

Learn EC2

The Basics

Learn EC2 basics, concepts, and more.

Amazon EC2 is the core compute service provided by Amazon Web Services. It's [Virtual Machines](#) in the cloud.

If you have been using Amazon Web Services for a while there is no doubt you encountered EC2 in one way or another. It is a central service used by [Amazon Lightsail](#) and numerous other offerings.

Primary Use Cases

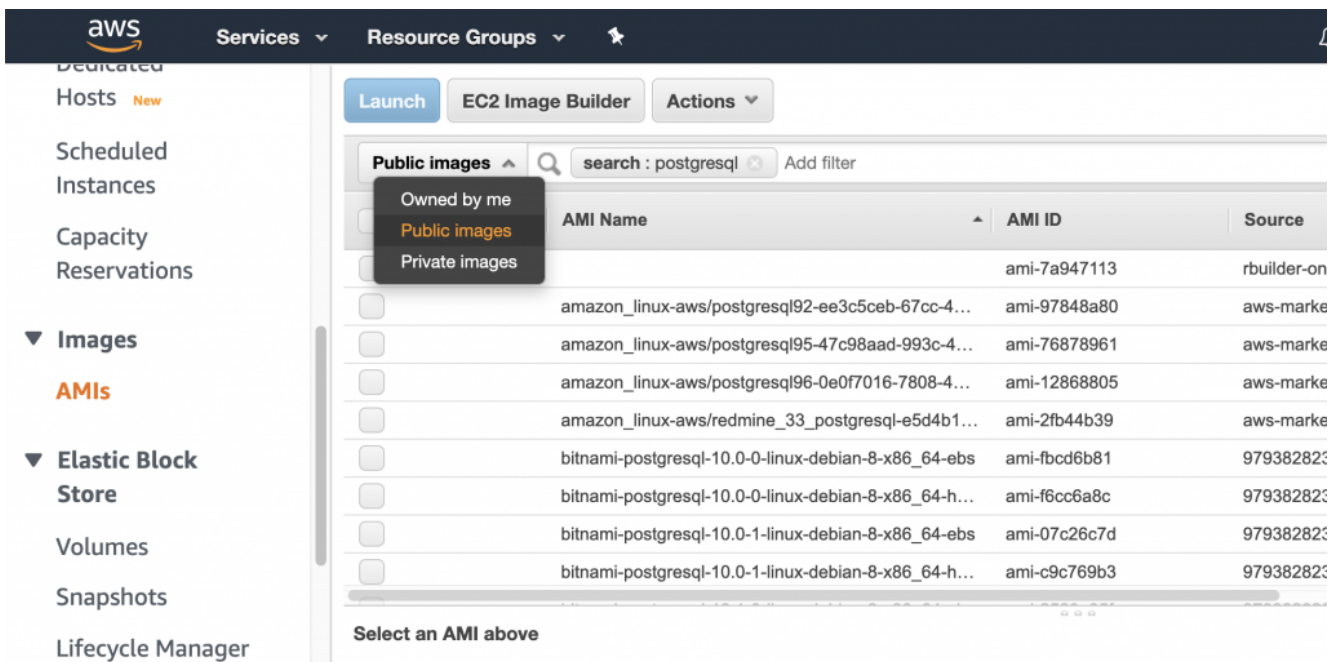
1. Hosting environments for your apps
2. High-performance computing
3. Computing with more specific use cases like:
 1. GPU Heavy Tasks
 2. High Memory Requirements
 3. Burstable compute

Instances

EC2 Instances are central to the ecosystem. To use EC2, you will launch an EC2 instance from an EC2 image. An EC2 image contains a snapshot of an operating system like Linux with everything configured as it was upon snapshot creation.

Images

Amazon Machine Images (AMI) are prepackaged in numerous ways to meet a legion of use cases. Public images are found within [the AWS console's AMI search feature](#). If you have an AWS account, you can access the search feature.



Security Groups

Security groups are a collection of [firewall](#) rules that secure your instances from nefarious hackers. If you're familiar with firewalls, then you will be familiar with

security groups. Apply [the principle of least privilege](#) and only grant access to systems that require access to your EC2 instances.

Other Concepts

Learn EC2 concepts you'll need to understand when using EC2.

Key Pairs

Use key pairs to gain [secure shell](#) access on your EC2 instance.

Volumes

Attach disks to your EC2 instances to expand space and meet various use cases like high performance read/write disk access.

Load Balancers

Scale up your instances by routing traffic to multiple instances.

Auto Scaling Groups

A definition of how many instances you want to run within a cluster along with thresholds on when to expand to the size of the cluster.

Snapshots

Create a moment in time snapshot of your EC2 instances.

Capacity Reservations

Save money by reserving your EC2 instances in advance.

Learn EC2 - Beyond the Basics

- **Books**

- [Programming Amazon Ec2](#) (O'Reilly)

- **Videos**

- [Amazon EC2 Fundamentals](#) (LinkedIn)
- [Managing AWS EC2 Instances](#) (Pluralsight)

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