amazon EC2

AMI'S

❖ **AMAZON MACHINE IMAGES (AMI'S):**

- AMI is a master image for the creation of virtual servers (known EC2 instances) in the AWS environment.
- AMI's are used with auto scaling to quickly launch new servers on demand, and to quickly recover from disaster.
- Each AMI also contains a block device mapping that specifies the block devices to attach to the instances that you launch. You must specify an AMI when you launch an instance.
- The AMI must be compatible with the instance type that you chose for your instance.

➢ **AMI LIFECYCLE:**

- Amazon provides AMIs that you can use to launch your instances, or you can create your own AMIs.
- For example, you can launch an instance from an existing AMI, customize the instance (for example, install software and configure operating system settings), and then save this updated environment as a new AMI.
- To prevent an instance from being used temporarily, you can disable the AMI. After you disable an AMI, you can't use it to launch new instances.
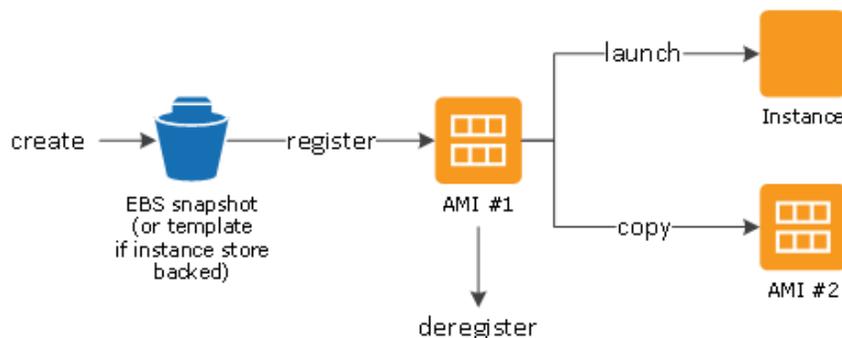
➢ **AMI LAUNCH PERMISSIONS:**

- **PUBLIC**   : The owner grants launch permissions to all AWS accounts
- **IMPLICIT**   : The owner has implicit launch permissions for an AMI
- **EXPLICIT**   : The owner grants launch permissions to specific aws accounts

➢ AMI CATALOG:

- Customers can easily search AMIs specifying desired categories, such as Provider, Region, Architecture, Root device type, and Operating System (Platform), and they can sort the results by date or title (A-Z).

COMMUNITY AMI'S:
- Free to use
- Generally, with these AMIs you are just selecting the os you want

MARKET PLACE AMI'S:
- Pay to use. Buying, Sharing, and Selling AMIs
- Generally, comes packaged with additional, licensed software

MY AMI'S:
- AMIs that you create yourself.

➢ AMI VIRTUALIZATION:

- Virtualization is the process of creating a software-based, or virtual, representation of something, such as virtual apps, servers, storage & network
- In Aws EC2, virtualization refers to using a portion of a servers computing power and storage to setup and run an operating system.
- Virtualization for EC2 is run using the Xen Hypervisor software.

TYPES OF VIRTUALIZATIONS:

HVM AMI'S (HARDWARE VIRTUAL MACHINE):
- It provides the ability to run an operating system directly on top a virtual machine.

PV AMI'S (PARA VIRTUAL):
- Guests can run on host hardware that does not have explicit support for virtualization.

➢ LAUNCH TEMPLATES:
- Why do you need to specify all the EC2 instance details every time you launch an instance. Launch Templates is a new capability that enables a new way to templatize your launch requests.
- It reduces the number of steps required to create an instance by capturing all launch parameters within one resource. This makes the process easy to reproduce.