**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.**