AWS Solutions Architect Certification Training

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Module 2 - Assignment COMPLETED by Nagesha. K.S.
Please check the following screenshots for each question.

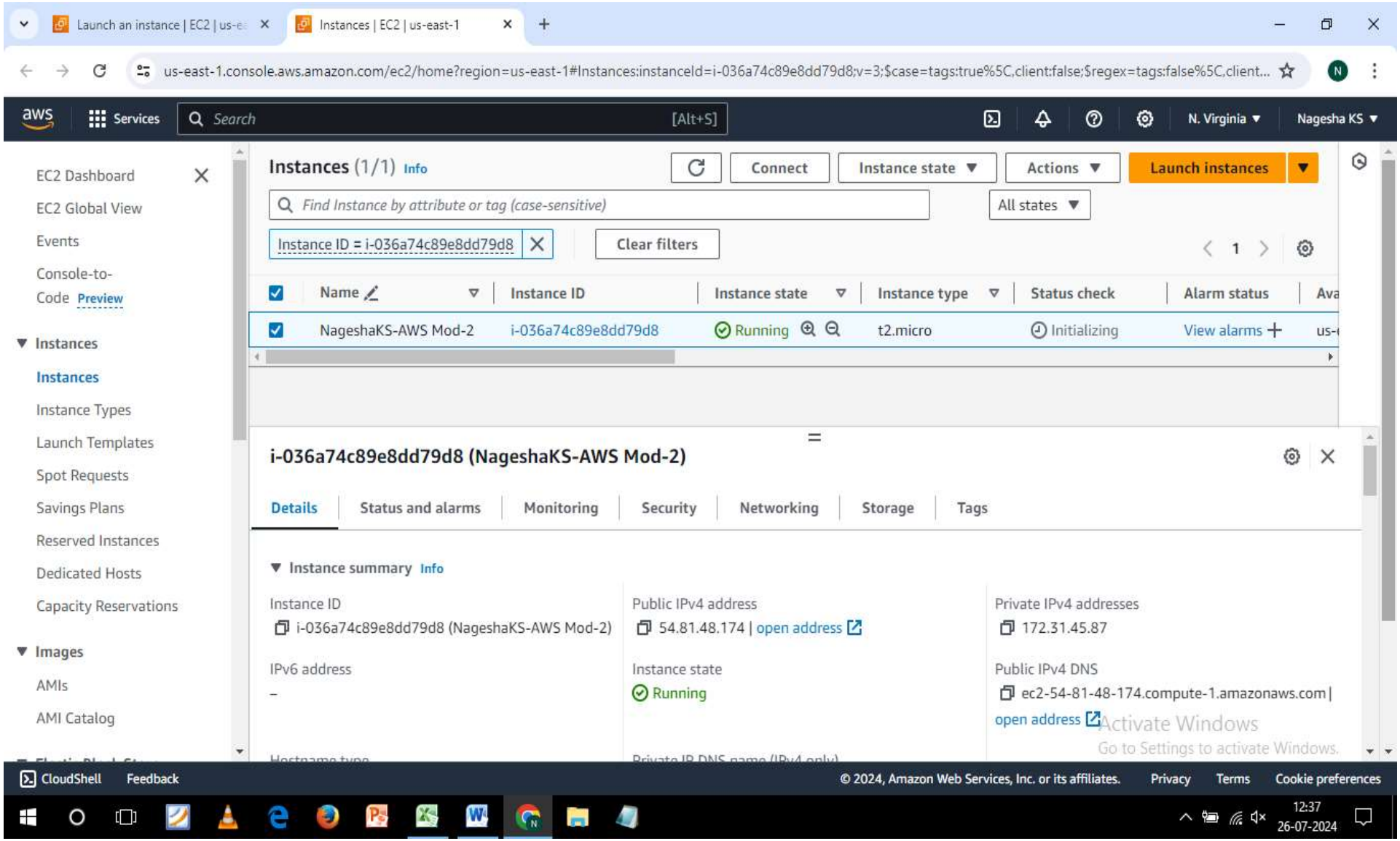
Problem Statement:

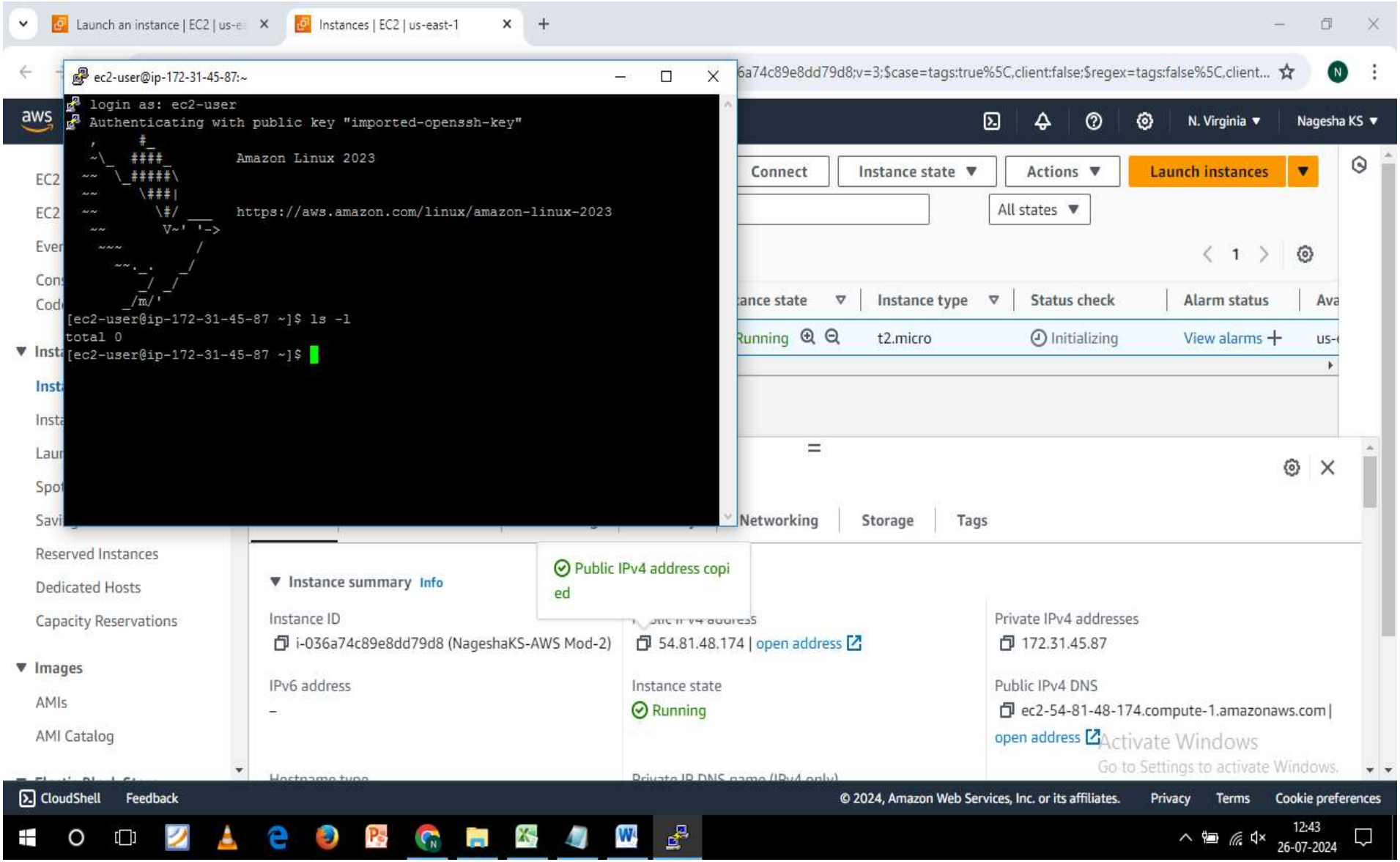
You work for XYZ Corporation. Your company is working on an application, and it requires secured web servers on Linux to launch the application.

You are asked to:

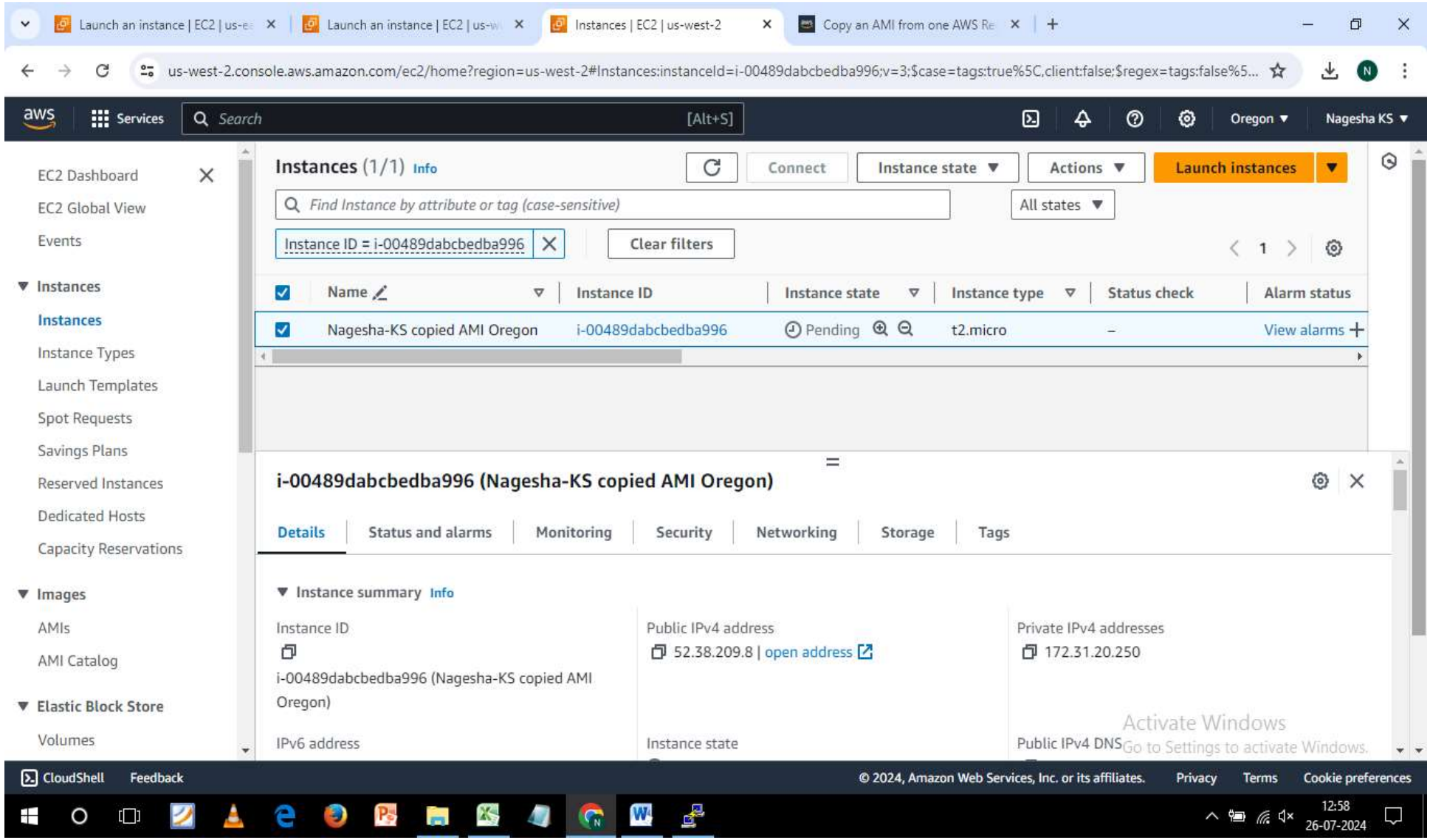
1. Create an instance in the us-east-1 (N. Virginia) region with the Linux OS and manage the requirement of web servers of your company using AMIs
2. Replicate the instance in the us-west-2 (Oregon) region
3. Build two EBS volumes and attach them to the instance in the us-east-1 (N. Virginia) region
4. Delete one volume after detaching it and extend the size of the other volume
5. Take a backup of this EBS volume
6. **Optional Step (Not Free Tier eligible):** Create one more EBS volume with the Multi-Attach feature and attach it to two compatible instances to test the feature. Here, mounting is optional (**Hint:** Nitro-based EC2 instance, which is billable)

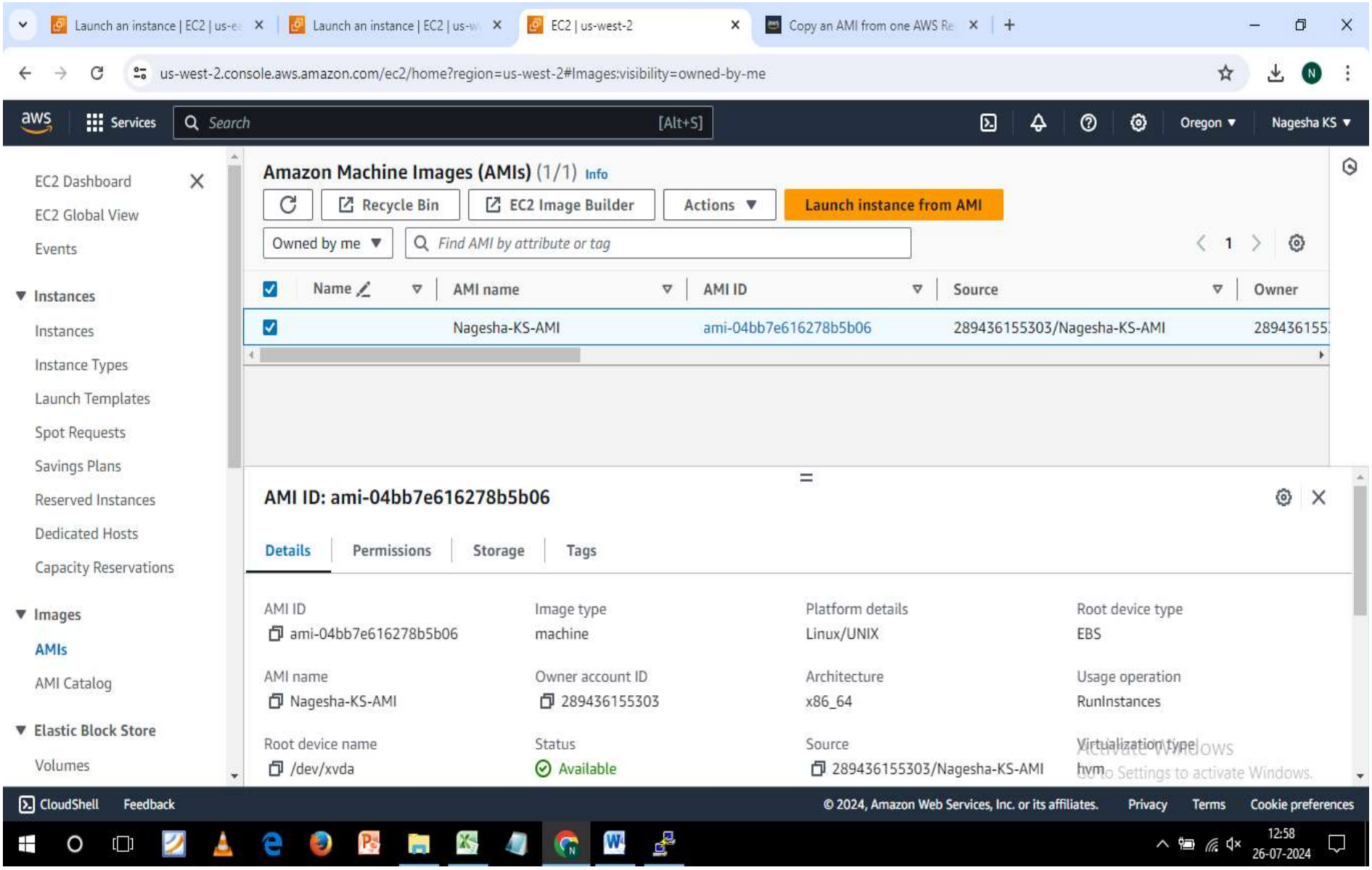
1. Create an instance in the us-east-1 (N. Virginia) region with the Linux OS and manage the requirement of web servers of your company using AMIs

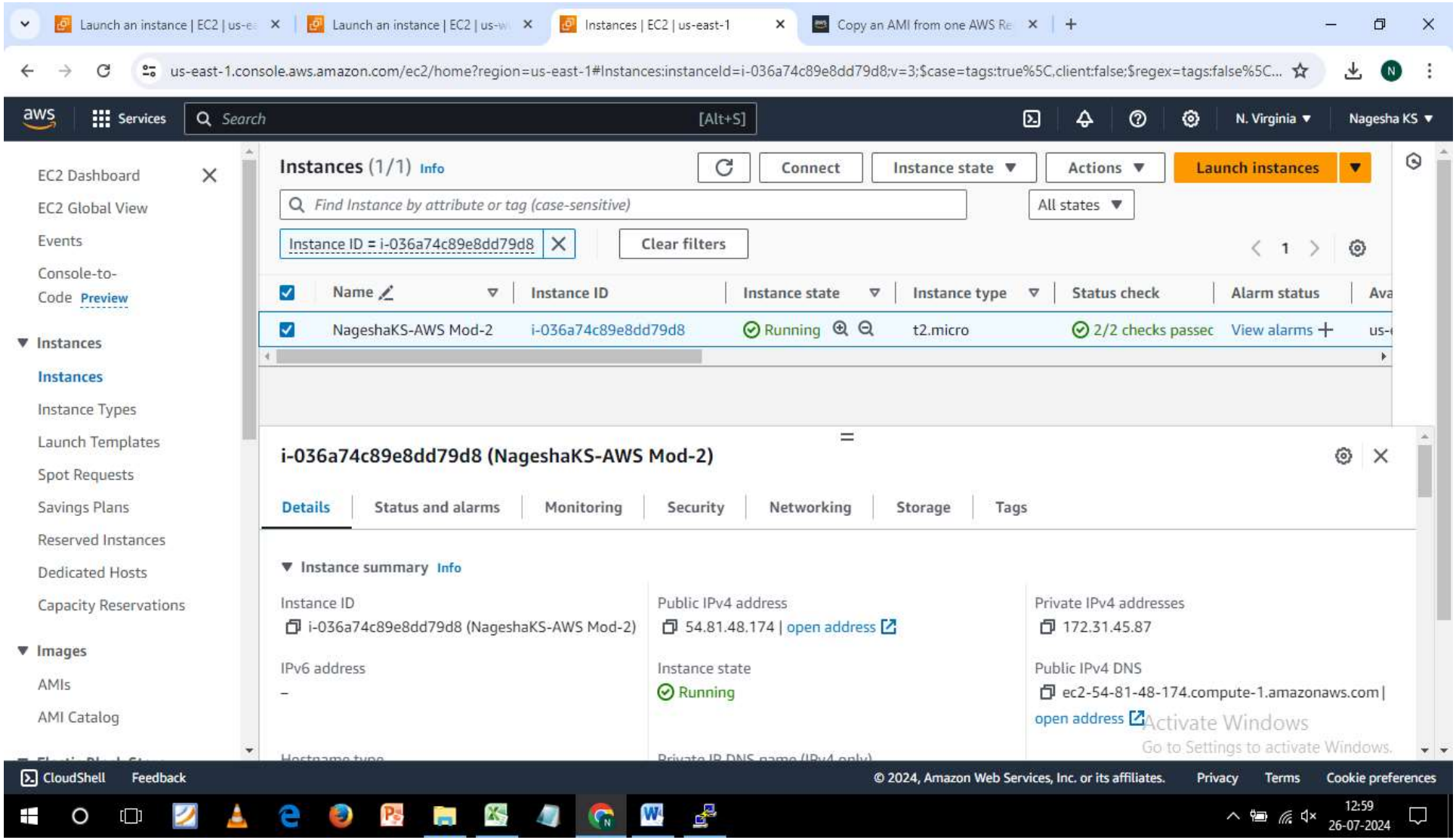


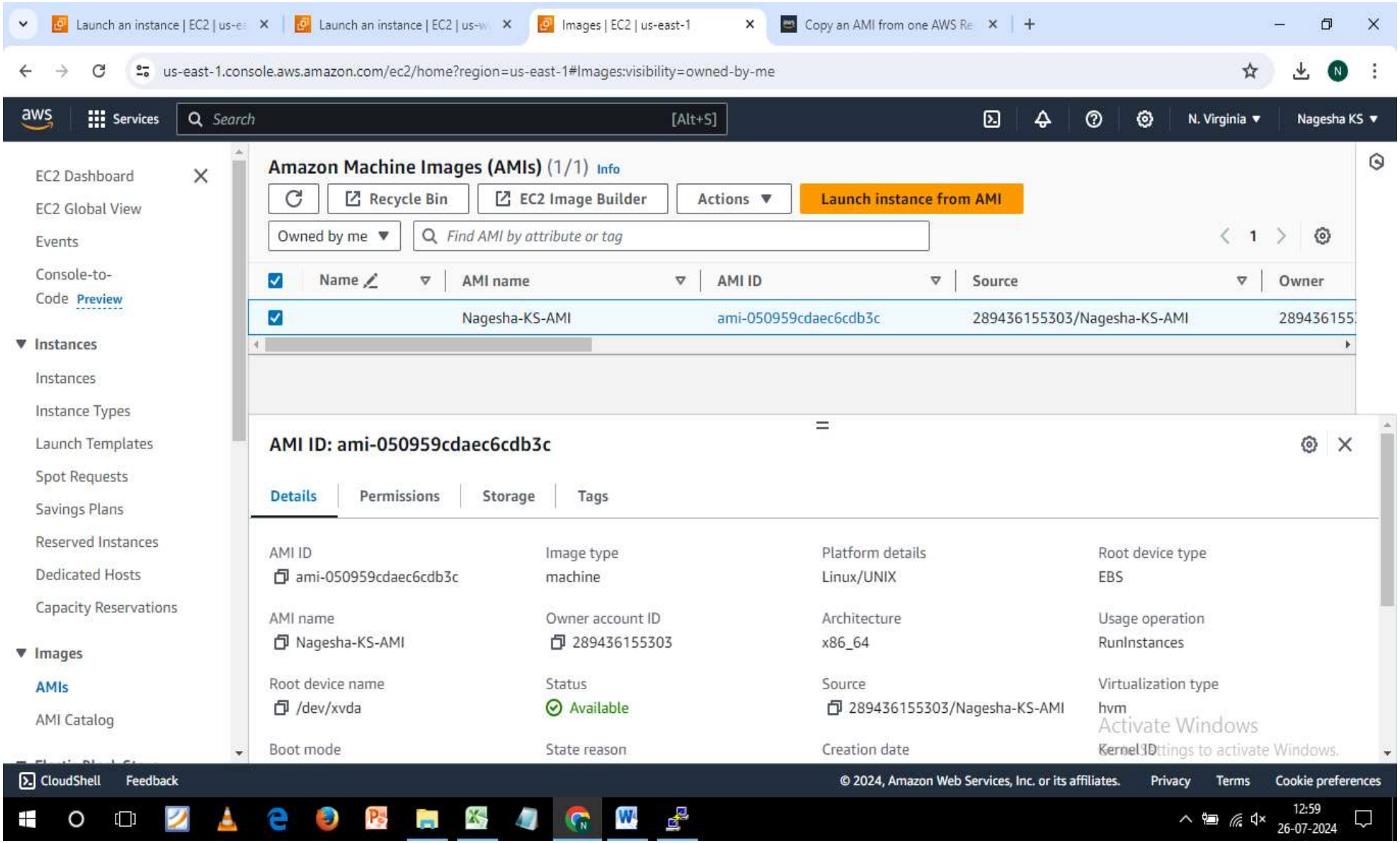

Launch an instance | EC2 | us-e
Instances | EC2 | us-east-1
ec2-user@ip-172-31-45-87:~
login as: ec2-user
Authenticating with public key "imported-openssh-key"
Amazon Linux 2023
https://aws.amazon.com/linux/amazon-linux-2023
[ec2-user@ip-172-31-45-87 ~]$ ls -l
total 0
[ec2-user@ip-172-31-45-87 ~]$
N. Virginia
Nagesha KS
Connect
Instance state
Actions
Launch instances
All states
Instance type
Status check
Alarm status
t2.micro
Initializing
View alarms
Networking
Storage
Tags
Public IPv4 address copied
Instance summary Info
Instance ID
i-036a74c89e8dd79d8 (NageshaKS-AWS Mod-2)
54.81.48.174 | open address
Private IPv4 addresses
172.31.45.87
IPv6 address
Instance state
Running
Public IPv4 DNS
ec2-54-81-48-174.compute-1.amazonaws.com | open address
Reserved Instances
Dedicated Hosts
Capacity Reservations
Images
AMIs
AMI Catalog
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences
12:43
26-07-2024

2. Replicate the instance in the us-west-2 (Oregon) region




Launch an instance | EC2 | us-e
Launch an instance | EC2 | us-w
EC2 | us-west-2
Copy an AMI from one AWS Re
us-west-2.console.aws.amazon.com/ec2/home?region=us-west-2#Images:visibility=owned-by-me
aws
Services
Search
[Alt+S]
Oregon
Nagesha KS
EC2 Dashboard
EC2 Global View
Events
Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Capacity Reservations
Images
AMIs
AMI Catalog
Elastic Block Store
Volumes
Amazon Machine Images (AMIs) (1/1) Info
Recycle Bin
EC2 Image Builder
Actions
Launch instance from AMI
Owned by me
Find AMI by attribute or tag
1
Name
AMI name
AMI ID
Source
Owner
Nagesha-KS-AMI
ami-04bb7e616278b5b06
289436155303/Nagesha-KS-AMI
AMI ID: ami-04bb7e616278b5b06
Details
Permissions
Storage
Tags
AMI ID
ami-04bb7e616278b5b06
Image type
machine
Platform details
Linux/UNIX
Root device type
EBS
AMI name
Nagesha-KS-AMI
Owner account ID
289436155303
Architecture
x86_64
Usage operation
RunInstances
Root device name
/dev/xvda
Status
Available
Source
289436155303/Nagesha-KS-AMI
Virtualization type
hvm
Activate Windows
Go to Settings to activate Windows.
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences
12:58
26-07-2024


Launch an instance | EC2 | us-e
Launch an instance | EC2 | us-w
Instances | EC2 | us-east-1
Copy an AMI from one AWS Re
us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:instanceId=i-036a74c89e8dd79d8;v=3;$case=tags:true%5C,client:false;$regex=tags:false%5C...
aws
Services
Search
[Alt+S]
N. Virginia
Nagesha KS
EC2 Dashboard
EC2 Global View
Events
Console-to-Code Preview
Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Capacity Reservations
Images
AMIs
AMI Catalog
Instances (1/1) Info
Connect
Instance state
Actions
Launch instances
Find Instance by attribute or tag (case-sensitive)
All states
Instance ID = i-036a74c89e8dd79d8
Clear filters
1
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
NageshaKS-AWS Mod-2
i-036a74c89e8dd79d8
Running
t2.micro
2/2 checks passec
View alarms
i-036a74c89e8dd79d8 (NageshaKS-AWS Mod-2)
Details
Status and alarms
Monitoring
Security
Networking
Storage
Tags
Instance summary Info
Instance ID
i-036a74c89e8dd79d8 (NageshaKS-AWS Mod-2)
IPv6 address
–
Public IPv4 address
54.81.48.174 | open address
Instance state
Running
Private IPv4 addresses
172.31.45.87
Public IPv4 DNS
ec2-54-81-48-174.compute-1.amazonaws.com |
open address
Activate Windows
Go to Settings to activate Windows.
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences
12:59
26-07-2024


Launch an instance | EC2 | us-e
Launch an instance | EC2 | us-w
Images | EC2 | us-east-1
Copy an AMI from one AWS Re
us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Images:visibility=owned-by-me
aws
Services
Search
[Alt+S]
N. Virginia
Nagesha KS
EC2 Dashboard
EC2 Global View
Events
Console-to-Code Preview
Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Capacity Reservations
Images
AMIs
AMI Catalog
Amazon Machine Images (AMIs) (1/1) Info
Recycle Bin
EC2 Image Builder
Actions
Launch instance from AMI
Owned by me
Find AMI by attribute or tag
1
Name
AMI name
AMI ID
Source
Owner
Nagesha-KS-AMI
ami-050959cdaec6cdb3c
289436155303/Nagesha-KS-AMI
AMI ID: ami-050959cdaec6cdb3c
Details
Permissions
Storage
Tags
AMI ID
ami-050959cdaec6cdb3c
Image type
machine
Platform details
Linux/UNIX
Root device type
EBS
AMI name
Nagesha-KS-AMI
Owner account ID
289436155303
Architecture
x86_64
Usage operation
RunInstances
Root device name
/dev/xvda
Status
Available
Source
289436155303/Nagesha-KS-AMI
Virtualization type
hvm
Boot mode
State reason
Creation date
Kernel ID
Activate Windows
CloudShell
Feedback
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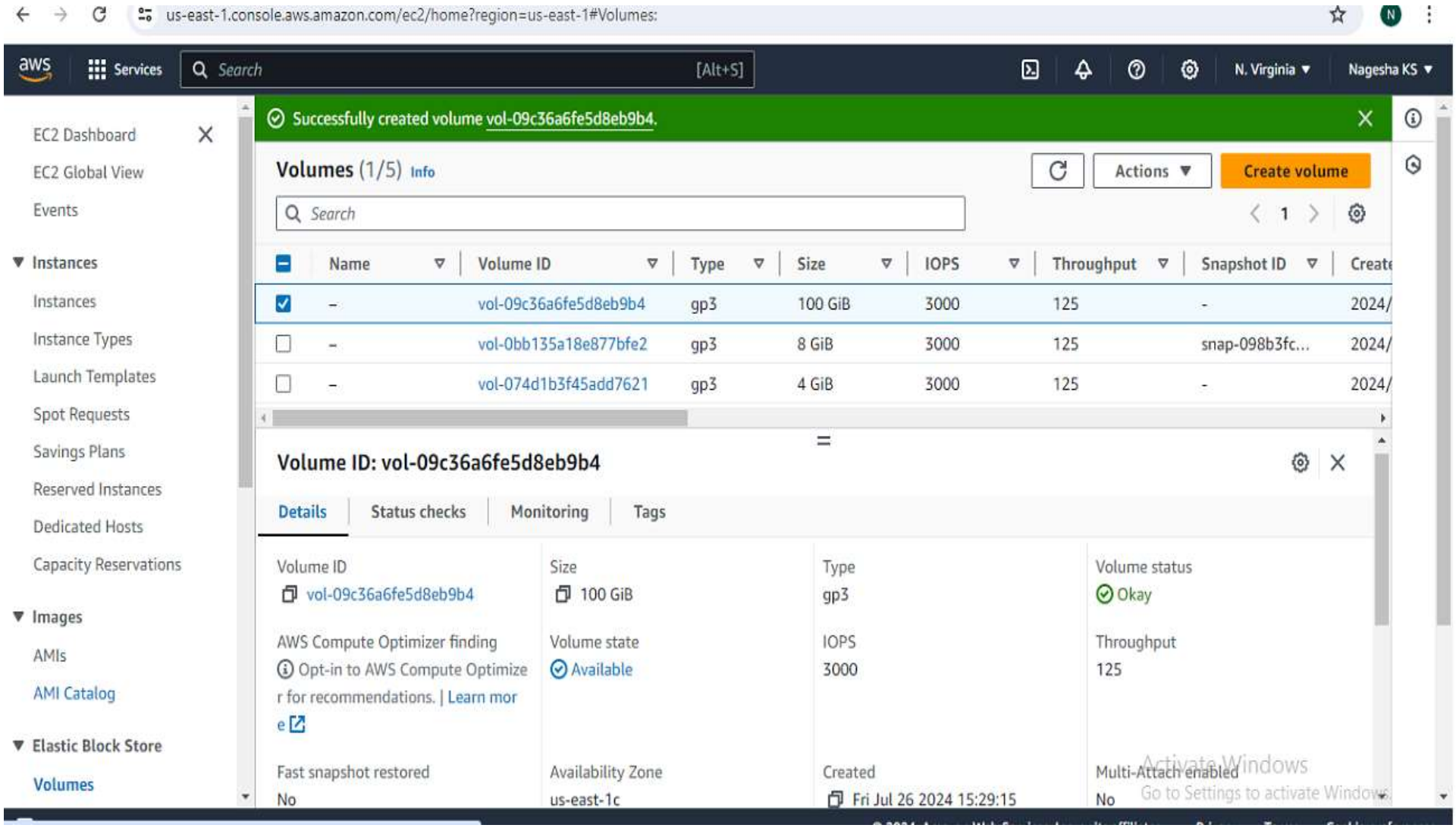
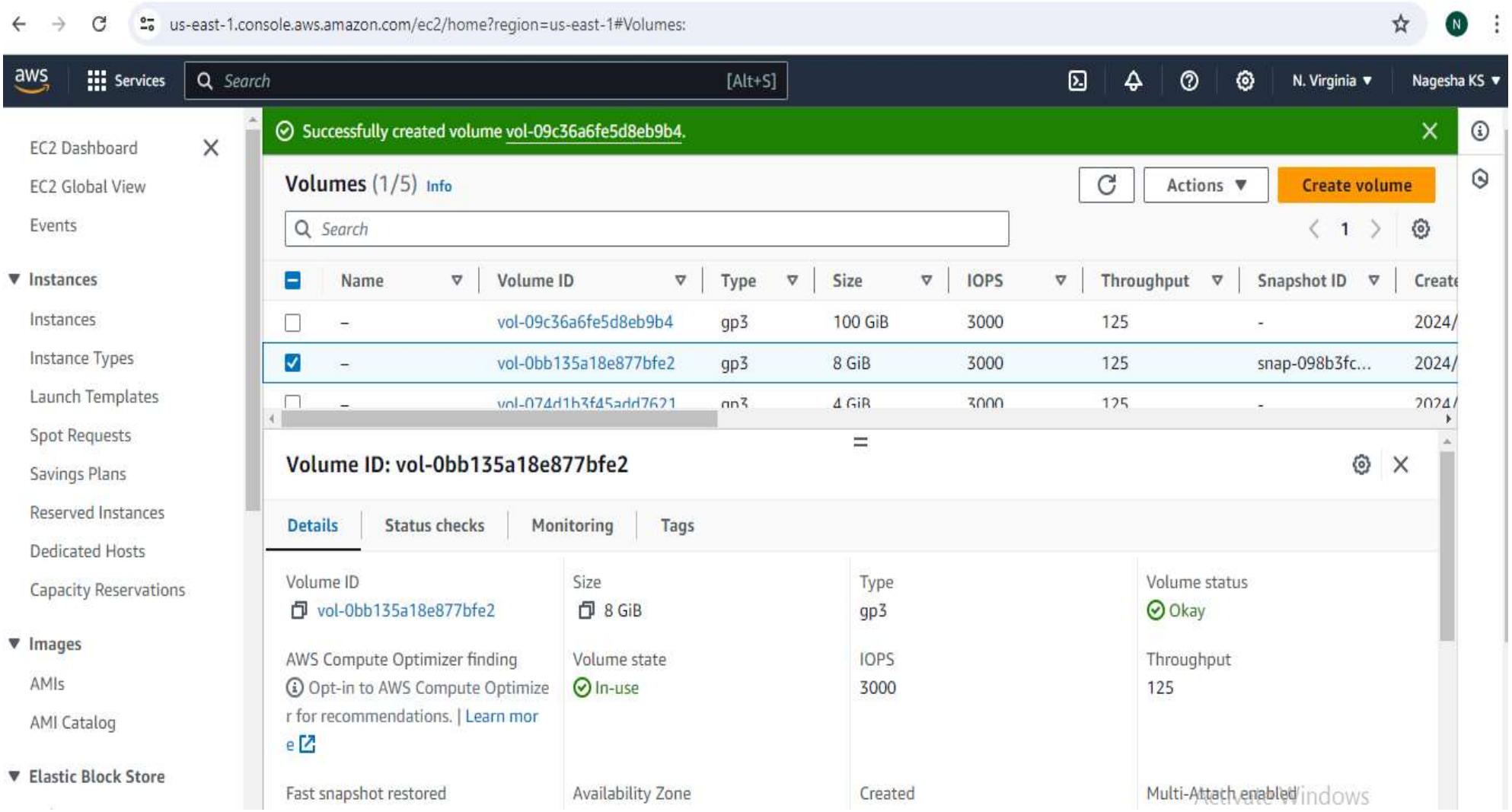
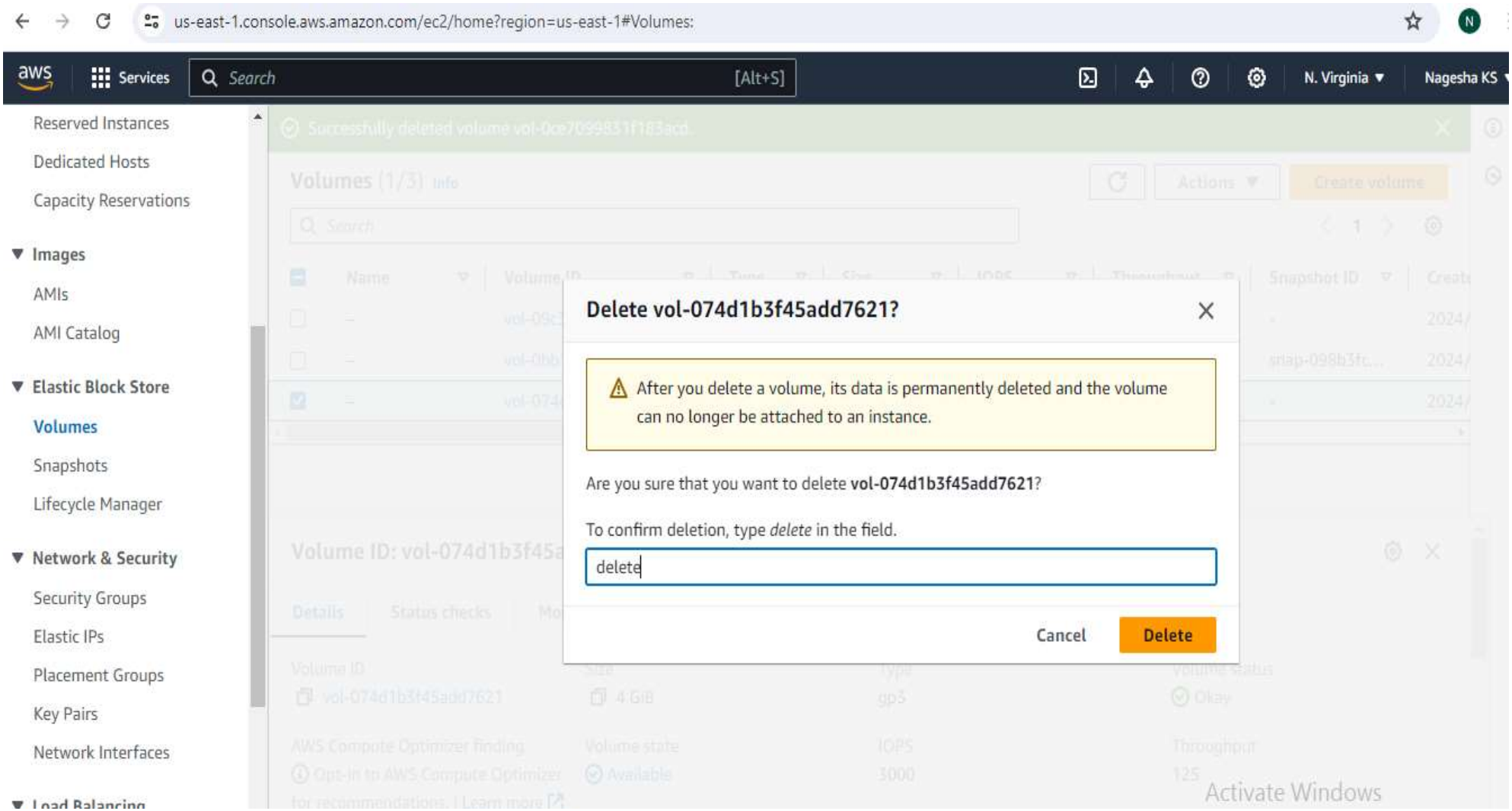
Privacy
Terms
Cookie preferences
12:59
26-07-2024

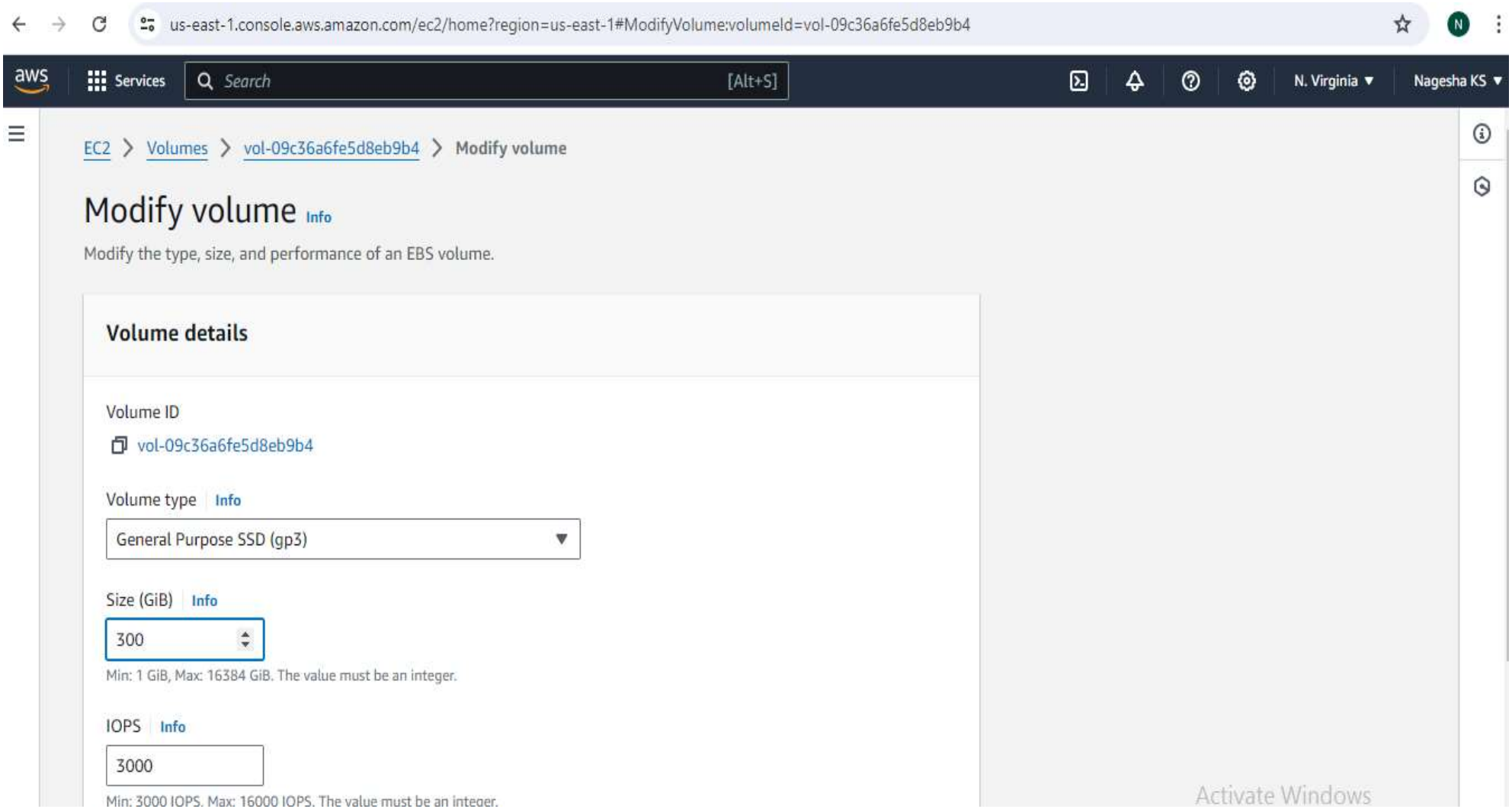
3. Build two EBS volumes and attach them to the instance in the us-east-1 (N. Virginia) region

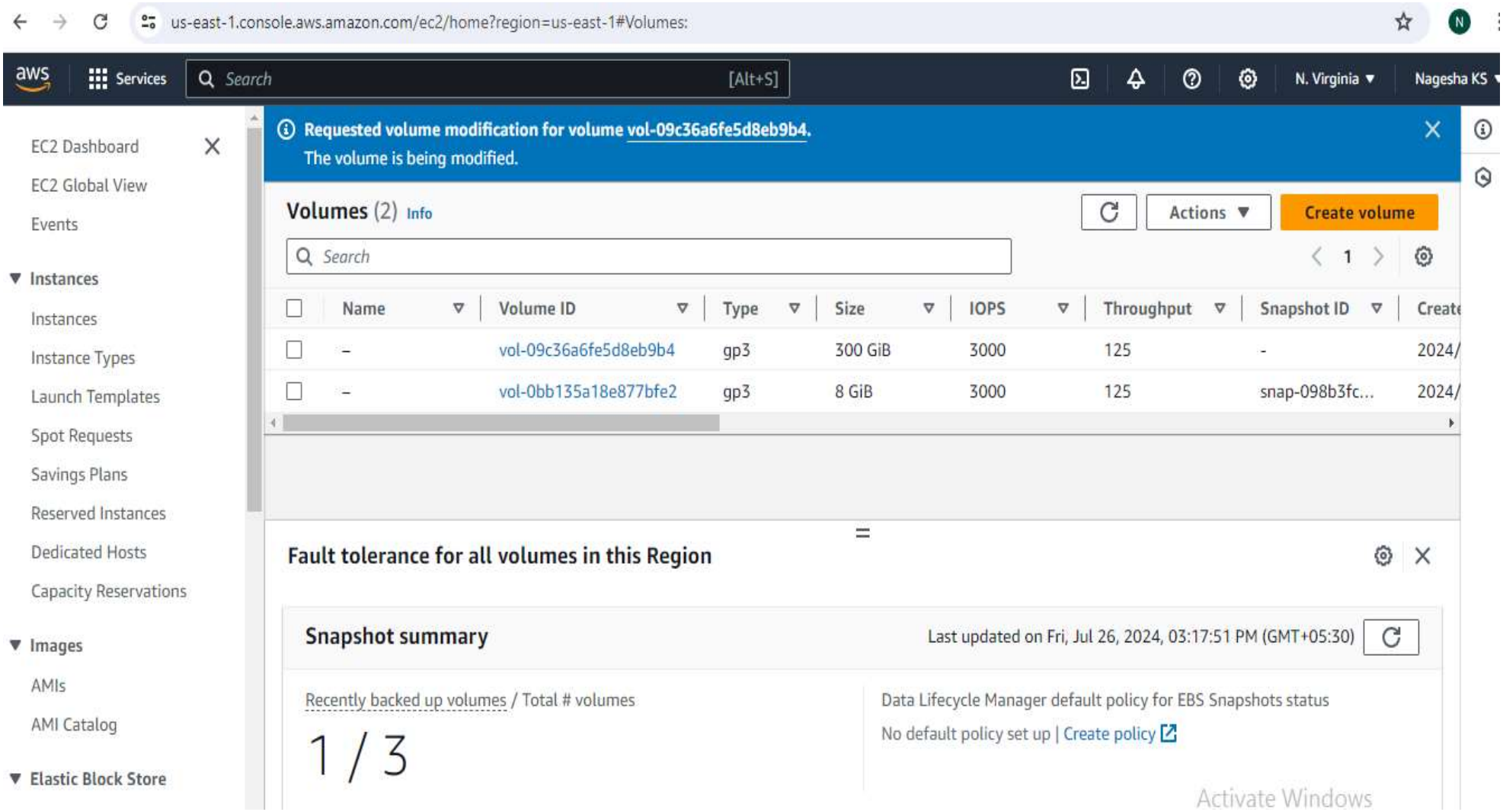



us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Volumes:
aws
Services
Search
[Alt+S]
N. Virginia
Nagesha KS
EC2 Dashboard
EC2 Global View
Events
Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Capacity Reservations
Images
AMIs
AMI Catalog
Elastic Block Store
Successfully created volume vol-09c36a6fe5d8eb9b4.
Volumes (1/5) Info
Actions
Create volume
Search
1
Name
Volume ID
Type
Size
IOPS
Throughput
Snapshot ID
Create
– vol-09c36a6fe5d8eb9b4 gp3 100 GiB 3000 125 - 2024/
– vol-0bb135a18e877bfe2 gp3 8 GiB 3000 125 snap-098b3fc... 2024/
Volume ID: vol-0bb135a18e877bfe2
Details
Status checks
Monitoring
Tags
Volume ID
vol-0bb135a18e877bfe2
Size
8 GiB
Type
gp3
Volume status
Okay
AWS Compute Optimizer finding
Opt-in to AWS Compute Optimizer for recommendations. | Learn more
Volume state
In-use
IOPS
3000
Throughput
125
Fast snapshot restored
Availability Zone
Created
Multi-Attach enabled
Activate Windows

4. Delete one volume after detaching it and extend the size of the other volume




us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#ModifyVolume:volumeId=vol-09c36a6fe5d8eb9b4
aws
Services
Search
[Alt+S]
N. Virginia
Nagesha KS
EC2 > Volumes > vol-09c36a6fe5d8eb9b4 > Modify volume
Modify volume Info
Modify the type, size, and performance of an EBS volume.
Volume details
Volume ID
vol-09c36a6fe5d8eb9b4
Volume type Info
General Purpose SSD (gp3)
Size (GiB) Info
300
Min: 1 GiB, Max: 16384 GiB. The value must be an integer.
IOPS Info
3000
Min: 3000 IOPS, Max: 16000 IOPS. The value must be an integer.
Activate Windows


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Volumes:
aws
Services
Search
[Alt+S]
N. Virginia
Nagesha KS
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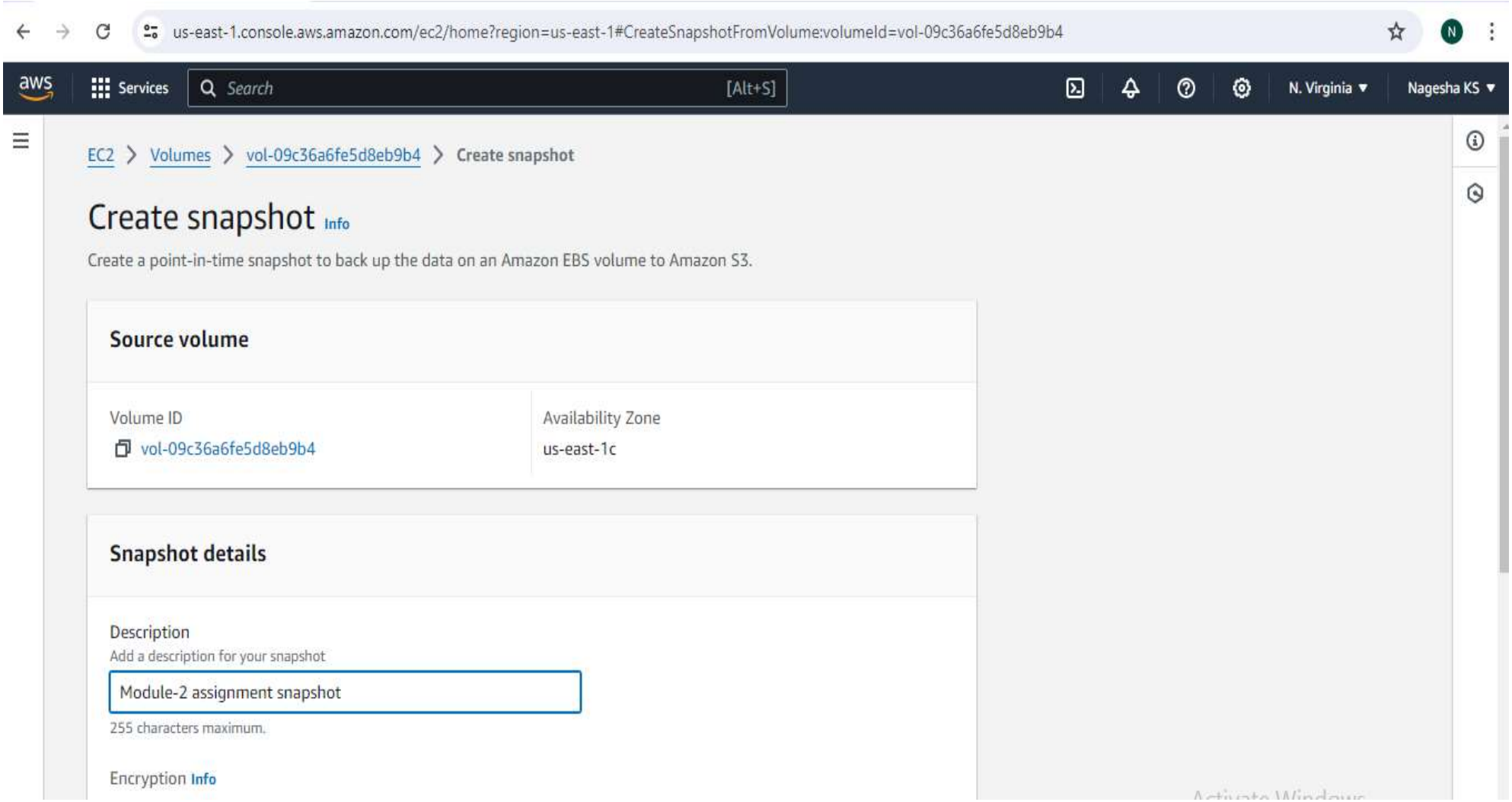
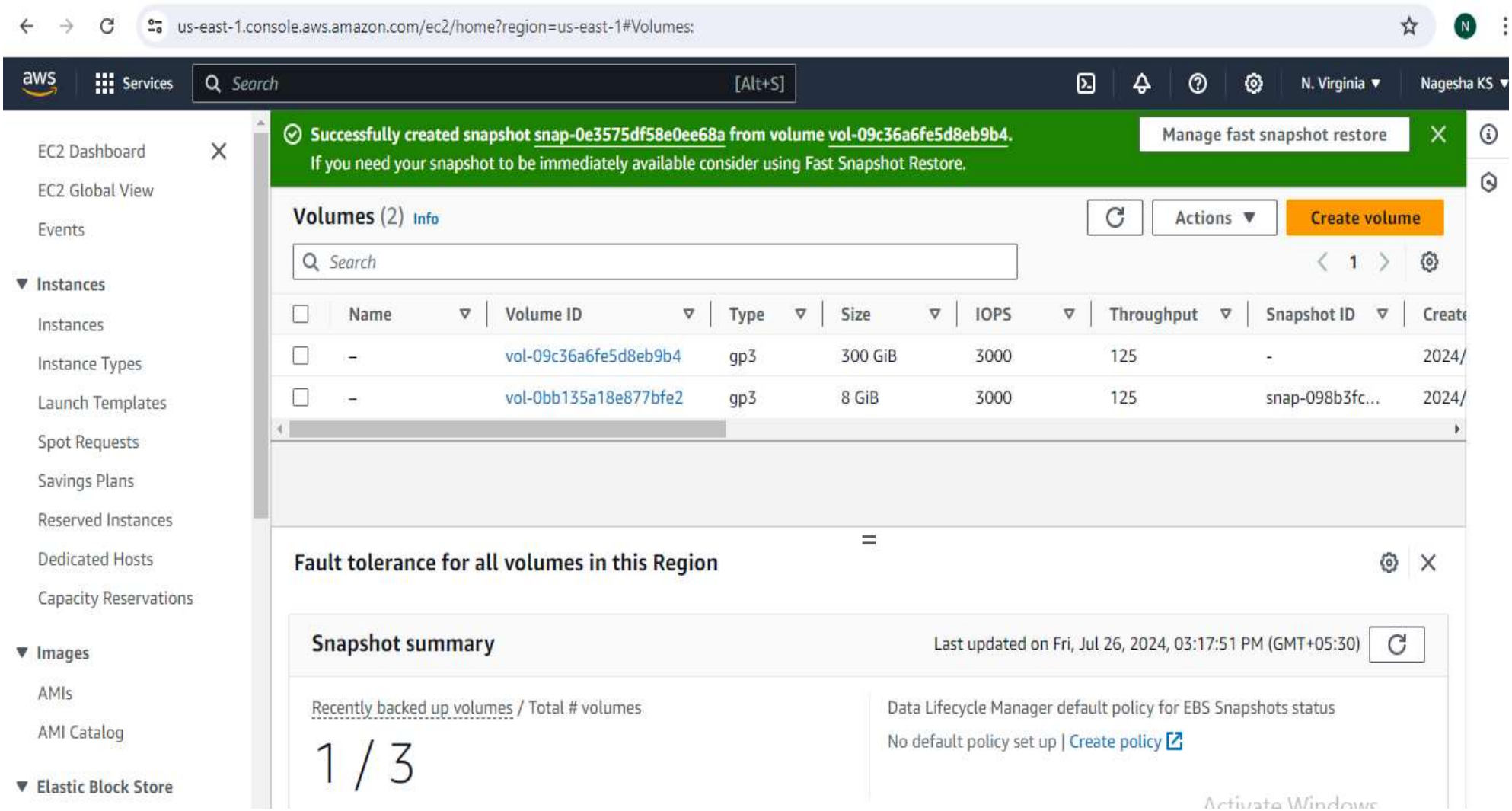
Dedicated Hosts
Capacity Reservations
Images
AMIs
AMI Catalog
Elastic Block Store
Requested volume modification for volume vol-09c36a6fe5d8eb9b4.
The volume is being modified.
Volumes (2) Info
Actions
Create volume
Search
1
Name
Volume ID
Type
Size
IOPS
Throughput
Snapshot ID
Create
–
vol-09c36a6fe5d8eb9b4
gp3
300 GiB
3000
125
-
2024/
–
vol-0bb135a18e877bfe2
gp3
8 GiB
3000
125
snap-098b3fc...
2024/
Fault tolerance for all volumes in this Region
Snapshot summary
Last updated on Fri, Jul 26, 2024, 03:17:51 PM (GMT+05:30)
Recently backed up volumes / Total # volumes
1 / 3
Data Lifecycle Manager default policy for EBS Snapshots status
No default policy set up | Create policy
Activate Windows

5. Take a backup of this EBS volume




us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Volumes:
aws
Services
Search
[Alt+S]
N. Virginia
Nagesha KS
EC2 Dashboard
EC2 Global View
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Instances
Instance Types
Launch Templates
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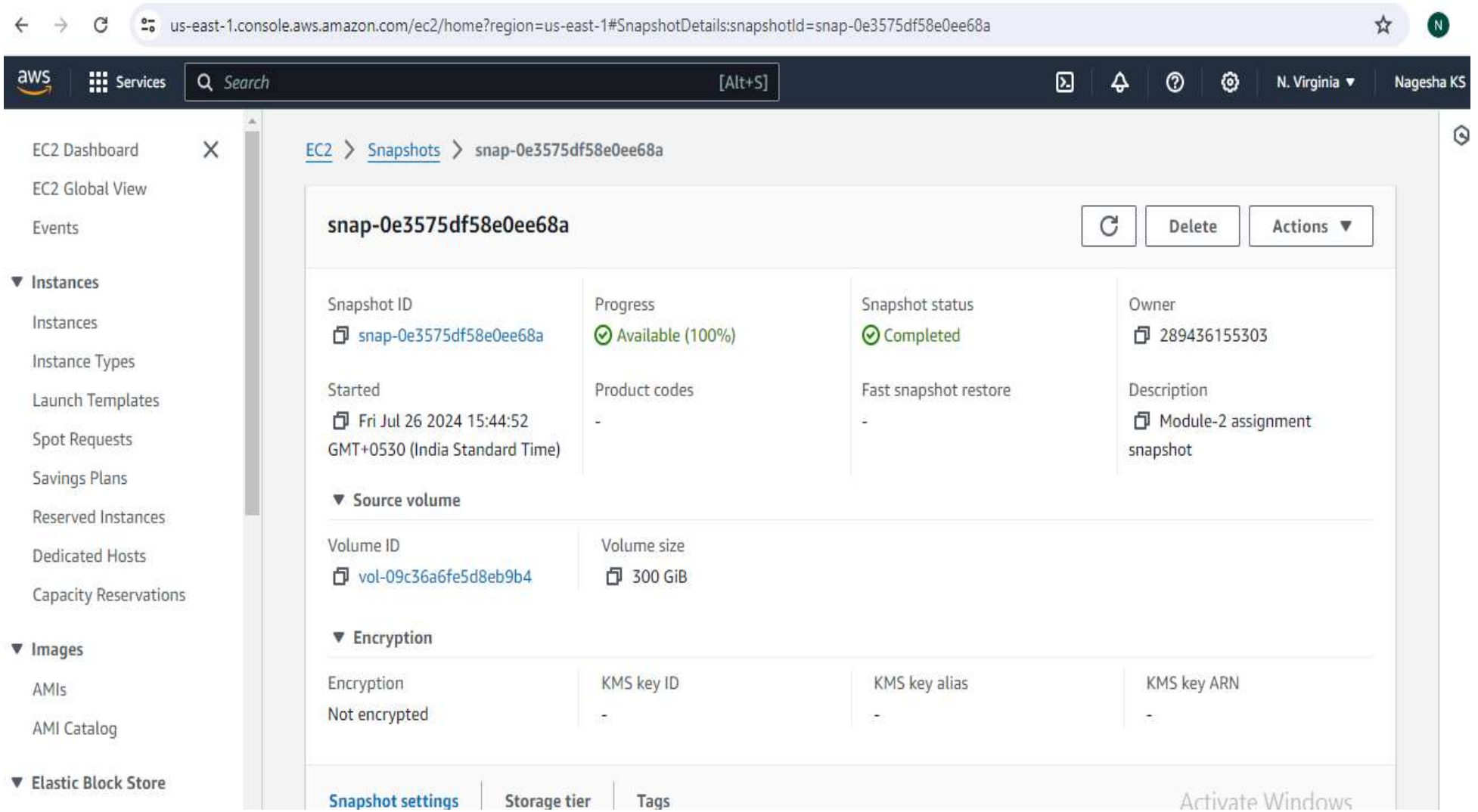
Savings Plans
Reserved Instances
Dedicated Hosts
Capacity Reservations
Images
AMIs
AMI Catalog
Elastic Block Store
Successfully created snapshot snap-0e3575df58e0ee68a from volume vol-09c36a6fe5d8eb9b4.
If you need your snapshot to be immediately available consider using Fast Snapshot Restore.
Manage fast snapshot restore
Volumes (2) Info
Actions
Create volume
Search
1
Name
Volume ID
Type
Size
IOPS
Throughput
Snapshot ID
Create
- vol-09c36a6fe5d8eb9b4 gp3 300 GiB 3000 125 - 2024/
- vol-0bb135a18e877bfe2 gp3 8 GiB 3000 125 snap-098b3fc... 2024/
Fault tolerance for all volumes in this Region
Snapshot summary
Last updated on Fri, Jul 26, 2024, 03:17:51 PM (GMT+05:30)
Recently backed up volumes / Total # volumes
1 / 3
Data Lifecycle Manager default policy for EBS Snapshots status
No default policy set up | Create policy



AWS Module-2 Assignment has been completed successfully.