

2. Create Linux EC2 instance with required VPC Configurations as above.

First, create a VPC and EC2 Instance with Amazon Linux AMI and install webserver and host your index file on EC2.

Your VPCs (4) Info								
Search								
<input type="checkbox"/>	Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR	DHCP option set	Main route table	
<input type="checkbox"/>	-	vpc-0106cbe3513a1507a	Available	172.31.0.0/16	-	dopt-0d51a27c377096...	rtb-03813de583f8a9ce4	
<input type="checkbox"/>	my-lab-vpc	vpc-0c155d2284ae957a5	Available	12.0.0.0/16	-	dopt-0d51a27c377096...	rtb-077794888daed7658	
<input type="checkbox"/>	project-vpc	vpc-0d756f07d2282118	Available	10.0.0.0/16	-	dopt-0d51a27c377096...	rtb-08f57dbd8198846ae	
<input type="checkbox"/>	my-new-vpc	vpc-056ea6bc053c7bbaf	Available	12.0.0.0/16	-	dopt-0d51a27c377096...	rtb-00f3f825ca7ad418a	

Create internet gateway and attach to the VPC

Internet gateways (5) Info					
Search					
<input type="checkbox"/>	Name	Internet gateway ID	State	VPC ID	Owner
<input type="checkbox"/>	my-lab-internet-gateway	igw-0218c1c3b9c3cc092	Detached	-	794872146236
<input type="checkbox"/>	-	igw-030a569bb49943efc	Attached	vpc-0106cbe3513a1507a	794872146236
<input type="checkbox"/>	project-igw	igw-03f5ecf5d3253e9f	Attached	vpc-0d756f07d2282118 project-vpc	794872146236
<input type="checkbox"/>	my-lab-vpc	igw-0a77a0c3f382765c4	Attached	vpc-0c155d2284ae957a5 my-lab-vpc	794872146236
<input type="checkbox"/>	my-new-ig	igw-0e17e207643951120	Attached	vpc-056ea6bc053c7bbaf my-new-vpc	794872146236

Create 2 subnets, one public and other private subnets

Subnets (13) Info							
Find resources by attribute or tag							
<input type="checkbox"/>	Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR	Available IPv4 addresses
<input type="checkbox"/>	my-new-public-subnet2	subnet-079b3cf3c05f4c899	Available	vpc-056ea6bc053c7bbaf my-n...	12.0.3.0/24	-	247
<input type="checkbox"/>	my-new-public-subnet1	subnet-0fd2f67061c36424e	Available	vpc-056ea6bc053c7bbaf my-n...	12.0.1.0/24	-	249
<input type="checkbox"/>	project-subnet-private1-us-east-1a	subnet-0f49bc7bc001726ea	Available	vpc-0d756f07d2282118 proj...	10.0.128.0/24	-	251
<input type="checkbox"/>	-	subnet-0362a2e4a502fba72	Available	vpc-0106cbe3513a1507a	172.31.80.0/20	-	4091
<input type="checkbox"/>	-	subnet-091f8b1ac63f5962d	Available	vpc-0106cbe3513a1507a	172.31.64.0/20	-	4091
<input type="checkbox"/>	-	subnet-0e698f40951f36de1	Available	vpc-0106cbe3513a1507a	172.31.0.0/20	-	4091
<input type="checkbox"/>	-	subnet-0ccra5794af45f1269	Available	vpc-0106cbe3513a1507a	172.31.32.0/20	-	4091
<input type="checkbox"/>	-	subnet-0bhe9d9482ccca4b9	Available	vpc-0106cbe3513a1507a	172.31.16.0/20	-	4088
<input type="checkbox"/>	-	subnet-0513be5d486c897c6	Available	vpc-0106cbe3513a1507a	172.31.48.0/20	-	4091

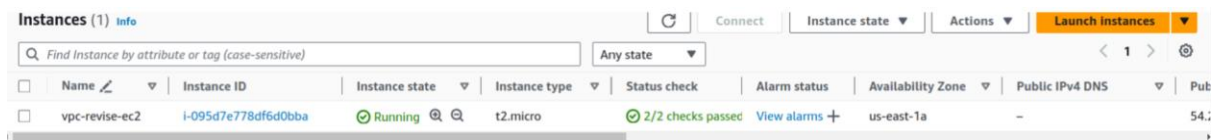
Create a route table and associate to public subnet.

Route tables (8) Info							
Find resources by attribute or tag							
<input type="checkbox"/>	Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC	Owner ID
<input type="checkbox"/>	-	rtb-08f57dbd8198846ae	-	-	Yes	vpc-0d756f07d2282118 proj...	794872146236
<input type="checkbox"/>	project-rtb-private1-us-east-1a	rtb-01d448b7ad498f4	subnet-0f49bc7bc00172...	-	No	vpc-0d756f07d2282118 proj...	794872146236
<input type="checkbox"/>	-	rtb-077794888daed7658	-	-	Yes	vpc-0c155d2284ae957a5 my-L...	794872146236
<input type="checkbox"/>	-	rtb-03813de583f8a9ce4	subnet-0e698f40951f36...	-	Yes	vpc-0106cbe3513a1507a	794872146236
<input type="checkbox"/>	my-new-route-table	rtb-0df86122c33a9108a	2 subnets	-	No	vpc-056ea6bc053c7bbaf my-n...	794872146236
<input type="checkbox"/>	-	rtb-00f3f825ca7ad418a	-	-	Yes	vpc-056ea6bc053c7bbaf my-n...	794872146236
<input type="checkbox"/>	my-test-route-table	rtb-013a7e88ca4a1d7c7	2 subnets	-	No	vpc-0c155d2284ae957a5 my-L...	794872146236
<input type="checkbox"/>	project-rtb-public	rtb-01a04b7aaa76ea15f	subnet-059d28c41e2a4a...	-	No	vpc-0d756f07d2282118 proj...	794872146236

Edit the route with following configurations

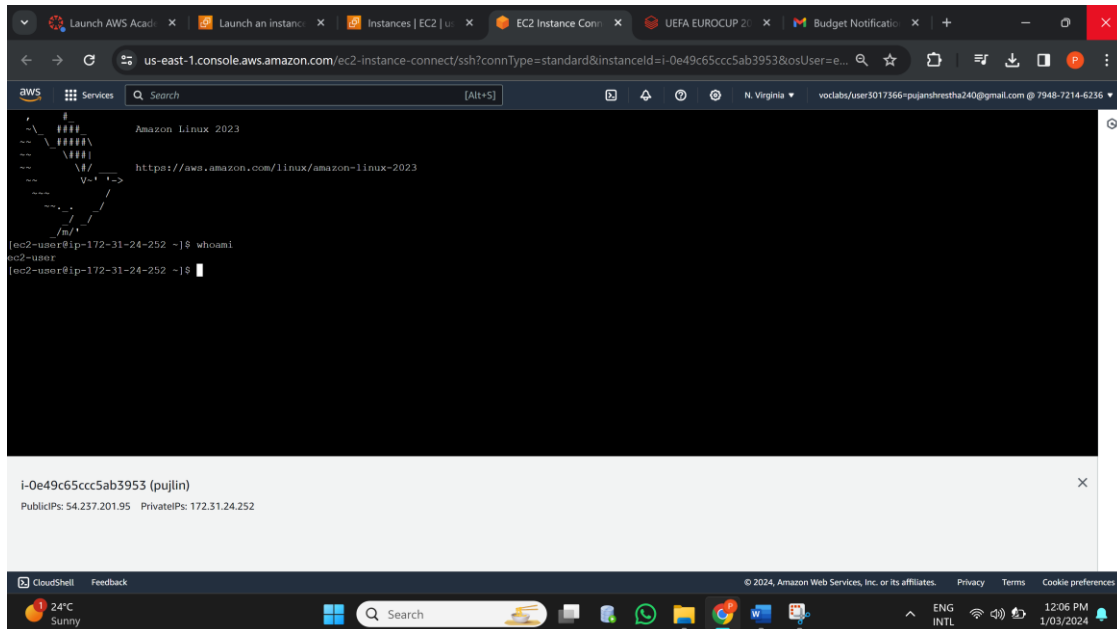
Edit routes			
Destination	Target	Status	Propagated
10.0.0.0/16	local	Active	No
<input type="text" value="0.0.0.0/0"/>	<input type="text" value="Internet Gateway"/>	Active	No
	<input type="text" value="igw-07eee47f568b6c7a"/>		<input type="button" value="Remove"/>
<input type="button" value="Add route"/>			
<input type="button" value="Cancel"/> <input type="button" value="Preview"/> <input type="button" value="Save changes"/>			

Create an EC2 instance with the VPC and public subnet with key and security group as HTTP and SSH.



	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IP
<input type="checkbox"/>	vpc-revise-ec2	i-095d7e778df6d0bba	Running	t2.micro	2/2 checks passed	View alarms	us-east-1a	-	54.237.201.95

Then we connect to EC2 Instance through our browser.



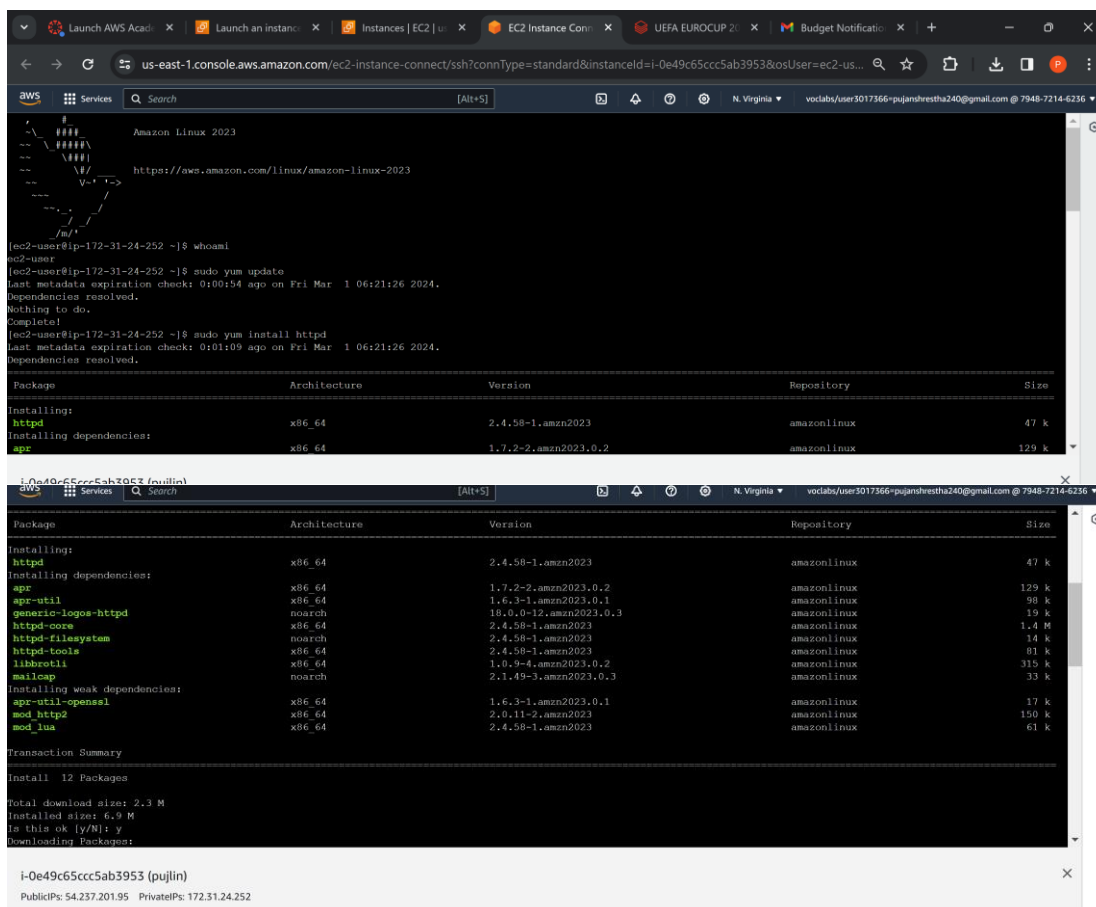
us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-0e49c65ccc5ab3953&osUser=ec2-user

Amazon Linux 2023

```
~$ http://aws.amazon.com/linux/amazon-linux-2023
[ec2-user@ip-172-31-24-252 ~]$ whoami
ec2-user
[ec2-user@ip-172-31-24-252 ~]$
```

i-0e49c65ccc5ab3953 (pujlin)
PublicIPs: 54.237.201.95 PrivateIPs: 172.31.24.252

Installing httpd server



us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-0e49c65ccc5ab3953&osUser=ec2-user

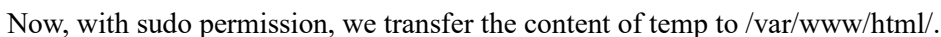
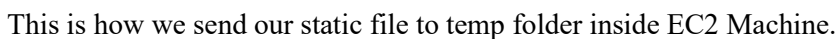
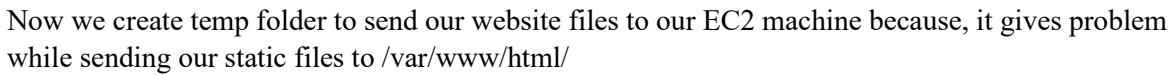
Amazon Linux 2023

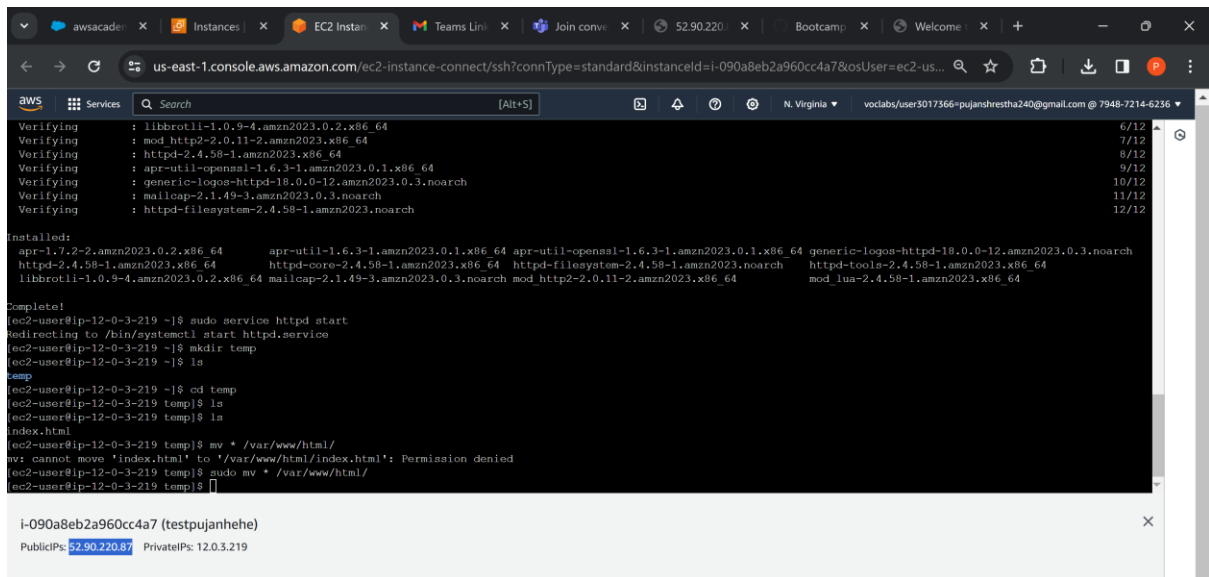
```
~$ http://aws.amazon.com/linux/amazon-linux-2023
[ec2-user@ip-172-31-24-252 ~]$ whoami
ec2-user
[ec2-user@ip-172-31-24-252 ~]$ sudo yum update
Last metadata expiration check: 0:00:54 ago on Fri Mar 1 06:21:26 2024.
Dependencies resolved.
Nothing to do.
Complete!
[ec2-user@ip-172-31-24-252 ~]$ sudo yum install httpd
Last metadata expiration check: 0:01:09 ago on Fri Mar 1 06:21:26 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-fsutils x86_64      2.4.58-1.amzn2023 amazonlinux   14 k
httpd-tools  x86_64      2.4.58-1.amzn2023 amazonlinux   91 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]: y
Downloading Packages:
```

i-0e49c65ccc5ab3953 (pujlin)
PublicIPs: 54.237.201.95 PrivateIPs: 172.31.24.252





The screenshot shows the AWS Management Console interface for an EC2 instance. The top navigation bar includes the AWS logo, a search bar, and various service icons. The main content area displays a terminal window with the following output:

```
Verifying : libbrotli-1.0.9-4.amzn2023.0.2.x86_64 6/12
Verifying : mod_http2-2.0.11-2.amzn2023.x86_64 7/12
Verifying : httpd-2.4.58-1.amzn2023.x86_64 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
Verifying : mailcap-2.1.49-3.amzn2023.0.3.noarch 11/12
Verifying : httpd-filesystem-2.4.58-1.amzn2023.noarch 12/12

Installed:
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  generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch
httpd-2.4.58-1.amzn2023.x86_64      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_http2-2.0.11-2.amzn2023.x86_64      mod_lua-2.4.58-1.amzn2023.x86_64

Complete!
[ec2-user@ip-12-0-3-219 ~]$ sudo service httpd start
Redirecting to /bin/systemctl start httpd.service
[ec2-user@ip-12-0-3-219 ~]$ mkdir temp
[ec2-user@ip-12-0-3-219 ~]$ ls
temp
[ec2-user@ip-12-0-3-219 ~]$ cd temp
[ec2-user@ip-12-0-3-219 temp]$ ls
index.html
[ec2-user@ip-12-0-3-219 temp]$ mv * /var/www/html/
mv: cannot move 'index.html' to '/var/www/html/index.html': Permission denied
[ec2-user@ip-12-0-3-219 temp]$ sudo mv * /var/www/html/
[ec2-user@ip-12-0-3-219 temp]$
```

Below the terminal output, the instance ID `i-090a8eb2a960cc4a7` (testpujanhehe) is shown, along with its public IP address `52.90.220.87` and private IP address `12.0.3.219`.

Finally, accessing our hosted website with our public IP Address.

