AWS amazon web service

AWS LAUNCHED IN 2006

Offering 240+ service

We are going to learn 25+ major service

12 services

13 services for resume weightage and live project

(*) What is Cloud computing?

It's a technology which reduce our cost and reduce our physical machines (which is on premises) convert to virtual machines (cloud servers). On demand delivery of resources through internet with {pay as you go model}. In other words, simply says

physical datacenter ------ to virtual datacenter.

physical data center contains (on premises)

1server --- EC2 LAMDA EBS

2 storage --- S3 EFS

3 security --- IAM CM CLOUD TRAIL

4 database --- RDS REDHIFT DYNAMO DB

5 applications -- ELB ASG CW SNS SQS

6 networking --- VPC R53

1 server

A **server** is a software or hardware device that accepts and responds to requests made over a network. The device that makes the request, and receives a response from the server, is called a client.

2 storage

On-premises storage means **your company's server is hosted within your organization's infrastructure and, in many cases, physically onsite**. The server is controlled, administered, maintained, procured, etc. by your company and its in-house IT team

4 database

in computing, a database is an organized collection of data stored and accessed electronically

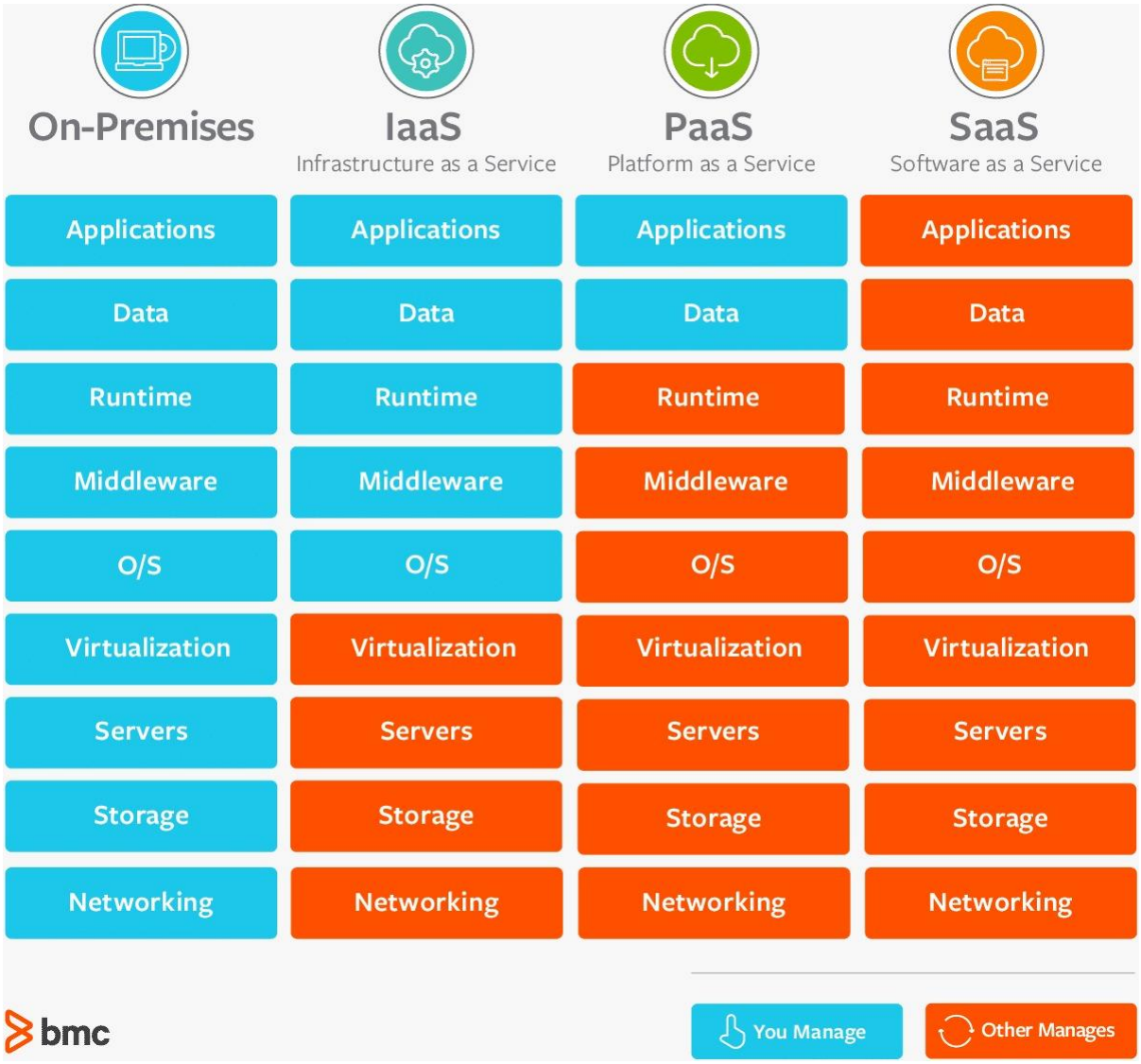
5 applications

An application program is a computer program designed to carry out a specific task other than one relating to the operation of the computer itself, typically to be used by end-users

6 networking

Computer networking refers to **interconnected computing devices that can exchange data and share resources with each other**

Cloud models are common for all platforms like AZURE & GCP etc.



On premises – we need to maintain the following

Blue: IAAS PAAS

31 REGION THROUGHOUT THE WORLD SINGLE REGION CONTAINS 3 DATA CENTERS (Availability zone)

According to client needs we need to create virtual machines in a specific region

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1.SERVER

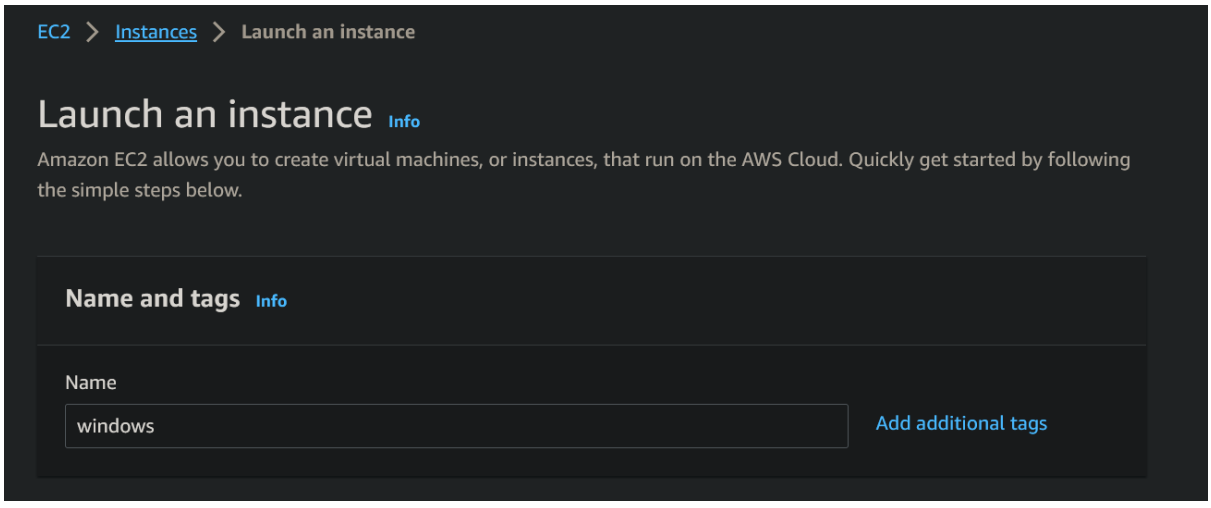
EC2 SERVER ENGINEERING (Elastic compute cloud – virtual server access through internet)

LAUNCH AN INSTANCE WINDOWS& LINUX

EC2 -- INSTANCES -— LAUNCH AN INSTANCE

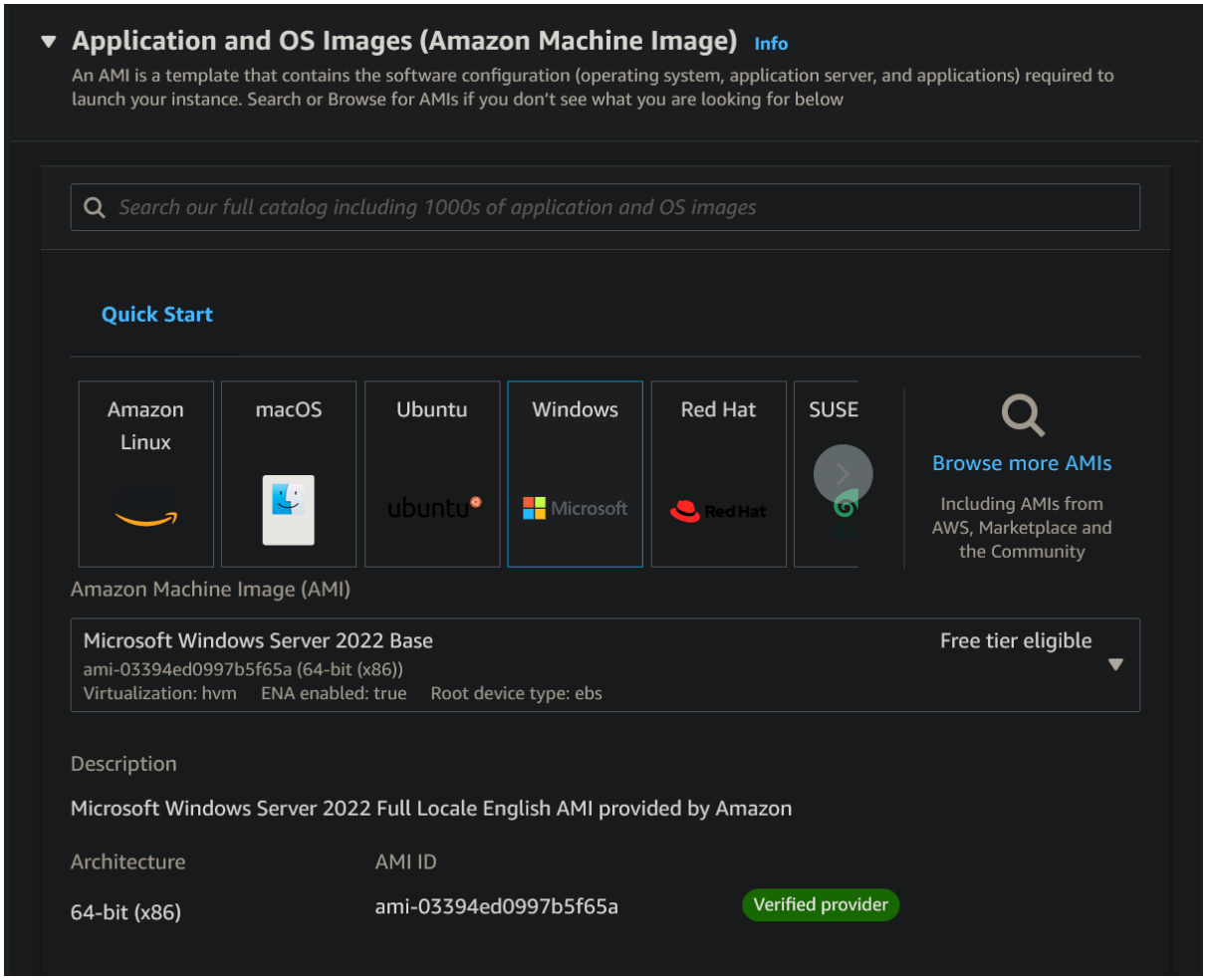
WINDOWS SERVER CREATION

(*) NAME

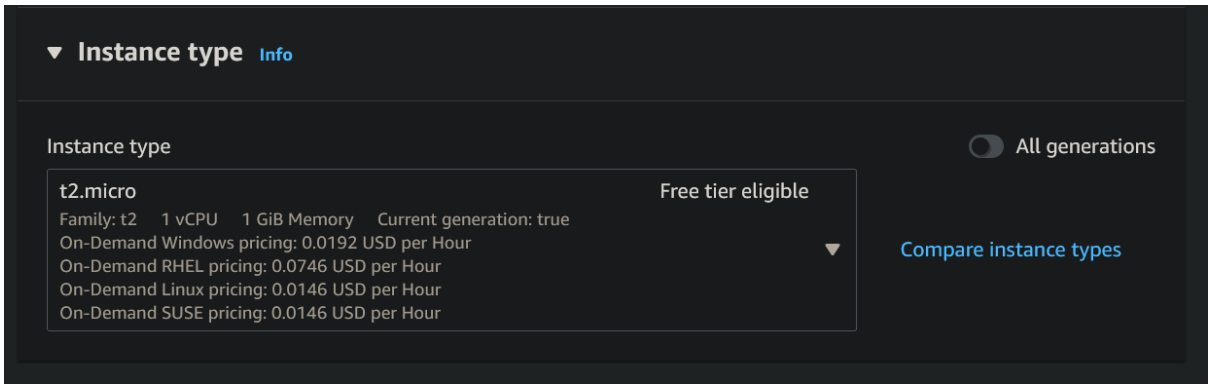


(*) AMAZON MACHINE IMAGE

SELECT FREE TIER OS



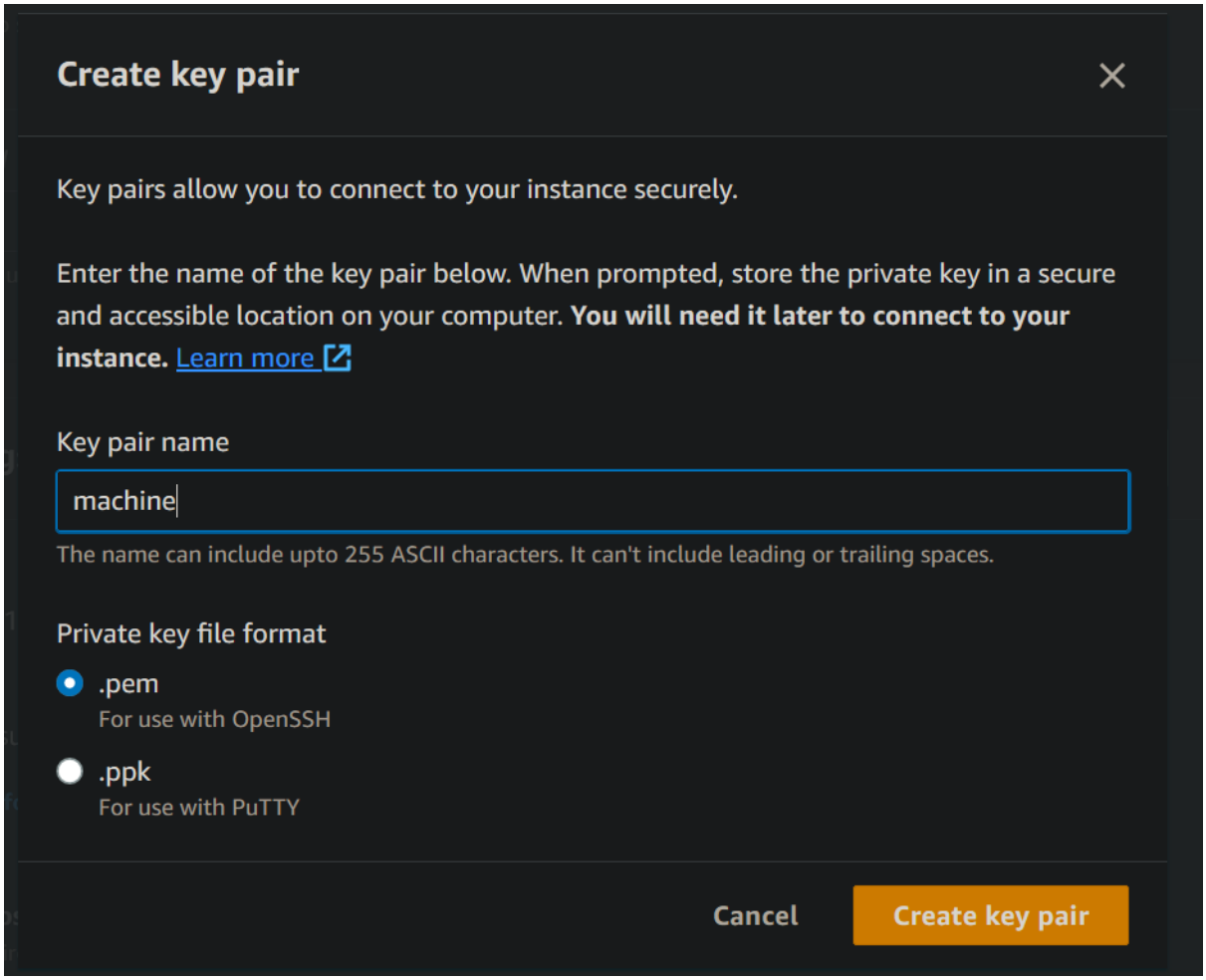
(*) RAM SELECTION T2 MICRO FREE TIER ELIGIBLE



(*) CREATE A NEW KEY PAIR

.PEM for windows

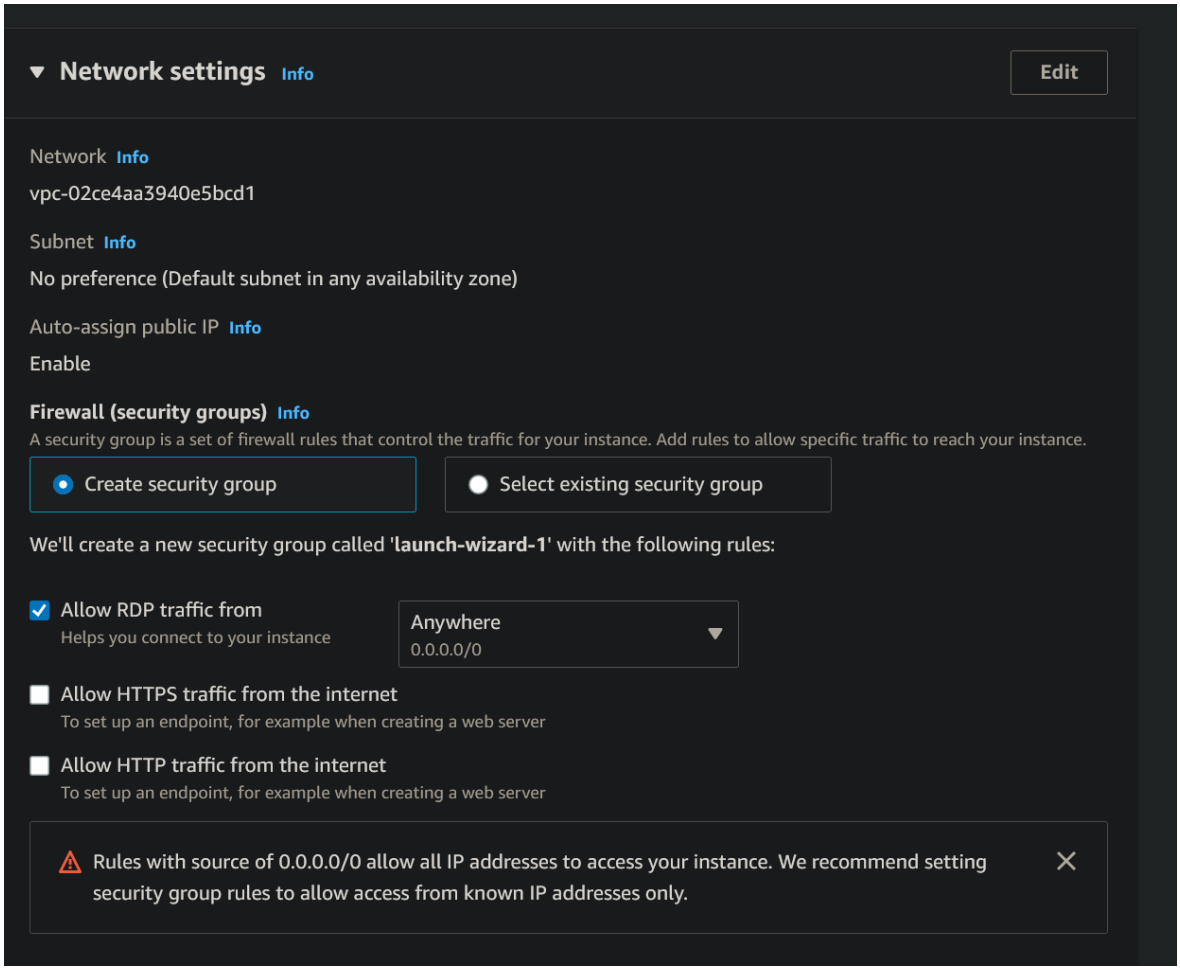
.PPK for Linux



Public key is created within the machine

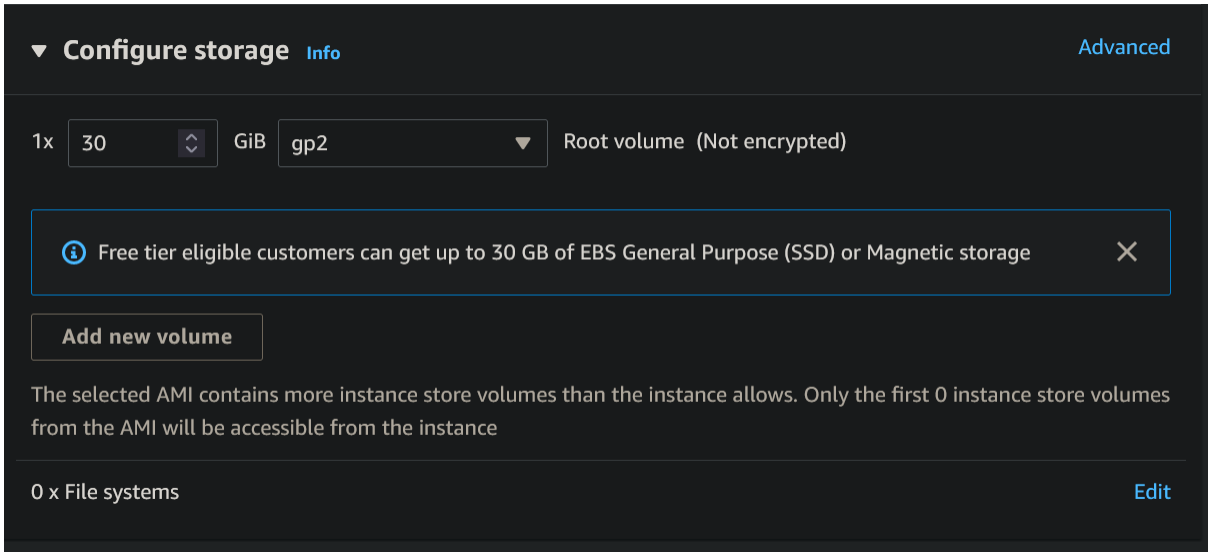
Private key is downloaded

(*) network settings



Remote desktop protocol RDP IS ENABLED PORT NO 3389

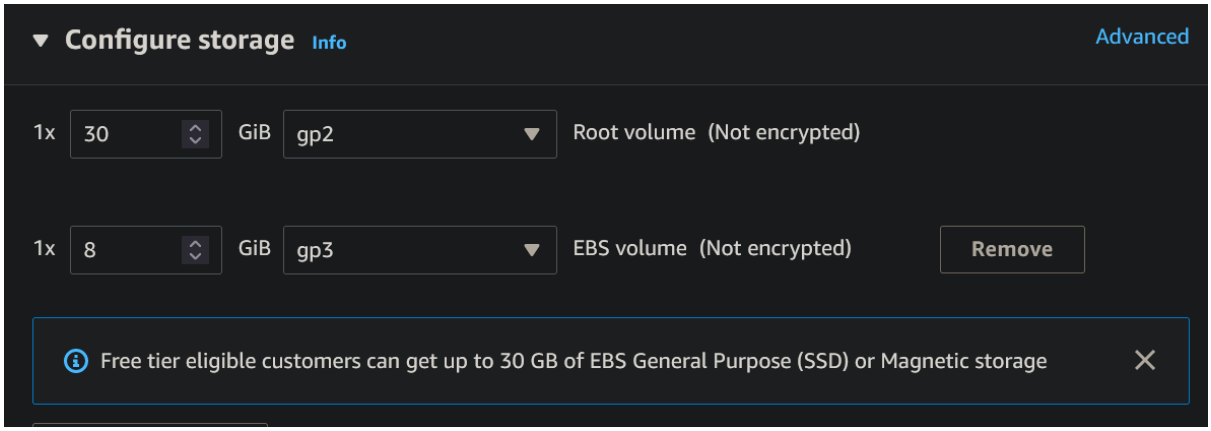
(*) configure storage



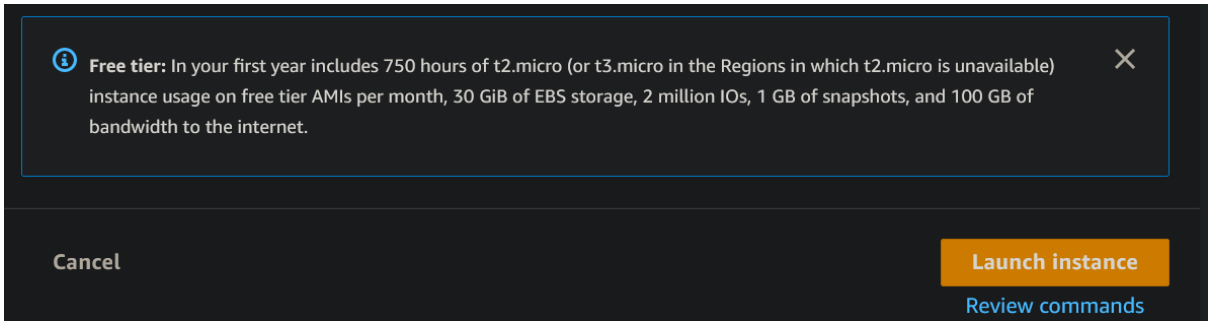
16 tb of storage can be added in free tier

We can add new volumes till 16 Terabytes (according to client needs)

(*) add volume



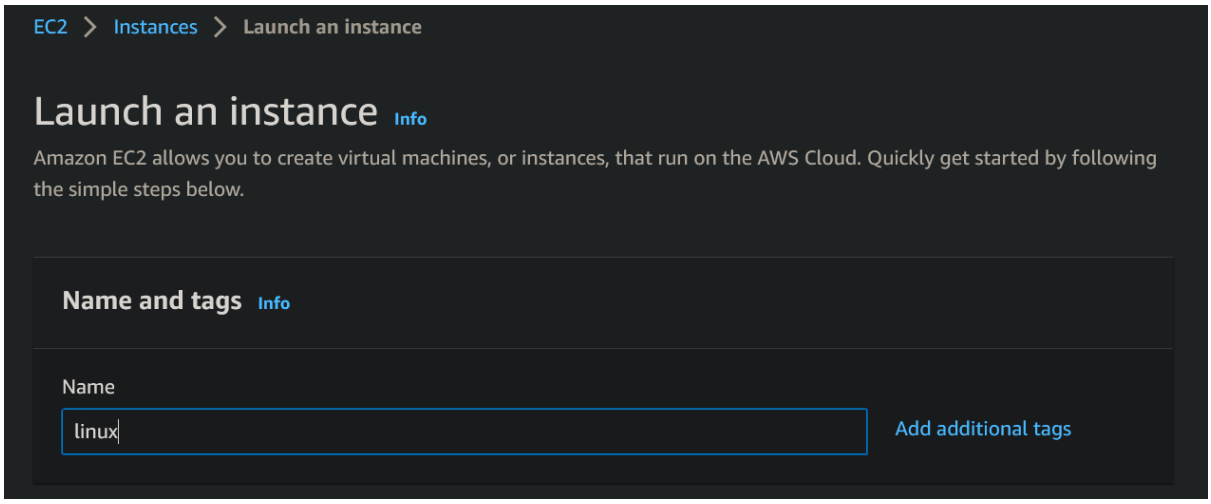
(*) launch instance



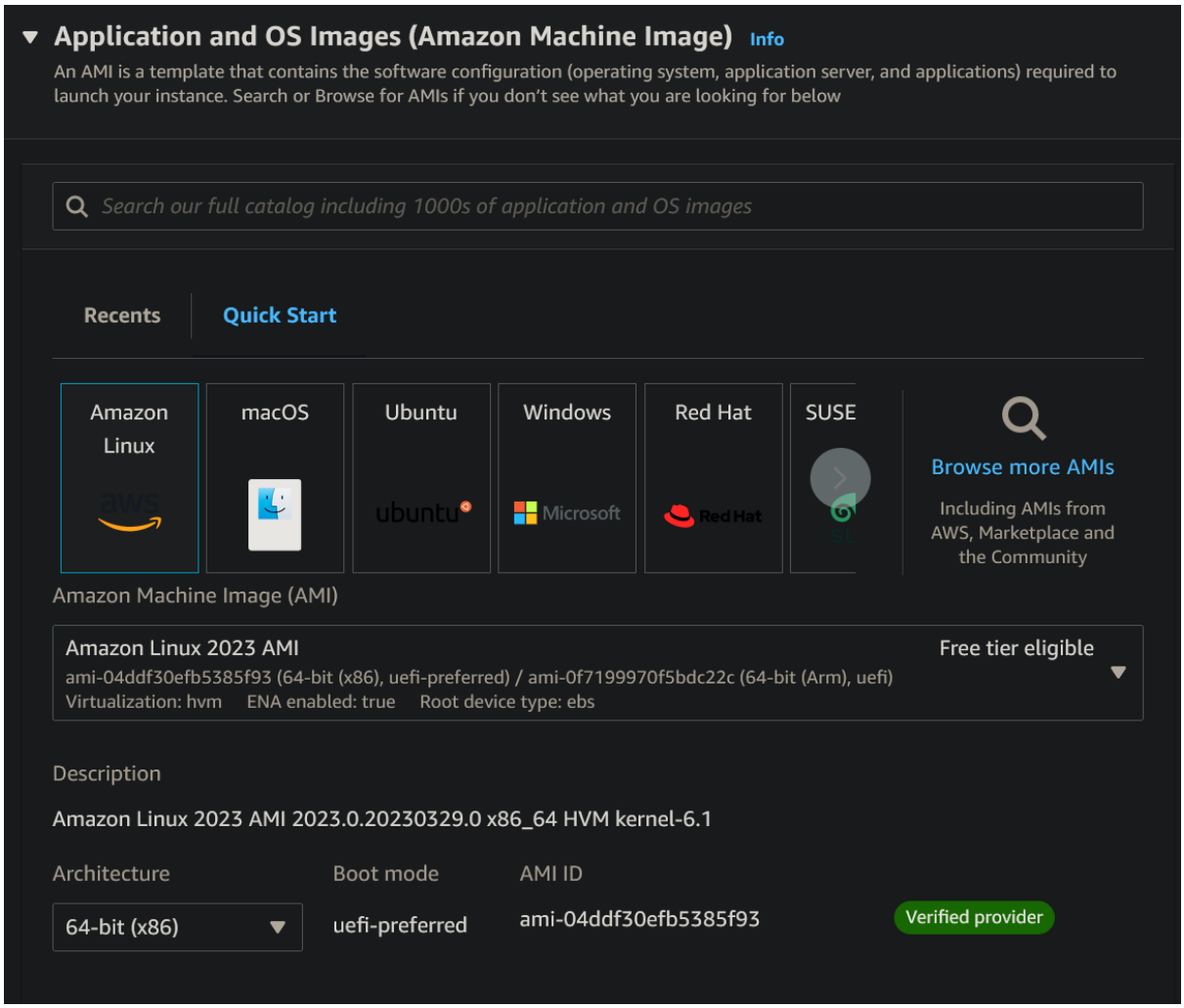
(*) instance has been launched for windows

2. Linux instance

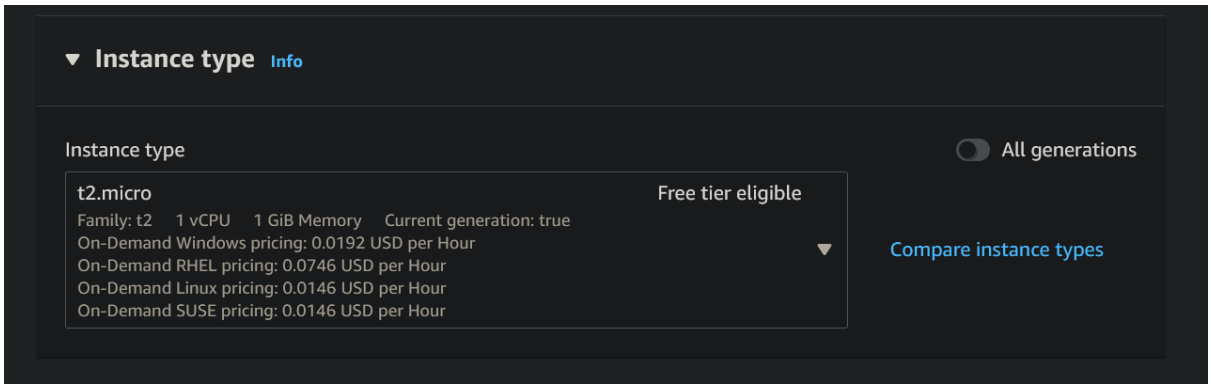
Name and tags



(*) amazon machine image

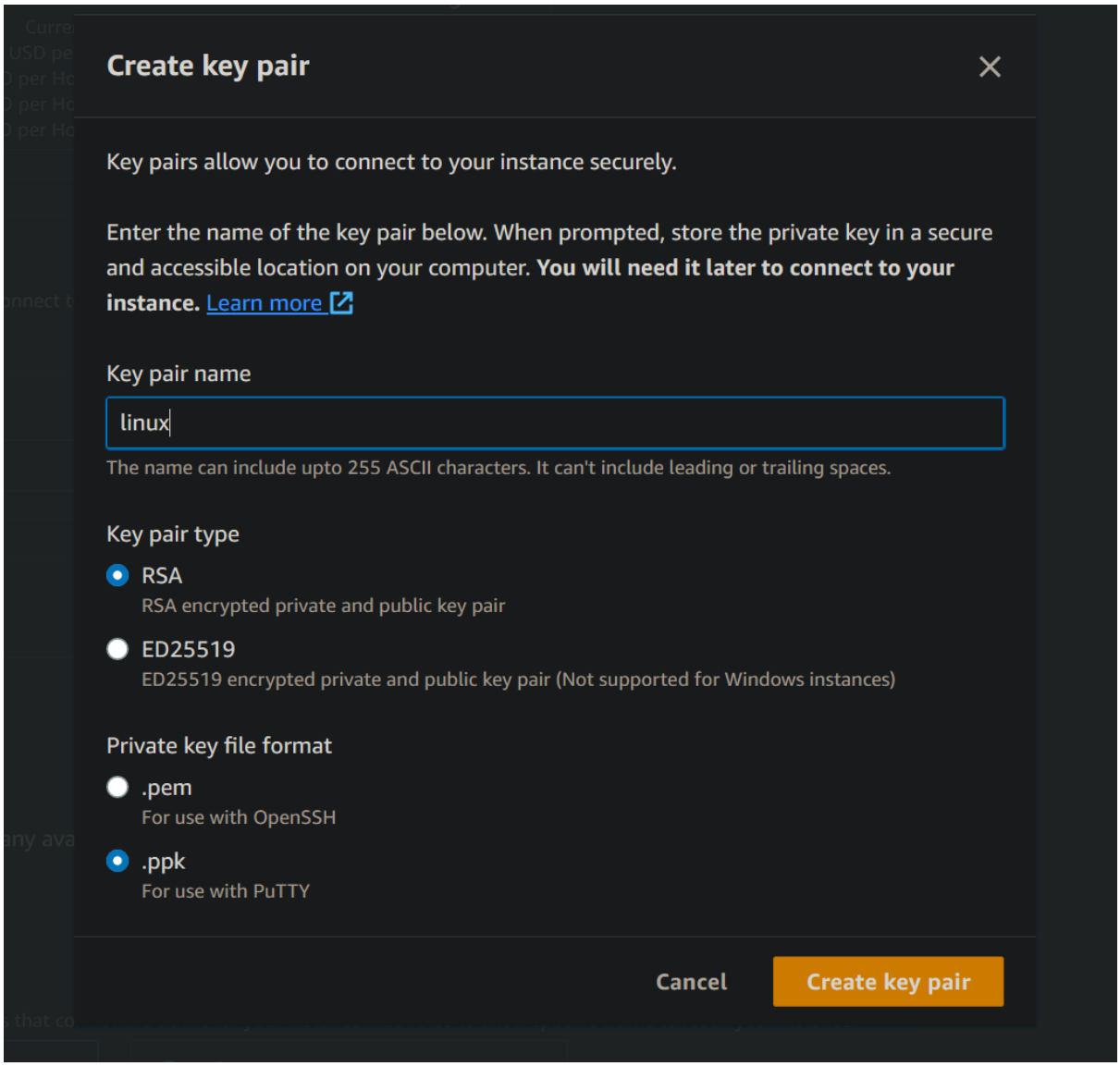


(*) instance type t2 micro



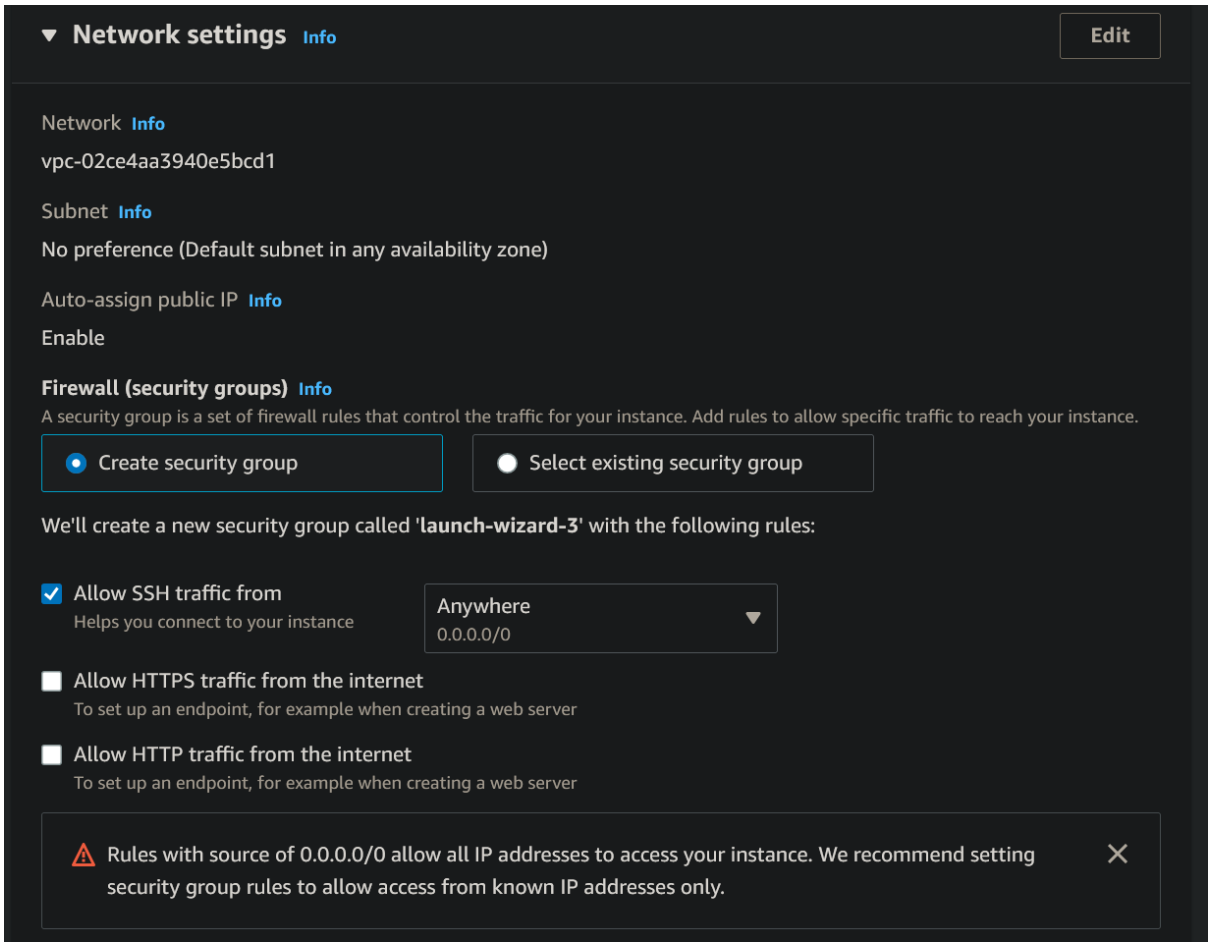
(*) create new key pair

PPK file format PUTTY PRIVATE KEY FORMAT

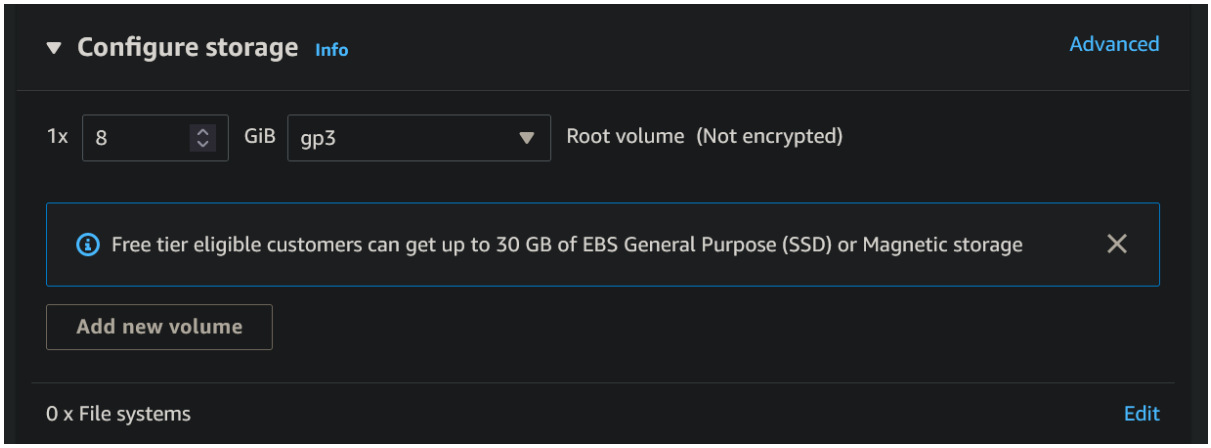


(*) NETWORK SETTINGS

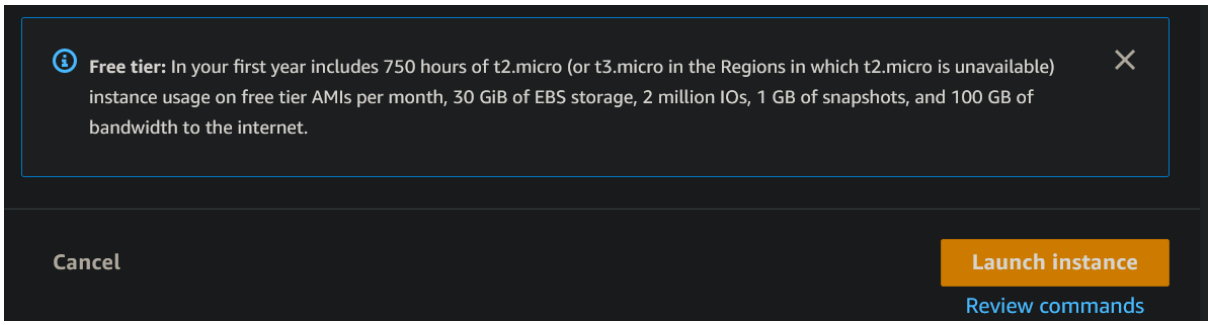
ALLOW SSH PROTOCOL PORT NO 22



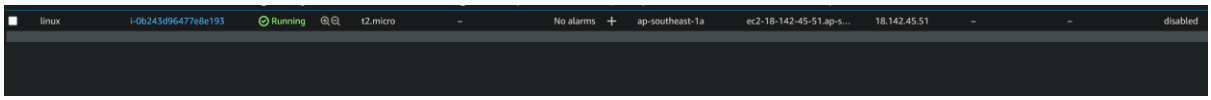
(*) CONFIGURE STORAGE



(*) LAUNCH INSTANCE



(*) view all instance

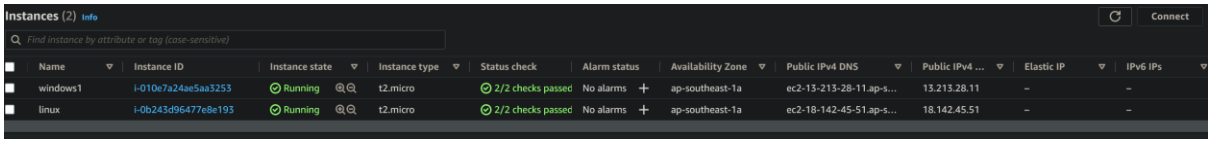


2/2 CHECK PASSED NETWORK AND SYSTEM CHECK

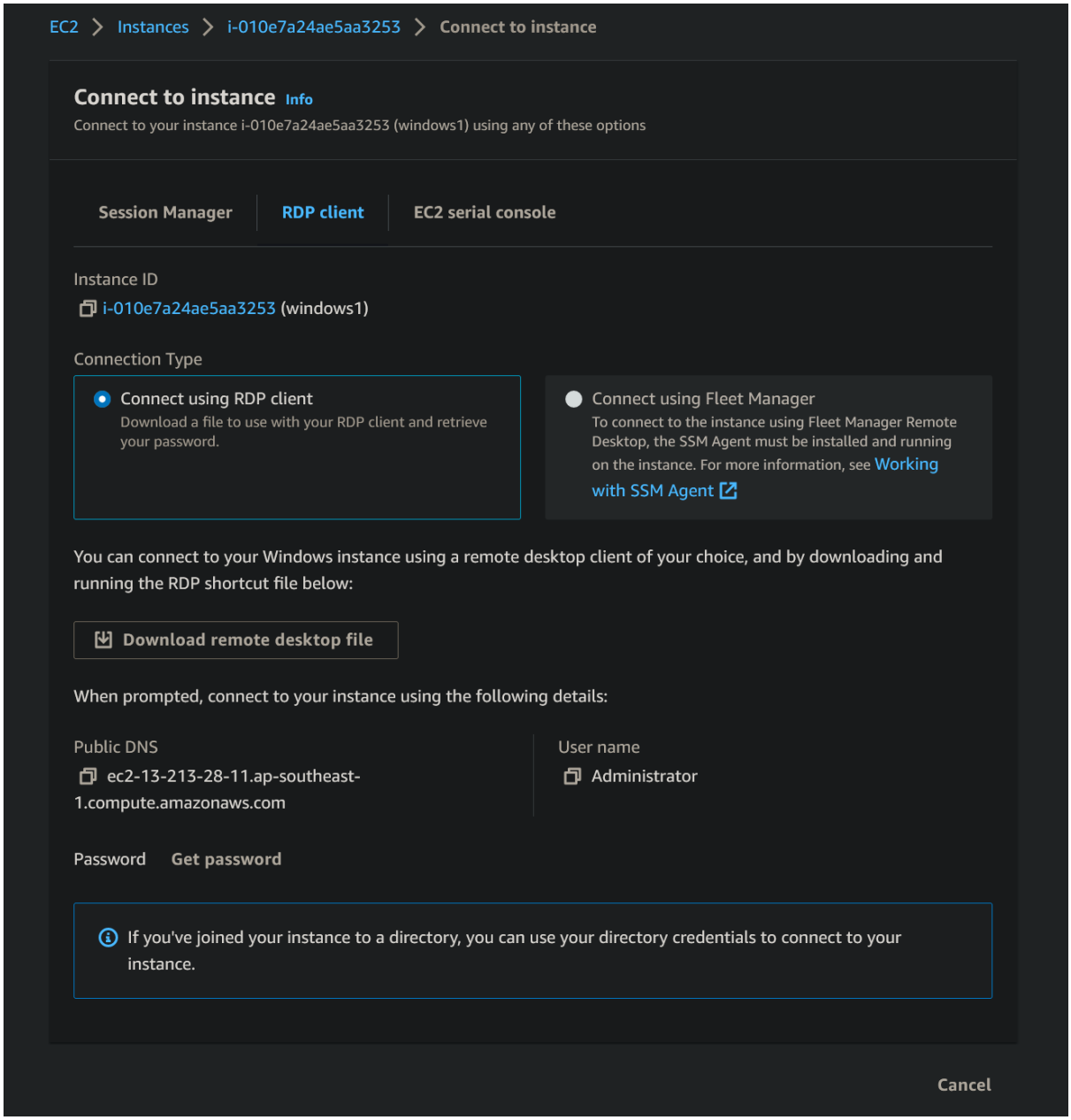
½ CHECK BOX CONNECTIVITY ISSUE

To solve this issue, they will restart the machine.

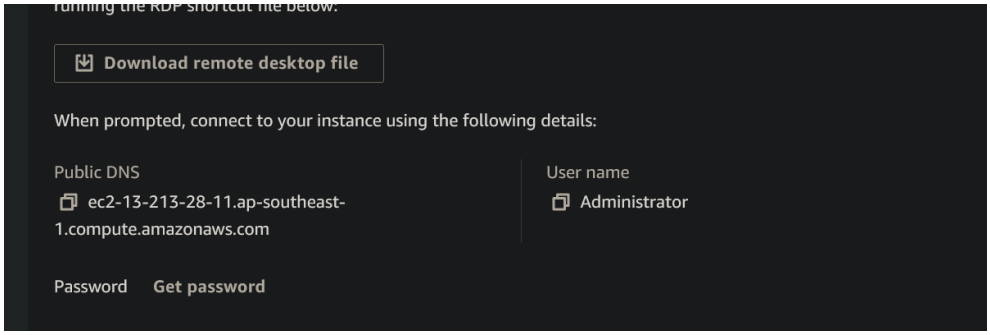
(*) Opening the machine using connect option



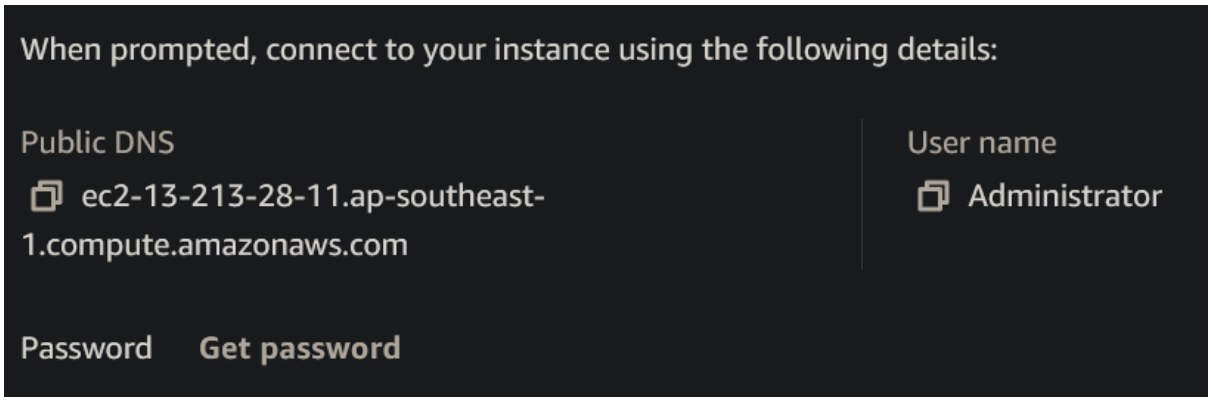
(*) connect using RDP client for windows



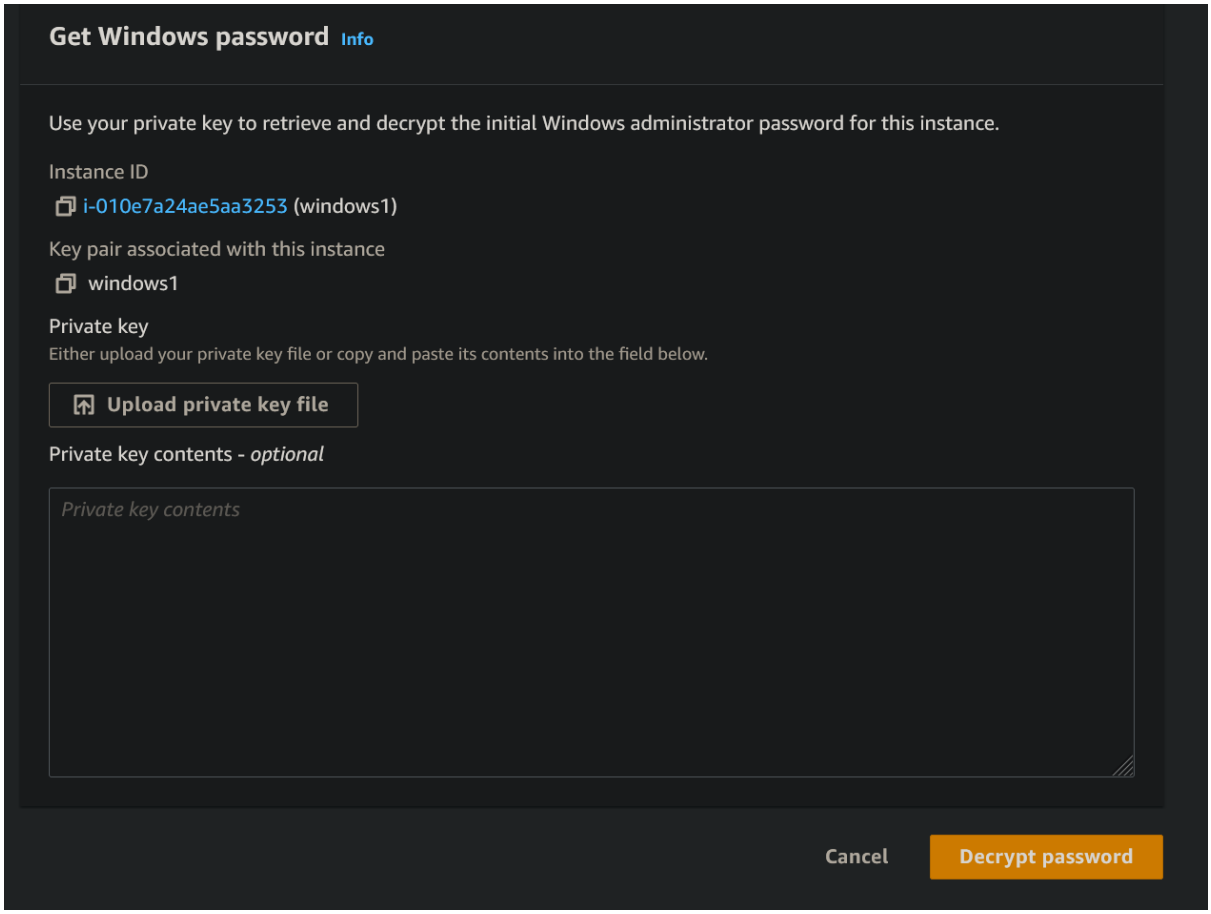
(*) download remote desktop file



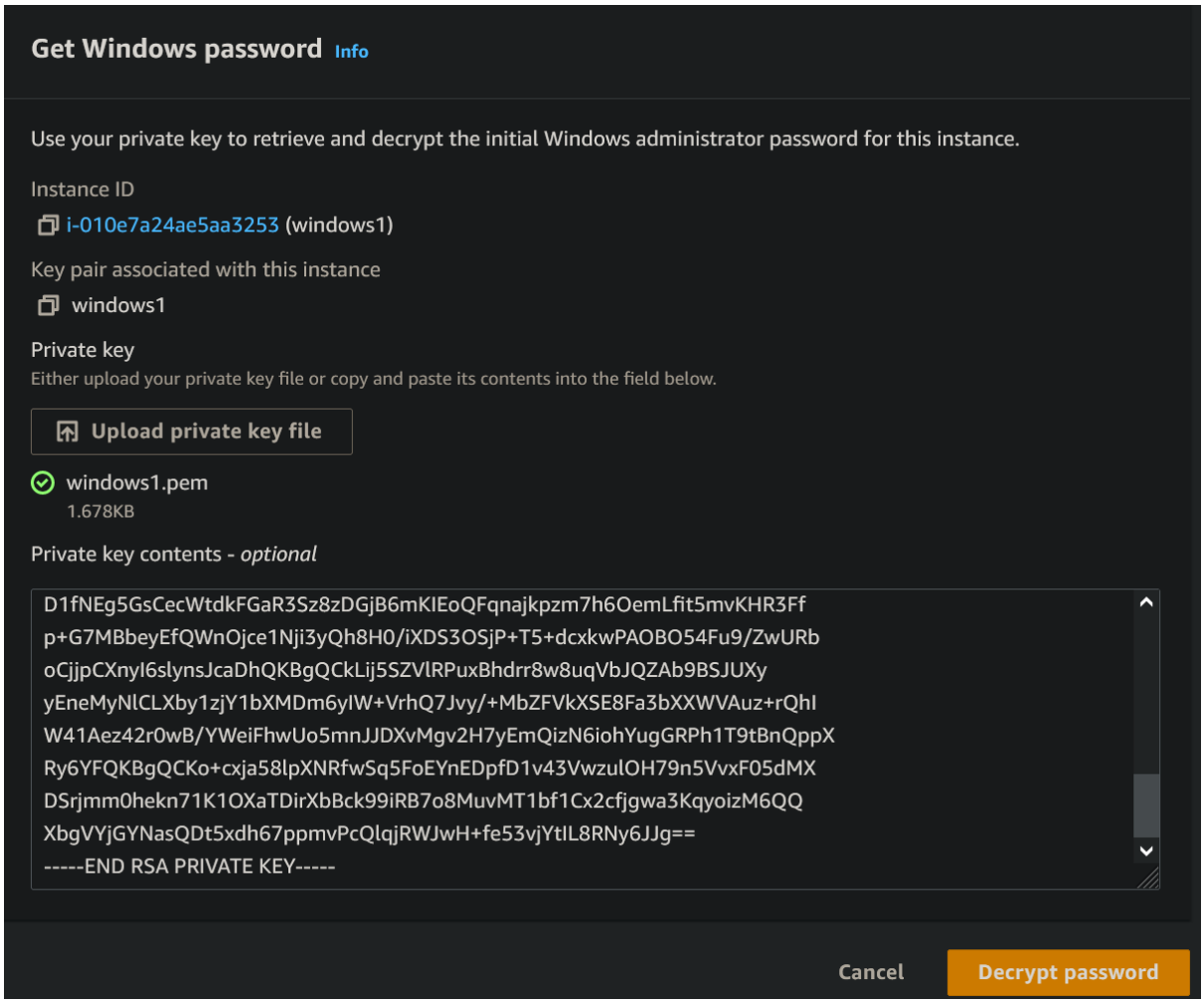
(*) choose get password



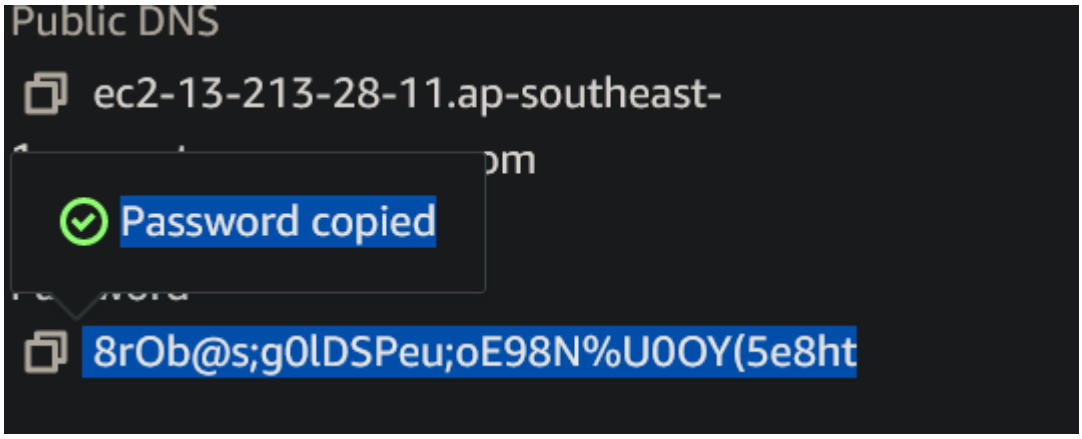
(*) get windows password



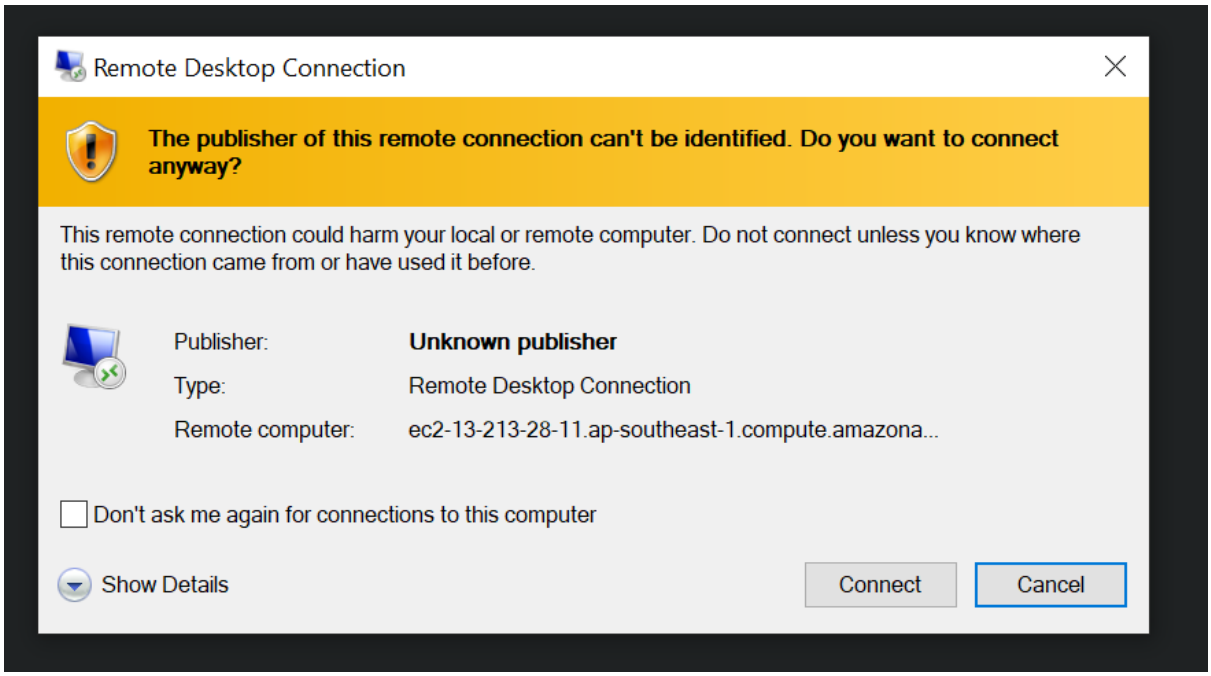
(*) (upload PEM private key file)



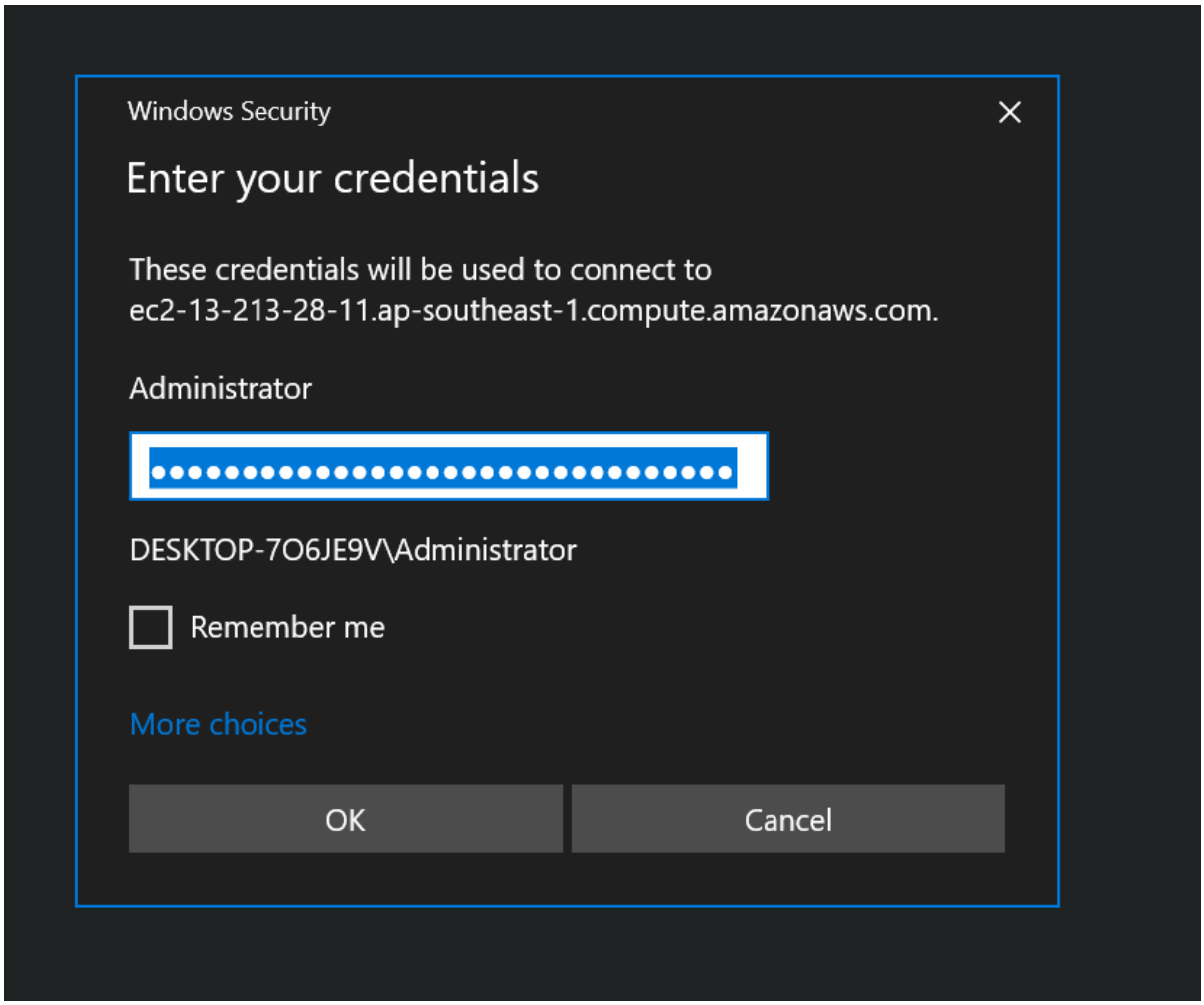
(*) (password copied)

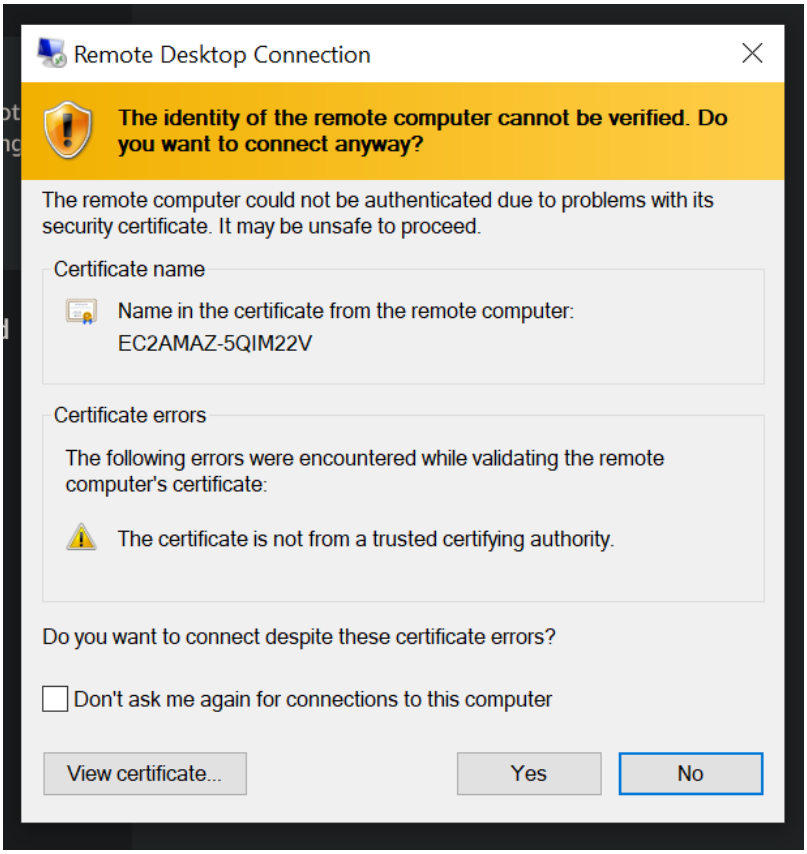


(*) connect using remote desktop file

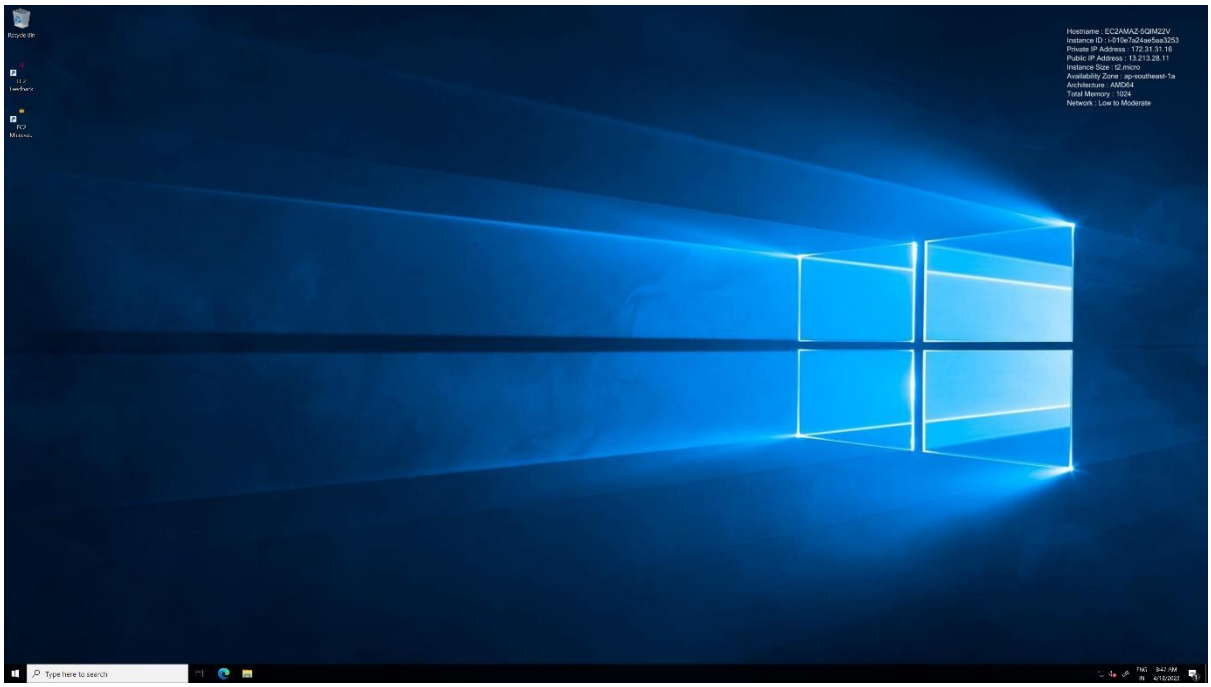


(*) paste decrypted password and press ok





(*) windows machine is connected successfully



NEW VOLUME SHOULD BE ADDED MANUALLY

1.DISK MANAGEMENT

2. ONLINE

3.INITIALIZE DISK

4. NEW SIMPLE VOLUME – NEXT – NEXT -- FINISH

5. NEW VOLUME ADDED SUCCESSFULLY

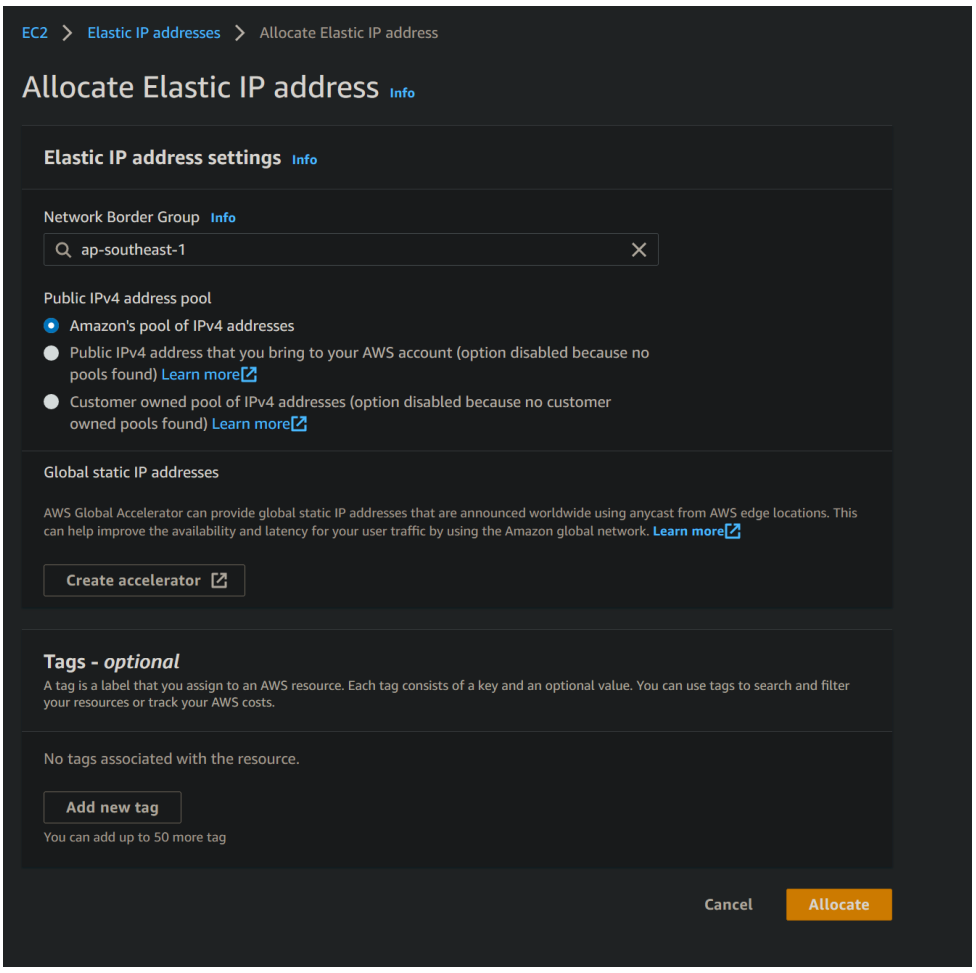
2. ELASTIC IP ADDRESS

Public ipv4 dynamic address

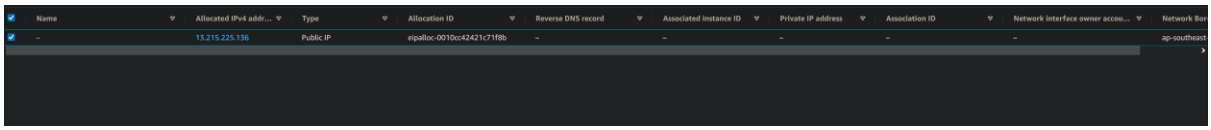
To cover private Ip

Private ipv4 address is a static Ip address

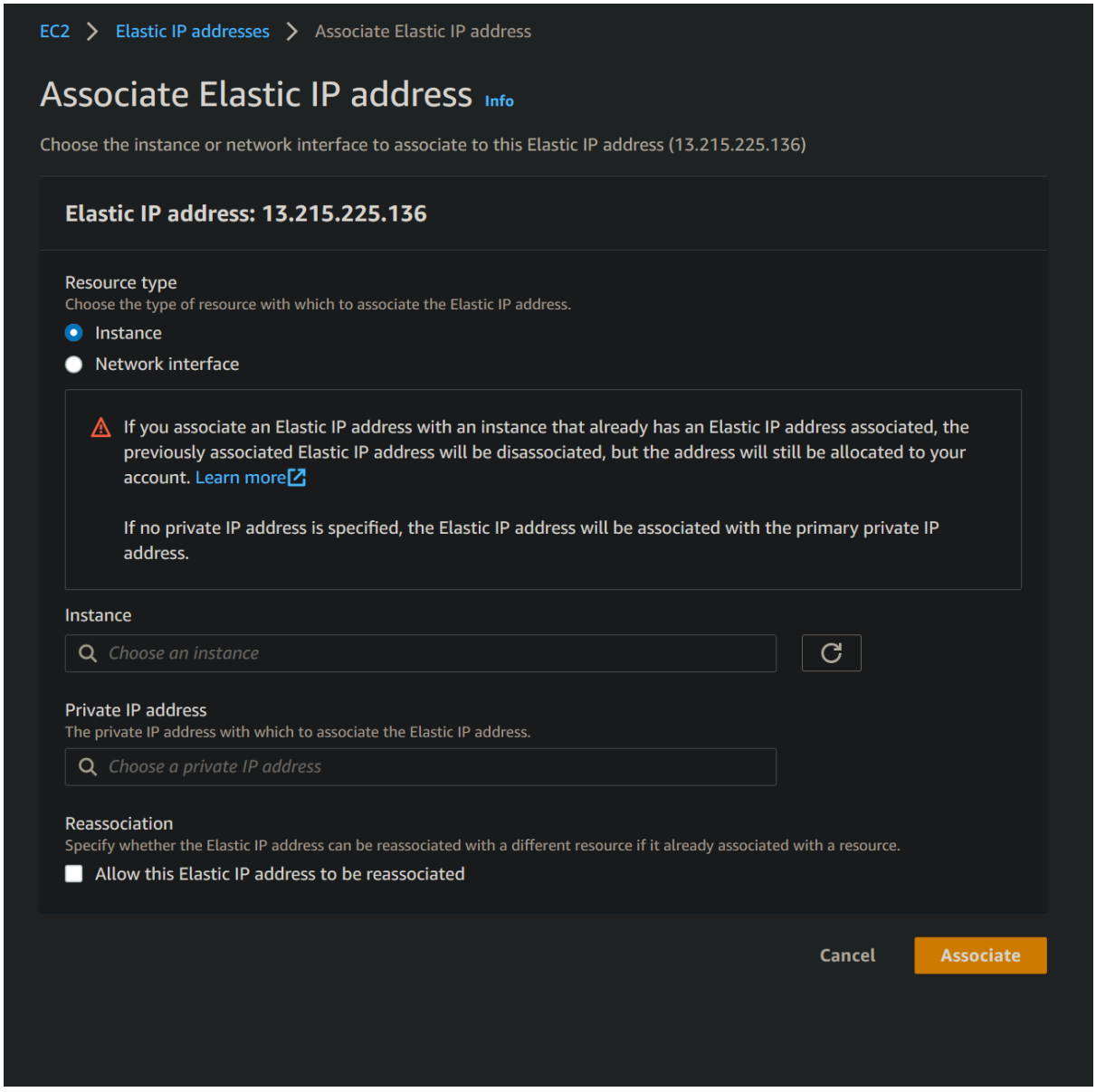
(*) allocate elastic Ip address



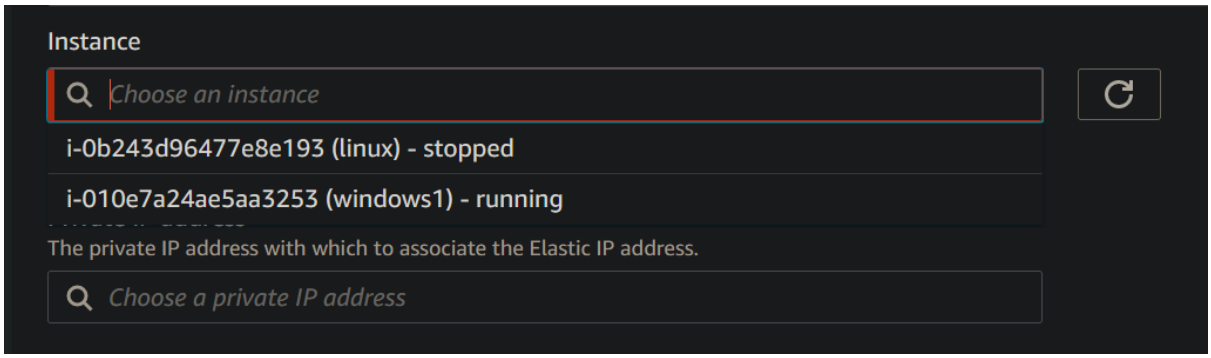
(*) ELASTIC IP ADDRESS CREATED



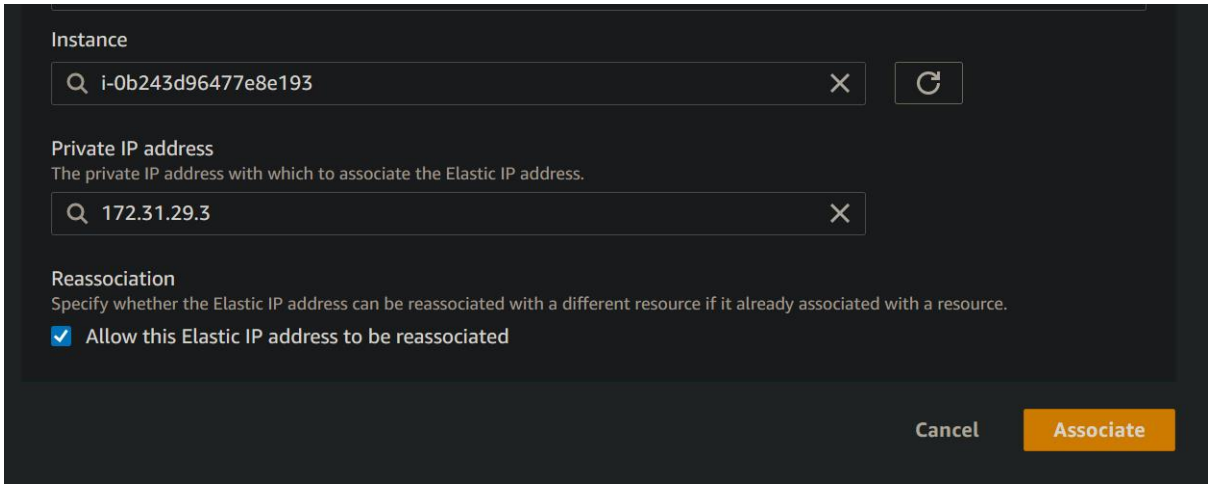
(*) ASSOCIATE ELASTIC IP ADDRESS



(*) CHOOSE A STOPPED INSTANCE

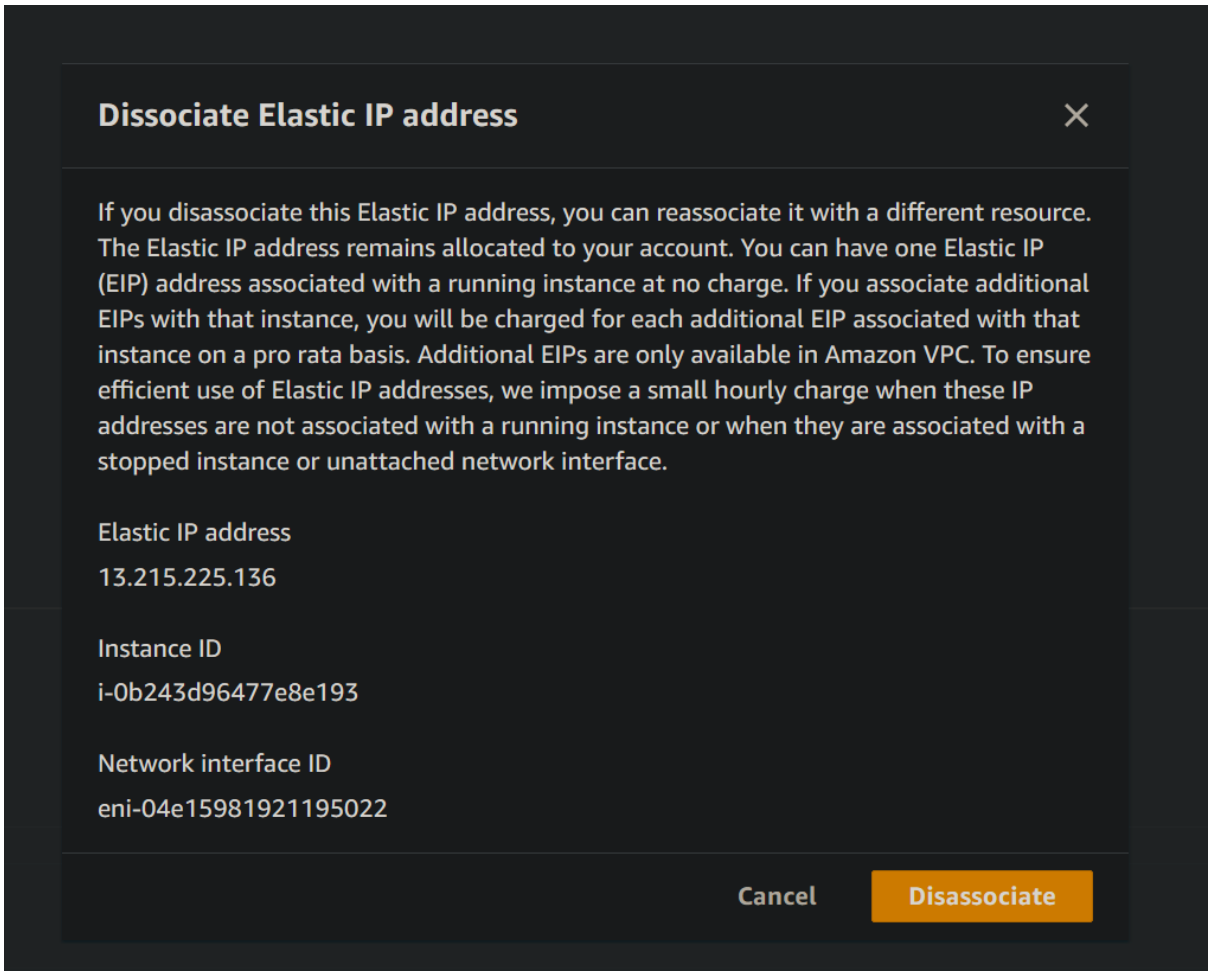


(*) SELECT PRIVATE IP ADDRESS ALLOW THIS ELASTIC IP ADDRESS TO BE REASSOCIATED

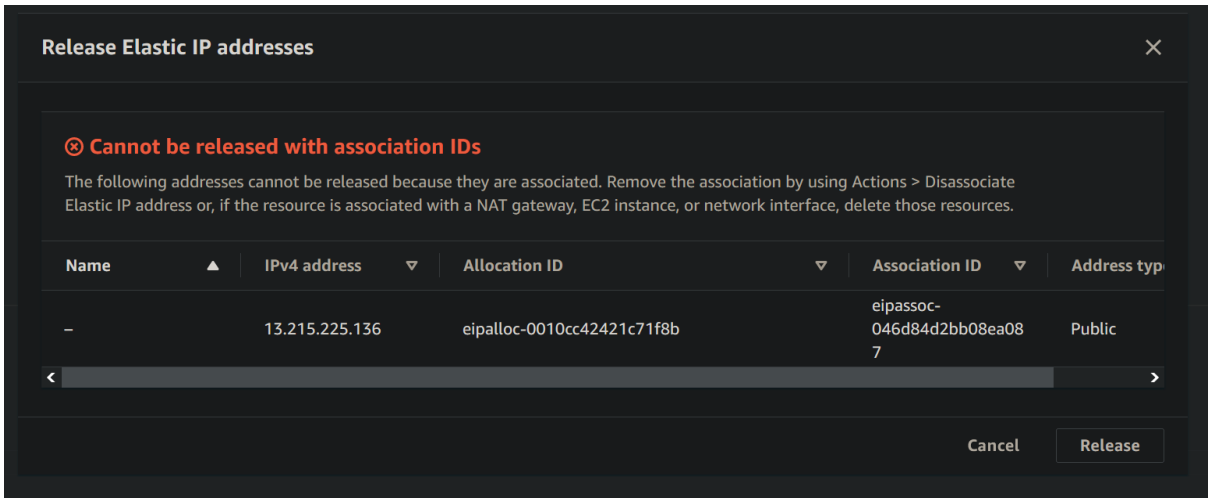


(*) DYNAMIC IP ADDRESS CHANGED TO STATIC

(*) DISSOCIATE ELASTIC IP ADDRESS AS IT IS NOT FREE OF COST



(*) RELEASE ELASTIC IP ADDRESS

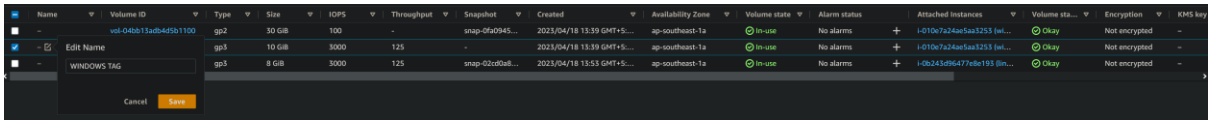


3. CREATING BACKUP

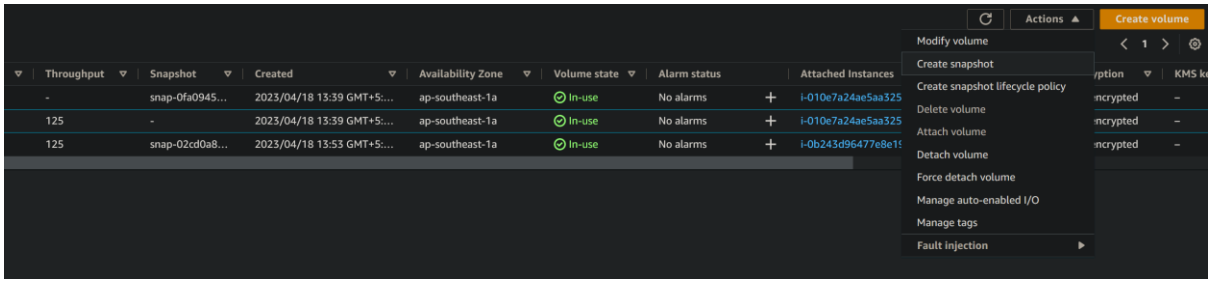
1.Go to elastic block store on the side

2. select volumes

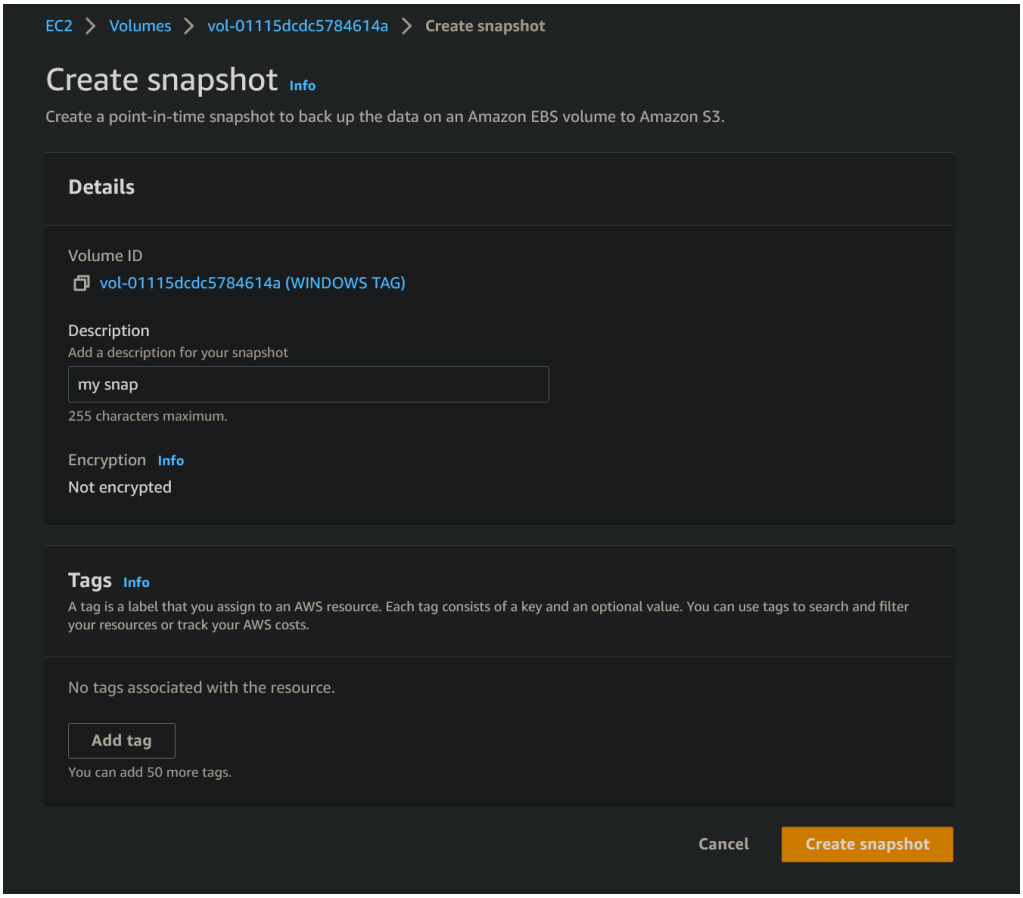
3. add tags for the volumes



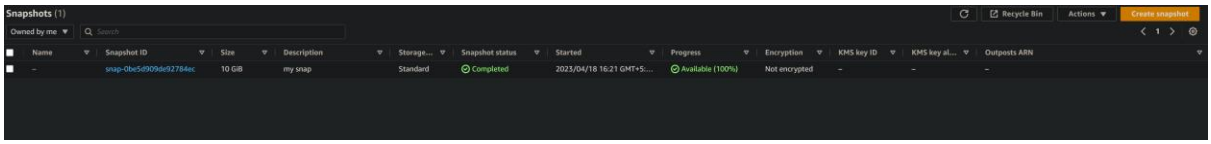
4.create snapshot



5.create snapshot

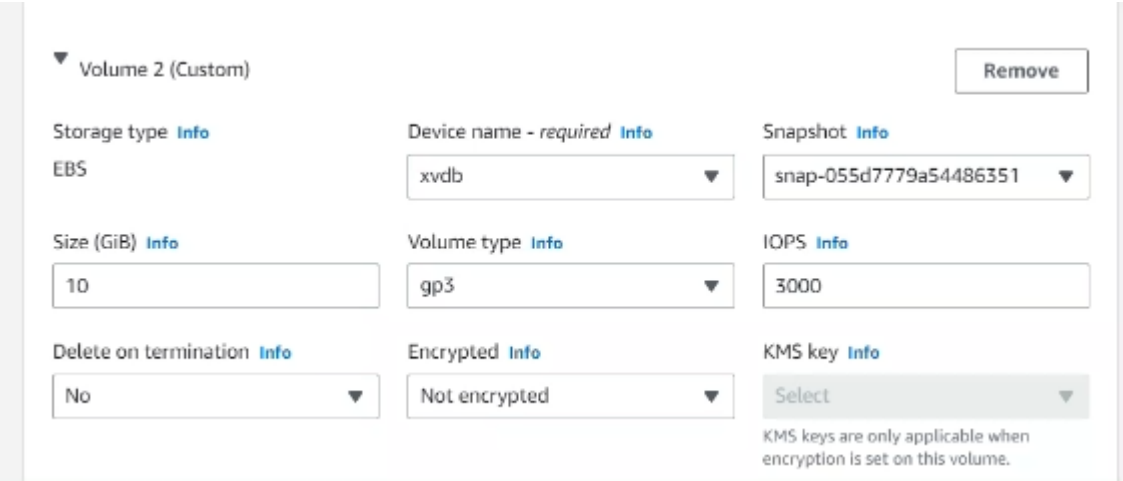


6. backup is created go to snapshot there you will see



7. create a new machine (instance)

8. add a new volume and add my snap to the volume



9. click on create instance

10. then connect using remote desktop file

11 NEW VOLUMES SHOULD BE ADDED MANUALLY

12.DISK MANAGEMENT

13. ONLINE

14.INITIALIZE DISK

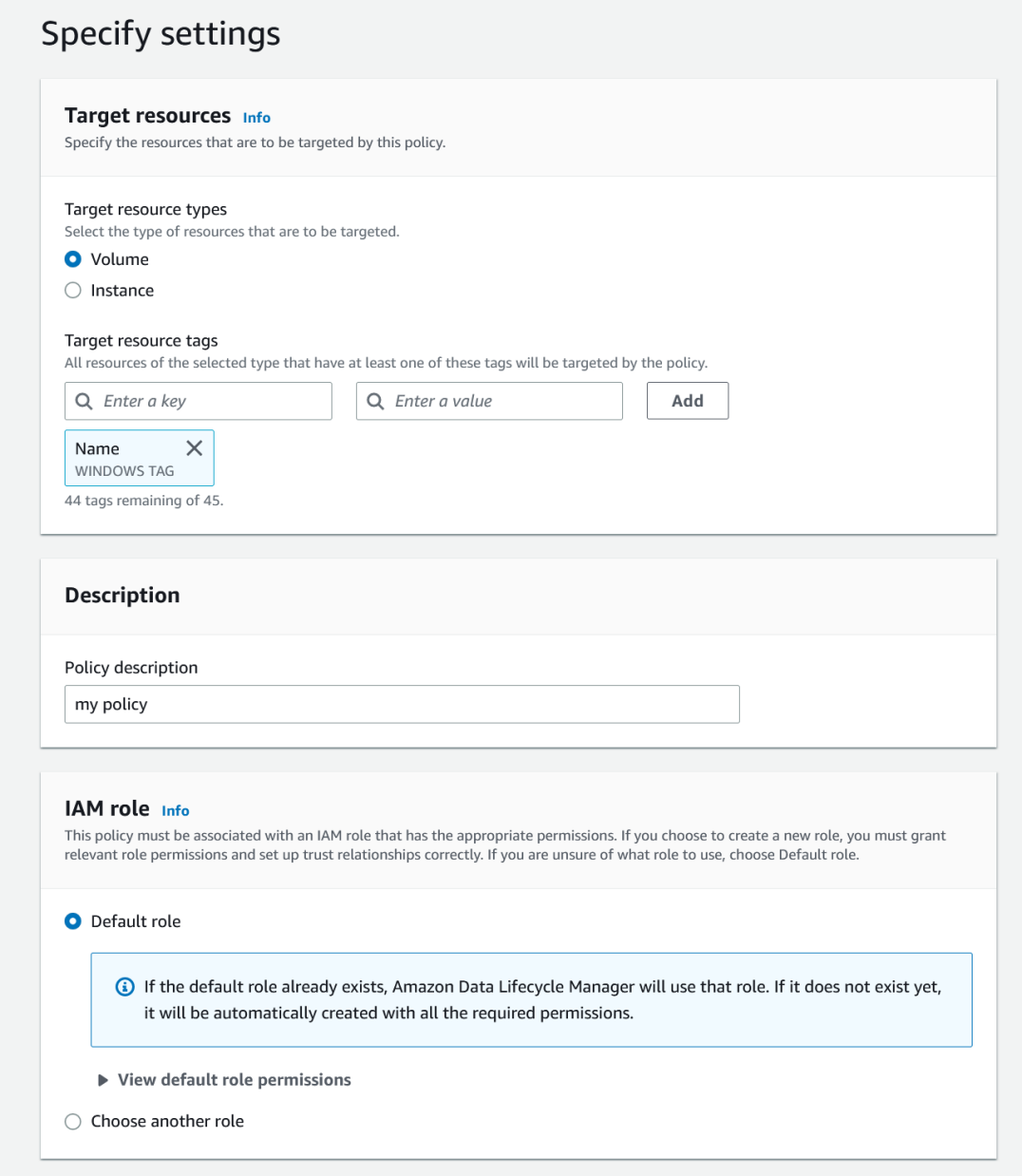
15. NEW SIMPLE VOLUME – NEXT – NEXT -- FINISH

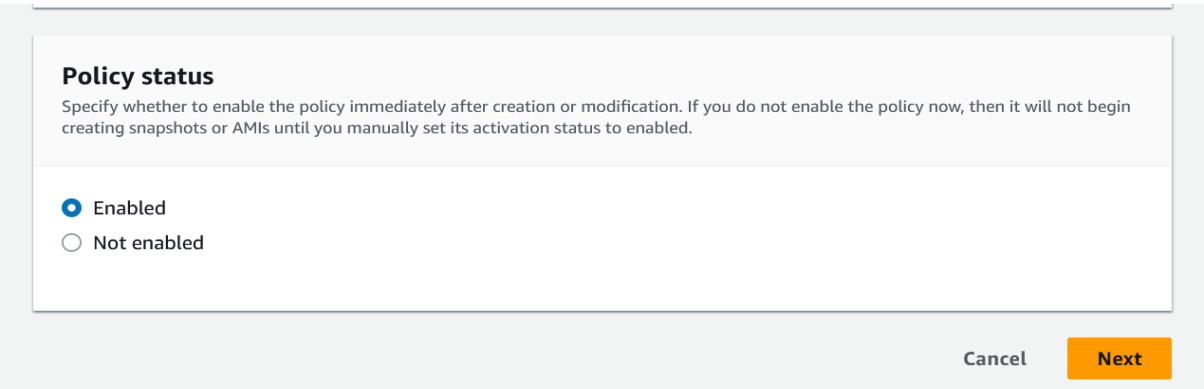
16. NEW VOLUME ADDED SUCCESSFULLY with backups

4.Elastic block store – lifecycle manager scheduling backups

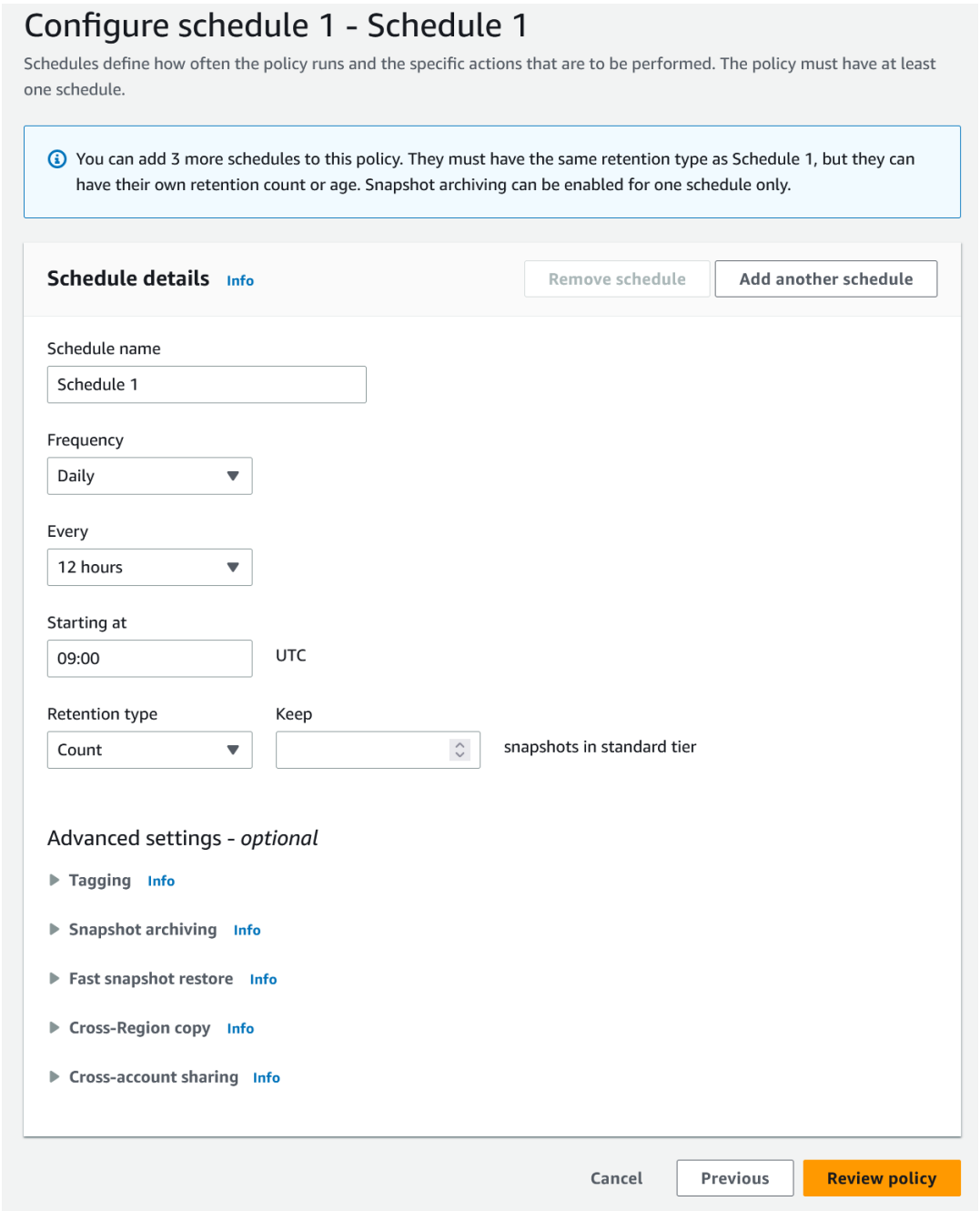
(*) EBS snapshot policy

(*) specify settings



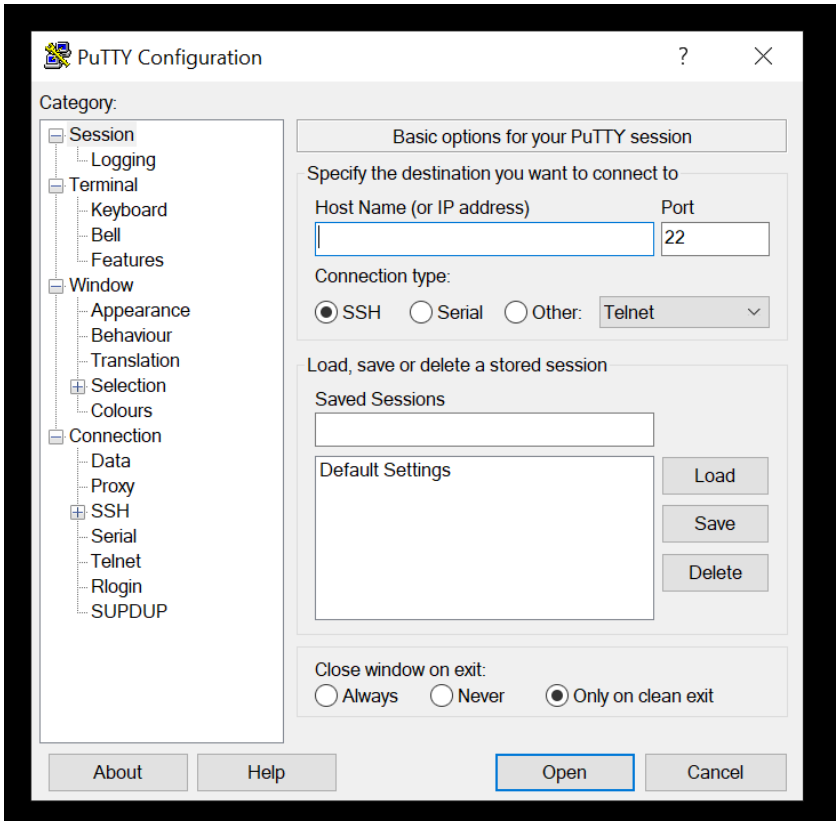


(*) configure schedule

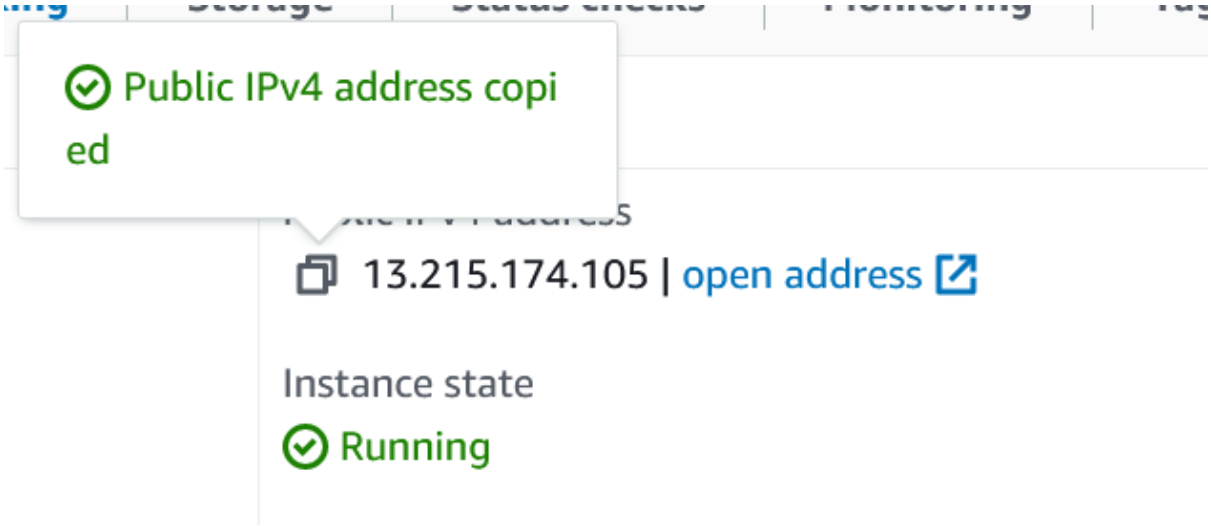


5. Linux

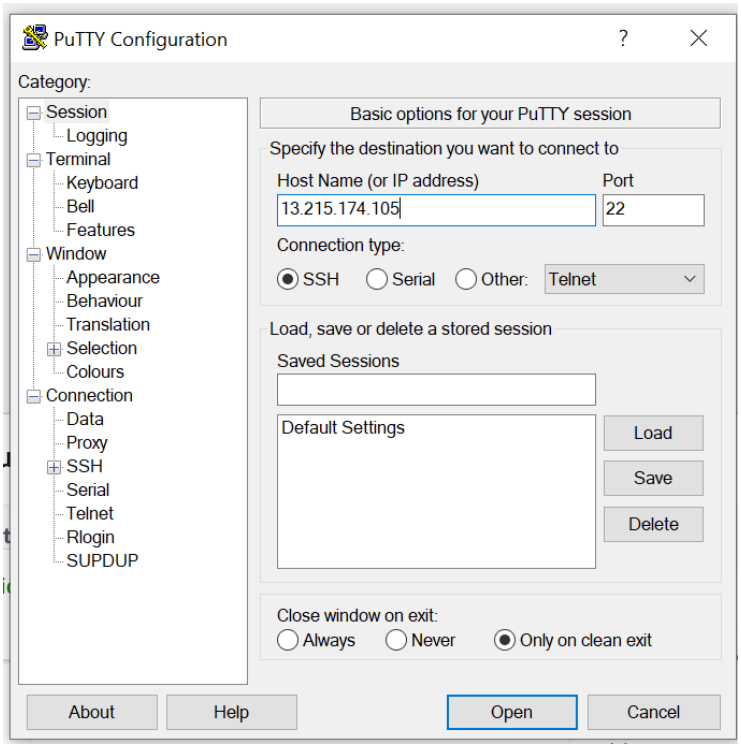
(*) putty configuration putty.org -- alternative binary file – 64bit exe



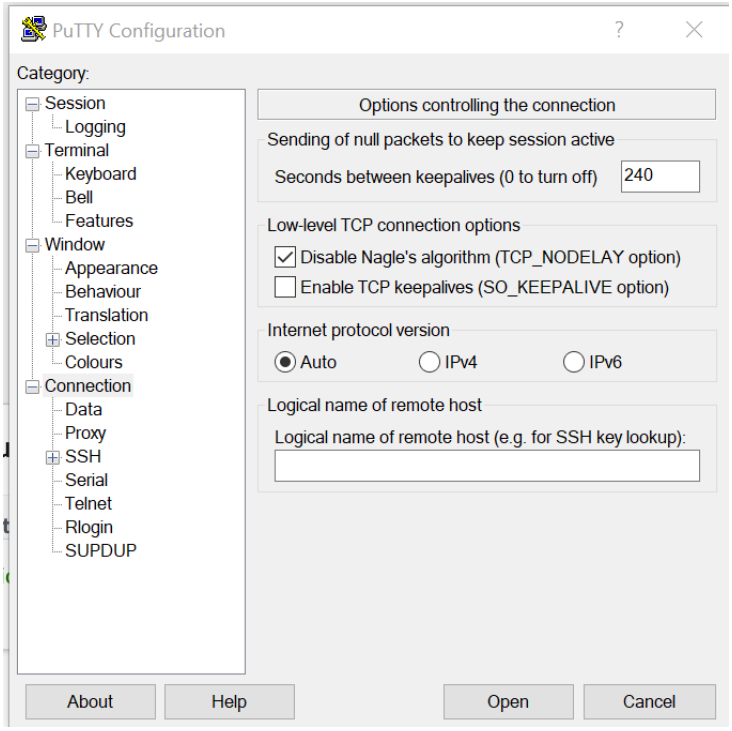
(*) copy Linux Ip address



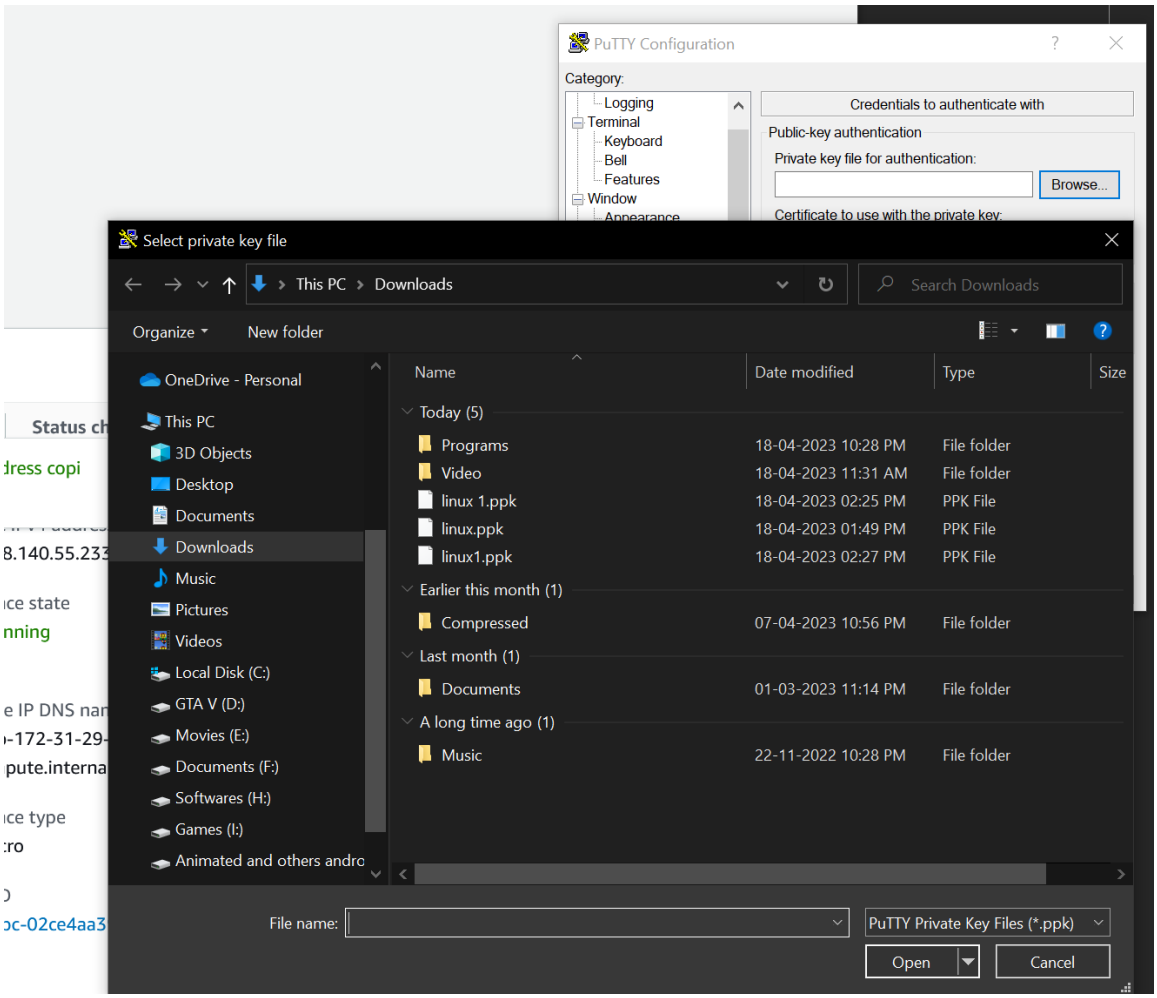
(*) putty configuration session



(*) connection seconds between keepalive 240



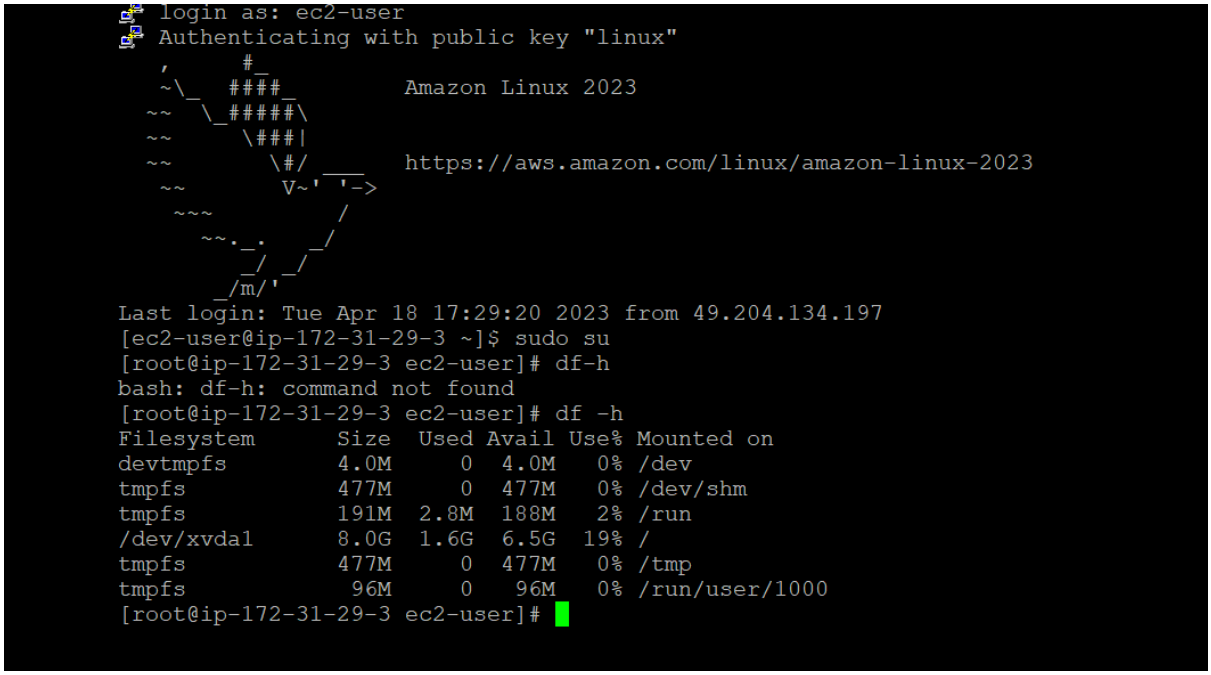
(*) select private key file using authentication – credentials – browse --- linux PPK file



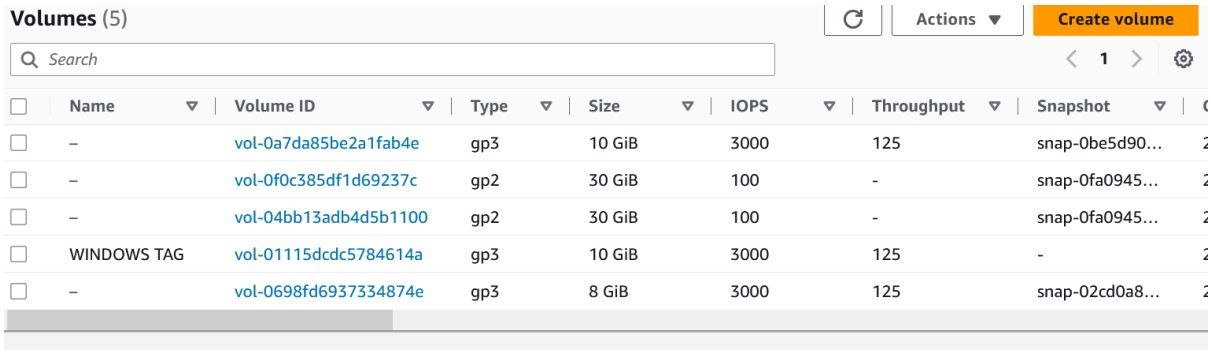
(*) login as ec2 user

(*) Sudo su

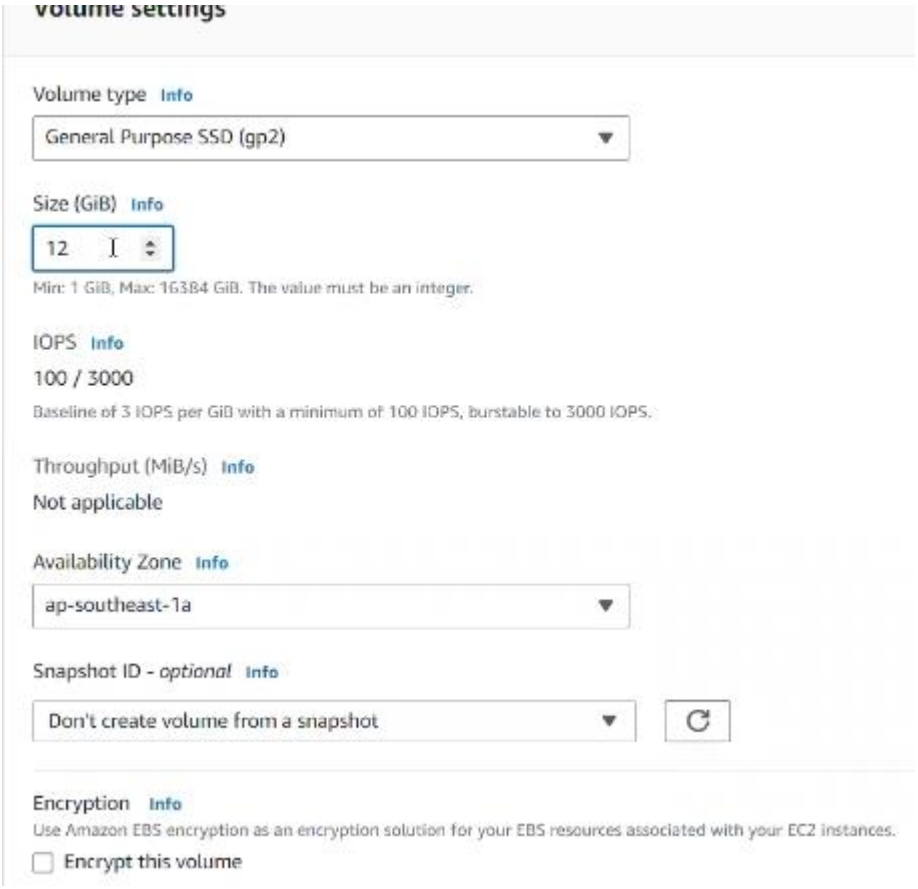
df -h for viewing file system



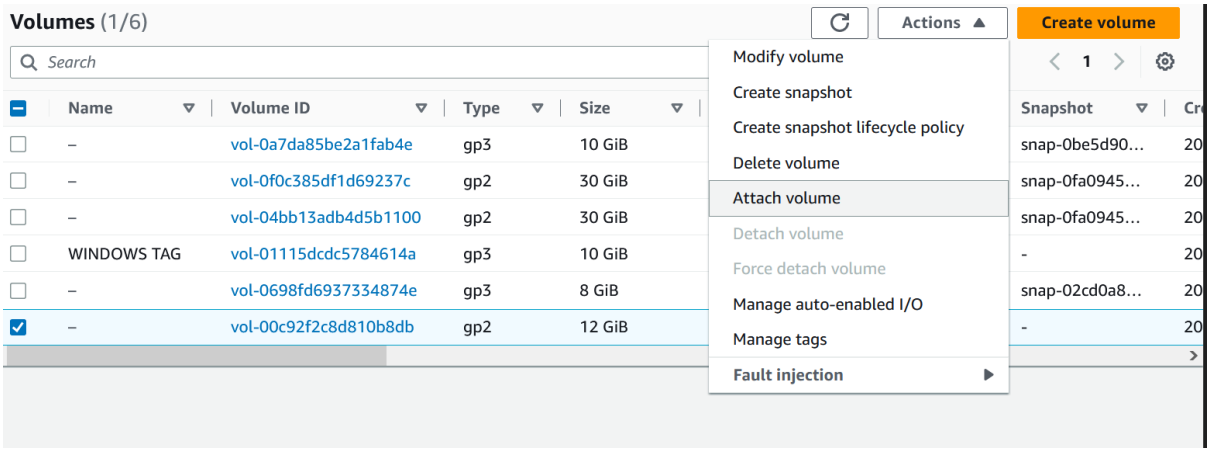
(*) elastic book store – volume – create volume



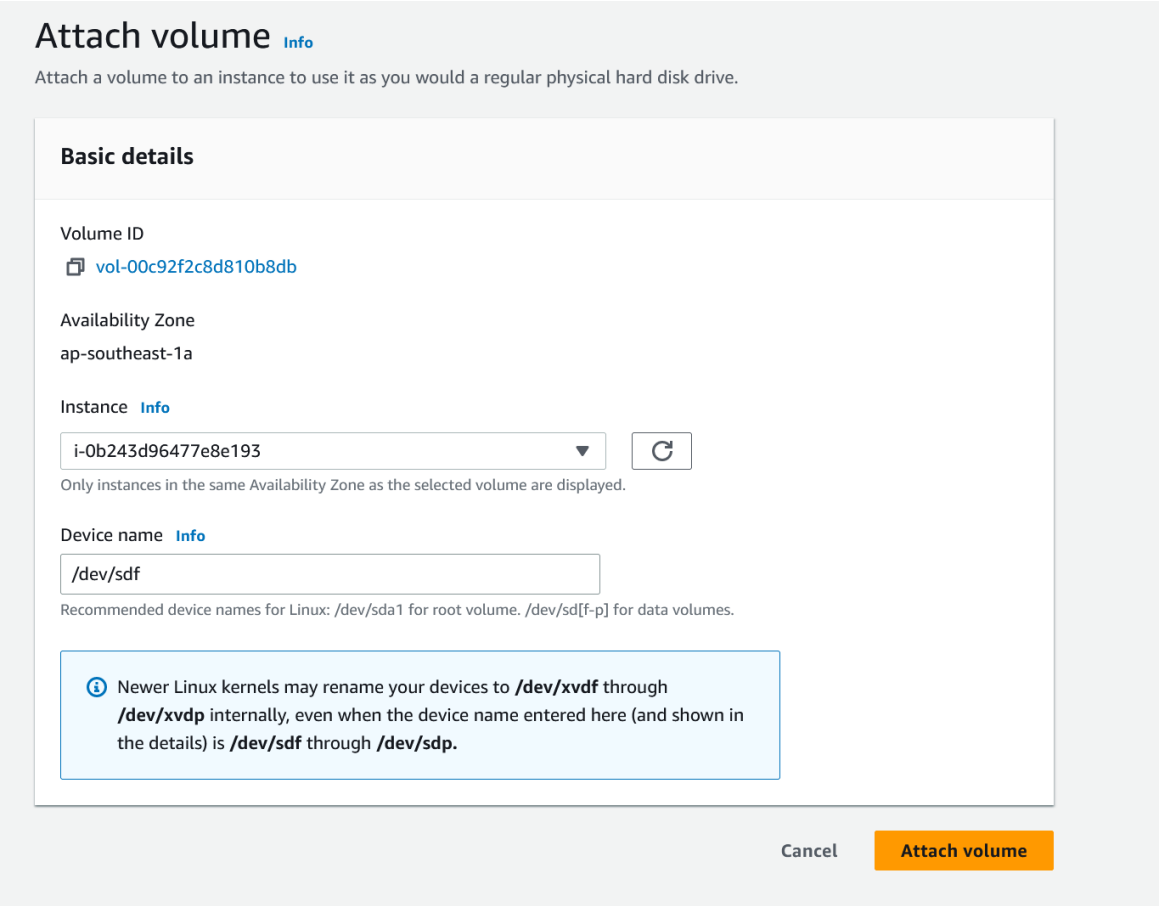
(*) create volume 12gb



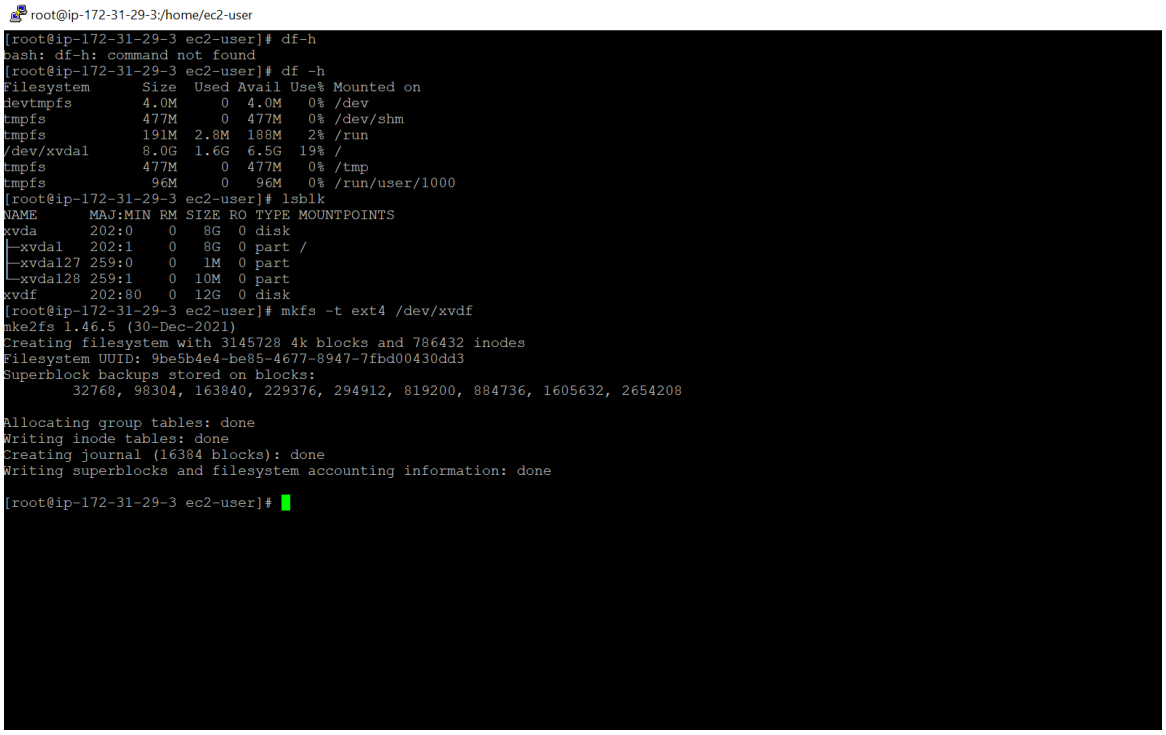
(*) select the available storage --- actions --- attach volume



(*) select Linux instance



(*) use lsblk to view the file system then use (mkfs -t ext4 /dev/xvdf)



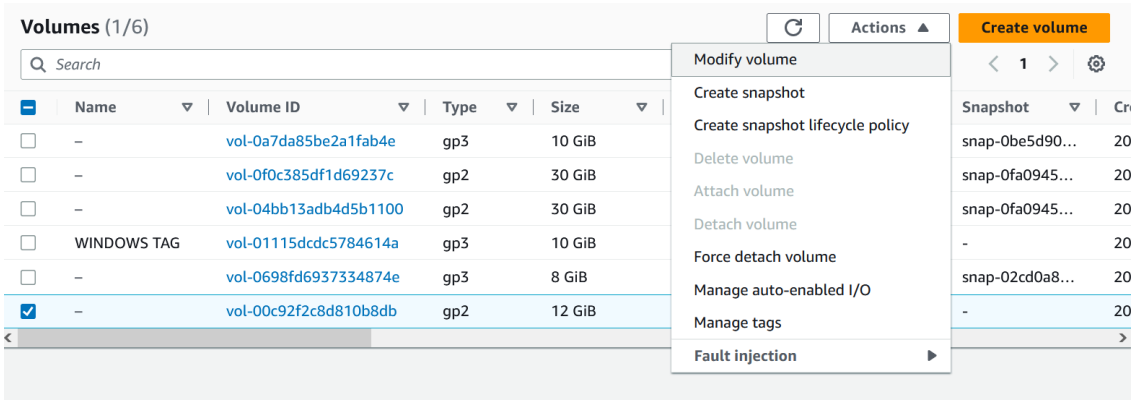
(*) create a new directory mkdir

Mount dev/xvdf greens

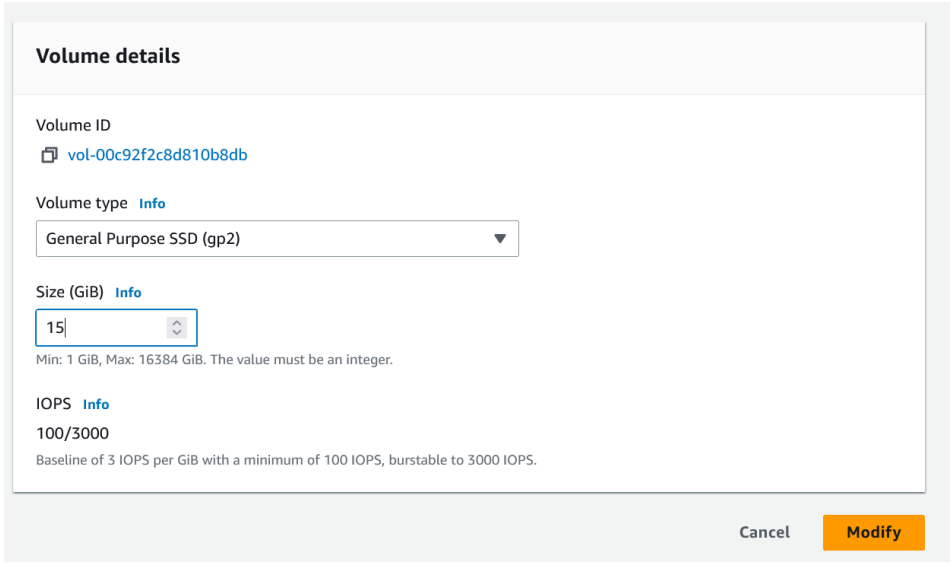
Df -h

```
[root@ip-172-31-29-3 ec2-user]# mkdir greens
[root@ip-172-31-29-3 ec2-user]# mount /dev/xvdf greens
[root@ip-172-31-29-3 ec2-user]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        4.0M     0  4.0M   0% /dev
tmpfs           477M     0  477M   0% /dev/shm
tmpfs           191M  2.8M  188M   2% /run
/dev/xvda1      8.0G  1.6G  6.5G  19% /
tmpfs           477M     0  477M   0% /tmp
tmpfs            96M     0   96M   0% /run/user/1000
/dev/xvdf        12G   24K   12G   1% /home/ec2-user/greens
[root@ip-172-31-29-3 ec2-user]#
```

(*) To modify volume, go to elastic block store – volume-- actions-- modify volume



(*) size 15gb click modify



(*) use lsblk command