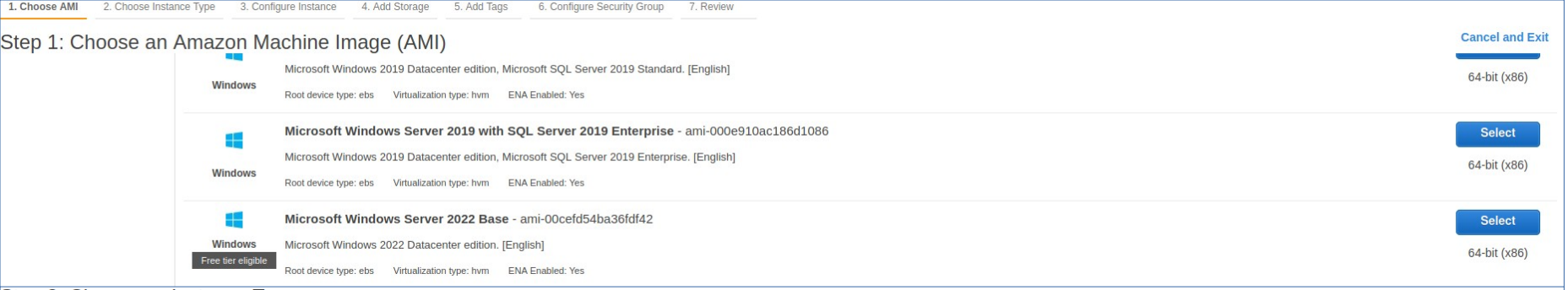
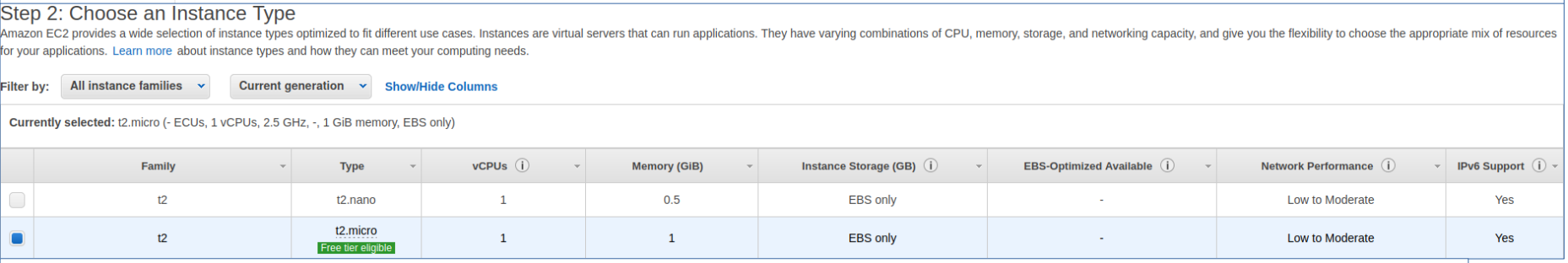
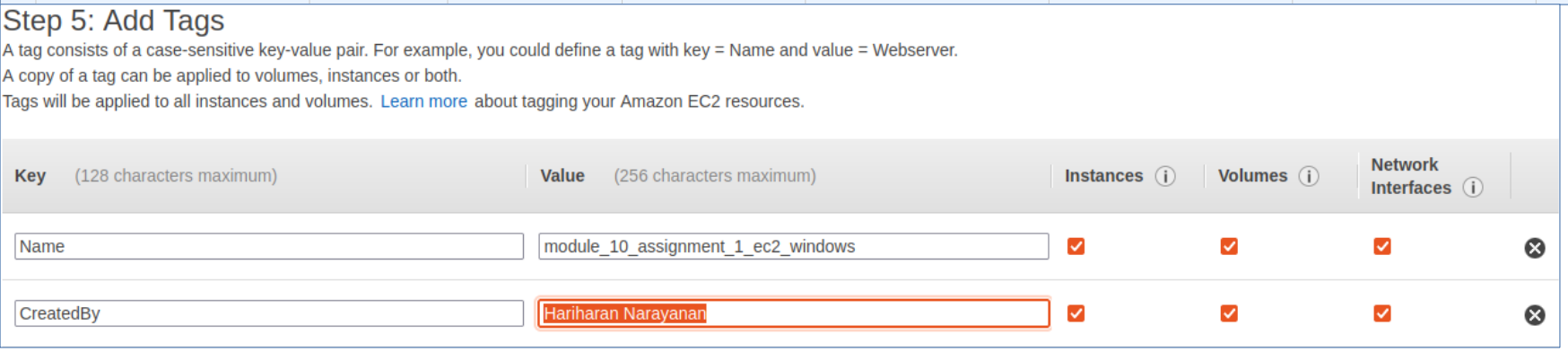
Module-10: FSx Assignment - 1

You have been asked to:

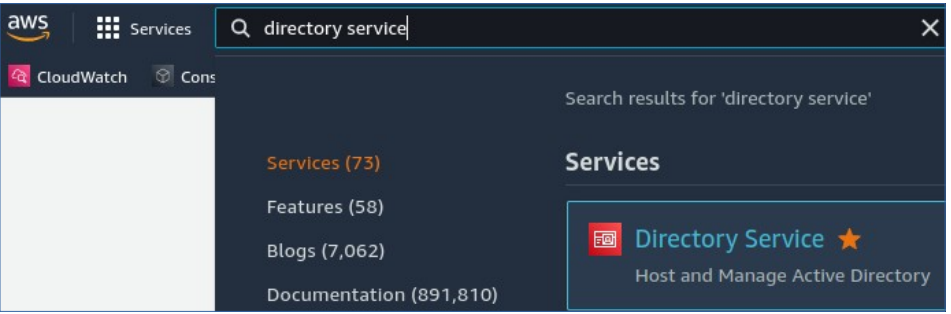
1. Create an FSx file system for a windows file server
   a) Make sure you have AWS Managed Active Directory with a valid domain name
   b)Connect it to your Windows EC2 server
2. Create an FSx file system for Lustre and attach it to an Amazon Linux 2 instance



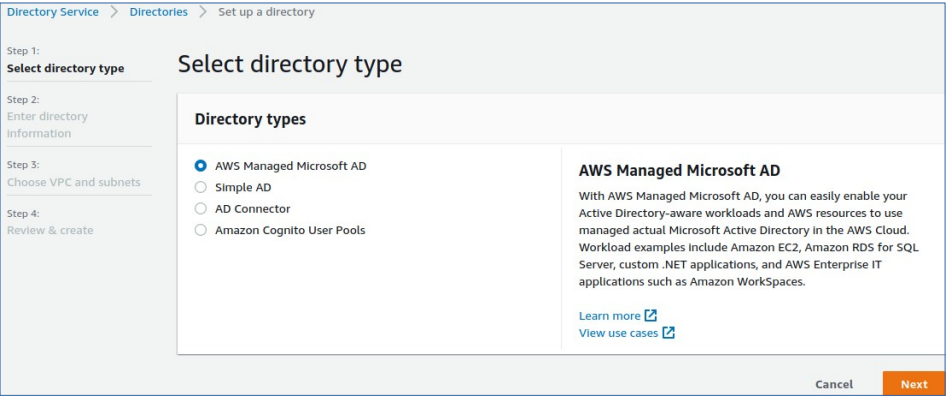




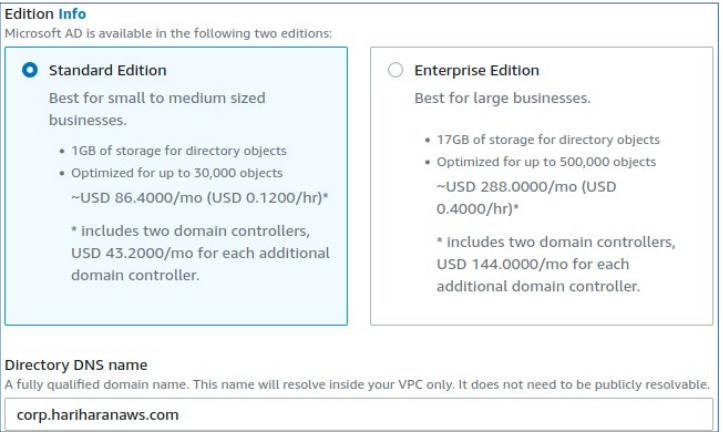
1. Create a Windows EC2 instance



2. Open Directory service

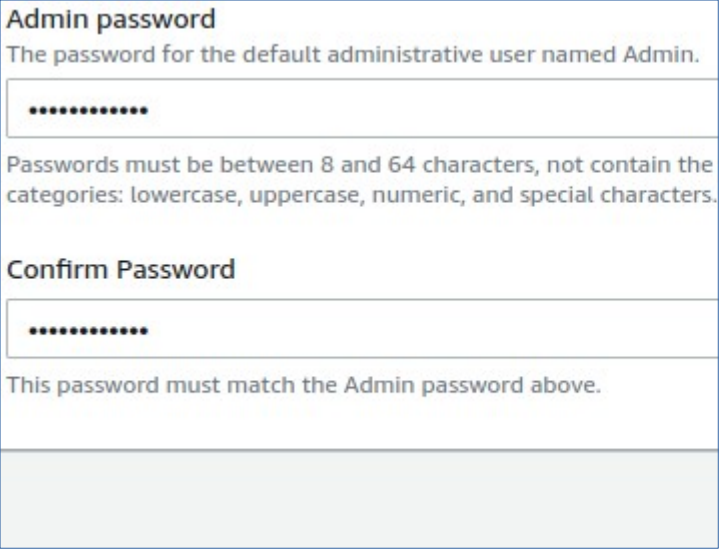


3. Select AWS Managed Microsoft AD

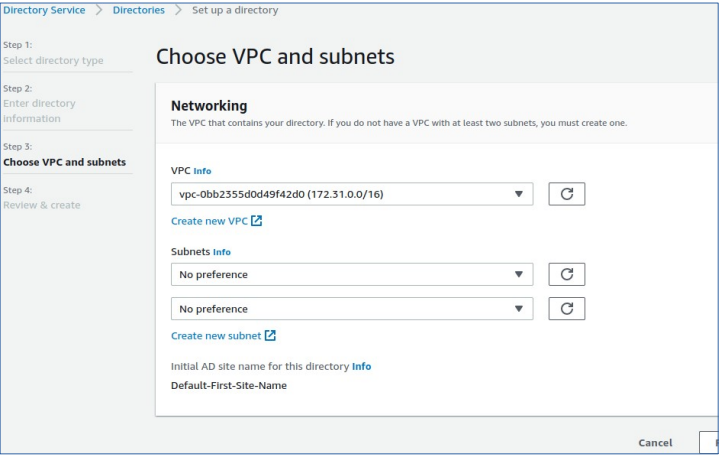


4. Select Standard edition

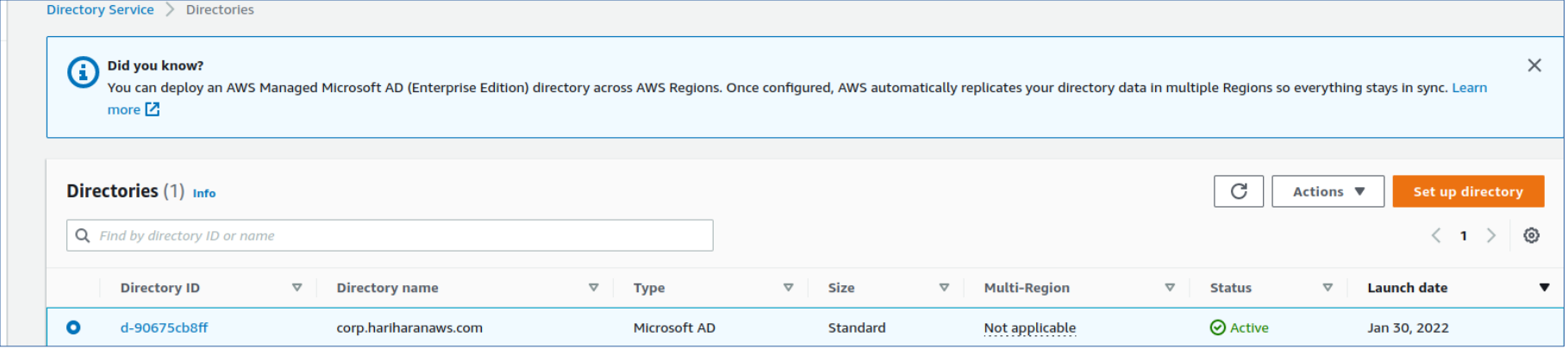
5. Provide a DNS name to the AD



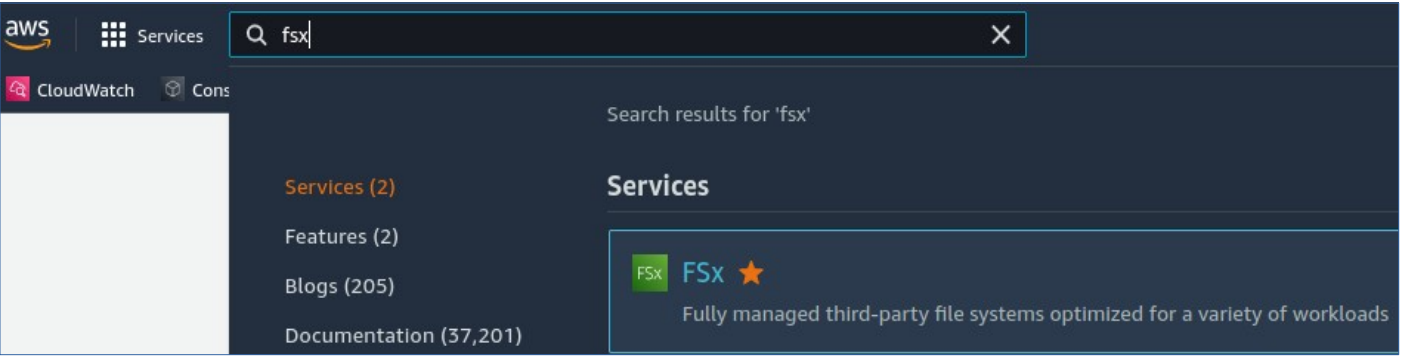
6. Provide password to the AD



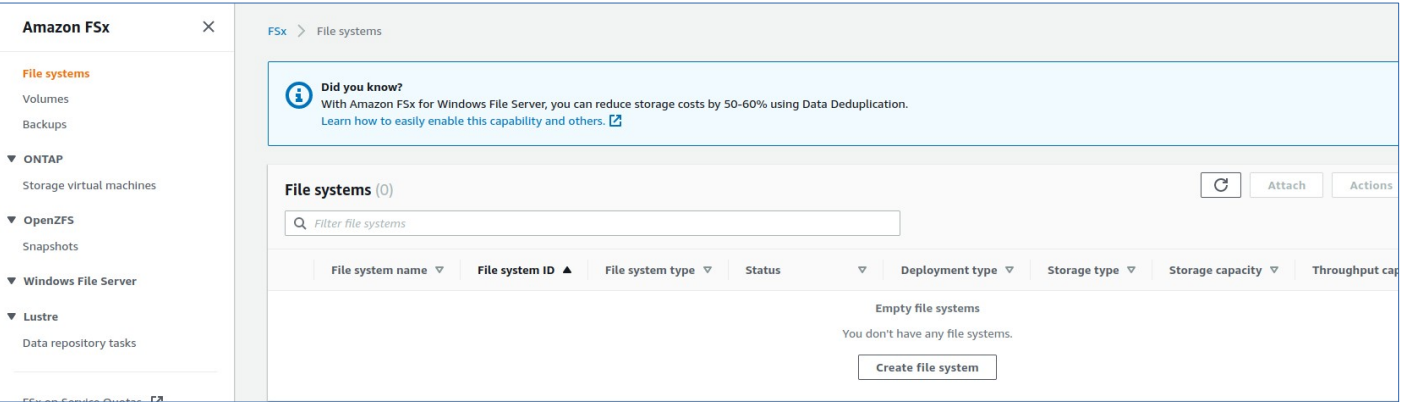
7. Provide the VPC (I provided the default VPC).
Save settings, review and create the AD.



8. Verify that AD is created properly and becomes “Active”.

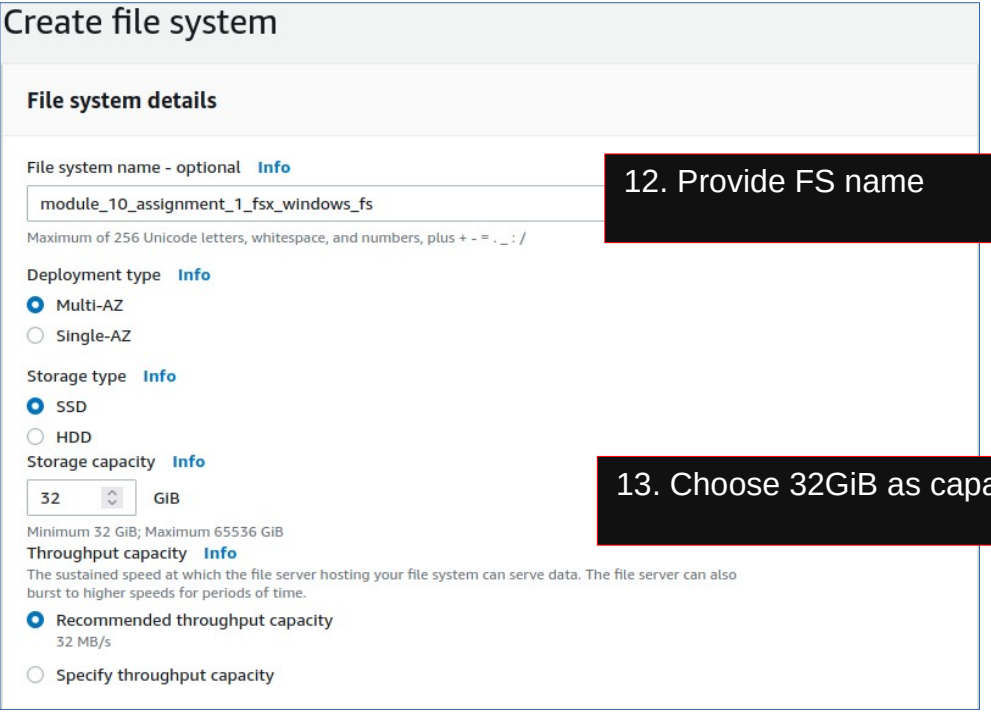


9. Open Fsx console.



10. Create new file system

11. Select Windows File server



12. Provide FS name

13. Choose 32GiB as capacity

Network & security

Virtual Private Cloud (VPC) Info

Specify the VPC from which your file system is accessible.

Default VPC | vpc-0bb2355d0d49f42d0

VPC Security Groups Info

Specify VPC Security Groups to associate with your file system's network interfaces.

Choose VPC security group(s)

sg-0124c6b876719836e (default)

Preferred subnet Info

Specify the preferred subnet for your file system.

subnet-03bc8bc7122bf48a0 (us-east-1f)

Standby subnet

subnet-030af8e7ced9531f0 (us-east-1b)

14. Choose default VPC

15. Choose default SG

16. Leave the subnets as chosen

Windows authentication

Choose an Active Directory to provide user authentication and access control for your file system Info

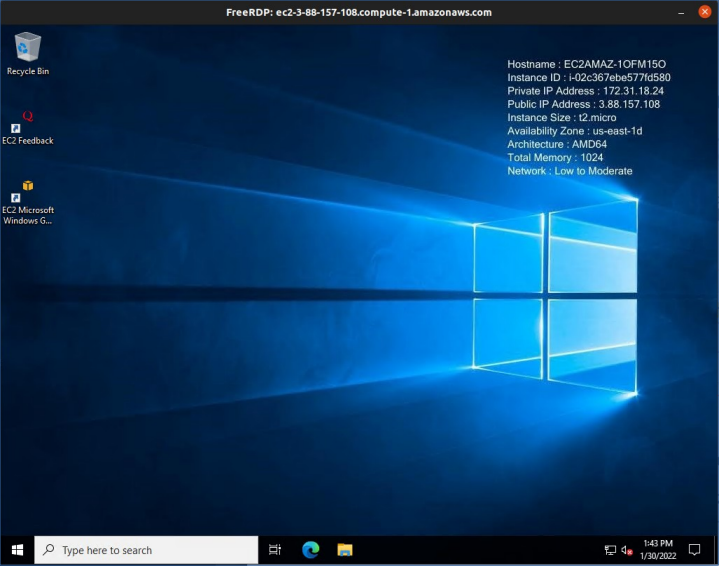
- (•) AWS Managed Microsoft Active Directory
- ( ) Self-managed Microsoft Active Directory

Choose an AWS Managed Microsoft AD directory to use. Info

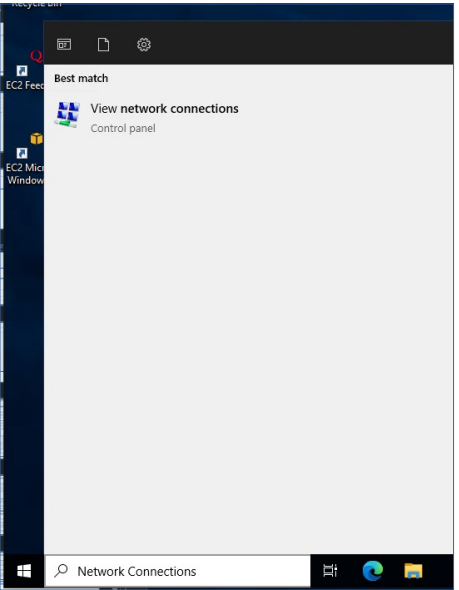
corp.hariharanaws.com | d-90675cb8ff (vpc-0bb2355d…

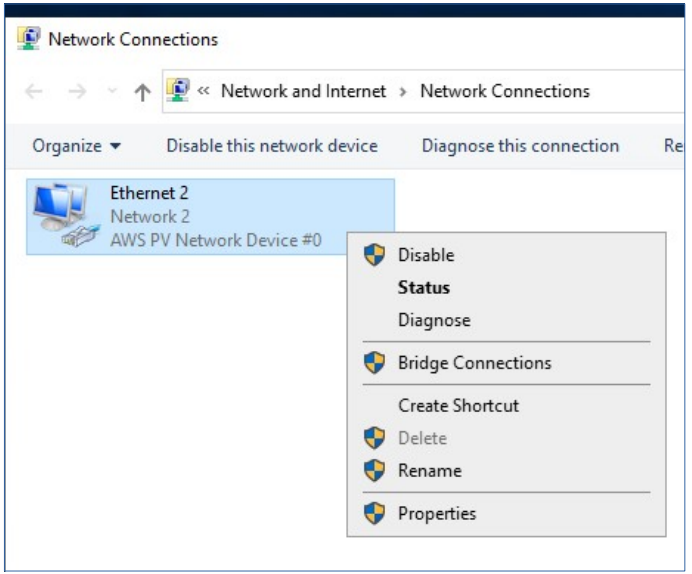
17. Select to attach AWS managed MSFT AD

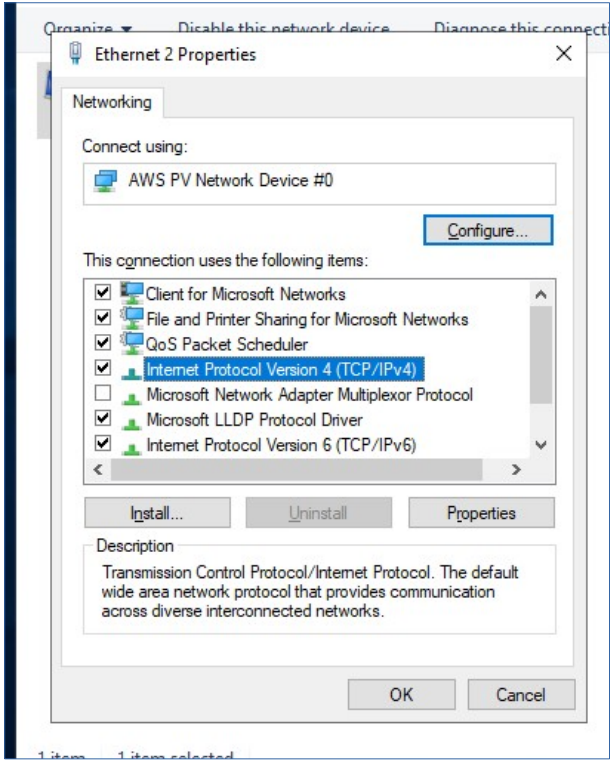
18. Select the AD we created in (8).
Leave other settings as-is and create FS



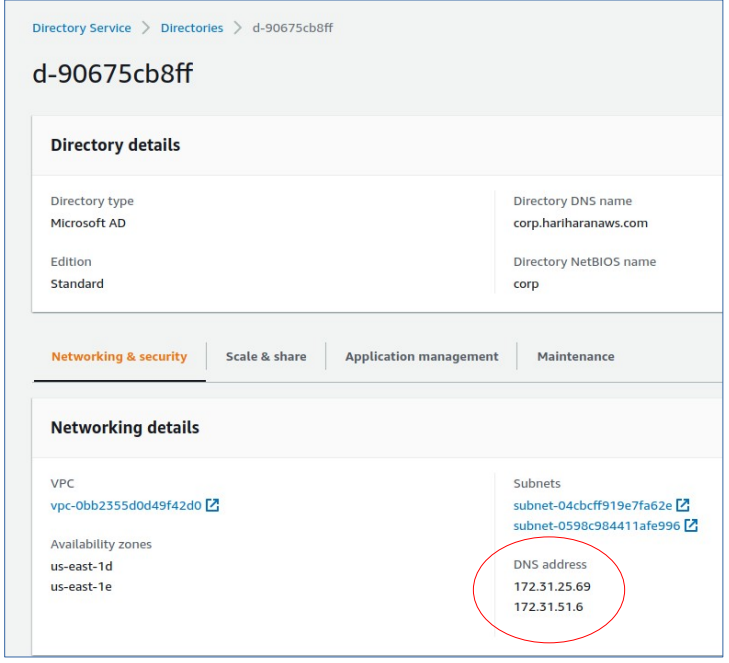
19. Connect to the Windows EC2 instance created in (1), using any RDP client



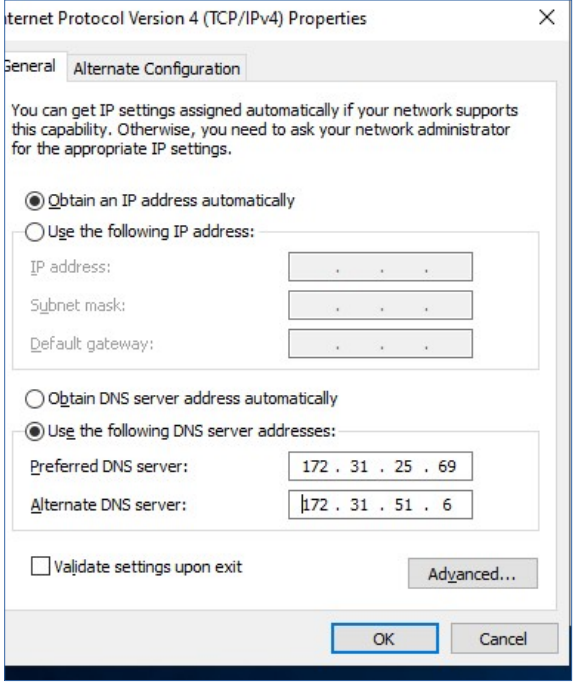




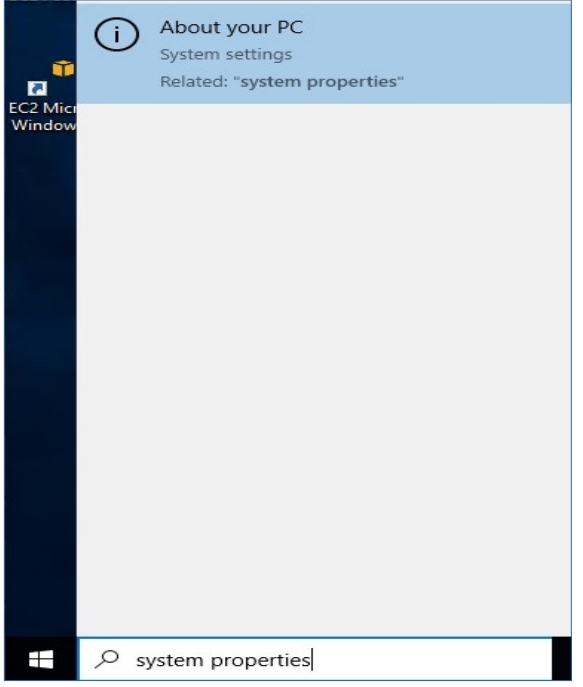
20. Open Network Connections and Ipv4 Properties



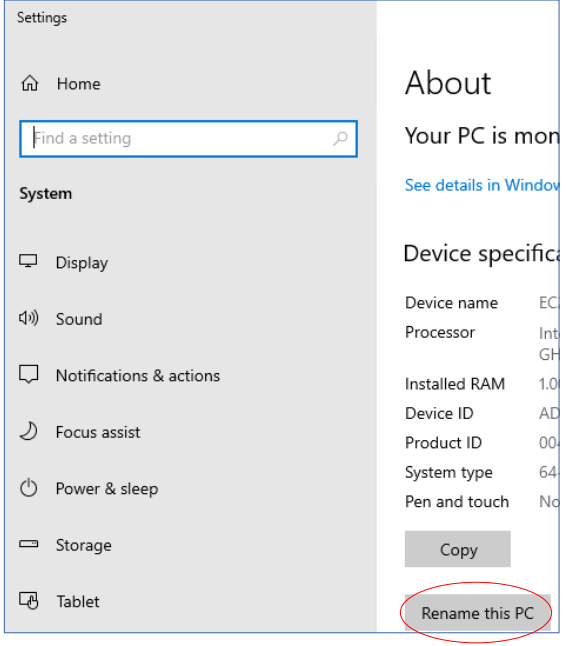
21. Note the DNS addresses of the Windows AD we created



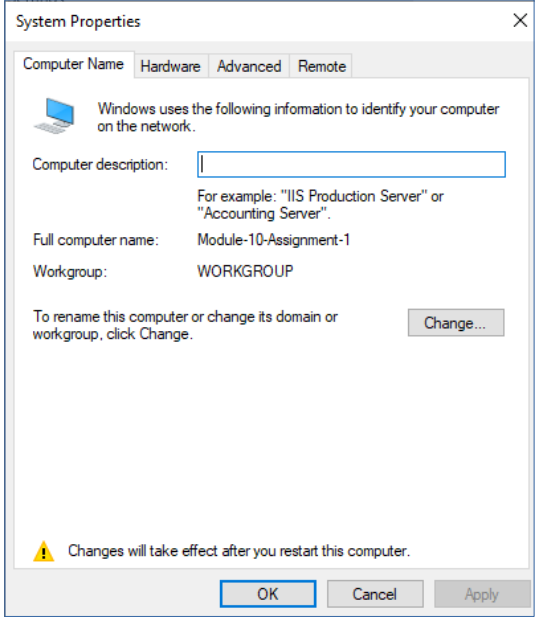
22. Provide the same in the Ipv4 properties DNS server addresses



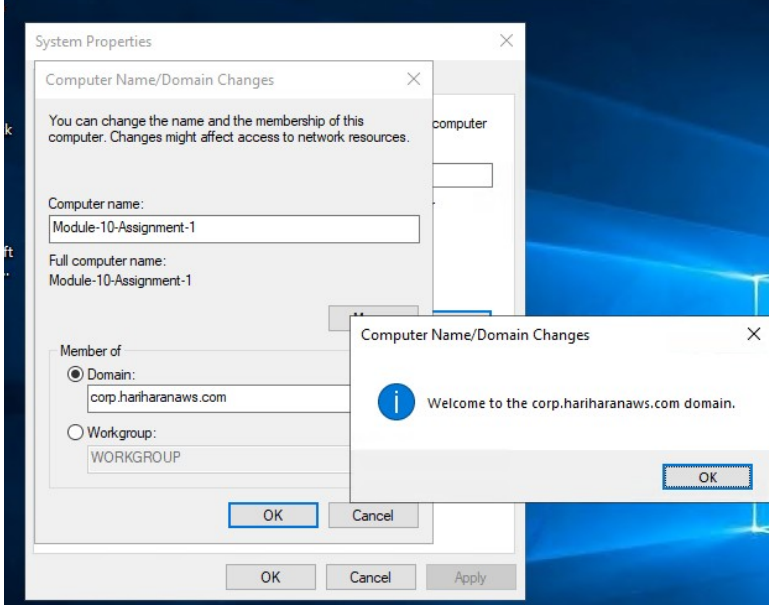
23. Open PC properties dialog to rename PC



24. Select to rename the PC. After rename, restart the EC2 instance and reconnect using RDP client



25. After restart, open System Properties and “Change” to change domain of this instance



26. In “Domain”, provide the value of “Directory name” of the Windows AD we created in (8). Provide username and password of the Admin user we provided in (8)

This finishes parts (1.a) and (1.b) asked in the question

FSx > File systems

Did you know?
With Amazon FSx for Windows File Server, you can reduce storage costs by 50-60% using Data Deduplication.
Learn how to easily enable this capability and others.

File systems (1)

Attach | Actions | Create file system

Filter file systems

File system name	File system ID	File system type	Status	Deployment type	Storage type	Storage capacity	Throughput capacity	Creation time
module_10_assignment_1_fsx_windows_fs	fs-0fd7584764f2bce49	Windows	Available	Multi-AZ	SSD	32 GiB	32 MB/s	2022-01-30T16:55:12+05:30

Amazon FSx for Lustre

FSx Amazon FSx for Lustre

27. Repeat steps (9) and (10) to create another Fsx File System. Choose “Amazon Fsx for Lustre” this time.

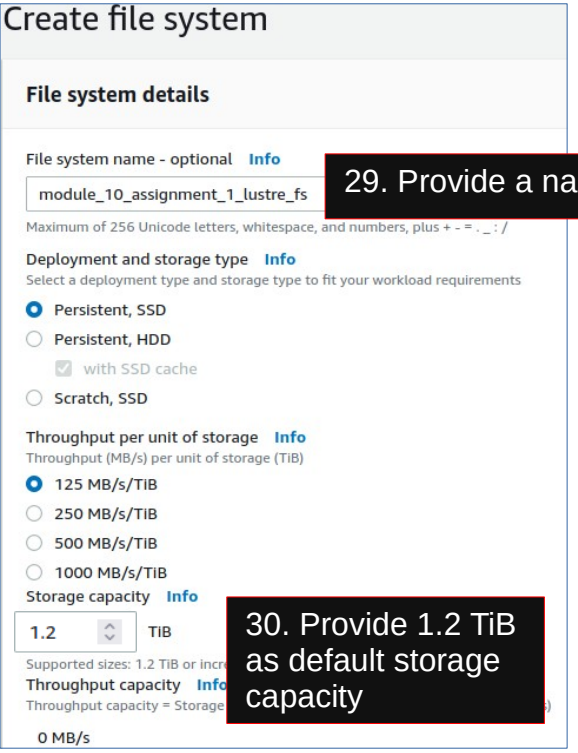
Instances (1/2) Info

Connect | Instance state | Actions | Launch instan

Search

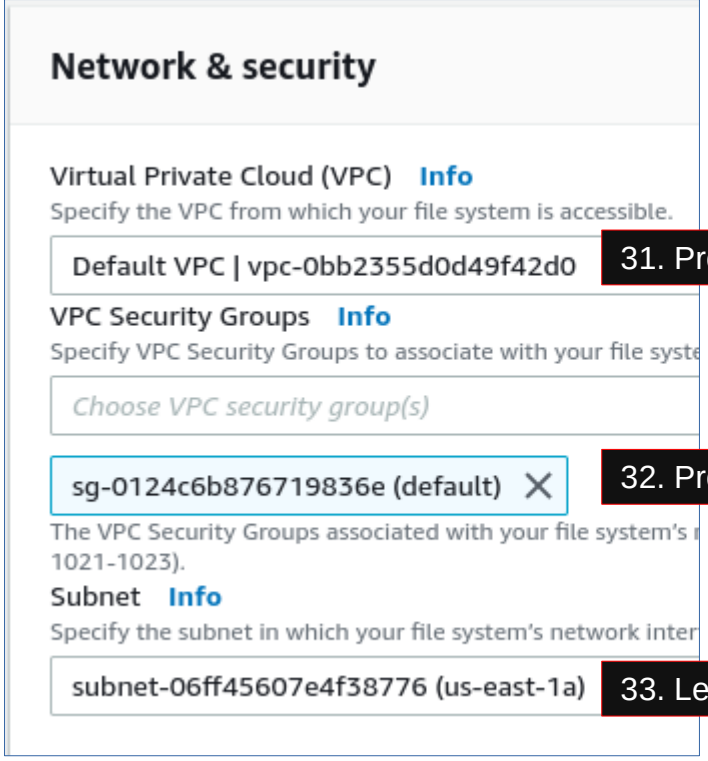
Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
module_10_assignment_1_ec2_windows	i-02c367ebe577fd580	Running	t2.micro	2/2 checks passed	No alarms	us-east-1d	ec2-3-88-157-108.com...
module_10_assignment_1_ec2_amazon_linux	i-0408d3928c07d99fa	Running	t2.micro	2/2 checks passed	No alarms	us-east-1d	ec2-52-90-159-242.co...

28. Create an EC2 instance of Amazon Linux



29. Provide a name

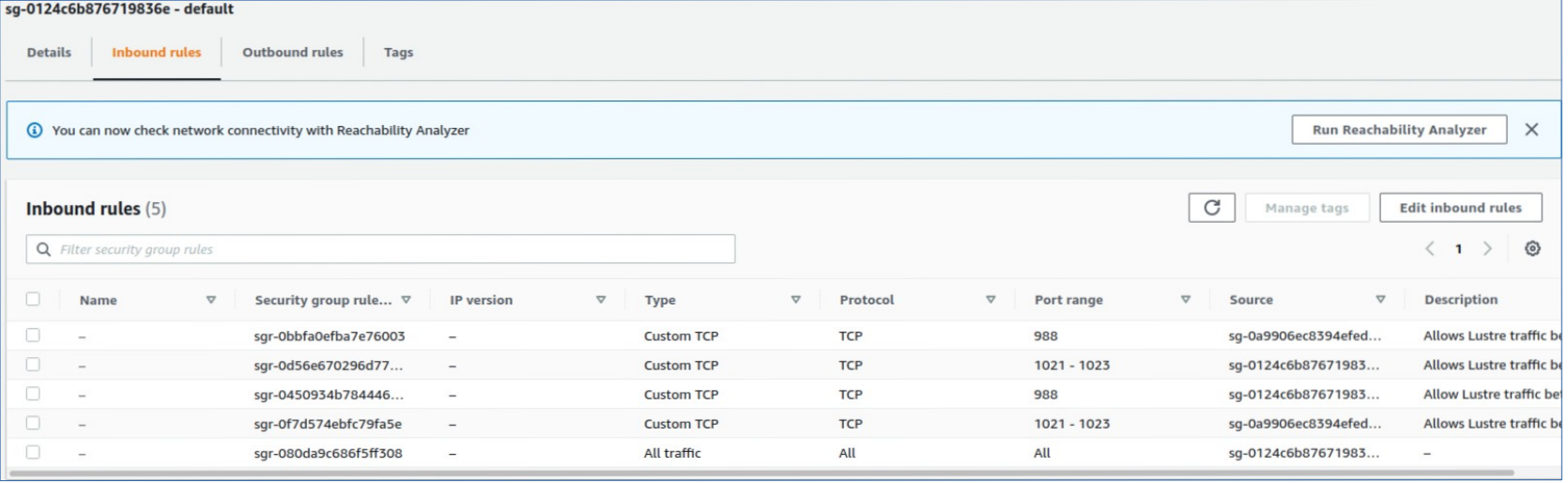
30. Provide 1.2 TiB as default storage capacity



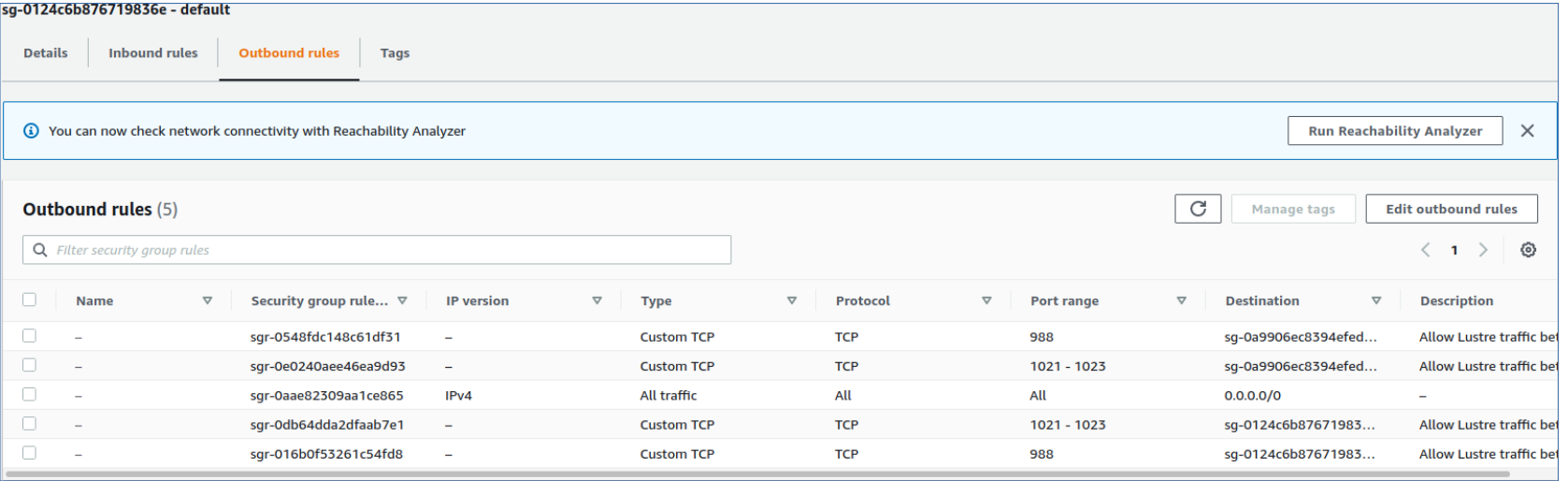
31. Provide default VPC

32. Provide default SG

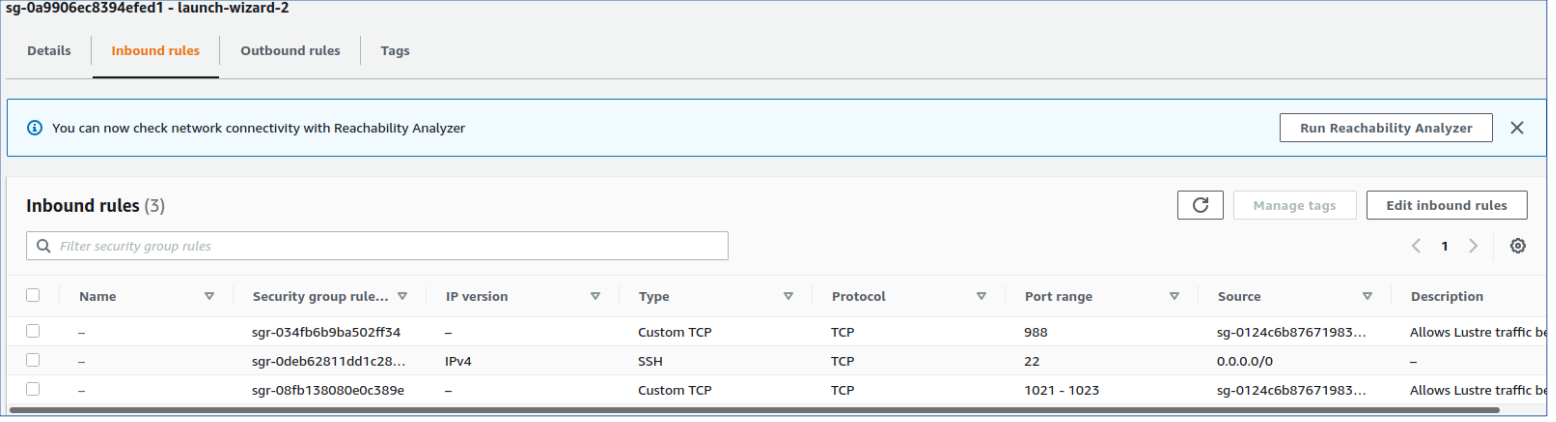
33. Leave subnet as-is



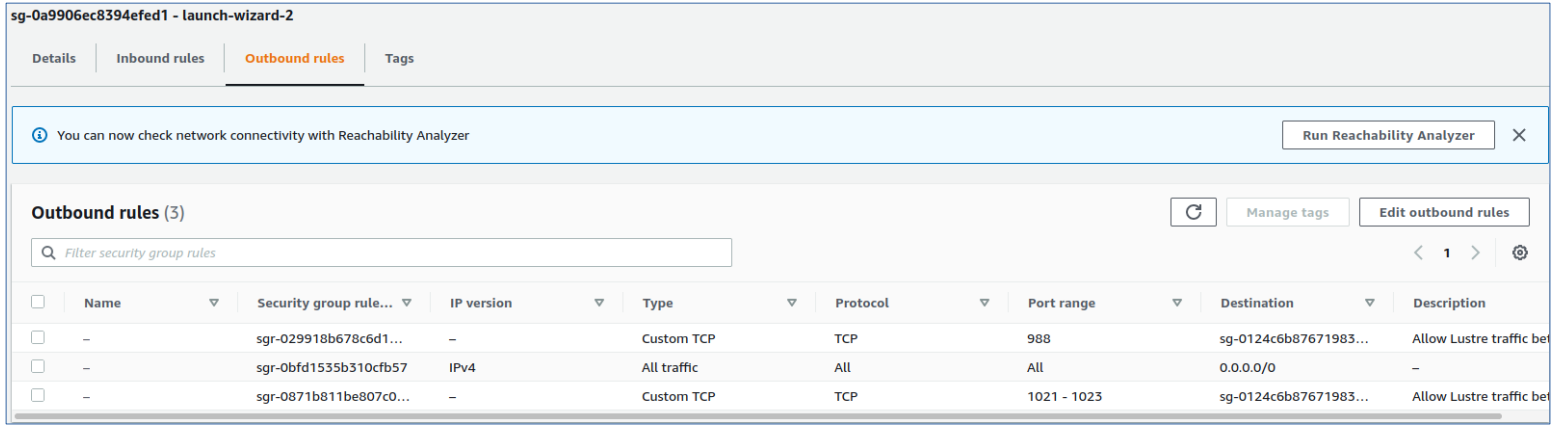
34. Modify inbound rules for default SG to add rules to allow traffic to between Lustre servers and clients.



35. Modify outbound rules for default SG to add rules to allow traffic to between Lustre servers and clients.



36. Modify inbound rules for SG of Amazon Linux instance created in (28) to add rules to allow traffic to between Lustre servers and clients.



37. Modify outbound rules for SG of Amazon Linux instance created in (28) to add rules to allow traffic to between Lustre servers and clients.

38. Open a SSH session into the Amazon Linux instance created in (28)

```
       __|  __|_  )
       _|  (     /   Amazon Linux 2 AMI
      ___|\___|___|

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-16-137 ~]$ uname -r
5.10.93-87.444.amzn2.x86_64
```

```
[ec2-user@ip-172-31-16-137 ~]$ sudo amazon-linux-extras install -y lustre2.10
Installing lustre-client
```

39. Install the Lustre file-system client

```
Installed:
  lustre-client.x86_64 0:2.10.8-5.amzn2
```

```
[ec2-user@ip-172-31-16-137 ~]$ sudo mount -t lustre -o noatime,flock fs-09d9355b7dad6bb3e.fsx.us-east-1.amazonaws.com@tcp:/wcynjbmv /fsx
[ec2-user@ip-172-31-16-137 ~]$ ls
[ec2-user@ip-172-31-16-137 ~]$ df
Filesystem                   1K-blocks    Used  Available Use% Mounted on
devtmpfs                        485568       0     485568   0% /dev
tmpfs                           494344       0     494344   0% /dev/shm
tmpfs                           494344     488     493856   1% /run
tmpfs                           494344       0     494344   0% /sys/fs/cgroup
/dev/xvda1                     8376300 1585868    6790432  19% /
tmpfs                            98872       0      98872   0% /run/user/1000
172.31.44.68@tcp:/wcynjbmv 1201383168    7936 1201373184   1% /fsx
tmpfs                            98872       0      98872   0% /run/user/0
```

40. Finally, create a directory called ~/fsx and mount the Lustre filesystem with this directory as the a mount directory. Verify that the file system was mounted correctly.

This finishes part (2) asked in the question