OCT-01-2021-vpc

Vpc: private network in aws

Cidr:indicates size of your network how big is your network

Subnets:vpc divided into smaller group of networks atleast one subnet with out subnet we canot launch ec2

Rules:1) subnet is specific to one 1 az

2) each and every subnet reserver 5 ip adrewss by aws 1 st 4 and last -01

Vpc-10.0.0.0/24---256

Sn1---10.0.0.0/26

From 10.0.0.4 to 10.0.0.126 we can attaché instance in sn1

10.0.0.0,10.0.0.1,10.0.0.2,10.0.0.3,10.0.0.127 reserved by aws

Sn2----10.0.0.128/26

From 10.0.0 .135 to 10.0.0.255

3) subnet is associated with single route table and single nacl.but multiple route tables attaché single sn.

In vpc we can create multiple routetables.

4) public subnet:subnet is associated with route table it is having igw that subnet is called public subnet

public subnet means that subnet is attached to igw

that network it posiibl to acess and send req to out side world

Private subnet: subnet is not having ugw it is private

it is not possible to tp acess and taking req outside world.

5) size of subnet cidr

Vpc1

Sn1(public)

I1 i2

Sn2(private)

I3 i4

Vpc2:

Sn3(pulic)

I5 i6

Sn4(private)

I7 i8

I1---i3

I1---i7(np)

I1—i5

I3---i5(np)

Vpc s are sma eac also not possible

Vpc1 is diff n/w vpc2 diff n/w

Igw

Router

Nacl

Nat

Vpcpeering connection

Vpc endpoints

Vpc flow logs

transitgateway

One machine wants to talks with another machine need network

Ec2-instancess physically in network

1. In aws how to create my own private network

In aws using vpc.

Using of vpc create my own private network using vpc.

1. In the vpc all are similar staing instancss ip address and unique ip address
2. Cidr: classless inter domaine routing it will give two things
3. it will indicate size of your network
4. address sericess
5. 10.0.0.0/24---24

24: means indicate size of your network

10.0—sericess

4) if I give 10.0.0.0/24 ----this icdr give to my network how many instances I want to launch

Formula:

32-24=8

2^8=256

We can launch 256 instancess

10.0.0.0—1st ip

10.0.0.1—2nd ip

10.0.0.255—last ip

1. Icdr-10.0.0.0/26

32-26=6

2^6=64---it will generate 64 ip address

we can launch in vpc 64 instancess

10.0.0.0-ist ip

10.0.0.63-last ip

5) icdr---10.0.0.0/23

32-23=9

2^9=512

Ist ip-10.0.0.0

Last ip -10.0.0.511

It is inncorect

Last ip address 10.0.0.255,255.10.2.255

1. What is ip address: identity of machine with in a network
2. Public IP address: Also referred to as an external IP address, this is the address assigned to your device. **It typically changes each time you establish a new network connection**.
3. Static: Static means that the IP addresses do not change.private ip
4. There are 2 types of ways to identify the machine in a network
5. We are not having grater than 255 ip address
6. 10.0.0.0/22

10.0.0.0

10.0.0.255

10.0.1.0

10.0.1.255

10.0.2.0

10.0.2.255

No need to worry sysem will take.

1. We are attaching ip address to all machine in future so created another series 1pv6 it is

How many machines incress it will acomdent.

1. Network need to divided into smaller group of network
2. Vpc cidr divided into smaller group of networks it is called subnets.
3. Vpc –10.0.0.0/24—256

I want to divided into 256 ips smaller groups.it is subnet

Sn1-128 associate to sn1

10.0.0.0/25 32-25=7. 2^7=128

10.0.0.0----1st ip

10.0.0.127---last ip

Sn2-next 128 ip associate to sn2.

10.0.0.0/25

10.0.0.128

10.0.0.255—last ip

15) I want to divide 3 smaller group vpc:10.0.0.0/24====256 ips

16) there are a 2 ways to identified by machine ipv4 and ipv6.

Ipv4 -32 bit=36.35.25.13

8+8+8+8

10.0.0.0/24

10.0.0.1

10.0.0.255

10.0.1.0

10.0.1.255

10.0.2.1

10.0.2.255

1pv6-128 bit

17) one machine wants to connect another machine using binary number.

18) when ever you create network(10.0.0.0) give cidr/24 how many ips accmodent

19) vpc in aws need to be divided into smaller group of networks it is called subnet.

20) vpc: in aws we are creating private n/w it is called vpc

Icdr: how many ips divided. That private n/w

Ivpc having 2 subnets

I1----10.0.0.34=sn1

I2----10.0.0.135---sn2

I3-----10.0.0.127=sn3

I4---10.0.1.36---it is not the range of vpc1.it another vpc range

21) I am getting task

Vpc: 10.0.0.0/24====256 ips –that ips divide into 3 subnets

Sn1---128

10.0.0.0/25

10.0.0.0

10.0.0.127

Sub2-64

10.0.0.128/26

10.0.0.128

10.0.0.191

S3-64.

10.0.0.192/26

10.0.0.192

10.0.0.256

22) I have mobile that modile wants to connect outside world need internate

In aws also inside servers wants to connect to outside world need igw

Igw: need for inside aws servers wants to connect to outside world .

Your network(vpc) is attached to outside world

23) router: router determines traffic from your machine to outside from outside to your machine with in network a machines.

24) network acess control list: it is act as a firewall to subnets. Subnet having 100 machines

In 100 machines we want to block 80 req .

We are noit goto all sg’s and deny 80 port .

Hera in nacl we block that 80 port then all machines are not getting req from 80 port

When vpc created: rt,sg,nacl created by default;

Vpc ===🡺cidr

Vpc means in aws create network .

Vpc divided into multiple subnets.

Task 1:

1. How to become a subnet1 is public

Vpc1-🡪paris--🡪 10.0.0.0/24

Sn1---public------10.0.0.0/26

Sn2-----private------10.0.0.128/26

Sn3---private---10.0.0.192/26