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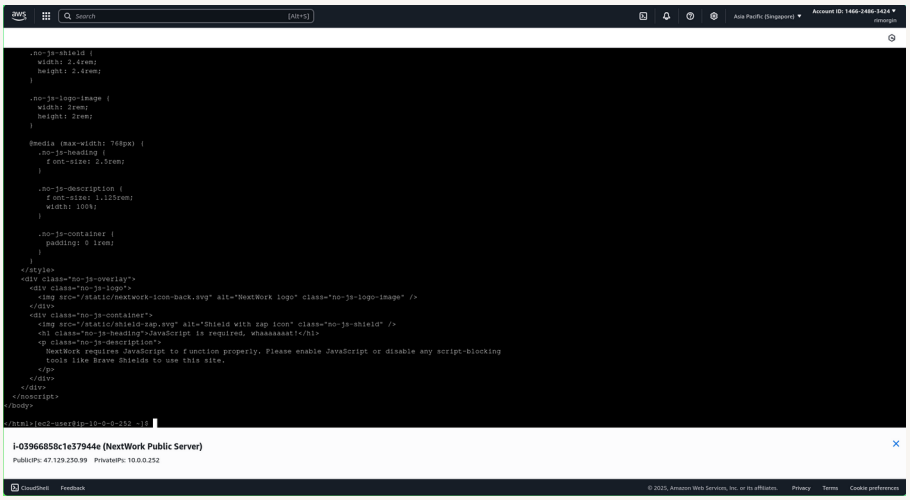
Testing VPC Connectivity

Sean Calderon



Introducing Today's Project!

What is Amazon VPC?

Amazon VPC is a isolated network in the vast open space of AWS Cloud. It is useful for engineers, enthusiasts, hobbyist, and etc. for learning VPC networking concepts because it is easy to understand and will help them upskill.

How I used Amazon VPC in this project

In this project, I used Amazon VPC to setup my own cloud network infrastructure that is secure.

This project took me...

This project took me approximately 35 minutes. It was not that challenging on troubleshooting connection issues since I already understand how network operates on VPC from subnet to subnet. However, it was still rewarding to see my instances being able to reach the internet and also able to communicate to each other while residing on different subnets.

Connecting to an EC2 Instance

Connectivity means a node to node connection has no issues and both nodes can interact and send/transfer data together.

My first connectivity test was whether I could connect to my public instance was not successful but it results error and can't connect to the instance.

EC2 Instance Connect

I connected to my EC2 instance using EC2 Instance Connect, which is one of the ways to access instance.

My first attempt at getting direct access to my public server resulted in an error, because there is no rule on security group that allows ssh on my instance.

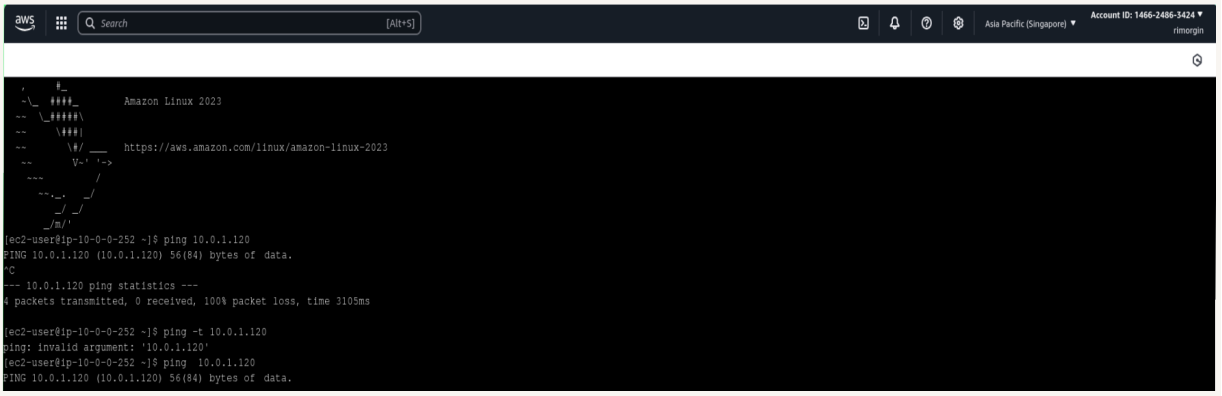
I fixed this error by adding a rule to allow ssh with source ip of anywhere. Although, anywhere is not a best practice to for remote access because hackers can brute force attack the instance.

Connectivity Between Servers

Ping is a network utility to check if the other node is reachable. I used ping to test the connectivity between public server and private server

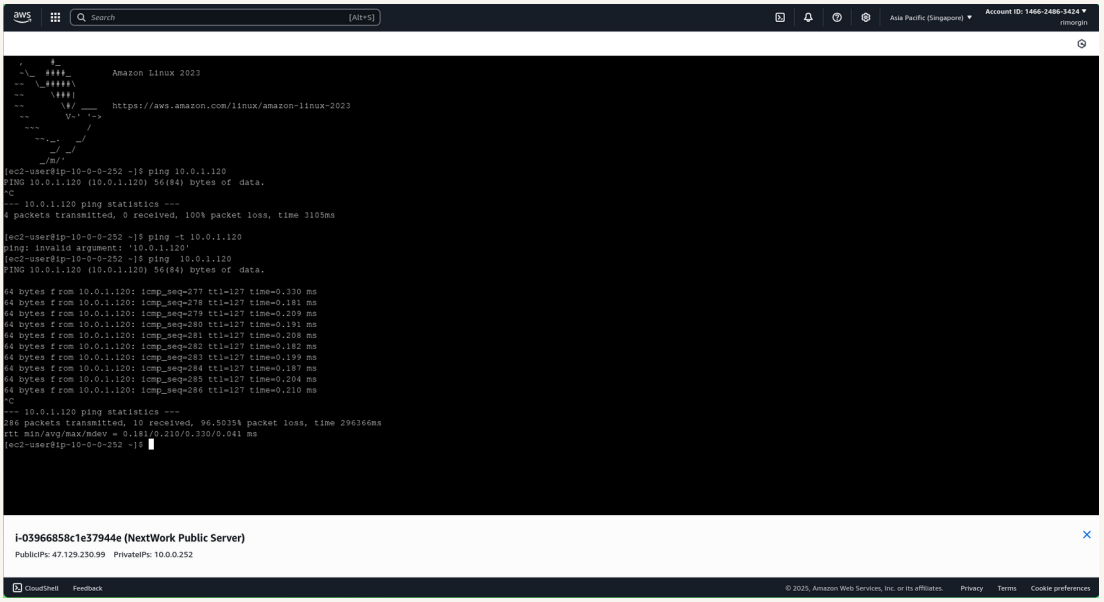
The ping command I ran was "ping 10.0.1.120"

The first ping returned no responses from the private server. This meant there are issues on how the ICMP packets travel from subnet to subnet.



Troubleshooting Connectivity

I troubleshooted this by checking the NACL first because it is the first barrier of checkpoint for traffic going in and out of the subnet. After carefully analyzing and solving the problem on NACL, the problem now lies on instance level and solved it



Connectivity to the Internet

Many developers use cURL because it has wide variety of uses such as getting or sending data, including files, using URL syntax.

I used curl to test the connectivity between my public server and the internet to verify if my instance is reachable over the internet..

Ping vs Curl

Ping and curl are different because ping is used only to test reachability and latency while curl can only do reachability testing but there are other use cases for curl.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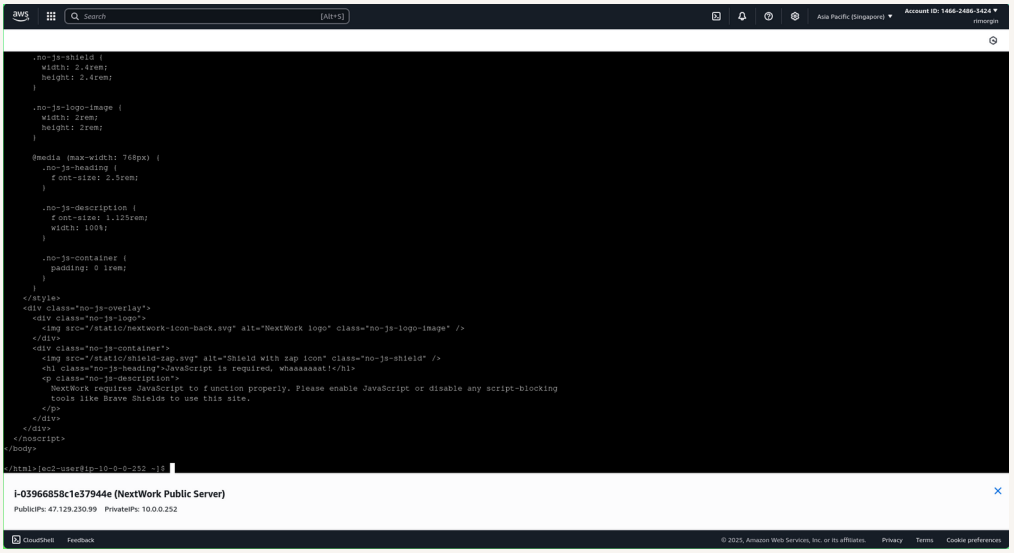
NextWork Student

Connectivity to the Internet

I ran the curl command "curl google.com" which returned raw html content which means my public server can reach google.com or simply the internet.



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