**What is NAT Gateway**

NAT stands for Network Address Translator.

NAT Gateway will be used when we are working with subnets. There are 2 types of subnets.

1. Public subnet

2. Private subnet

When the subnet is connected to an internet gateway then it will become public subnet. If the internet gateway is not connected to the subnet then it will become private subnet.

But if we want to make some updates in our instance which is launched in private subnet, we need internet. To provide internet connectivity to private subnet we will use NAT Gateway.

**Note:** we have to launch NAT gateway in public subnet. While creating NAT Gateway we need to Allocate Elastic IP to it.

After creating a NAT gateway go to the private Route table which is associated with Private Subnet and click on edit routes and add NAT gateway to the route click save.

Now private instance launched in private subnet will get the internet through NAT Gateway.

**Connecting to Private instance from Public instance (Bastion host)**

First connect to the public instance using public IP address and aws pem file. After successfully connected with public instance, create a file with .pem extension using nano editor.

$ sudo nano AWS\_Private\_key.pem

Now copy the private key from your computer and paste it in the nano editor file and save it.

After creating the file, we need to give the user read permission to the file.

$ chmod 600 AWS\_Private\_key.pem (User Group Others) 6 = read. 0 = nothing

After granting the read permission connect to the private instance using private IP address.

$ ssh -i <path to aws pem file> ubuntu@privateIP

Ex: ssh -i AWS\_Vissu.pem ubuntu@177.155.0.216

Now we can do the upgrades or installations in our private instance.