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Testing VPC Connectivity

OR

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```
}

@media (max-width: 768px) {
  .no-js-heading {
    font-size: 2.5rem;
  }

  .no-js-description {
    font-size: 1.125rem;
    width: 100%;
  }

  .no-js-container {
    padding: 0 1rem;
  }
}

</style>
<div class="no-js-overlay">
  <div class="no-js-logo">
    
  </div>
  <div class="no-js-container">
    
    <h1 class="no-js-heading">JavaScript is required, whaaaaaat!</h1>
    <p class="no-js-description">
```

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Introducing Today's Project!

What is Amazon VPC?

Amazon VPC is Virtual Private Cloud and it is useful because it helps us create private network and connect our resources together.

How I used Amazon VPC in this project

In today's project, I used Amazon VPC to test my connectivity within my VPC and the internet.

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

Nothing really

This project took me...

This project took me 1 hour.

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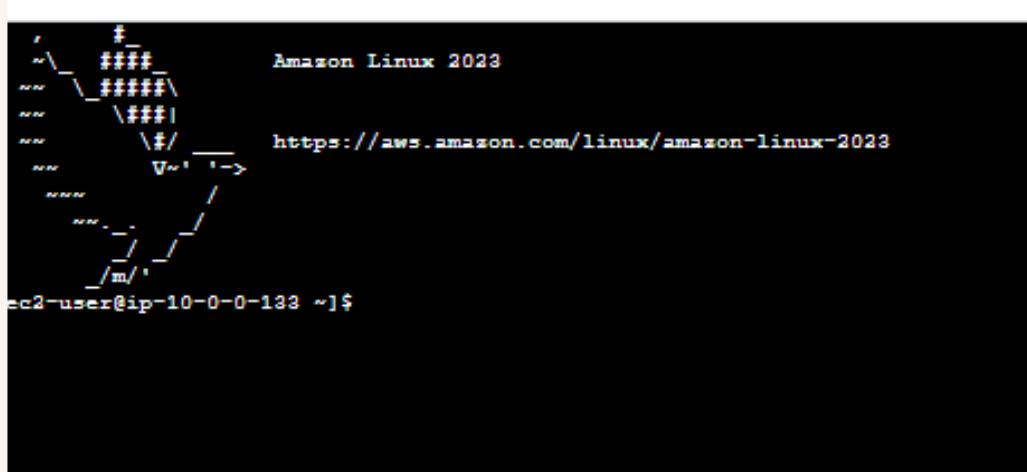
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Connecting to an EC2 Instance

Connectivity means how well different part of your resources talk to each other.

My first connectivity test was whether I could connect to my ec2 using instance connect, but seems to fail.



A screenshot of a terminal window on an Amazon Linux 2023 instance. The window shows a stylized tree logo on the left and the text "Amazon Linux 2023" and "https://aws.amazon.com/linux/amazon-linux-2023" in the center. At the bottom, the command "curl https://aws.amazon.com/linux/amazon-linux-2023" is entered, followed by a red error message: "curl: (7) Failed to connect to aws.amazon.com port 443: Connection refused". The prompt "ec2-user@ip-10-0-0-133 ~]\$" is at the bottom right.

```
curl: (7) Failed to connect to aws.amazon.com port 443: Connection refused
ec2-user@ip-10-0-0-133 ~]$
```

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EC2 Instance Connect

I connected to my EC2 instance using EC2 Instance Connect, which is an alternative and faster way to connect to ec2, rather than using ssh and taking care of the generated keys.

My first attempt at getting direct access to my public server resulted in an error, because my security group only allows HTTP inbound traffic.

I fixed this error by editing the inbound rules and added ssh protocol type configuration.





Connectivity Between Servers

Ping is connectivity from two computers or device I used ping to test the connectivity between my public server to my private server

The ping command I ran was "ping 10.0.1.169"

The first ping returned [ec2-user@ip-10-0-0-133 ~]\$ ping 10.0.1.169 This meant ICMP might not be allowed or no connectivity.

```
~\_\_ ##### Amazon Linux 2023
~\_\_ \##### \
~\_\_ \###|
~\_\_ \#/ \_--> https://aws.amazon.com/linux/amazon-linux-2023
~\_\_ V~!`-'-
~~~ \
~~~ .- \
~~~ / \
~~~ /m/ \
:2-user@ip-10-0-0-133 ~]$ ping ip-10-0-1-169.eu-west-1.compute.internal
ping: ip-10-0-1-169.eu-west-1.compute.internal: Name or service not known
:2-user@ip-10-0-0-133 ~]$ ping 10.0.1.169
PING 10.0.1.169 (10.0.1.169) 56(84) bytes of data.
```

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Troubleshooting Connectivity

I troubleshooted this by checking my inbound and outbound traffic of my NACL, Subnet and security group.

```
4 bytes from 10.0.1.169: icmp_seq=1017 ttl=127 time=1.06 ms
4 bytes from 10.0.1.169: icmp_seq=1018 ttl=127 time=0.447 ms
4 bytes from 10.0.1.169: icmp_seq=1019 ttl=127 time=0.433 ms
4 bytes from 10.0.1.169: icmp_seq=1020 ttl=127 time=0.427 ms
4 bytes from 10.0.1.169: icmp_seq=1021 ttl=127 time=0.433 ms
4 bytes from 10.0.1.169: icmp_seq=1022 ttl=127 time=0.426 ms
4 bytes from 10.0.1.169: icmp_seq=1023 ttl=127 time=0.433 ms
4 bytes from 10.0.1.169: icmp_seq=1024 ttl=127 time=0.436 ms
4 bytes from 10.0.1.169: icmp_seq=1025 ttl=127 time=0.418 ms
4 bytes from 10.0.1.169: icmp_seq=1026 ttl=127 time=0.445 ms
4 bytes from 10.0.1.169: icmp_seq=1027 ttl=127 time=0.461 ms
4 bytes from 10.0.1.169: icmp_seq=1028 ttl=127 time=0.425 ms
4 bytes from 10.0.1.169: icmp_seq=1029 ttl=127 time=0.431 ms
4 bytes from 10.0.1.169: icmp_seq=1030 ttl=127 time=0.436 ms
4 bytes from 10.0.1.169: icmp_seq=1031 ttl=127 time=0.446 ms
4 bytes from 10.0.1.169: icmp_seq=1032 ttl=127 time=0.425 ms
4 bytes from 10.0.1.169: icmp_seq=1033 ttl=127 time=0.445 ms
4 bytes from 10.0.1.169: icmp_seq=1034 ttl=127 time=0.431 ms
4 bytes from 10.0.1.169: icmp_seq=1035 ttl=127 time=0.486 ms
4 bytes from 10.0.1.169: icmp_seq=1036 ttl=127 time=0.467 ms
4 bytes from 10.0.1.169: icmp_seq=1037 ttl=127 time=0.437 ms
4 bytes from 10.0.1.169: icmp_seq=1038 ttl=127 time=0.441 ms
4 bytes from 10.0.1.169: icmp_seq=1039 ttl=127 time=0.430 ms
4 bytes from 10.0.1.169: icmp_seq=1040 ttl=127 time=0.447 ms
4 bytes from 10.0.1.169: icmp_seq=1041 ttl=127 time=0.457 ms
4 bytes from 10.0.1.169: icmp_seq=1042 ttl=127 time=0.442 ms
4 bytes from 10.0.1.169: icmp_seq=1043 ttl=127 time=0.429 ms
4 bytes from 10.0.1.169: icmp_seq=1044 ttl=127 time=0.545 ms
```

i-098475993ae826d35 (NextWork Public Server)

PublicIPs: 54.78.141.92 PrivateIPs: 10.0.0.133

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Connectivity to the Internet

Curl is used in transfer and retrieval of data in the internet.

I used curl to test the connectivity between my public server and the internet.

Ping vs Curl

Ping and curl are different because checks for connectivity and return status, time and amount of time it took while curl is able to transfer or retrieve data from the internet.

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Connectivity to the Internet

I ran the curl command on my ec2 terminal which returned html response on the console.

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