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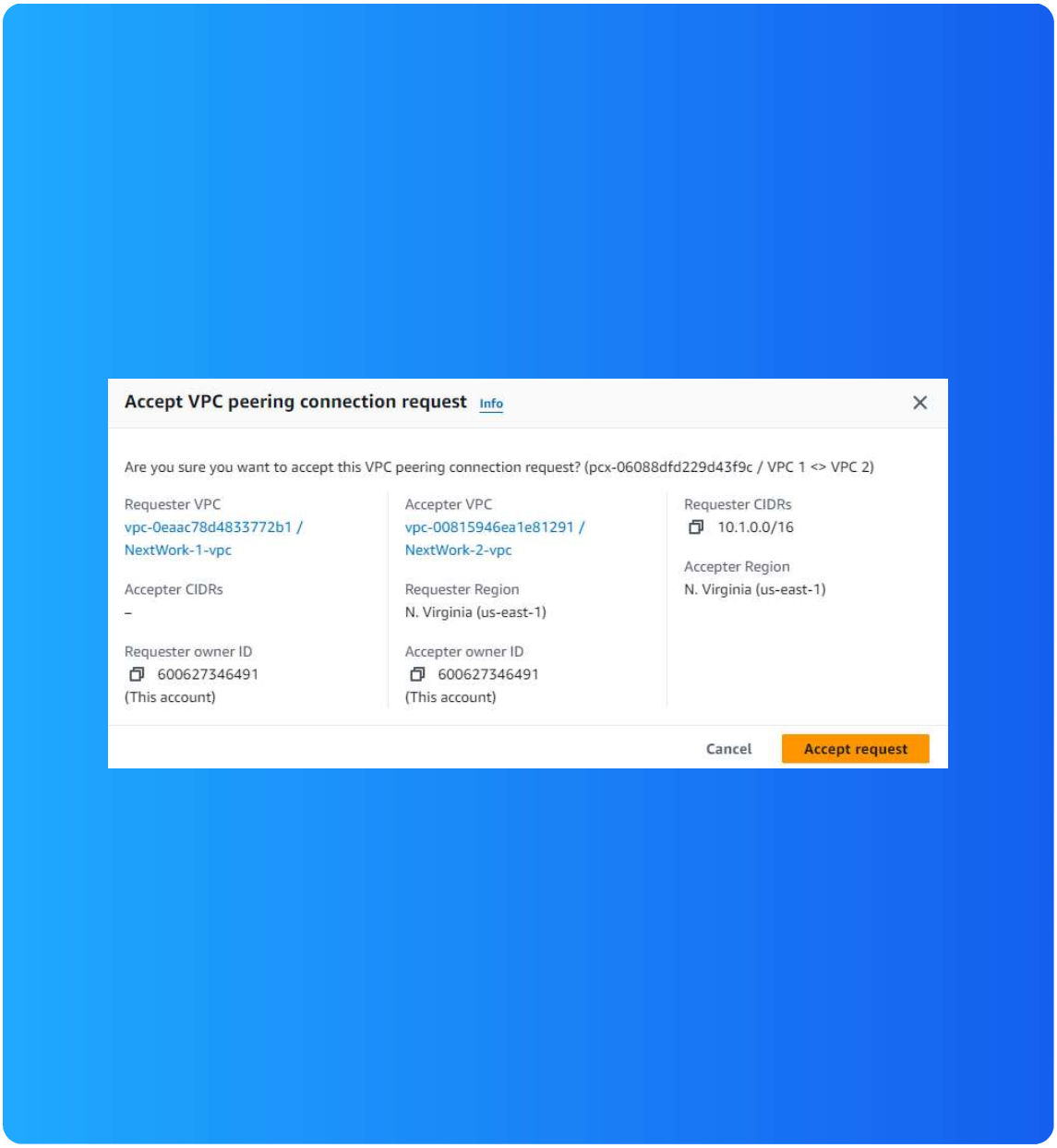
VPC Peering

Ivan Delgadillo Fernandez



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Introducing Today's Project!

What is Amazon VPC?

you can launch AWS resources in a logically isolated virtual network that you've defined

How I used Amazon VPC in this project

I used peering 2 VPC's with instances using private IP

One thing I didn't expect in this project was...

I didn't expect fix the default security groups

This project took me...

45 minutes

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In the first part of my project...

Step 1 - Set up my VPC

I will create a VPC from scratch using VPC resource map

Step 2 - Create a Peering Connection

A VPC peering connection is a networking connection between two VPCs that enables routing using each VPC's private IP addresses as if they were in the same network.

Step 3 - Update Route Tables

Set up a way for traffic coming from VPC 1 to get to VPC 2. Set up a way for traffic coming from VPC 2 to get to VPC 1.

Step 4 - Launch EC2 Instances

I will launch an EC2 instance in each VPC, so I can use them to test your VPC peering connection later.

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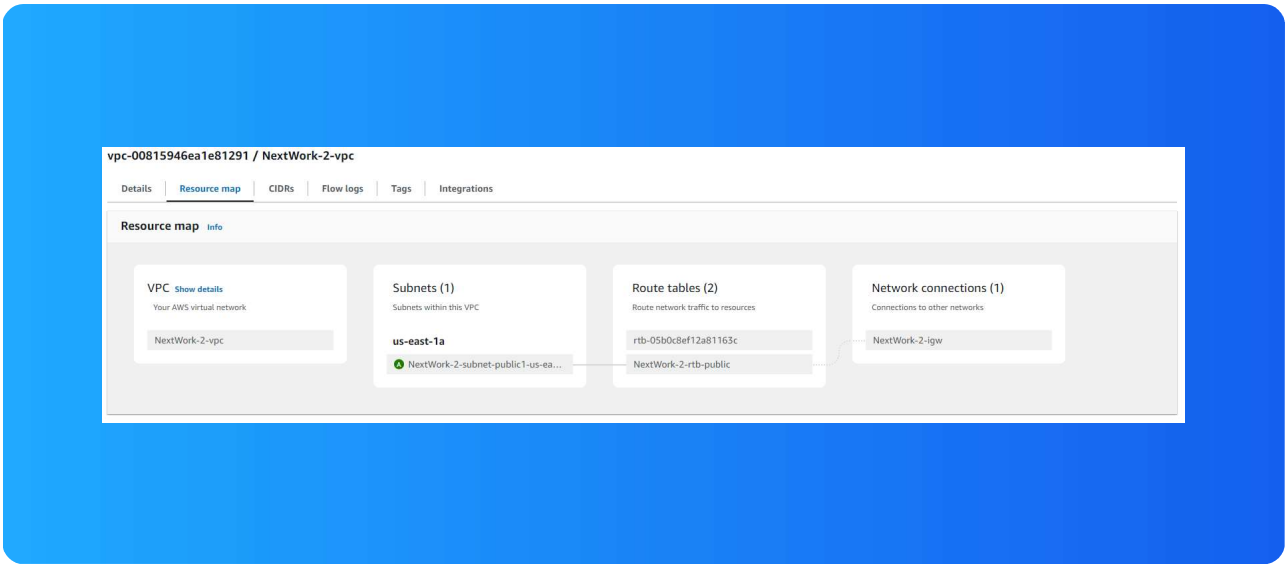
Multi-VPC Architecture

I did launch a 2 VPCs with a subnet public using a resource map option

Each VPC must have a unique IPv4 CIDR block so the IP addresses of their resources don't overlap. Having overlapping IP addresses could cause routing conflicts and connectivity issues!

I also launched 2 EC2 instances

I didn't set up key pairs for these EC2 instances as EC2 Instance Connect, AWS actually manages a key pair for us!



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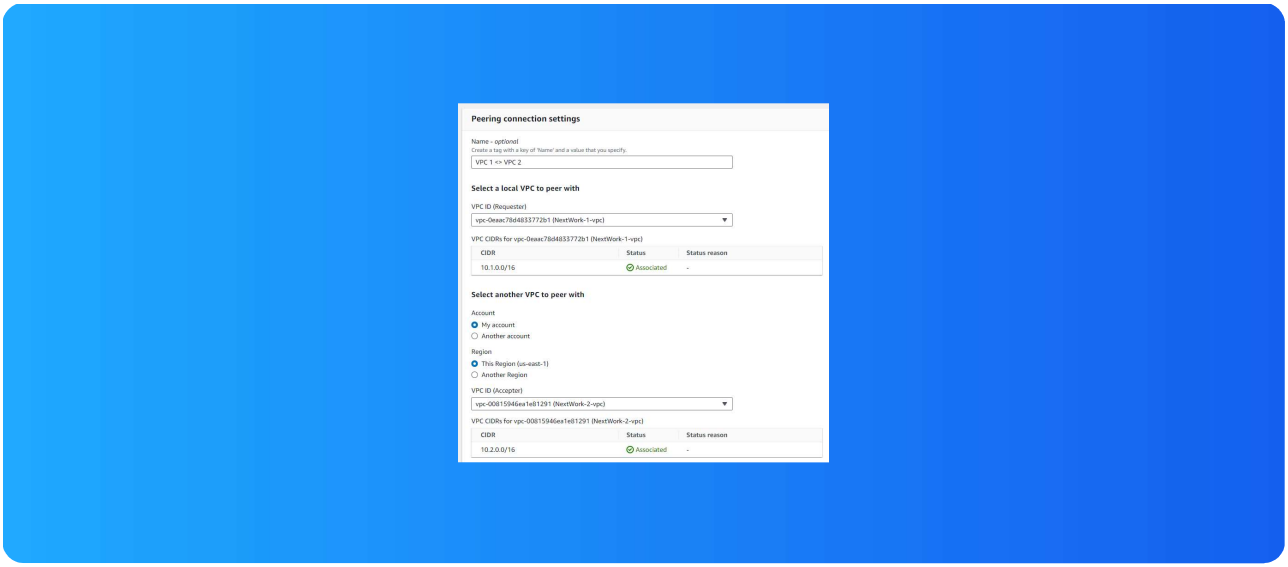
VPC Peering

A VPC peering connection is a direct connection between two VPCs! A peering connection lets VPCs and their resources route traffic between them using their private IP addresses

Transfer data VPCs without going through the public internet

In VPC peering, the Accepter is the VPC that receives a peering connection request! The Accepter can either accept or decline the invitation. This means the peering connection isn't actually made until the other VPC also agrees to it!



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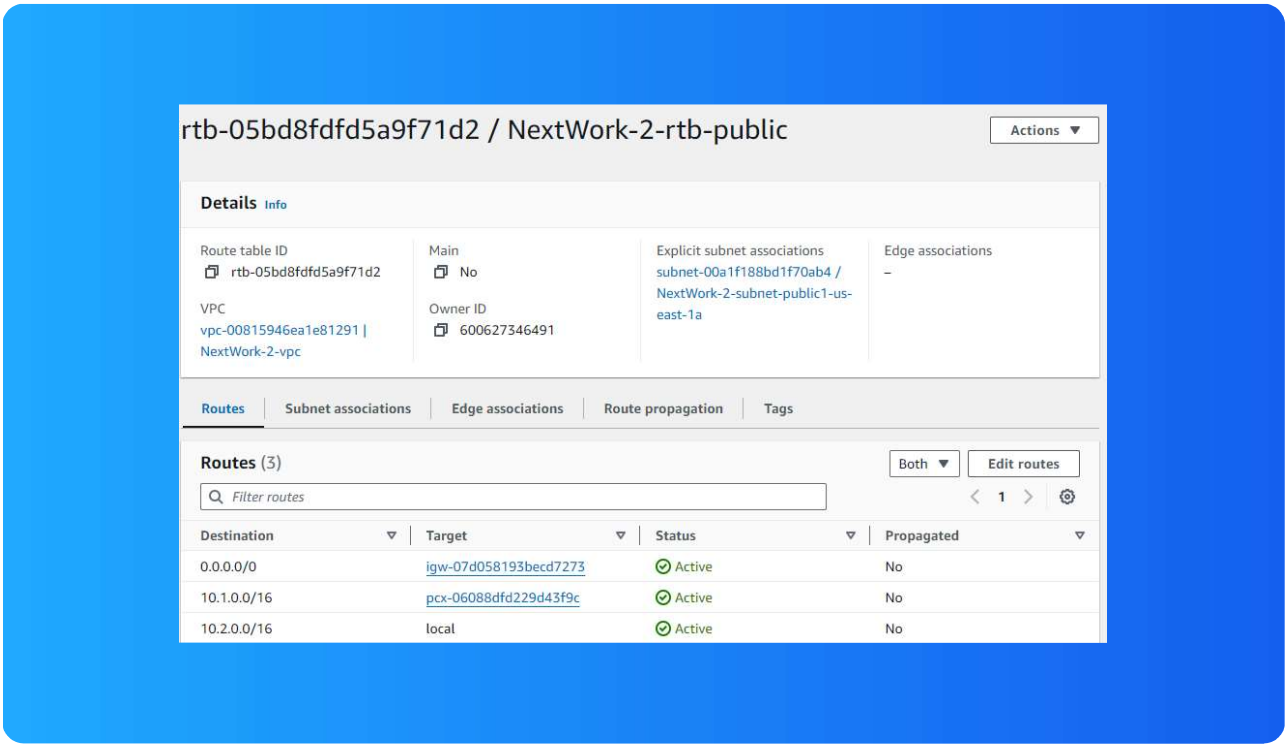
Updating route tables

Even if your peering connection has been accepted, traffic in VPC 1 won't know how to get to resources in VPC 2 without a route in your route table! You need to set up a route that directs traffic bound for VPC 2 to the peering connection you've set

My VPC's new routes have a destination of 10.X.0.0/16, the routes target was VPC peering.



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In the second part of my project...

Step 5 - Use EC2 Instance Connect

I'm trying connect to instance EC2 using Instance-connect

Step 6 - Connect to EC2 Instance 1

I will try connect to Instance using a IP public

Step 7 - Test VPC Peering

Instance 1 will send test messages to Instance 2.

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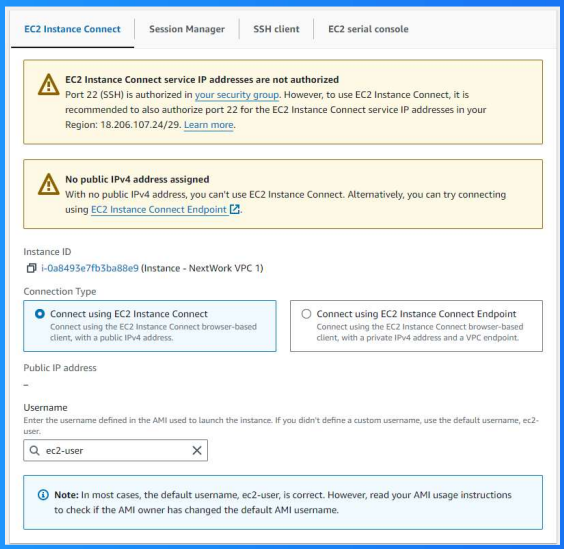
Troubleshooting Instance Connect

I used EC2 instance connect to test VPC peering

I was stopped from using EC2 instance Connect without IP public



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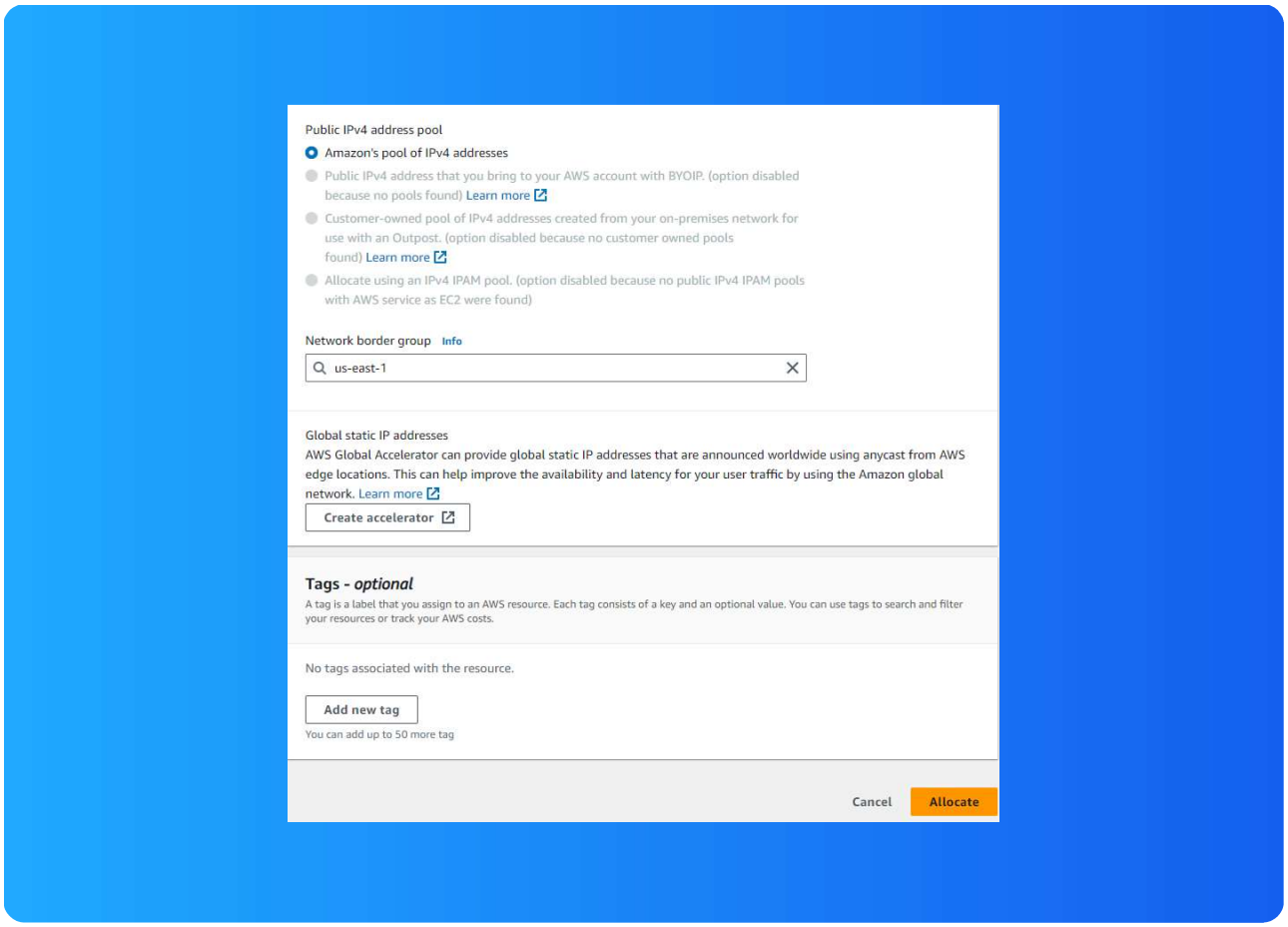
Elastic IP addresses

To resolve this error, I set up Elastic IP addresses. Elastic IP addresses a great way to assign an instance a public IPv4 address after launching it!

Associating an Elastic IP address resolved the error because the Instance now have a IP public to use instance connect



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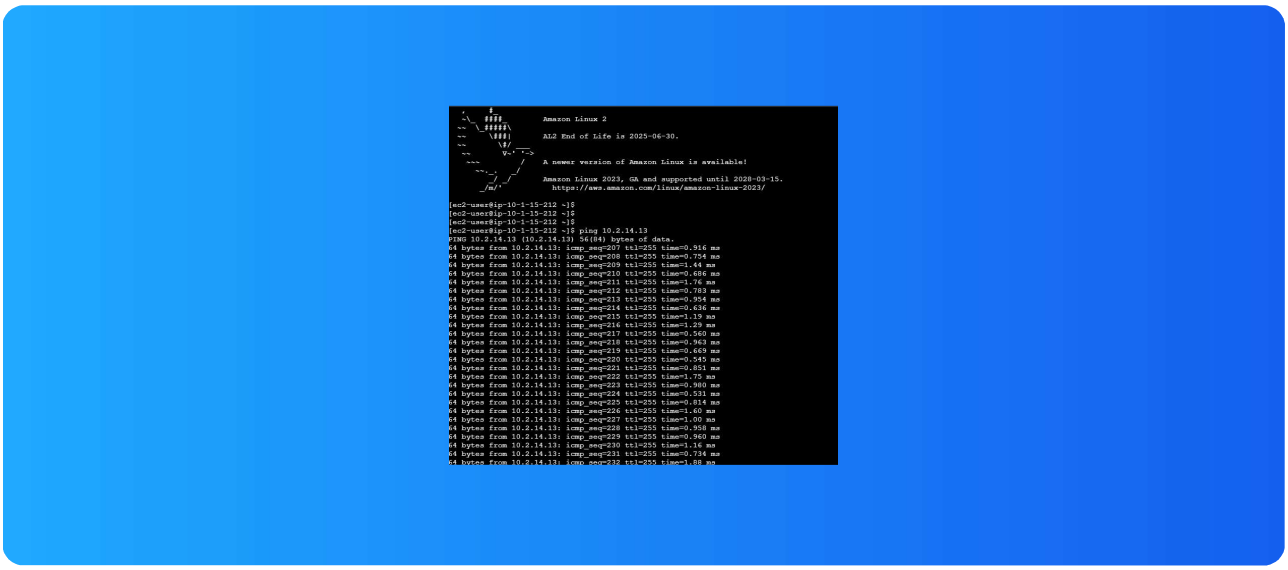
Troubleshooting ping issues

To test VPC peering I ran the command ping 10.X.X.X.

A successful ping test would validate my VPC peering connection because the instance 2 in VPC-2 are respond the ICMP.

I had update my second EC2 Instance's security group because don't allow the ICMP connection, I added a new rule that allow ICMP.



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