

# Cloud Computing Lab Week 1 : AWS, EC2, EBS and S3

Abhishek Das

PES1201800177

Section : G

## b) Understanding and creating AWS EC2(Elastic Compute) virtual machines

The screenshot displays the AWS Management Console's 'Launch Instance Wizard' at Step 7: Review Instance Launch. The interface includes a top navigation bar with the AWS logo, a search bar, and user information. Below the navigation bar, a progress bar shows the steps: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage, 5. Add Tags, 6. Configure Security Group, and 7. Review. The main content area is divided into sections for AMI Details, Instance Type, Security Groups, and Instance Details.

**Step 7: Review Instance Launch**

**AMI Details** [Edit AMI](#)

Ubuntu Server 18.04 LTS (HVM), SSD Volume Type - ami-00ddb0e5626798373

Free tier eligible

Ubuntu Server 18.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical (<http://www.ubuntu.com/cloud/services>).

Root Device Type: ebs Virtualization type: hvm

**Instance Type** [Edit instance type](#)

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	-	1	1	EBS only	-	Low to Moderate

**Security Groups** [Edit security groups](#)

Security group name: launch-wizard-1

Description: launch-wizard-1 created 2021-01-21T21:52:26.630+05:30

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	0.0.0.0/0	ssh
HTTP	TCP	80	0.0.0.0/0	
HTTP	TCP	80	:::0	
HTTPS	TCP	443	0.0.0.0/0	
HTTPS	TCP	443	:::0	

**Instance Details** [Edit instance details](#)

Number of instances: 1

Network: vpc-95b017e8

Subnet: No preference (default subnet in any Availability Zone)

EBS-optimized: No

Monitoring: No

Purchasing option: On demand

[Cancel](#) [Previous](#) [Launch](#)

Feedback English (US) © 2008 - 2021, Amazon Web Services, Inc. or its affiliates. All rights reserved. [Privacy Policy](#) [Terms of Use](#)

Welcome to the new instances experience!

We're redesigning the EC2 console to make it easier to use. To switch between the old console and the new console, use the New EC2 Experience toggle above the navigation panel. We'll release updates continuously based on customer feedback.

Instances (1/1) Info

Refresh

Connect

Instance state

Actions

Launch instances

Filter instances

< 1 >

<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"/>	PES1201800177	i-09b62452e968a9b14	Running	t2.micro	-	No alarms	us-east-1c	ec2-3-93-6-247.comp...	3.93.6.247	-

```
ubuntu@ip-172-31-82-21: ~
File Edit View Search Terminal Help
Setting up libmpc3:amd64 (1.1.0-1) ...
Setting up libc-dev-bin (2.27-3ubuntu1.4) ...
Setting up manpages-dev (4.15-1) ...
Setting up libc6-dev:amd64 (2.27-3ubuntu1.4) ...
Setting up libitm1:amd64 (8.4.0-1ubuntu1~18.04) ...
Setting up libisl19:amd64 (0.19-1) ...
Setting up libasan4:amd64 (7.5.0-3ubuntu1~18.04) ...
Setting up libbinutils:amd64 (2.30-21ubuntu1~18.04.4) ...
Setting up libcilkrts5:amd64 (7.5.0-3ubuntu1~18.04) ...
Setting up libubsan0:amd64 (7.5.0-3ubuntu1~18.04) ...
Setting up libgcc-7-dev:amd64 (7.5.0-3ubuntu1~18.04) ...
Setting up cpp-7 (7.5.0-3ubuntu1~18.04) ...
Setting up binutils-x86-64-linux-gnu (2.30-21ubuntu1~18.04.4) ...
Setting up cpp (4:7.4.0-1ubuntu2.3) ...
Setting up binutils (2.30-21ubuntu1~18.04.4) ...
Setting up gcc-7 (7.5.0-3ubuntu1~18.04) ...
Setting up gcc (4:7.4.0-1ubuntu2.3) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
Processing triggers for libc-bin (2.27-3ubuntu1.2) ...
ubuntu@ip-172-31-82-21:~$ nano hw.c
ubuntu@ip-172-31-82-21:~$ gcc hw.c
ubuntu@ip-172-31-82-21:~$
ubuntu@ip-172-31-82-21:~$ ./a.out
Hello worldubuntu@ip-172-31-82-21:~$
```

## c) Understanding and using AWS EBS(Elastic Block Store)

	Name	Volume ID	Size	Volume Type	IOPS	Throughput	Snapshot	Created	Availability Zone	State	Alarm Status	Attachment Information	Monitoring	Volume Status
<input type="checkbox"/>		vol-0c56533...	10 GiB	gp2	100	-		January 21, 2021 at...	us-east-1a	available	None			Okay
<input type="checkbox"/>		vol-0896ebc...	8 GiB	gp2	100	-	snap-0b071e0...	January 21, 2021 at...	us-east-1d	in-use	None		i-0fb86e688dfe52f8...	Okay

	Volume ID	Size	Volume Type	IOPS	Throughput	Snapshot	Created	Availability Zone	State	Alarm Status	Attachment Information	Monitoring	Volume Status
	vol-0896ebc...	8 GiB	gp2	100	-	snap-0b071e0...	January 21, 2021 at...	us-east-1d	in-use	None		i-0fb86e688dfe52f8 ...	Okay
	vol-0c9612b...	10 GiB	gp2	100	-		January 21, 2021 at...	us-east-1d	in-use	None		i-0fb86e688dfe52f8 ...	Okay

```
ubuntu@ip-172-31-25-132: ~/mnt
File Edit View Search Terminal Help

[-jnvDFS] device [blocks-count]
ubuntu@ip-172-31-25-132:/dev$ sudo mkfs -t ext3 /dev/xvdf
mke2fs 1.44.1 (24-Mar-2018)
Creating filesystem with 2621440 4k blocks and 655360 inodes
Filesystem UUID: 753f606d-a1d4-4596-867e-4ccfe93e62c3
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-172-31-25-132:/dev$ cd
ubuntu@ip-172-31-25-132:~$ sudo mkdir /mnt
mkdir: cannot create directory '/mnt': File exists
ubuntu@ip-172-31-25-132:~$ ls
ubuntu@ip-172-31-25-132:~$ sudo mkdir mnt
ubuntu@ip-172-31-25-132:~$ sudo mount /dev/xvdf ~/mnt
ubuntu@ip-172-31-25-132:~$ cd mnt/
ubuntu@ip-172-31-25-132:~/mnt$ ls
lost+found
ubuntu@ip-172-31-25-132:~/mnt$ lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
loop0         7:0    0  97.8M  1 loop /snap/core/10185
loop1         7:1    0  28.1M  1 loop /snap/amazon-ssm-agent/2012
xvda         202:0    0    8G   0 disk
└─xvda1       202:1    0    8G   0 part /
xvdf         202:80   0   10G   0 disk /home/ubuntu/mnt
ubuntu@ip-172-31-25-132:~/mnt$
```

```
ubuntu@ip-172-31-25-132:~/mnt$ df -h
Filesystem      Size  Used Avail Use% Mounted on
udev            476M   0    476M   0% /dev
tmpfs           98M    764K  98M    1% /run
/dev/xvda1      7.7G  1.2G  6.6G   15% /
tmpfs           490M   0    490M   0% /dev/shm
tmpfs           5.0M   0    5.0M   0% /run/lock
tmpfs           490M   0    490M   0% /sys/fs/cgroup
/dev/loop0      98M    98M   0 100% /snap/core/10185
/dev/loop1      29M    29M   0 100% /snap/amazon-ssm-agent/2012
tmpfs           98M   0    98M   0% /run/user/1000
/dev/xvdf       9.8G   23M  9.3G   1% /home/ubuntu/mnt
ubuntu@ip-172-31-25-132:~/mnt$
```

Create Snapshot Actions

Owned By Me Snapshot ID : snap-0468414c2c282918a Add filter

Name	Snapshot ID	Size	Description	Status	Started	Progress	Encryption	KMS Key
PES1201800...	snap-0468414c2c2...	10 GiB	Snapshot of my volume	completed	January 21, 2021 at 10:44:5...	available (100%)	Not Encrypted	

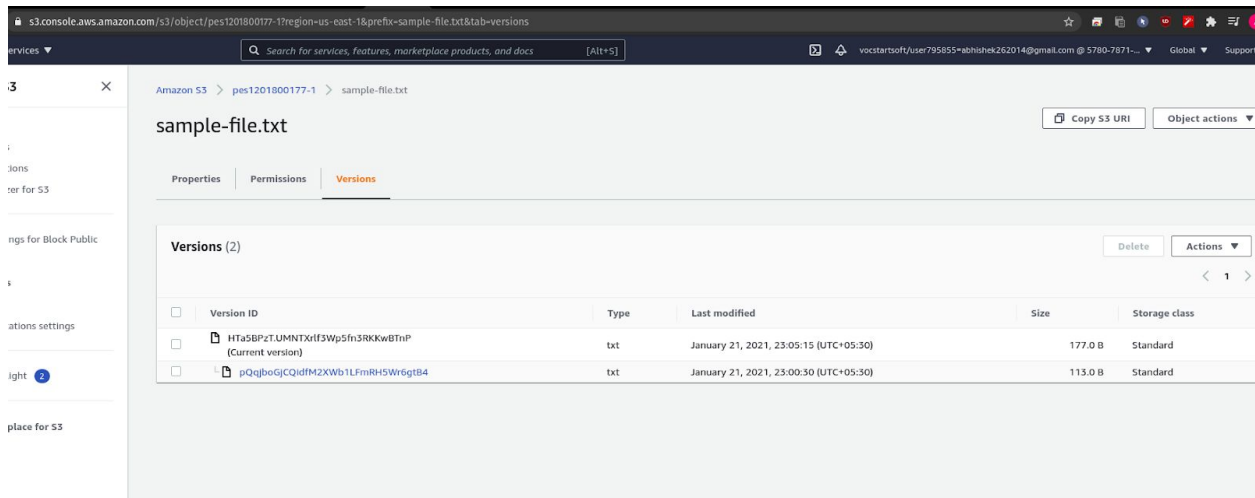
Filter by tags and attributes or search by keyword

Name	Volume ID	Size	Volume Type	IOPS	Throughput	Snapshot	Created	Availability Zone	State	Alarm Status	Attachment Information	Monitoring	Volume Status
	vol-000f05bf...	10 GiB	gp2	100	-	snap-0468414...	January 21, 2021 at...	us-east-1a	available	None			Okay
	vol-0896ebc...	8 GiB	gp2	100	-	snap-0b071e0...	January 21, 2021 at...	us-east-1d	in-use	None	i-0fb86e6886dfe52b...		Okay
	vol-0c9612b...	10 GiB	gp2	100	-		January 21, 2021 at...	us-east-1d	in-use	None	i-0fb86e6886dfe52b...		Okay

## d)Object Storage using S3 Buckets

pes1201800177-1s3.amazonaws.com/new-report.png

Service	Operation	UsageType	Resource	StartTime	EndTime	UsageValue
AmazonS3	HeadBucket	USW2-C3DataTransfer-Out-Bytes	lab-test-bucket-77	10/31/2020 0:00	12/31/2020 11:59	15309
AmazonS3	PutObject	USW2-C3DataTransfer-In-Bytes	admin-test-77	10/31/2020 0:00	12/31/2020 11:59	19032
AmazonS3	HeadBucket	USW2-Requests-Tier2	admin-test-77	10/31/2020 0:00	12/31/2020 11:59	128
AmazonS3	PutObjectForReplication	USW1-Request-SIA-Tier1	mybucket-98765	10/31/2020 0:00	12/31/2020 11:59	56888
AmazonS3	GetObjectFor Replication	USW1-USW2-AWS-In-Bytes	mybucket-98766	10/31/2020 0:00	12/31/2020 11:59	254587
AmazonS3	GetObjectFor Replication	USW2-C3DataTransfer-Out-Bytes	mybucket-98767	10/31/2020 0:00	12/31/2020 11:59	235
AmazonS3	HeadBucket	USW2-C3DataTransfer-In-Bytes	mybucket-98768	10/31/2020 0:00	12/31/2020 11:59	25589
AmazonS3	PutObject	USW2-Requests-Tier2	mybucket-98769	10/31/2020 0:00	12/31/2020 11:59	2348
AmazonS3	PutObjectForReplication	USW1-Request-SIA-Tier1	mybucket-98770	10/31/2020 0:00	12/31/2020 11:59	15309
AmazonS2	GetObjectFor Replication	USW1-USW2-AWS-In-Bytes	mybucket-98771	10/31/2020 0:00	12/31/2020 11:59	19032
AmazonS3	GetObjectFor Replication	USW2-C3DataTransfer-Out-Bytes	lab-example-bucket	10/31/2020 0:00	12/31/2020 11:59	128
AmazonS3	HeadBucket	USW2-C3DataTransfer-In-Bytes	lab-example-bucket	10/31/2020 0:00	12/31/2020 11:59	56888
AmazonS3	PutObject	USW2-Requests-Tier2	lab-example-bucket	10/31/2020 0:00	12/31/2020 11:59	254587
AmazonS3	PutObjectForReplication	USW1-Request-SIA-Tier1	lab-example-bucket	10/31/2020 0:00	12/31/2020 11:59	235
AmazonS3	GetObjectFor Replication	USW1-USW2-AWS-In-Bytes	lab-example-bucket	10/31/2020 0:00	12/31/2020 11:59	25589



This sample text file is used to illustrate the use of versioning in an Amazon S3 bucket.

Make it a great day!

This is version 2 of the text file!

My SRN IS PES1201800177