

1. Amazon Machine Image (AMI):

An Amazon Machine Image (AMI) is a template that contains the software configuration (including the operating system, application server, and applications) required to launch an instance within Amazon EC2. It serves as the basic building block for creating virtual servers in the cloud. AMIs can be pre-configured with specific software and configurations, or you can create custom AMIs tailored to your needs. When launching an EC2 instance, you can select an AMI to use as the foundation for that instance.

2. Security Group:

A Security Group acts as a virtual firewall for your EC2 instances, controlling inbound and outbound traffic. It acts as a set of rules that define which traffic is allowed to reach your instances. Each security group is associated with one or more EC2 instances, and you can specify rules that allow traffic based on protocols, ports, and IP ranges. Security groups are stateful, meaning any allowed inbound traffic is automatically allowed for the corresponding outbound traffic. They provide a flexible and secure way to control access to your EC2 instances.

3. Instance Types:

Instance types define the hardware specifications of the virtual servers (instances) you can launch within Amazon EC2. Each instance type is optimized for specific workloads and offers varying combinations of CPU, memory, storage, and networking capacity. Different instance types are designed to meet the performance, scalability, and cost requirements of different applications and use cases. For example, there are instances optimized for general-purpose computing, memory-intensive workloads, compute-intensive tasks, storage-optimized applications, and more.

4. Key Pair:

A Key Pair is a set of cryptographic keys used to securely connect to your EC2 instances via SSH (Secure Shell) or RDP (Remote Desktop Protocol). When you launch an EC2 instance, you specify a key pair, and AWS associates the public key with the instance. You can then use the corresponding private key to authenticate and securely access the instance remotely. Key pairs provide a secure method for accessing and managing your EC2 instances without the need for traditional passwords.

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