Amazon EC2 Instance

Compute 4 Types

EC2 Instance, EBS, Elastic Load Balancer, Lambda Function

EC2 :

EC2 is a Web - service which aims to make easier developing by providing secure & resizable compute capacity in the cloud.

- Not Requiring any Hardware Units
- Easily Scalable (up and down)
- You only pay for what you use
- You have complete control
- Highly Secure
- You can work on it from anywhere in the world

Steps to create & use EC2 Instance :

1. Choose an AMI (Amazon Machine Image) (Template)
2. Choose an Instance Type.
3. Configure Instance
4. Adding Storage
5. Adding Tags
6. Configure Security Group
7. Review.

1. Choose an AMI (Amazon Machine Image) (Template)

An AMI is a template that is used to create a new instance/machine based on user requirement.

Contains : S/w information
OS information
Volume Information
Access Permission

There are 2 Types of Instances

- Predefined AMI's are created by Amazon & can be modified by the User.
- Custom AMI's are created by the user so that they can be reused.

2. Choose an Instance Type.

Instance type specifies the H/w specifications that are required in the machine from the previous step.

- Compute Optimized
- Memory Optimized
- GPU Optimized
- Storage Optimized
- General Purpose

3. Configure Instance

We need to specify the followings

- number of instances
- purchasing options
- kind of network
- the subnet
- when to assign a public IP
- the IAM role
- The Shutdown behavior
  And so on….

4. Adding Storage

Deciding the type of storage

i) Ephimeral Storage (temp. and free) (30GB)
ii) Amazon Elastic Block Store (Permanent and Paid)
iii) Amazon S3

5. Adding Tags

Tags that are helpful to identify machines in an environment where thousands of VM's are running simultaneously.

6. Configure Security Group

An Actual Firewall that sits infront of EC2 instance, and it protects EC2 Instance from unintended inbound and outbound traffic.

- We can finetune access to our EC2 instance, based on port numbers and IP address from which it can be accessed.

7. Review.

Finally Reviewing the complete setup and Functionalities before the launch of our EC2 Instance.