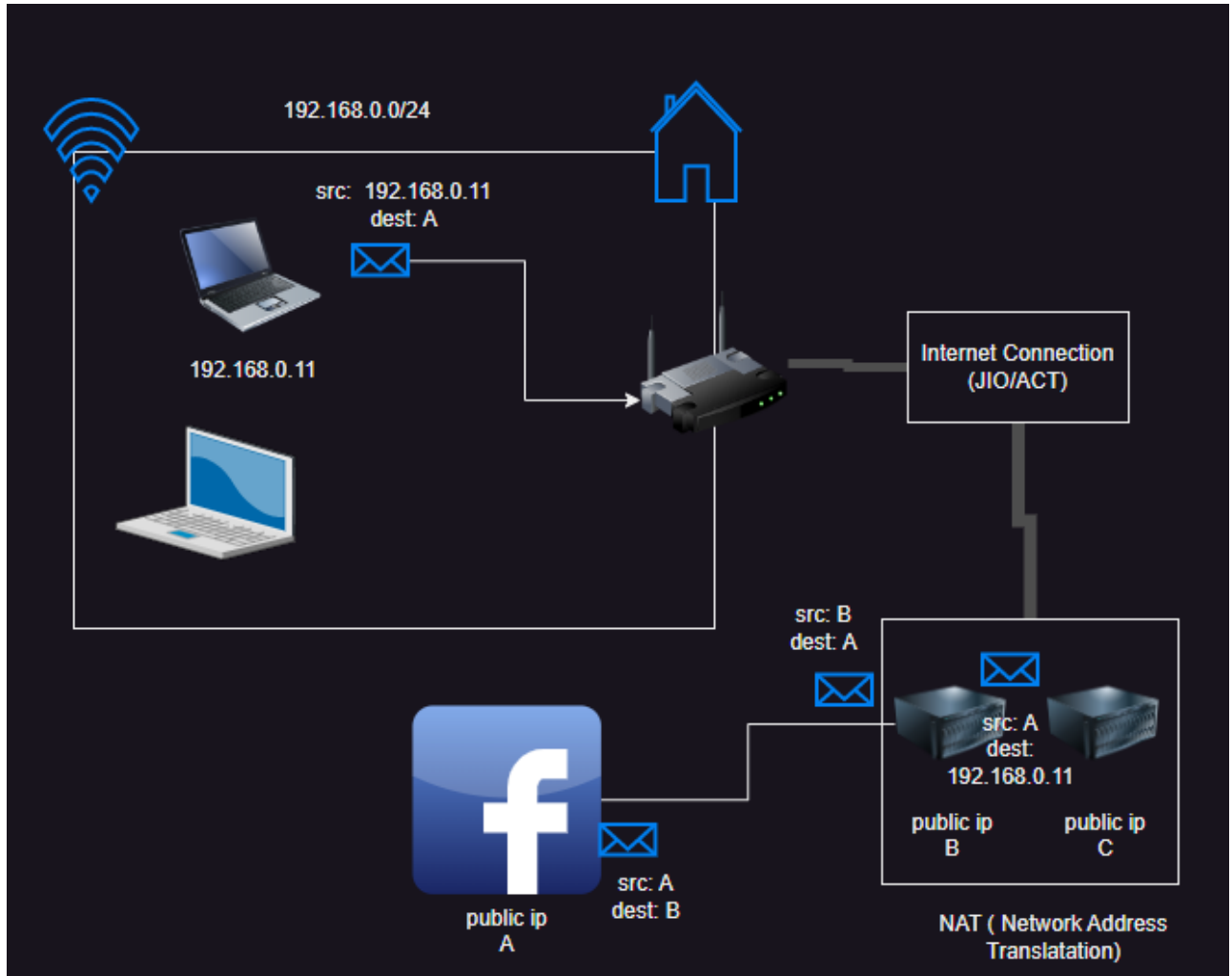


## How Home Networks work

- Typically home networks are private network with a internet connection
- Network is managed by routers where
  - DHCP
  - Router (This is a device to forward traffic from one network to another)
- In a public network, a device will respond to another device when they can interact directly

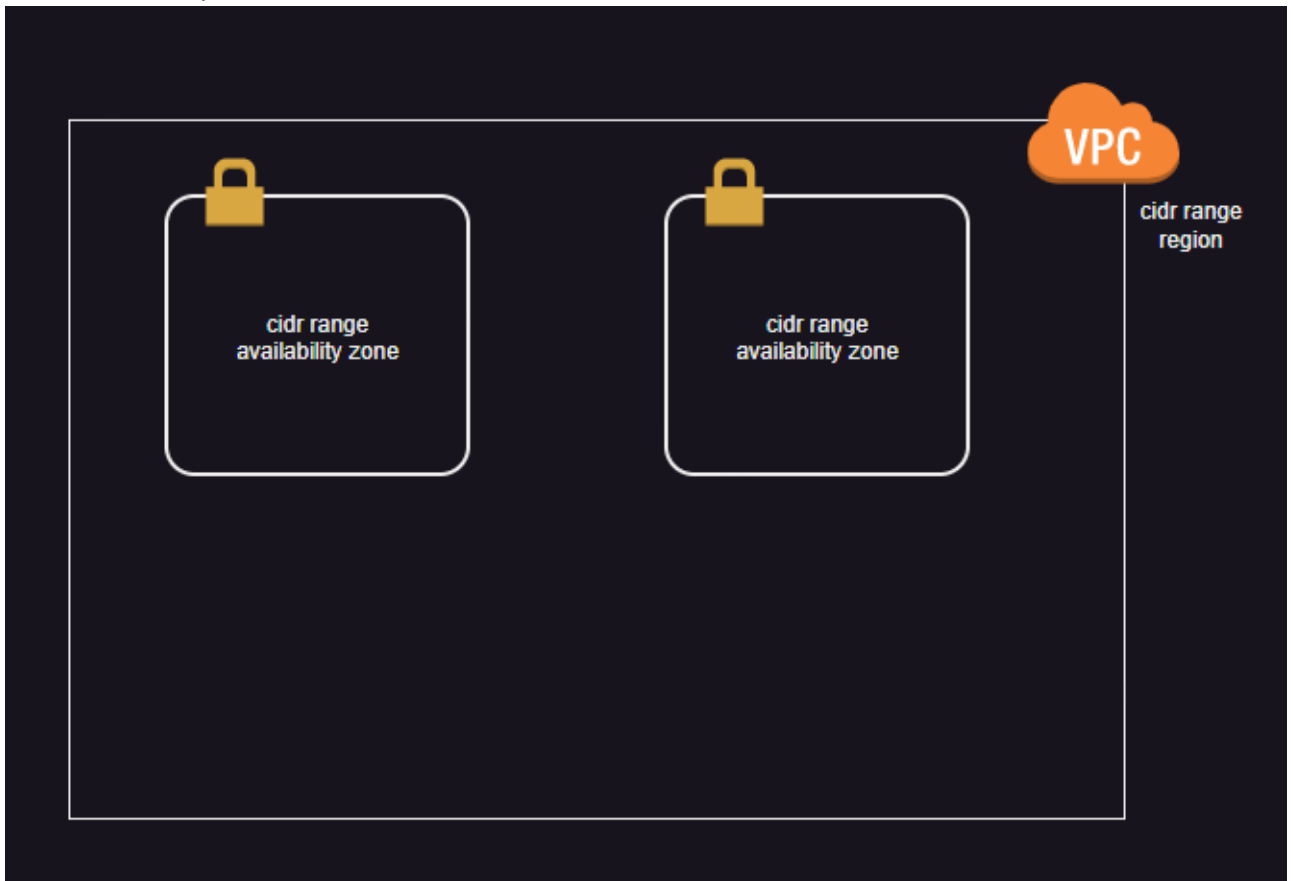


- NAT (Network Address Translation) servers play a key role to provide access to the private networks to get internet access.

## AWS Networking Basics

- In AWS, we can create networks using vpc (Virtual private cloud).
- By default in every region, in your account you will have a default vpc.
- VPC belongs to a region and subnet to an AZ

- We can create vpc and subnets



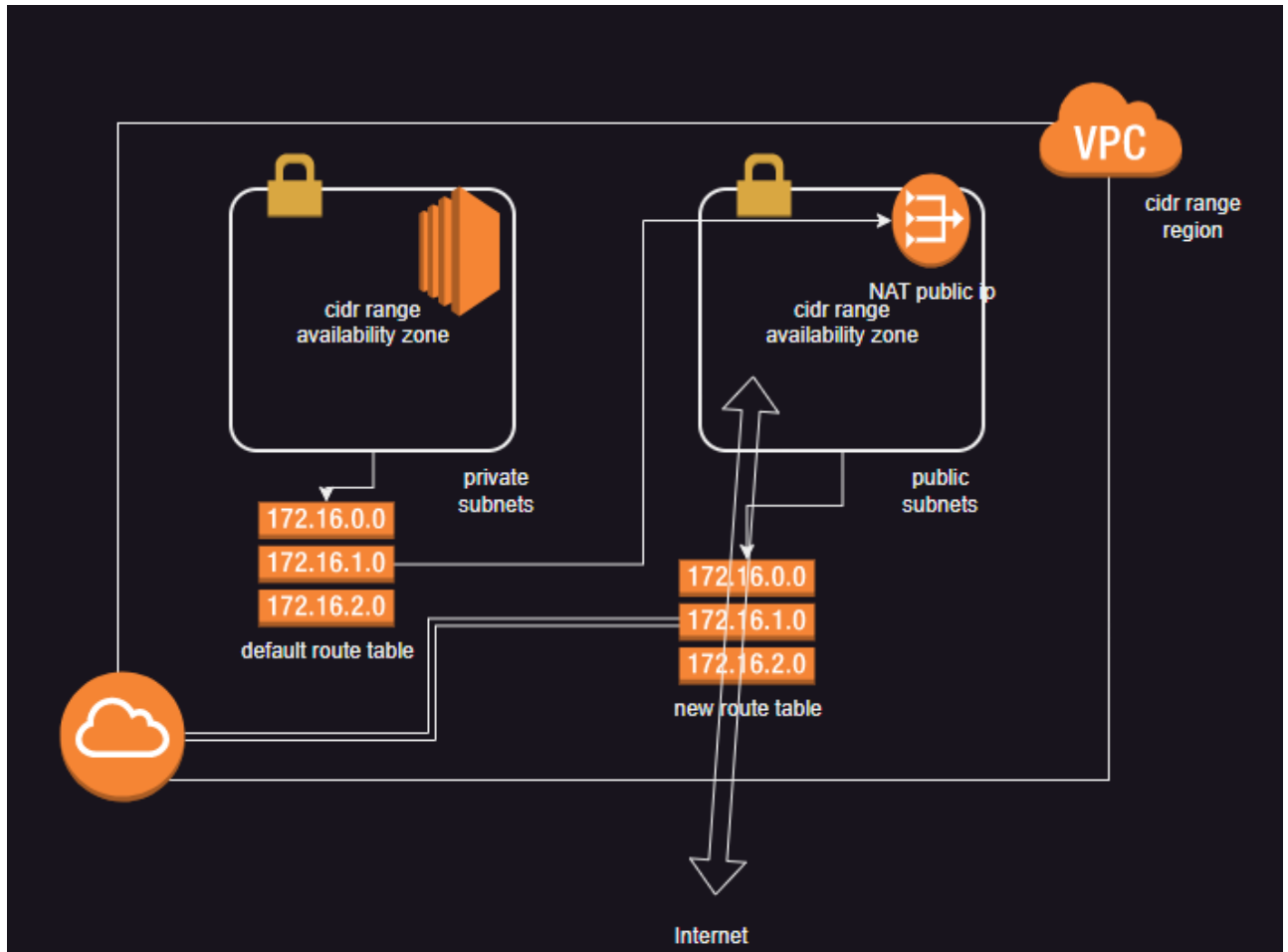
- Every vpc will have a default route table (router) which enables all internal communication.



- If you want to make your network accesible from outside, You need to have an internet-gateway associated with your vpc (internet connection) and we need to associate a route between route table

and internet gateway

- Every subnet will be associated with
  - route table with explicit connection
  - default route table (without explicit connection)
- Subnets in AWS can be private or public.
- public subnets are associate with route table which have route to internet gateway and private subnets have assocaiation with route tables which donot have route to internet gateway
- Private subnets can get internet access with the help of NAT Gateway created in a public subnet and modifying routetable
- In AWS we have default vpc where all subnets are public.



## Azure networking basics

- In Azure we create networks with the help of virtual networks
- In Azure network belongs to a region
- Azure Subnet also belong to a region

- While creating resources we can select the subnet and zone



- Every Azure network has an internet connection established by default.
- Azure gives a default routes (system defined routing), All the machines will get internet connection.
- Any machine can be given a public ip then it gets bidirectional internet.