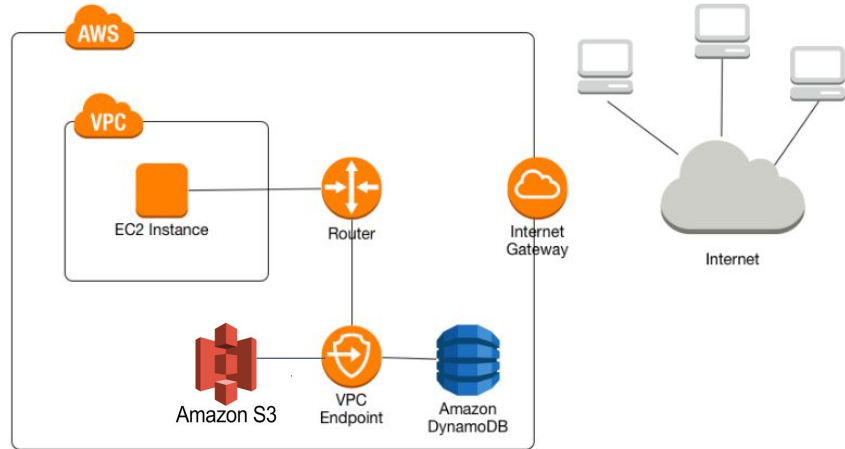


services using HTTP protocol



## Connectivity



### Virtual Private Cloud (VPC) [Info](#)

VPC that defines the virtual networking environment for this DB instance.

Default VPC (vpc-d8715da2)

Only VPCs with a corresponding DB subnet group are listed.

**i** After a database is created, you can't change the VPC selection.

### ▼ Additional connectivity configuration

#### Subnet group [Info](#)

DB subnet group that defines which subnets and IP ranges the DB instance can use in the VPC you selected.

default

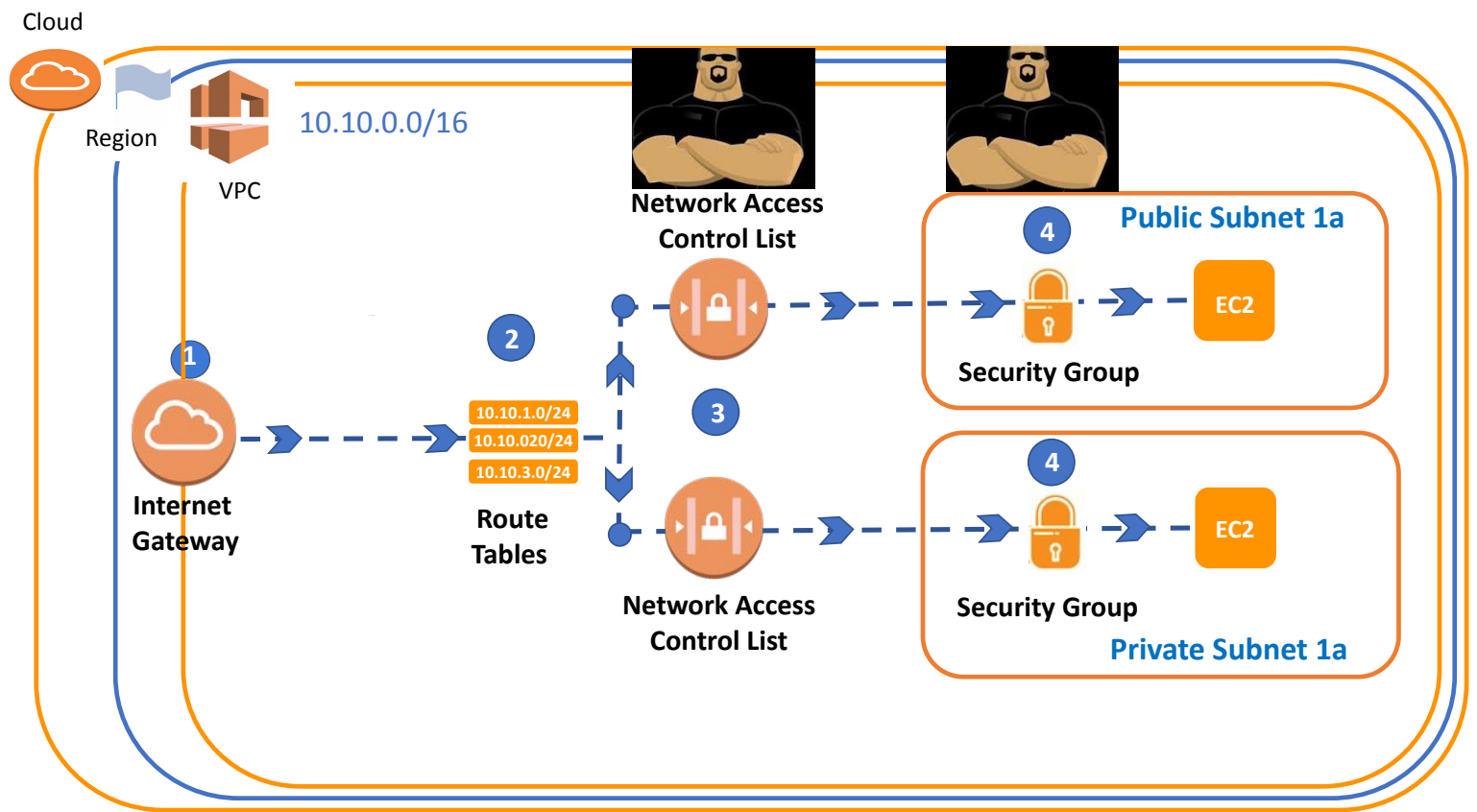
### Publicly accessible [Info](#)

☒ Yes

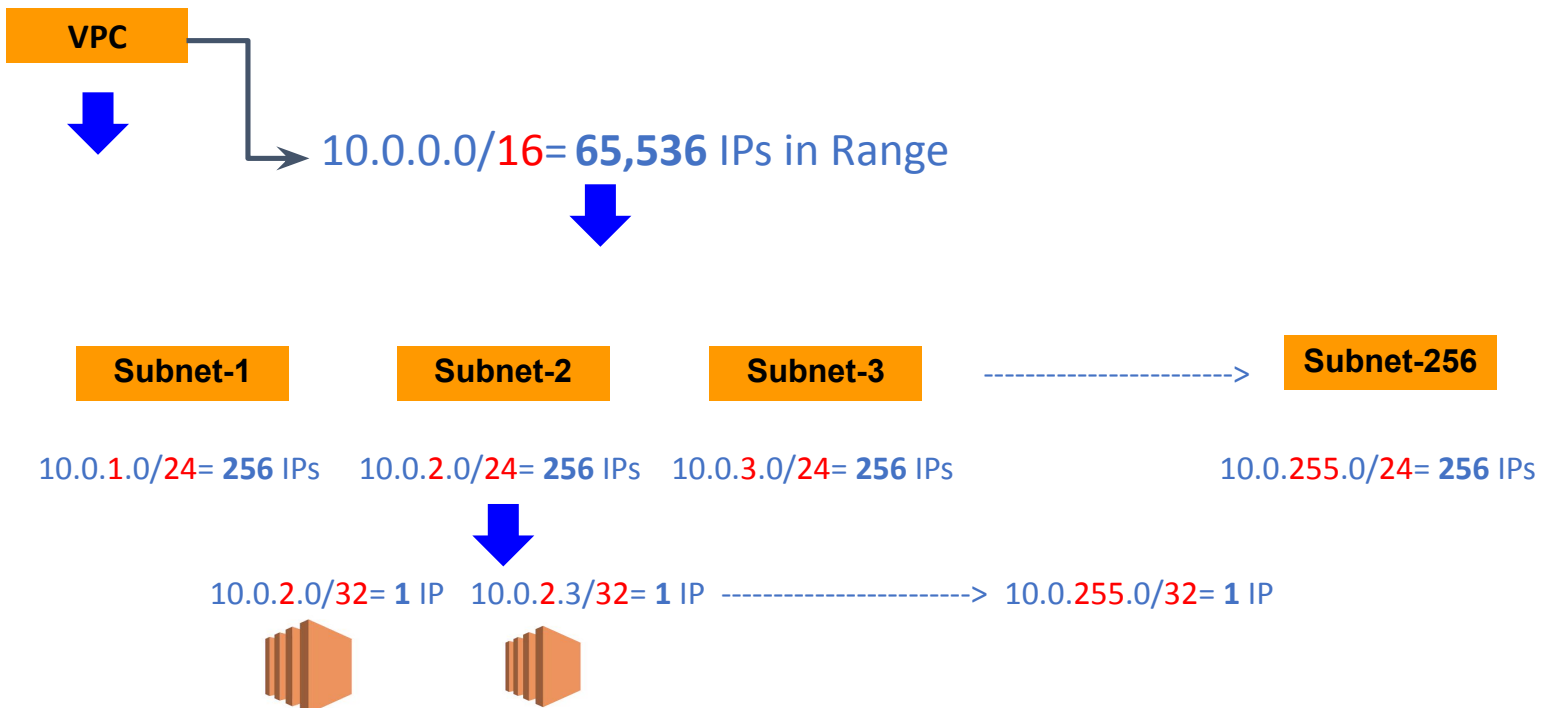
Amazon EC2 instances and devices outside the VPC can connect to your database. Choose one or more VPC security groups that specify which EC2 instances and devices inside the VPC can connect to the database.

☐ No

RDS will not assign a public IP address to the database. Only Amazon EC2 instances and devices inside the VPC can connect to your database.



$65,536/256 = 256$  SUBNETS



65,536/4096= 16 SUBNETS

VPC



10.0.0.0/16= 65,536 IPs in Range



Subnet-1

Subnet-2

Subnet-3

Subnet-16



10.0.1.0/20= 4096 IPs

10.0.2.0/20= 4096 IPs

10.0.3.0/20= 4096 IPs

10.0.255.0/20= 4096 IPs



10.0.2.0/32= 1 IP

10.0.2.0/32= 1 IP

-----> 10.0.255.0/32= 1 IP



Region



Region : N.Virginia

CIDR : 10.7.0.0/16

vpc=clarus-vpc-a

Internet Gateway

Availability Zone 1-a

Availability Zone 1-b

Availability Zone 1-c

10.10.1.0/24  
10.10.020/24  
10.10.3.0/24

Route  
Table

Public Subnet 1a

10.7.1.0/24

Public Subnet 1b

10.7.4.0/24

Public Subnet 1c

10.7.7.0/24

10.10.1.0/24  
10.10.020/24  
10.10.3.0/24

Route  
Table

10.7.2.0/24

Private Subnet 1a

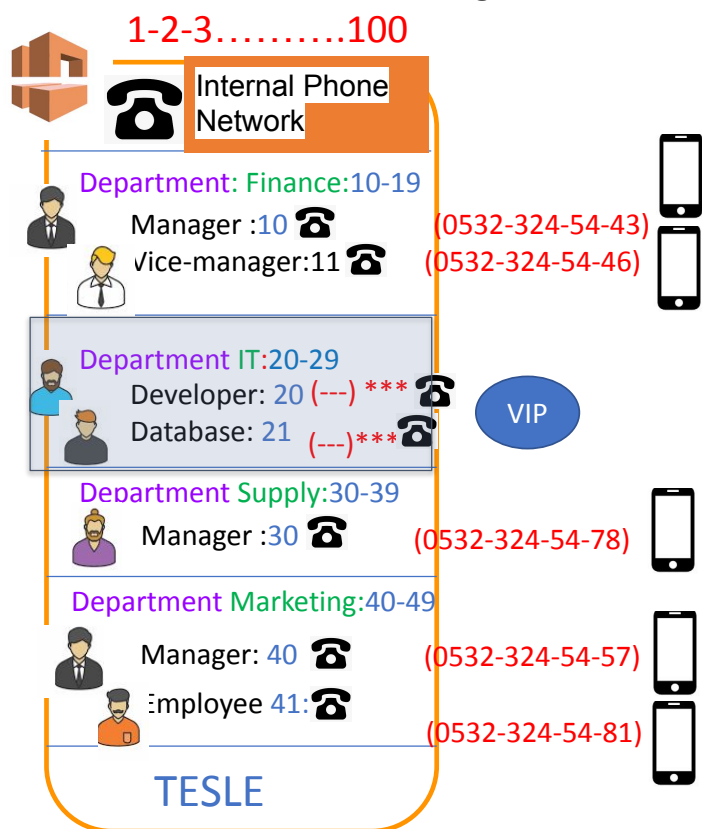
10.7.5.0/24

Private Subnet 1b

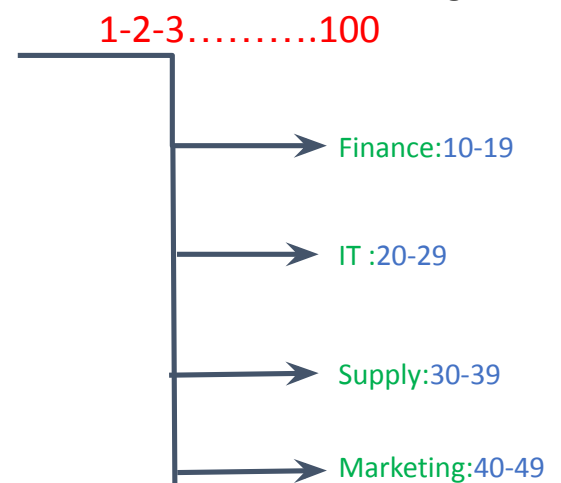
10.7.8.0/24

Private Subnet 1c

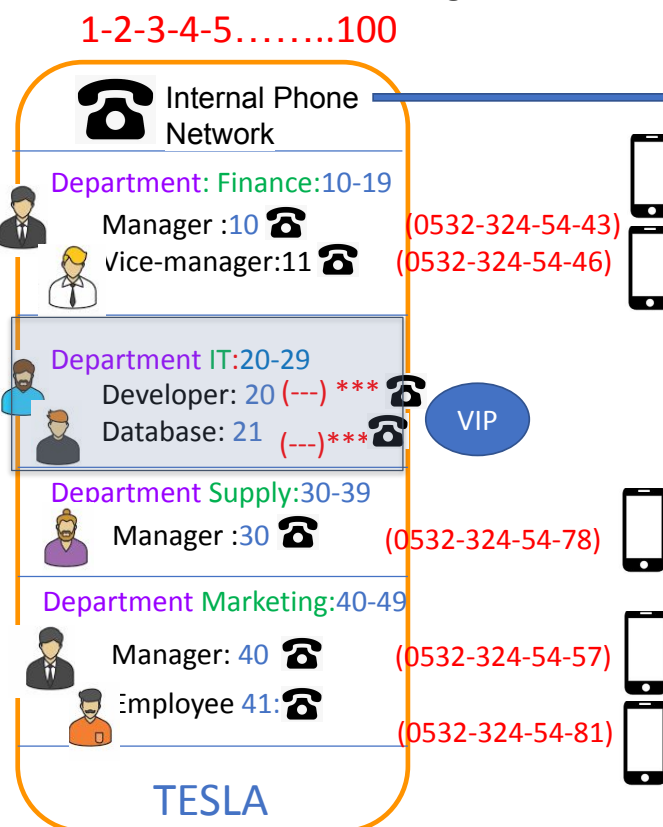
## Internal Phone Number Range:



## Internal Phone Number Range:



## Internal Phone Number Range:



CIDR  
10.7.0.0/16

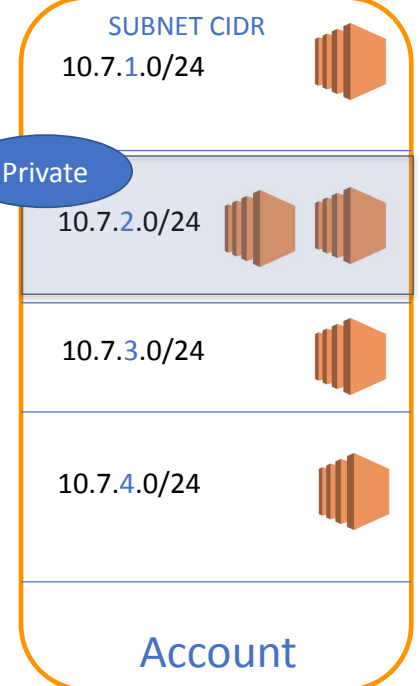
VPC

Public IP :3.4.9.0/32

Private IP: 10.7.1.1/32

Public IP :---

Private IP: 10.7.2.1/32

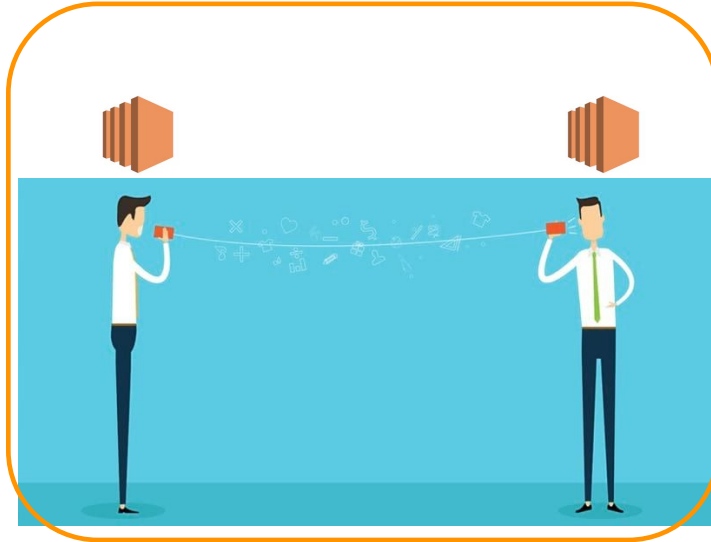


VPC CIDR Block

Labeling

Internal Communication

$10.7.0.0/16 = 65000 \text{ IP} = 65000$



How is it possible to use the same CIDR block for all of us?

SSN:01-A-2345-4563



SSN:02-C-98756H64

VPC 1=House 1



VPC 2=House 2



**VPC CIDR IP POOL**  
10.7.0.0/16 = 65000 IP

**AWS PUBLIC IP POOL**



10.7.1.0/32

10.7.2.0/32

175.0.0.1/32



**Private Subnet**



**Public Subnet**

Create **VPC**

Create **IGW**

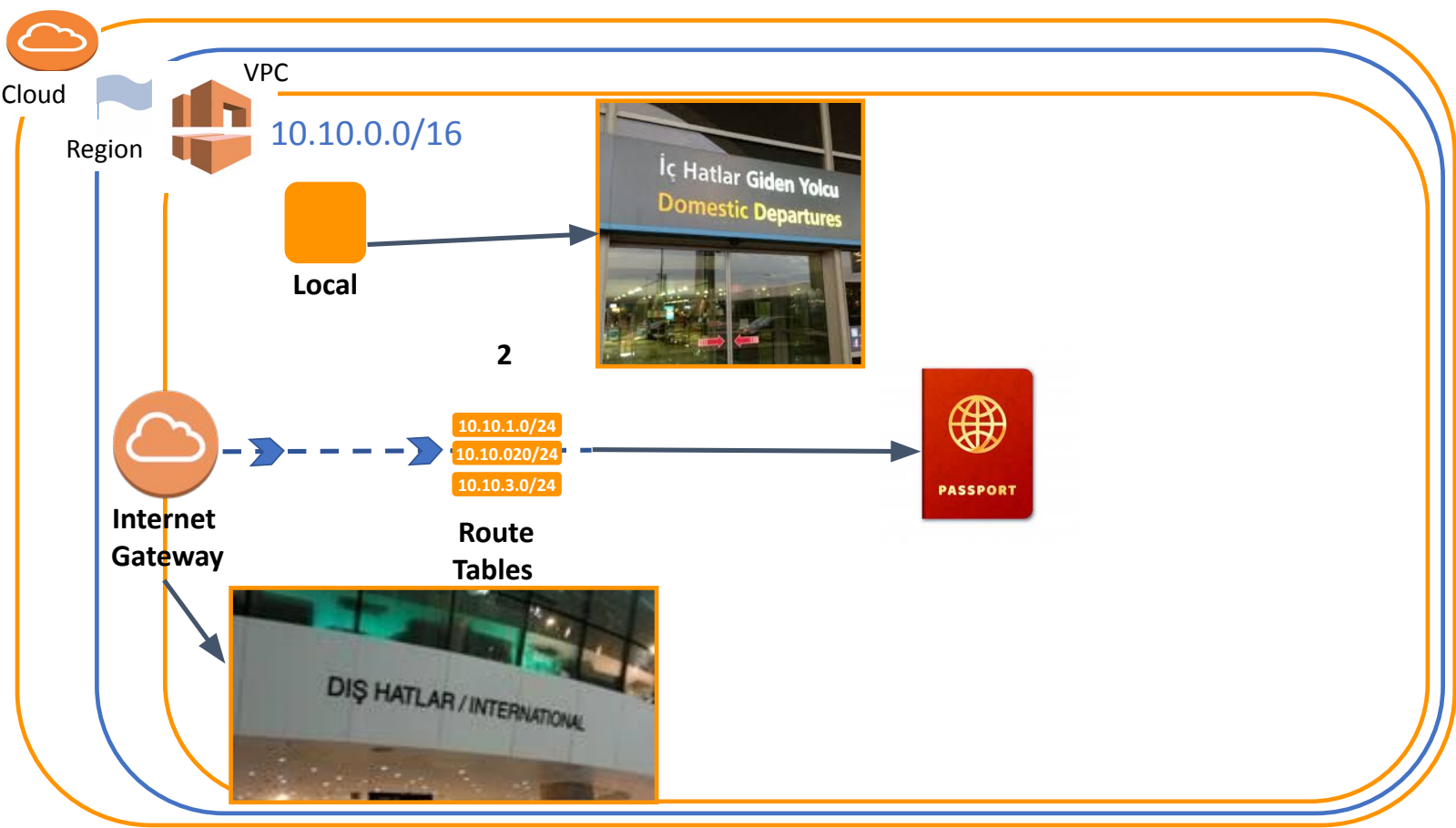
IGW Action Menu:  
**Attach IGW to VPC**

Set the VPC Route Table:  
**00000:/0 > IGW**

VPC Action Menu:  
**Edit DNS Hostname**

Name Default Route Table: **default-labvpc**

- Name tag: **clarus-vpc-a**
- IPv4 CIDR block: **10.7.0.0/16**



- Name tag: **clarus-vpc-a**
- IPv4 CIDR block: **10.7.0.0/16**



### us-east-1a

- public**

- clarus-az1a-public-subnet
- us-east-1a

10.7.1.36

**10.7.1.0/24** 10.7.1.85

- private**

- clarus-az1a-private-subnet
- us-east-1a

10.7.2.76

**10.7.2.0/24**

Spare...

us-east-1a  
10.7.3.0/24

### us-east-1b

- public**

- clarus-az1b-public-subnet
- us-east-1b

**10.7.4.0/24**

- private**

- clarus-az1b-private-subnet
- us-east-1b

**10.7.5.0/24**

Spare...

us-east-1b  
10.7.6.0/24

### us-east-1c

- public**

- clarus-az1c-public-subnet
- us-east-1c

**10.7.7.0/24**

- private**

- clarus-az1c-private-subnet
- us-east-1c

**10.7.8.0/24**

Spare...

us-east-1c  
10.7.9.0/24

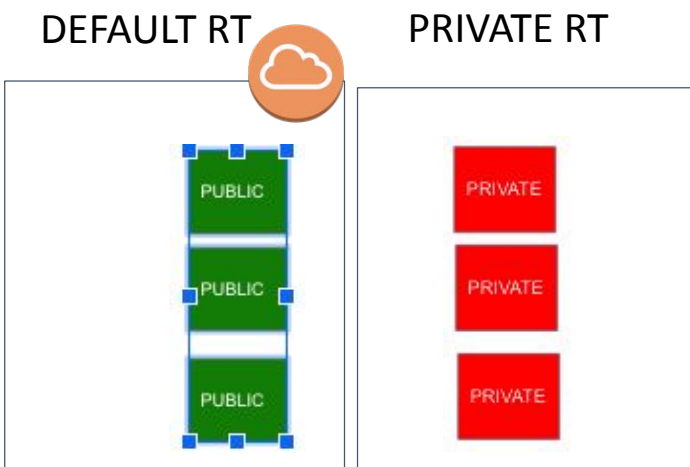
1- All Subnets are associated with Default Route Table **Implicitly**

2- By default all subnets are PUBLIC !!!!! a.Local  
b.0.0.0/0 >>>>IGW

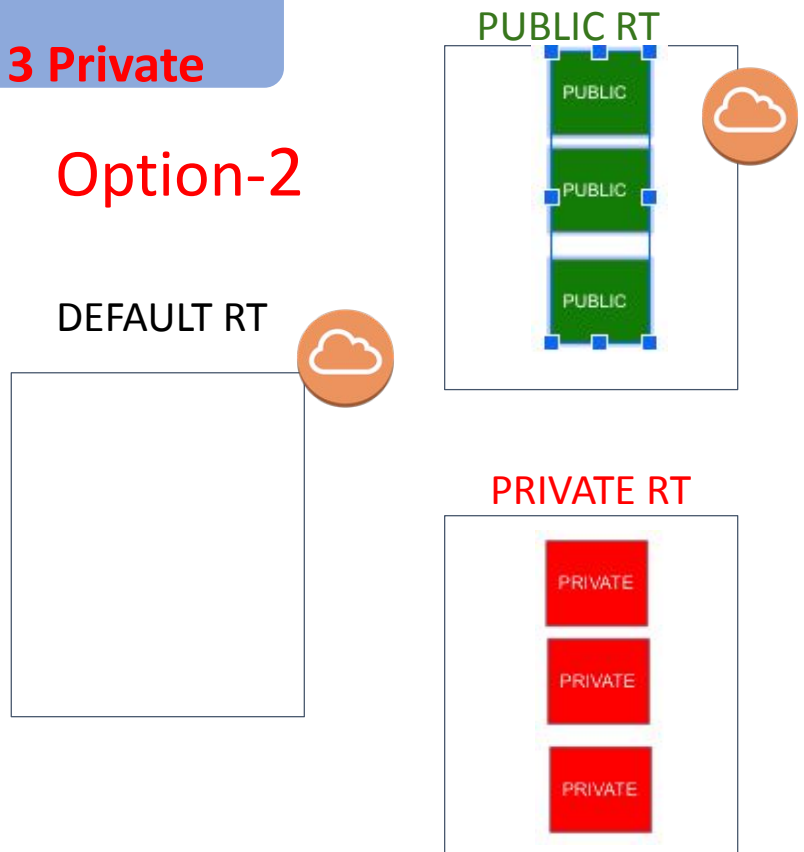
Conclusion

Current= 6 Public  
Desired= 3 Public 3 Private

Option-1



Option-2





Public Route Table Steps

Create a new Route Table  
for Public Subnets

Associate 3 Public Subnets  
with Public Route Table

Set Routes: a.Local  
b.0000/0 >>>>IGW

Modify Auto-Assign IP  
Settings-Subnet Action  
Menu-Edit subnet settings

Default Route Table of VPC  
3 Public Subnets  
Internet Connectivity



Create 3 Public and  
3 Private Subnets



Private Route Table Steps

Create a new Route Table  
for Private Subnets

Associate 3 Private Subnets  
with Private Route Table

Route Table of Private  
3 Private Subnets  
Internet Connectivity



a.Local

Launching an Instance



Create in Public Subnet

Create in Private Subnet



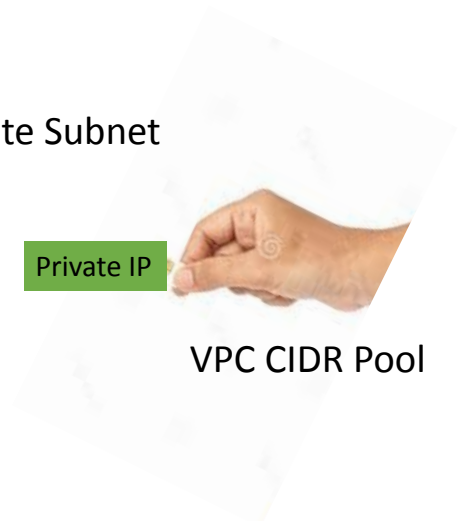
+

VPC CIDR Pool

Public IP

(Auto Assign IP )

AWS IP POOL



VPC CIDR Pool



Route Tables



**Private Subnets**  
Internet Connectivity

**Public Subnets**  
Internet Connectivity

