School of Computer Science Engineering and Technology

Course- B.Tech./BCA
Course Code –CSET232/BCA220

Year- 2023
Date- 21-02-2023

Type- Specialization Core-II
Course Name- Design of Cloud Architectural Solution
Semester- 4th
Batch- 2021

A-Type- Lab Assignment # No. 5(2) (Week 6, Assignment No. 5.5)

Lab Objective-

Launch a free tier Amazon Linux 2/ Windows instance. Connect with the instance and do some changes. Create AMI of the instance and copy the AMI in some different region and create EC2 instance and connect with the newly created instance. Share the AMI with some other users and create EC2 instance. Create snapshot of the EC2 instance/AMI. Attach/detach root volume of EC2 instance.

CO-Mapping:

Exp. No.	Name	CO1	CO2	CO3
07	Amazon Machine Image (AMI), Elastic Block Storage (EBS) and Amazon EBS snapshots	✓	✓	

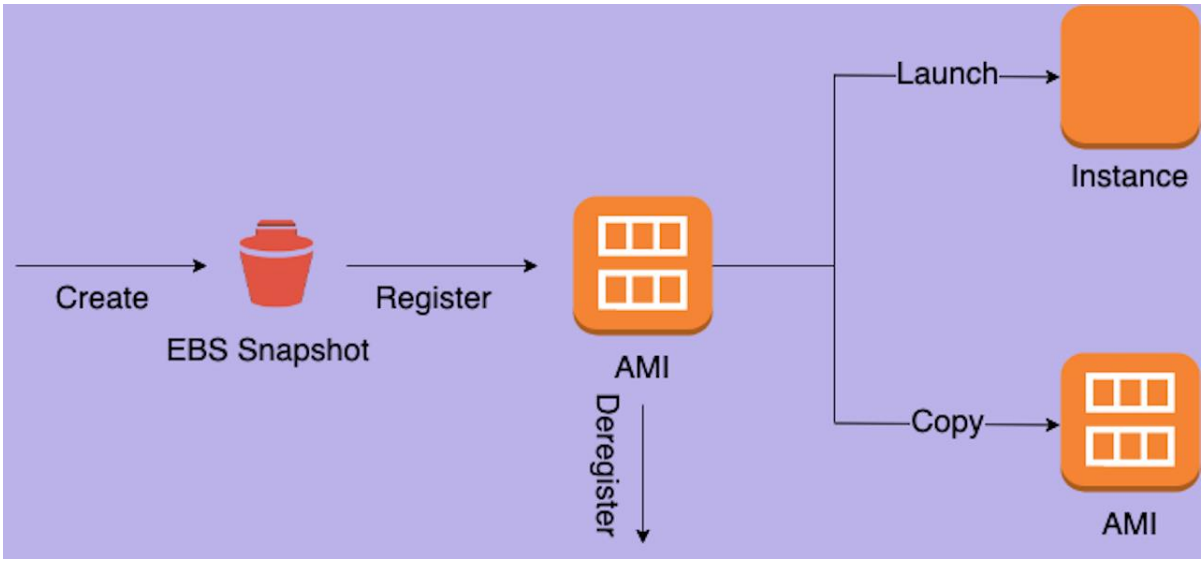
Amazon Machine Image (AMI):

An Amazon Machine Image (AMI) is a supported and maintained image provided by AWS that provides the information required to launch an instance. You must specify an AMI when you launch an instance. You can launch multiple instances from a single AMI when you require multiple instances with the same configuration. You can use different AMIs to launch instances when you require instances with different configurations.

Elastic Block Storage (EBS)

Amazon Elastic Block Store (Amazon EBS) provides block level storage volumes for use with EC2 instances. EBS volumes behave like raw, unformatted block devices. You can mount these volumes as devices on your instances. EBS volumes that are attached to an instance are exposed as storage volumes that persist independently from the life of the instance. You can create a file system on top of these volumes or use them in any way you would use a block device (such as a hard drive). You can dynamically change the configuration of a volume attached to an instance.

Amazon EBS snapshots: You can back up the data on your Amazon EBS volumes to Amazon S3 by taking point-in-time snapshots. Snapshots are incremental backups, which means that only the blocks on the device that have changed after your most recent snapshot are saved. This minimizes the time required to create the snapshot and saves on storage costs by not duplicating data. Each snapshot contains all of the information that is needed to restore your data (from the moment when the snapshot was taken) to a new EBS volume.



Task 1:

. Create AMI from EC2 and launch in a region

• Create one Windows/Linux instance

• Create some new folders or install any software on the instance

• Create AMI from the instance and check availability of AMI and snapshot

• Terminate the running instance.

• Copy the AMI from one region to another and launch a new instance from AMI. Use same password as the initial instance to connect with the instance created by AMI.

Task 2: Share AMI from one AWS account to another account and launch EC2 instance.

• Write down account ids of both the accounts.

• Go to the AMI and modify image permission and assign permission for the second account for creating

EC2 instance.

• Create EC2 instance from the AMI in the second account.

• Create one AMI from the copied AMI in any region for permanent storage.

• Modify access permission from first account and check the access of AMI and EC2 instance.

Task 3: How to attach root volume with another EC2 Instance and take snapshot of EC2 instance

• Know about the EBS Volume

• Create a volume.

• Attach a volume to an instance.

• Create EC2 AMI

• Attach a volume to multiple instances.

• Make a volume available for use.

• View volume details

• Replace a volume.

• Monitor the status of your volumes.

• Detach a volume from an instance.

• Delete a volume

It is advised to Lab Instructor to check the Complete Lab assignment of every student.

Students should first show the deployed work to instructor and submit all mandatory step's snapshots doc/pdf of your enrolment number_lab05(02) (**Ex: E21CSE072_Lab05(2)**) and upload the file on LMS.