It creates virtual system which actually uses storage, operating compute (CPU, RAM) network resources of host machine.

A single computer can have multiple OS running parallel because of virtualization layer.

Hypervisor:

It is a form of virtualization software that are used to allocate the resource. It is hardware virtualization technique that allows multiple guest operating system to run on single host machine at the same time.

It can also be referred as virtual machine manager

There are two types of hypervisor:

Type1: This runs directly on host machines and it does not require any server based OS. It has direct access to hardware resources.

Type2: Host operating system run on host system, this kind of hypervisor does not run directly on hardware. Rather than they require application in host system. The software is installed on OS, the hypervisor makes hardware call.

Eg: oracle virtual box. VMware work station

Types of virtualization:

1) Hardware
2) OS
3) Server and storage OS

EC2: It is a web service that provides secure and resizable compute capacity in the cloud.

EC2 allows you to configure the capacity and also provide complete control of computing resources. In this user can scale up and scale down resources as per their requirement.

As user create an environment or instance as per their requirement this leads to less wastage of capacity0.01

300.3

26

36228

EC2 is virtual machine hosted on AWS.

There are many prizing option in EC2,

1. **On demand**: These instances are mostly used for short term application or for unpredictable workload. Here we are pay for sec, min, hrs depending on the type of instance.

Eg: Application being developed on EC2. This is most flexible option to scale up and down.

2. **Resoerved instances**: When the workload is fixed and the extra requirement is known then we use this kind of instances.
   - Standard reserved instance: upto 70% discount.
   - Convertible reserve instance: upto 55% discount
   - Scheduled reserved instance: no discount

3. **Spot instance:** If you need large amount of computing capacity this is the best instance. You can purchase unused capacity at a discount of 90% as well. The fluctuation of pricing will be dependent on supply and demand.

4. **D0edicated instance:** The physical EC2 server is dedicated for the use and this is a most ex0pensive option.

5. **Saving plans:** User get upto 72% discount regardless of their instance type and reason.

   User can commit for 2-3 years to avail discount.