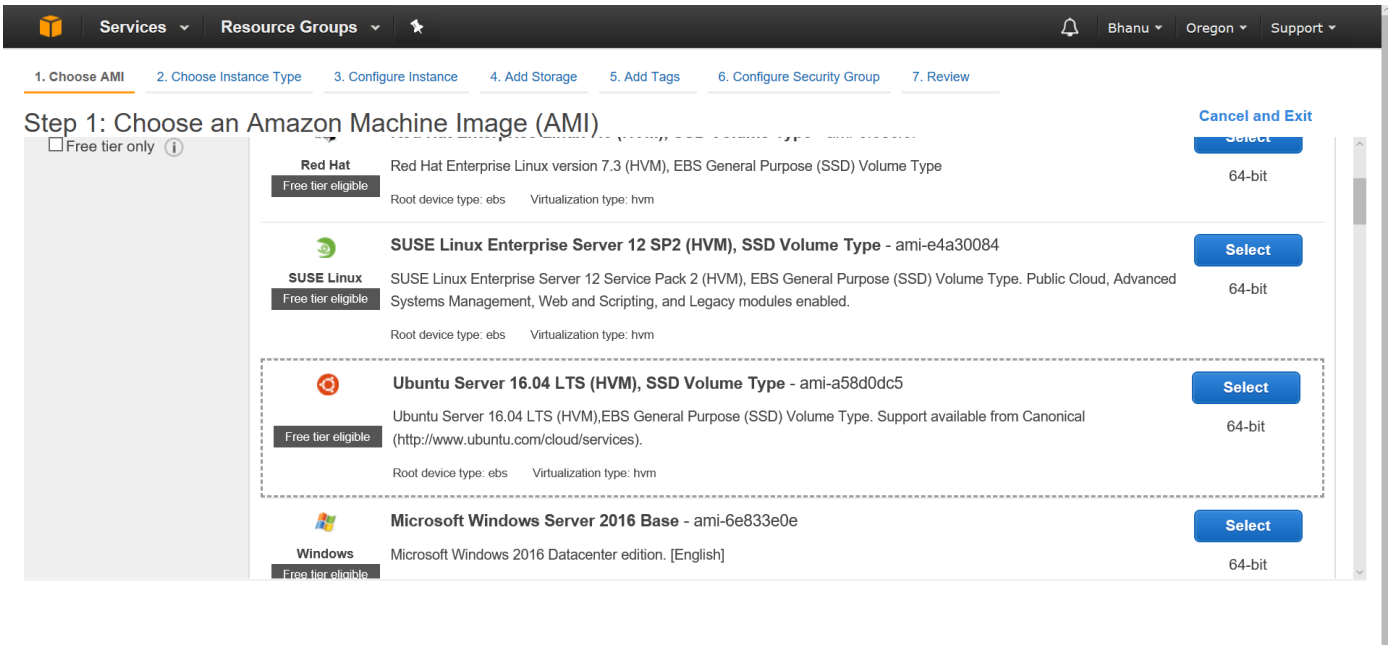
AWS Cassandra Setup:

Steps to Create Instance:

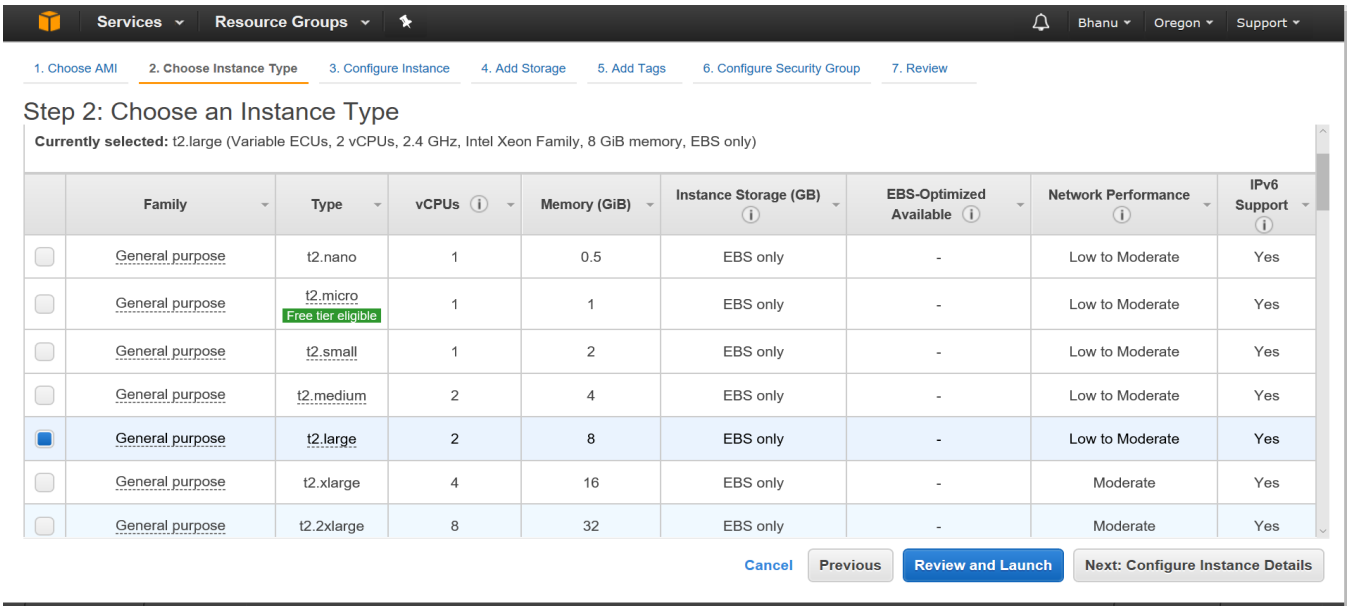
Choose **Launch Instance**.

Step 1: Choose an Amazon Machine Image (AMI), find Ubuntu Server at the top of the list and choose **Select**.

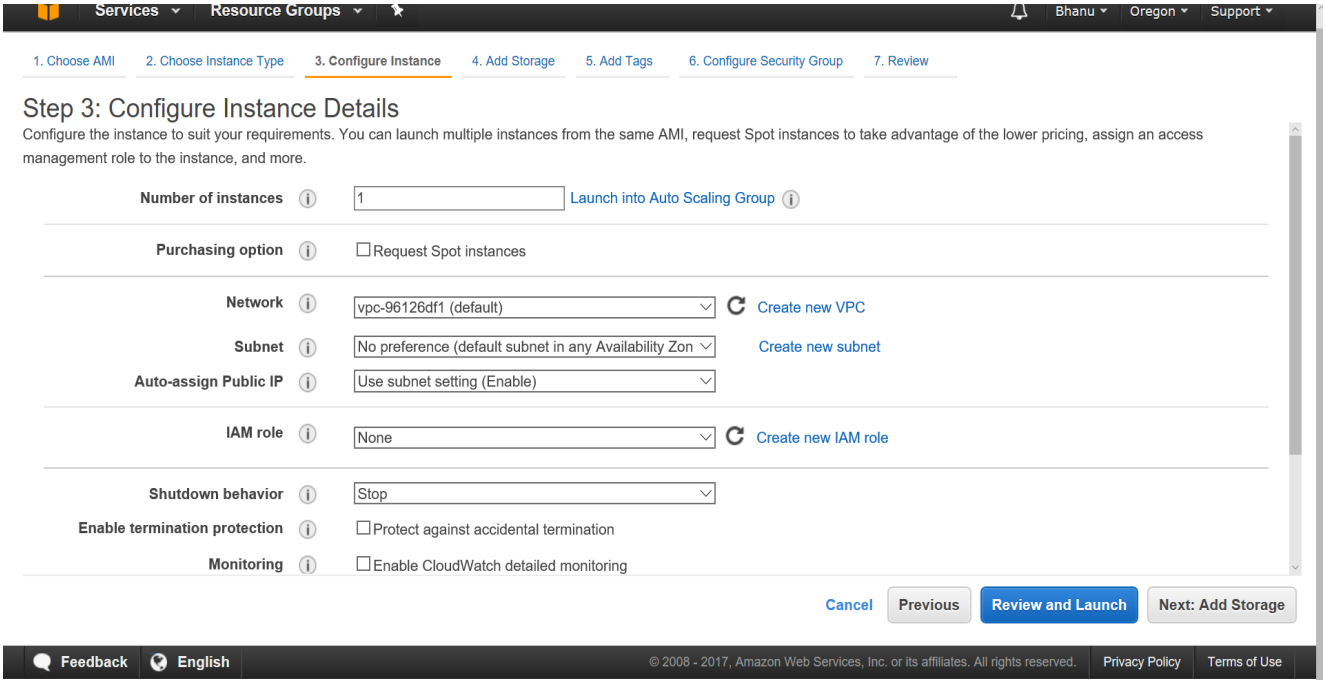


Step 2: Choose an Instance Type, choose **Next: Configure Instance Details**

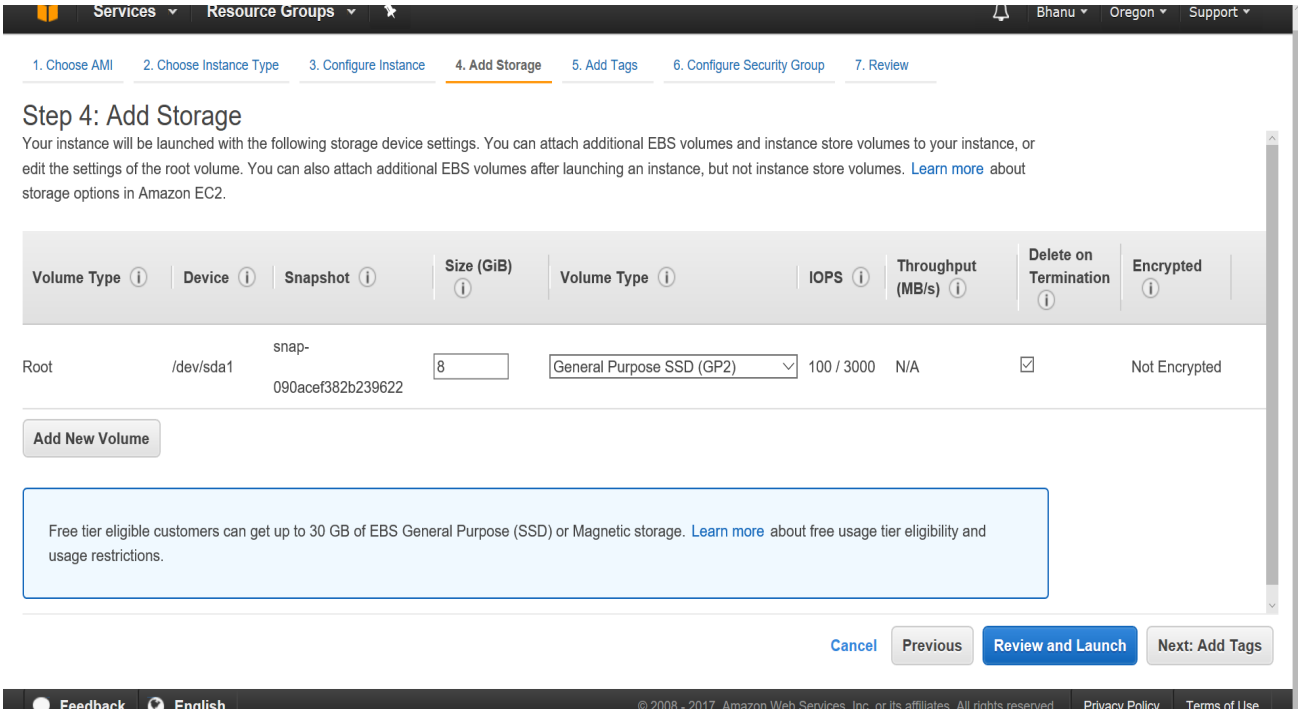
We selected t2.large.



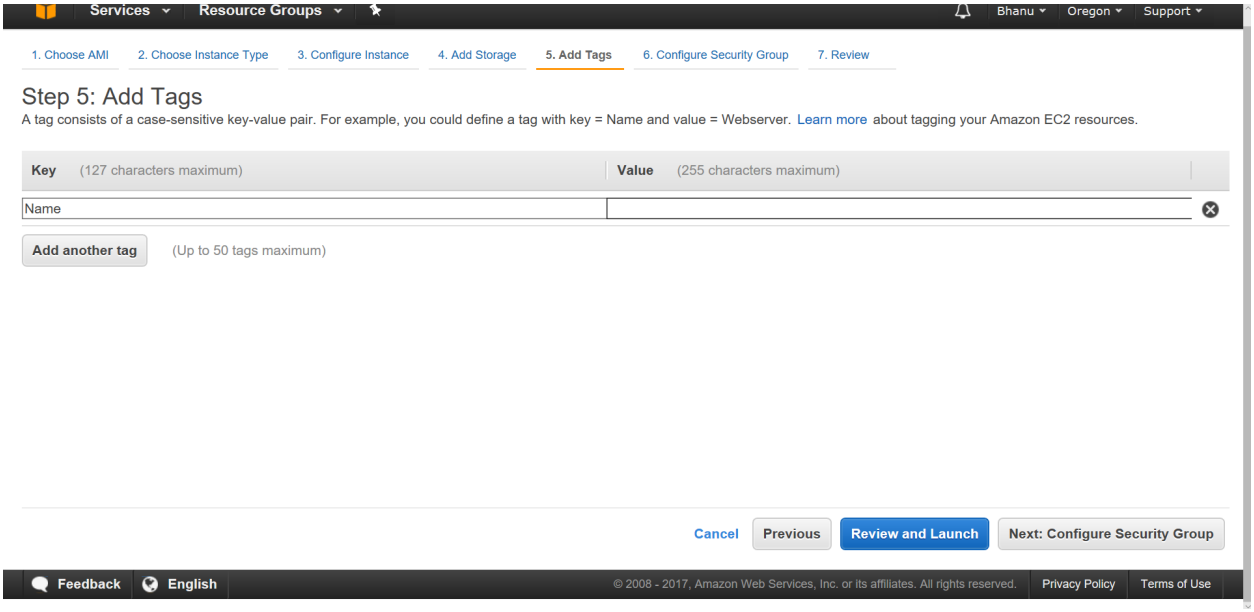
Step 3: Configure Instance Details, choose **Network**, and then choose the entry for your default VPC.



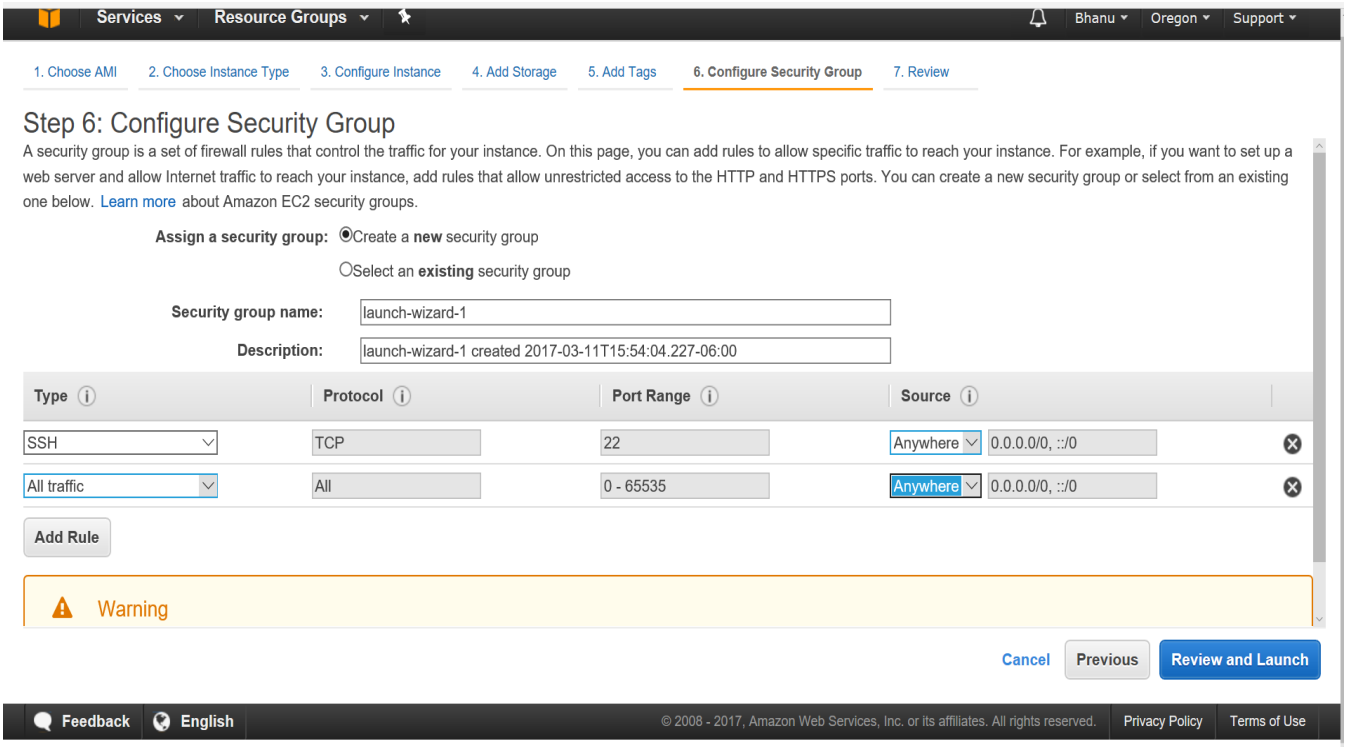
Step 4: For storage, we add **<u>30GB</u>**



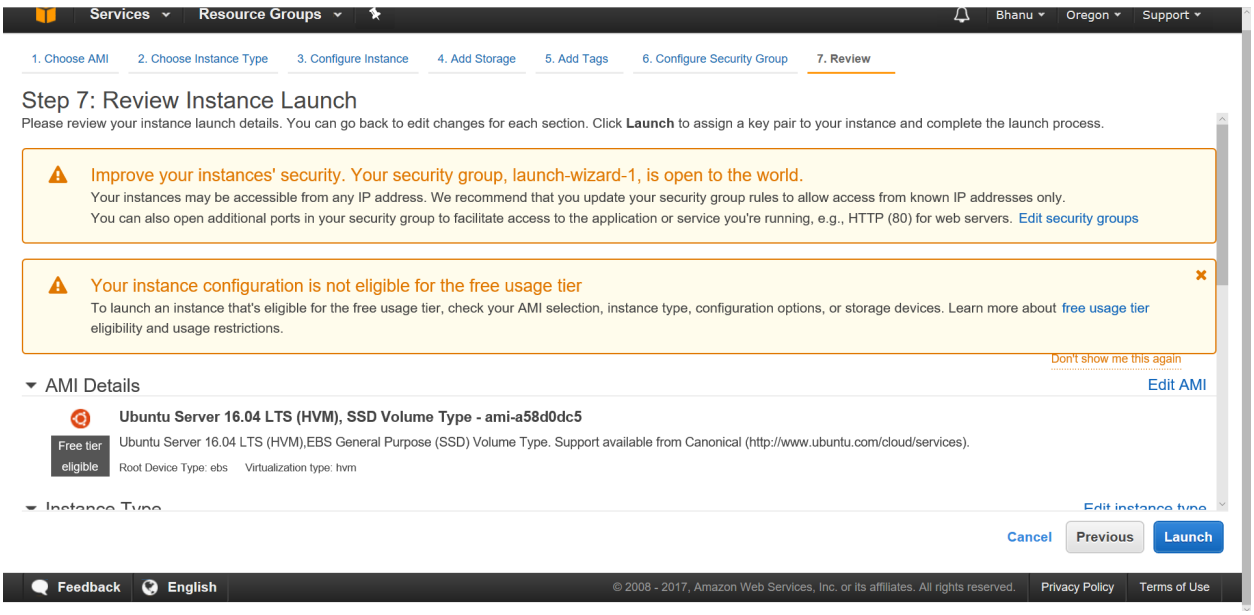
Step 5: Add tags



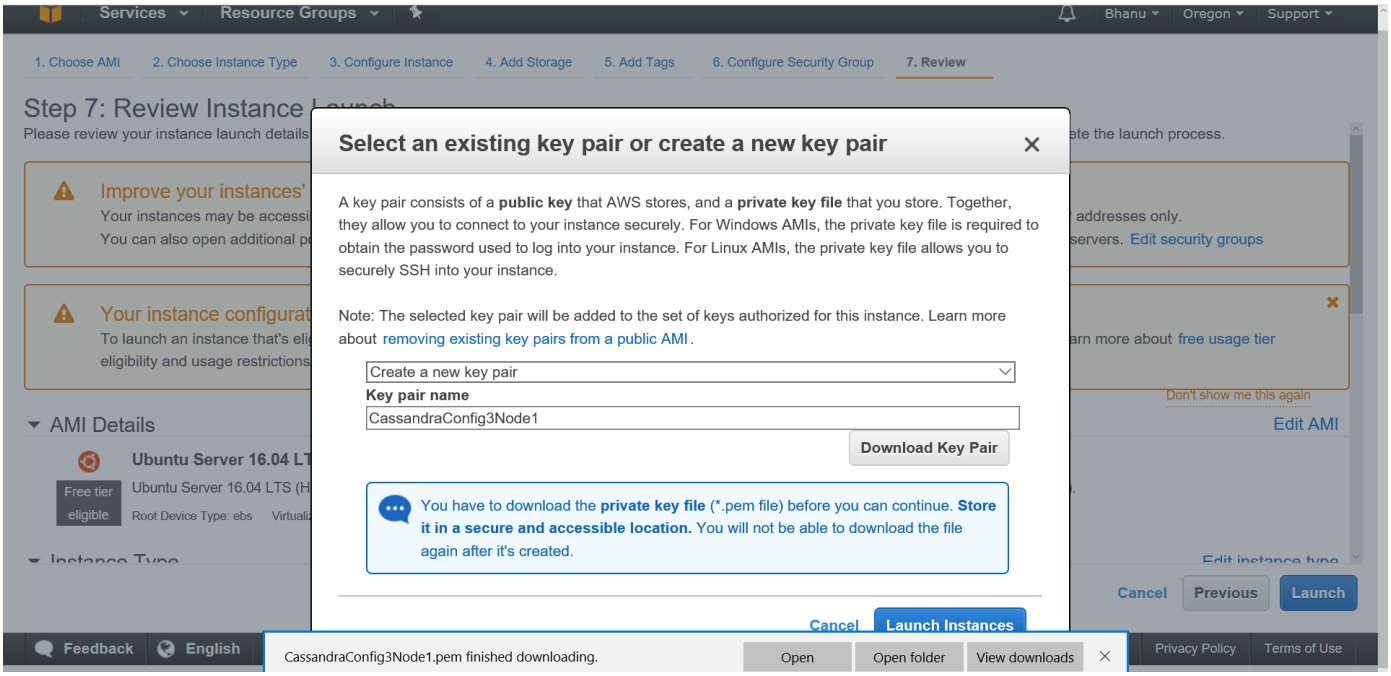
Step 6: Choose **Next: Configure Security Group**.
In this we opened all the inbound/outbound traffic by creating a new rule for All Traffic and accepting Source IP from anywhere.



Step 7: Choose **launch.**



Create a new key pair and download it to your local desktop.

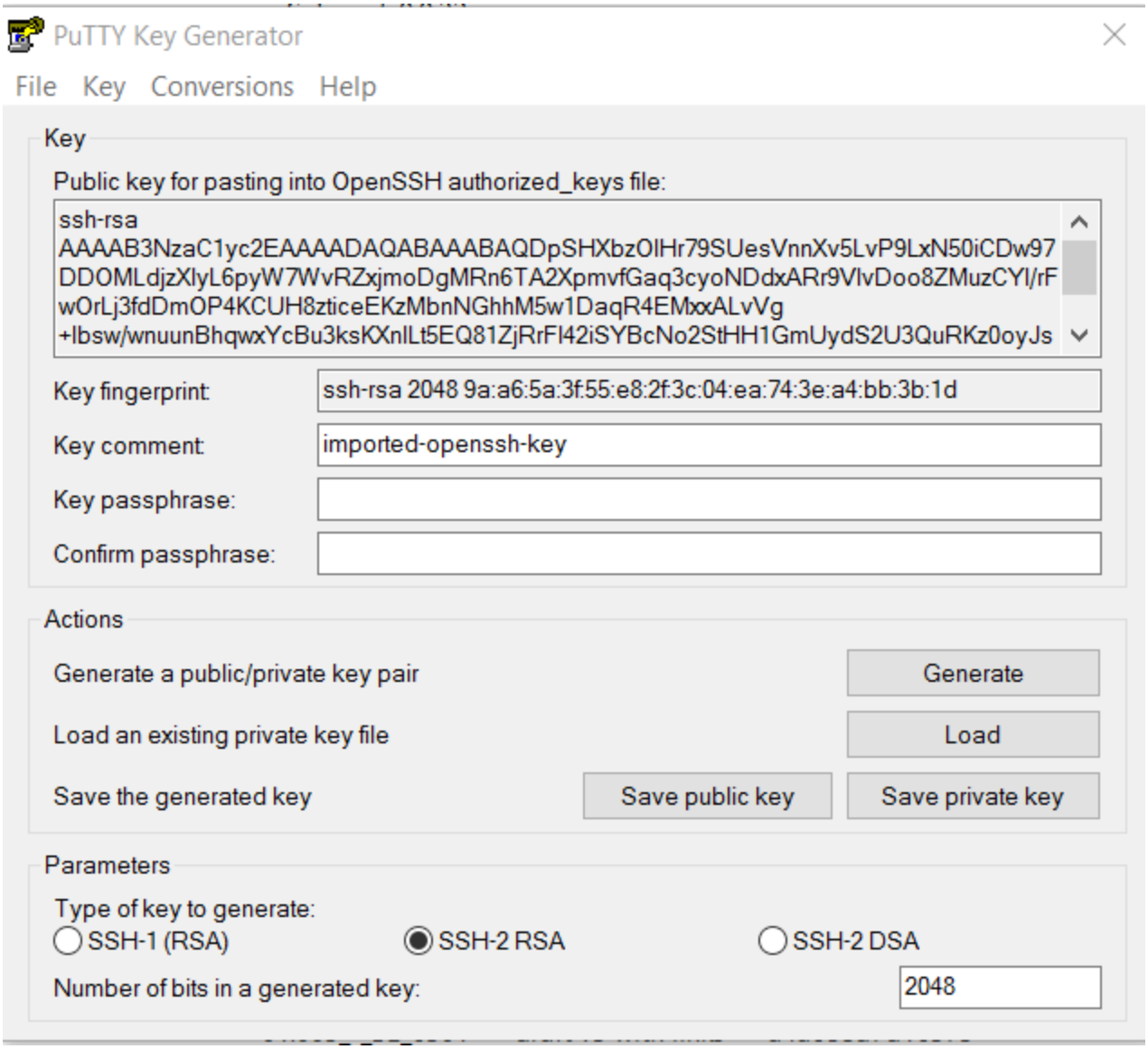


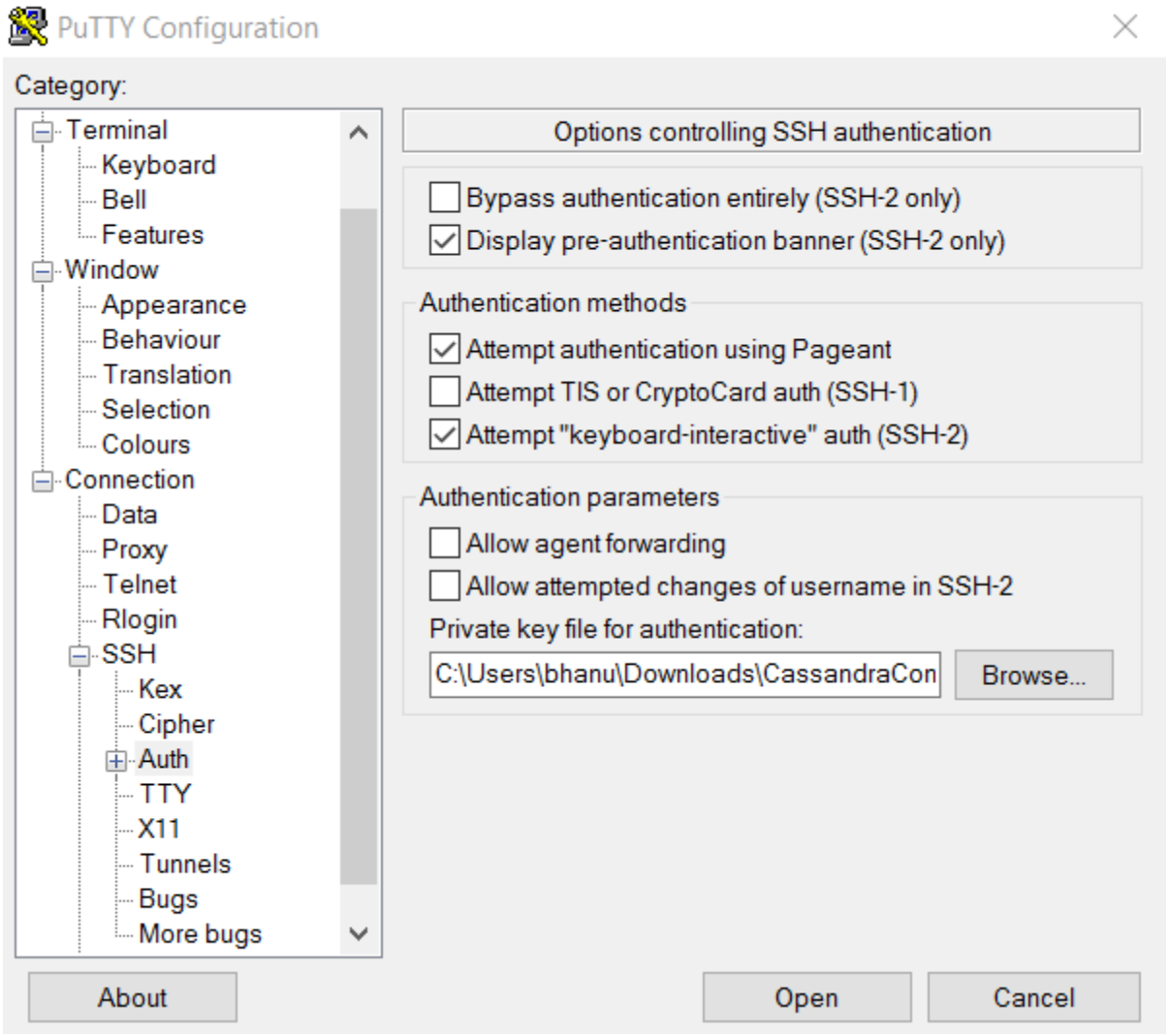
Connecting to EC2 Instance:

After creating of Ec2 instance, connect to it using Putty.
Before connecting using Putty, generate Private key using Putty Key Generator.

Steps for creating Private Key:

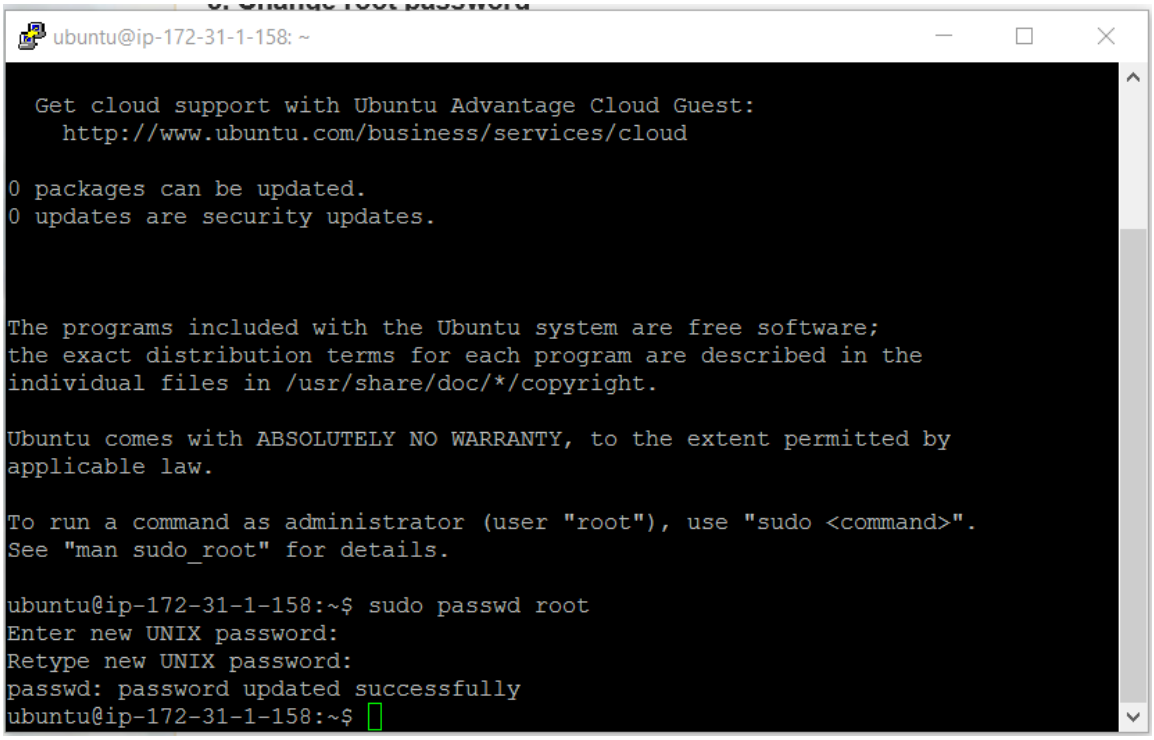
- Open Putty Key Generator.
- Click on conversions.
- Click on import
- Select the Key(.pem) created in AWS console.
- Click on save private key.


PuTTY Key Generator
File Key Conversions Help
Key
Public key for pasting into OpenSSH authorized_keys file:
ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAABAQDpSHXbzOlHr79SUesVnnXv5LvP9LxN50iCDw97
DDOMLdjzXlyL6pyW7WvRZxjmoDgMRn6TA2XpmvfGaq3cyoNDdxARr9VlvDoo8ZMuzCYl/rF
wOrLj3fdDmOP4KCUH8zticeEKzMbnNGhhM5w1DaqR4EMxxALvVg
+lbsw/wnuunBhqwxYcBu3ksKXnlLt5EQ81ZjRrFl42iSYBcNo2StHH1GmUydS2U3QuRKz0oyJs
Key fingerprint:
ssh-rsa 2048 9a:a6:5a:3f:55:e8:2f:3c:04:ea:74:3e:a4:bb:3b:1d
Key comment:
imported-openssh-key
Key passphrase:
Confirm passphrase:
Actions
Generate a public/private key pair
Generate
Load an existing private key file
Load
Save the generated key
Save public key
Save private key
Parameters
Type of key to generate:
SSH-1 (RSA)
SSH-2 RSA
SSH-2 DSA
Number of bits in a generated key:
2048



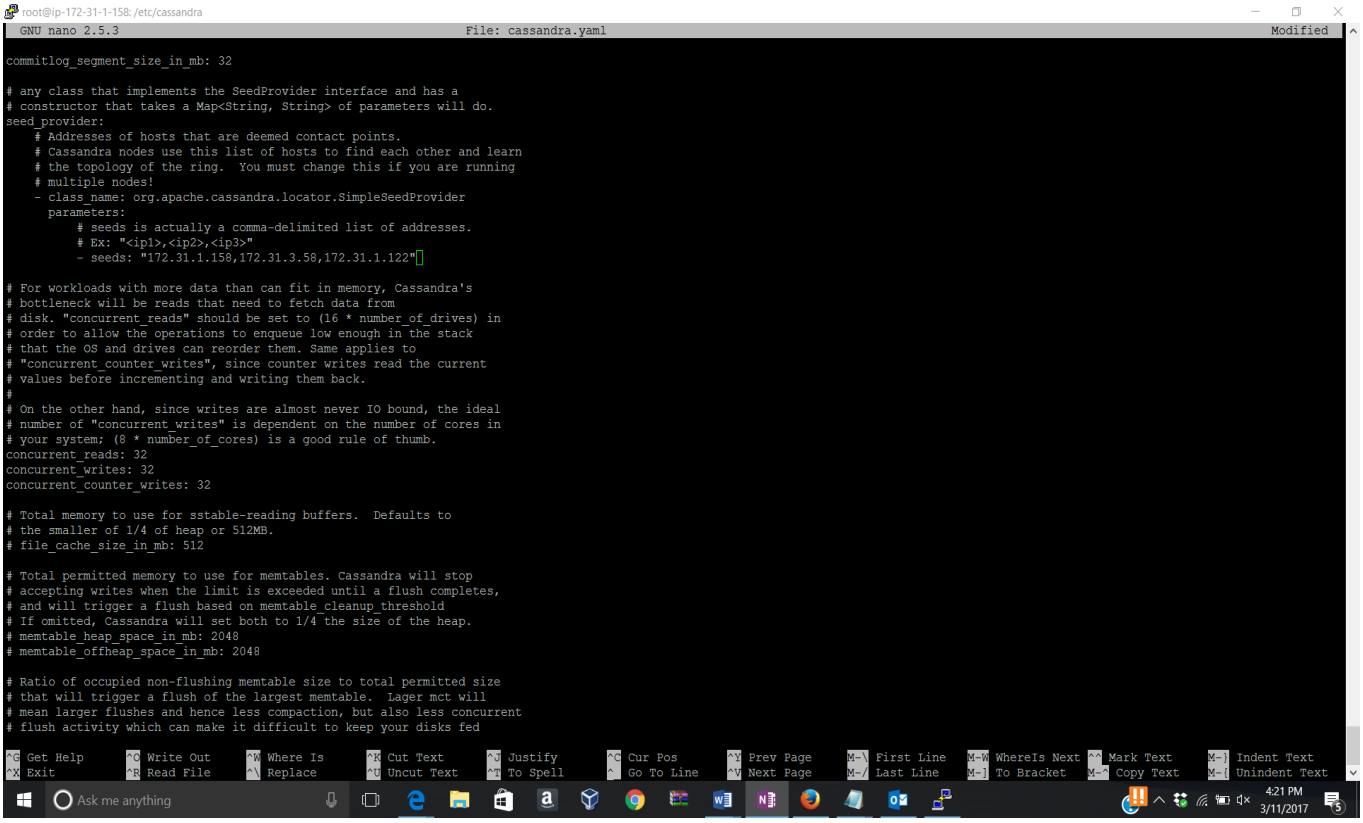
Logging in Putty:

- Open Putty.
- Enter the Public IP of Ec2 Instance in hostname.
- Click on Auth
- Browse the Private Key
- Click on Data under connections and enter the auto login username as ubuntu
- Click on Open



Making Instances Communicate:

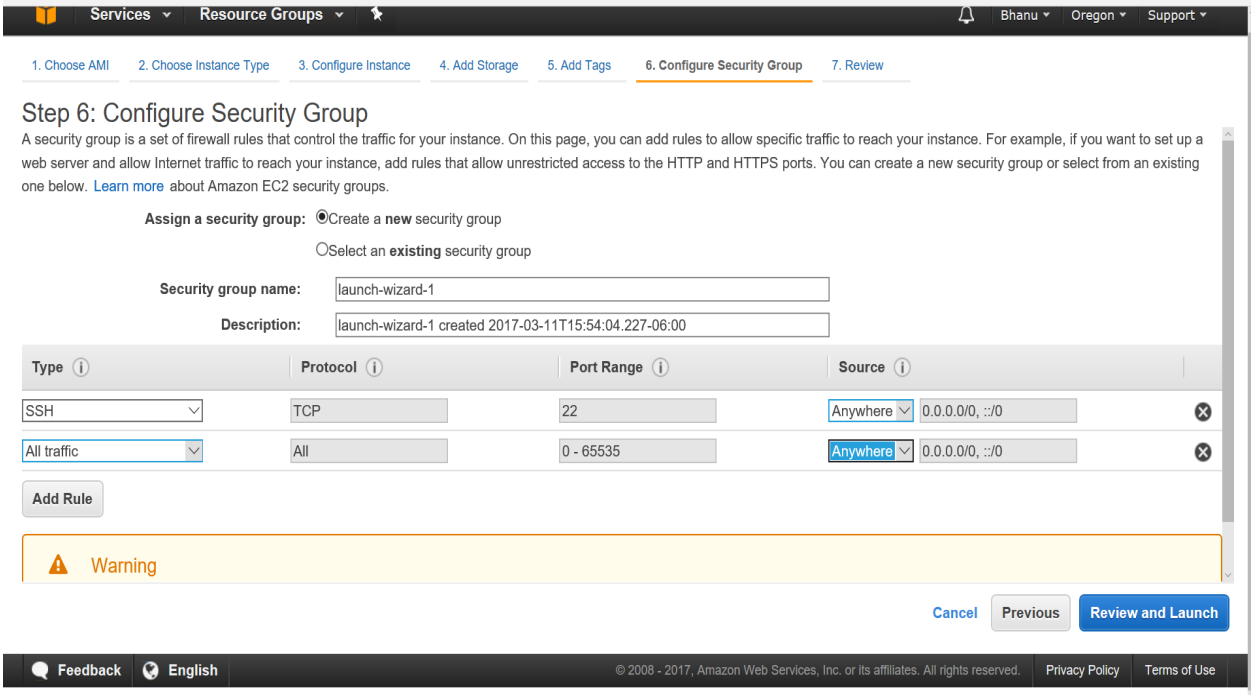
In the listen address mention the IP Address of all the Cassandra nodes so that they form one cluster.



Snapshot of Cassandra Cluster with 6 nodes:

```
root@ip-172-31-15-207:/bin# nodetool -h localhost status
Datacenter: datacenter1
=======================
Status=Up/Down
|/ State=Normal/Leaving/Joining/Moving
--  Address         Load       Tokens  Owns (effective)  Host ID
                Rack
UN  172.31.15.207  87.77 KB   256     46.9%            287a3ee8-e43d-4f3b-9aac-
83c856ad7ef8  rack1
UN  172.31.2.254   218.28 KB  256     49.4%            4f8aed2e-22f4-49f7-bd69-
daa67672ff81  rack1
UN  172.31.15.152  89.95 KB   256     48.3%            a0c44198-0bb6-45d8-b1a4-
07d4f4cf09a1  rack1
UN  172.31.6.227   70.41 KB   256     50.2%            efe877d0-3189-46ab-9a5c-
34dcf17bf3bc  rack1
UN  172.31.1.178   53.14 KB   256     52.2%            a488a948-91ce-4758-a35f-
6c0922f4cfe9  rack1
UN  172.31.8.240   70.4 KB    256     52.9%            f4a6e0f5-b607-4b3d-a373-
a09259a21c7d  rack1
```

In Security Groups open the inbound/outbound traffic.



VM Instance Specification:

Instance /CPU Type: t2.large
Number of Cores: 2

Memory Size: 30GB/dev/sda1
Price: CPU credits/hours: 36 $0.094 per hour

Description | Status Checks | Monitoring | Tags

Instance ID	i-0700186a818924820	Public DNS (IPv4)	-
Instance state	stopped	IPv4 Public IP	-
Instance type	t2.large	IPv6 IPs	-
Elastic IPs		Private DNS	ip-172-31-3-58.us-west-2.compute.internal
Availability zone	us-west-2c	Private IPs	172.31.3.58
Security groups	launch-wizard-3. view inbound rules	Secondary private IPs	
Scheduled events	-	VPC ID	vpc-96126df1
AMI ID	ubuntu/images/hvm-ssd/ubuntu-xenial-16.04-amd64-server-20170221 (ami-a58d0dc5)	Subnet ID	subnet-d85d5180
Platform	-	Network interfaces	eth0
IAM role	-	Source/dest. check	True
Key pair name	CassandraConfig3Node3		
Owner	539628028430	EBS-optimized	False

Launch time	March 11, 2017 at 3:56:56 PM UTC-6 (9 hours)	Root device type	ebs
Termination protection	False	Root device	/dev/sda1
Lifecycle	normal	Block devices	/dev/sda1
Monitoring	basic		
Alarm status	None		
Kernel ID	-		
RAM disk ID	-		
Placement group	-		
Virtualization	hvm		
Reservation	r-0a56f120811b85e1e		
AMI launch index	0		
Tenancy	default		
Host ID	-		
Affinity	-		
State transition reason	User initiated (2017-03-11 22:52:02		

Issues Faced:

Issue 1:
Was unable to download Cassandra from the link provided in blog.

Solution 1:
Downloaded a newer version of Cassandra and got it running.

Issue 2:
Removing nodes on local host was time consuming and slow.

Solution 2:
Used command **nodetool removenode force hostID**