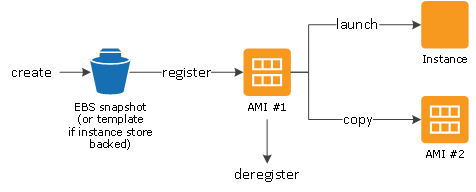
EC2 AMI (Amazon Machine Image)

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

USE AN AMI-



1. The following diagram summarizes the AMI lifecycle. After you create and register an AMI, you can use it to launch new instances.
2. You can copy an AMI within the same AWS Region or to different AWS Regions. When you no longer require an AMI, you can deregister it.

CREATE OUR OWN AMI-

1. You can launch an instance from an existing AMI, customize the instance (for example, install software on the instance), and then save this updated configuration as a custom AMI.
2. Instances launched from this new custom AMI include the customizations that you made when you created the AMI.
3. The root storage device of the instance determines the process you follow to create an AMI.
4. The root volume of an instance is either an Amazon Elastic Block Store (Amazon EBS) volume or an instance store volume.

COPY AN AMI-

1. You can copy an Amazon Machine Image (AMI) within or across AWS Regions. You can copy both Amazon EBS-backed AMIs and instance-store-backed AMIs.
2. You can copy AMIs with encrypted snapshots and also change encryption status during the copy process.
3. There are no charges for copying an AMI. However, standard storage and data transfer rates apply. If you copy an EBS-backed AMI, you will incur charges for the storage of any additional EBS snapshots.

CROSS-REGION COPYING AMI-

Copying an AMI across geographically diverse Regions provides the following benefits:

1. Consistent global deployment: Copying an AMI from one Region to another enables you to launch consistent instances in different Regions based on the same AMI.
2. Scalability: You can more easily design and build global applications that meet the needs of your users, regardless of their location.
3. High availability: You can design and deploy applications across AWS Regions, to increase availability.

Destination Regions are limited to 100 concurrent AMI copies.

CROSS-ACCOUNT COPYING AMI-

1. You can share an AMI with another AWS account.
2. To copy an AMI that was shared with you from another account, the owner of the source AMI must grant you read permissions for the storage that backs the AMI, either the associated EBS snapshot (for an Amazon EBS-backed AMI) or an associated S3 bucket (for an instance store-backed AMI).

DREGISTER YOUR AMI-

1. You can deregister an AMI when you have finished with it. After you deregister an AMI, it can't be used to launch new instances.
2. Existing instances launched from the AMI are not affected.

AMI TYPES-

1. All AMIs are categorized as either backed by Amazon EBS or backed by instance store.
2. Amazon EBS-backed AMI – The root device for an instance launched from the AMI is an Amazon Elastic Block Store (Amazon EBS) volume created from an Amazon EBS snapshot.
3. Amazon instance store-backed AMI –The root device for an instance launched from the AMI is an instance store volume created from a template stored in Amazon S3.
4. Boot time for an instance Amazon EBS-backed AMI is usually less than 2 minute while Amazon instance store-backed AMI is usually less than 5 minutes.
5. Size limit for a root device Amazon EBS-backed AMI is 64 TB\*\* while Amazon instance store-backed AMI is 10 GB.
6. Data persistence Amazon EBS-backed AMI is by default, the root volume is deleted when the instance terminates.\* Data on any other EBS volumes persists after instance termination by default while Amazon instance store-backed AMI is Data on any instance store volumes persists only during the life of the instance.
7. Stopped state Amazon EBS-backed AMI is Can be in a stopped state. Even when the instance is stopped and not running, the root volume is persisted in Amazon EBS while Amazon instance store-backed AMI is cannot be in a stopped state; instances are running or terminated.
8. By default, EBS root volumes have the Delete on Termination flag set to true. But we can change it and can save our EBS root volume from delete.

DEPRECATE AN AMI-

1. You can deprecate an AMI to indicate that it is out of date and should not be used.
2. You can also specify a future deprecation date for an AMI, indicating when the AMI will be out of date
3. For example, you might deprecate an AMI that is no longer actively maintained, or you might deprecate an AMI that has been superseded by a newer version.
4. By default, deprecated AMIs do not appear in AMI listings, preventing new users from using out-of-date AMIs
5. However, existing users and launch services, such as launch templates and Auto Scaling groups, can continue to use a deprecated AMI by specifying its ID.
6. When you deprecate an AMI, the AMI is not deleted. The AMI owner continues to pay for the AMI's snapshots. To stop paying for the snapshots, the AMI owner must delete the AMI by deregistering it.
7. To deprecate an AMI, you must be the owner of the AMI.

AMI QUATOS-

1. The maximum number of public and private AMIs allowed per Region is 5000 default. These include available and pending AMIs, and AMIs in the Recycle Bin.
2. The maximum number of public AMIs, including public AMIs in the Recycle Bin, allowed per Region is 5 defaults.
3. The maximum number of entities (organizations, organizational units (OUs), and accounts) that an AMI can be shared with in a Region is 1000 defaults. Note that if you share an AMI with an organization or OU, the number of accounts in the organization or OU does not count towards the quota.