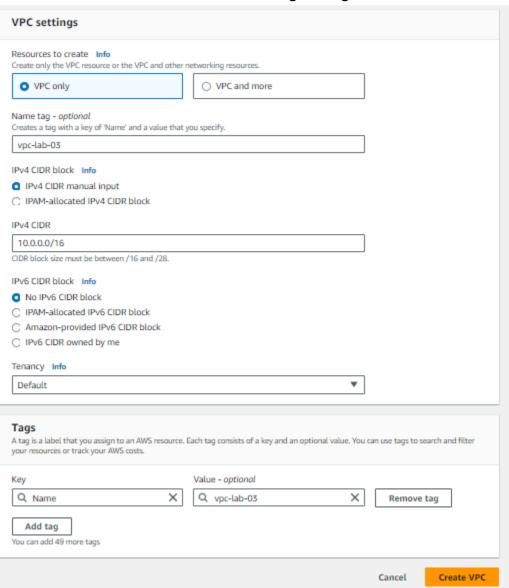
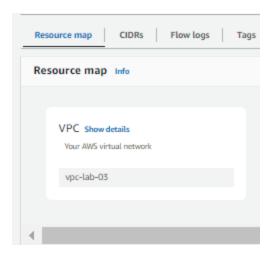
VPC Configuration Lab

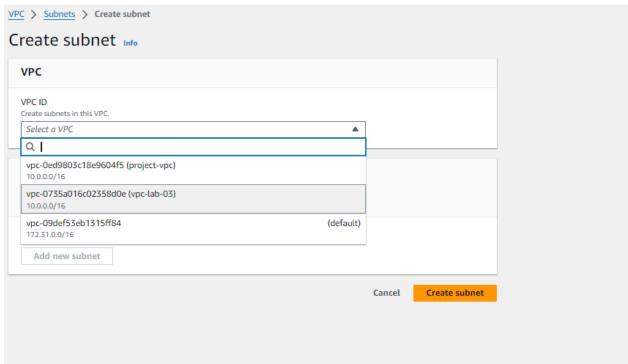
- Objective: To understand the fundamentals of AWS networking through the configuration of a Virtual Private Cloud (VPC).
- Approach: Students will create a new VPC, add subnets, set up an Internet Gateway, and configure route tables. The lab might also include setting up a simple EC2 instance within this VPC to demonstrate how resources are deployed in a custom network environment.
- Goal: By the end of this lab, students should be able to create and configure a VPC, understand subnetting, and the role of route tables and internet gateways in AWS.

1. Create a new VPC with the following settings.





2. Create a new subnet public and private

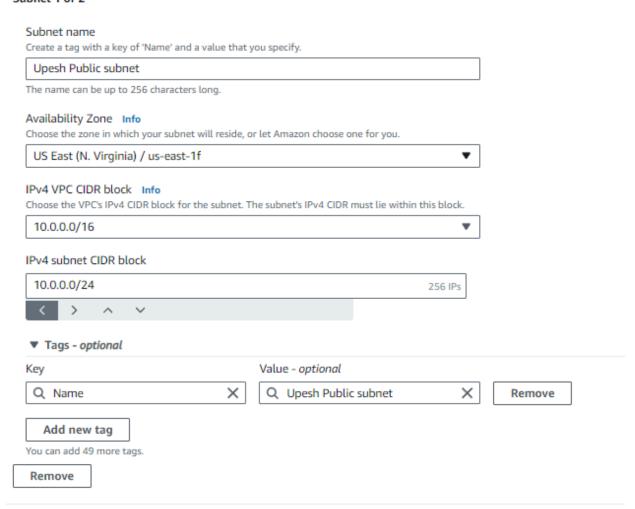


3. Subnet settings should be used as follows.

Subnet settings

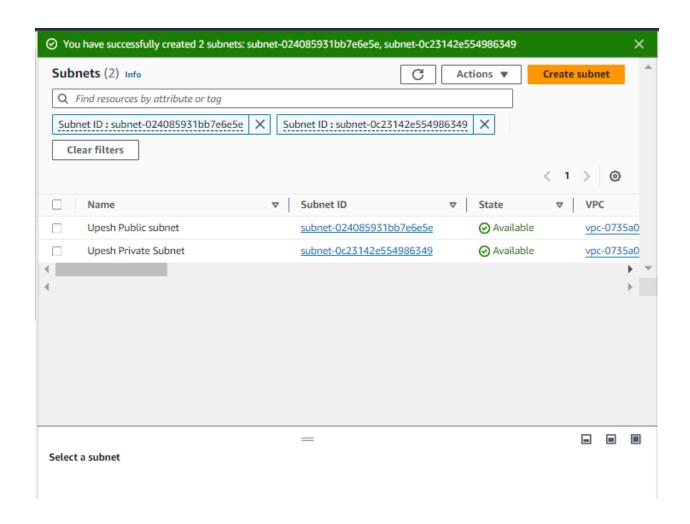
Specify the CIDR blocks and Availability Zone for the subnet.

Subnet 1 of 2

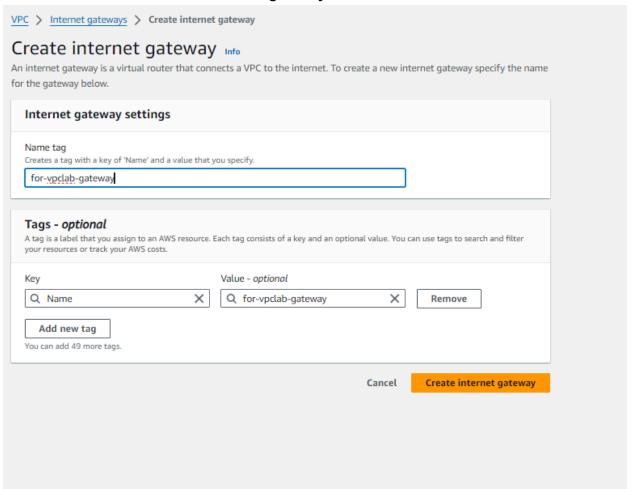


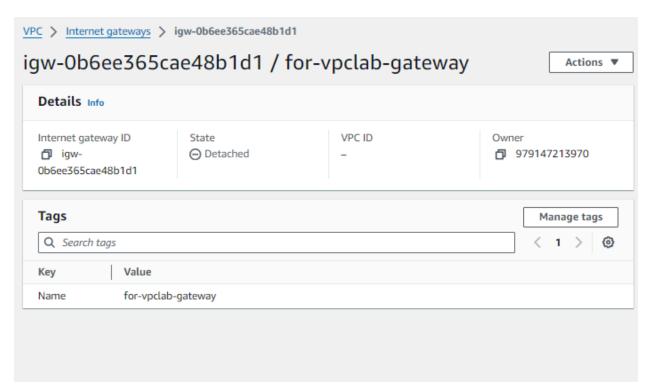
Subnet 2 of 2

Subnet name		
Create a tag with a key of 'Name' and a value that	you specify.	
Upesh Private Subnet		
The name can be up to 256 characters long.		
Availability Zone Info		
Choose the zone in which your subnet will reside, o	or let Amazon choose one for you.	
US East (N. Virginia) / us-east-1e	▼	
IPv4 VPC CIDR block Info Choose the VPC's IPv4 CIDR block for the subnet. T	The subnet's IPv4 CIDR must lie within this block.	
10.0.0.0/16	▼	
IPv4 subnet CIDR block		
10.0.1.0/24	256 IPs	
< > ^ ~		
▼ Tags - optional		
Key	Value - optional	
Q Name X	Q Upesh Private Subnet X	Remove
Add new tag You can add 49 more tags.		
Remove		
The state of the s		
Add new subnet		

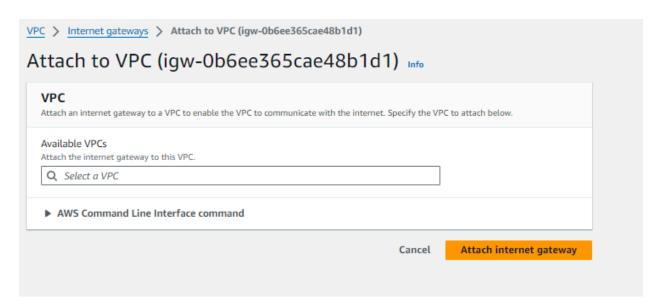


4. You can now create an internet gateway.



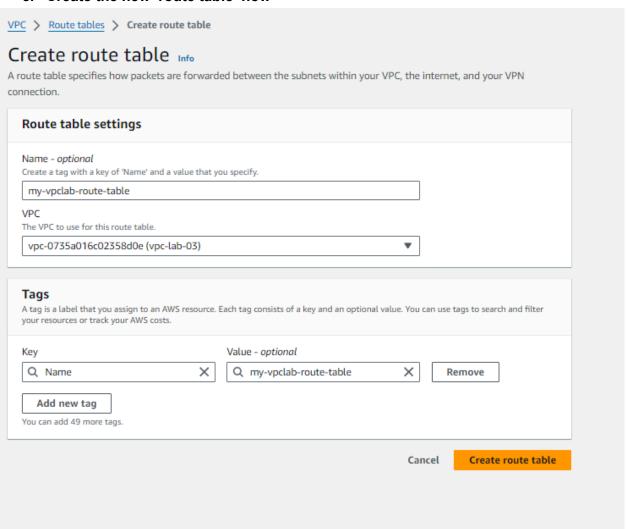


4. Attach that internet gateway to VPC.

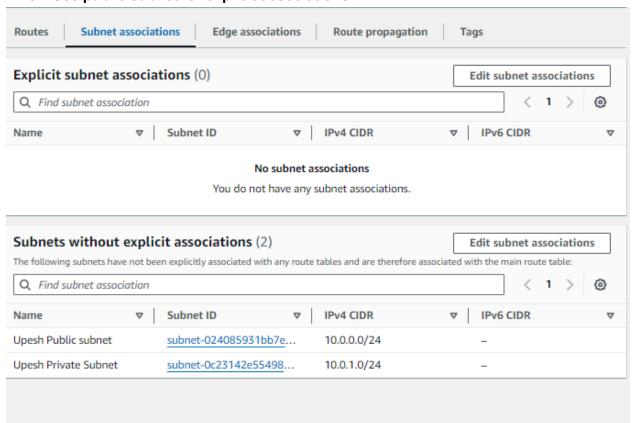


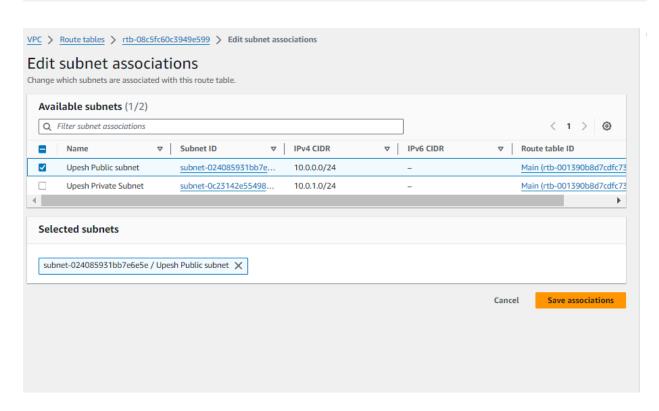


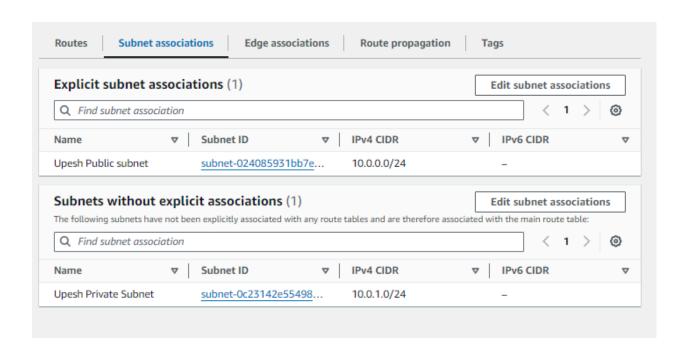
5. Create the new route table now

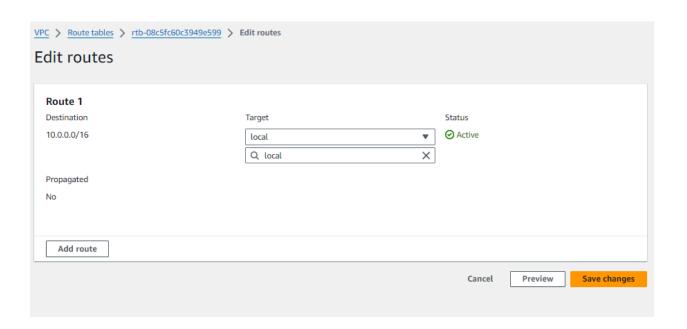


6. Use public subnet for explicit associations

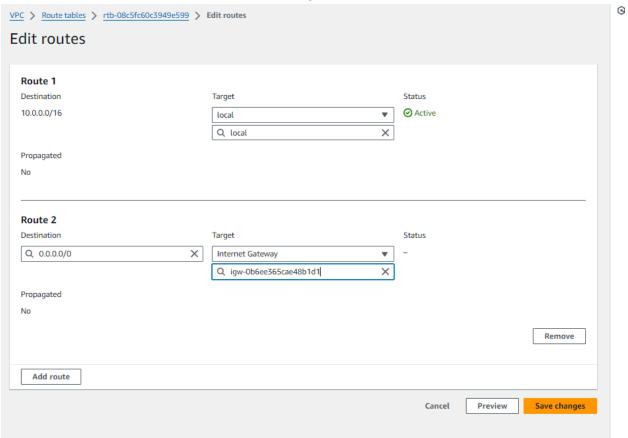








7. Use new route to be accessible through the internet



8. EC2 Instance

EC2 > Instances > Launch an instance

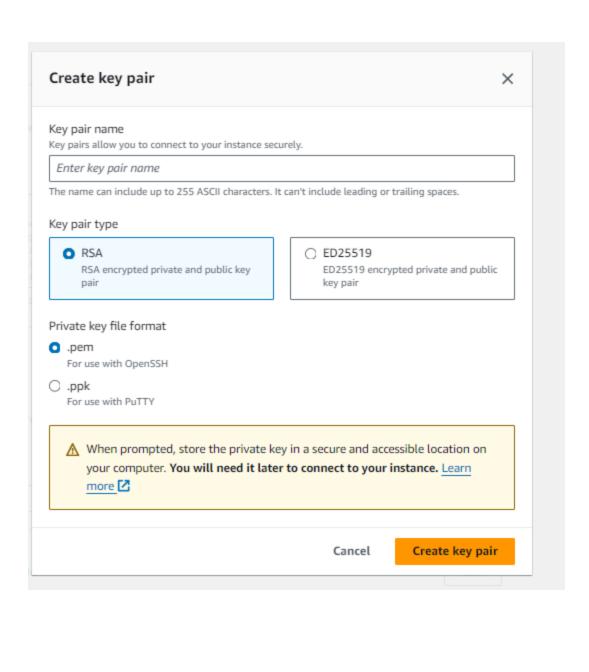
Launch an instance Info

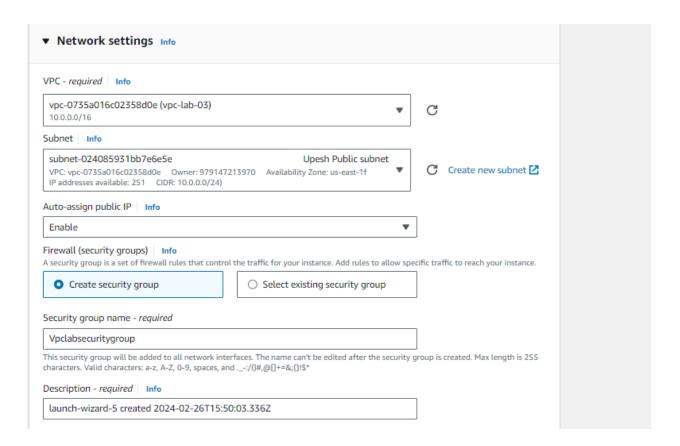
Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

ame						
MyVpcLabInst	ance				A	Add additional tags
Applicati	on and OS I	mages (Ama	azon Machin	e Image) ı	nfo	
equired to laur	nch your instanc	ce. Search or Bro		you don't see v	tem, application : what you are look	server, and application king for below
equired to laur	nch your instanc	ce. Search or Bro	owse for AMIs if	you don't see v		
Q Search our Recents Amazon	r full catalog inc	ce. Search or Bro	owse for AMIs if	you don't see v		
Q Search our Recents	r full catalog inc	ce. Search or Bro	owse for AMIs if y	you don't see v	what you are look	

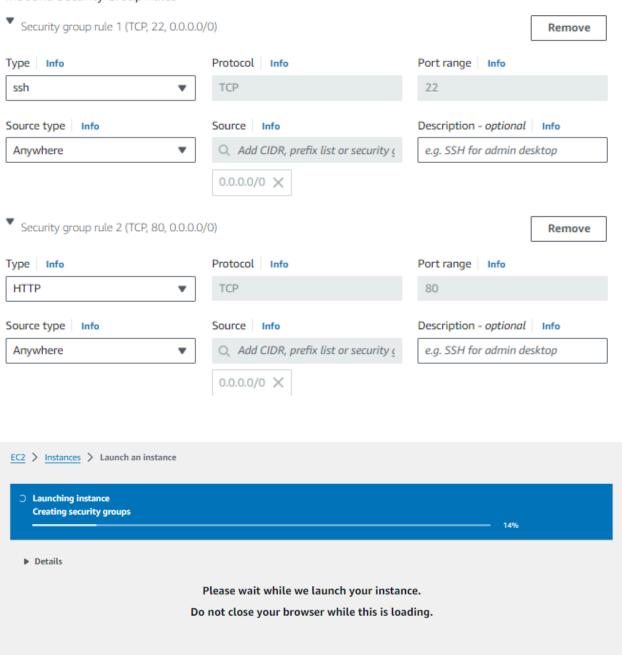
Description

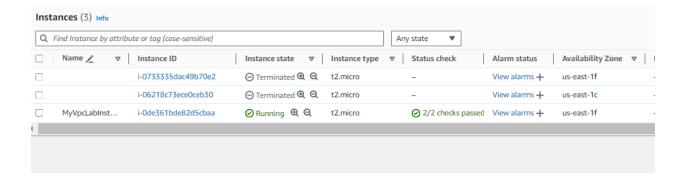
Amazon Linux 2023 AMI 2023.3.20240219.0 x86_64 HVM kernel-6.1



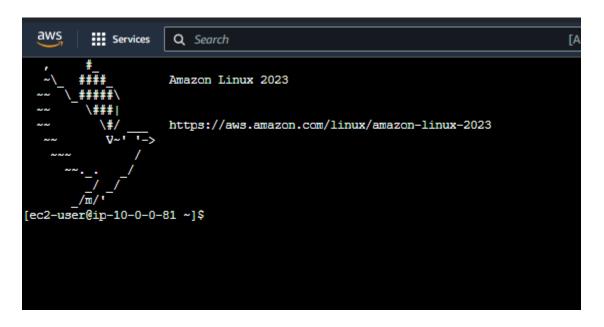


Inbound Security Group Rules





8. Public IP works correctly.





Dependencies resolved.

Nothing to do.

Complete!

[ec2-user@ip-10-0-0-81 ~]\$ sudo yum install httpd

Last metadata expiration check: 0:06:30 ago on Mon Feb 26 16:00:06 2024.

Dependencies resolved.

Package	Architecture	Version	Repository	Size
Installing:				
httpd	x86 64	2.4.58-1.amzn2023	amazonlinux	47 k
Installing dependencies:	-			
apr	x86 64	1.7.2-2.amzn2023.0.2	amazonlinux	129 k
apr-util	x86 64	1.6.3-1.amzn2023.0.1	amazonlinux	98 k
generic-logos-httpd	noarch	18.0.0-12.amzn2023.0.3	amazonlinux	19 k
httpd-core	x86 64	2.4.58-1.amzn2023	amazonlinux	1.4 M
httpd-filesystem	noarch	2.4.58-1.amzn2023	amazonlinux	14 k
httpd-tools	x86 64	2.4.58-1.amzn2023	amazonlinux	81 k
libbrotli	x86 64	1.0.9-4.amzn2023.0.2	amazonlinux	315 k
mailcap	noarch	2.1.49-3.amzn2023.0.3	amazonlinux	33 k
Installing weak dependencies:				
apr-util-openssl	x86 64	1.6.3-1.amzn2023.0.1	amazonlinux	17 k
mod http2	x86 64	2.0.11-2.amzn2023	amazonlinux	150 k
mod lua	x86 64	2.4.58-1.amzn2023	amazonlinux	61 k

Transaction Summary

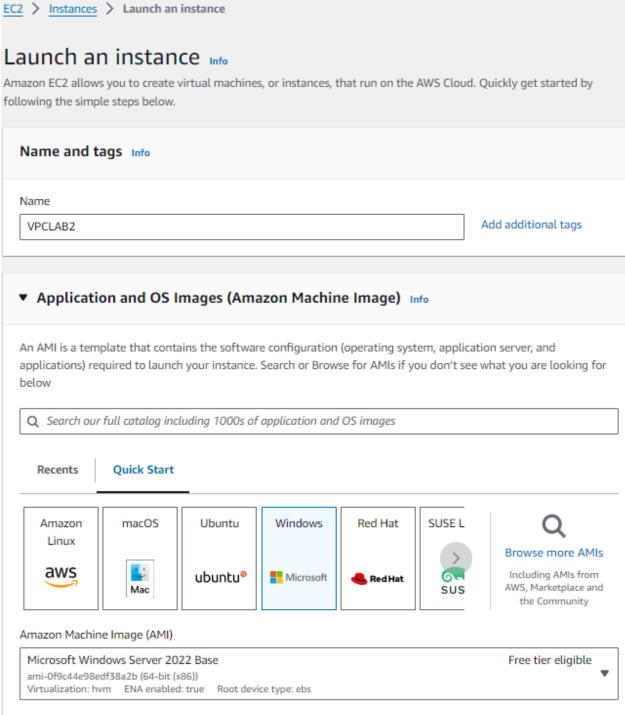
Install 12 Packages

Total download size: 2.3 M Installed size: 6.9 M Is this ok [y/N]:

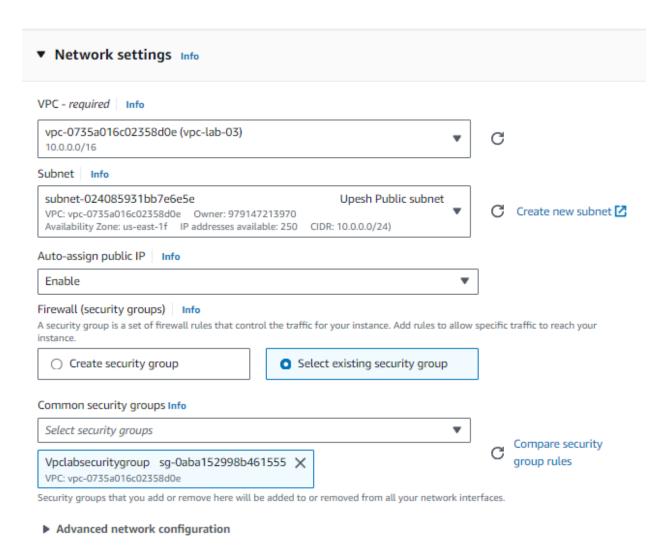
```
9.8 MB/s | 2.3 MB
 otal
                                                                                                                                        00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
 unning transaction
 Preparing
 Installing
                     : apr-1.7.2-2.amzn2023.0.2.x86 64
  Installing
                     : apr-util-openssl-1.6.3-1.amzn2023.0.1.x86 64
  Installing
                     : apr-util-1.6.3-1.amzn2023.0.1.x86_64
 Installing
                     : mailcap-2.1.49-3.amzn2023.0.3.noarch
 Installing
                     : httpd-tools-2.4.58-1.amzn2023.x86 64
                                                                                                                                              6/12
6/12
7/12
8/12
 Running scriptlet: httpd-filesystem-2.4.58-1.amzn2023.noarch
                     : httpd-filesystem-2.4.58-1.amzn2023.noarch
: httpd-core-2.4.58-1.amzn2023.x86_64
 Installing
 Installing
 Installing
                     : mod lua-2.4.58-1.amzn2023.x86 64
                     : mod http2-2.0.11-2.amzn2023.x86 64
 Installing
                                                                                                                                              9/12
                     : generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch
: libbrotli-1.0.9-4.amzn2023.0.2.x86 64
 Installing
                                                                                                                                             10/12
 Installing
                                                                                                                                             11/12
 Installing
                     : httpd-2.4.58-1.amzn2023.x86 64
                                                                                                                                             12/12
 Running scriptlet: httpd-2.4.58-1.amzn2023.x86 64
                                                                                                                                             12/12
 Verifying
                     : httpd-core-2.4.58-1.amzn2023.x86_64
                                                                                                                                              1/12
 Verifying
                     : apr-util-1.6.3-1.amzn2023.0.1.x86 64
                                                                                                                                              2/12
 Verifying
                     : mod_lua-2.4.58-1.amzn2023.x86_64
                                                                                                                                              3/12
                     : apr-1.7.2-2.amzn2023.0.2.x86_64
: httpd-tools-2.4.58-1.amzn2023.x86_64
: libbrotli-1.0.9-4.amzn2023.0.2.x86_64
 Verifying
                                                                                                                                              4/12
 Verifying
                                                                                                                                              5/12
 Verifying
                                                                                                                                              6/12
                     : mod http2-2.0.11-2.amzn2023.x86 64
 Verifying
                                                                                                                                              7/12
                     : httpd-2.4.58-1.amzn2023.x86 64
 Verifying
                                                                                                                                              8/12
 Verifying
                     : apr-util-openssl-1.6.3-1.amzn2023.0.1.x86 64
                                                                                                                                              9/12
 Verifying
                     : generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch
                                                                                                                                             10/12
                     : mailcap-2.1.49-3.amzn2023.0.3.noarch
 Verifying
                     : httpd-filesystem-2.4.58-1.amzn2023.noarch
 Verifying
 nstalled:
 apr-1.7.2-2.amzn2023.0.2.x86_64
                                                                        apr-util-1.6.3-1.amzn2023.0.1.x86_64
 apr-util-openssl-1.6.3-1.amzn2023.0.1.x86_64
httpd-2.4.58-1.amzn2023.x86_64
                                                                        generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch httpd-core-2.4.58-1.amzn2023.x86_64
 httpd-filesystem-2.4.58-1.amzn2023.noarch
                                                                        httpd-tools-2.4.58-1.amzn2023.x86 64
 libbrotli-1.0.9-4.amzn2023.0.2.x86 64
                                                                        mailcap-2.1.49-3.amzn2023.0.3.noarch
                                                                        mod lua-2.4.58-1.amzn2023.x86 64
 mod http2-2.0.11-2.amzn2023.x86 64
 mplete!
[ec2-user@ip-10-0-0-81 ~]$
```

```
c2-user@ip-10-0-0-81 ~]$ sudo service httpd start
edirecting to /bin/systemctl start httpd.service
 c2-user@ip-10-0-0-81 ~]$ sudo service httpd status
edirecting to /bin/systemctl status httpd.service
httpd.service - The Apache HTTP Server
    Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; preset: disabled)
   Active: active (running) since Mon 2024-02-26 16:08:36 UTC; 41s ago
     Docs: man:httpd.service(8)
 Main PID: 26381 (httpd)
   Status: "Total requests: 0; Idle/Busy workers 100/0; Requests/sec: 0; Bytes served/sec: 0 B/sec"
    Tasks: 177 (limit: 1114)
   Memory: 13.3M
      CPU: 90ms
   CGroup: /system.slice/httpd.service
             -26381 /usr/sbin/httpd -DFOREGROUND
             -26382 /usr/sbin/httpd -DFOREGROUND
             -26383 /usr/sbin/httpd -DFOREGROUND
             -26384 /usr/sbin/httpd -DFOREGROUND
            -26385 /usr/sbin/httpd -DFOREGROUND
eb 26 16:08:36 ip-10-0-0-81.ec2.internal systemd[1]: Starting httpd.service - The Apache HTTP Server...
eb 26 16:08:36 ip-10-0-0-81.ec2.internal systemd[1]: Started httpd.service - The Apache HTTP Server.
```

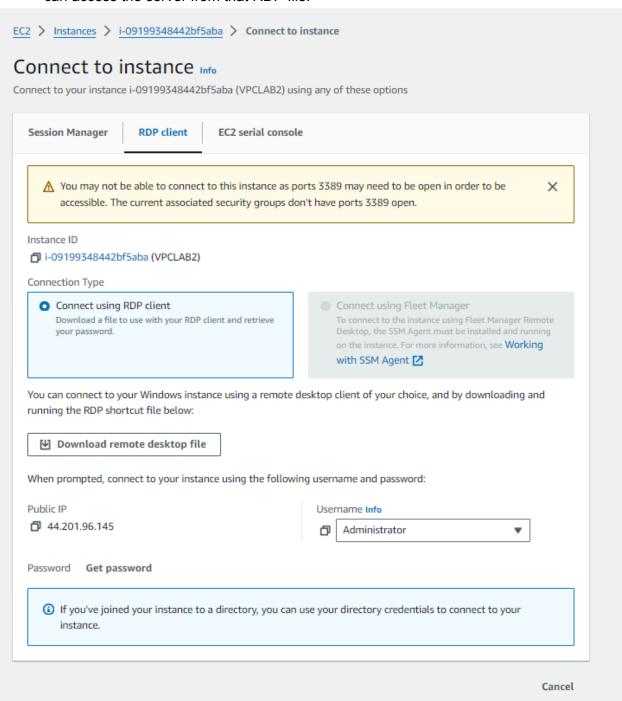
8. Create a new instance using WIndows tier architecture for using RDP.

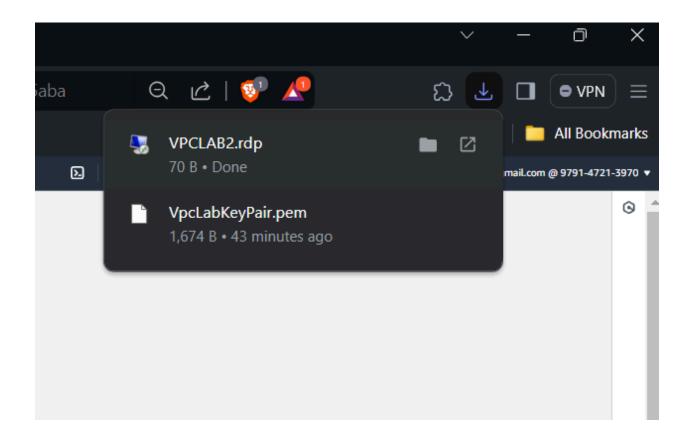


Description

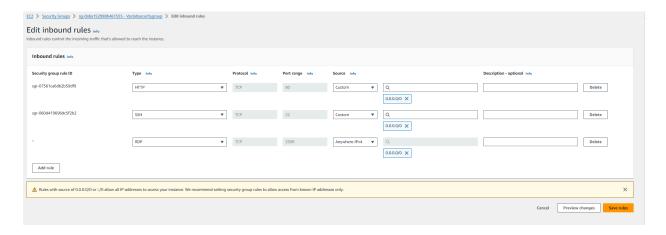


9. Use get password to decrypt password from key pair and and download the rdp file. You can access the server from that RDP file.





10 . Change the inbound rules to adjust the RDP to be accessible from everywhere.

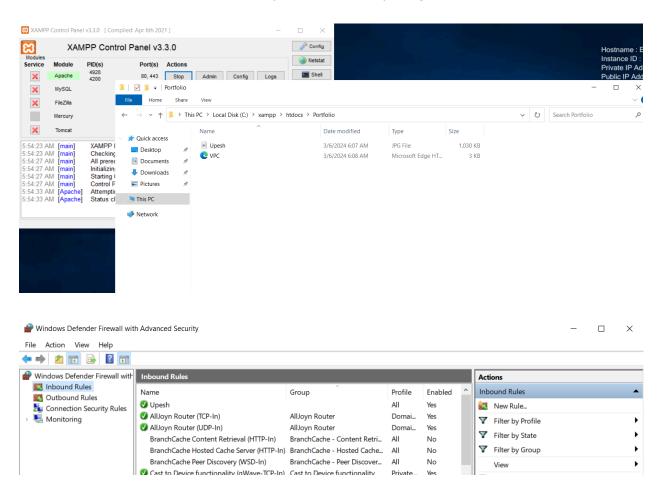


Hostname: EC2AMAZ-1ULH66I
Instance ID: i-09199348442bf5aba
Private IP Address: 10.0.0.49
Public IP Address: 44.201.96.145
Instance Size: t2.micro
Availability Zone: us-east-1f
Architecture: AMD64
Total Memory: 1024
Network: Low to Moderate

11. Then i downloaded Xampp in the RDP setup and installed it. Then the apache server was run.



12. THen i created an html file to host my portfolio with my image



13. Portfolio hosted sucessfully

