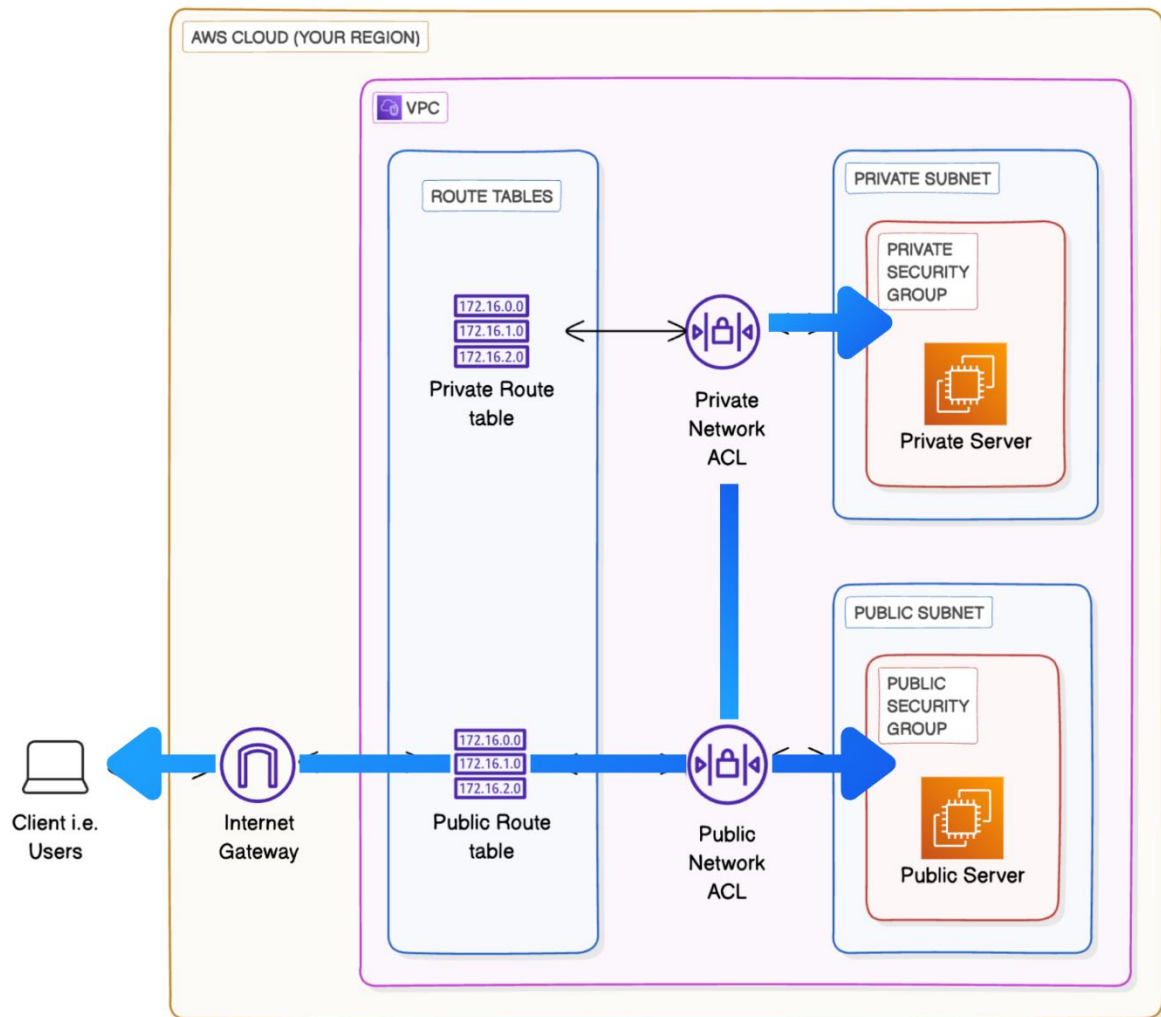


Testing VPC Connectivity



Connect to NextWork Public Server

In this step, you're going to:

- Set up a connection to your Public Server
- Troubleshoot a connection issue
- Still in your EC2 console, select Instances from the left-hand navigation panel.
- Select the checkbox next to NextWork Public Server.
- Select Connect.
- Keep all of the default settings.

Connect to instance Info

Connect to your instance i-081059d0ca4599d10 (NextWork Public Server) using any of these options

EC2 Instance Connect

Session Manager

SSH client

EC2 serial console

Instance ID

i-081059d0ca4599d10 (NextWork Public Server)

Connection Type

☒ Connect using EC2 Instance Connect
Connect using the EC2 Instance Connect browser-based client, with a public IPv4 address.

☐ Connect using EC2 Instance Connect Endpoint
Connect using the EC2 Instance Connect browser-based client, with a private IPv4 address and a VPC endpoint.

Public IP address

18.246.210.18

Username

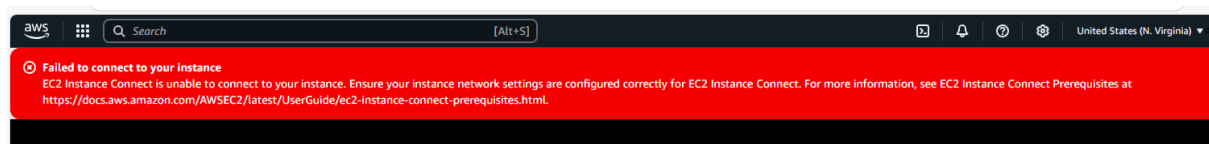
Enter the username defined in the AMI used to launch the instance. If you didn't define a custom username, use the default username, ec2-user.

Note: In most cases, the default username, ec2-user, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

Cancel

Connect

- Select Connect.
- Oh no! We've failed to connect to our instance?!



Let's investigate what happened by reviewing our security settings.

- Head back to your VPC console.
- Select Subnets from the left-hand navigation panel.
- Select the checkbox next to NextWork Public Subnet.
- Hmm let's take a look! Investigate the Route table and Network ACL tabs

Details

Flow logs

Route table

Network ACL

CIDR reservations

Sharing

Tags

Route table: rtb-02784a4f8cdfc0935 / nextwork-rtb-public Edit route table

Routes (2)

| Destination | Target |
|-------------|---------------------------------------|
| 10.0.0.0/16 | local |
| 0.0.0.0/0 | igw-05a45a2b6419a5af8 |

| | | | | | | |
|---------|-----------|-------------|-------------|-------------------|---------|------|
| Details | Flow logs | Route table | Network ACL | CIDR reservations | Sharing | Tags |
|---------|-----------|-------------|-------------|-------------------|---------|------|

Network ACL: [acl-0158c6d7b4a651392](#) [Edit network ACL association](#)

Inbound rules (2)

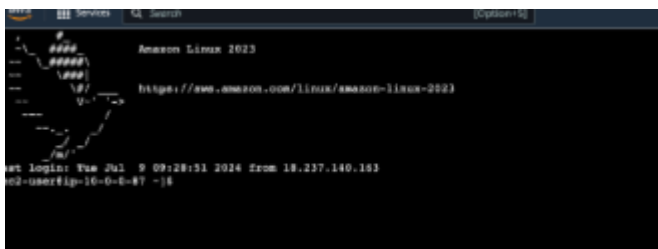
Filter inbound rules

| Rule number | Type | Protocol | Port range | Source | Allow/Deny |
|-------------|-------------|----------|------------|-----------|------------|
| 100 | All traffic | All | All | 0.0.0.0/0 | Allow |
| * | All traffic | All | All | 0.0.0.0/0 | Deny |

- Hmm that leaves one more thing to investigate...
- Head into the Security groups page from the left-hand navigation bar.
- Select the checkbox next to NextWork Public Security Group.
- Select the Inbound rules tab.
- Mystery solved.

| Inbound rules (1) | | | | | | | |
|--------------------------|------|------------------------|------------|------|----------|------------|-----------|
| | Name | Security group rule... | IP version | Type | Protocol | Port range | Source |
| <input type="checkbox"/> | - | sg-03464f7489dc082... | IPv4 | HTTP | TCP | 80 | 0.0.0.0/0 |

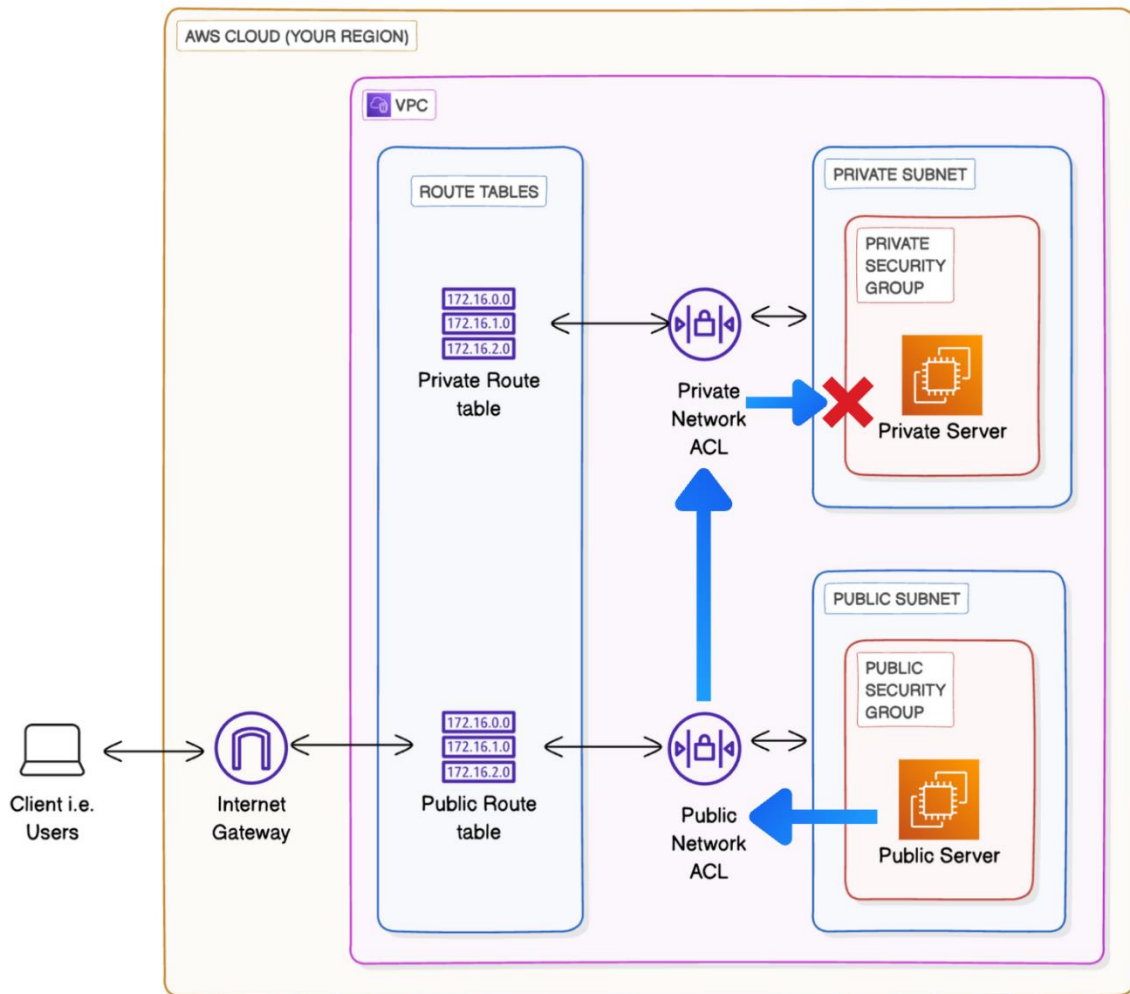
- In the Inbound rules tab, select Edit inbound rules.
- Select Add rule.
- For your new rule, configure the Type as SSH.
- Then, under Source type, select Anywhere-IPv4.
- Select Save rules.
- With that modified, refresh your EC2 console's Instances page.
- Select your Public Server and select Connect again.
- Success.



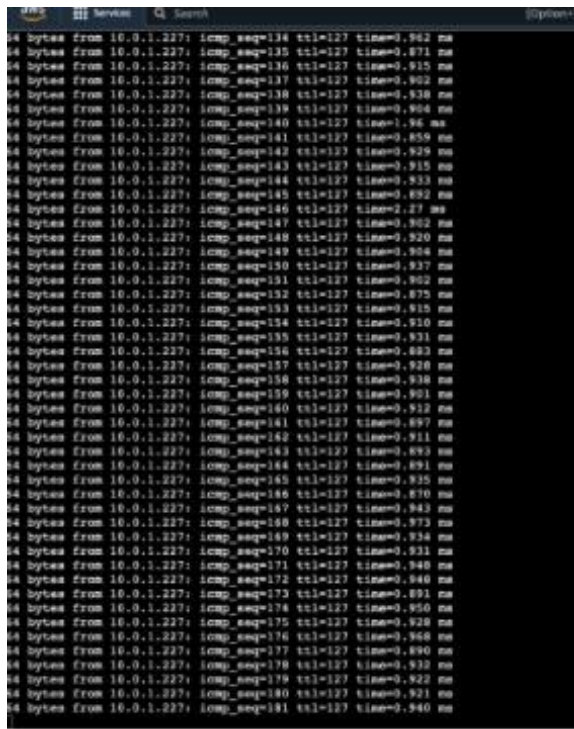
Test connectivity between your EC2 instances

In this step, you're going to:

- Get your Public Server to talk to your Private Server
- Troubleshoot another connection issue
- Leave open the EC2 Instance Connect tab, but head back to your EC2 console in a new tab.



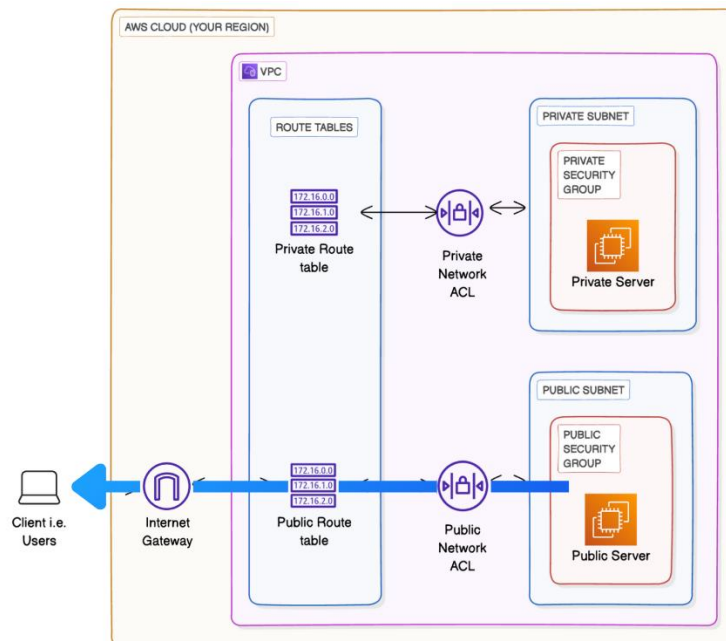
- Select Edit inbound rules.
- Select Add rule.
- For Type, select All ICMP - IPv4.
- For Source, select NextWork Public Security Group.
- Select Save rules.
- Revisit the EC2 Instance Connect tab that's connected to NextWork Public Server.



Test VPC connectivity with the internet

In this step, you're going to:

- Get your Public Server to talk to the internet
- Troubleshoot an error response



- Quit the ping command by pressing Control + C on your keyboard.
- Let's enter a new command!

- Type in `curl example.com` in the prompt, i.e. right after the `$` sign at the bottom line of the black window.

```
<!doctype html>
<html>
<head>
  <title>Example Domain</title>

  <meta charset="utf-8" />
  <meta http-equiv="Content-type" content="text/html; charset=utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1" />
  <style type="text/css">
    body {
      background-color: #f0f0f2;
      margin: 0;
      padding: 0;
      font-family: -apple-system, system-ui, BlinkMacSystemFont, "Segoe UI", "Open Sans", "Helvetica Neue", Helvetica, Arial;
    }
    div {
      width: 600px;
      margin: 5em auto;
      padding: 2em;
      background-color: #fddfff;
      border-radius: 0.5em;
      box-shadow: 2px 3px 7px 2px rgba(0,0,0,0.02);
    }
    a:link, a:visited {
      color: #38488f;
      text-decoration: none;
    }
    @media (max-width: 700px) {
      div {
        margin: 0 auto;
        width: auto;
      }
    }
  </style>
</head>

<body>
<div>
  <h1>Example Domain</h1>
  <p>This domain is for use in illustrative examples in documents. You may use this domain in literature without prior coordination or asking for permission.</p>
  <p><a href="https://www.iana.org/domains/example">More information...</a></p>
</div>
</body>
</html>
```

- This output confirms that your Public Sever instance can talk with the internet.
- This wouldn't be possible if NextWork Public Subnet, your internet gateway and your security settings weren't set up properly.
- Now let's run `curl nextwork.org`

```
[ec2-user@ip-10-0-0-251 ~]$ curl nextwork.org
<a href="https://learn.nextwork.org/projects/aws-host-a-website-on-s3">Found</a>.
```

Now let's try running curl with the URL that your terminal returned. Run curl <https://learn.nextwork.org/projects/aws-host-a-website-on-s3>

[illegible]