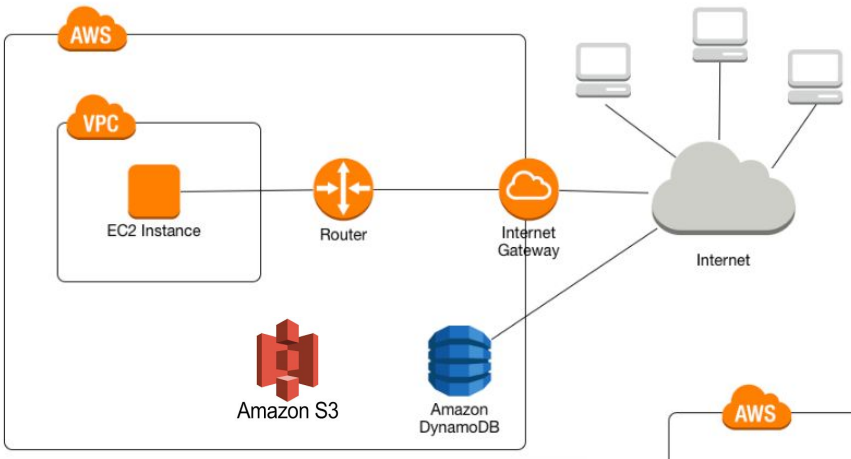
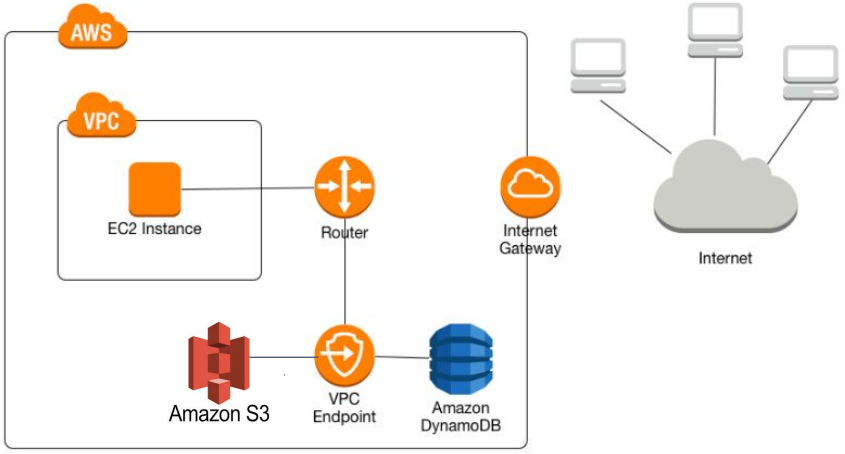


services using HTTP protocol



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**

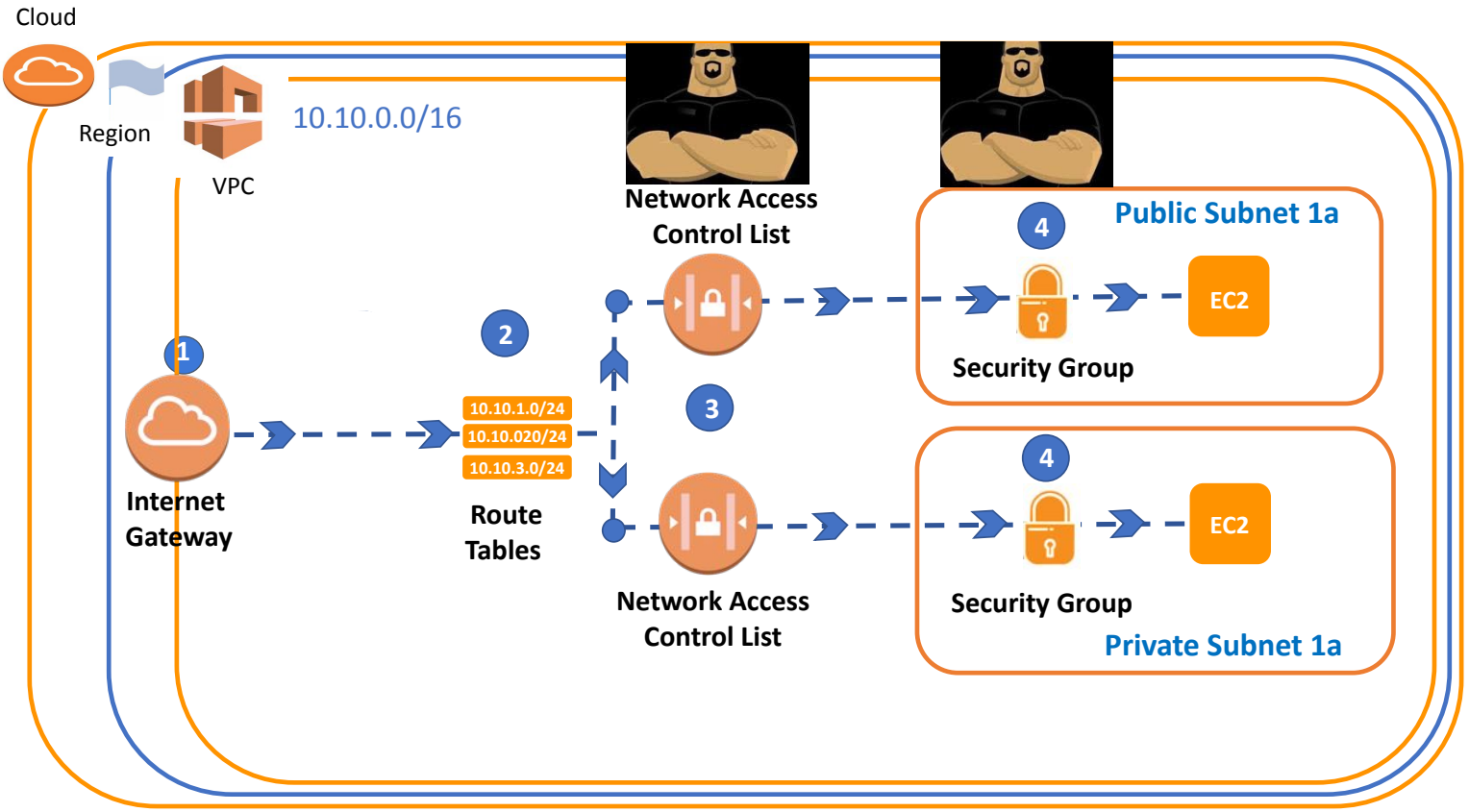
Subnet group Info

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.



65,536/256= 256 SUBNETS

VPC

10.0.0.0/16= **65,536** IPs in Range

Subnet-1 **Subnet-2** **Subnet-3** ----------> **Subnet-256**

10.0.1.0/24= **256** IPs 10.0.2.0/24= **256** IPs 10.0.3.0/24= **256** IPs 10.0.255.0/24= **256** IPs

10.0.2.0/32= **1** IP 10.0.2.3/32= **1** IP ----------> 10.0.255.0/32= **1** IP

65,536/4096= 16 SUBNETS

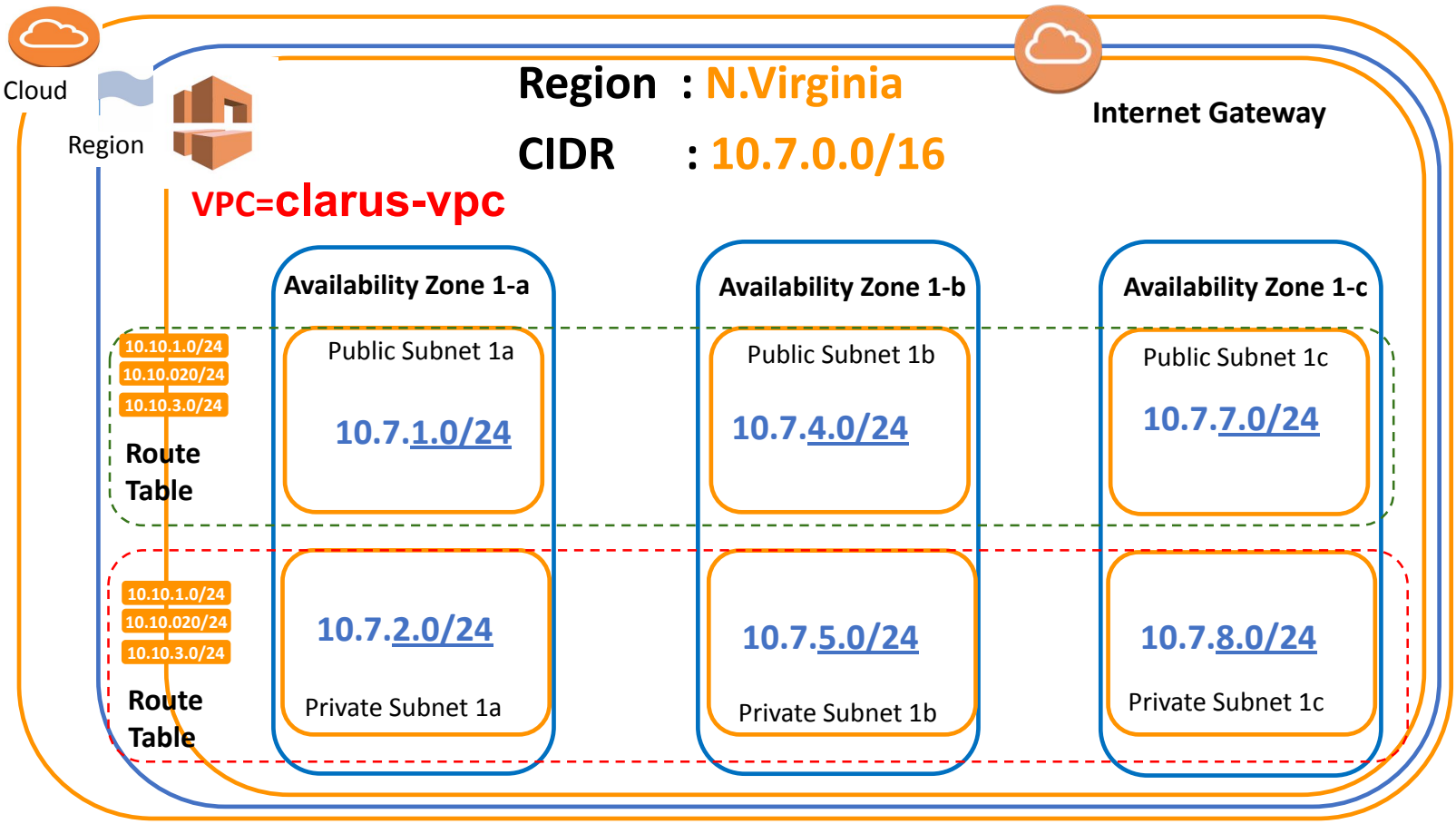
VPC

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



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

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)

TESLA

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

SUBNET CIDR

10.7.1.0/24

Private

10.7.2.0/24

10.7.3.0/24

10.7.4.0/20

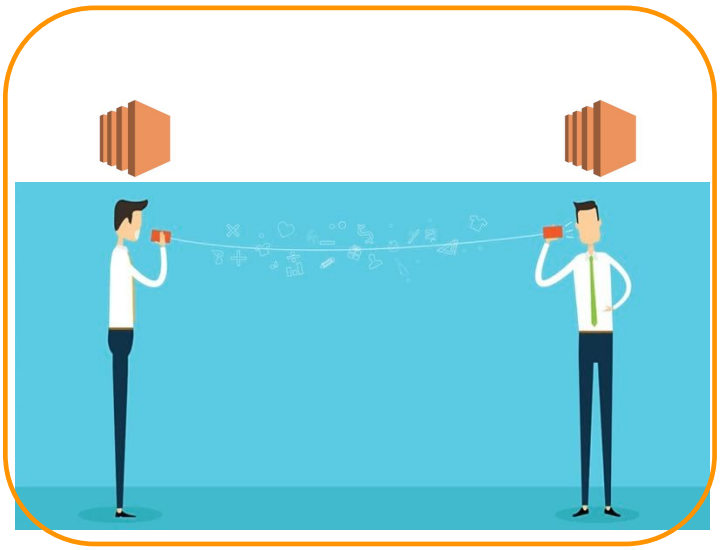
Account

VPC CIDR Bock

Labeling

Internal Communication

10.7.0.0/16 = 65000 IP = 65000



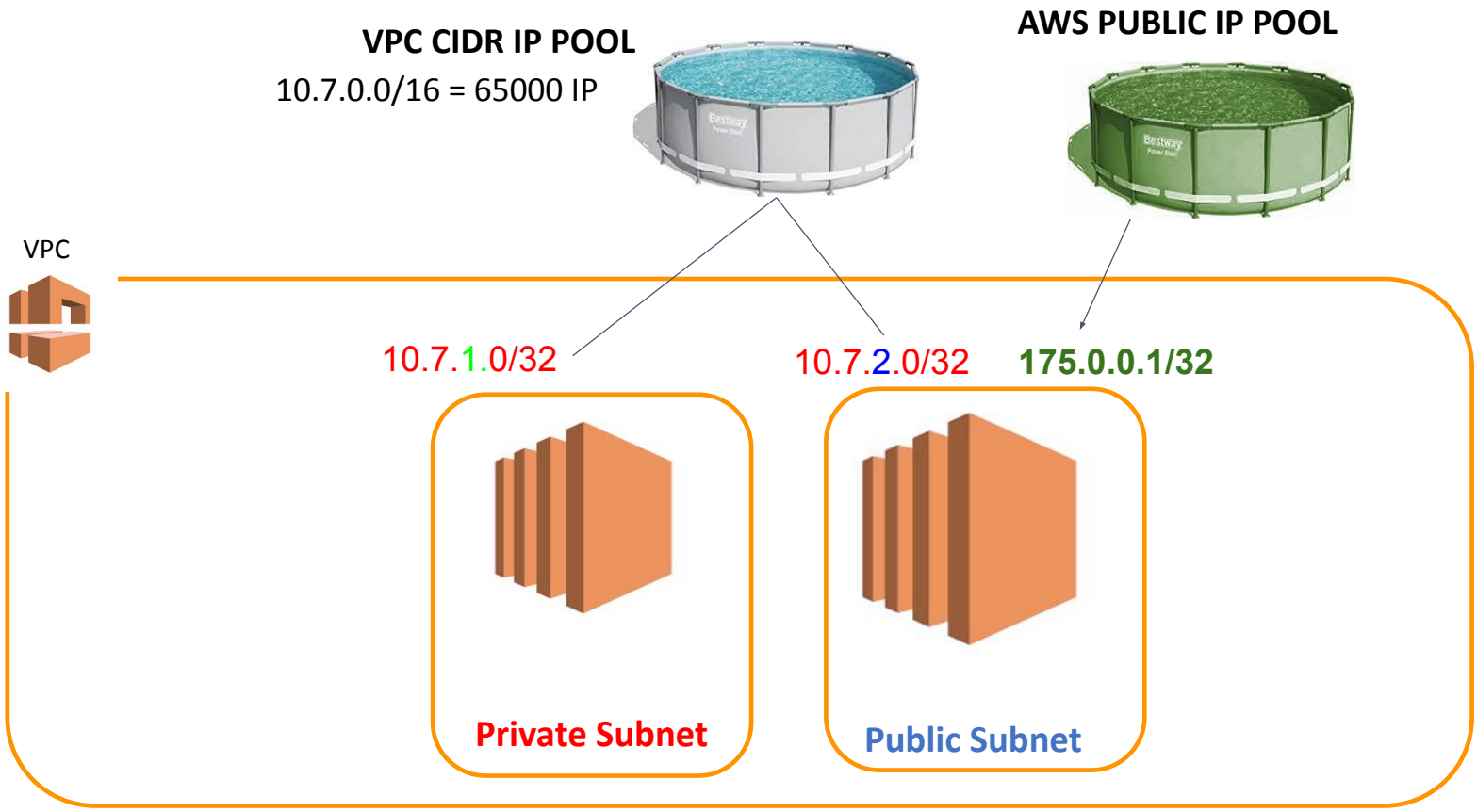
How is it possible to use the same CIDR block for all of us?

SSN:01-A-2345-4563

SSN:02-C-98756H64

VPC 1=House 1

VPC 2=House 2



Create VPC

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

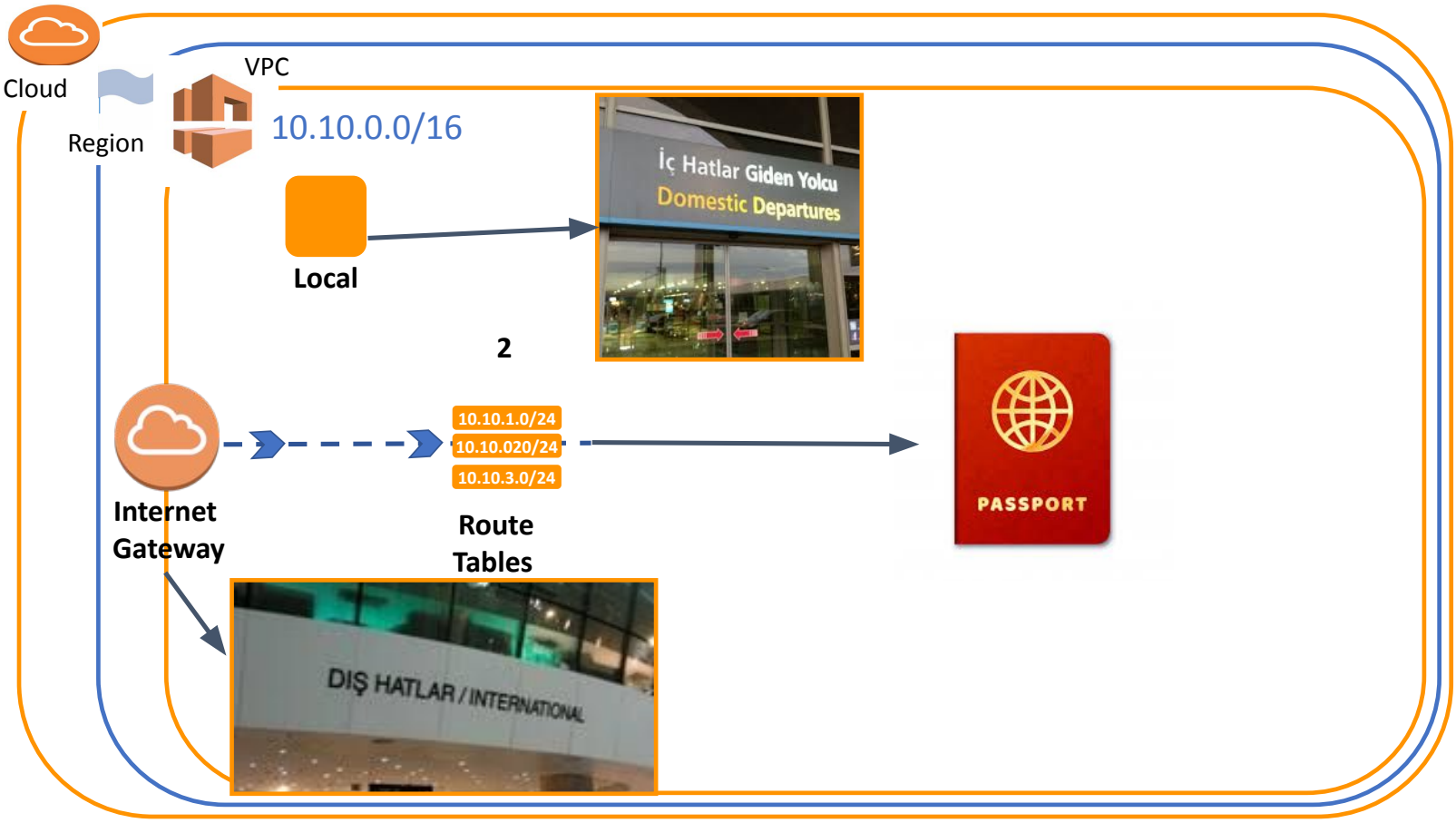
Create IGW

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



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

us-east-1a	us-east-1b	us-east-1c
• **public** • clarus-az1a-public-subnet • us-east-**1a** **10.7.1.0/24**	• **public** • clarus-az1b-public-subnet • us-east-**1b** **10.7.4.0/24**	• **public** • clarus-az1c-public-subnet • us-east-**1c** **10.7.7.0/24**
• **private** • clarus-az1a-private-subnet • us-east-**1a** 10.7.2.76 **10.7.2.0/24**	• **private** • clarus-az1b-private-subnet • us-east-**1b** **10.7.5.0/24**	• **private** • clarus-az1c-private-subnet • us-east-**1c** **10.7.8.0/24**
Spare… **us-east-1a** **10.7.3.0/24**	**Spare…** **us-east-1b** **10.7.6.0/24**	**Spare…** **us-east-1c** **10.7.9.0/24**

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

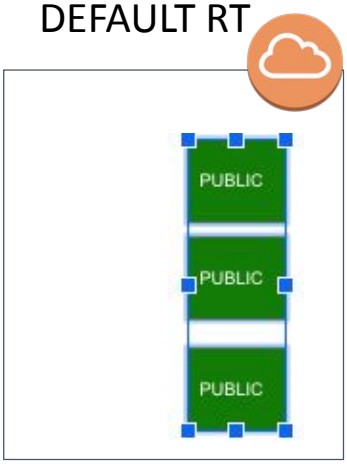
2- By default all subnets are PUBLIC !!!!!! a.Local b.0000/0 >>>>IGW

Conclusion

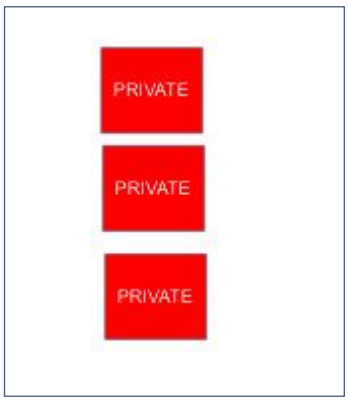
Current= 6 Public
Desired= 3 Public 3 Private

Option-1

DEFAULT RT

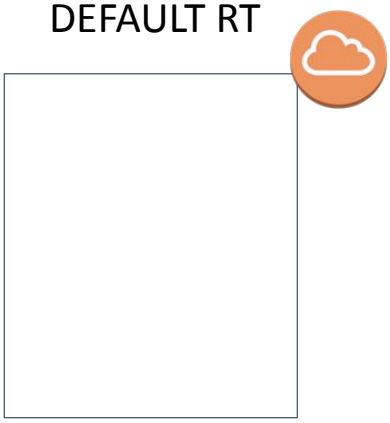


PRIVATE RT

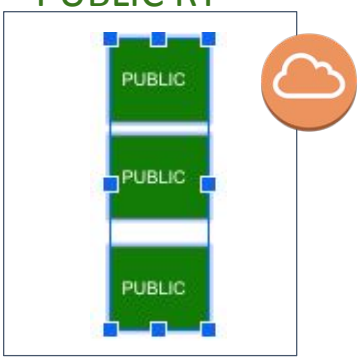


Option-2

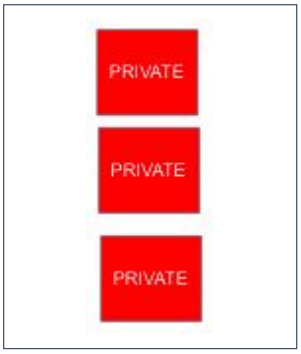
DEFAULT RT



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

VPC CIDR Pool

+

(Auto Assign IP)

AWS IP POOL

Create in Private Subnet

VPC CIDR Pool

Route Tables

Private Subnets
Internet Connectivity

Public Subnets
Internet Connectivity