**AWS EBS: Elastic Block Store**

<https://awsnewbies.com/ebs/>

**Amazon Elastic Block Store (EBS)** provides persistent block storage volumes for [**EC2**](https://awsnewbies.com/ec2/)**Instances**.  Unlike some other types of storage volumes, it doesn’t get deleted when you terminate or stop an EC2 Instance.

Once you create an EBS volume, it automatically gets replicated within the **Availability Zone** to offer high availability and durability.  You can scale usage up or down within minutes, and pay for only what you provision.

You can think of the **EC2** as the **virtual machine/server**, and **EBS** as the **virtual disk** you attach to the EC2 Instance.

It benefits application workloads that require fine tuning for performance, cost, and capacity.

Typical use cases include hosting [databases](https://awsnewbies.com/databases/), big data analytics engines, data warehousing applications, and stream and log processing applications.

**EBS Pricing and Types**

**GP2: General Purpose SSD**

* **General purpose: balances price and performance**
* 3 IOPS/GB with up to 10,000 IOPS
* Burst up to 3,000 IOPS for extended periods of time (for volumes 3334 GiB+)
* $0.10/GB-month provisioned storage

**IO1: Provisioned IOPS SSD**

* **I/O intensive applications**
  + ie: large relational/NoSQL databases
* Use if need more than 10,000 IOPS
* Provision up to 20,000 IOPS/volume
* $0.125/GB-month provisioned storage
* $0.065/provisioned IOPS-month

**ST1: Throughput Optimized HDD**

* **Big data, log processing, data warehousing**
* Cannot be a boot drive
* $0.045/GB-month provisioned storage

**SC1: Cold HDD**

* **Lowest cost storage for infrequently access workloads**
* File server
* Cannot be a boot volume
* $0.025/GB-month provisioned storage

**Snapshots to S3**

* **Snapshot of data**
* $0.05/GB-month data stored