

# Subnets, VPC Routers, and Route Tables Part 2

---



**Brock Tubre**

TECHNICAL INSTRUCTOR

# VPC Router

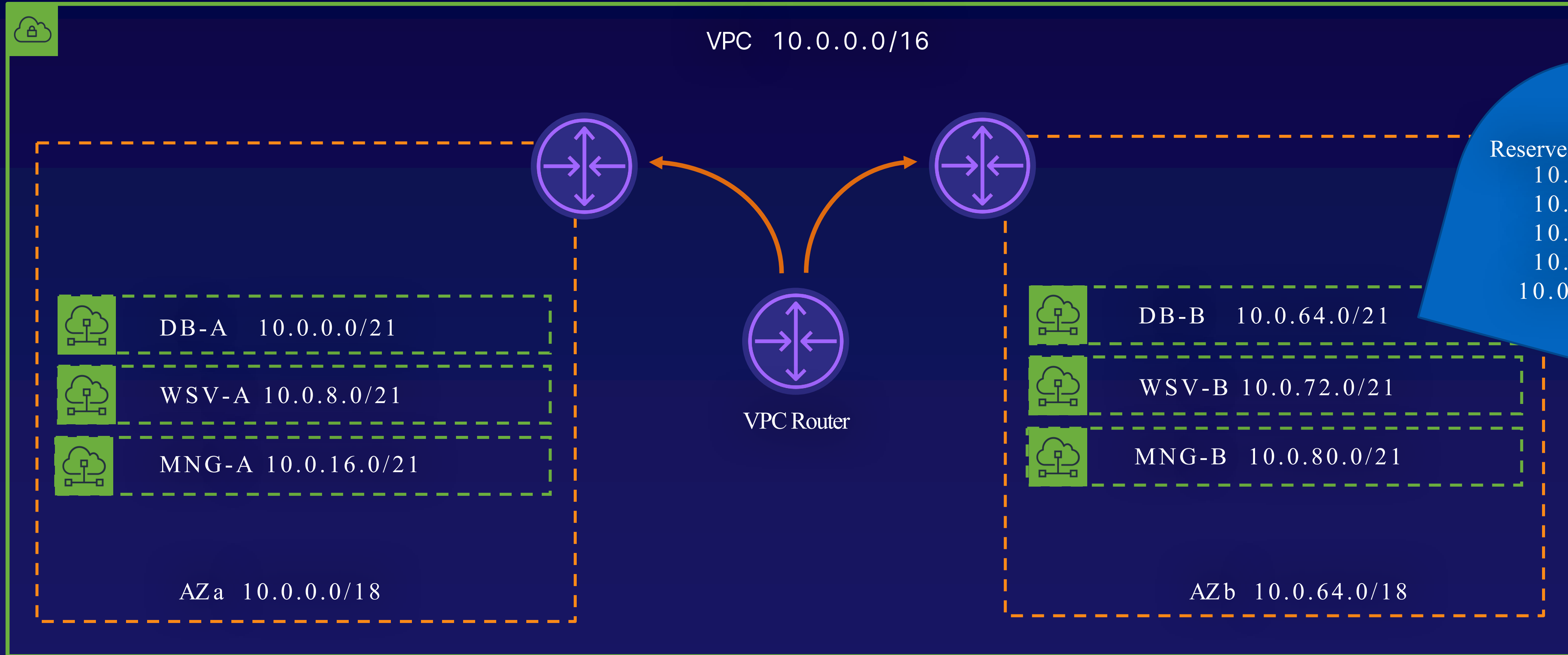
# VPC Router

Also known as the implicit router.

A logical construct where all routing decisions begin. Routing decisions are governed by route tables associated with VPCs and subnets. This is the first place packets hit when leaving resources that are in a VPC/subnet.



# VPC Router





VPC 10.0.0.0/16

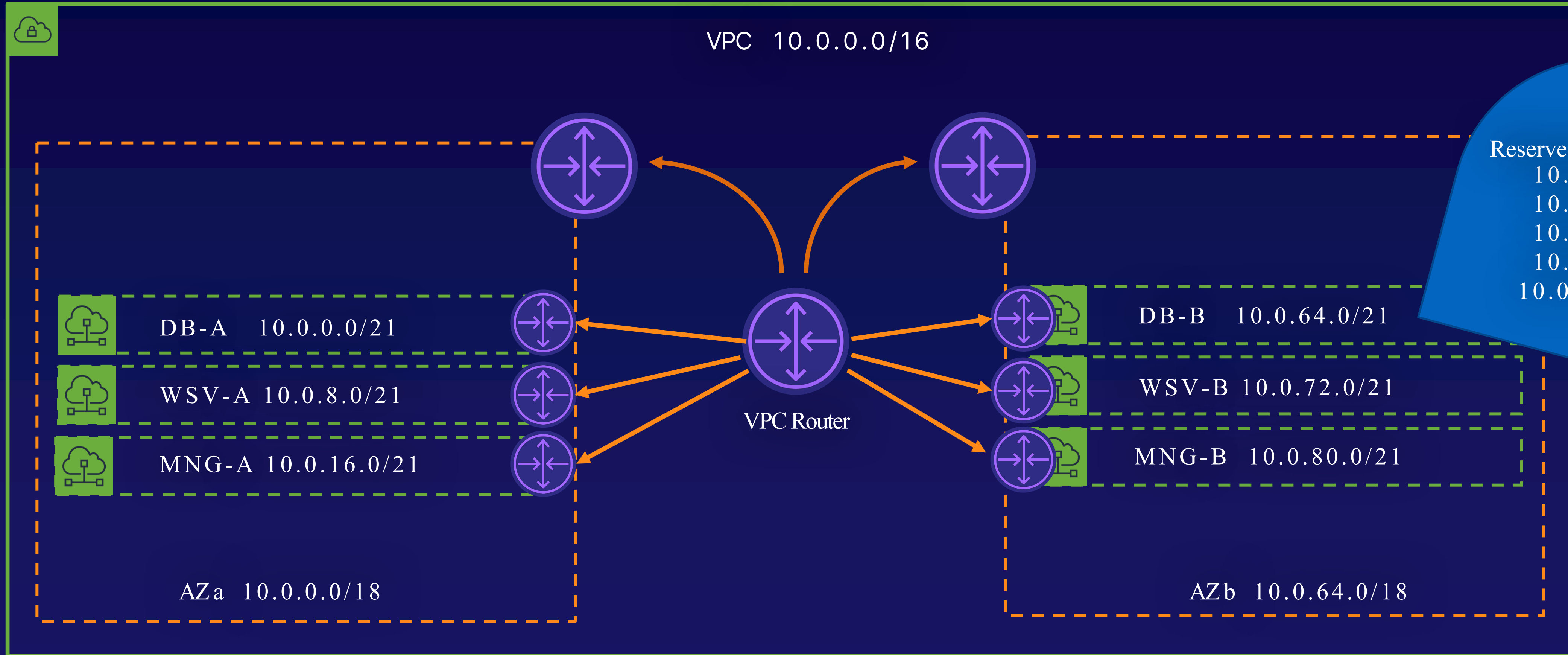
## AWS Reserved IP Addresses

In our example, subnet DB-B with a CIDR range of 10.0.64.0/21, the following five IP addresses are reserved:

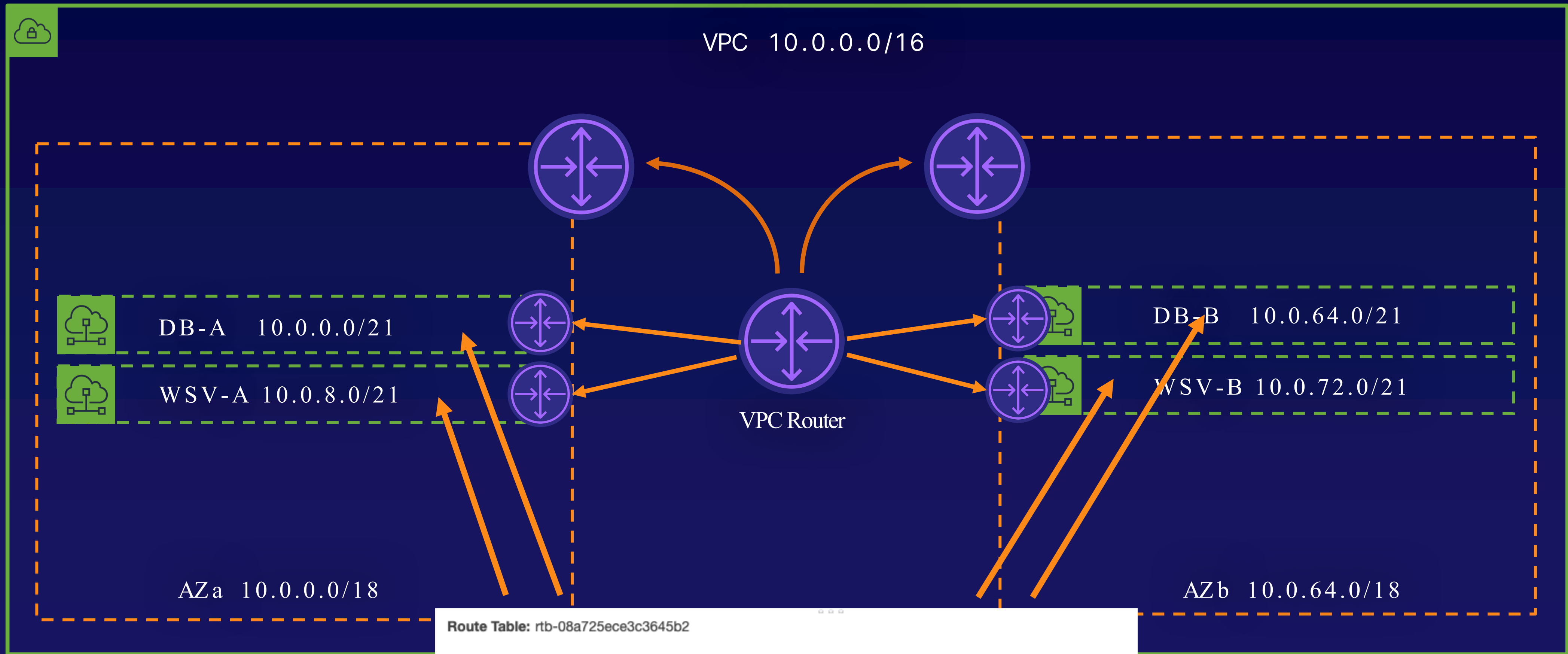
- 10.0.64.0: Network Address.
- 10.0.64.1: Reserved by AWS for the VPC router.
- 10.0.64.2: The IP address of the DNS server.
- 10.0.64.3: Reserved by AWS for future use.
- 10.0.71.255: Network broadcast address.

Addresses  
.64.0  
.64.1  
.64.2  
.64.3  
71.255

# VPC Router



# VPC Router



Main Route Table

Route Table: rtb-08a725ece3c3645b2

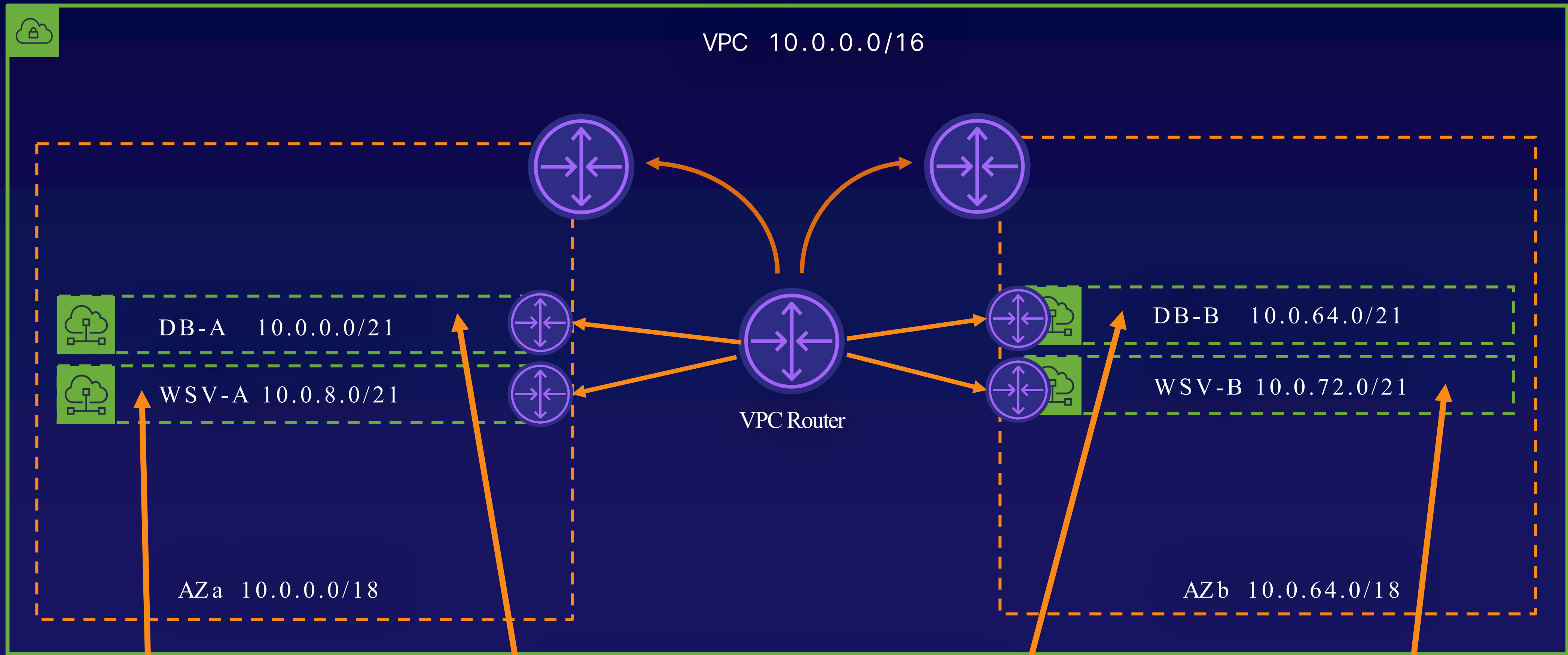
Summary Routes Subnet Associations Route Propagation Tags

Edit routes

View All routes

Destination	Target	Status	Propagated
10.0.0.0/16	local	active	No

# VPC Router



## Custom Route Tables

Route Table: rtb-001c481810608649d

Summary Routes Subnet Associations Route Propagation Tags

Edit routes

View All routes

Destination	Target	Status	Propagated
10.0.0.0/16	local	active	No

Route Table: rtb-086ed0c8e0d707a3a

Summary Routes Subnet Associations Route Propagation Tags

Edit routes

View All routes

Destination	Target	Status	Propagated
10.0.0.0/16	local	active	No

Route Table: rtb-0dad0be596dd039fe

Summary Routes Subnet Associations Route Propagation Tags

Edit routes

View All routes

Destination	Target	Status	Propagated
10.0.0.0/16	local	active	No

Route Table: rtb-02b000f012ff12116

Summary Routes Subnet Associations Route Propagation Tags

Edit routes

View All routes

Destination	Target	Status	Propagated
10.0.0.0/16	local	active	No

# VPC Router

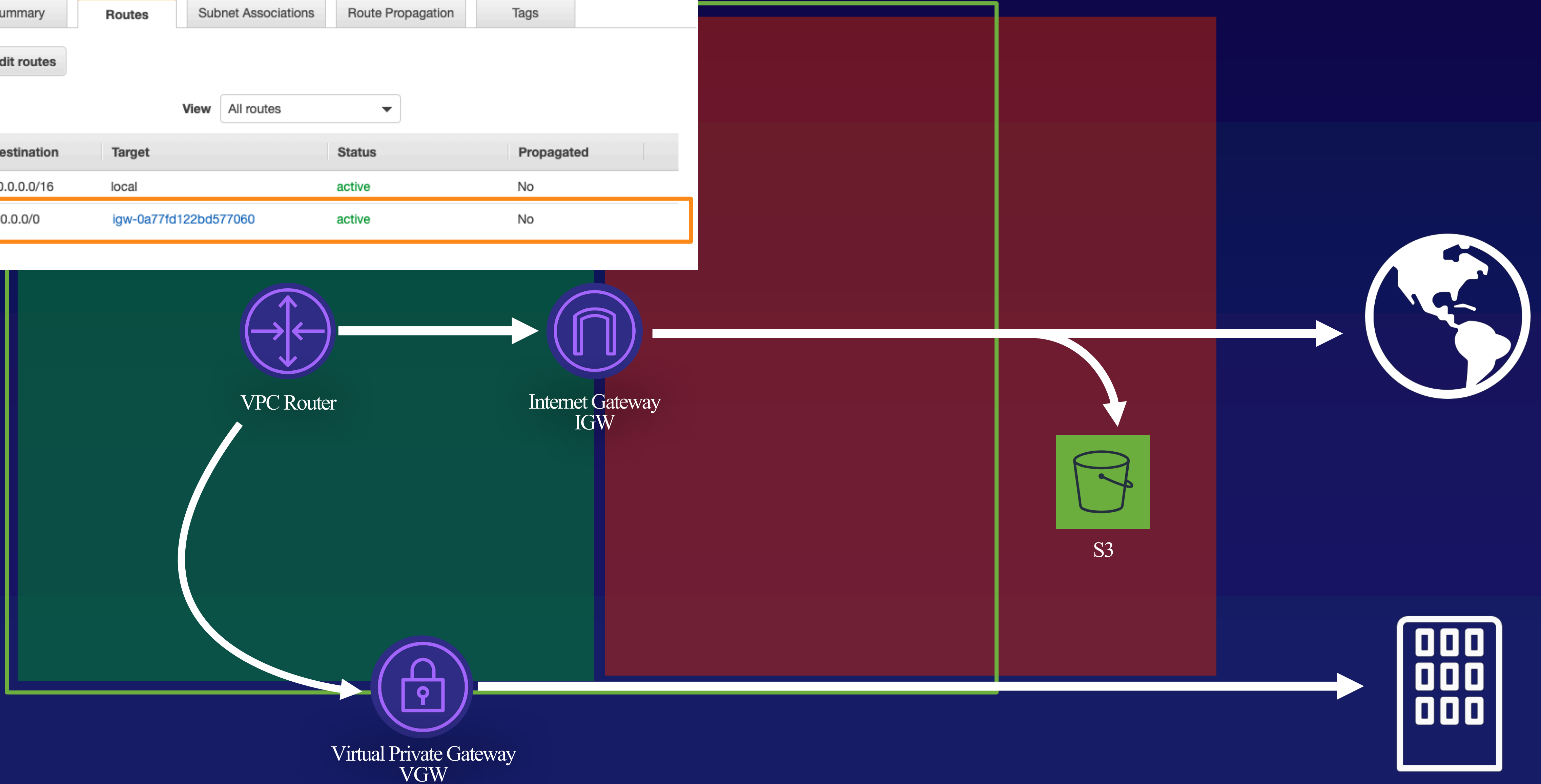
Route Table: rtb-08a725ece3c3645b2

Summary Routes Subnet Associations Route Propagation Tags

Edit routes

View All routes

Destination	Target	Status	Propagated
10.0.0.0/16	local	active	No
0.0.0.0/0	igw-0a77fd122bd577060	active	No



1

## Highly Available Device

VPC Routers are highly available devices and it occupies the .1 addressing space on every subnet associated with our VPC.

2

## Communicate Between VPC Subnets

By default, it allows communications between subnets in the same VPC. This is what the static “local” route table entry defines.

3

## Influencing VPC Routing

You can influence the routing for your VPC by editing the main route table or creating custom route tables for each of your subnets.

AWS reserves 5 IP addresses for internal networking purposes.