

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 displays the AWS Management Console interface for an EC2 instance. At the top, a table lists the instance 'myEc2Server' with its ID 'i-0eafd7f6581c468f2', state 'Running', type 't3.micro', and other attributes. Below this, the 'Details' tab is selected for the instance. The details are organized into three columns: Instance summary, Public IP addresses, and Private IP addresses. The Instance summary column shows the instance ID, IP address, hostname type, answer private resource DNS name, auto-assigned IP address, and IAM role. The Public IP addresses column shows the public IP address '54.237.200.83' and the public DNS 'ec2-54-237-200-83.compute-1.amazonaws.com'. The Private IP addresses column shows the private IP address '172.31.29.122' and the private DNS 'ip-172-31-29-122.ec2.internal'.

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 [54.7 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 nginx amd64 1.24.0-2ubuntu7.6 [510 kB]
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 (2.12.0-4build2)
```

```

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 Management Console interface for an EBS volume. The volume ID is **vol-0c89698e6ba23ada2**. Key details include:

- Size:** 5 GB
- Type:** gp3
- Volume state:** Available
- IOPS:** 3000
- Throughput:** 125
- Created:** Wed Feb 18 2026 15:49:48 GMT+0530 (India Standard Time)
- Multi-Attach enabled:** No
- Operator:** -
- Encryption:** Not encrypted
- KMS key ID:** -
- KMS key alias:** -
- KMS key ARN:** -

Below the details, there are tabs for **Status checks**, **Monitoring**, and **Tags**. The **Status checks** tab is active, showing:

- Status check:** ✔ Okay
- I/O status:** ✔ Enabled
- I/O status updated on:** Wed Feb 18 2026 15:49:48 GMT+0530 (India Standard Time)
- I/O performance:** ⓘ Not applicable
- I/O performance updated on:** -
- Auto-enabled I/O:** ⚠ Disabled
- Description:** ⓘ This feature only applies to attached io1, io2, and gp3 volumes.

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

The screenshot shows the 'Attach volume' dialog in the AWS Management Console. It prompts the user to select an instance and a volume to attach.

- Instance ID:** **i-0cafd7f6581c468f2** (myEc2Server)
- Availability Zone:** **us-east-1c**
- Currently attached volumes (1):** (Empty list)
- Volume:** **vol-0c89698e6ba23ada2** (Selected from a dropdown menu)
- Device name:** **/dev/xvdf** (Selected from a dropdown menu)

At the bottom right, there are buttons for **Cancel** and **Attach volume**.

```

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  213M   0 part /boot
└─nvme1n1    259:5    0    5G   0 disk

```

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: Owned by me

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<input type="checkbox"/>	Name	Snapshot ID	Full snapshot size	Volume size	Description	Storage tier	Snapshot status	Started	Progress	Encryption	KMS key ID	KMS key al...
<input type="checkbox"/>		snap-0f21b6a1099a96f3a	152 MiB	5 GiB	Snapshot of 5GB test volume	Standard	Completed	2026/02/18 16:24 GMT+5:...	100%	Not encrypted	-	-

Create EBS Volume from Snapshot:

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

snap-0f21b6a1099a96f3a

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Details

Snapshot ID
snap-0f21b6a1099a96f3a

Owner
260448776023

Description
Snapshot of 5GB test volume

▼ Source volume

Volume ID
vol-0c89698e6ba23ada2

Volume size
5 GiB

▼ Encryption

Encryption
Not encrypted

KMS key ID
-

KMS key alias
-

KMS key ARN
-

Full snapshot size
152 MiB

Started
Wed Feb 18 2026 16:24:19 GMT+05:30 (India Standard Time)

Progress
100%

Product codes
-

Snapshot status
Completed

Fast snapshot restore
-

Snapshot settings

Storage tier

Tags

▼ Snapshot Lock - new

Lock mode
Not locked

▼ Share permissions

Snapshot share permissions
Private
The snapshot is shared only with AWS accounts that you specified.

Modify permissions

Volumes (3) [Info](#)

Saved filter sets: Choose filter set

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<input type="checkbox"/>	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Source volume ID	Created	Availability Zone	Volume state	Alarm status	Attached resources
<input type="checkbox"/>		vol-0dcd0e2fc77386c41	gp3	5 GiB	3000	125	snap-0f21b6a...	-	2026/02/18 16:31 GMT+5:...	use1-az4 (us-east-1)	Available	No alarms	+
<input type="checkbox"/>		vol-0c89698e6ba23ada2	gp3	5 GiB	3000	125	-	-	2026/02/18 15:49 GMT+5:...	use1-az4 (us-east-1)	In-use	No alarms	+