**Getting Familiar with Cloud Computing**

For this project, first step was obtaining EC2 credentials. I tried going through quicklabs or aws educate but it did not work out. Therefore, I created a new personal aws account from which I got my EC2 credentials. Then I installed AWS cli 2 in my mac. I entered my credential before I wrote my first command to launch my first ec2 instance:

aws ec2 run-instances --image-id ami-0915bcb5fa77e4892 --count 1 --instance-type t2.micro --key-name my-first-ec2-key

{

"InstanceId": "i-03b5a67c4ae7f9c72"

}

aws ec2 describe-instances --instance-ids i-03b5a67c4ae7f9c72

The ec2 instance took around 30 seconds to start. Then I tried sshing into the newly created virtual machine using the following command.

ssh -i "my-first-ec2-key.pem" ec2-user@ec2-54-197-190-215.compute-1.amazonaws.com

I tried installing node in the machine but I did not work. I had to switch to root user before I can install anything.

sudo su

Then I installed perl, emacs and node in the virtual machine. Then I pressed Ctrl+D to logout of the virtual machine. For the next step I had to copy the disk state of the instance and create a new ami which I can use in the future to directly start my ec2 instance with my preferred software preinstalled.

aws ec2 create-image --instance-id i-04e9eecc868890365 --name my\_first\_custom\_image

{

"ImageId": "ami-04cf0c486685e3dd3"

}

aws ec2 describe-images --image-ids ami-04cf0c486685e3dd3

Since the new ami was created successfully which took somewhere around 5 minutes which was reasonable considering the entire disk state had to be copied.

##Closing down the previous instance

aws ec2 terminate-instances --instance-ids i-04e9eecc868890365

Closing the previous instance took about a minute. Then I ran a new ec2 instance using the custom ami that was created earlier which took somewhere around 30 seconds as well.

##Starting new instance using custom ami

aws ec2 run-instances --image-id ami-04cf0c486685e3dd3 --count 1 --instance-type t2.micro --key-name my-first-ec2-key

##Result

{

"Instances":[

{

"InstanceId": "i-0c1cad88d0d21d3e7"

}

]

}

For cleaning up, I had to deregister the new custom ami and then delete the snapshot or storage associated with the image.

##Terminating the new instance

aws ec2 terminate-instances --instance-ids i-0c1cad88d0d21d3e7

##Deregistering ami image

aws ec2 deregister-image --image-id ami-04cf0c486685e3dd3

##Getting the snapshot id associated with the ami

aws ec2 describe-snapshots| grep -A5 -b5 ami-04cf0c486685e3dd3

##Result

"SnapshotId": "snap-06ba4a2a32bf00249"

##Deleting the snapshot

aws ec2 delete-snapshot --snapshot-id snap-06ba4a2a32bf00249

Deleting the snapshot was almost instantaneous and so was deregistering ami.

**Charges:**

*EC2*: 0.0116$/hr \*( 1hr 20 minutes + 7 minutes) = **0.01682 $**.

*SnapShot Storage*: $0.08 per GB-month \* 8 GB \* 600 seconds / (86,400 seconds/day \* 30 day-month). = **0.000148$**

*Io Requests*: $0.01 /10,000 requests \* 200 requests approx = **$0.0002**