

AWS Task-4

Task Description:

Launch an EC2 instance (Linux and Windows) along with a web server. Then, create an EBS volume of 5 GB, attach it to an EC2 machine (Linux and Windows), and take a snapshot. Finally, create an EBS volume using the taken snapshot.

Ec2 instance(Ubuntu) have been created:

The screenshot shows the AWS CloudWatch Metrics interface. At the top, there's a search bar and a navigation bar with tabs like 'Metrics' and 'Logs'. Below the search bar, there's a table with columns for 'Metric Name', 'Unit', 'Value', 'Timestamp', and 'Dimensions'. One row in the table is highlighted in yellow, showing a value of 1.0 for the metric 'AWS/EC2/NetworkIn' over a period of 1 minute. The dimensions for this metric include 'InstanceId: i-0eafdf7f6581c468f2' and 'Region: us-east-1'. The rest of the table shows other metrics like 'AWS/EC2/NetworkOut' and 'AWS/EC2/ProcessorUtilization' with their respective values and dimensions.

Installing Nginx server in instance(myEc2Server) and start/enable the Nginx:

```
root@ip-172-31-29-122:/home/ubuntu# apt install nginx -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  nginx-common
Suggested packages:
  fcgiwrap nginx-doc ssl-cert
The following NEW packages will be installed:
  nginx nginx-common
0 upgraded, 2 newly installed, 0 to remove and 93 not upgraded.
Need to get 565 kB of archives.
After this operation, 1596 kB of additional disk space will be used.
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 nginx-common all 1.24.0-2ubuntu7.6 [565 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 nginx amd64 1.24.0-2ubuntu7.6 [24.7 MB/s]
Fetched 565 kB in 0s (24.7 MB/s)
Preconfiguring packages ...
Selecting previously unselected package nginx-common.
(Reading database ... 71752 files and directories currently installed.)
Preparing to unpack .../nginx-common_1.24.0-2ubuntu7.6_all.deb ...
Unpacking nginx-common (1.24.0-2ubuntu7.6) ...
Selecting previously unselected package nginx.
Preparing to unpack .../nginx_1.24.0-2ubuntu7.6_amd64.deb ...
Unpacking nginx (1.24.0-2ubuntu7.6) ...
Setting up nginx-common (1.24.0-2ubuntu7.6) ...
Created symlink /etc/systemd/system/multi-user.target.wants/nginx.service → /usr/lib/systemd/system/nginx.service.
Setting up nginx (1.24.0-2ubuntu7.6) ...
 * Upgrading binary nginx
Processing triggers for man-db (2.12.0-1build2)
```

```

root@ip-172-31-29-122:/home/ubuntu# systemctl start nginx
root@ip-172-31-29-122:/home/ubuntu# systemctl enable nginx
Synchronizing state of nginx.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable nginx
root@ip-172-31-29-122:/home/ubuntu# echo "Hello from Linux Web Server" > /var/www/html/index.html
root@ip-172-31-29-122:/home/ubuntu# cat /var/www/html/index.html
Hello from Linux Web Server
root@ip-172-31-29-122:/home/ubuntu#

```

Created EBS Volume:

The screenshot shows the AWS EC2 Volumes page. On the left, there's a sidebar with navigation links for EC2, Dashboard, EC2 Global View, Events, Instances, Images, Elastic Block Store, Network & Security, and Load Balancing. The main area displays the details of a specific EBS volume. The volume ID is vol-0c89698e6ba23ada2. It has a size of 5 GiB, a type of gp3, and a throughput of 125. It was created on Feb 18, 2026, at 15:49:48 GMT+0530 (India Standard Time). The status check is 'Okay'. The volume is attached to an instance and is managed by the user.

Attaching volume to Ec2: select the instance -> Actions -> storage -> attach volume

The screenshot shows the 'Attach volume' dialog box. It lists the instance i-0caf07f6581c468f2 (myEc2Server) and the volume vol-0c89698e6ba23ada2. The device name is set to /dev/sdf. The 'Attach volume' button is highlighted in orange at the bottom right.

The screenshot shows the terminal output of the lsblk command. It lists several block devices: loop0, loop1, loop2, nvme0n1, nvme0n1p1, nvme0n1p14, nvme0n1p15, nvme0n1p16, and nvme1n1. The nvme1n1 device is highlighted with a red box.

Created a file system(Formatted the volume):

```
root@ip-172-31-29-122:/home/ubuntu# sudo file -s /dev/nvme1n1
/dev/nvme1n1: data
root@ip-172-31-29-122:/home/ubuntu# mkfs -t ext4 /dev/nvme1n1
mke2fs 1.47.0 (5-Feb-2023)
Creating filesystem with 1310720 4k blocks and 327680 inodes
Filesystem UUID: cc0f4cc7-0047-4f1a-99a6-06c61506bbaa
Superblock backups stored on blocks:
    32768, 98304, 163840, 229376, 294912, 819200, 884736

Allocating group tables: done
Writing inode tables: done
Creating journal (16384 blocks): done
Writing superblocks and filesystem accounting information: done
```

Created the mount point and mounted the volume:

```
root@ip-172-31-29-122:/home/ubuntu# mkdir /data
root@ip-172-31-29-122:/home/ubuntu# mount /dev/nvme1n1 /data
root@ip-172-31-29-122:/home/ubuntu# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root       6.8G  2.0G  4.7G  30% /
tmpfs          458M     0  458M   0% /dev/shm
tmpfs          183M  908K  182M   1% /run
tmpfs          5.0M     0  5.0M   0% /run/lock
efivarfs       128K   3.6K  120K   3% /sys/firmware/efi/efivars
/dev/nvme0n1p16 881M   89M  730M  11% /boot
/dev/nvme0n1p15 105M   6.2M  99M   6% /boot/efi
tmpfs           92M   12K   92M   1% /run/user/1000
/dev/nvme1n1     4.9G  24K  4.6G   1% /data
root@ip-172-31-29-122:/home/ubuntu# lsblk
NAME      MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
loop0        7:0    0 27.6M  1 loop /snap/amazon-ssm-agent/11797
loop1        7:1    0  74M  1 loop /snap/core22/2163
loop2        7:2    0 50.9M  1 loop /snap/snapd/25577
nvme0n1     259:0    0    8G  0 disk
└─nvme0n1p1  259:1    0    7G  0 part /
└─nvme0n1p14 259:2    0    4M  0 part
└─nvme0n1p15 259:3    0 106M  0 part /boot/efi
└─nvme0n1p16  259:4    0 913M  0 part /boot
nvme1n1     259:5    0    5G  0 disk /data
```

Create Snapshot:

- EC2 Console -> Volumes -> Actions -> Create Snapshot.

Snapshots (1) Info											
Snapshot scope		Last updated less than a minute ago Recycle Bin Actions									
Name	Snapshot ID	Full snapshot size	Volume size	Description	Storage tier	Snapshot status	Started	Progress	Encryption	KMS key ID	KMS key alias
	snap-0f21b6a1099a96f3a	152 MB	5 GiB	Snapshot of 5GiB test volume	Standard	Completed	2026/02/18 16:24 GMT+5:30	100%	Not encrypted	-	-

Create EBS Volume from Snapshot:

EC2 → Snapshots -> select Snapshot -> Actions -> create volume from snapshot

snap-0f21b6a1099a96f3a

Last updated [less than a minute ago](#) [Delete](#) [Actions](#)

Details

Snapshot ID	snap-0f21b6a1099a96f3a	Full snapshot size	152 MB	Progress	100%	Snapshot status	Completed
Owner	260448776023	Started	Wed Feb 18 2026 16:24:19 GMT+0530 (India Standard Time)	Product codes	-	Fast snapshot restore	-
Description	Snapshot of 5GiB test volume						

Source volume

Volume ID	vol-089698e6ba23ada2	Volume size	5 GiB
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Encryption

Encryption	Not encrypted	KMS key ID	-	KMS key alias	-	KMS key ARN	-
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Snapshot settings

Snapshot Lock - new

Lock mode: [Not locked](#)

Share permissions

Snapshot share permissions: [Modify permissions](#)

The snapshot is shared only with AWS accounts that you specified.

Volumes (3) Info												
Saved filter sets		Last updated less than a minute ago Recycle Bin Actions										
Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Source volume ID	Created	Availability Zone	Volume state	Alarm status	Attached resources
	vol-0cc0e2fc77386c41	gp3	5 GiB	3000	125	snap-0f21b6a...	-	2026/02/18 16:31 GMT+5:30	use1-az2 (us-east-1c)	Available	No alarms	+
	vol-089698e6ba23ada2	gp3	5 GiB	3000	125	-	-	2026/02/18 15:49 GMT+5:30	use1-az2 (us-east-1c)	In-use	No alarms	+
	vol-0cc0e2fc77386c41	gp3	5 GiB	3000	125	-	-	2026/02/18 16:31 GMT+5:30	use1-az2 (us-east-1c)	Available	No alarms	+