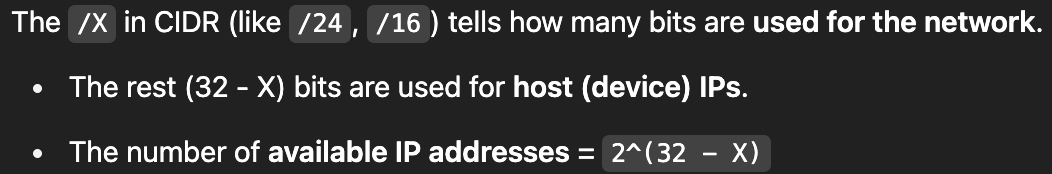
IPV4 is 32 bit of 1s and 0s.



**VPC**

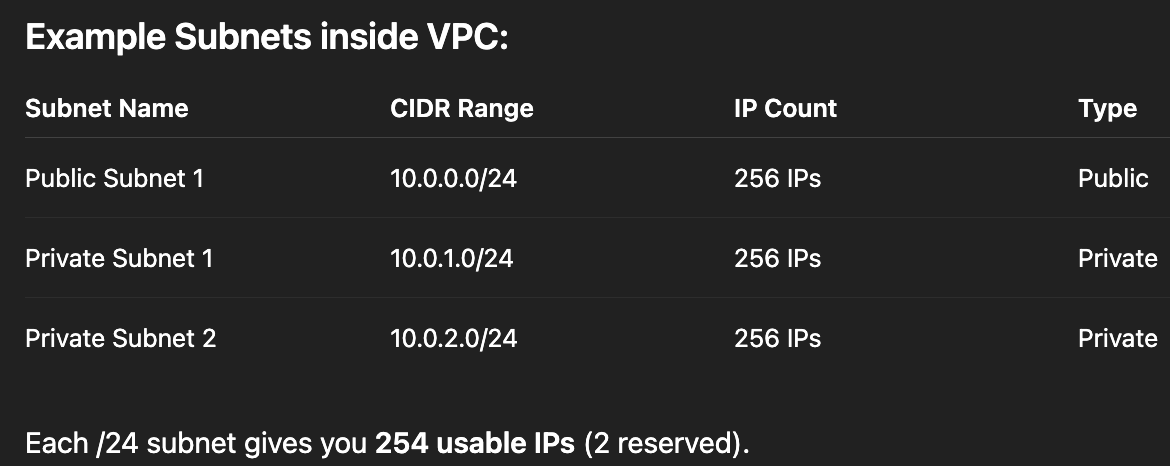
A VPC (Virtual Private Cloud) is your own private network inside a cloud provider like AWS.

When you create a VPC, you assign it a CIDR block - a range of IP addresses your network can use.

Example: VPC CIDR = 10.0.0.0/16, gives 65,536 IPs to use (from 10.0.0.0 to 10.0.255.255)

**Subnet**

A subnet is a smaller part of the VPC. You divide your big VPC IP range into smaller ranges (subnets) to organize and isolate resources.All subnets get a CIDR block from within the VPC’s CIDR block. Like we have Subnet for public-facing apps, Subnet for databases,



Public subnet can talk to the internet (via Internet Gateway).

Private subnet cannot (unless you use a NAT Gateway).