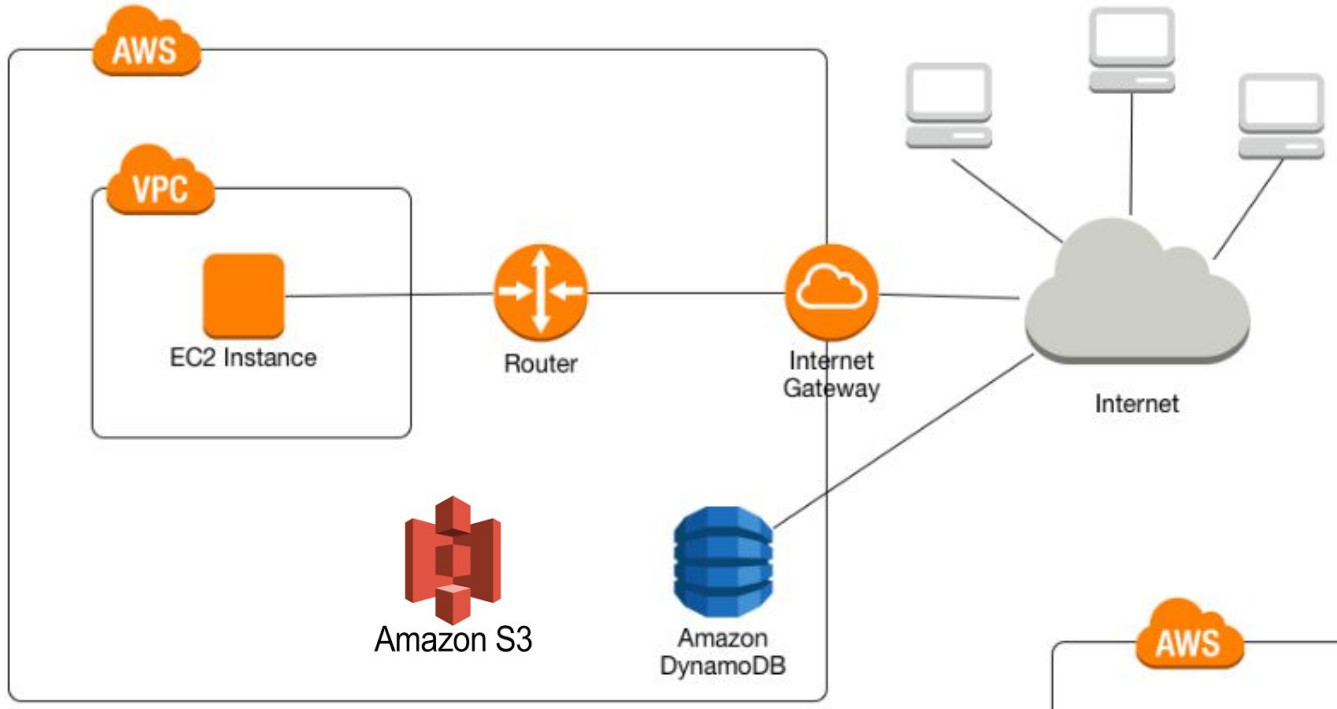
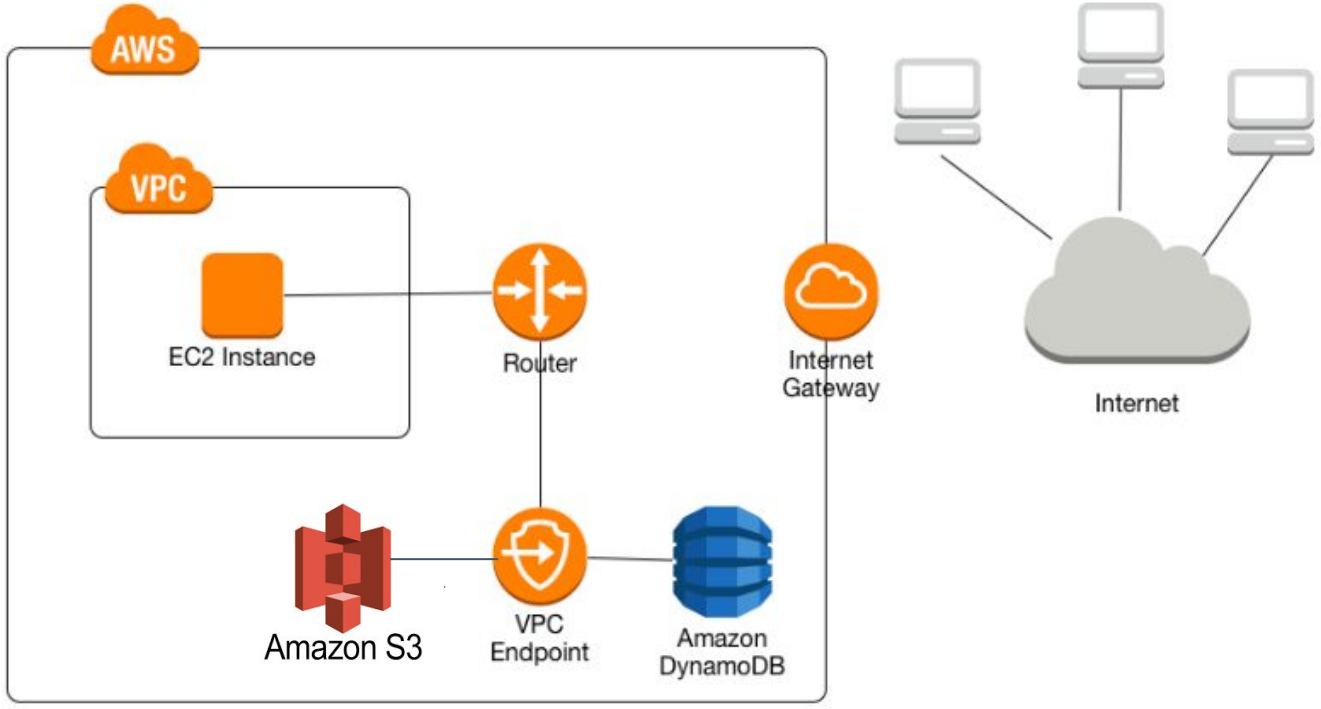


services using HTTP protocol



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.

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

Additional connectivity configuration

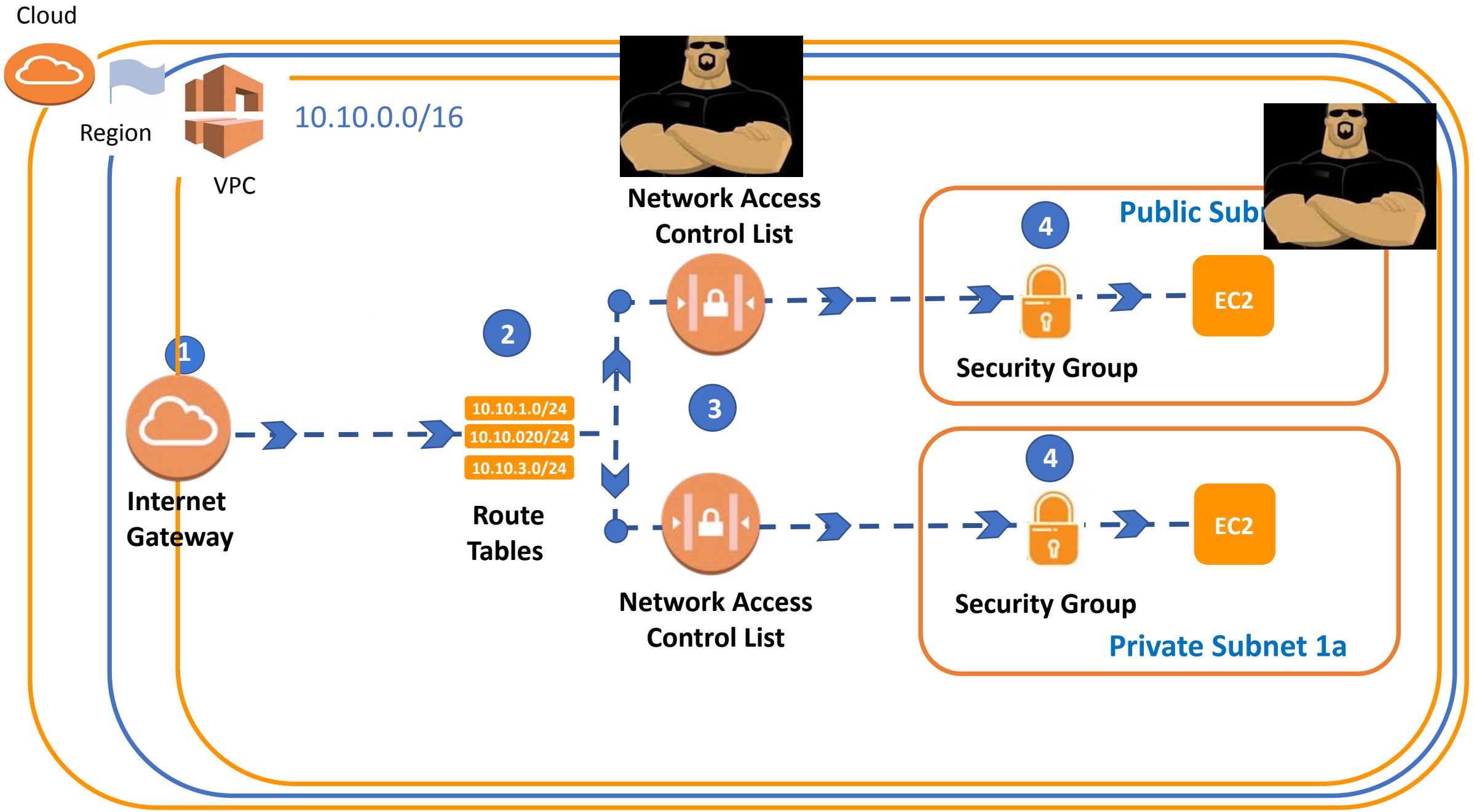
Subnet group Info

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

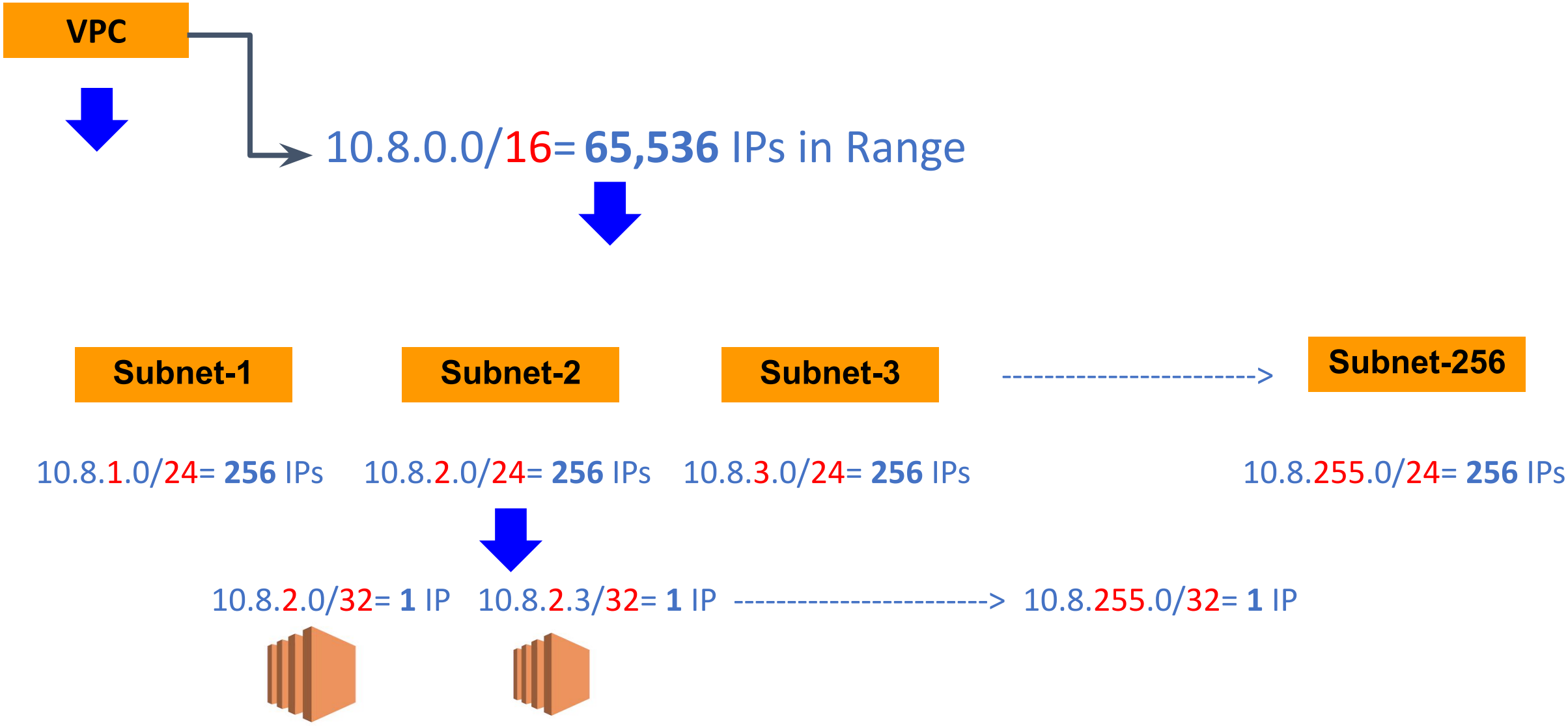
default

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.


Cloud
Region
VPC
10.10.0.0/16
Network Access Control List
Public Sub
4
EC2
Security Group
1
2
3
10.10.1.0/24
10.10.020/24
10.10.3.0/24
Internet Gateway
Route Tables
Network Access Control List
4
EC2
Security Group
Private Subnet 1a

65,536/256= 256 SUBNETS



65,536/4096= 16 SUBNETS

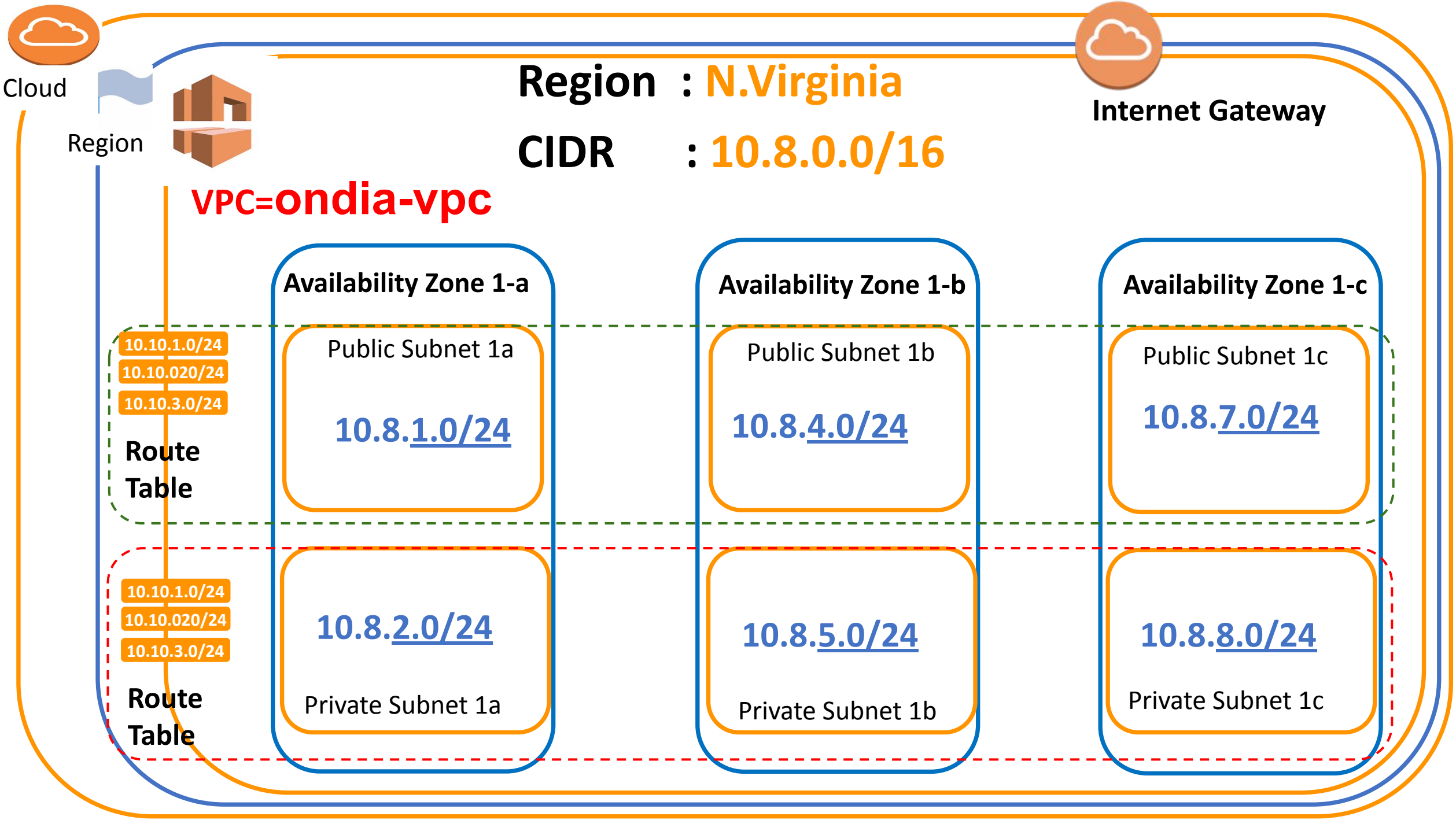
VPC

10.8.0.0/16= **65,536** IPs in Range

Subnet-1 **Subnet-2** **Subnet-3** ----------> **Subnet-16**

10.8.1.0/20= **4096** IPs 10.8.2.0/20= **4096** IPs 10.8.3.0/20= **4096** IPs 10.8.255.0/20= **4096** IPs

10.8.2.0/32= **1** IP 10.8.2.0/32= **1** IP ----------> 10.8.255.0/32= **1** IP



Cloud
Region
Region : N.Virginia
CIDR : 10.8.0.0/16
Internet Gateway
VPC=ondia-vpc
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
10.8.1.0/24
Public Subnet 1b
10.8.4.0/24
Public Subnet 1c
10.8.7.0/24
10.10.1.0/24
10.10.020/24
10.10.3.0/24
Route Table
10.8.2.0/24
Private Subnet 1a
10.8.5.0/24
Private Subnet 1b
10.8.8.0/24
Private Subnet 1c

Internal Phone Number Range:

1-2-3…….100

Internal Phone Network

Department: Finance:10-19

Manager :10 (0532-324-54-43)

Vice-manager:11 (0532-324-54-46)

Department IT:20-29

Developer: 20 (---) ***

Database: 21 (---)***

VIP

Department Supply:30-39

Manager :30 (0532-324-54-78)

Department Marketing:40-49

Manager: 40 (0532-324-54-57)

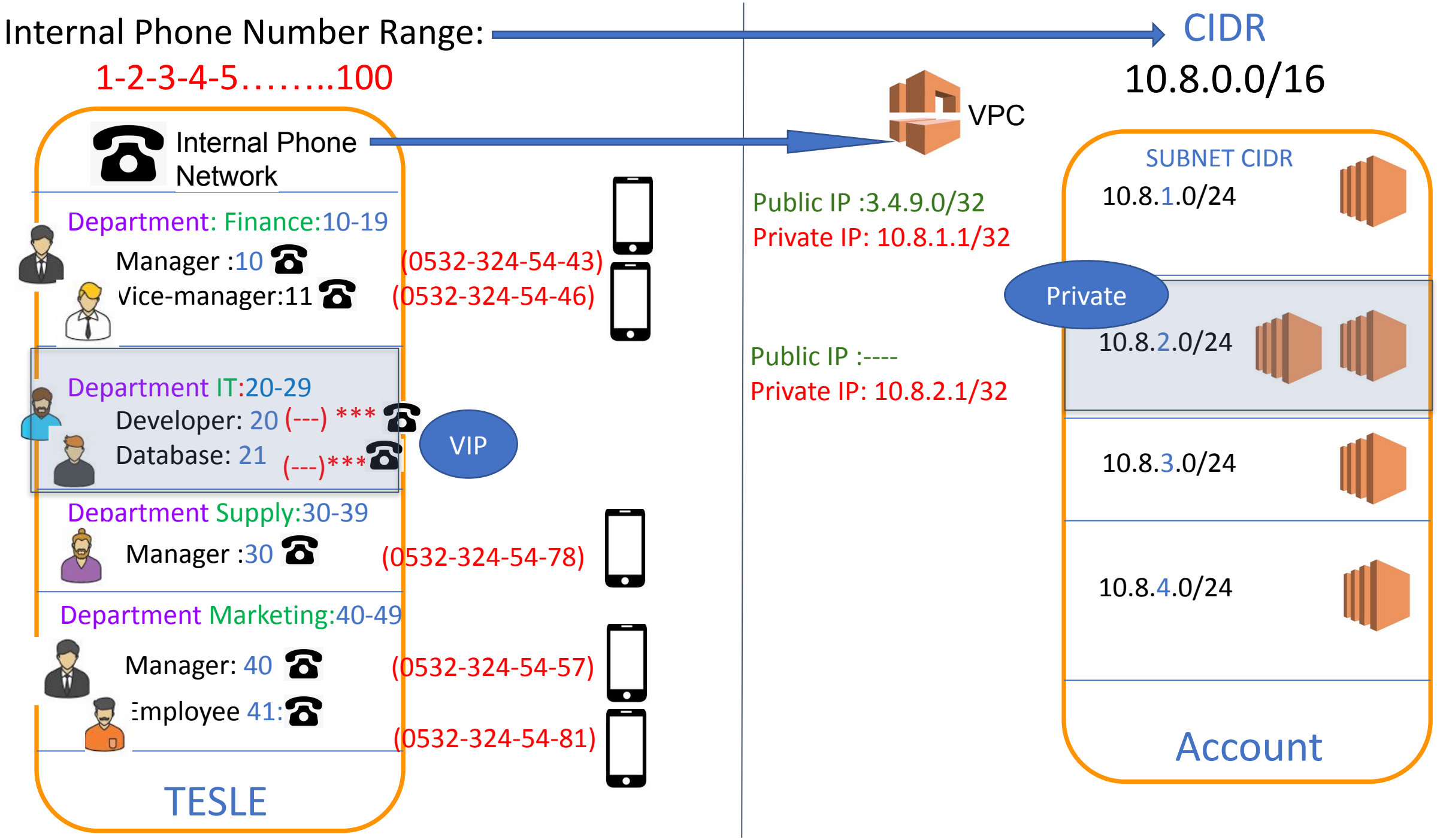
Employee 41: (0532-324-54-81)

TESLE

Internal Phone Number Range:

1-2-3…….100

- Finance:10-19
- IT :20-29
- Supply:30-39
- Marketing:40-49

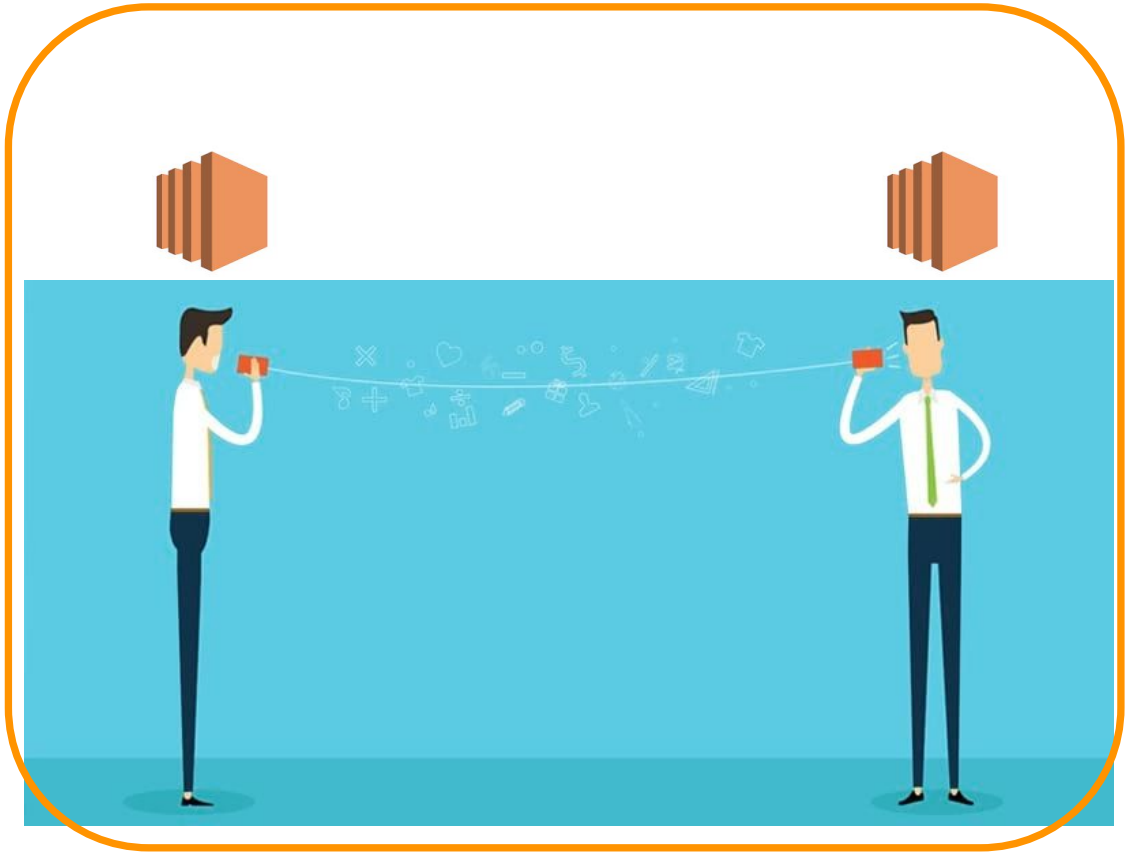

Internal Phone Number Range:
1-2-3-4-5……..100
CIDR
10.8.0.0/16
VPC
Internal Phone Network
Department: Finance:10-19
Manager :10
Vice-manager:11
(0532-324-54-43)
(0532-324-54-46)
Public IP :3.4.9.0/32
Private IP: 10.8.1.1/32
SUBNET CIDR
10.8.1.0/24
Private
10.8.2.0/24
Department IT:20-29
Developer: 20 (---) ***
Database: 21 (---)***
VIP
Public IP :----
Private IP: 10.8.2.1/32
10.8.3.0/24
Department Supply:30-39
Manager :30
(0532-324-54-78)
10.8.4.0/24
Department Marketing:40-49
Manager: 40
(0532-324-54-57)
Employee 41:
(0532-324-54-81)
TESLE
Account

VPC CIDR Bock

Labeling

Internal Communication

10.8.0.0/16 = 65000 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

10.8.0.0/16 = 65000 IP

AWS PUBLIC IP POOL

VPC

10.8.1.0/32

10.8.2.0/32

175.0.0.1/32

Private Subnet

Public Subnet

Create VPC

- *Name tag*: **ondia-vpc**
- *IPv4 CIDR block*: **10.8.0.0/16**

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

Cloud

VPC

Region

10.8.0.0/16

Local

2

Internet Gateway

10.8.1.0/24
10.8.2.0/24
10.8.4.0/24

Route Tables

- *Name tag*: **ondia-vpc-a**
- *IPv4 CIDR block*: **10.8.0.0/16**

us-east-1a

- public
- ondia-az1a-public-subnet
- us-east-**1a**

10.8.1.36

10.8.1.0/24 10.8.1.85

- private
- ondia-az1a-private-subnet
- us-east-**1a**

10.8.2.76

10.8.2.0/24

Spare…

us-east-1a
10.8.3.0/24

us-east-1b

- public
- ondia-az1b-public-subnet
- us-east-**1b**

10.8.4.0/24

- private
- ondia-az1b-private-subnet
- us-east-**1b**

10.8.5.0/24

Spare…

us-east-1b
10.8.6.0/24

us-east-1c

- public
- ondia-az1c-public-subnet
- us-east-**1c**

10.8.7.0/24

- private
- ondia-az1c-private-subnet
- us-east-**1c**

10.8.8.0/24

Spare…

us-east-1c
10.8.9.0/24

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

2- By default all subnets are PUBLIC !!!!!! **a.Local**
b.0000/0 >>>>IGW

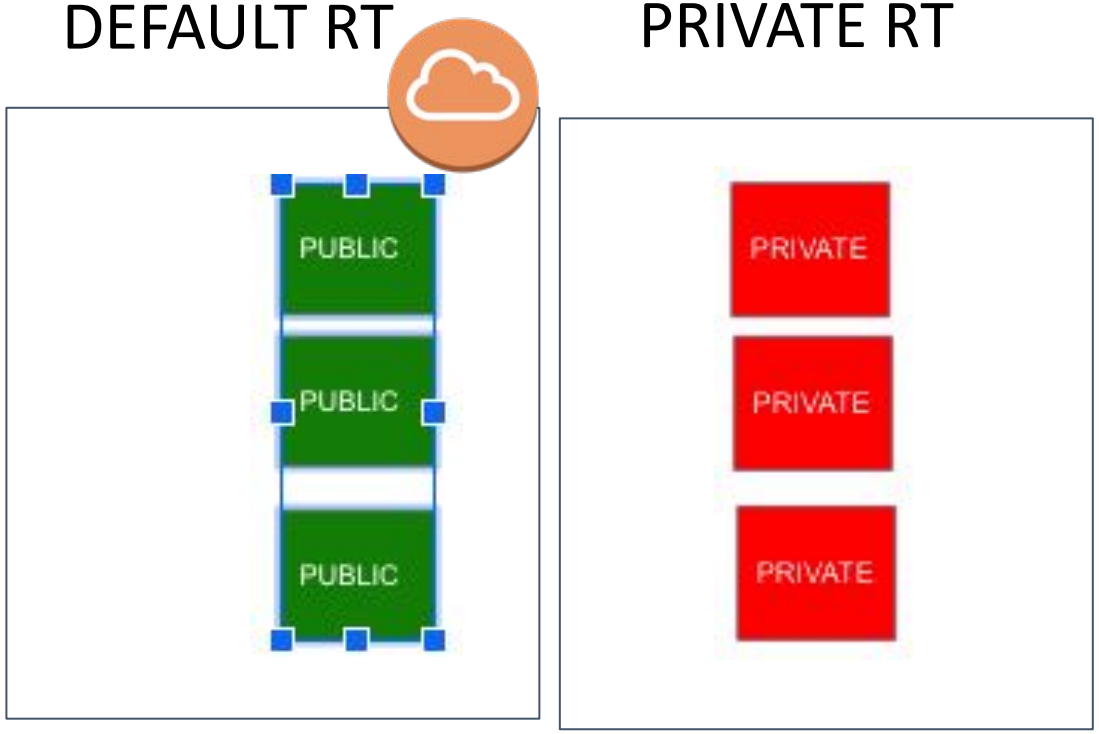
Conclusion

Current= 6 Public

Desired= 3 Public 3 Private

Option-1

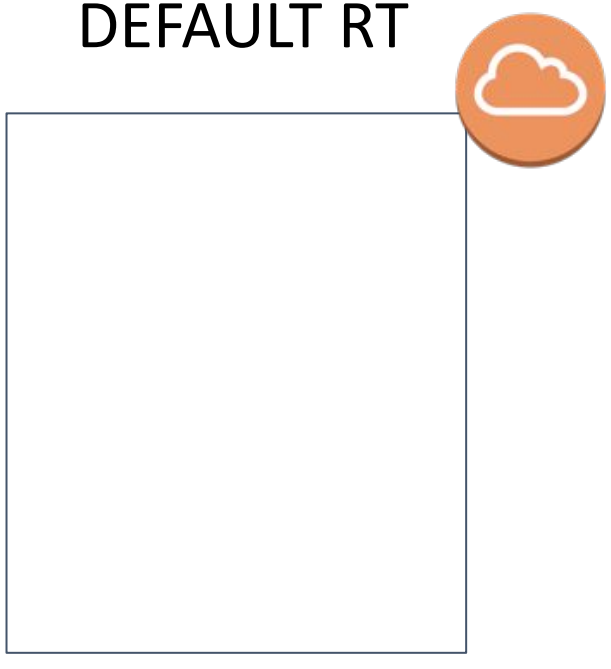
DEFAULT RT



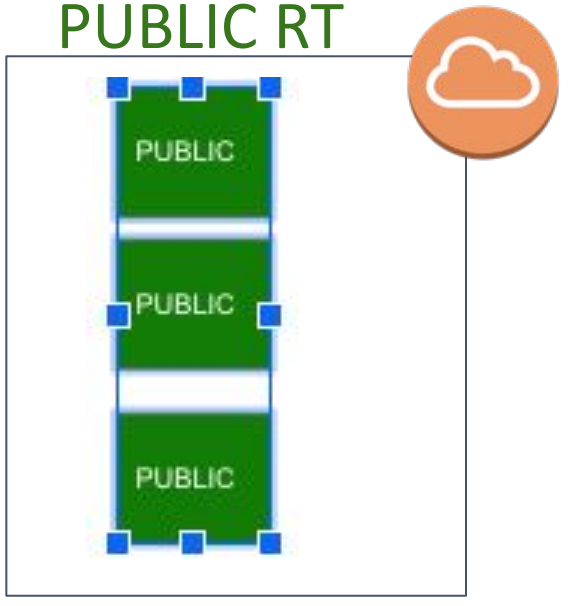
PRIVATE RT

Option-2

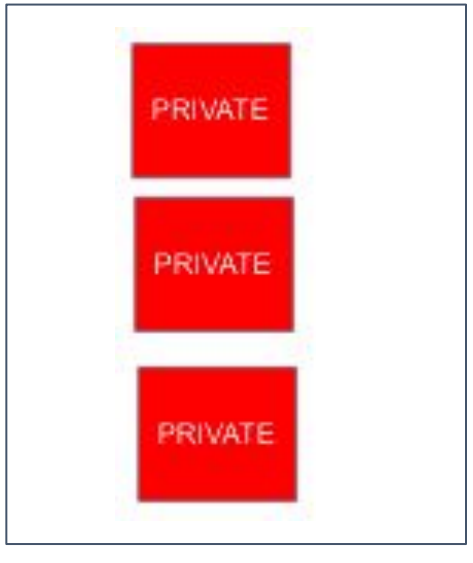
DEFAULT RT



PUBLIC RT



PRIVATE RT



Create 3 Public and
3 Private Subnets

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

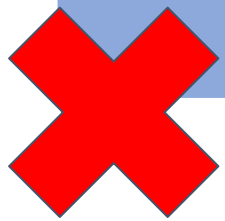
Private Route Table Steps

a.Local

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



Launching an Instance

Create in Public Subnet

Create in Private Subnet

Private IP

\+

VPC CIDR Pool

Public IP

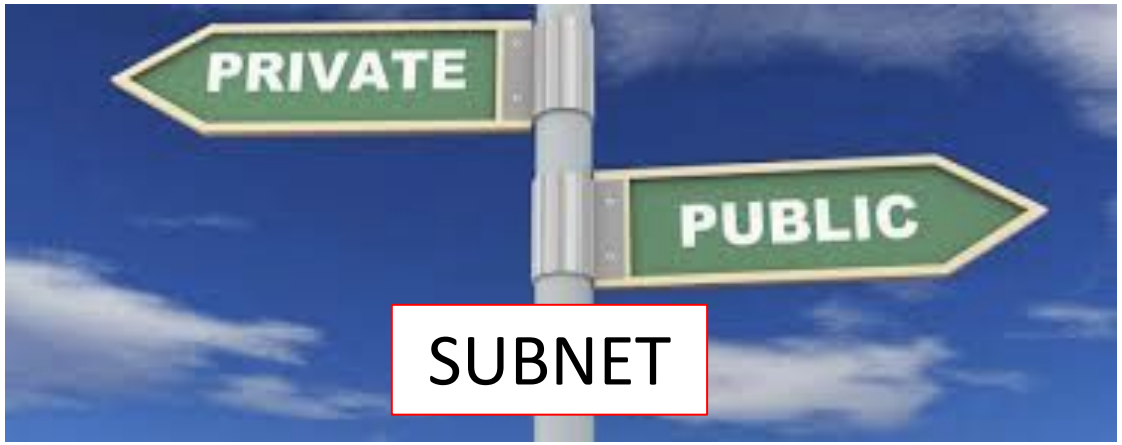
(Auto Assign IP)

AWS IP POOL

Private IP

VPC CIDR Pool

Route Tables



Private Subnets
Internet Connectivity

Public Subnets
Internet Connectivity