



# AMI & Snapshot

## 09 04 2023



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## Today's Takeaways



- ▶ Amazon Machine Image (AMI)
- ▶ Snapshot



1

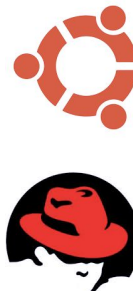
# Amazon Machine Image (AMI)

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## Amazon Machine Image (AMI)

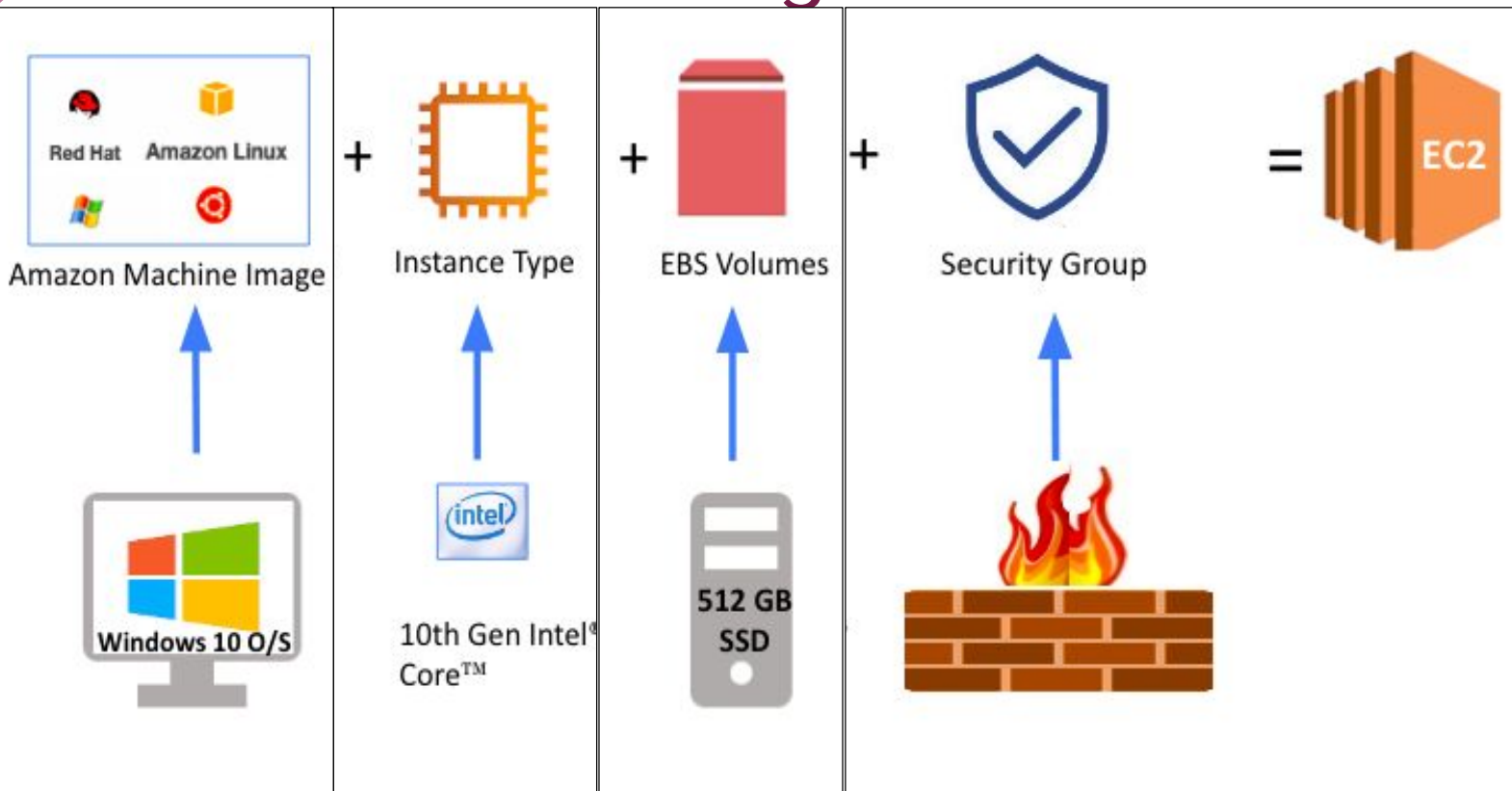


What is AMI?



- An Amazon Machine Image (AMI) is used for the launching an virtual instances in the AWS environment.
- AMI are **like templates** that are configured with an **operating system and other software**, which determine the user's operating environment.
- You can copy an AMI . So you can launch **multiple instances** from a single AMI **with the same configuration**.

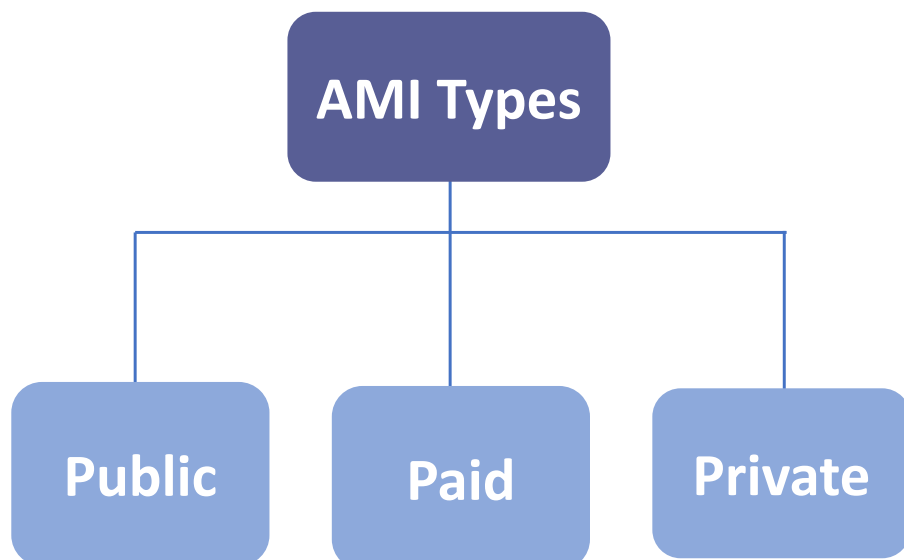
# Amazon Machine Image



## Amazon Machine Image (AMI)



### Types of AMIs



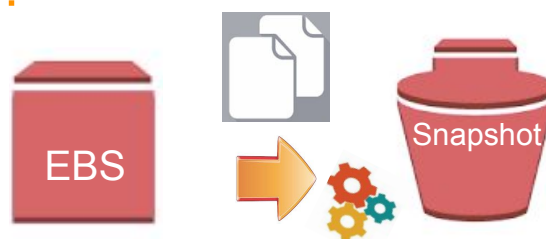


## 2 Snapshot

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### Snapshot

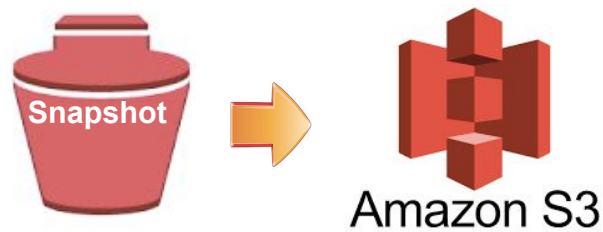
What is Snapshot?



- It is a **point-in-time copy** of your Amazon EBS Volume/Instance
- Snapshots are used for the **purpose of**
  - Backup
  - Copying AMI for creating multiple instances with the same features.
  - Creating a new Volume

# Snapshot

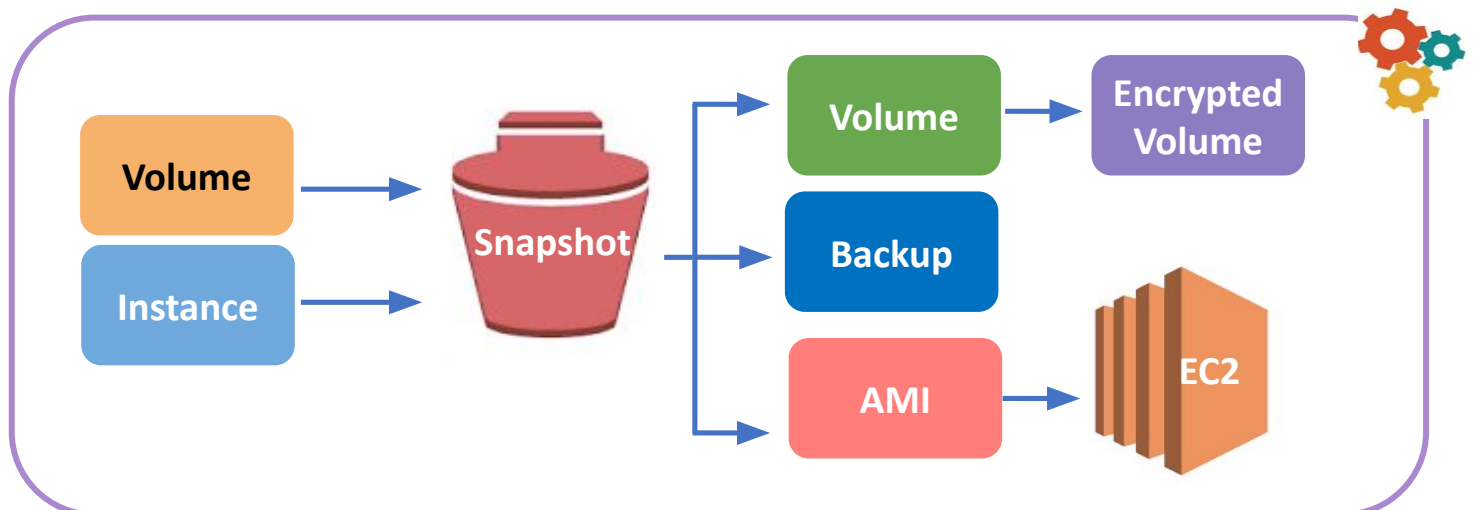
## Features of the Snapshot



- Source from **Volume** or **Instance**
- Stored in **Amazon S3**
- **Incremental** storage
- **Data Lifecycle Manager (DLM)**

# Snapshot

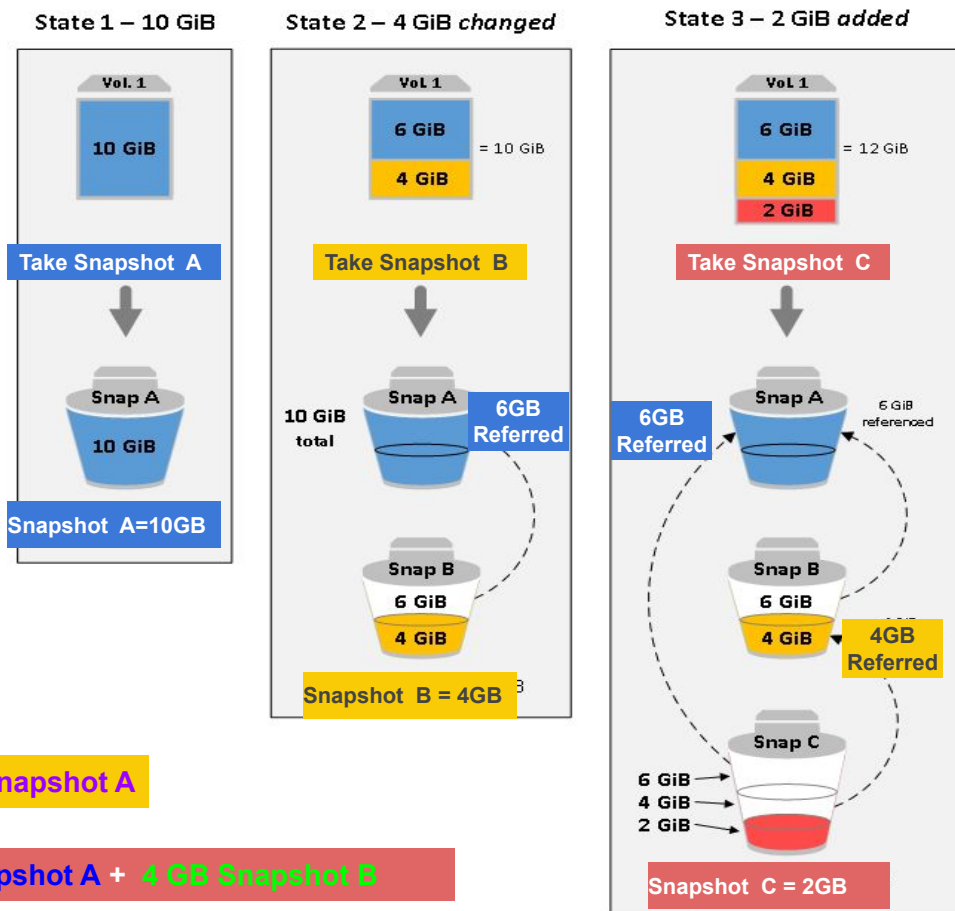
## Lifecycle of Snapshot



# Snapshot

## Incremental Backups

32 GiB vs. 16 GiB



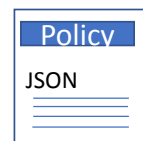
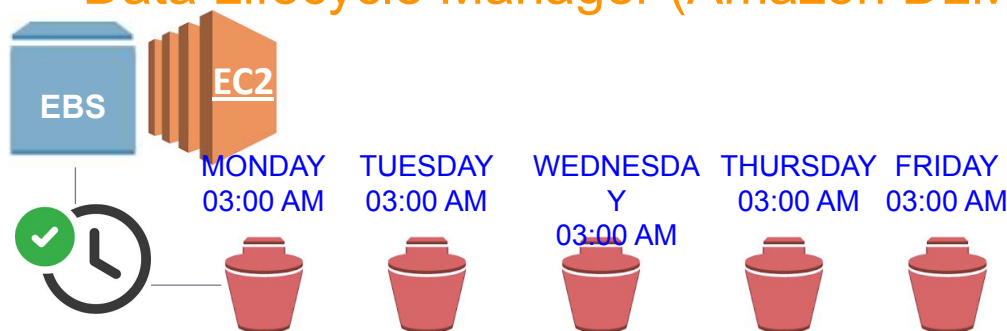
Snapshot A = 10 GB

Snapshot B = 4 GB Changed + Referred 6 GB Snapshot A

Snapshot C = 2 GB Added + Referred 6 GB Snapshot A + 4 GB Snapshot B

# Snapshot

## Data Lifecycle Manager (Amazon DLM)



RETENTION=5

# Snapshot

## Data Lifecycle Manager (Amazon DLM)



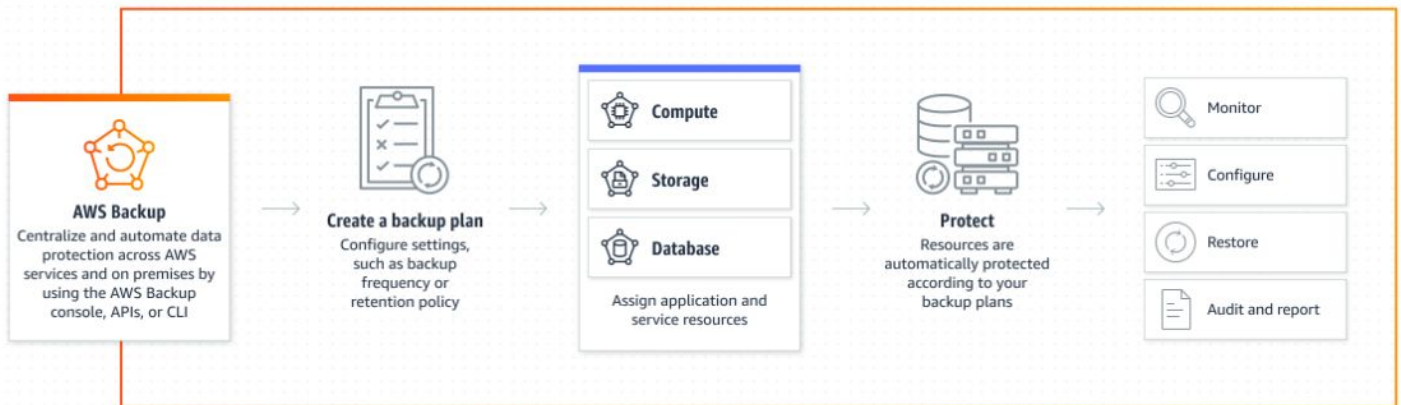
# Snapshot

## Data Lifecycle Manager (Amazon DLM)- Backup and Restore



# Snapshot

## AWS Backup



AWS Backup is fully managed service that centralizes the all backup process in your project including.

# Snapshot

## Encryption of Root Device via Snapshot

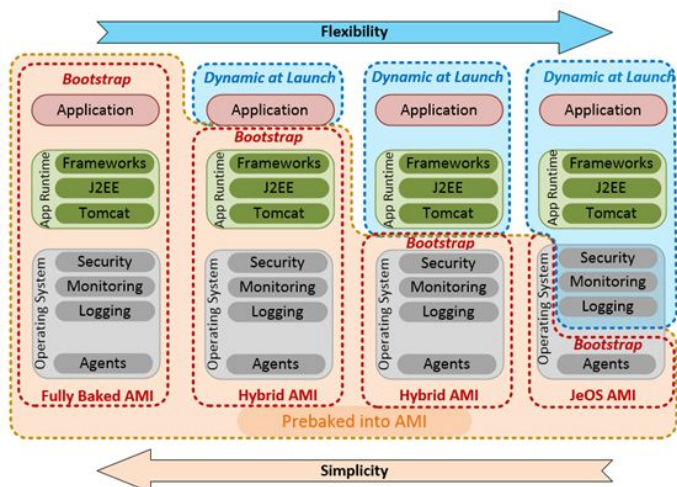


- Root device (volume) cannot be encrypted after creation. “How to encrypt unencrypted volume after after creation” is a common question that can be asked in certification exams!
  - Take snapshot of unencrypted volume.
  - Copying the unencrypted Snapshot,
  - You are able to encrypt this Snapshot while coping
  - Create an encrypted volume from this copied Snapshot.



# Golden AMI

- A **golden AMI** is an AMI that contains **security patches**, **configuration**, and **agents** required to by an organization. A “just enough OS” (jeOS) is the most basic golden AMI.
- It may also contain specific **software components** that make it **easier and faster** to start-up an instance .



# Snapshot

## Let's get our hands dirty!

- Create Snapshots
- Make Public The Snapshot
- Data Life Cycle Manager
- Creating AMI from the Snapshot
- Creating Volume from the Snapshot
- Creating an Image from Instance



# THANKS!

**Any questions?**

