

Case-Study---EC2-EBS-EFS

Problem Statement:

You work for XYZ Corporation. Your corporation is working on an application and they require secured web servers on Linux to launch the application.

Tasks To Be Performed:

1. Create an instance in the US-East-1 (N. Virginia) region with Linux OS and manage the requirement of web servers of your company using AML.
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 backup of this EBS volume.

Solution:

1. Creation of Ubuntu EC2 Instance in US-East-1 and configure

a. Launch instance

The screenshot displays the AWS Management Console interface for an EC2 instance. At the top, a table lists the instance 'ubuntu-study' with its ID 'i-Od4793dae601d78e9', state 'Running', type 't2.micro', and availability zone 'us-east-1'. Below this, the 'Instance: i-Od4793dae601d78e9 (ubuntu-study)' details are shown. The 'Instance summary' section includes the instance ID, IP address, hostname, and DNS names. The 'Networking' tab is selected, showing the public IPv4 address '54.234.0.126' and the private IP address '172.31.29.107'. The 'Storage' tab shows the VPC ID 'vpc-0cc7f12f99a9d7686' and the subnet ID 'subnet-09271199f47bbaf8e'. The 'Tags' tab is also visible.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elast
ubuntu-study	i-Od4793dae601d78e9	Running	t2.micro	2/2 checks passed	View alarms	us-east-1d	ec2-54-234-0-126.compute-1.ama...	54.234.0.126	-

Instance: i-Od4793dae601d78e9 (ubuntu-study)

Instance summary

Instance ID: i-Od4793dae601d78e9 (ubuntu-study)

IPv6 address: -

Hostname type: IP name: ip-172-31-29-107.ec2.internal

Answer private resource DNS name: IPv4 (A)

Auto-assigned IP address: 54.234.0.126 [Public IP]

IAM Role: -

IMDSv2: Required

Public IPv4 address: 54.234.0.126 [open address]

Instance state: Running

Private IP DNS name (IPv4 only): ip-172-31-29-107.ec2.internal

Instance type: t2.micro

VPC ID: vpc-0cc7f12f99a9d7686

Subnet ID: subnet-09271199f47bbaf8e

Private IPv4 addresses: 172.31.29.107

Public IPv4 DNS: ec2-54-234-0-126.compute-1.amazonaws.com [open address]

Elastic IP addresses: -

AWS Compute Optimizer finding: Opt-in to AWS Compute Optimizer for recommendations. | Learn more

Auto Scaling Group name: -

[Alt+S]

Instances (1/1) Info

Find Instance by attribute or tag (case-sensitive) Any state

Instance state = running Clear filters

<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elasti...
<input checked="" type="checkbox"/>	ubuntu-study	i-0d4793dae601d78e9	Running	t2.micro	2/2 checks passed	View alarms	us-east-1d	ec2-54-234-0-126.compute-1.ama...	54.234.0.126	-

Instance: i-0d4793dae601d78e9 (ubuntu-study)

Details Status and alarms new Monitoring Security Networking Storage Tags

▼ Root device details

Root device name /dev/sda1 Root device type EBS EBS optimization disabled

▼ Block devices

Filter block devices

Volume ID	Device name	Volume size (GiB)	Attachment status	Attachment time	Encrypted	KMS key ID	Delete on termination
vol-0366b3843d161d522	/dev/sda1	8	Attached	2024/01/28 21:24 GMT+5:30	No	-	Yes

▼ Recent root volume replacement tasks

Filter tasks Replace root volume

Task ID	Task state	Start time	Completion time	Tags
No recent replace root volume tasks				

b. Install nginx webserver

AWS Services [Alt+S]

```
ubuntu@ip-172-31-29-107:~$ nginx -v
nginx version: nginx/1.18.0 (Ubuntu)
ubuntu@ip-172-31-29-107:~$ sudo systemctl start nginx
ubuntu@ip-172-31-29-107:~$ sudo systemctl enable nginx
Synchronizing state of nginx.service with SysV service script with /lib/systemd/systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable nginx
ubuntu@ip-172-31-29-107:~$ ps -ef|grep nginx
root      2121      1  0 16:39 ?        00:00:00 nginx: master process /usr/sbin/nginx -g daemon on; master_process on;
www-data  2124    2121  0 16:39 ?        00:00:00 nginx: worker process
ubuntu    2319    1112  0 16:40 pts/0    00:00:00 grep --color=auto nginx
ubuntu@ip-172-31-29-107:~$
```

c. Security Group inbound rule

[Alt+S]

EC2 > Security Groups > sg-0ab118107a54a8428 - launch-wizard-1

sg-0ab118107a54a8428 - launch-wizard-1 Actions

Details

Security group name launch-wizard-1	Security group ID sg-0ab118107a54a8428	Description launch-wizard-1 created 2024-01-28T15:51:50.972Z	VPC ID vpc-0cc7f12f99a9d7686
Owner 590184123293	Inbound rules count 2 Permission entries	Outbound rules count 1 Permission entry	

Inbound rules Outbound rules Tags

Inbound rules (2)

Search

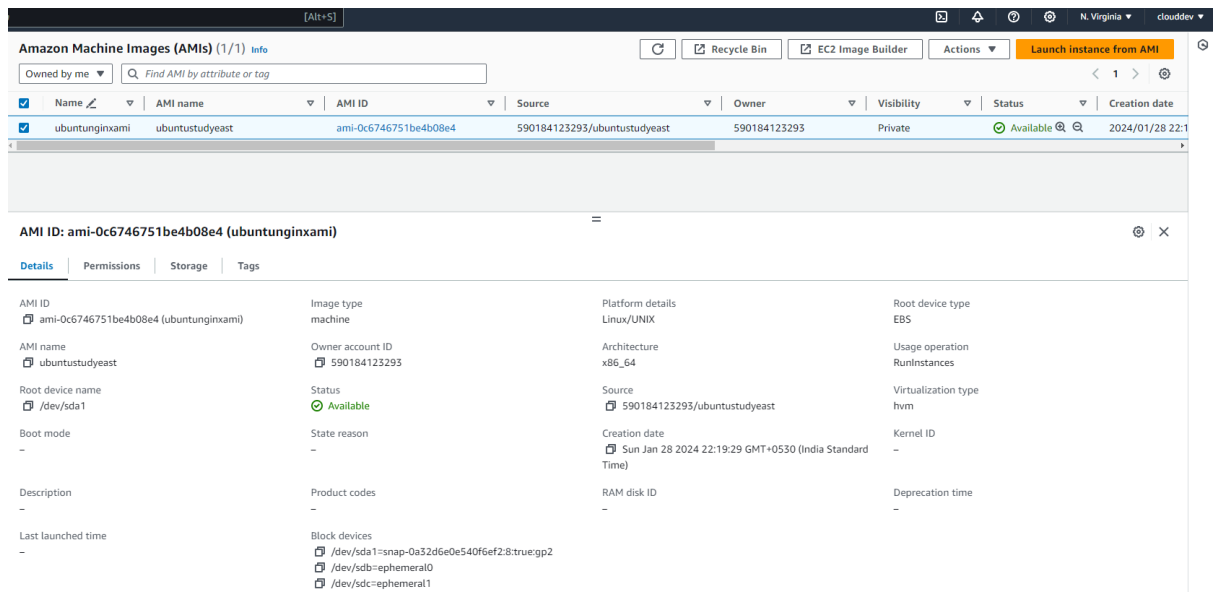
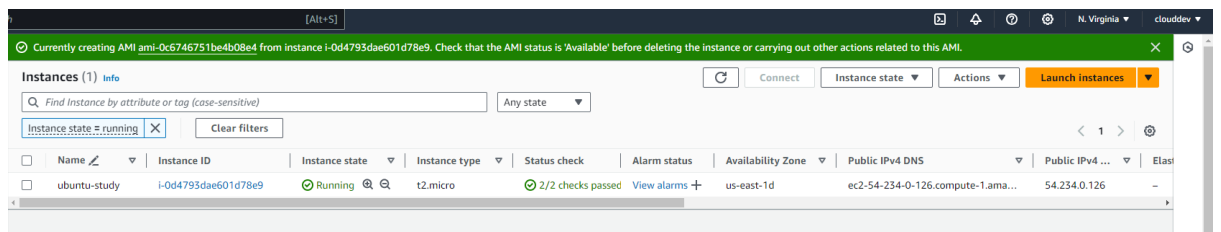
<input type="checkbox"/>	Name	Security group rule...	IP version	Type	Protocol	Port range	Source	Description
<input type="checkbox"/>	-	sg-05ccd34989c684f9e	IPv4	SSH	TCP	22	0.0.0.0/0	-
<input type="checkbox"/>	-	sg-04e0a54854ab8ea5c	IPv4	HTTP	TCP	80	0.0.0.0/0	-

d. Launch webserver



2. Replication of EC2 in US-West-2 and launch an instance

a. Create AMI of EC2 created in US-East-1



b. Copy the AMI to US-West-2 region

Services Search [Alt+S]

EC2 > AMIs > ami-0c6746751be4b08e4 > Copy AMI

Copy AMI Info

Create a copy of an Amazon Machine Image in a Region.

Copy Amazon Machine Image (AMI)

Original AMI ID
ami-0c6746751be4b08e4 (ubuntunginxami)

AMI copy name
ubuntustudyeast

AMI copy description
[Copied ami-0c6746751be4b08e4 (ubuntunginxami) from us-east-1] ubuntustudyeast

Destination Region
A copy of the original AMI will be created in the destination Region.
US West (Oregon)

☐ Copy tags
Includes your user-defined AMI tags when copying the AMI.

☐ Encrypt EBS snapshots of AMI copy
Encrypts all snapshots in the AMI copy with the same key.

Cancel Copy AMI

[Alt+S]

Oregon cloudev

Amazon Machine Images (AMIs) (1/1) info

Owned by me

Find AMI by attribute or tag

🔄

🗑️ Recycle Bin

🔧 EC2 Image Builder

Actions

Launch instance from AMI

< 1 >

🔍

✓	Name ↗	AMI name	AMI ID	Source	Owner	Visibility	Status	Creation date
✓		ubuntustudyeast	ami-062b480d52ebb1e46	590184123293/ubuntustudyeast	590184123293	Private	Available 🔍	2024/01/28 22:22

AMI ID: ami-062b480d52ebb1e46 🔍 ✕

Details

Permissions

Storage

Tags

AMI ID ami-062b480d52ebb1e46	Image type machine	Platform details Linux/UNIX	Root device type EBS
AMI name 🔍 ubuntustudyeast	Owner account ID 🔍 590184123293	Architecture x86_64	Usage operation RunInstances
Root device name 🔍 /dev/sda1	Status 🟢 Available	Source 🔍 590184123293/ubuntustudyeast	Virtualization type hvm
Boot mode -	State reason -	Creation date 🔍 Sun Jan 28 2024 22:24:04 GMT+0530 (India Standard Time)	Kernel ID -
Description 🔍 [Copied ami-0c6746751be4b08e4 (ubuntunginxami) from us-east-1] ubuntustudyeast	Product codes -	RAM disk ID -	Deprecation time -
Last launched time -	Block devices 🔍 /dev/sda1=snap-0c9805f47722d7e40:8:true:gp2 🔍 /dev/sdb=ephemeral0 🔍 /dev/sdc=ephemeral1		

c. Launch instance from AMI

Services

Search

[Alt+S]

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Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags

Info

Name

ubuntufromami

Add additional tags

Application and OS Images (Amazon Machine Image)

Info

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below.

Search our full catalog including 1000s of application and OS images

AMI from catalog

My AMIs

Quick Start

Amazon Machine Image (AMI)

ubuntustudytest

ami-062b480d52ebb1e46

Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

Published	Architecture	Virtualization	Root device type	ENA Enabled
2024-01-28T16:54:00.0Z	x86_64	hvm	ebs	Yes

Summary

Number of instances

Info

1

Software Image (AMI)

[Copied ami-0c5746751be4b08e4 ...read more]

ami-062b480d52ebb1e46

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million I/Os, 1 GiB of snapshots, and 100 GiB of bandwidth to the internet.

Cancel

Launch instance

Review commands

[Alt+S]

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Instances (1/1)

Info

Find Instance by attribute or tag (case-sensitive)

Any state

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP
ubuntufromami	i-0e6575d31f90498de	Running	t2.micro	2/2 checks passed	View alarms	us-west-2a	ec2-54-202-151-137.us...	54.202.151.137	-

Instance: i-0e6575d31f90498de (ubuntufromami)

Details

Status and alarms

New

Monitoring

Security

Networking

Storage

Tags

Instance summary

Info

Instance ID

i-0e6575d31f90498de (ubuntufromami)

IPv6 address

-

Hostname type

IP name: ip-172-31-24-36.us-west-2.compute.internal

Answer private resource DNS name

IPv4 (A)

Auto-assigned IP address

54.202.151.137 [Public IP]

IAM Role

-

IMDSv2

Optional

EC2 recommends setting IMDSv2 to required | Learn more

Public IPv4 address

54.202.151.137 [open address]

Instance state

Running

Private DNS name (IPv4 only)

ip-172-31-24-36.us-west-2.compute.internal

Instance type

t2.micro

VPC ID

vpc-05ba26421976f64ac

Subnet ID

subnet-02db095e5e2475e2

Private IPv4 addresses

172.31.24.36

Public IPv4 DNS

ec2-54-202-151-137.us-west-2.compute.amazonaws.com [open address]

Elastic IP addresses

-

AWS Compute Optimizer finding

Opt-in to AWS Compute Optimizer for recommendations. | Learn more

Auto Scaling Group name

-

[Alt+S]

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EC2

Security Groups

sg-081d5461d21bc9b98 - launch-wizard-1

sg-081d5461d21bc9b98 - launch-wizard-1

Actions

Details

Security group name	launch-wizard-1	Security group ID	sg-081d5461d21bc9b98	Description	launch-wizard-1 created 2024-01-28T17:06:37.715Z	VPC ID	vpc-05ba26421976f64ac
Owner	590184123293	Inbound rules count	2 Permission entries	Outbound rules count	1 Permission entry		

Inbound rules

Outbound rules

Tags

Inbound rules (2)

Manage tags

Edit inbound rules

Name	Security group rule...	IP version	Type	Protocol	Port range	Source	Description
-	sg-00aadb0af9545c10be	IPv4	HTTP	TCP	80	0.0.0.0/0	-
-	sg-0d325a0090f3d3...	IPv4	SSH	TCP	22	0.0.0.0/0	-

NGINX validation in US-West-2

```

Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 6.2.0-1017-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Sun Jan 28 17:13:51 UTC 2024
System load: 0.0107421875   Processes:      104
Usage of /: 23.4% of 7.3G   Swap usage:    0
Memory usage: 20%          IP address for eth0: 172.31.24.36
Swap usage:    0%

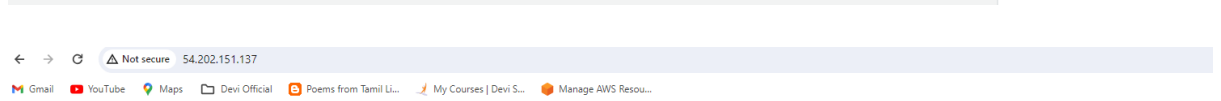
 * Ubuntu Pro delivers the most comprehensive open source security and
   compliance features.
   https://ubuntu.com/pro

Expanded Security Maintenance for Applications is not enabled.

All updates can be applied immediately.
14 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Last login: Sun Jan 28 16:14:48 2024 from 18.204.107.28
ubuntu@ip-172-31-24-36:~$ nginx -v
nginx version: nginx/1.18.0 (Ubuntu)
ubuntu@ip-172-31-24-36:~$

```



Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.

3. Create EBS volume 1 & volume 2. Attach & Mount to EC2 (Us-east-1)
 - a. Volume creation

Volumes (1/3) Info												
Search												
<input type="checkbox"/>	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created	Availability Zone	Volume state	Alarm stat	
<input type="checkbox"/>	-	vol-0366b3843d161d522	gp2	8 GiB	100	-	snap-091ad9e...	2024/01/28 21:24 GMT+5...	us-east-1d	In-use	No alarms	
<input checked="" type="checkbox"/>	volume2	vol-06da82edd95102724	gp3	15 GiB	3000	125	-	2024/01/28 21:52 GMT+5...	us-east-1d	Available	No alarms	
<input type="checkbox"/>	volume1	vol-0760fe9a4cbc2e1f5	gp3	10 GiB	3000	125	-	2024/01/28 21:51 GMT+5...	us-east-1d	Available	No alarms	

- b. Attach volume

Volumes (3) Info												
Search												
<input checked="" type="checkbox"/>	Successfully attached volume vol-06da82edd95102724 to instance i-0d4793dae601d78e9.											
<input type="checkbox"/>	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created	Availability Zone	Volume state	Alarm stat	
<input type="checkbox"/>	-	vol-0366b3843d161d522	gp2	8 GiB	100	-	snap-091ad9e...	2024/01/28 21:24 GMT+5...	us-east-1d	In-use	No alarms	
<input type="checkbox"/>	volume2	vol-06da82edd95102724	gp3	15 GiB	3000	125	-	2024/01/28 21:52 GMT+5...	us-east-1d	In-use	No alarms	
<input type="checkbox"/>	volume1	vol-0760fe9a4cbc2e1f5	gp3	10 GiB	3000	125	-	2024/01/28 21:51 GMT+5...	us-east-1d	Available	No alarms	

Volumes (3) Info												
Search												
<input checked="" type="checkbox"/>	Successfully attached volume vol-0760fe9a4cbc2e1f5 to instance i-0d4793dae601d78e9.											
<input type="checkbox"/>	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created	Availability Zone	Volume state	Alarm stat	
<input type="checkbox"/>	-	vol-0366b3843d161d522	gp2	8 GiB	100	-	snap-091ad9e...	2024/01/28 21:24 GMT+5...	us-east-1d	In-use	No alarms	
<input type="checkbox"/>	volume2	vol-06da82edd95102724	gp3	15 GiB	3000	125	-	2024/01/28 21:52 GMT+5...	us-east-1d	In-use	No alarms	
<input type="checkbox"/>	volume1	vol-0760fe9a4cbc2e1f5	gp3	10 GiB	3000	125	-	2024/01/28 21:51 GMT+5...	us-east-1d	In-use	No alarms	

```
Set134 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [159 kb]
Set135 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [16.8 kb]
Set136 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [37.1 kb]
Set137 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [7476 B]
Set138 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [260 B]
Fetched 29.2 MB in 5s (5423 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-29-107:~$ lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
loop0       7:0      0  24.9M  1 loop /snap/amazon-ssm-agent/7628
loop1       7:1      0  55.7M  1 loop /snap/core18/2812
loop2       7:2      0  63.5M  1 loop /snap/core20/2015
loop3       7:3      0 111.9M  1 loop /snap/lxd/24322
loop4       7:4      0  40.9M  1 loop /snap/snapd/20290
xvda        202:0    0    8G  0 disk 
--xvda1    202:1    0   7.9G  0 part /
--xvda14   202:14   0    4M  0 part 
--xvda15   202:15   0  106M  0 part /boot/efi
ubuntu@ip-172-31-29-107:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        7.6G  1.8G  5.8G   24% /
tmpfs            475M   0  475M   0% /dev/shm
tmpfs           190M 852K  190M   1% /run
tmpfs            5.0M   0   5.0M   0% /run/lock
/dev/xvda15     106M  6.3M   99M   6% /boot/efi
tmpfs           95M  4.0K   95M   1% /run/user/1000
ubuntu@ip-172-31-29-107:~$ lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
loop0       7:0      0  24.9M  1 loop /snap/amazon-ssm-agent/7628
loop1       7:1      0  55.7M  1 loop /snap/core18/2812
loop2       7:2      0  63.5M  1 loop /snap/core20/2015
loop3       7:3      0 111.9M  1 loop /snap/lxd/24322
loop4       7:4      0  40.9M  1 loop /snap/snapd/20290
xvda        202:0    0    8G  0 disk 
--xvda1    202:1    0   7.9G  0 part /
--xvda14   202:14   0    4M  0 part 
--xvda15   202:15   0  106M  0 part /boot/efi
xvdf        202:80   0   15G  0 disk 
xvdg        202:96   0   10G  0 disk 
ubuntu@ip-172-31-29-107:~$
```

c. Mount volume

```
32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632, 2654208
Allocating group tables: done
Writing inode tables: done
Creating journal (16384 blocks): done
Writing superblocks and filesystem accounting information: done
ubuntu@ip-172-31-29-107:~$ sudo mkfs -t ext4 /dev/xvdg
mkfs: 1.46.5 (30-Dec-2021)
Creating filesystem with 2621440 4k blocks and 655360 inodes
Filesystem UUID: 0819f038-648a-4ffb-bc13-bf72236aa310
Superblock backups stored on blocks:
    32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632
Allocating group tables: done
Writing inode tables: done
Creating journal (16384 blocks): done
Writing superblocks and filesystem accounting information: done
ubuntu@ip-172-31-29-107:~$ pwd
/home/ubuntu
ubuntu@ip-172-31-29-107:~$ sudo mkdir ebsvolumes
ubuntu@ip-172-31-29-107:~$ sudo mount /dev/xvdf
mount: /dev/xvdf: can't find in /etc/fstab.
ubuntu@ip-172-31-29-107:~$ sudo mount /dev/xvdf /home/ubuntu/ebsvolumes
ubuntu@ip-172-31-29-107:~$ sudo mount /dev/xvdg /home/ubuntu/ebsvolumes
ubuntu@ip-172-31-29-107:~$ lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
loop0       7:0      0  24.9M  1 loop /snap/amazon-ssm-agent/7628
loop1       7:1      0  55.7M  1 loop /snap/core18/2812
loop2       7:2      0  63.5M  1 loop /snap/core20/2015
loop3       7:3      0 111.9M  1 loop /snap/lxd/24322
loop4       7:4      0  40.9M  1 loop /snap/snapd/20290
xvda        202:0    0    8G  0 disk 
--xvda1    202:1    0   7.9G  0 part /
--xvda14   202:14   0    4M  0 part 
--xvda15   202:15   0  106M  0 part /boot/efi
xvdf        202:80   0   15G  0 disk /home/ubuntu/ebsvolumes
xvdg        202:96   0   10G  0 disk /home/ubuntu/ebsvolumes
ubuntu@ip-172-31-29-107:~$
```

Instances (1/1) Info

Find Instance by attribute or tag (case-sensitive)

Any state

Connect

Instance state

Actions

Launch instances

Instance state = running

Clear filters

<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4	Elastic IP
<input checked="" type="checkbox"/>	ubuntu-study	i-0d4793dae601d78e9	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1d	ec2-54-234-0-126.compute-1.ama...	54.234.0.126	-

Instance: i-0d4793dae601d78e9 (ubuntu-study)

Details | Status and alarms | Monitoring | Security | Networking | Storage | Tags

Root device details

Root device name

/dev/sda1

Root device type

EBS

EBS optimization

disabled

Block devices

Filter block devices

Volume ID	Device name	Volume size (GiB)	Attachment status	Attachment time	Encrypted	KMS key ID	Delete on termination
vol-0366b3843d161d522	/dev/sda1	8	Attached	2024/01/28 21:24 GMT+5:30	No	-	Yes
vol-06da82edd95102724	/dev/sdf	15	Attached	2024/01/28 21:53 GMT+5:30	No	-	No
vol-0760fe9a4cbc2e1f5	/dev/sdg	10	Attached	2024/01/28 21:53 GMT+5:30	No	-	No

Recent root volume replacement tasks

4. Delete Volume 2 and resize Volume 1

a. Detach & delete volume2

The screenshot shows the AWS Management Console 'Volumes' page. A table lists three volumes: '-', 'volume2', and 'volume1'. 'volume2' is selected. The 'Actions' dropdown menu is open, showing options like 'Detach volume', 'Force detach volume', etc.

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created	Availability Zone
-	vol-0366b3843d161d522	gp2	8 GiB	100	-	snap-091ad9e...	2024/01/28 21:24 GMT+5:...	us-east-1d
volume2	vol-06da82edd95102724	gp3	15 GiB	3000	125	-	2024/01/28 21:52 GMT+5:...	us-east-1d
volume1	vol-0760fe9a4cbc2e1f5	gp3	10 GiB	3000	125	-	2024/01/28 21:51 GMT+5:...	us-east-1d

The screenshot shows the AWS Management Console 'Volumes' page after detaching volume2. A green banner at the top says 'Successfully detached volume.' The table now shows 'volume2' with a state of 'In-use'.

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created	Availability Zone	Volume state	Alarm status
-	vol-0366b3843d161d522	gp2	8 GiB	100	-	snap-091ad9e...	2024/01/28 21:24 GMT+5:...	us-east-1d	In-use	No alarms
volume2	vol-06da82edd95102724	gp3	15 GiB	3000	125	-	2024/01/28 21:52 GMT+5:...	us-east-1d	In-use	No alarms
volume1	vol-0760fe9a4cbc2e1f5	gp3	10 GiB	3000	125	-	2024/01/28 21:51 GMT+5:...	us-east-1d	In-use	No alarms

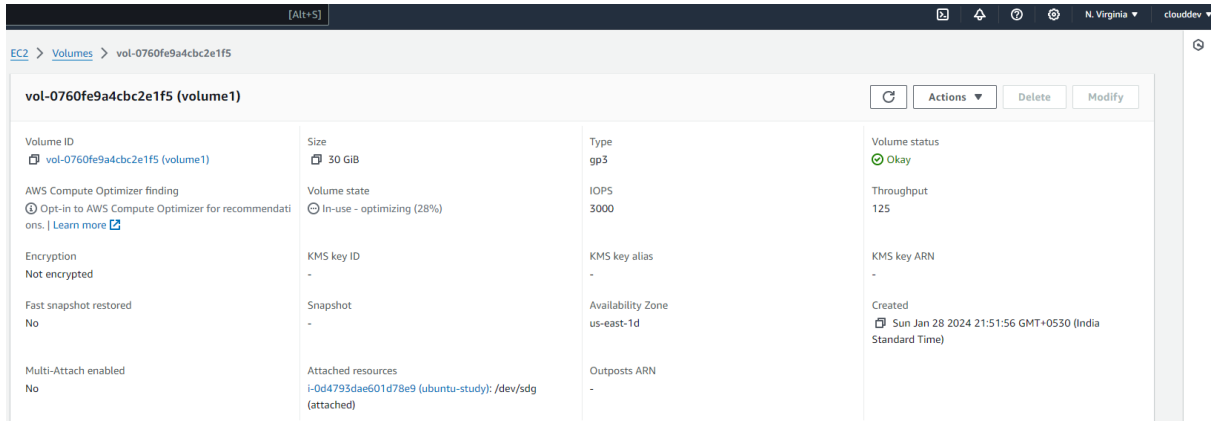
The screenshot shows the AWS Management Console 'Instances' page. The 'Storage' tab is selected for instance 'i-0d4793dae601d78e9'. It shows details for the root device and block devices.

Volume ID	Device name	Volume size (GiB)	Attachment status	Attachment time	Encrypted	KMS key ID	Delete on termination
vol-0366b3843d161d522	/dev/sda1	8	Attached	2024/01/28 21:24 GMT+5:30	No	-	Yes
vol-0760fe9a4cbc2e1f5	/dev/sdg	10	Attached	2024/01/28 21:53 GMT+5:30	No	-	No

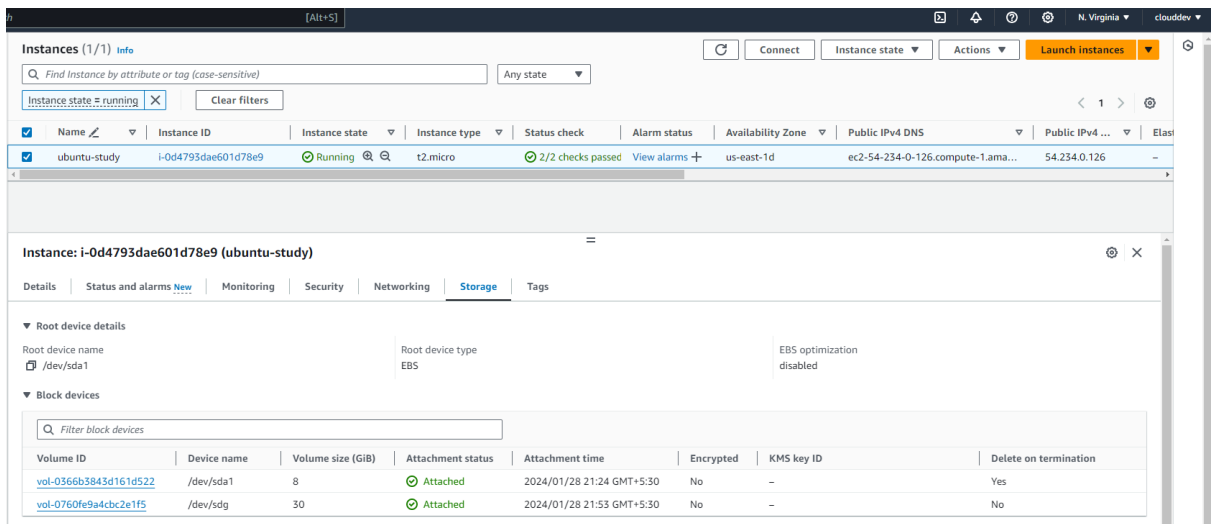
DELETE VOLUME2

The screenshot shows the AWS Management Console 'Volumes' page. A confirmation dialog is open, asking 'Delete vol-06da82edd95102724?'. The dialog text states: 'After you delete a volume, its data is permanently deleted and the volume can no longer be attached to an instance. Are you sure that you want to delete vol-06da82edd95102724?'. There are 'Cancel' and 'Delete' buttons.

b. Resize volume1 to 30 GB and mount



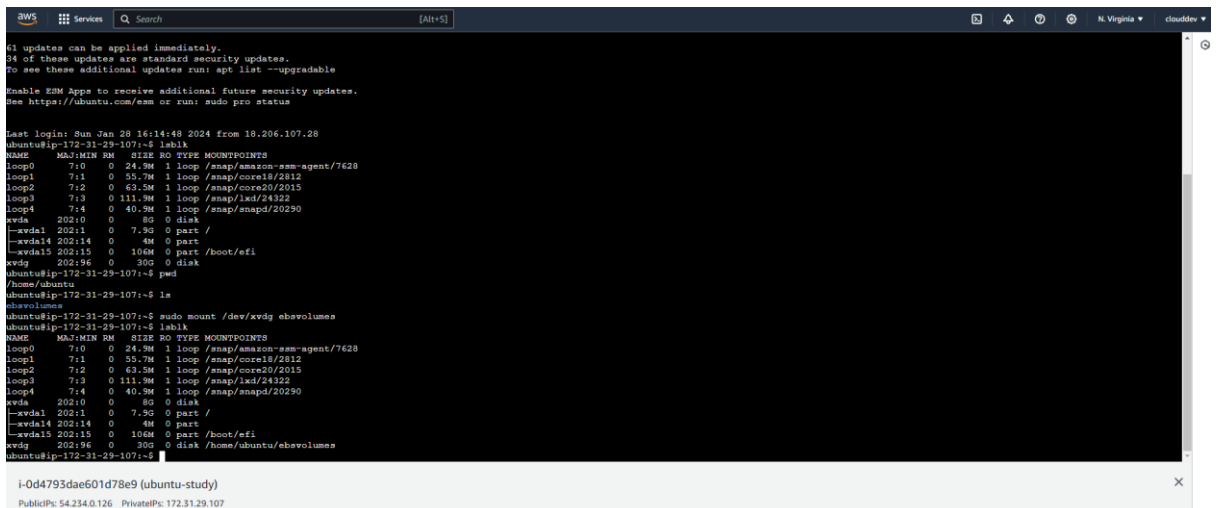
The screenshot shows the AWS Management Console interface for the volume **vol-0760fe9a4cbc2e1f5 (volume1)**. The volume is of type **gp3** and has a size of **30 GiB**. It is currently in the **Opt-in to AWS Compute Optimizer for recommendations** state, with a recommendation to **In-use - optimizing (28%)**. The volume is not encrypted and is located in the **us-east-1d** Availability Zone. It is attached to the instance **i-0d4793dae601d78e9 (ubuntu-study)** at the device path **/dev/sdg**. The volume status is **Okay** and its throughput is **125**. It was created on **Sun Jan 28 2024 21:51:56 GMT+0530 (India Standard Time)**.



The screenshot shows the AWS Management Console interface for the instance **i-0d4793dae601d78e9 (ubuntu-study)**. The instance is in the **Running** state. The **Storage** tab is selected, showing a table of attached EBS volumes:

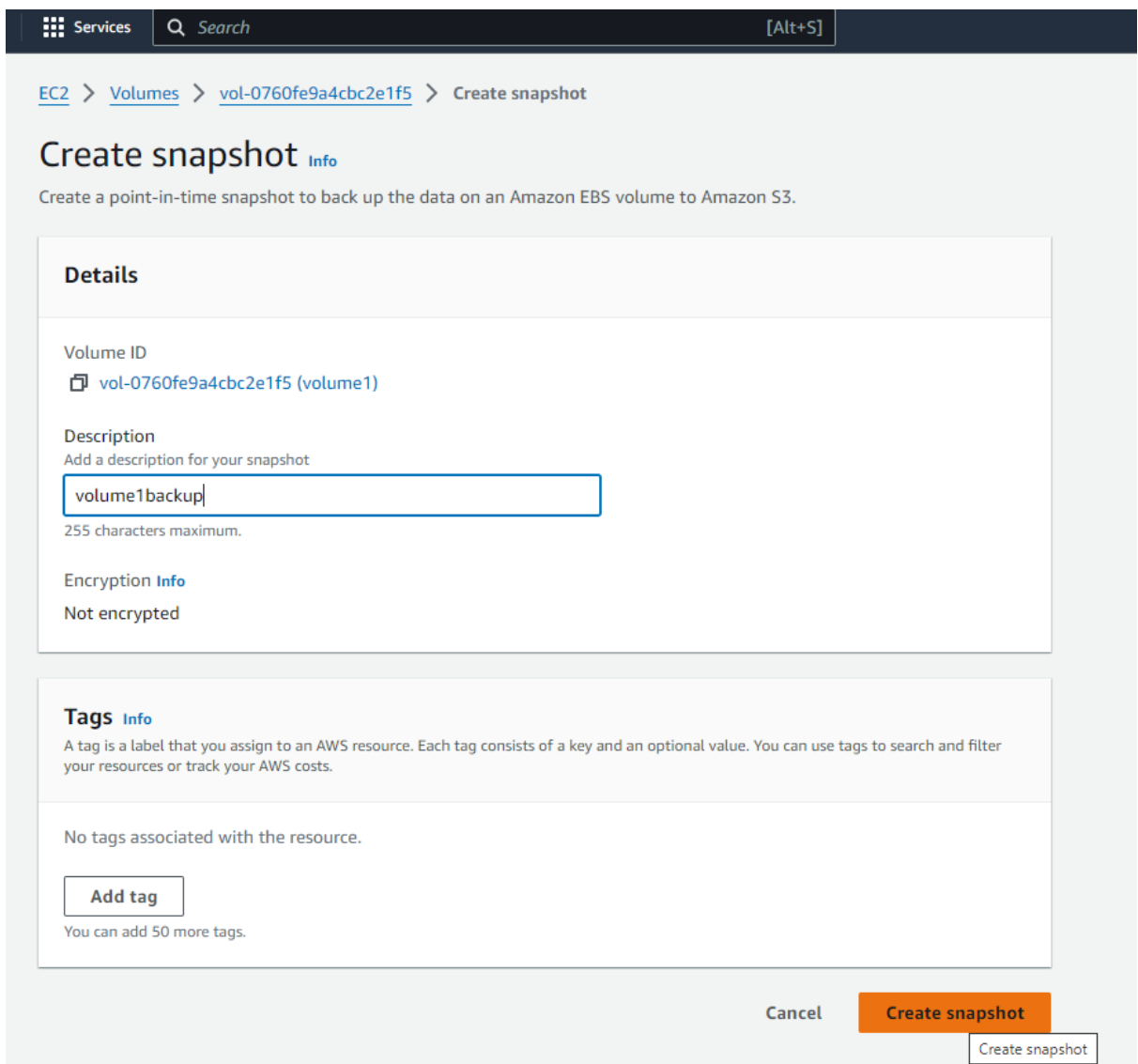
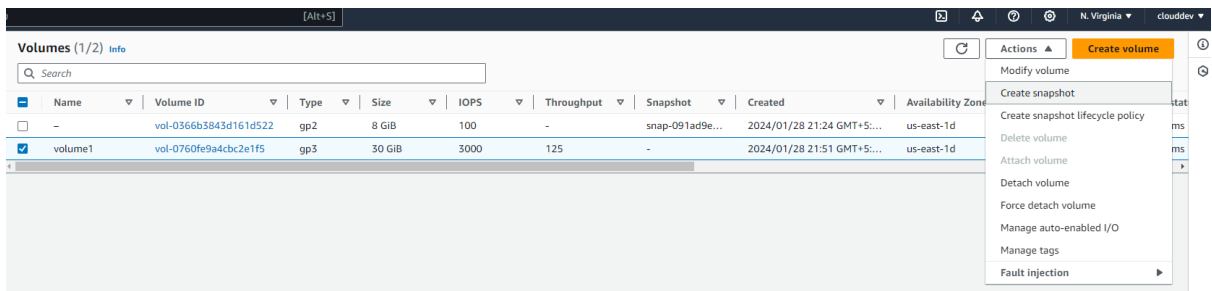
Volume ID	Device name	Volume size (GiB)	Attachment status	Attachment time	Encrypted	KMS key ID	Delete on termination
vol-0366b3843d161d522	/dev/sda1	8	Attached	2024/01/28 21:24 GMT+5:30	No	-	Yes
vol-0760fe9a4cbc2e1f5	/dev/sdg	30	Attached	2024/01/28 21:53 GMT+5:30	No	-	No

RESIZED VOLUME MOUNTED



The screenshot shows a terminal window on the **i-0d4793dae601d78e9 (ubuntu-study)** instance. The terminal output shows the **lsblk** command output, which lists the **sdg** disk as **30G** and **mounted**. The **df** command output shows the **/dev/sdg** partition is **30G** in size and **mounted**. The terminal output also shows the **mount** command being used to mount the volume at **/dev/sdg**.

5. Create Snapshot of EBS Volume 1



SNAPSHOT created for backup

[Alt+S]

N. Virginiaclouddev

Snapshots (1/2)Info

Owned by me

Search

Recycle Bin

Actions

Create snapshot

<

1

>

	Name	Snapshot ID	Volume size	Description	Storage tier	Snapshot status	Started	Progress	Encryp
<input checked="" type="checkbox"/>	-	snap-0b44cc5d87c794db2	30 GiB	volume1backup	Standard	Completed	2024/01/28 22:31 GMT+5:...	Available (100%)	Not en
<input type="checkbox"/>	-	snap-0a32d6e0e540f6ef2	8 GiB	Created by CreateImage(ji-0d4793dae601...	Standard	Completed	2024/01/28 22:20 GMT+5:...	Available (100%)	Not en

Snapshot ID: snap-0b44cc5d87c794db2

Details

Snapshot settings

Storage tier

Tags

Snapshot ID

🔗 snap-0b44cc5d87c794db2

Owner

👤 590184123293

Encryption

Not encrypted

Fast snapshot restore

-

Volume size

📦 30 GiB

Volume ID

🔗 vol-0760fe9a4cbc2e1f5

KMS key ID

-

Description

📦 volume1backup

Progress

🟢 Available (100%)

Started

📅 Sun Jan 28 2024 22:31:01 GMT+0530 (India Standard Time)

KMS key alias

-

Snapshot status

🟢 Completed

Product codes

-

KMS key ARN

-