

AWS Task-2

Task Description:

Set up a VPC with an Internet gateway, create a public subnet with 256 IP addresses, a private subnet with 256 IP addresses, make a route table connecting the Internet gateway and the subnets, and launch a Linux EC2 instance by using the above VPC and public subnet.

Techstacks needs to be used :

- AWS VPC
- AWS EC2

Created VPC:

The screenshot shows the AWS VPC Details page for a newly created VPC named 'MyVPC'. The top bar displays a success message: 'You successfully created vpc-02ba37f6f1125145a / MyVPC'. The main content area is divided into several sections:

- Details**:
 - VPC ID: vpc-02ba37f6f1125145a
 - DNS resolution: Enabled
 - Main network ACL: acl-068bfccfe4b4de208
 - IPv6 CIDR (Network border group): -
 - Encryption control ID: -
- State**: Available
- Tenancy**: default
- Default VPC**: No
- Network Address Usage metrics**: Disabled
- Encryption control mode**: -
- Block Public Access**: Off
- DHCP option set**: dopt-0c1da39cd611dc47
- IPv4 CIDR**: 10.0.0.0/16
- Route 53 Resolver DNS Firewall rule groups**: -
- DNS hostnames**: Disabled
- Main route table**: rtb-0ddc5c4e00a257fb5
- IPv6 pool**: -
- Owner ID**: 260448776023

Below the details section, there are tabs for **Resource map**, **CIDRs**, **Flow logs**, **Tags**, and **Integrations**. The **Resource map** section contains four boxes: **VPC** (Your AWS virtual network, MyVPC), **Subnets (0)** (Subnets within this VPC), **Route tables (1)** (Route network traffic to resources, rtb-0ddc5c4e00a257fb5), and **Network Connections (0)** (Connections to other networks).

Create a public subnet:(CIDR:10.0.0.0/24)

The screenshot shows the AWS CloudFormation Subnets page for a stack named "subnet-024bc99e413dae483". The main section displays the "Public Subnet" configuration, including its Subnet ID (subnet-024bc99e413dae483), Availability Zone (us-east-1a), Network ACL (us-east-1), and various network settings like State (Available), VPC (vpc-02ba37f6f1125145a), and Auto-assign IPv4 address (No). Below the main details, there are tabs for Flow logs, Route table, Network ACL, CIDR reservations, Sharing, and Tags. A separate "Flow logs" section at the bottom shows no results found.

Creating a Private Subnet:(CIDR: 10.0.1.0/24)

The screenshot shows the AWS CloudFormation Subnets page for a stack named "subnet-00626845e39ab03ad". The main section displays the "Private Subnet" configuration, including its Subnet ID (subnet-00626845e39ab03ad), Availability Zone (us-east-1a), Network ACL (us-east-1), and various network settings like State (Available), VPC (vpc-02ba37f6f1125145a), and Auto-assign IPv4 address (No). Below the main details, there are tabs for Flow logs, Route table, Network ACL, CIDR reservations, Sharing, and Tags. A separate "Flow logs" section at the bottom shows no results found.

Creating internet gateway and VPC attached to it:

The screenshot shows the AWS CloudFormation Internet Gateways page for a stack named "igw-0d58696cd99df8fed". The main section displays the "MyIGW" configuration, including its Internet gateway ID (igw-0d58696cd99df8fed), State (Attached), VPC ID (vpc-02ba37f6f1125145a), and Owner (260448776023). Below the main details, there are tabs for Details, Tags, and Actions. A separate "Tags" section at the bottom shows one tag named "MyIGW".

VPC > Internet gateways > Attach to VPC (igw-0d58696cd99df8fed)

The following internet gateway was created: igw-0d58696cd99df8fed - MyIGW. You can now attach to a VPC to enable the VPC to communicate with the internet.

Attach to VPC (igw-0d58696cd99df8fed) [Info](#)

VPC
Attach an internet gateway to a VPC to enable the VPC to communicate with the internet. Specify the VPC to attach below.

Available VPCs
Attach the internet gateway to this VPC.

vpc-02ba37f6f1125145a [X](#)

AWS Command Line Interface command

[Cancel](#) [Attach internet gateway](#)

Creating Route table(my-RouteTable) and attached VPC to it:

rtb-04943e994ec4935c1

Route table rtb-04943e994ec4935c1 | my-RouteTable was created successfully.

rtb-04943e994ec4935c1 / my-RouteTable

Details [Info](#)

Route table ID	rtb-04943e994ec4935c1	Main	Explicit subnet associations
VPC	vpc-02ba37f6f1125145a MyVPC	No	Edge associations
Owner ID	260448776023	-	-

[Routes](#) [Subnet associations](#) [Edge associations](#) [Route propagation](#) [Tags](#)

Routes (1)

Destination	Target	Status	Propagated	Route Origin
10.0.0.0/16	local	Active	No	Create Route Table

Add a Route to the Internet Gateway:

rtb-04943e994ec4935c1 > Edit routes

Edit routes

Destination	Target	Status	Propagated	Route Origin
10.0.0.0/16	local	Active	No	CreateRouteTable
0.0.0.0/0	Internet Gateway	-	No	CreateRoute
0.0.0.0/0	igw-0d58696cd99df8fed	-	No	CreateRoute

[Add route](#) [Cancel](#) [Preview](#) [Save changes](#)

Updated routes for rtb-04943e994ec4935c1 / my-RouteTable successfully

rtb-04943e994ec4935c1 / my-RouteTable

Details [Info](#)

Route table ID	rtb-04943e994ec4935c1	Main	Explicit subnet associations
VPC	vpc-02ba37f6f1125145a MyVPC	No	Edge associations
Owner ID	260448776023	-	-

[Routes](#) [Subnet associations](#) [Edge associations](#) [Route propagation](#) [Tags](#)

Routes (2)

Destination	Target	Status	Propagated	Route Origin
0.0.0.0/0	igw-0d58696cd99df8fed	Active	No	Create Route
0.0.0.0/0	local	Active	No	Create Route Table
10.0.0.0/16	local	Active	No	Create Route Table

Associate Public &Private Subnets with Route Table(my-RouteTable):

VPC > Route tables > rtb-04943c994ec4935c1 > Edit subnet associations

Edit subnet associations

Change which subnets are associated with this route table.

Available subnets (2/2)		IPv4 CIDR	IPv6 CIDR
<input checked="" type="checkbox"/> Name	Subnet ID	10.0.0.0/24	-
<input checked="" type="checkbox"/> Public Subnet	subnet-024bc99e413dae483	10.0.0.0/24	-
<input checked="" type="checkbox"/> Private Subnet	subnet-00626845e39ab03ad	10.0.1.0/24	-

Selected subnets

subnet-024bc99e413dae483 / Public Subnet subnet-00626845e39ab03ad / Private Subnet

launching a Linux EC2 instance by using the above VPC and public subnet.

Instances > Launch an Instance

Amazon Linux 2023 AMI 2023.10.20260202.2.x86_64 HVM kernel-6.1

Architecture	Boot mode	AMI ID	Publish Date	Username	Verified provider
64-bit (x86)	uefi-preferred	ami-0c1fe732b5494dc14	2026-02-03	ec2-user	

Instance type Info | Get advice

t3.micro Free tier eligible

Family: t3 2 vCPU 1 GiB Memory Current generation: true On-Demand Linux base pricing: 0.0104 USD per Hour
On-Demand Windows base pricing: 0.0196 USD per Hour On-Demand Ubuntu Pro base pricing: 0.0119 USD per Hour
On-Demand RHEL base pricing: 0.0104 USD per Hour On-Demand RHEL base pricing: 0.0392 USD per Hour

All generations

Key pair (login) Info

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required

Network settings Info

VPC - required Info

vpc-02ba57f6f1125145a (MyVPC)

Subnet Info

subnet-024bc99e413dae483 Public Subnet

Auto-assign public IP Info

Enable

Firewall (security group) Info

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Instances > i-06ff8a74dbd0b70dd

Instance summary for i-06ff8a74dbd0b70dd (VPC-Test) Info

Updated less than a minute ago

Instance ID	i-06ff8a74dbd0b70dd	Public IPv4 address	44.201.68.153 <input type="button" value="open address"/>
IPv6 address	-	Instance state	Running
Hostname type	IP name: ip-10-0-0-57.ec2.internal	Private IP DNS name (IPv4 only)	ip-10-0-0-57.ec2.internal
Answer private resource DNS name	-	Instance type	t3.micro
Auto-assigned IP address	<input type="button" value="View details"/>	VPC ID	vpc-02ba57f6f1125145a (MyVPC) <input type="button" value="Edit"/>
IAM role	-	Subnet ID	subnet-024bc99e413dae483 (Public Subnet) <input type="button" value="Edit"/>
IMDSv2	Required	Instance ARN	arn:aws:ec2:us-east-1:260448776023:instance/i-06ff8a74dbd0b70dd
Operator	-	Platform details	
Details	Status and alarms	Monitoring	disabled
Instance details <small>Info</small>	Allowed image	Termination protection	Disabled
AMI ID	<input type="button" value="View details"/>	Launch time	Tue Feb 17 2026 20:14:23 GMT+0530 (India Standard Time) (less than a minute)
AMI name	<input type="button" value="View details"/>	AM location	amazon/ami-2023-ami-2023.10.20260202.2-kernel-6.1-x86_64
Stop protection	Disabled		

Verifying the Ec2 to connectivity in local:

```
ec2-user@ip-10-0-0-57:~ + - Microsoft Windows [Version 10.0.26200.7705]
(c) Microsoft Corporation. All rights reserved.

C:\Users\hp>ssh -i "C:\Users\hp\Downloads\firstkey.pem" ec2-user@44.201.68.153
The authenticity of host '44.201.68.153 (44.201.68.153)' can't be established.
ED25519 key fingerprint is SHA256:3KqItbxWtaS5Xl1XPwqCSIaMZZvbzizzwHvF1FkjgNk.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? y
Please type 'yes', 'no' or the fingerprint: yes
Warning: Permanently added '44.201.68.153' (ED25519) to the list of known hosts.

,      #
~\_\_ #####_      Amazon Linux 2023
~~ \_\#####\
~~   \###|
~~     \#/ ___ https://aws.amazon.com/linux/amazon-linux-2023
~~       \|~' '-->
~~~           /
~~ ._. /_/
~/m/' [ec2-user@ip-10-0-0-57 ~]$
```