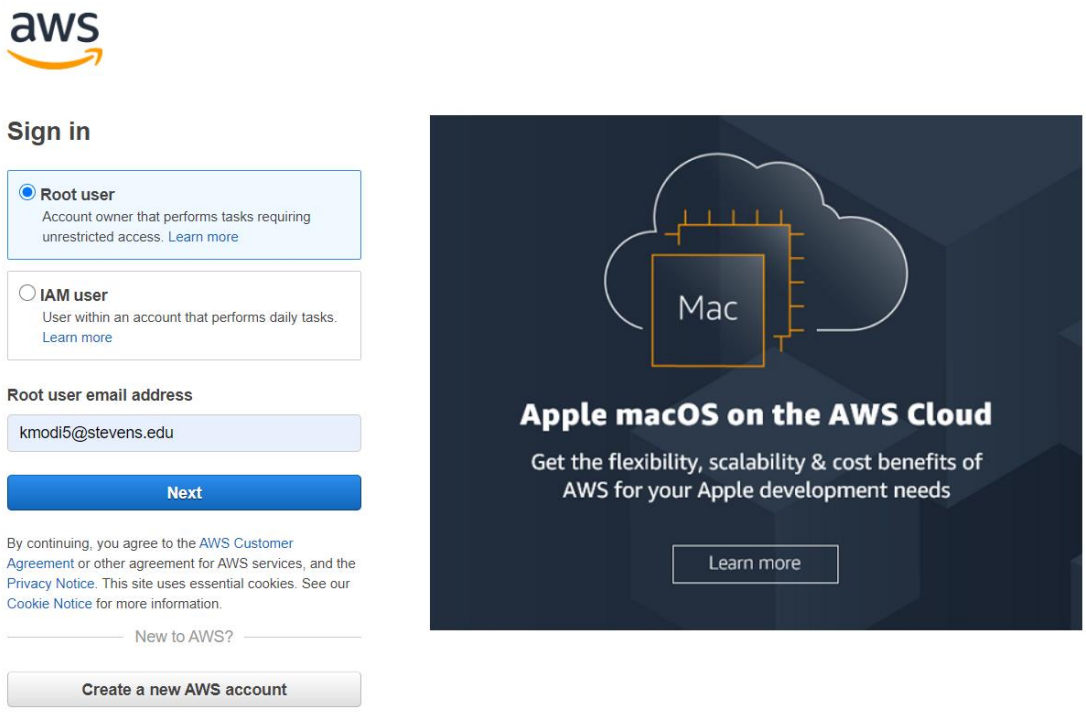
Lab 3: CS 524

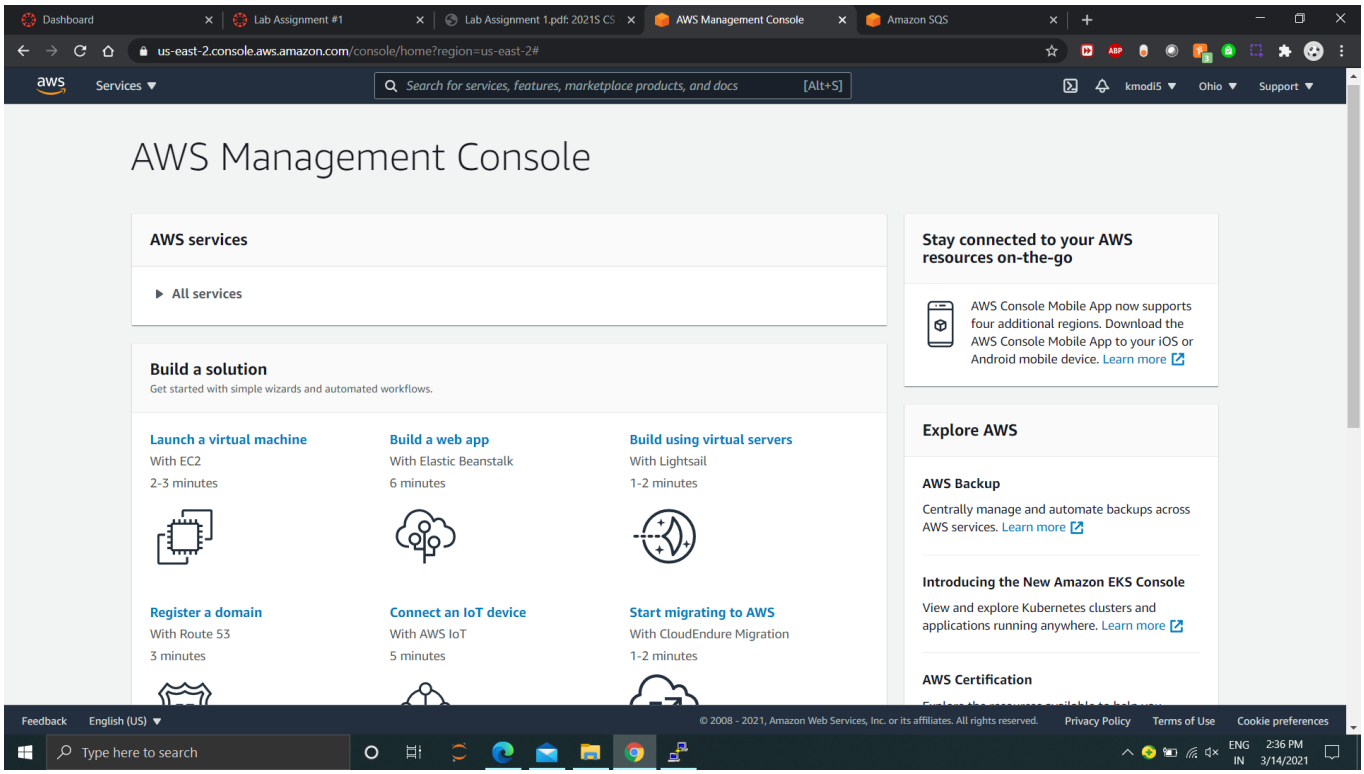
In this assignment, you will learn to develop and load-balance your own infrastructure (a server farm) using CloudFormation

ANS.

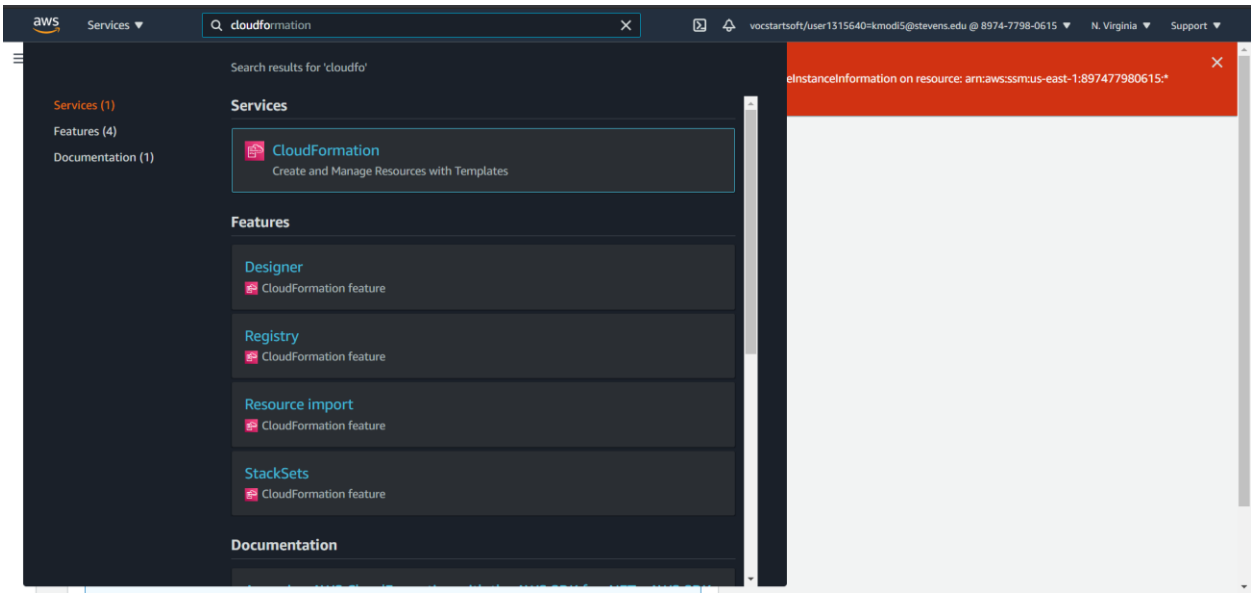
a. Once registered for AWS, now go into AWS Console



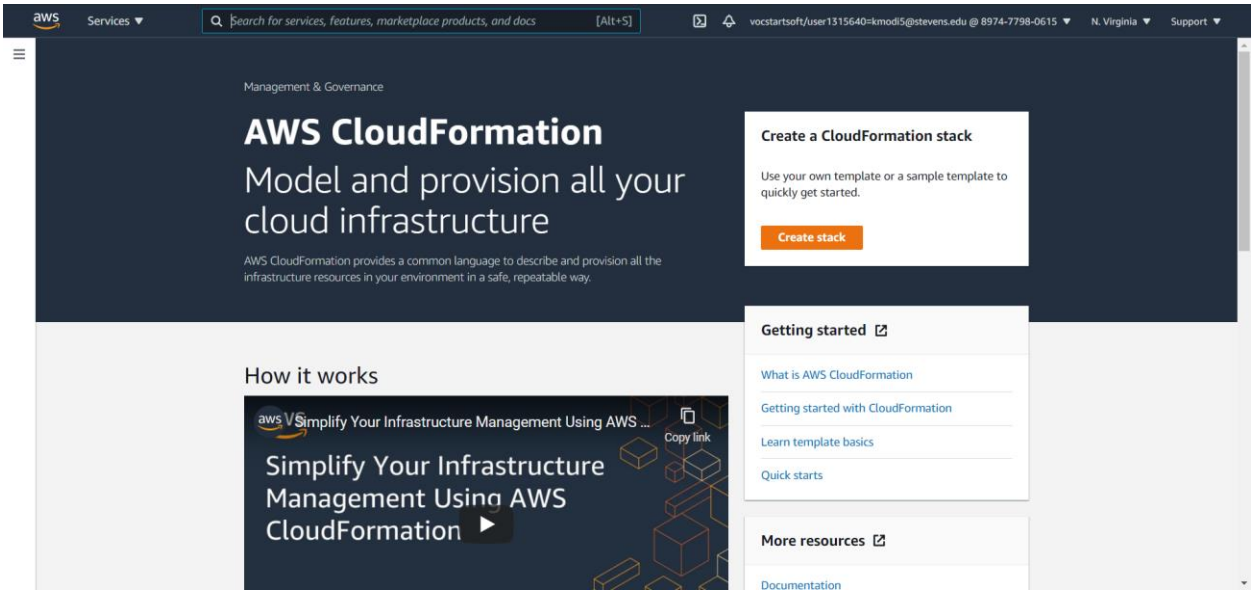
b. Go into AWS Console and Launch a virtual machine



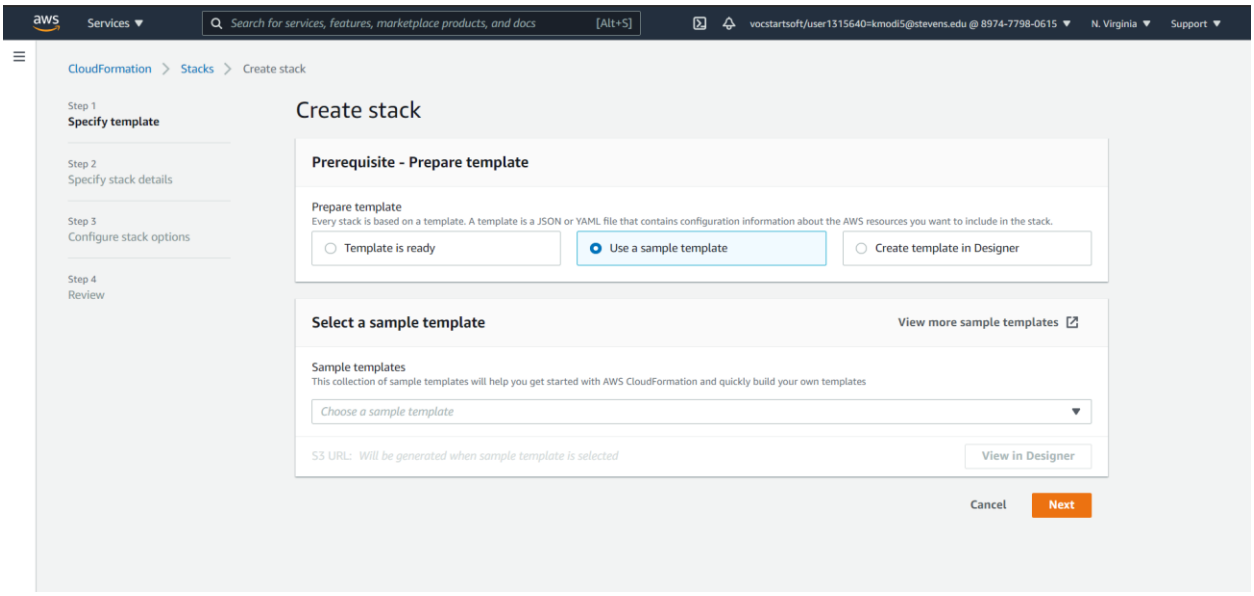
c. Search CloudFormation



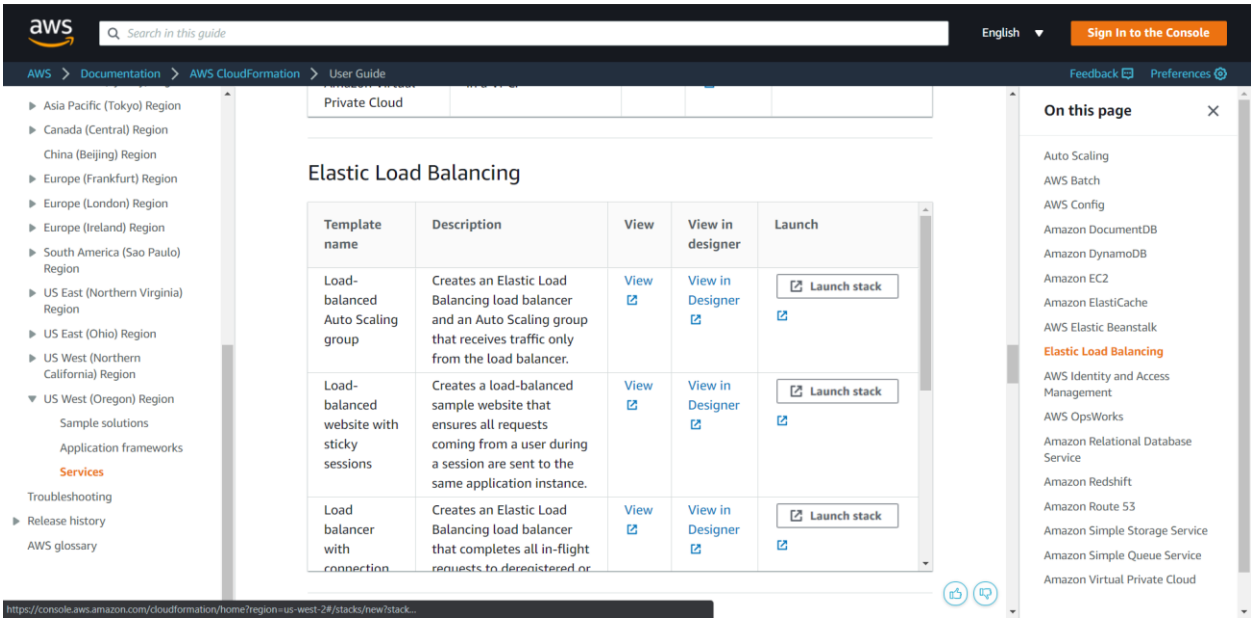
d. Create Stack on CloudFormation



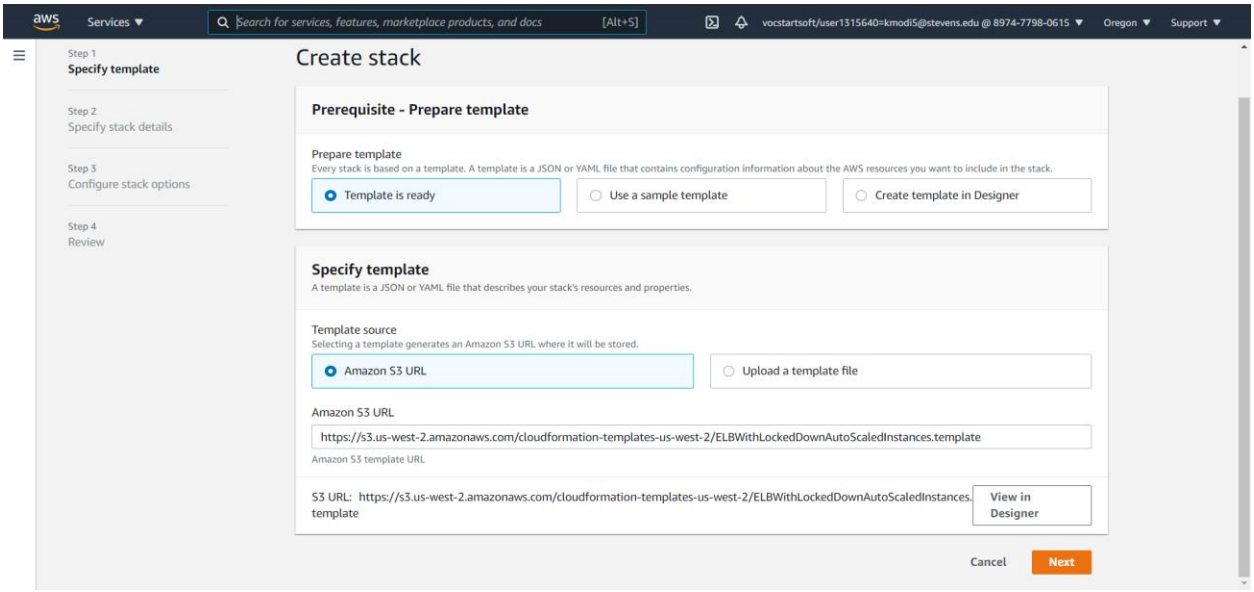
e. Use a sample template or import your own template



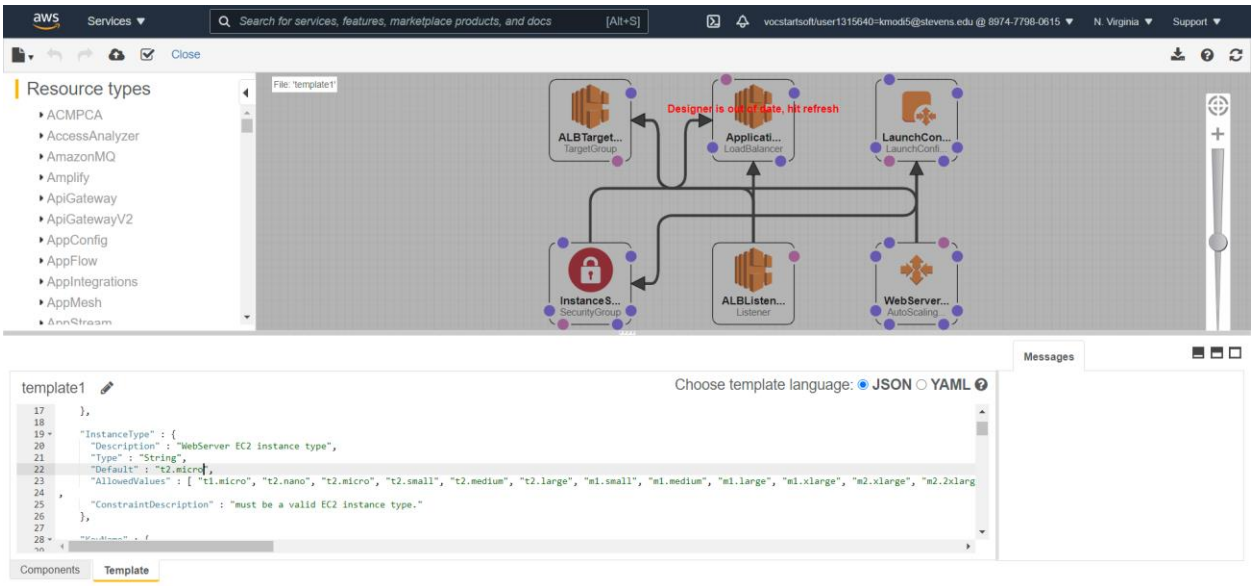
f. Importing Load Balancing sample



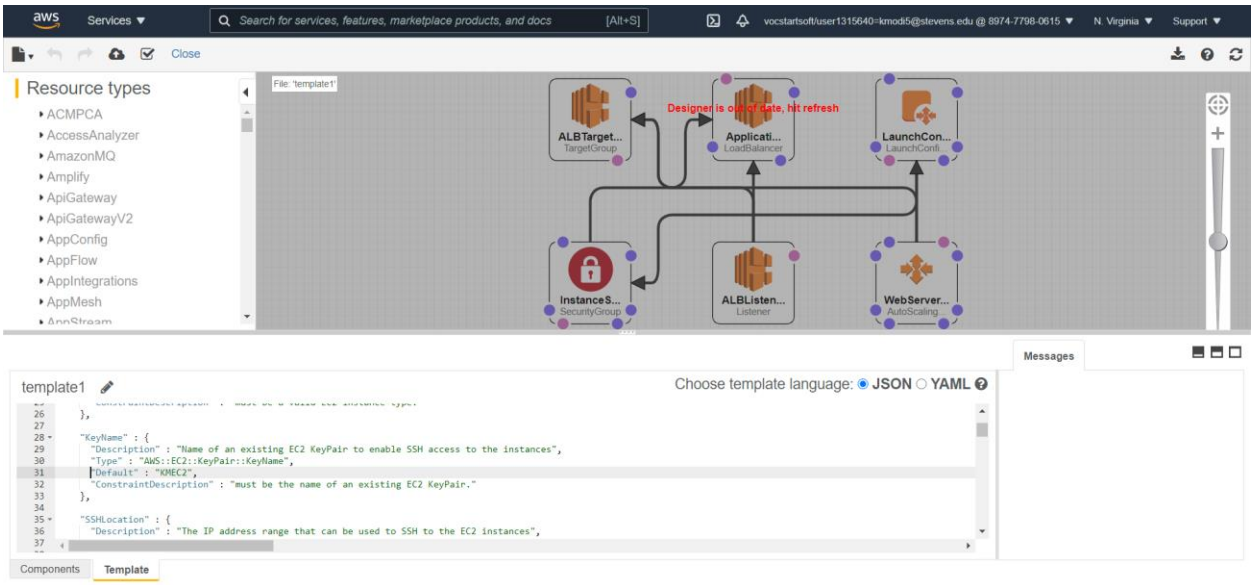
g. Use Load Balancing Auto Scaling Template and Click on View in Designer



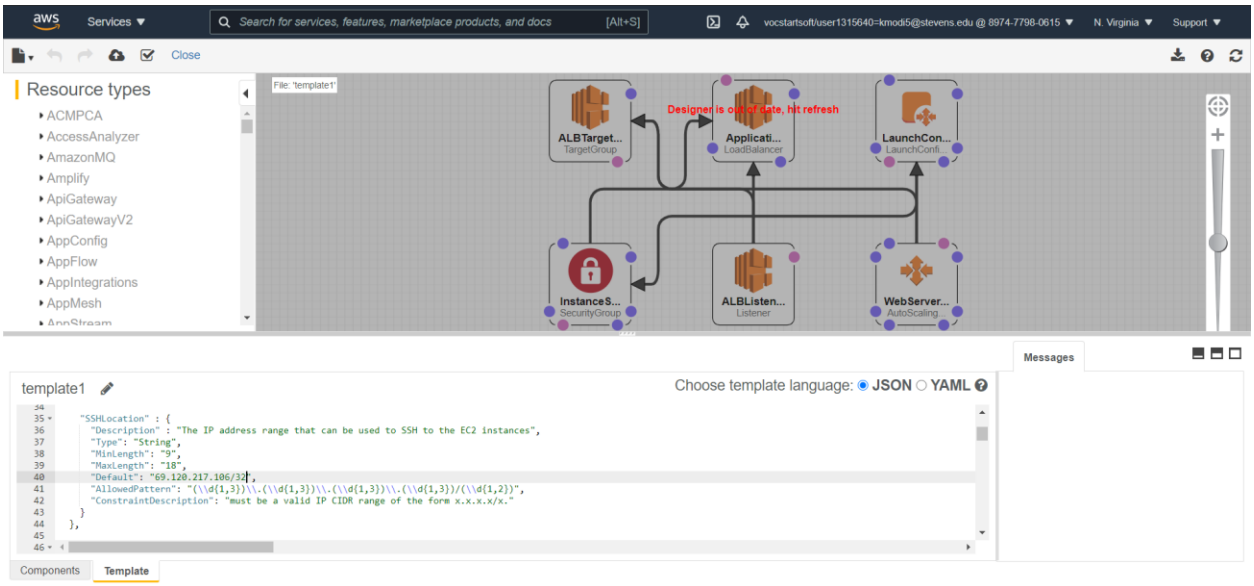
h. Change instance type to t2.micro



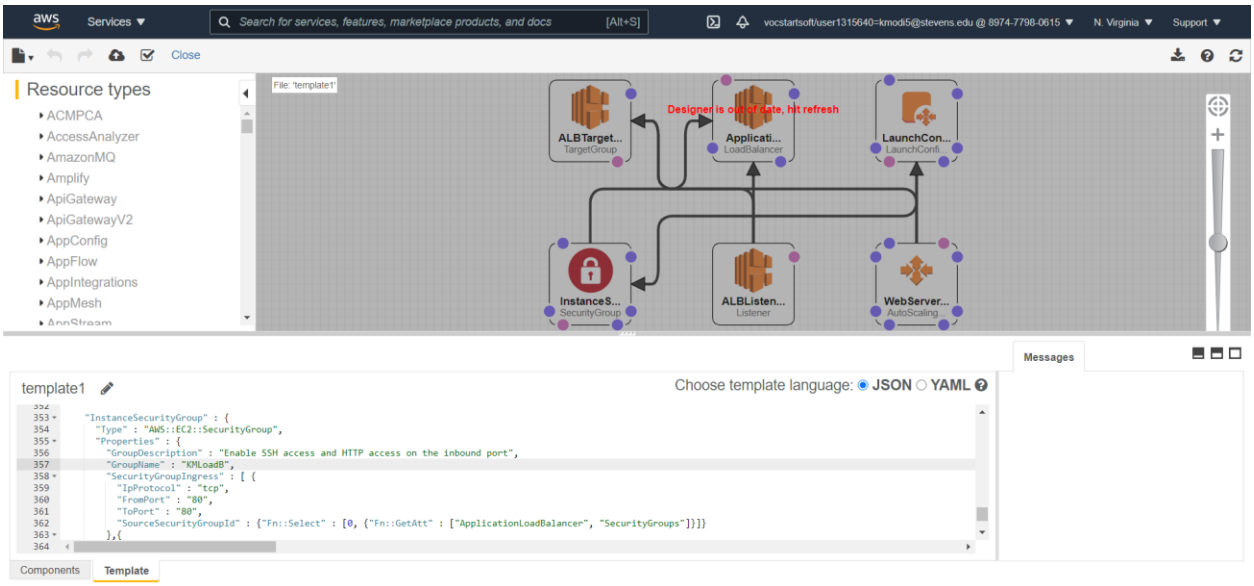
i. Change key name to your key



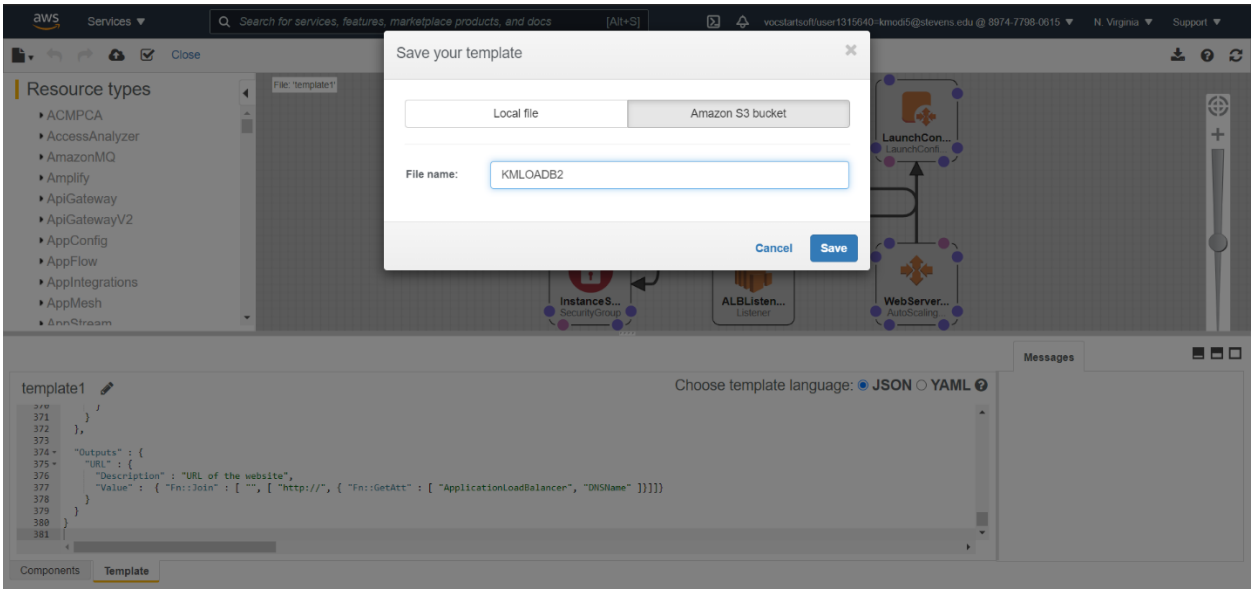
j. Use your location for SSH



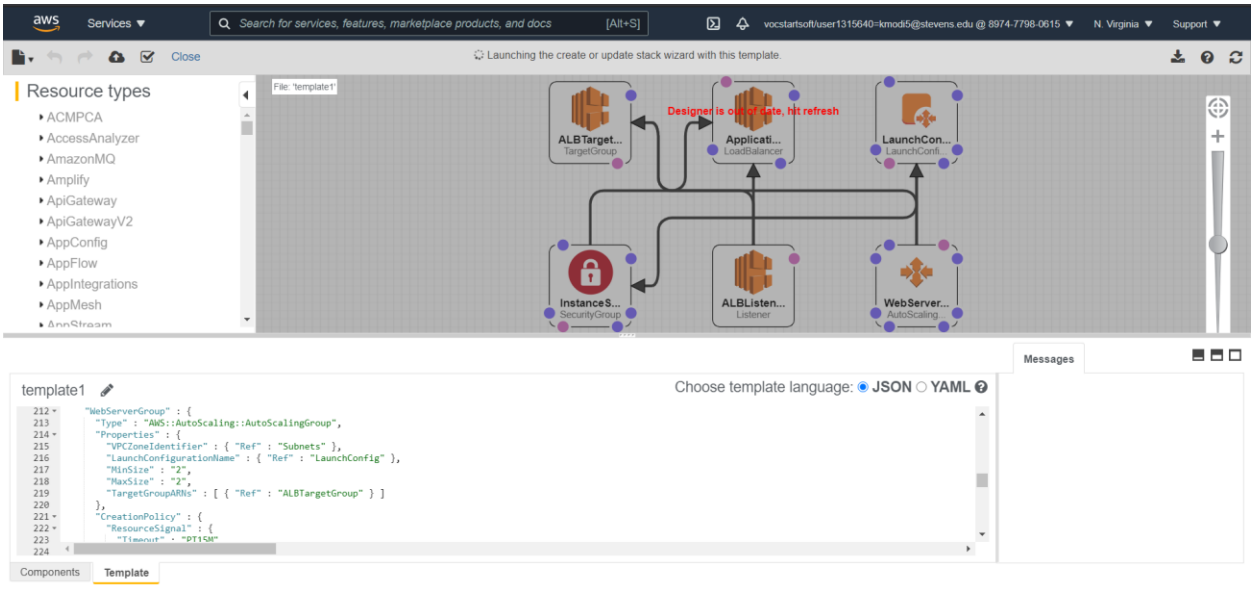
k. Give a name to your Security Group



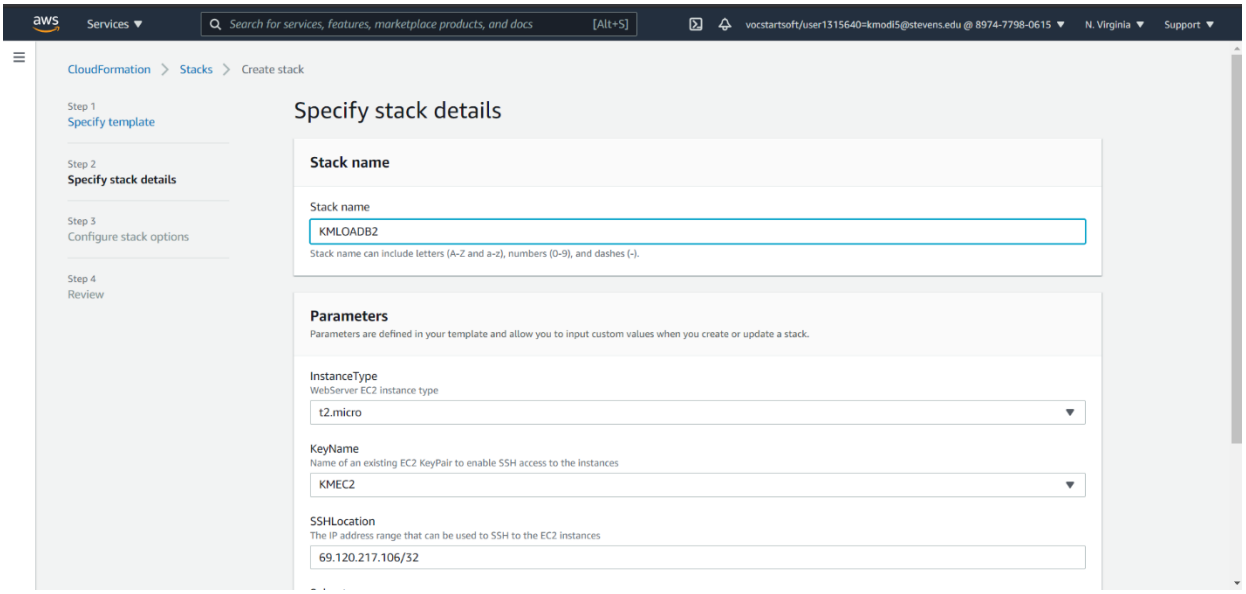
l. Save your Template

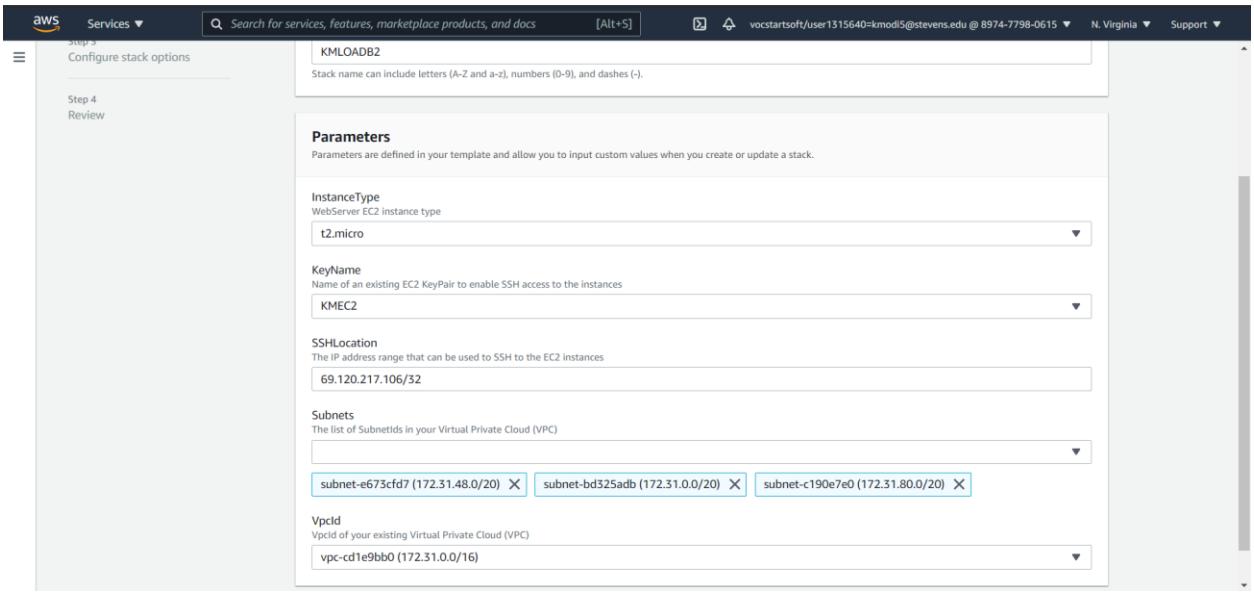


m. Launch the Stack

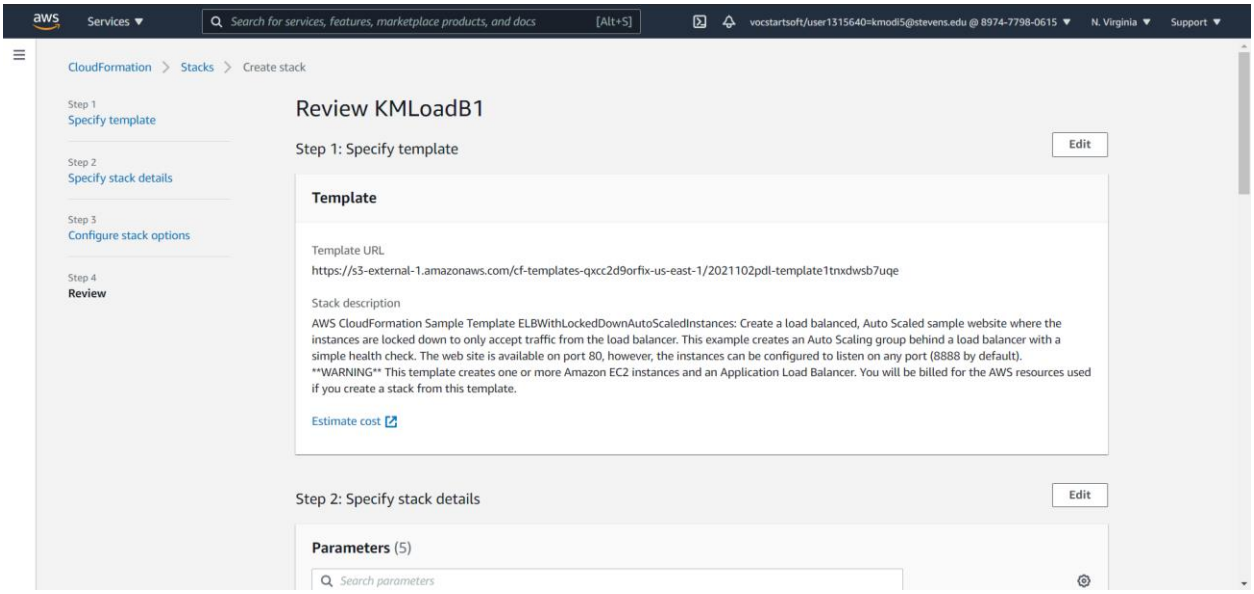


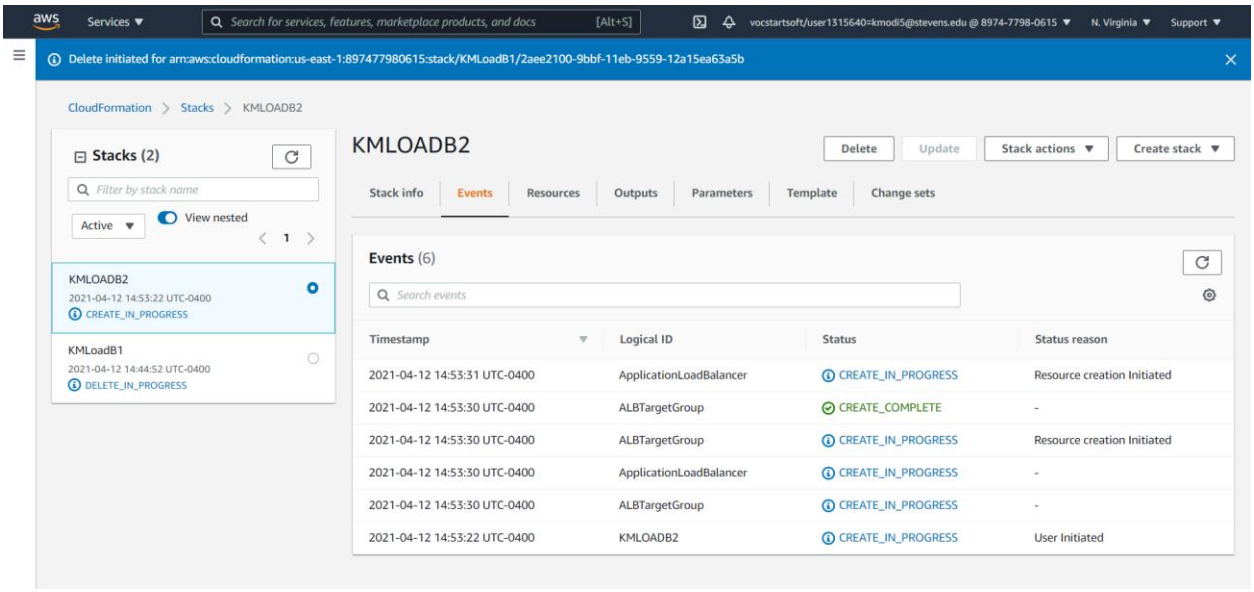
n. Configure the Parameters



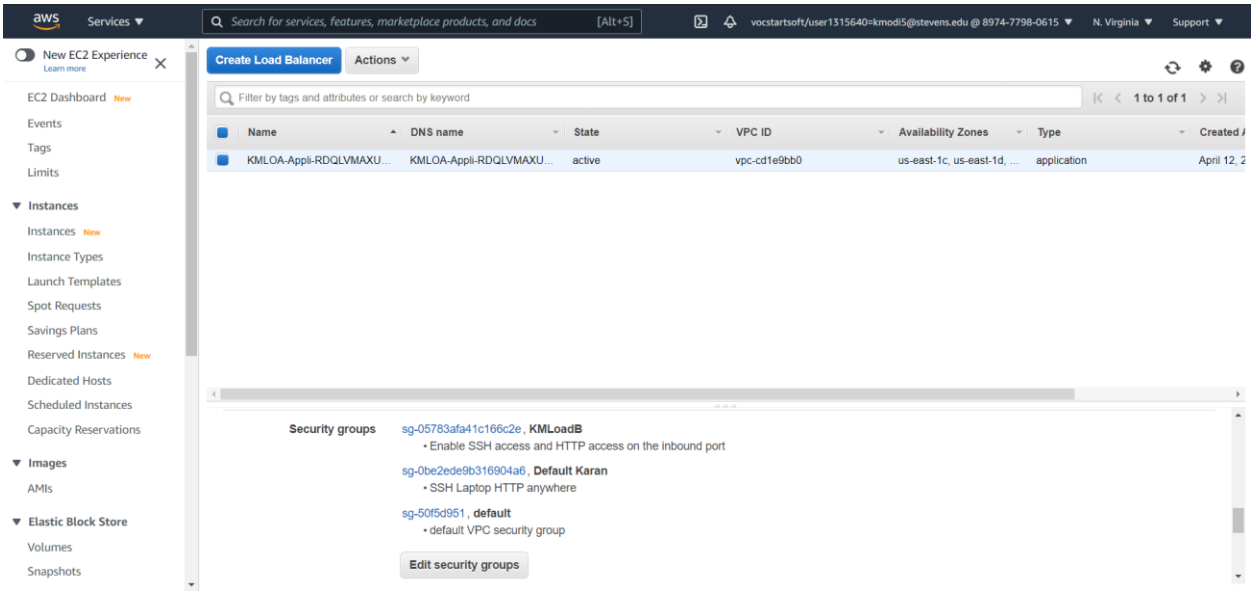


o. Review and create the stack

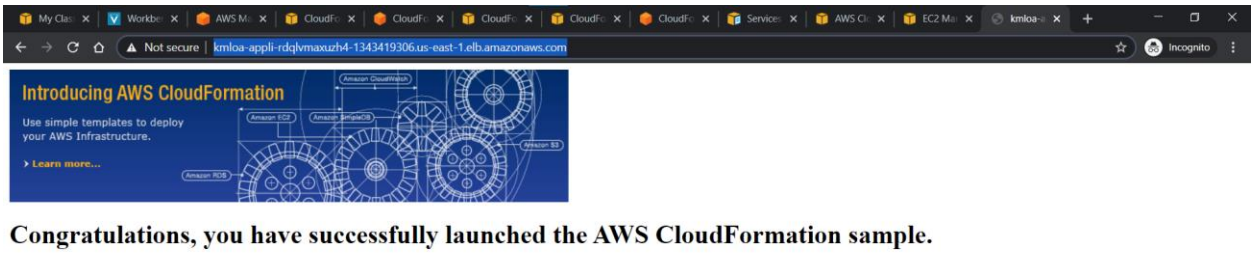




p. Now change the security group

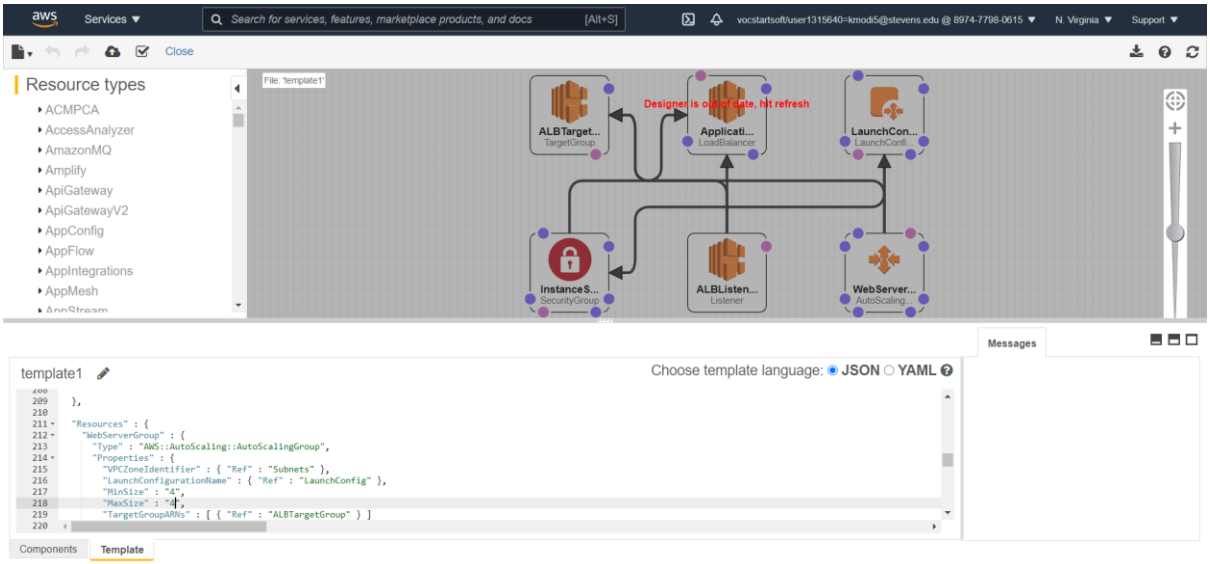


q. Launch the website http://kmloa-appli-rdqlvmaxuzh4-1343419306.us-east-1.elb.amazonaws.com/

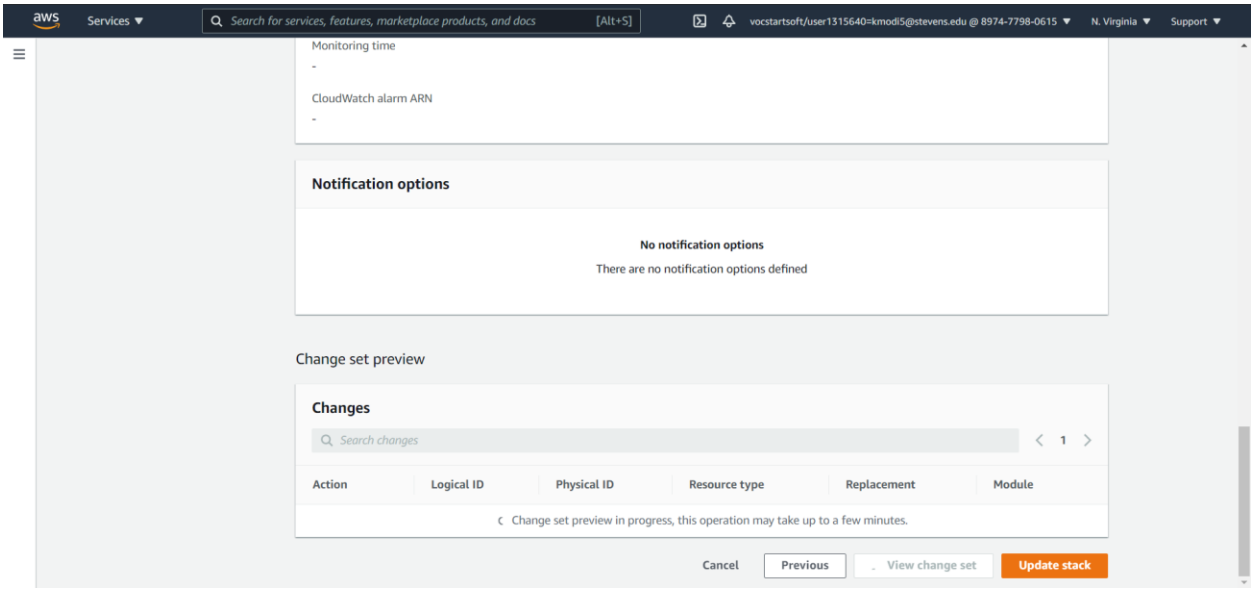


Congratulations, you have successfully launched the AWS CloudFormation sample.

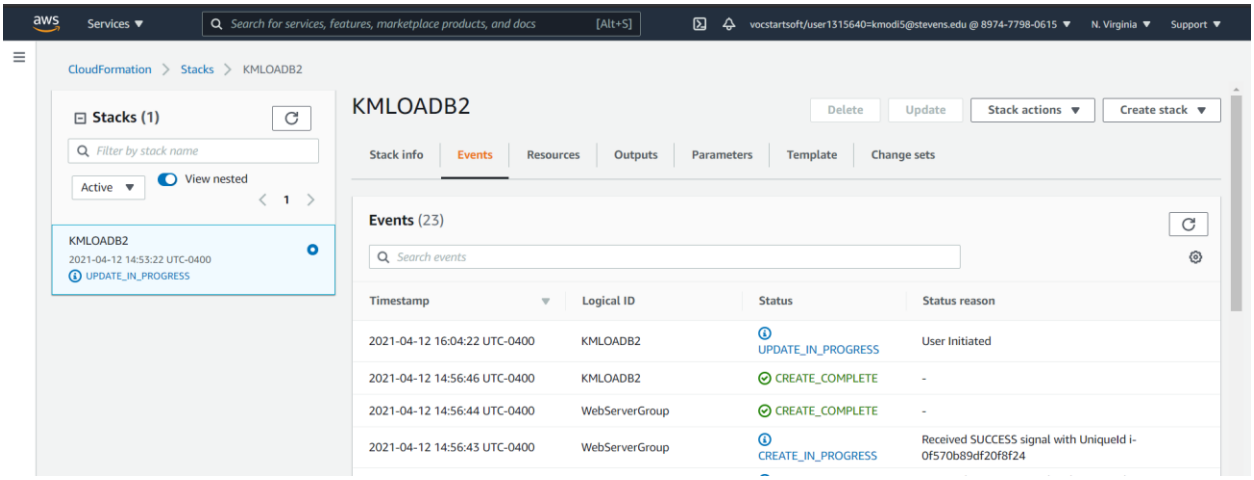
r. Edit Resource file and set min max size as 4 to recreate 4 servers like lab 2



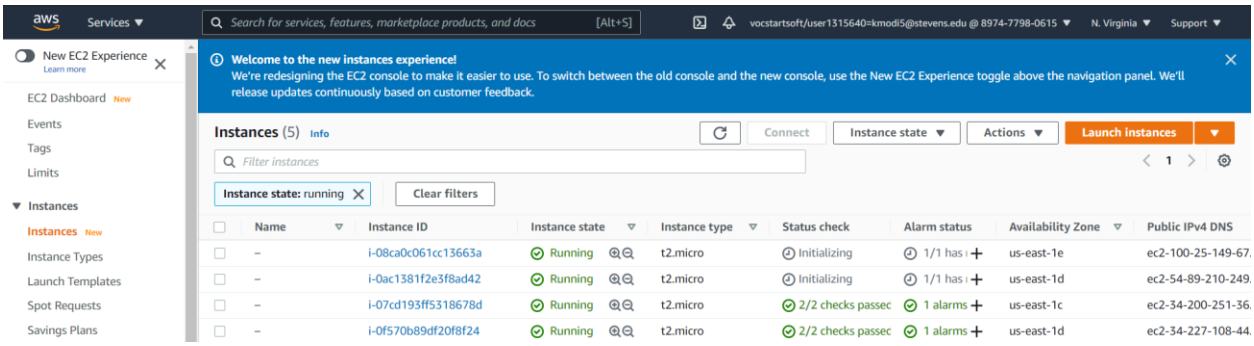
s. Update stack



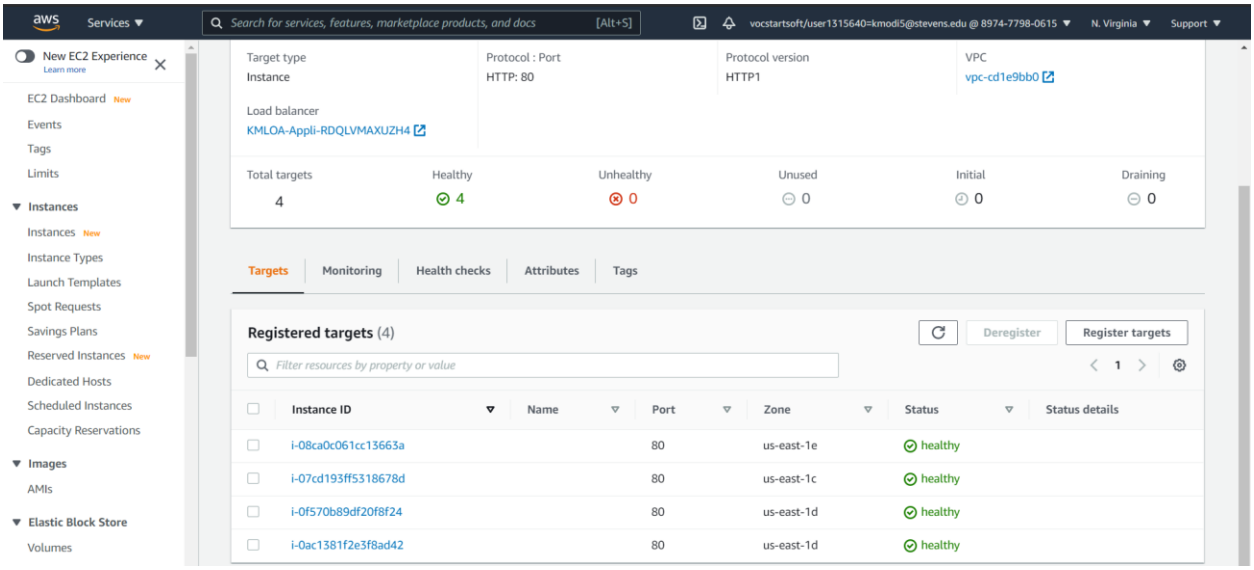
t. Stack updation state



u. Checking our instances



v. Checking the target group which are our instances



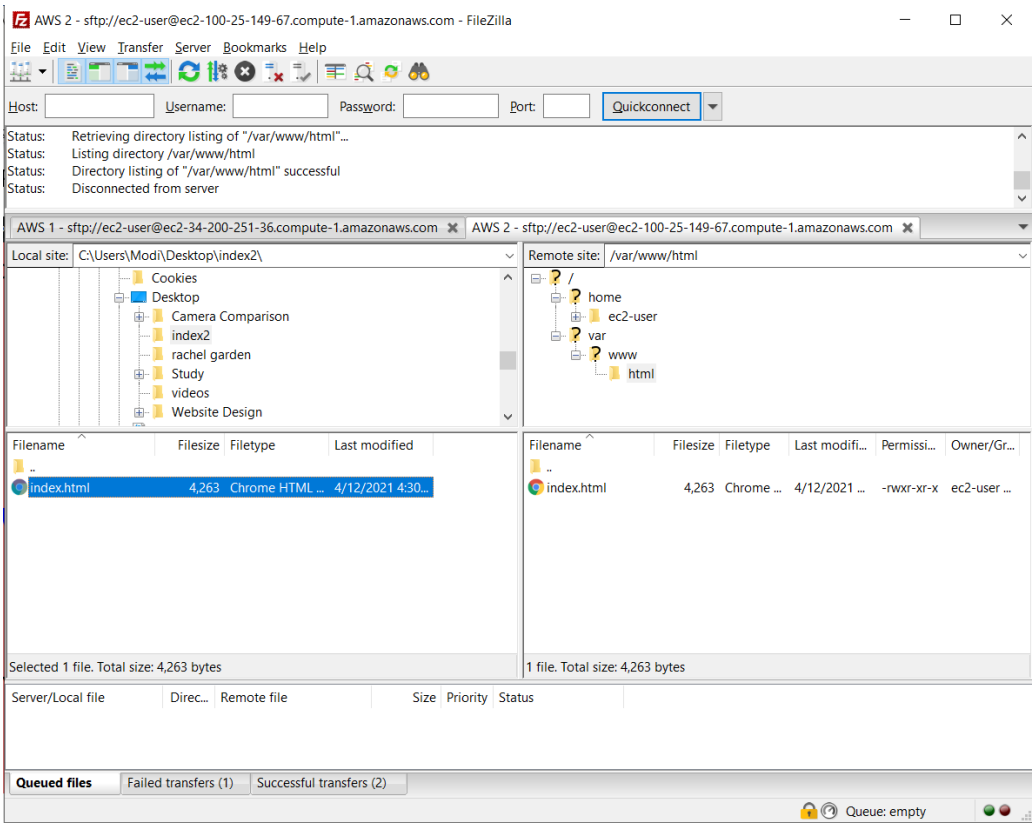
w. Connecting to Server using SSH and giving permission to load our webpage on all servers

```
[ec2-user@ip-172-31-1-222 ~]$ ssh -i "KMEC2.pem" ec2-user@ec2-34-200-251-36.compute-1.amazonaws.com
Warning: Identity file KMEC2.pem not accessible: No such file or directory.
The authenticity of host 'ec2-34-200-251-36.compute-1.amazonaws.com (172.31.1.222)' can't be established.
ECDSA key fingerprint is SHA256:u97ZQWAU0k7sqMhGgPbc3d8x0SsxFBuJHAuTtWS+Hz0.
ECDSA key fingerprint is MD5:fe:17:d5:66:12:2c:be:c0:2f:da:00:0b:9e:de:73:4a.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added 'ec2-34-200-251-36.compute-1.amazonaws.com,172.31.1.222' (ECDSA) to the list of known hosts.
Permission denied (publickey).
[ec2-user@ip-172-31-1-222 ~]$ sudo chown -R ec2-user /var/www/html
chmod -[ec2-user@ip-172-31-1-222 ~]$ sudo chmod -R 755 /var/www/html
```

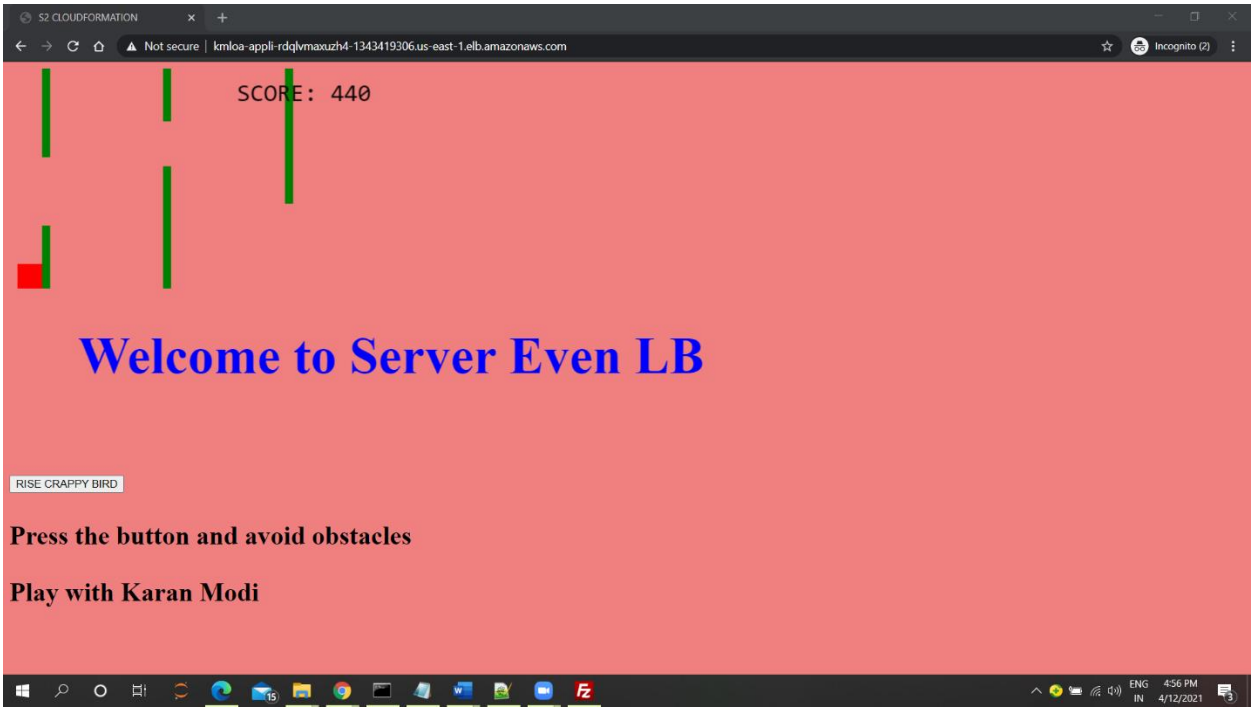
x. Also update all servers

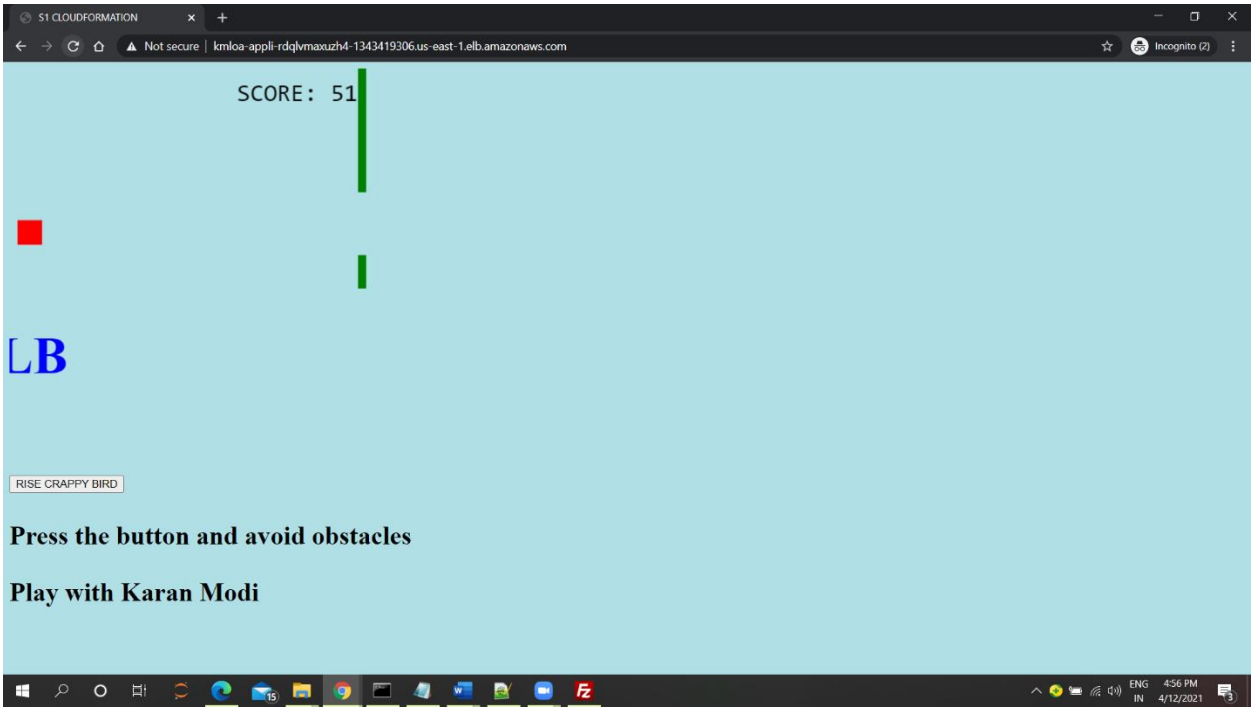
```
The authenticity of host 'ec2-54-89-210-249.compute-1.amazonaws.com (54.89.210.249)' can't be established.
ECDSA key fingerprint is SHA256:01Lnr+Q6TM0QsRqe4D7V8U/pKhlPYNHkKgOWTCmC1hY.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added 'ec2-54-89-210-249.compute-1.amazonaws.com,54.89.210.249' (ECDSA) to the list of known hosts.

       __|  __|_  )
       _|  (     /   Amazon Linux AMI
      ___|\___|___|

https://aws.amazon.com/amazon-linux-ami/2018.03-release-notes/
26 package(s) needed for security, out of 54 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-85-196 ~]$ sudo yum update
```

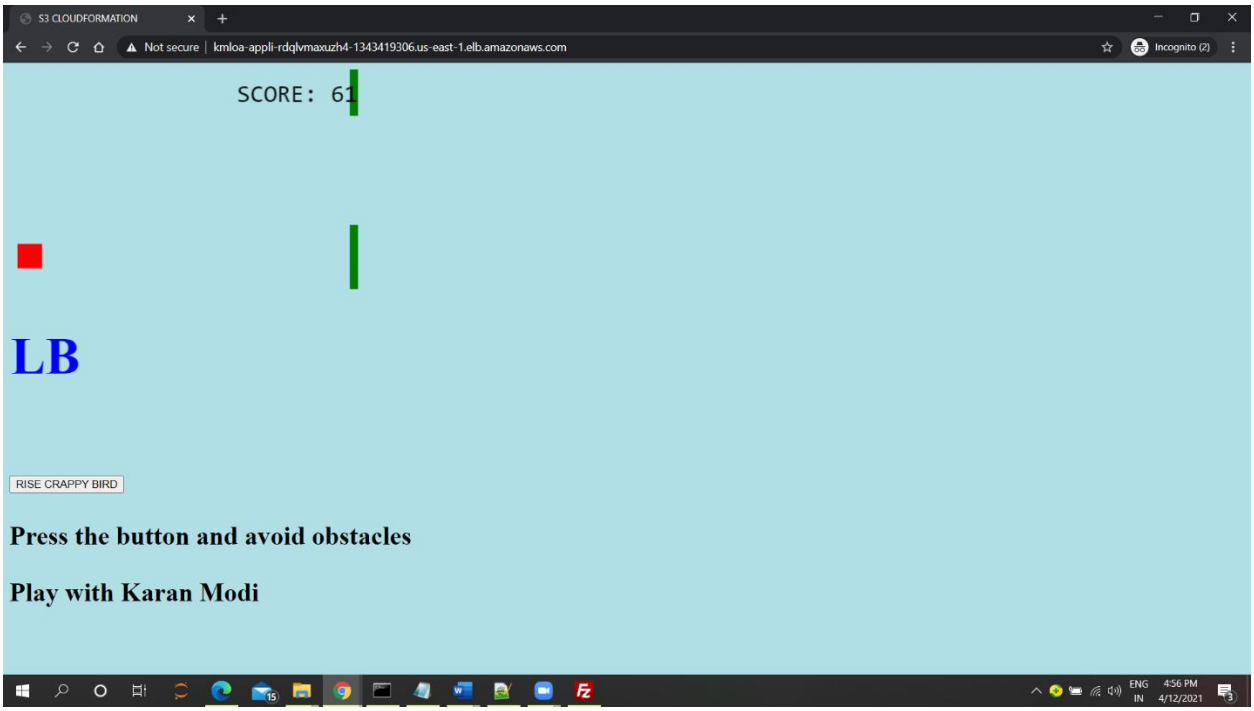
y. Connecting using SFTP with Filezilla



z. Checking our load balancer if it loads all different versions of websites







Our instances:

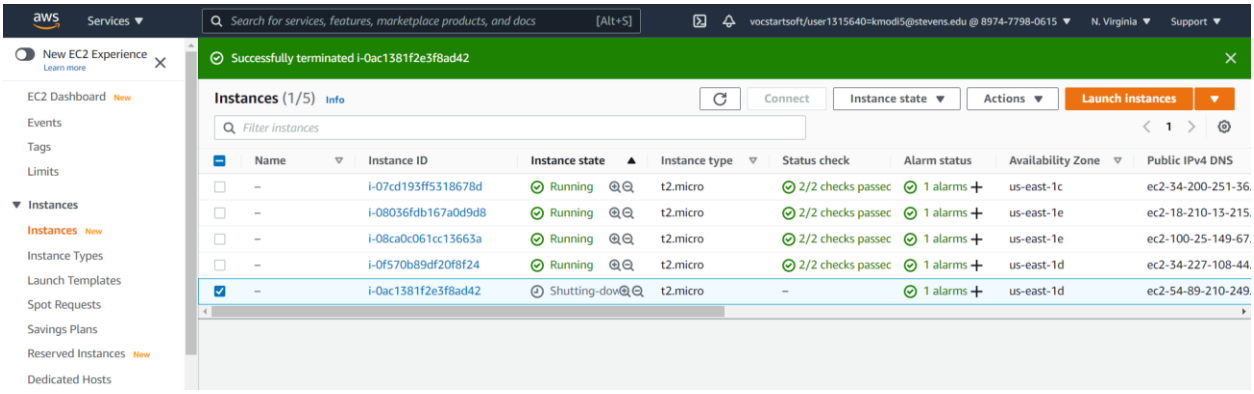
1. ec2-34-227-108-44.compute-1.amazonaws.com
2. ec2-34-200-251-36.compute-1.amazonaws.com
3. ec2-100-25-149-67.compute-1.amazonaws.com

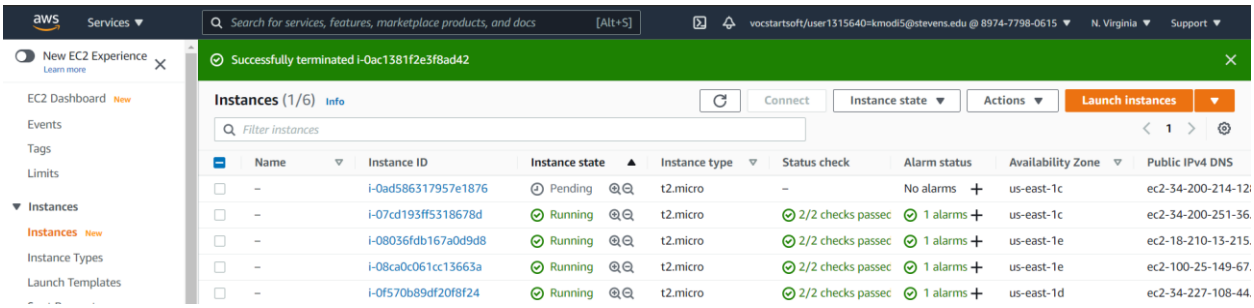
This will be the auto generated instance after deleting any instance

ec2-34-200-214-128.compute-1.amazonaws.com

aa. First Server one than Server 3 then 2 then 4

Now when we terminate one instance the cloudformation should automatically generate and run another similar instance





ab. Since we deleted the instance it will again generate a template instance and thus show the original webpage

Congratulations, you have successfully launched the AWS CloudFormation sample.