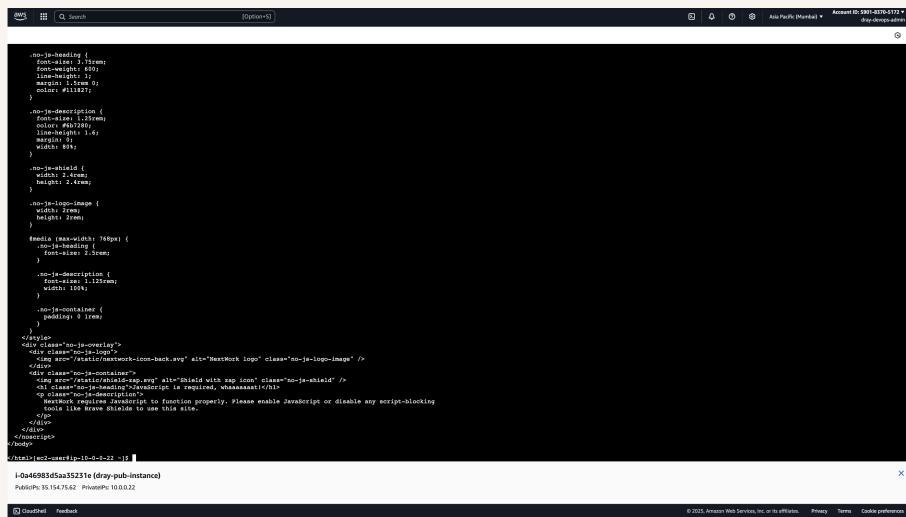




# Testing VPC Connectivity

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# Introducing Today's Project!

## What is Amazon VPC?

Amazon VPC is the fundamental networking tool which is used for creation of private space within the AWS region. It is needed for security and to easily manage the resources.

## How I used Amazon VPC in this project

in today's project i had test the connectivity between the instance in public and private subnet and also for the connection with the internet.

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

I had never expected that it would have so much security for the connection with the internet.

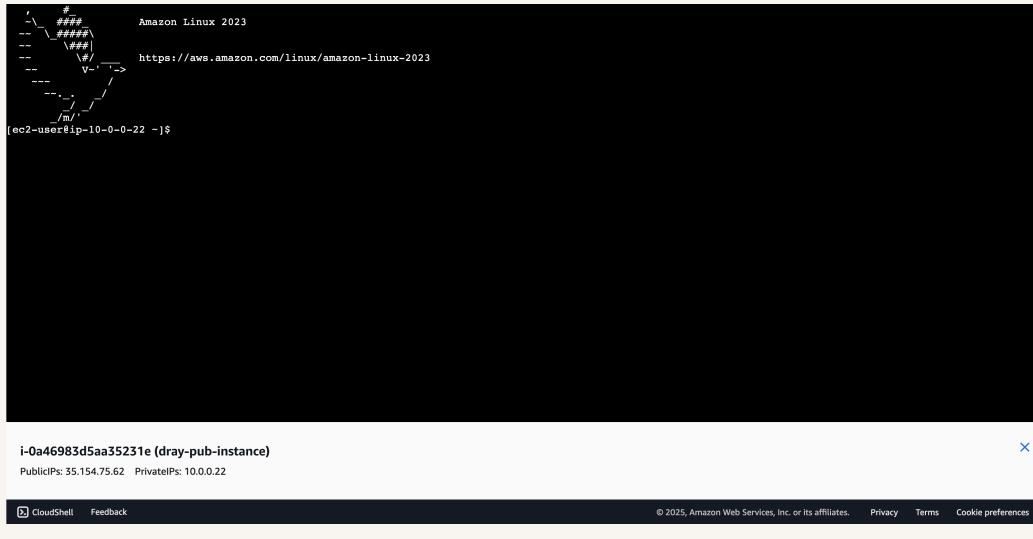
## This project took me...

it took near to 1.30 hr

# Connecting to an EC2 Instance

Connectivity means to connect to the EC2 instance using any of the method. By connecting we get the interface through which we can interact with the service.

My first connectivity test was whether I could connect to the ssh i.e Secured shell protocol.



The screenshot shows a terminal window with the following content:

```
Amazon Linux 2023
https://aws.amazon.com/linux/amazon-linux-2023
[ec2-user@ip-10-0-0-22 ~]$
```

Below the terminal window, there is some metadata and footer information:

i-0a46983d5aa35231e (dray-pub-instance)  
PublicIPs: 35.154.75.62 PrivateIPs: 10.0.0.22

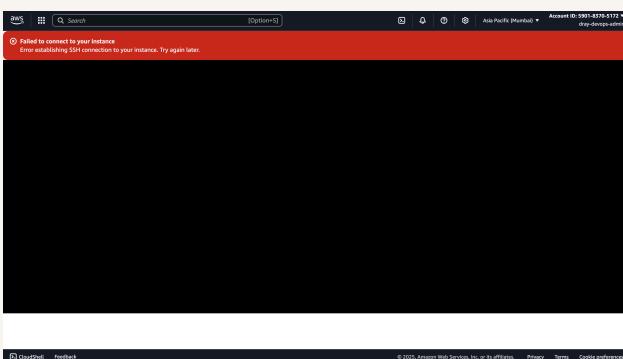
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# EC2 Instance Connect

I connected to my EC2 instance using EC2 Instance Connect, which is inbuilt service in Aws. In this we can directly connect without worrying about the key pair.

My first attempt at getting direct access to my public server resulted in an error, because for the connection the ICMP is required and i had not added the rule for it.

I fixed this error by adding the ICMP protocol to the private subnet and also changed the security group for it.

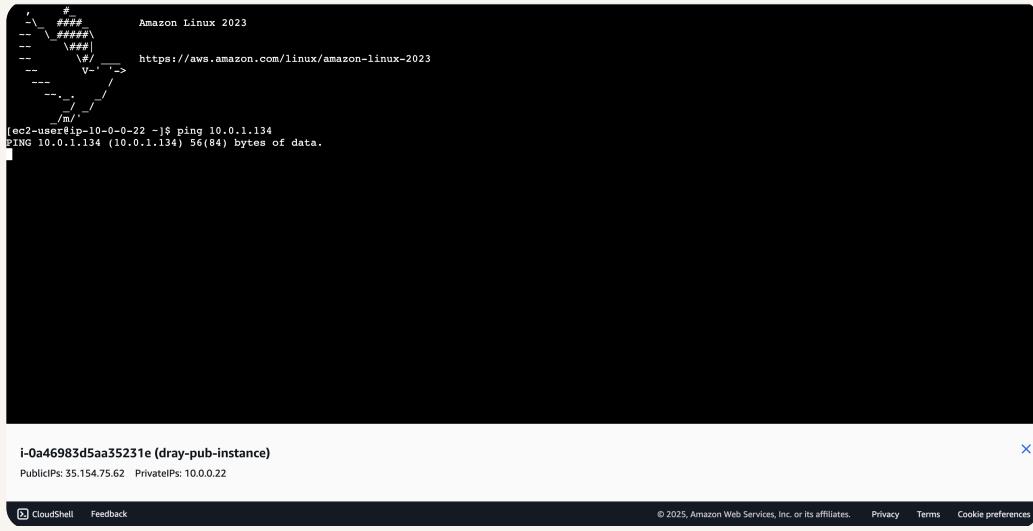


# Connectivity Between Servers

Ping is command for checking the connection between two devices I used ping to test the connectivity between the instance in the private and public subnet.

The ping command I ran was ping 10.0.0.27

The first ping returned single line output This meant that the connection is not set.



A screenshot of an AWS CloudShell terminal window. The terminal shows a login banner for Amazon Linux 2023, followed by a command prompt: [ec2-user@ip-10-0-0-22 ~]\$ ping 10.0.1.134. The output shows a single line of text: PING 10.0.1.134 (10.0.1.134) 56(84) bytes of data. The terminal has a light gray background and black text. At the bottom, there is a footer bar with the text "i-0a46983d5aa35231e (dray-pub-instance)", "Public IPs: 35.154.75.62 Private IPs: 10.0.0.22", and links for "CloudShell", "Feedback", "Privacy", "Terms", and "Cookie preferences".



# Troubleshooting Connectivity

I troubleshooted this by adding the ICMP protocol

AWS CloudShell terminal window showing the output of a ping command. The terminal interface includes a search bar, options, and account information at the top. The main area displays the ping results to an IP address, showing sequence numbers, TTL values, and round-trip times.

```
Last login: Fri Aug  8 05:45:16 2025 from 13.233.177.3
[ec2-user@ip-10-0-0-22 ~]$ ping 10.0.1.134
PING 10.0.1.134 (10.0.1.134) 56(84) bytes of data.
64 bytes from 10.0.1.134: icmp_seq=99 ttl=127 time=0.192 ms
64 bytes from 10.0.1.134: icmp_seq=100 ttl=127 time=0.190 ms
64 bytes from 10.0.1.134: icmp_seq=101 ttl=127 time=0.189 ms
64 bytes from 10.0.1.134: icmp_seq=102 ttl=127 time=0.189 ms
64 bytes from 10.0.1.134: icmp_seq=103 ttl=127 time=0.197 ms
64 bytes from 10.0.1.134: icmp_seq=104 ttl=127 time=0.169 ms
64 bytes from 10.0.1.134: icmp_seq=105 ttl=127 time=0.182 ms
64 bytes from 10.0.1.134: icmp_seq=106 ttl=127 time=0.176 ms
64 bytes from 10.0.1.134: icmp_seq=107 ttl=127 time=0.177 ms
64 bytes from 10.0.1.134: icmp_seq=108 ttl=127 time=0.177 ms
64 bytes from 10.0.1.134: icmp_seq=109 ttl=127 time=0.186 ms
64 bytes from 10.0.1.134: icmp_seq=110 ttl=127 time=0.164 ms
64 bytes from 10.0.1.134: icmp_seq=111 ttl=127 time=0.183 ms
64 bytes from 10.0.1.134: icmp_seq=112 ttl=127 time=0.185 ms
64 bytes from 10.0.1.134: icmp_seq=113 ttl=127 time=0.183 ms
64 bytes from 10.0.1.134: icmp_seq=114 ttl=127 time=0.187 ms
64 bytes from 10.0.1.134: icmp_seq=115 ttl=127 time=0.172 ms
64 bytes from 10.0.1.134: icmp_seq=116 ttl=127 time=0.188 ms
64 bytes from 10.0.1.134: icmp_seq=117 ttl=127 time=0.176 ms
64 bytes from 10.0.1.134: icmp_seq=118 ttl=127 time=0.241 ms
64 bytes from 10.0.1.134: icmp_seq=119 ttl=127 time=0.197 ms
64 bytes from 10.0.1.134: icmp_seq=120 ttl=127 time=0.197 ms
64 bytes from 10.0.1.134: icmp_seq=121 ttl=127 time=0.189 ms
64 bytes from 10.0.1.134: icmp_seq=122 ttl=127 time=0.194 ms
64 bytes from 10.0.1.134: icmp_seq=123 ttl=127 time=0.192 ms
64 bytes from 10.0.1.134: icmp_seq=124 ttl=127 time=0.178 ms
64 bytes from 10.0.1.134: icmp_seq=125 ttl=127 time=0.194 ms
64 bytes from 10.0.1.134: icmp_seq=126 ttl=127 time=0.194 ms
64 bytes from 10.0.1.134: icmp_seq=127 ttl=127 time=0.178 ms
64 bytes from 10.0.1.134: icmp_seq=128 ttl=127 time=0.203 ms
```

i-0a46983d5aa35231e (dray-pub-instance) X  
PublicIPs: 35.154.75.62 PrivateIPs: 10.0.0.22

# Connectivity to the Internet

Curl is the command used to test and receive data from other device.

I used curl to test the connectivity between instance in public subnet and the internet.

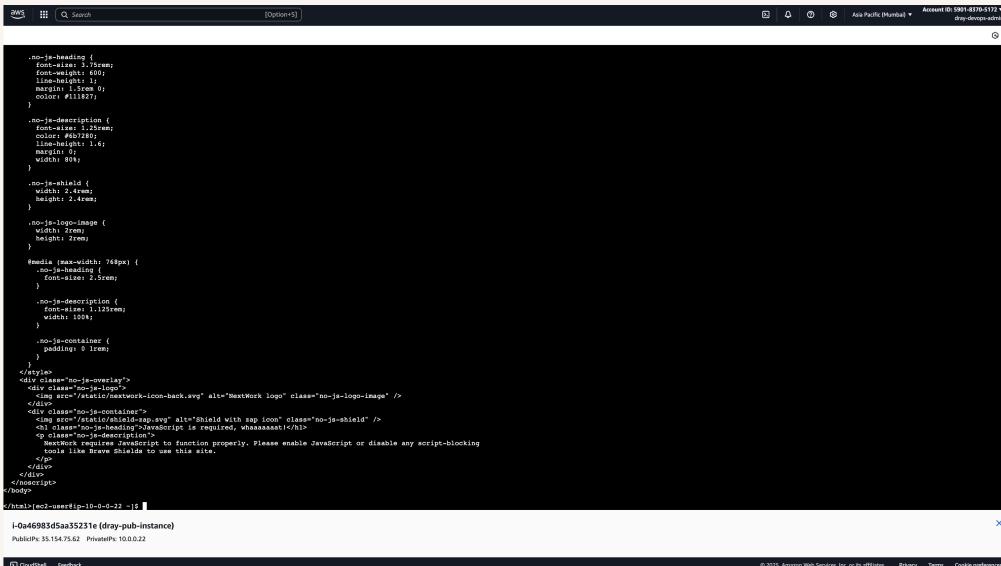
## Ping vs Curl

Ping and curl are different because ping is only for testing but curl can test as well as get the data from the resource.



# Connectivity to the Internet

I ran the curl command `curl https://learn.nextwork.org/projects/aws-host-a-website-on-s3` which returned the html web page of the website.





[nextwork.org](https://nextwork.org)

# The place to learn & showcase your skills

Check out [nextwork.org](https://nextwork.org) for more projects

