



# EBS and Fast Snapshot Restore

Amazon Elastic Block Store (EBS) is a high-performance block storage service designed for use with EC2 instances. It provides persistent block-level storage volumes that can be attached to EC2 instances, allowing you to store data and access it from any instance. EBS volumes are durable and highly available, offering features such as snapshots for data backup and replication for data protection.

Additionally, EBS Volumes can be resized without any downtime, allowing us to increase/decrease storage capacity or adjust performance characteristics as needed on the fly. However, do note that all EBS volumes are tied to a single availability zone (AZ), so point-in-time copies of the EBS volumes (called Snapshots) must be created and attached/restored to a different AZ or Region. This is usually done to enhance data durability and recovery options.

It is also not uncommon to encrypt the data in EBS Volumes at rest, which can be done using encryption keys provided by the AWS Key Management Service (KMS), granting the EBS volumes with an additional layer of security. KMS and related concepts will be discussed in detail in a later chapter.

## Note:

EBS also has a feature called **Fast Snapshot Restore** which can be used to clone data from an EC2 instance store into new EBS volumes with minimal time, reducing the amount of required to recover or create new volumes.