Setting your own EC2 in AWS

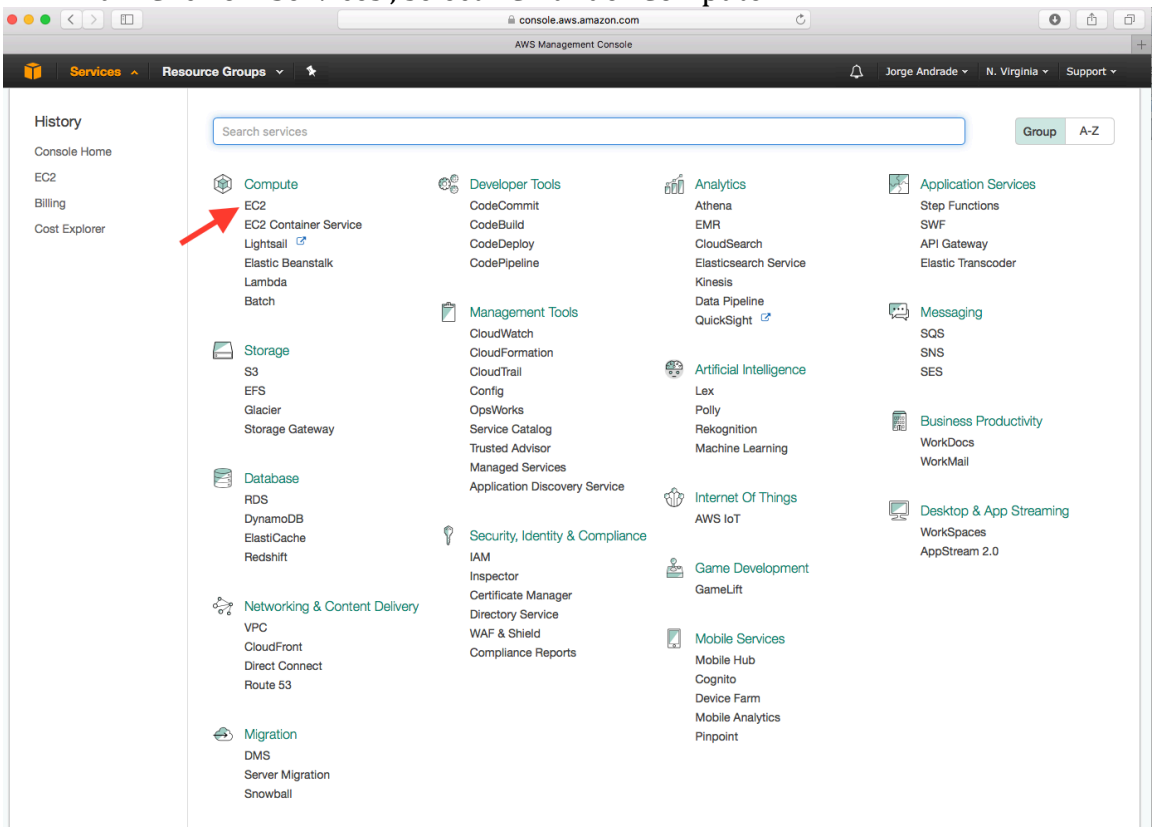
Advanced Bioinformatics: Genome Analysis

Course code: MSIB 32500

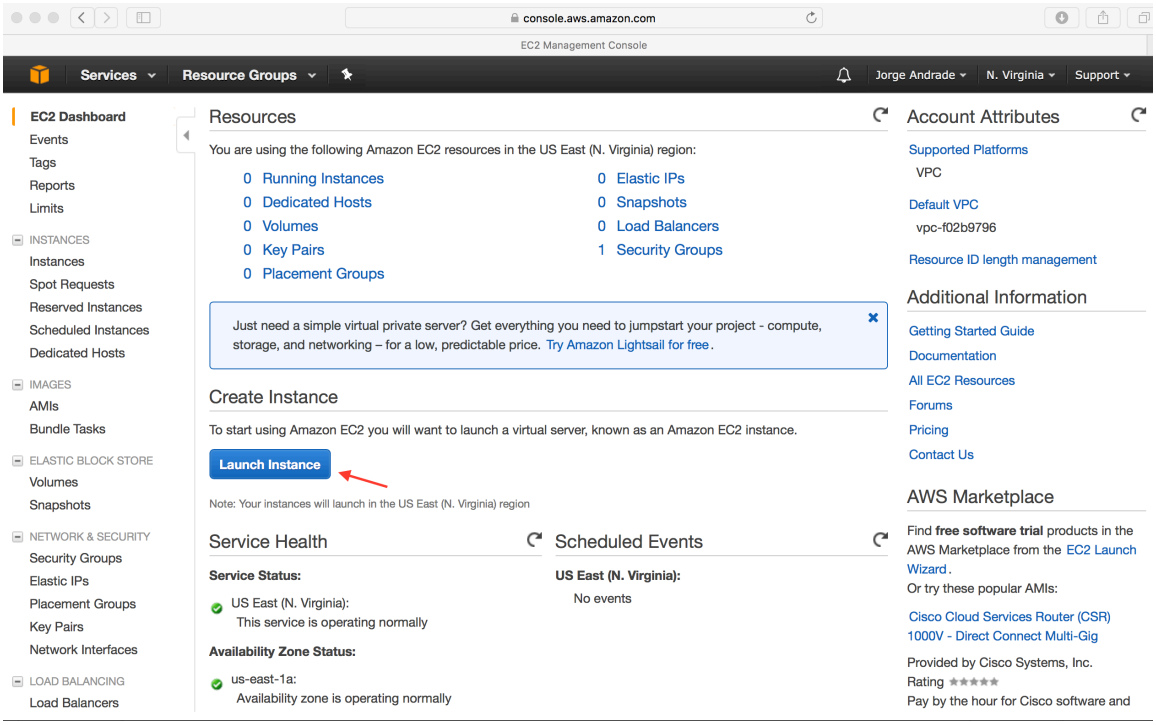
1. **Create an account**
    a. Go to http://aws.amazon.com
    b. Sign In to the Console; I am a new user; ## create your log-in credentials for a Personal Account
    c. For the lectures we will be using AWS free instances but you will be requested to enter your payment information (CC) to create an account
    d. For security you will need verify your identity using a code send to the phone number you provided
    e. Select the free 'Basic" AWS support plan

2. **Sign In to the AWS console**
    a. Login to your console by visiting https://console.aws.amazon.com using your e-mail and password

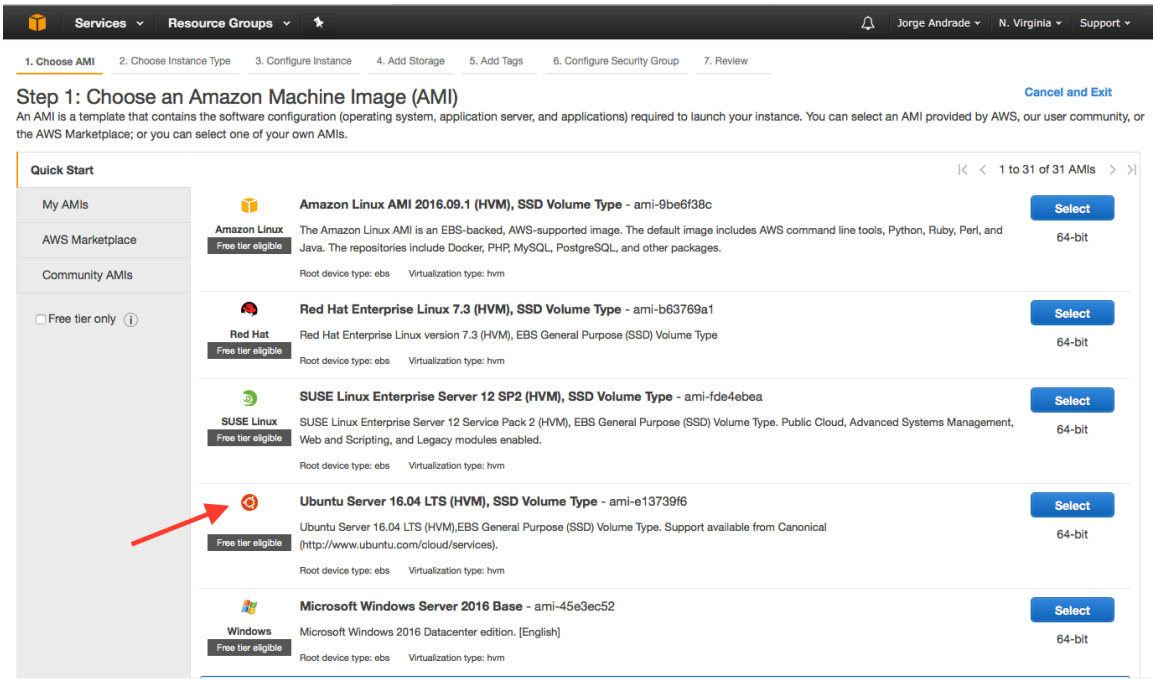
3. **Start EC2 Compute services**
    a. Click on 'Services', select EC2 under Compute



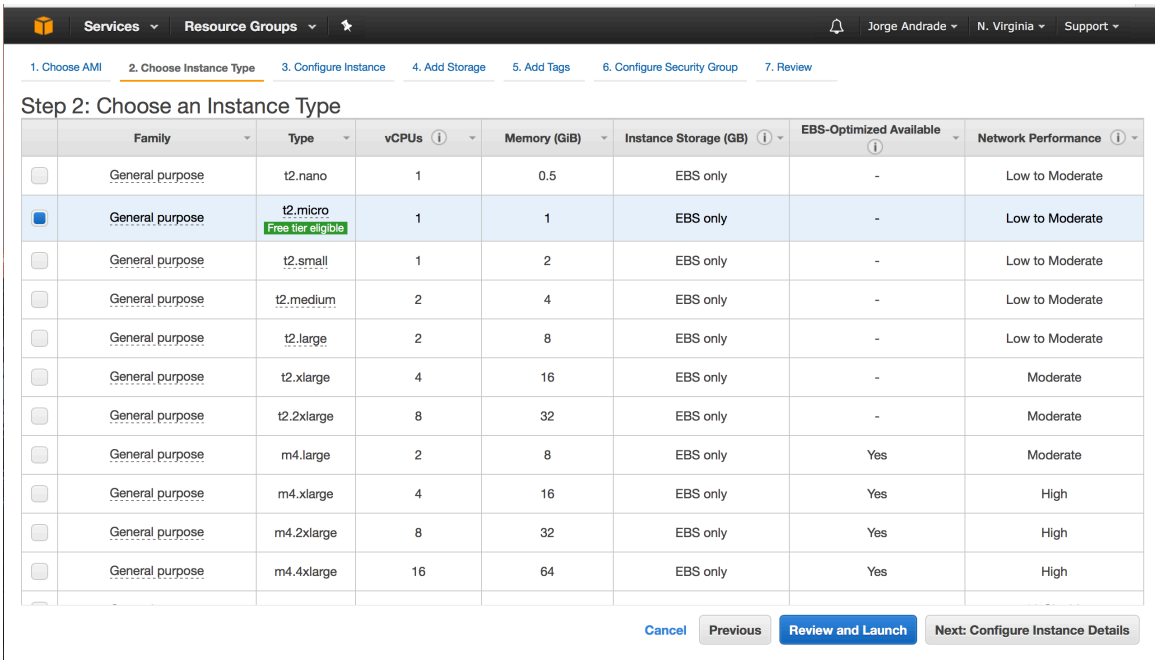
    b. Click "Launch Instance" Button



c. Select: Ubuntu Server 16.04 Amazon Machine Image (AMI)



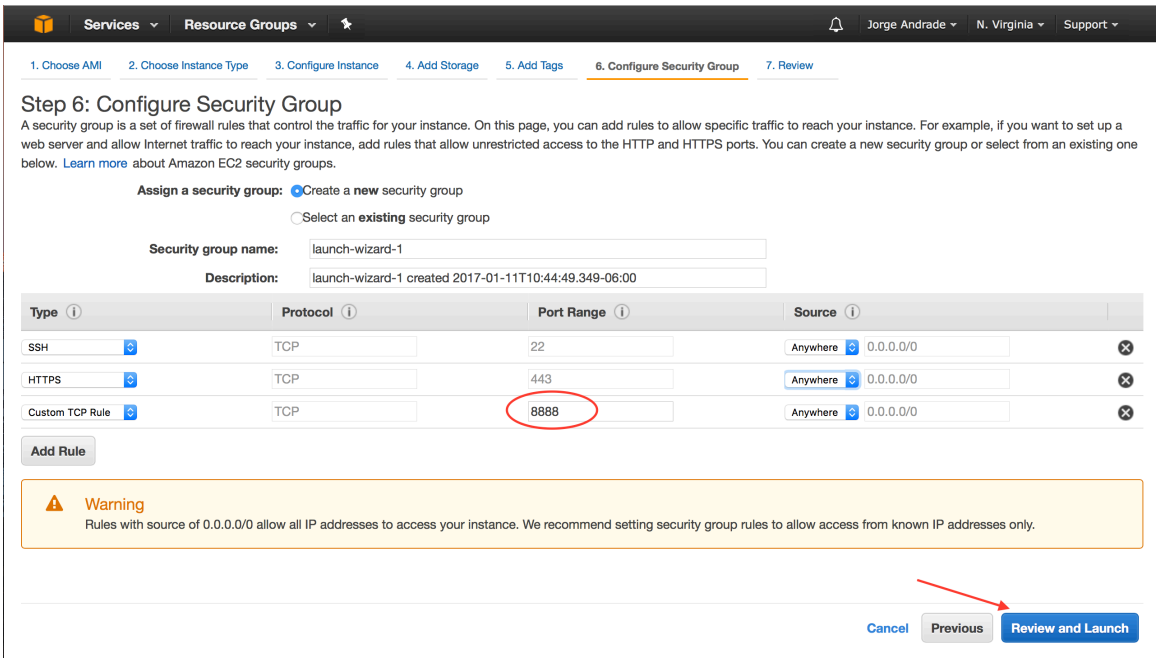
d. Select the Free tier t2.micro



e. Click “Review and Launch” Button

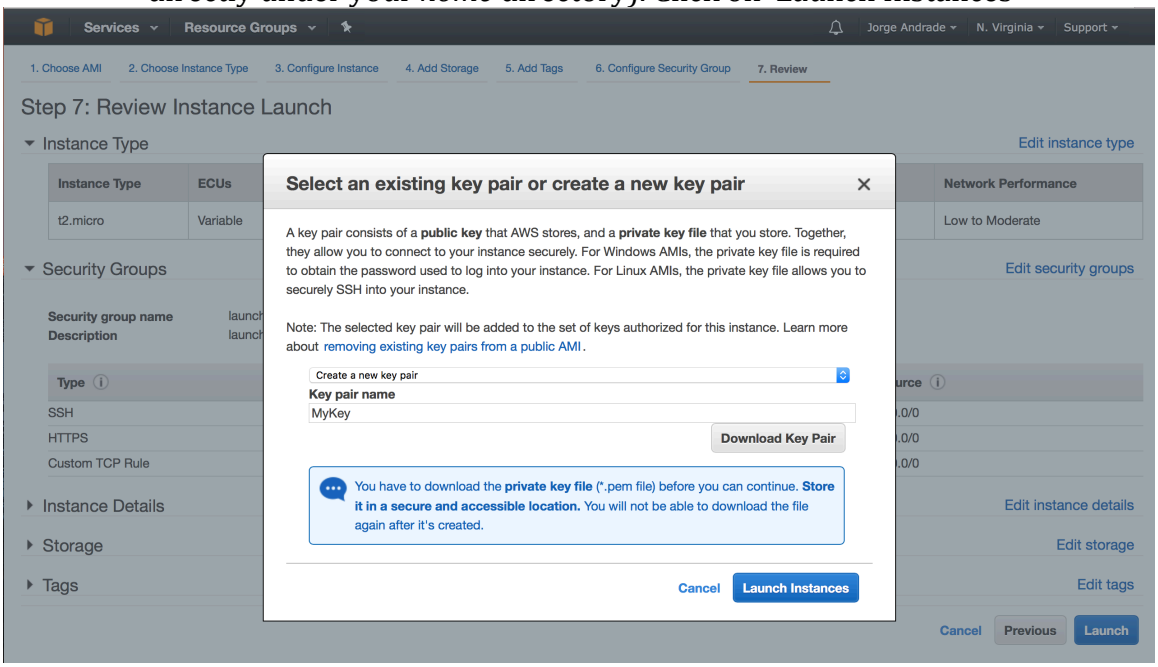
4. Edit security groups by adding HTTPS and Custom TCP Rule for port 8888

a. On Security Groups, click ‘Edit security groups’
b. Leave SSH ‘Type’, ‘Protocol’ and ‘Port Range’ as-is; Select ‘Anywhere’ on ‘Source’
c. Click ‘Add Rule’ and select ‘HTTPS’ on type, leave the default ‘Protocol’ and ‘Port Range’; Select ‘Anywhere’ on ‘Source’
d. Click ‘Add Rule’ and select ‘Custom TCP Rule’ on type, enter ‘8888’ on ‘Port Range’; Select ‘Anywhere’ on ‘Source’
e. Click ‘Review and Launch’ Button



5. Launch your instance and create your key pairs

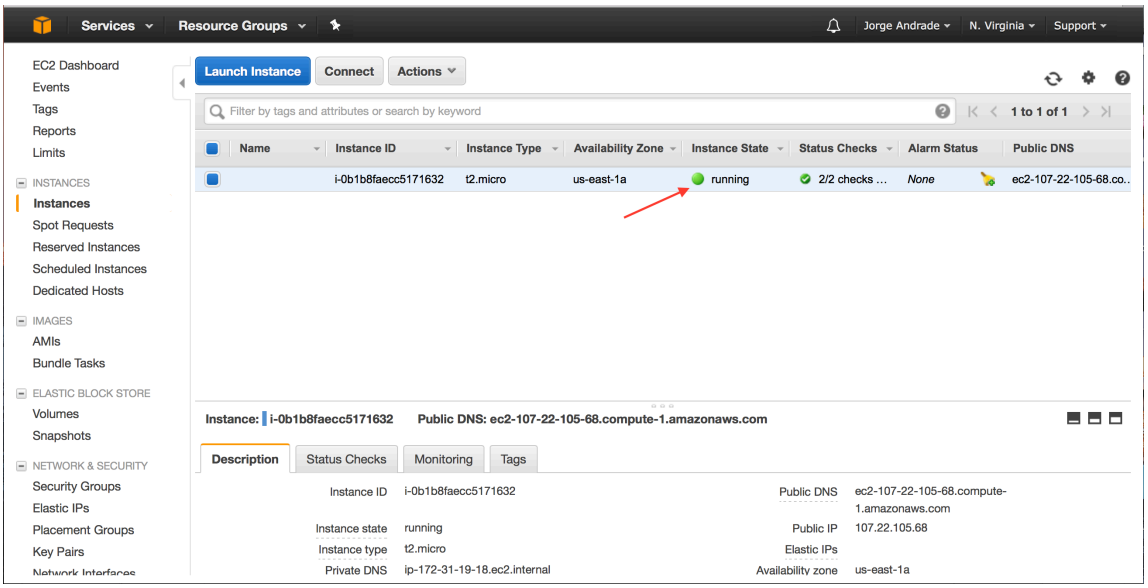
a. After you click 'Review and Launch', click on 'Launch'
b. Select 'Create a new key pair', write a name like: *MyKey* and Click on 'Download KeyPair', save your key file ('MyKey.pem') in a particular location on your local computer, note that you will need to know where this file is located later on (for convenience you may want to save it directly under your *home* directory). Click on 'Launch Instances'



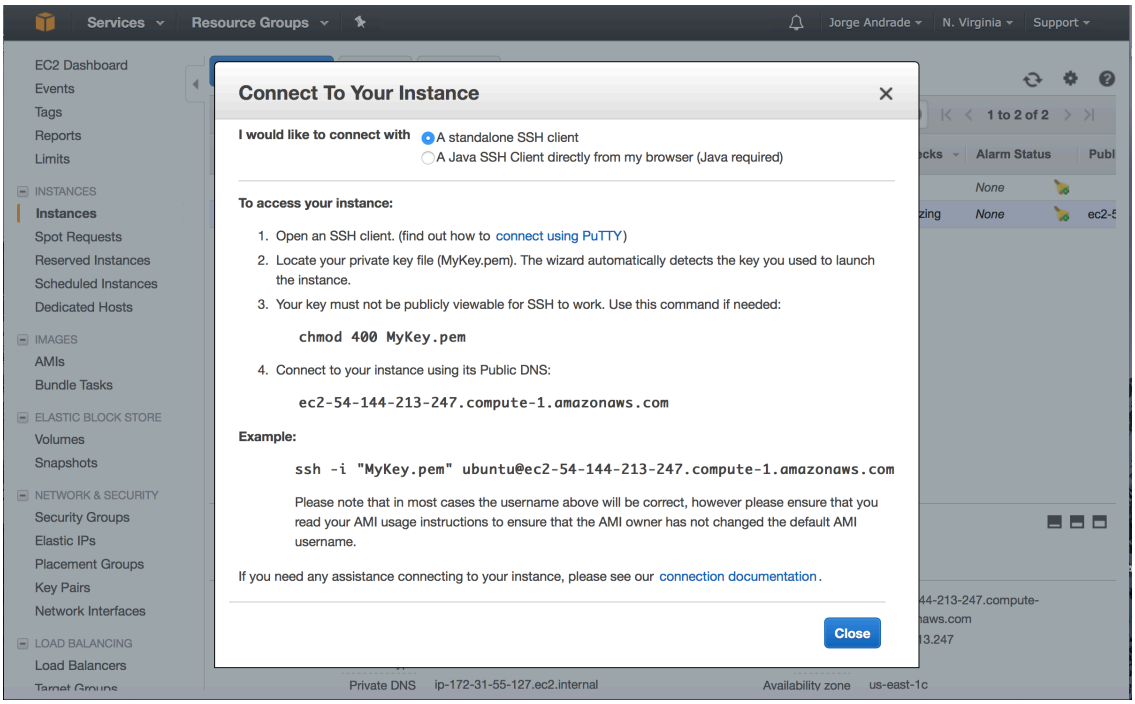
c. Click on 'View Instances'

6. Connect to your Elastic Compute Cloud

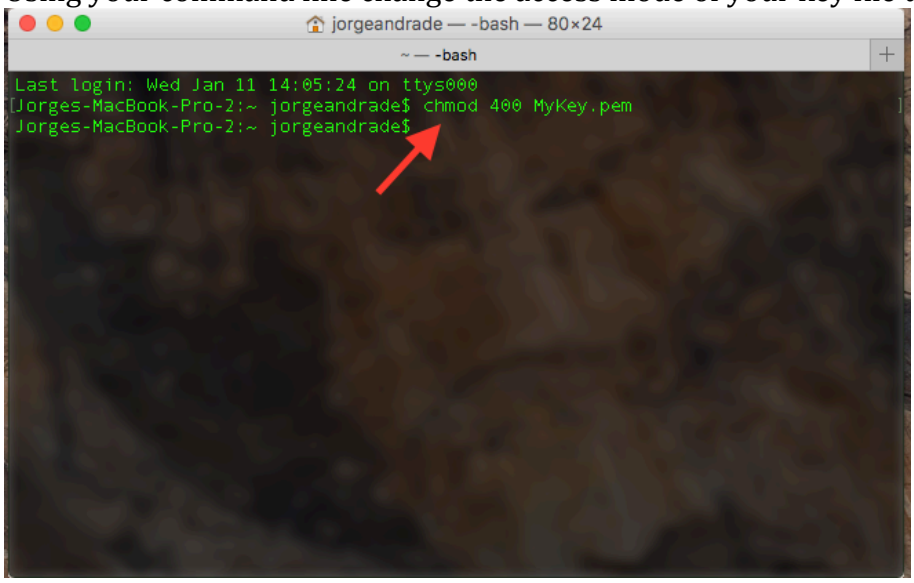
a. When you click on 'View Instances' you can see the 'Instance State' status, when this is on green as 'running' your instance has been provisioned



b. Explore the other available attributes of your instance including: Public DNS, Public IP, Key Name, etc.
c. With your instance selected, click on 'Connect' button
d. Read the instructions on how to connect to your instance; select 'A standalone SSH client



e. On your computer/laptop, open a *command line* window, on Mac you can use the *Terminal*, on Windows you can using *PuTTY* or the *command prompt*
f. Using your command line change the access mode of your key file to 400



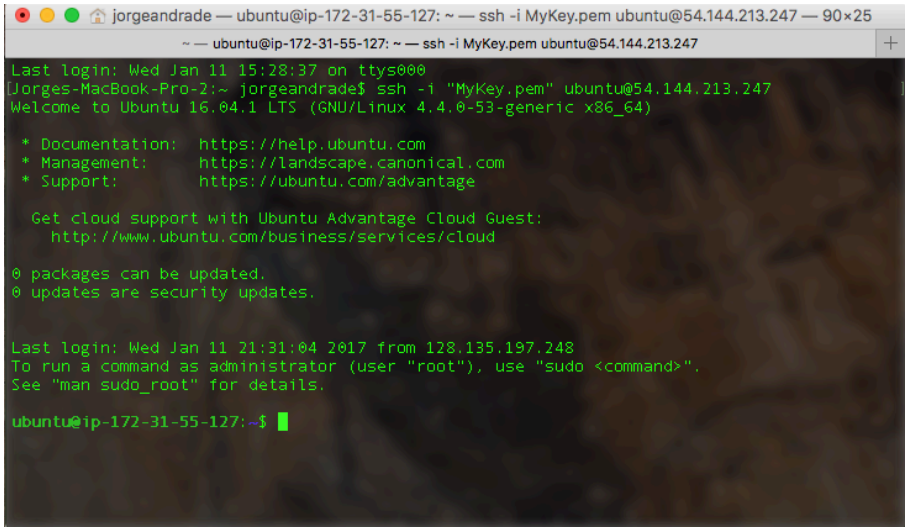
g. Using your command line terminal connect to your Instance using SSH. You can use the provided Public DNS or IP address

Example: Using DNS

```
ssh -i "MyKey.pem" ubuntu@ec2-54-144-213-247.compute-1.amazonaws.com
```

Example: Using IP

```
ssh -i "MyKey.pem" ubuntu@54.144.213.247
```



You can now start installing the software you need on the cloud, to install R use the following command:

```
sudo apt-get install r-base
```