin.site.urls),]*

```
from fabric import Connection
import os

c = Connection('lab7')

# Delete files
c.run('rm /opt/wwc/mysites/lab/polls/views.py')
c.run('rm /opt/wwc/mysites/lab/lab/urls.py')

# Copy files
os.system('scp ./code/polls/views.py lab7:/opt/wwc/mysites/lab/polls')
os.system('scp ./code/polls/urls.py lab7:/opt/wwc/mysites/lab/polls')
os.system('scp ./code/lab/urls.py lab7:/opt/wwc/mysites/lab/lab')


# Run server
c.sudo('python3 /opt/wwc/mysites/lab/manage.py runserver 8000')
```

Fig 12: copy the new urls.py and views.py and run server

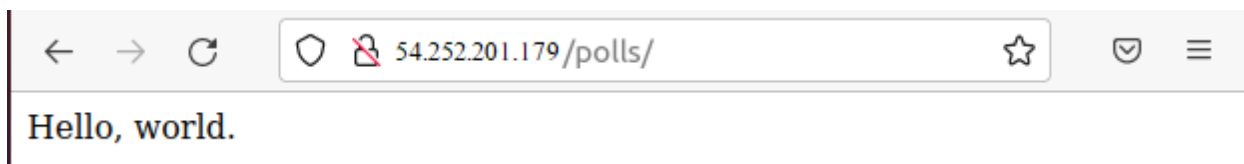Finally the Hello world shows in the polls folder using public DNS

Fig 13: Hello world in public DNS polls folder
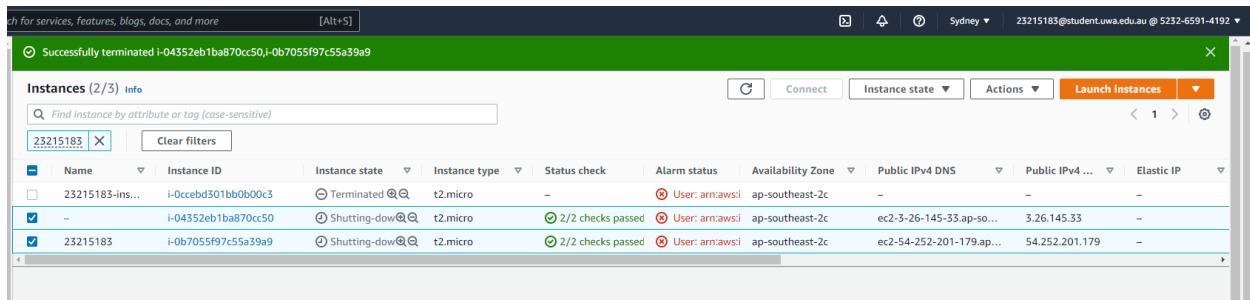
After completing all the steps I terminate the instance
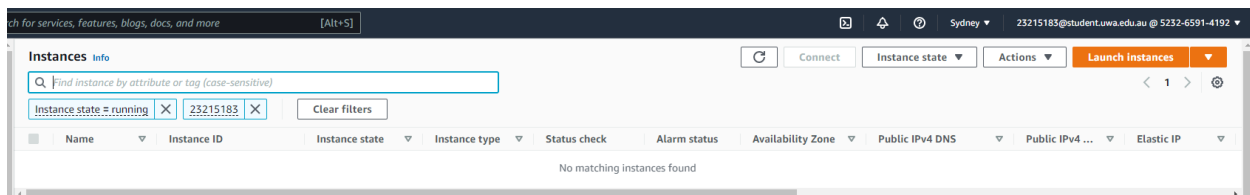

Fig 14: Instance terminate

Fig 15: no instance