



# AWS –Snapshots & AMI's

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# Agenda

- Snapshots
  - Working of Snapshots
  - Use Case : **Migrate Data Volume from One AZ to another AZ within the same Region and Between Regions**
- AMI's
  - Working of AMI's
  - Use Case : **Migrate EC2 instance (root Volume) to another AZ with the same Region and Between Regions**
- Schedule Snapshots



# AWS –Snapshots

# Concepts of Snapshot

- Snapshot is an backup for a volume
- It is not Assigned to any of the Availability Zone
- It is part of an “**Region**”.
- **Three Types of Snapshots**
  - **Owned by me**
  - **Public**
  - **Private**
- **Note:-- SNAPSHOT IS NOT DONE ON EC2 INSTANCE LEVEL, IT'S DONE ON PER VOLUME LEVEL.**

# Concepts of Snapshot

## Public Snapshot

- Can create a Volume in my account from Public Snapshots
- To create an Ec2 instance
  - First Copy the “Public Snapshot” to your Private Snapshot.
  - Create an image from this Private Snapshot
  - Then Create an EC2 Instance

# Snapshot: Permission

- Snapshot can be made “Public” or “Private”.
  - All AWS users can access the ‘Public” Snapshots.
- Can give permission to particular “Accounts”

# Use Case: 1. Migrate Data Volume from One AZ to another AZ within the same Region

1. If the Volume is attached to the Instance??
2. Stop the instance (for Consistent Data)
3. Take the Snapshot of each data volume in the Instance. (if an EC2 has multiple Volumes attached to it)
4. Create an Volume from the Snapshot into a **new AZ**.
  - Also can increase the **Volume size** , CANNOT DECREASE from the existing size.
  - Can change the “**Volume Type**”.
  - **Encryption CAN be ENABLED** for the volume created from a Snapshot

## Use Case: 2. Migrate Data Volume from One Region to another Region

1. If the Volume is attached to the Instance??
2. Stop the instance (for Consistent Data)
3. Take the Snapshot of each Data volume in the Instance.
4. “**Copy**” the snapshot to a different Region.
  - **Encryption** can be enabled while Copying.
5. Create an **Volume** from the **Snapshot** into a **new** Region to the specific **AZ**.
6. Then Attach to the required EC2 instance



## Use Case: 3. Taking snapshots of multiple volumes at the same time

1. Create a common TAG for all the volumes for which the Snapshot has to be taken.
2. Schedule the Snapshot policy with above TAG value for 12 hrs with immediate time and retention period “1” snapshot.
3. Once the snapshots are completed, we can delete the Schedule policy.

# AWS – AMI's

# Concepts of AMI's

- AMI's are used to create custom image of a running EC2 instance
- It is not Assigned to any of the Availability Zone
- It is part of an **“Region”**.
- **Three Types of AMI's**
  - **Owned by me**
  - **Public**
  - **Private**
- **Note:-- AMI's can be DONE ON EC2 INSTANCE LEVEL, or per Snapshot level.**

## Use Case: 4. Migrate EC2 instance (root Volume) to another AZ

- Stop the instance (for Consistent Data -- Compulsory)
- Take Image on the EC2.
- NOW Create an EC2 instance in the required AZ from the custom image listed in “**My AMI**” from the “**Launch Instance**”

# Use Case: 5. Migrate EC2 instance (Root Volume) to another Region

- Stop the instance (for Consistent Data -- Compulsory)
- Create an Image out of it.
- Copy this custom Image to another Region
  - Now the Image would be listed in “**My AMI**”
- Then Create an EC2 instance in the new Region and AZ.

# Schedule Snapshot

Policy ID	Description	State
policy-098fb966fb9a58...	snapshot-1	ENABLED

Policy: policy-098fb966fb9a58023

Details

Policy ID

policy-098fb966fb9a58023

Date created

Sun Aug 26 11:59:20 GMT+530 2018

Date modified

Sun Aug 26 11:59:20 GMT+530 2018

Target volumes with these tags

Name:ED01

Rule summary

Every 12 hours a snapshot will be created starting at 06:35 UTC.  
A maximum of 4 snapshots will be retained of a target volume.  
The oldest snapshot retained will be <= 2 days old.

Description

snapshot-1

Policy state

ENABLED

Schedule name

Default Schedule

Tags added to snapshots

Execution Role Arn

arn:aws:iam::766476266373:role/service-role/AWSDataLifecycleManagerDefaultRole

# Schedule Snapshot -- Output

Create Snapshot		Actions ▾							
Owned By Me ▾		Filter by tags and attributes or search by keyword							
<input type="checkbox"/>	Name ▾	Snapshot ID ▲	Size ▾	Description ▾	Status ▾	Started ▾	Progress ▾	Encrypted ▾	
<input type="checkbox"/>		snap-037314e96213ea006	2 GiB	Created for policy: ...	● completed	August 29, 2018 at 12:14:11 PM UTC+5:30	available (100%)	Not Encrypted	
<input type="checkbox"/>		snap-0488184b45507b0b2	2 GiB	Created for policy: ...	● completed	August 28, 2018 at 12:13:07 AM UTC+5:30	available (100%)	Not Encrypted	
<input type="checkbox"/>		snap-0e8382ad691be3c64	2 GiB	Created for policy: ...	● completed	August 28, 2018 at 12:25:26 PM UTC+5:30	available (100%)	Not Encrypted	
<input type="checkbox"/>		snap-0e91a4d2a56b79415	2 GiB	Created for policy: ...	● completed	August 29, 2018 at 12:16:13 AM UTC+5:30	available (100%)	Not Encrypted	