**VPC :**

Maximum CIDR range for vpc is /16

Minimum CIDR range for vpc is /28

**Subnet:**

Maximum CIDR range for subnet is /24

Minimum CIDR range for subnet is /28

**Steps to create VPC:**

* After log into the AWS console go to the VPC dashboard.
* Click on create VPC option.
* Select the VPC only option and enter the name of VPC whatever we want.
* Enter the ipv4 CIDR range which should be within the /16 and /28.
* Add the tags whatever we want but which is an optional.
* Finally click on create VPC.

**Steps to create Route table:**

* By default one route table will be created after creating the vpc.
* Click on create route table and enter the name of route table whatever we want.
* Select the VPC (which vpc we want to add to this route table).
* Add the tags which is not a mandatory.
* Click on create route table.

After creating the route tables and subnets we can attach the subnets to the route tables.

Each subnet associated with route table.

**Steps to create the Subnet:**

* Click on create subnet and select the VPC .
* Enter the subnet name and choose the availability zone.
* Enter the subnet ipv4 CIDR range which should be within the VPC CIDR range(whatever we have specified earlier while creating the vpc).
* Click on create subnet.

**Internet gateway:**

* After creating the internet gateway we should attach the internet gateway to the VPC.
* Add the internet gateway to the route table for that we can go to route table and select the public route table then click on routes and click on edit routes option and then click on add route select the igw and save changes.

**NAT gateway:**

* Create the NAT Gateway on public subnet.
* Allocate the elastic i.p address while creating the NAT gateway.
* After creation of NAT gateway we can add this NAT gateway to the private route table.

**EC2 Instance:**

* Create the public and private instance.
* First log into the public instance by using Putty.
* We can check the internet access and install nginx or any packages.
* After that log into the private instance from public instance by using ssh client.
* Install nginx or any packages and check internet connection.