

# Elastic Network Interfaces, Elastic IPs, and Internet Gateways Part 2



**Brock Tubre**

TECHNICAL INSTRUCTOR

# Internet Gateway (IGW)

I translate public IPs  
into private IPs!

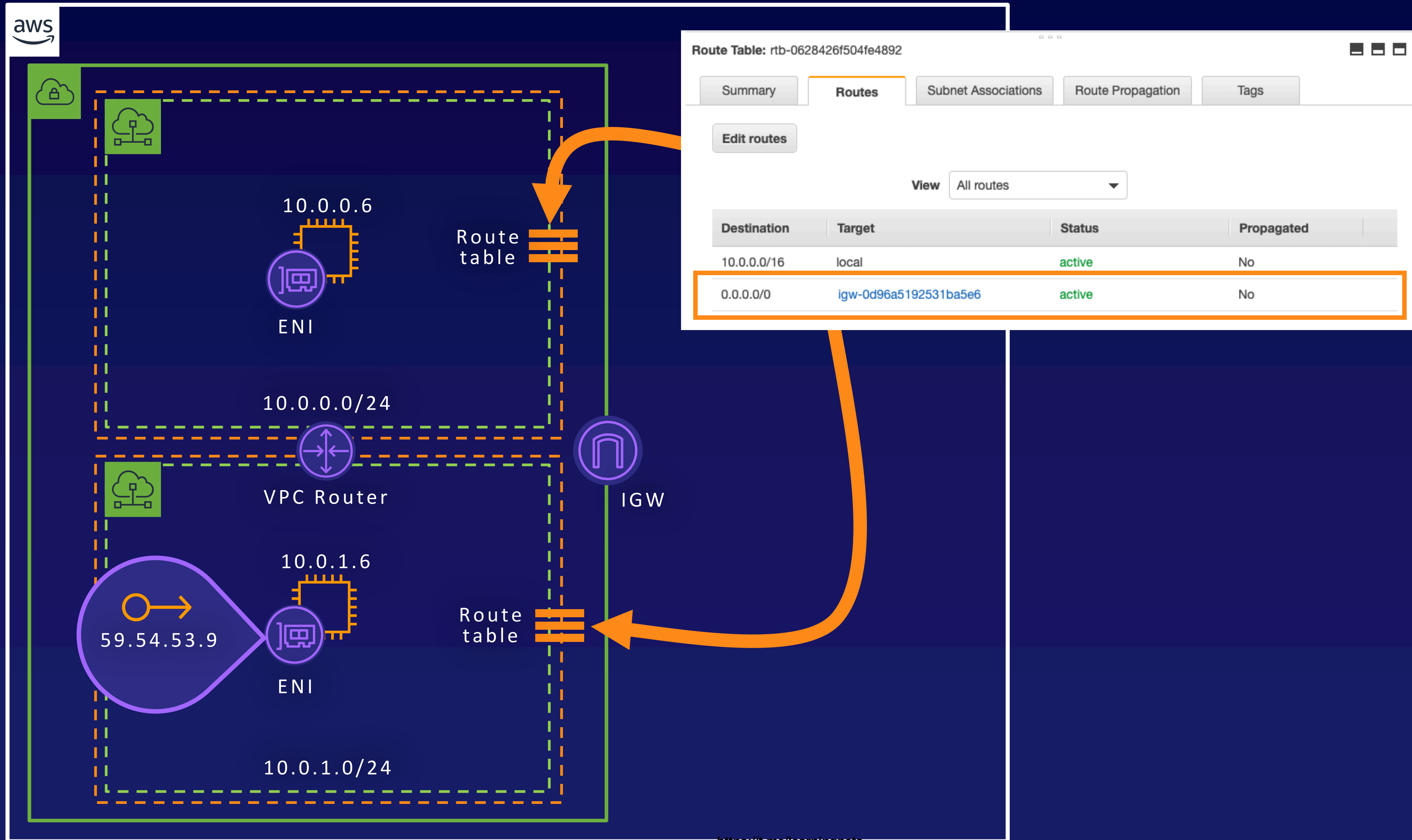


# Internet Gateway (IGW)

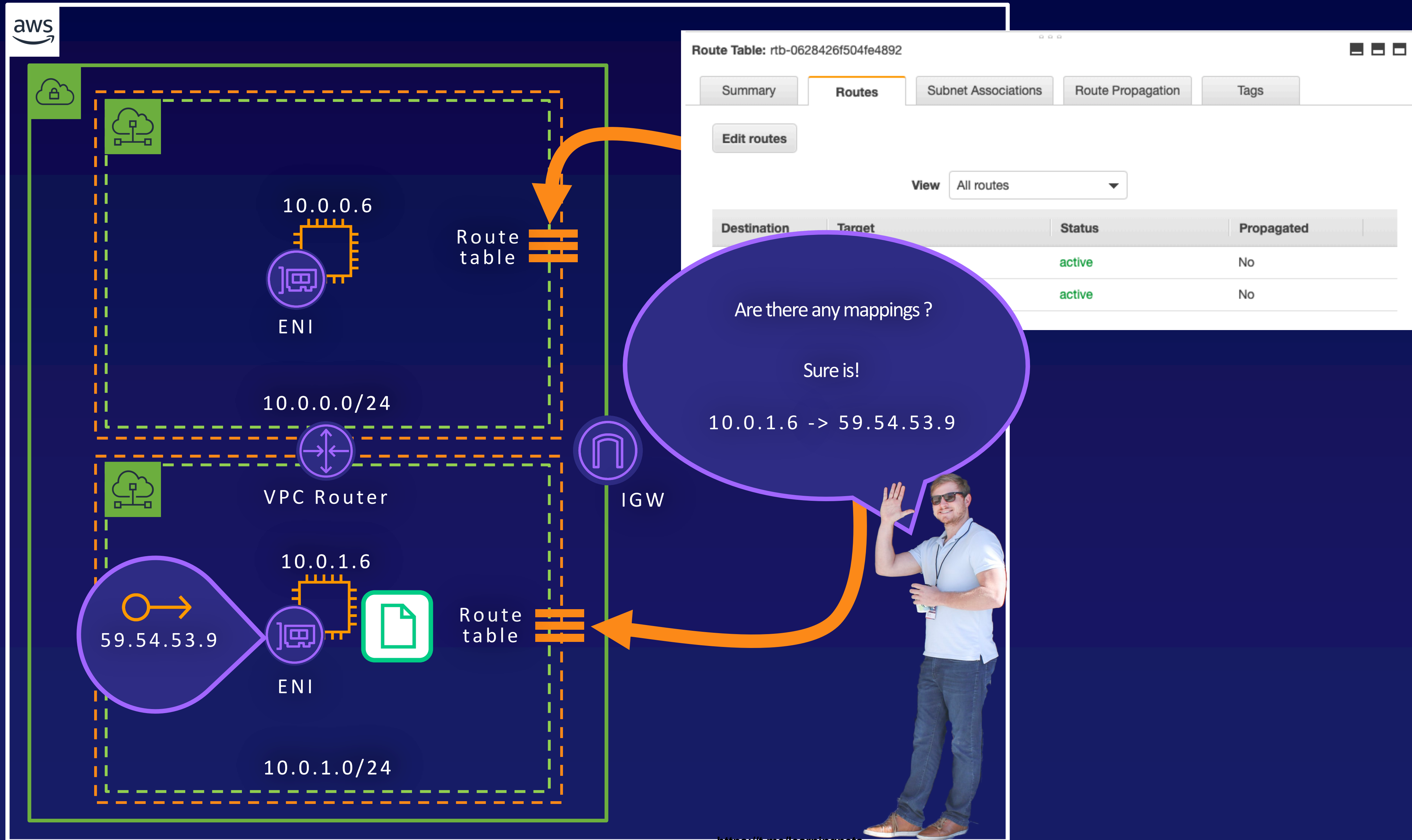
Translates private IPs to associated public IP addresses.

A highly scalable VPC component that allows communication between instances in your VPC and the internet. When an instance receives traffic from the internet, the IGW translates the destination address to the instances private address and forwards the traffic to the VPC.

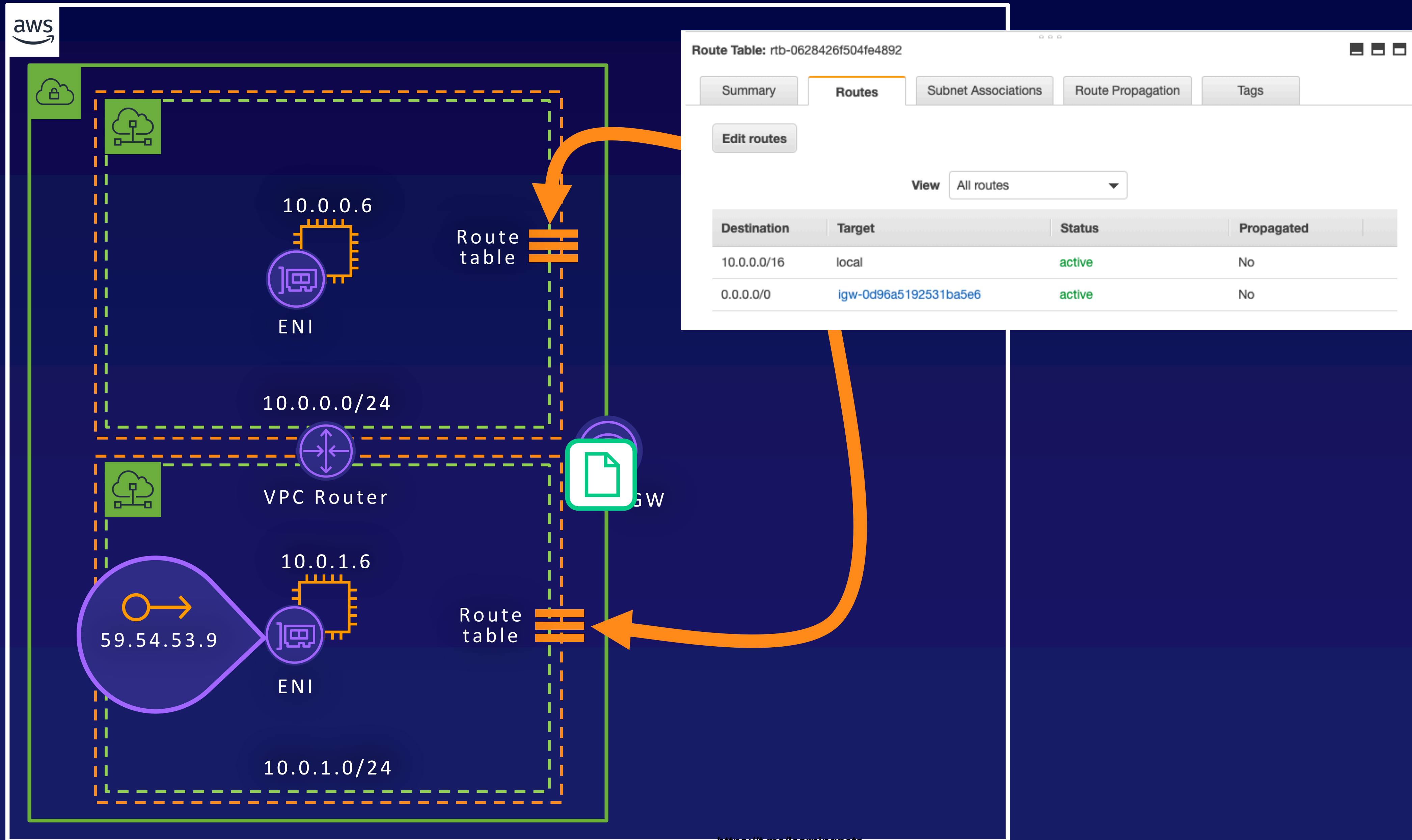
# Internet Gateway (IGW)



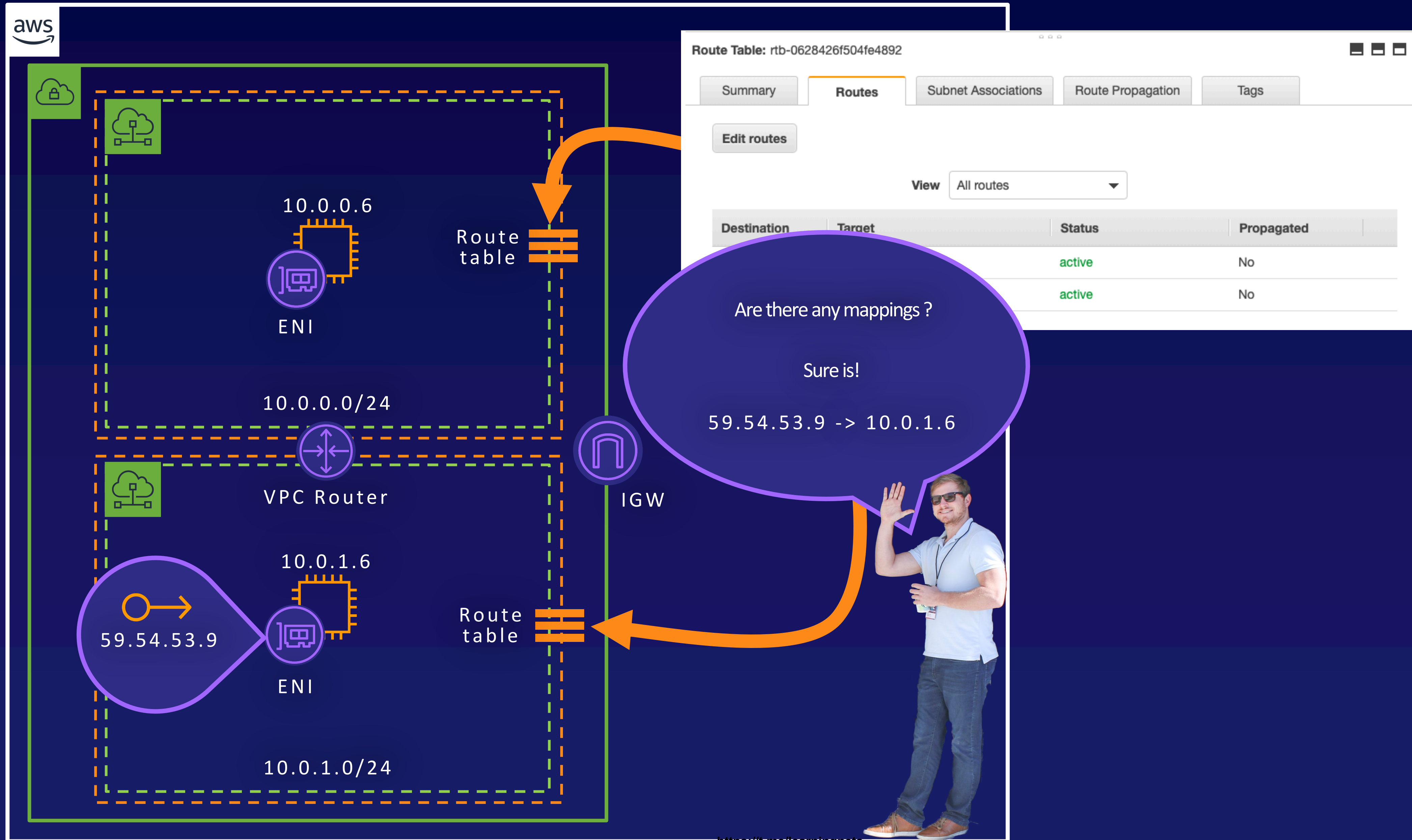
# Internet Gateway (IGW)



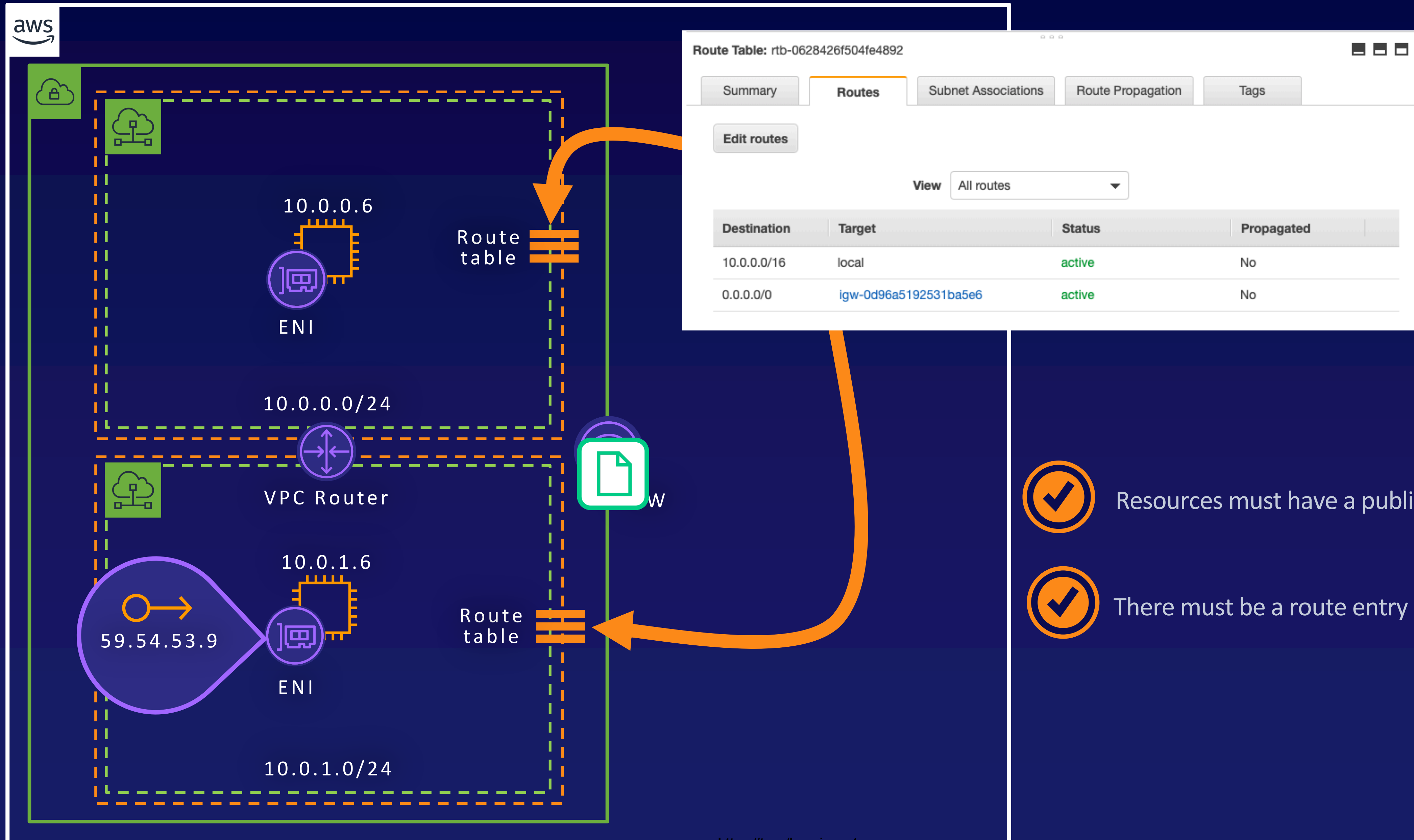
# Internet Gateway (IGW)



# Internet Gateway (IGW)



# Internet Gateway (IGW)

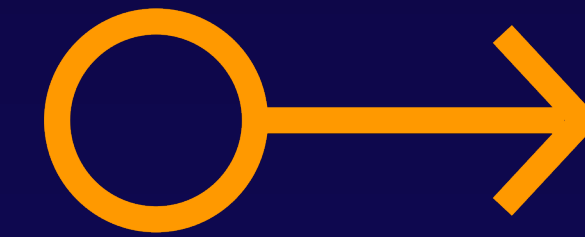


Resources must have a public IP.



There must be a route entry for the IGW.

## Elastic IP (EIP)



# Elastic IP (EIP)

Keep your static IP even when the underlying infrastructure changes.

A static, public IPv4 address that you can allocate to your account (taken from the pool) and release from your account (returned to the pool). The address comes from a pool of regional IPv4 addresses that AWS manages.

# Elastic IP (EIP) vs Dynamic External IP (Auto-assigned IP)

Elastic IP

Dynamic external IP

# Elastic IP (EIP) vs Dynamic External IP (Auto-assigned IP)

## Elastic IP

You request (allocate) from AWS's IPv4 address pool.

## Dynamic external IP

Assigned upon EC2 creation.

# Elastic IP (EIP) vs Dynamic External IP (Auto-assigned IP)

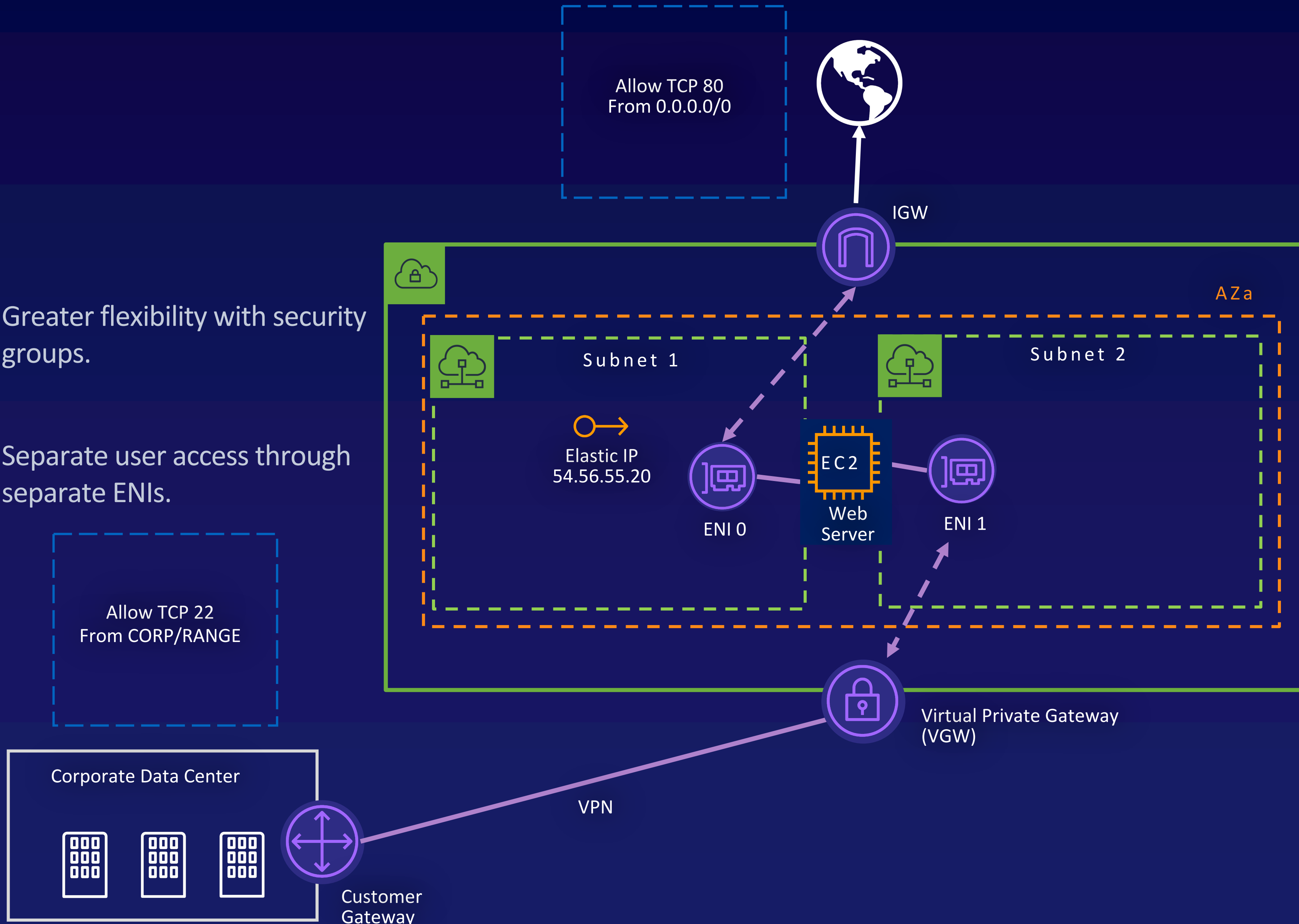
Elastic IP	Dynamic external IP
You request (allocate) from AWS's IPv4 address pool.	Assigned upon EC2 creation.
Assign EIP to an EC2 instance (technically assigned to the underlying ENI).	Cannot disassociate address from EC2 instance after launch.

# Elastic IP (EIP) vs Dynamic External IP (Auto-assigned IP)

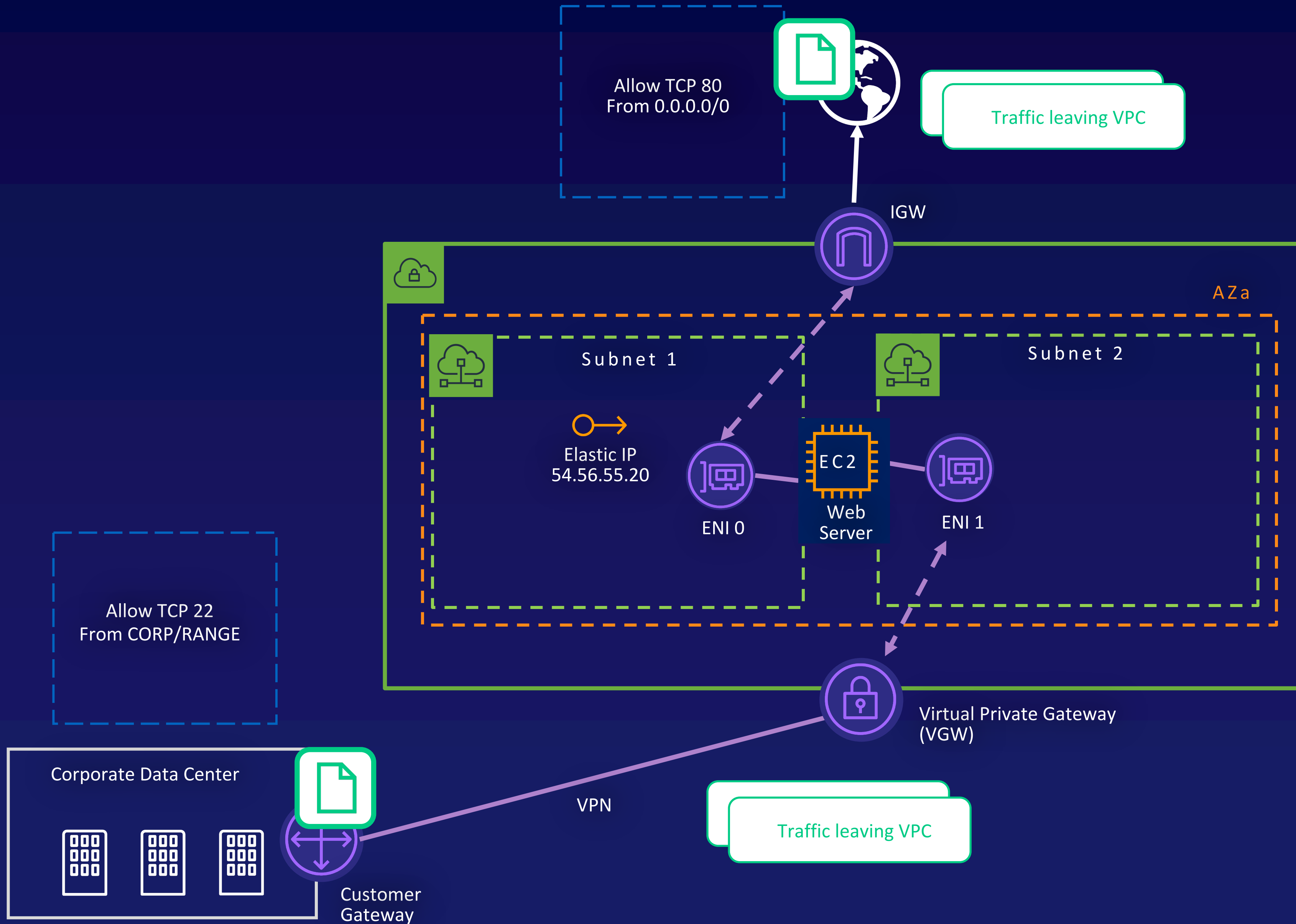
Elastic IP	Dynamic external IP
You request (allocate) from AWS's IPv4 address pool.	Assigned upon EC2 creation.
Assign EIP to an EC2 instance (technically assigned to the underlying ENI).	Cannot disassociate address from EC2 instance after launch.
You choose when to release back to AWS.	Automatically released when you stop or terminate the EC2 instance.

# Dual-Homed Instance

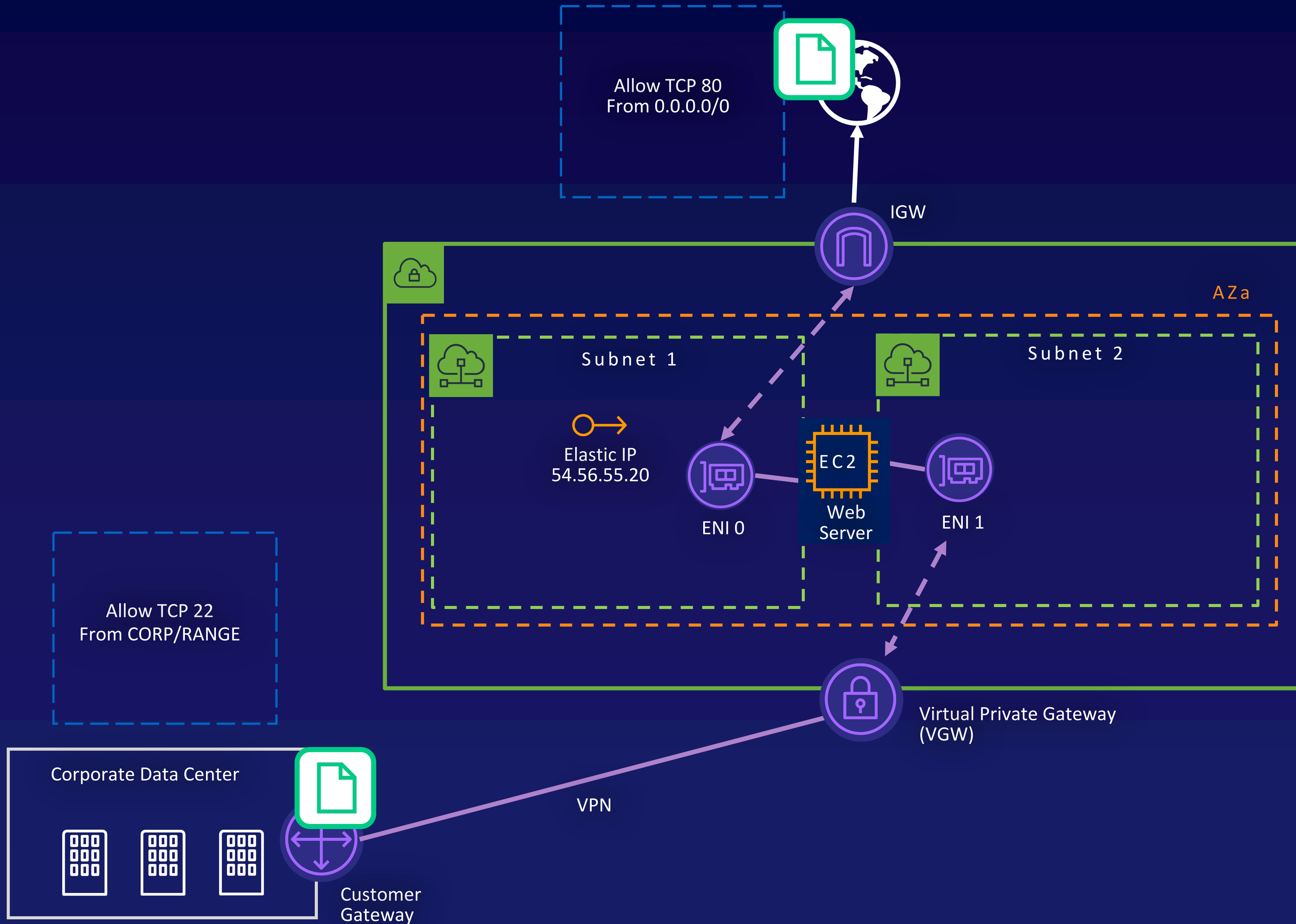
- Greater flexibility with security groups.
- Separate user access through separate ENIs.



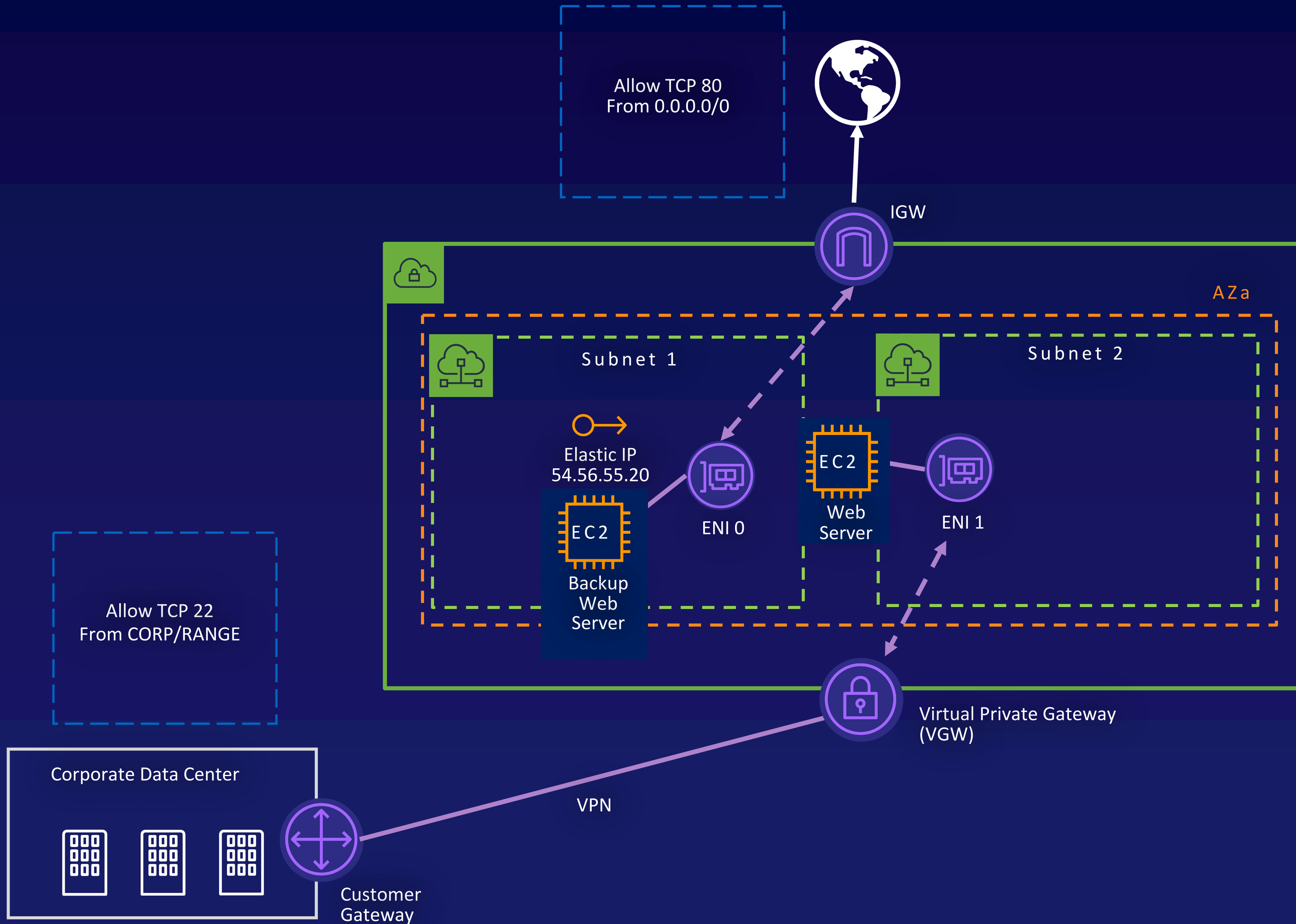
# Dual-Homed Instance



# Dual-Homed Instance



# Dual-Homed Instance



# Dual-Homed Instance



Allows for flexible software licensing.



Create a second ENI to license the software to.

