# Assignment 2 report

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Link to album.php website: http://vtranelb-731854279.us-east-1.elb.amazonaws.com/photoalbum/album.php

#### A. VPC and related functionalities.

### 1) VPC

I created VPC, subnets, route tables and internet gateway following the given architecture diagram A private and a public subnet with suitable CIDR ranges in two different avaibality zones.

Firgue 1 illustrates VTranVPC in detail.

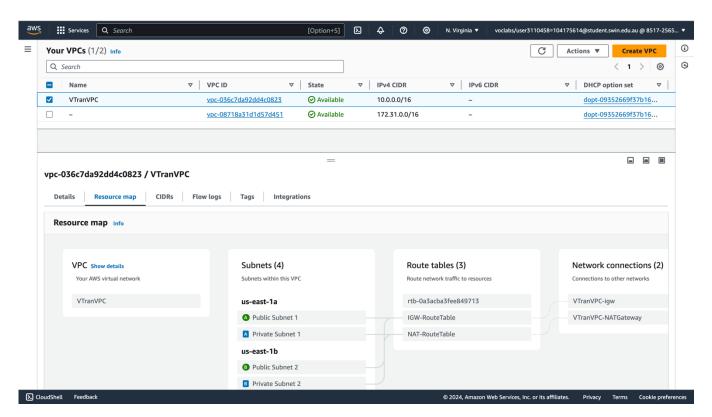


FIGURE 1

## 2) Security group:

Four security groups are created (NATServerSG is redundant), all follows the least-privilege principle, each associates with required tier in the architecture diagram

Q Search

Name

sgr-0204fb1b3461efc15

∑ CloudShell Feedback

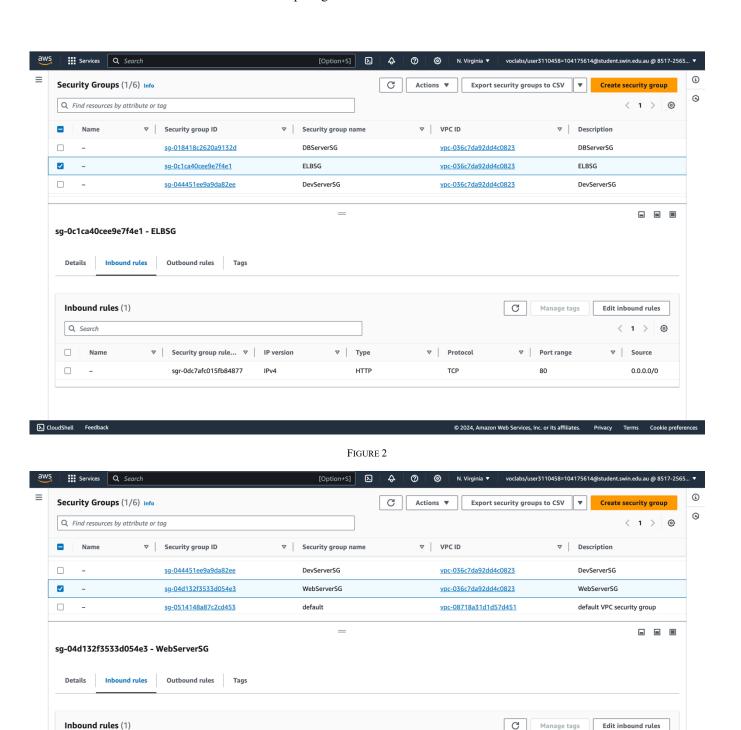


FIGURE 3

**▽** Type

HTTP

▼ | Protocol

TCP

< 1 >

**▽** Source

0.0.0.0/0

▼ Port range

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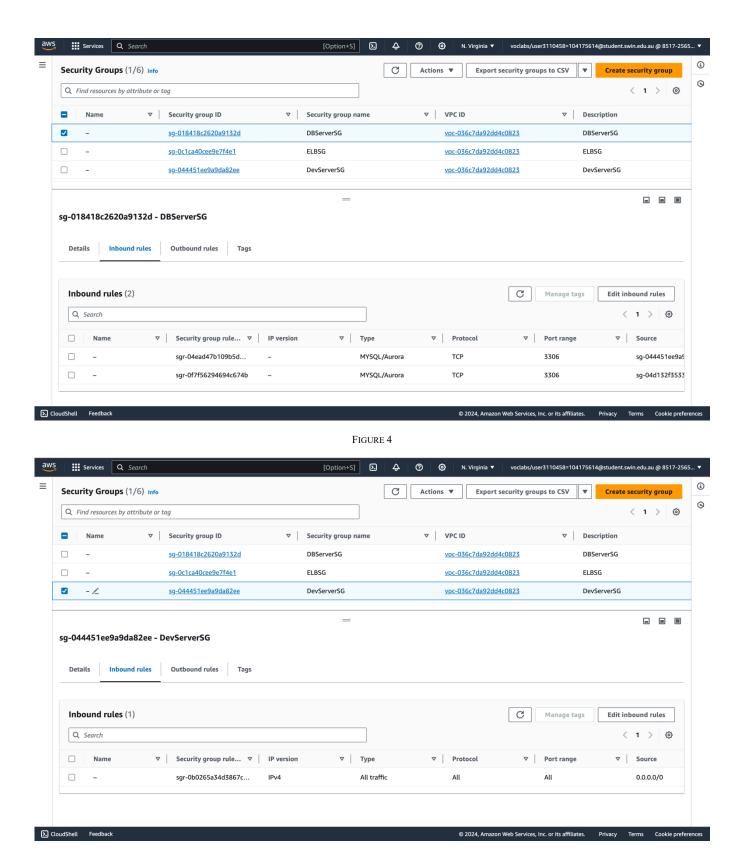


FIGURE 5

# 3) Network ACL

The rules needed have been added to access Web Server from public (protocol, type, source)

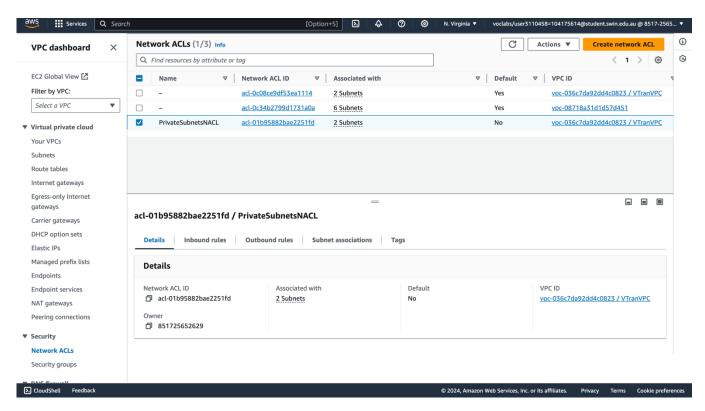


FIGURE 8

B. Create component for a highly available network:

1) DevServer launch template Services Q Search @ Instances (1/7) Info Connect Instance state ▼ C Actions ▼ EC2 Dashboard 0 1 FC2 Global View Q Find Instance by attribute or tag (case-sensitive) All states ▼ Events Name 🖊 **▽** Instance ID ▼ Status check Alarm status Availability Zone ▼ | Public IP Instance state ▼ Instance type Console-to-Code Preview ⊗ Running 
② 
Q DEV i-0040e594f2a0029d6 Initializing View alarms + t2.micro us-east-1b **▼** Instances ⊗ Running 
② 
○ DevServer i-07f11f7d73ef169d0 t2.micro (1) Initializing View alarms + us-east-1b i-09ffe2d8b4e8f21c8 ⊗ Running 
② 
② t1.micro View alarms + us-east-1b Instance Types i-00b5536d8350a5efb ⊗ Running 
⊕ 
⊖ t1.micro Initializing View alarms + us-east-1a Launch Templates i-0a026ca4594fb8ff5 ⊘ Running ⊕ ⊖ t1.micro Initializing View alarms + Spot Requests DevServer-VTran i-01eb5b13fd9e6b857 Initializing View alarms + ec2-44-22 Savings Plans **✓** i-063ccde76e5c4c20e t1.micro Initializing View alarms + Reserved Instances **Dedicated Hosts** Capacity Reservations New i-063ccde76e5c4c20e ΔMIs Details Status and alarms New Monitoring Security Networking Storage AMI Catalog **▼** Elastic Block Store **▼** Instance summary Info Volumes Private IPv4 addresses Instance ID Public IPv4 address ☐ i-063ccde76e5c4c20e 10.0.4.222 Lifecycle Manager IPv6 address Instance state Public IPv4 DNS **⊘** Running ▼ Network & Security Private IP DNS name (IPv4 only) Hostname type Security Groups

ip-10-0-4-222.ec2.internal

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FIGURE 9

IP name: ip-10-0-4-222.ec2.internal

Elastic IPs

CloudShell Feedback

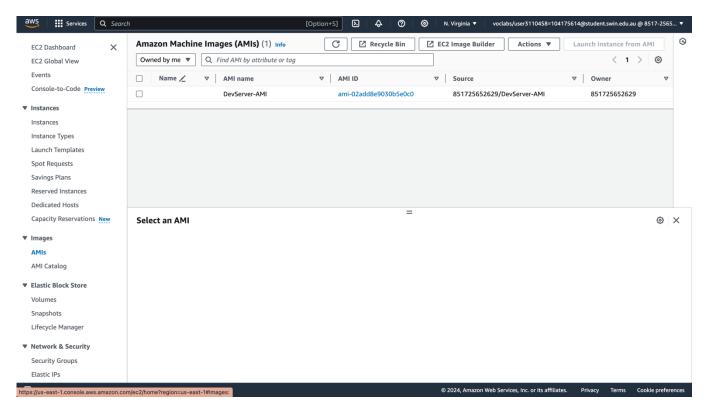


FIGURE 10

## 2) Create Auto Scaling Group

Config the auto scaling group in the "Target group" tab

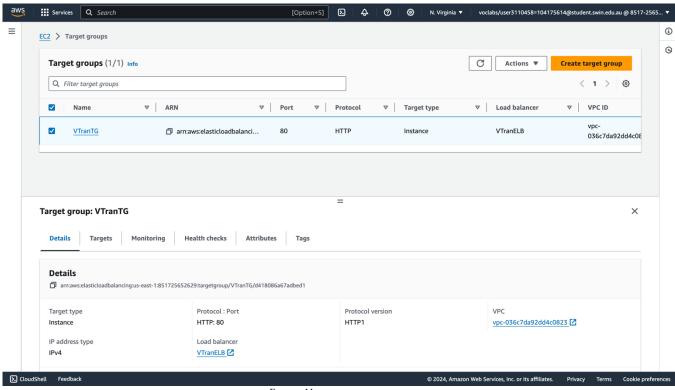


FIGURE 11

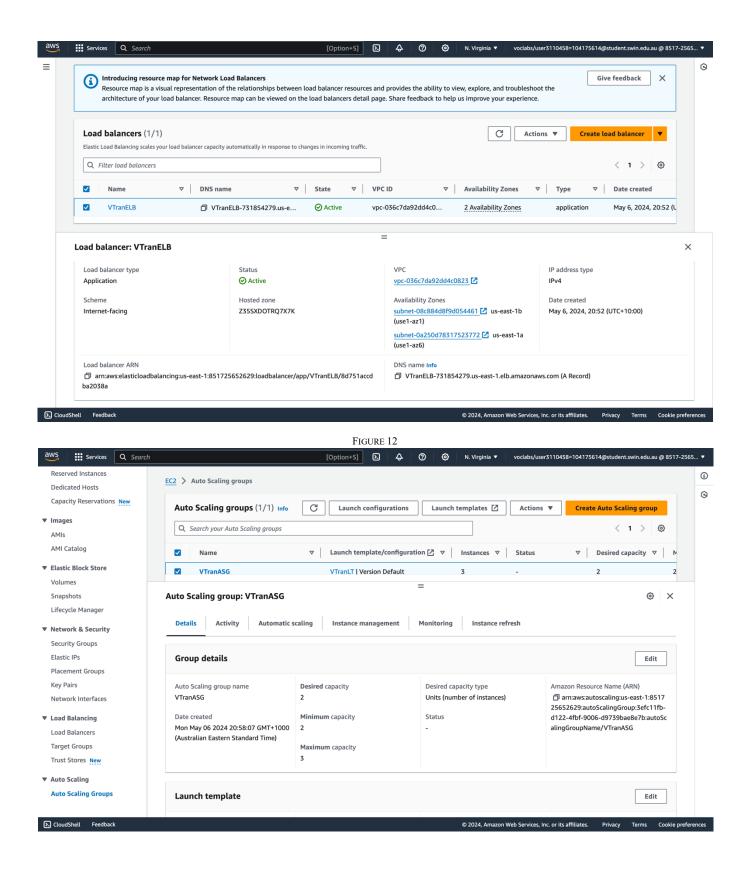


FIGURE 13

## C. S3 bucket and Lambda function:

1. Creating S3 bucket

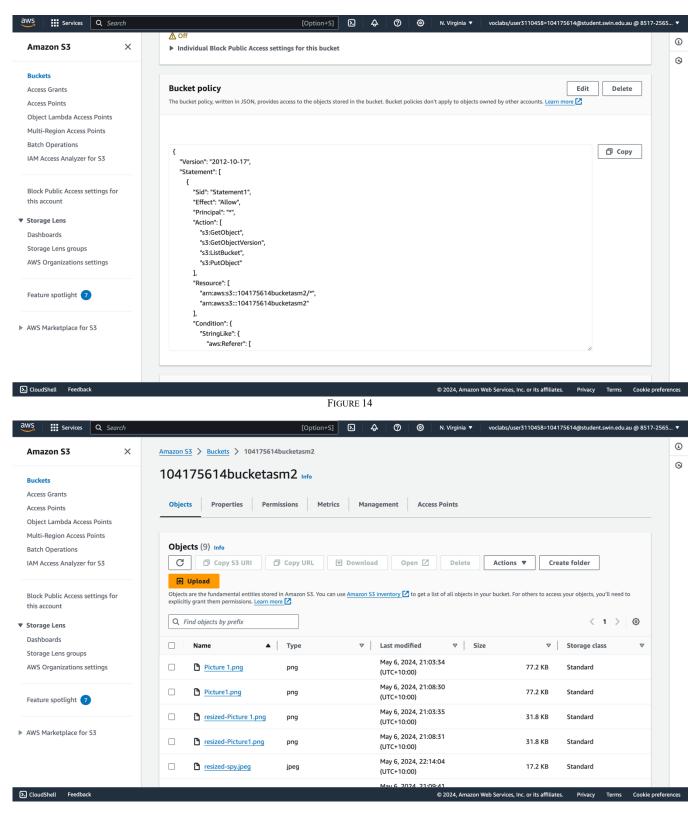


FIGURE 15

# 2. Creating Lambda function

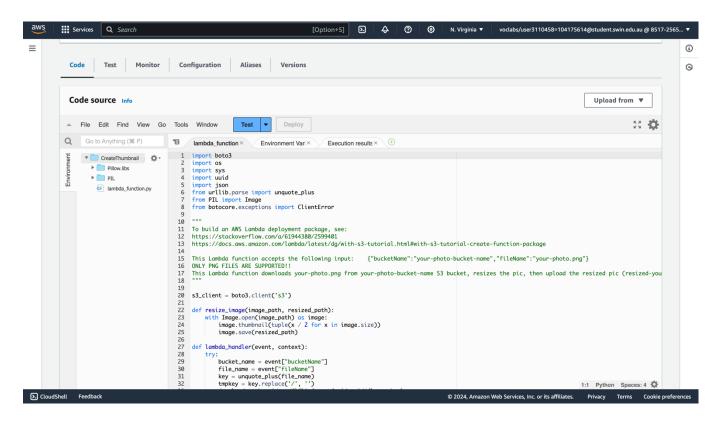
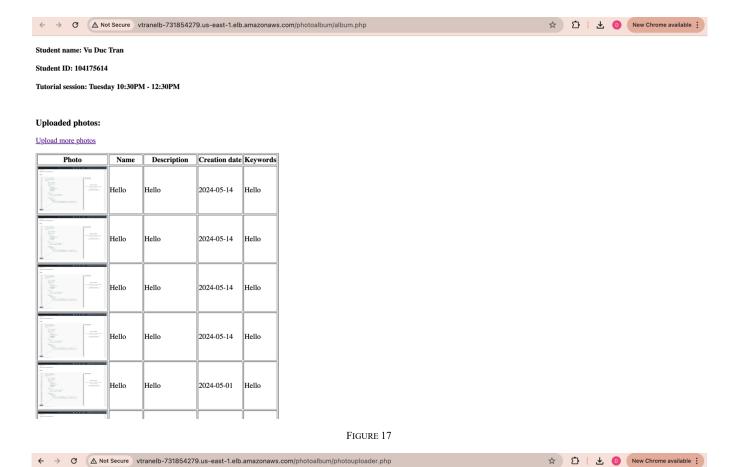


FIGURE 16

#### D. Website

Website can be constantly accessed through the link:  $\underline{\text{http://vtranelb-731854279.us-east-1.elb.amazonaws.com/photoalbum/album.php}}$ 



# Photo uploader

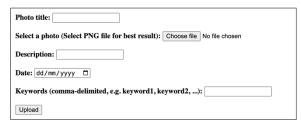


Photo Album