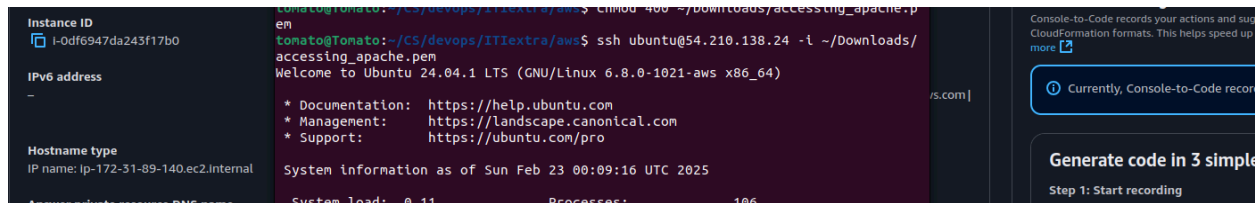


Q1:

First creating the ec2 instance with assigning it a public ip address



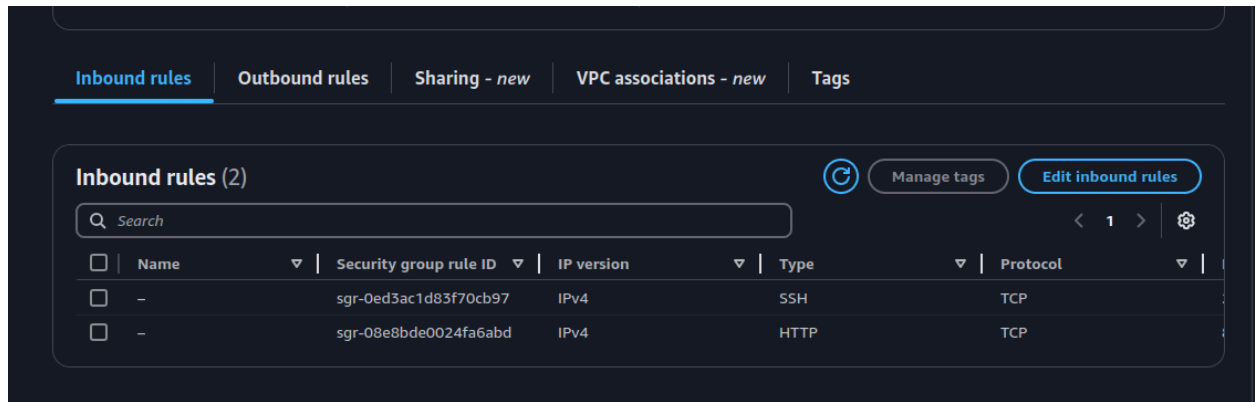
Ssh into the running instance



Curl inside the instance to check that apache2 is running



Allowing inbound http and ssh requests



```
00:24:55.339812 IP host-156.194.246.236.static.tedata.net.64201 > 1p-172-31-89-140.ec2.internal.http: Flags [P.], seq 434:867, ack 3461, win 476, options [nop,nop,TS val 2559930688 ecr 2097589791], length 433: H
TTP: GET / HTTP/1.1
00:24:55.340471 IP 1p-172-31-89-140.ec2.internal.http > host-156.194.246.236.static.tedata.net.64201: Flags [P.], seq 3461:6261, ack 867, win 484, options [nop,nop,TS val 2097511163 ecr 2559930688], length 2080:
HTTP: HTTP/1.1 200 OK
00:24:55.340496 IP 1p-172-31-89-140.ec2.internal.http > host-156.194.246.236.static.tedata.net.64201: Flags [P.], seq 6261:6920, ack 867, win 484, options [nop,nop,TS val 2097511163 ecr 2559930688], length 659:
HTTP
00:24:55.341652 IP 1p-172-31-89-140.ec2.internal.ecb > host-156.194.246.236.static.tedata.net.8075: Flags [P.], seq 3360:3370, ack 1, win 652, options [nop,nop,TS val 2097511163 ecr 2559930623], length 246
```

Q2: create a private ec2 instance

## Manage IP addresses info

Assign or unassign IPv4 and IPv6 addresses to or from an Instance's network interfaces.

### IP addresses

Instance ID  
I-0df6947da243f17b0

To assign additional public IPv4 addresses to this Instance, you must [allocate](#) Elastic IP addresses and associate them with the Instance or its network interfaces.

▼ eth0: eni-0df3e27db350a6dca - 172.31.80.0/20

#### IPv4 addresses

Private IP address	Public IP address	
172.31.89.140	54.210.138.24	Unassign

Assign new IP address

Auto-assign public IP Info

☐ Allow secondary private IPv4 addresses to be reassigned

You can stop the auto assigning of a public ip address to disable public accessing  
Reboot and check the changed network interface card

✓ Successfully initiated rebooting of I-0df6947da243f17b0

✓ Successfully completed request to manage IP addresses

▼ Details

- Successfully updated the auto-assign public IP value for the network interface eni-0df3e27db350a6dca (Only the value set on the primary network interface for an Instance will be used)

Updated 2 minutes ago

<b>Instance ID</b> I-0df6947da243f17b0	<b>Public IPv4 address</b> -	<b>Private IPv4 addresses</b> I 172.31.89.140
<b>IPv6 address</b> -	<b>Instance state</b> Running	<b>Public IPv4 DNS</b> -

Q3: creating a custom VPC with 2 public subnets 2 private subnets

Virtual private cloud

Your VPCs

- Subnets
- Route tables
- Internet gateways
- Egress-only internet gateways
- Carrier gateways
- DHCP option sets
- Elastic IPs
- Managed prefix lists
- NAT gateways
- Peering connections

▼ Security

- Network ACLs
- Security groups

▼ PrivateLink and Lattice

- Getting started Updated
- Endpoints Updated
- Endpoint services
- Service networks Updated
- Lattice services
- Resource configurations New
- Resource gateways New

<input type="checkbox"/>	-	vpc-01850b46d4e242529	Available	Off	172.31.0.0/16	-	dopt-0bd4a91cca6b2c37e	rtb-029d26cd9bd
<input type="checkbox"/>	itl_vpc	vpc-029cdf521c78a80a1	Available	Off	10.0.0.0/16	-	dopt-0bd4a91cca6b2c37e	rtb-00a0e8786d8

Select a VPC above

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EC2 Global View

Filter by VPC

Virtual private cloud

Your VPCs

Subnets

Route tables

Internet gateways

Egress-only internet gateways

Carrier gateways

DHCP option sets

Elastic IPs

Managed prefix lists

NAT gateways

Peering connections

Security

Network ACLs

Security groups

PrivateLink and Lattice

Getting started Updated

Endpoints Updated

Endpoint services

Service networks Updated

Lattice services

Resource configurations New

Resource gateways New

Name	Subnet ID	State	VPC	Block Public...	IPv4 CIDR	IPv6 CIDR	IPv6 CIDR
private_subnet2	subnet-09ed9eb66e87741d2	Available	vpc-029cdf521c76a80a1   Iti_vpc	Off	10.0.1.0/24	-	-
public_subnet	subnet-043d58f83bd3c21e2	Available	vpc-029cdf521c76a80a1   Iti_vpc	Off	10.0.0.0/24	-	-
private_subnet	subnet-0f4ed9dbd765e5910	Available	vpc-029cdf521c76a80a1   Iti_vpc	Off	10.0.3.0/24	-	-
-	subnet-085683926500ed96	Available	vpc-01850b46d4e242329	Off	172.31.0.0/20	-	-
public_subnet2	subnet-00bc5a80c2a07fcb5	Available	vpc-029cdf521c76a80a1   Iti_vpc	Off	10.0.2.0/24	-	-
-	subnet-0a9d7cb01f7e7069b	Available	vpc-01850b46d4e242329	Off	172.31.32.0/24	-	-
-	subnet-048525152e21dc64c	Available	vpc-01850b46d4e242329	Off	172.31.16.0/20	-	-

Select a subnet

EC2 Global View

Filter by VPC

Virtual private cloud

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Subnets

Route tables

Internet gateways

Egress-only internet gateways

Carrier gateways

DHCP option sets

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Security

Network ACLs

Security groups

PrivateLink and Lattice

Getting started Updated

Endpoints Updated

Endpoint services

Service networks Updated

Lattice services

Resource configurations New

Resource gateways New

Name	VPC ID	State	Block Public...	IPv4 CIDR	IPv6 CIDR	DHCP option set	Main
-	vpc-01850b46d4e242329	Available	Off	172.31.0.0/16	-	dopt-0bd4a91cca6b2c57e	rtb-
Iti_vpc	vpc-029cdf521c76a80a1	Available	Off	10.0.0.0/16	-	dopt-0bd4a91cca6b2c57e	rtb-

VPC Show details

Your AWS virtual network

Iti\_vpc

Subnets (4)

Subnets within this VPC

eu-central-1a

public\_subnet

private\_subnet

eu-central-1b

public\_subnet2

private\_subnet2

Route tables (3)

Route network traffic to resources

rtb-00a0e8786d87c020f

rtb-02bb732a22ba3a21d

rtb-0b0f32cb71b953849

Network connections (2)

Connections to other networks

Iti\_lgw

gw NAT

Find resources by attribute to tag

Name	Security group ID	Security group name	VPC ID	Description	Owner
-	sg-07245677d20abbfd0	default	vpc-01850b46d4e242329	default VPC security group	897729102326
-	sg-0455c0aed2f118b966	terraform-2025030723050338450000...	vpc-029cdf521c76a80a1	Managed by Terraform	897729102326
-	sg-026e6762351a381e5	terraform-2025030723050338480000...	vpc-029cdf521c76a80a1	Managed by Terraform	897729102326
-	sg-020d08c46bed5b5ec	terraform-2025030723050338430000...	vpc-029cdf521c76a80a1	Managed by Terraform	897729102326
-	sg-008bc2da804de92e9	default	vpc-029cdf521c76a80a1	default VPC security group	897729102326
-	sg-0e17d655a52c9d1a6	terraform-2025030723050338460000...	vpc-029cdf521c76a80a1	Managed by Terraform	897729102326

Spot Requests  
Savings Plans  
Reserved Instances  
Dedicated Hosts  
Capacity Reservations

▼ Images  
AMIs  
AMI Catalog

▼ Elastic Block Store  
Volumes  
Snapshots  
Lifecycle Manager

▼ Network & Security  
Security Groups  
Elastic IPs  
Placement Groups  
Key Pairs  
Network Interfaces

▼ Load Balancing  
Load Balancers  
Target Groups  
Trust Stores

▼ Auto Scaling  
Auto Scaling Groups

### Auto Scaling groups (2) [Info](#)

Search your Auto Scaling groups

<input type="checkbox"/>	Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	Availability Zones
<input type="checkbox"/>	<a href="#">terraform-202503072308369644000000b</a>	<a href="#">nginx_public_template</a>   Version Default	2	-	2	2	2	eu-central-1a, eu-central-1b
<input type="checkbox"/>	<a href="#">terraform-2025030723051605210000009</a>	<a href="#">apache_private_template</a>   Version Default	2	-	2	2	2	eu-central-1a, eu-central-1b

Savings Plans  
Reserved Instances  
Capacity Reservations

▼ Images  
AMIs  
AMI Catalog

▼ Elastic Block Store  
Volumes  
Snapshots  
Lifecycle Manager

▼ Network & Security  
Security Groups  
Elastic IPs  
Placement Groups  
Key Pairs  
Network Interfaces

▼ Load Balancing  
Load Balancers  
Target Groups  
Trust Stores

▼ Auto Scaling  
Auto Scaling Groups

Settings

### Load Balancing

Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.

Filter load balancers

<input type="checkbox"/>	Name	DNS name	State	VPC ID	Availability Zones	Type	Date created
<input type="checkbox"/>	public-lb	public-lb-1167990670.eu-central-1.elb.amazonaws.com	Active	vpc-029cdf521c76a80a1	2 Availability Zones	application	March 8, 2025, 01:05 (UTC+02:00)
<input checked="" type="checkbox"/>	private-lb	internal-private-lb-20230610.eu-central-1.elb.amazonaws.com	Active	vpc-029cdf521c76a80a1	2 Availability Zones	application	March 8, 2025, 01:05 (UTC+02:00)

#### Load balancer: private-lb

Listeners (1)

HTTP:80 1 rule

Rules (1)

Priority default  
Forward to target group  
Conditions (1)  
if no other rule applies

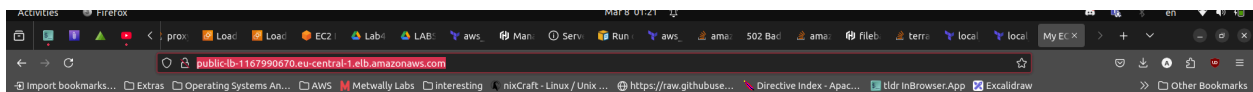
Target groups (1) [Info](#)

Instance private-target 2 targets

Targets (2)

i-0200107cd88b2fe2b Port 80  
Healthy

i-028a56d4133403bb2 Port 80  
Healthy



## Welcome to My EC2 Instance

Instance ID: Hello from public

This was made using terraform with the code available on  
<https://github.com/abdurahmanalaa123/ITI-sessions/tree/master/AWS/Lab2>