**Hypervisor:**

It is a software which helps to perform the virtualization process.

Example:

XEN hypervisor

**Virtualization:**

* We can run the multiple guest o.s on top of that host o.s.
* It will helps to reduce the cost and improve the efficiency of application.

**Types of Virtualization:**

* Hardware virtualization
* Para virtualization

**Hardware virtualization:**

* In this type of virtualization guest o.s are independent each other which means one guest o.s will not depend on another guest o.s.
* Data will be secure and no one can access the server.

**Para virtualization:**

* In which guest o.s depend on other guest o.s so data will be unsecure.

**Dynamic I.P:**

It will change if instance is stopped and then restart instance again.

**Static I.P:**

It will not change if instance is stopped and then start again.It will always constant.

**V.P.C:**

* It stands for virtual private cloud.It will provide the isolation,networking and security for the resources like ec2 instance,databases etc in AWS.
* Default vpc is available in every region.
* There are multiple components are in vpc dashboard such as subnet,route table,internet gateway,nat gateway,nacl,endpoints etc.

**Subnet:**

It is a logical subdivision of i.p addresses or range of i.p address within a v.p.c .

There two types of subnet:

* Public subnet
* Private subnet

**Public subnet:**

It is having the direct internet access through internet gateway so resouces in public subnet can access by everyone.

**Private subnet:**

* It does not have direct internet access.
* By using the nat gateway access the internet from private subnet.

**Route Table:**

* It is a set of rules that determines the where network traffic from subnet or gateway is directed.
* Each subnet is associated with a route table.

**Internet gateway:**

* Internet gateway allows to access the internet from resources like ec2 instance which are in public subnet.

**Nat gateway:**

* It will allows to access the internet from resources which are in private subnet.

**Security group:**

* Security groups are acts as a firewall at instance level.
* It will provide the security at instance level.
* It controls the inbound and outbound rules for instance.