

AWS Task-2

Task: 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.

1. Creating VPC

Create VPC [Info](#)

A VPC is an isolated portion of the AWS Cloud populated by AWS objects, such as Amazon EC2 instances.

VPC settings

Resources to create [Info](#)
Create only the VPC resource or the VPC and other networking resources.

VPC only VPC and more

Name tag - optional
Creates a tag with a key of 'Name' and a value that you specify.

IPv4 CIDR block [Info](#)
 IPv4 CIDR manual input IPAM-allocated IPv4 CIDR block
IPv4 CIDR

CIDR block size must be between /16 and /28.

IPv6 CIDR block [Info](#)
 No IPv6 CIDR block IPAM-allocated IPv6 CIDR block Amazon-provided IPv6 CIDR block IPv6 CIDR owned by me

Tenancy [Info](#)

VPC encryption control (\$) [Info](#)
Monitor mode provides visibility into encryption status without blocking traffic. Enforce mode prevents unencrypted traffic. Additional charges apply [Learn more](#)

None Monitor mode See which resources in your VPC are unencrypted but allow the creation of unencrypted resources. Enforce mode Requires all resources, except exclusions, in your VPC to be encryption-capable and blocks creation of unencrypted resources.

Tags
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key **Value - optional** [Remove tag](#)

[Add tag](#)
You can add 49 more tags.

[Cancel](#) [Preview code](#) [Create VPC](#)

2. VPC created

Success You successfully created **vpc-0c4163713c0598753 / my-vpc**

vpc-0c4163713c0598753 / my-vpc [Actions](#)

Details			
VPN ID	<input checked="" type="checkbox"/> vpc-0c4163713c0598753	State	<input checked="" type="radio"/> Available
DNS resolution	Enabled	Tenancy	default
Main network ACL	acl-0a35aab06c1967ac3	Default VPC	No
IPv6 CIDR (Network border group)	-	Network Address Usage metrics	Disabled
Encryption control ID	-	Encryption control mode	-
		Block Public Access	<input type="radio"/> Off
		DHCP option set	dopt-0d25a7ed083691b25
		IPv4 CIDR	10.0.0.0/16
		Route 53 Resolver DNS Firewall rule groups	-
		DNS hostnames	Disabled
		Main route table	rtb-0bf0c310dac509167
		IPv6 pool	-
		Owner ID	<input checked="" type="checkbox"/> 484733236792

3. Creating subnets with 256 IP addresses.

Create subnet [info](#)

VPC
VPC ID
Create subnets in this VPC.

Associated VPC CIDRs
IPv4 CIDRs

Subnet settings
Specify the CIDR blocks and Availability Zone for the subnet.

Subnet 1 of 2

Subnet name
Create a tag with a key of 'Name' and a value that you specify.

The name can be up to 256 characters long.

Availability Zone [info](#)
Choose the zone in which your subnet will reside, or let Amazon choose one for you.

IPv4 VPC CIDR block [info](#)
Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.

IPv4 subnet CIDR block
 256 IP

Tags - optional
Key Value - optional [Remove](#)
[Add new tag](#)
You can add up to 40 more tags.
[Remove](#)

Subnet 2 of 2

Subnet name
Create a tag with a key of 'Name' and a value that you specify.

The name can be up to 256 characters long.

Availability Zone [info](#)
Choose the zone in which your subnet will reside, or let Amazon choose one for you.

IPv4 VPC CIDR block [info](#)
Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.

IPv4 subnet CIDR block
 256 IP

Tags - optional
Key Value - optional [Remove](#)
[Add new tag](#)
You can add up to 40 more tags.
[Remove](#)
[Add new subnet](#)

[Cancel](#) [Create subnet](#)

4. Created subnets.

subnet-03bf7e797aefaa3d48 / private-subnet				Actions		
Details						
Subnet ID <input type="text" value="subnet-03bf7e797aefaa3d48"/>	Subnet ARN <input type="text" value="arn:aws:ec2:eu-north-1:48473323679:subnet/subnet-03bf7e797aefaa3d48"/>	State <input checked="" type="radio"/> Available	Block Public Access <input checked="" type="radio"/> Off	IPv6 CIDR association ID -		
IPv4 CIDR <input type="text" value="10.0.1.0/24"/>	Available IPv4 addresses <input type="text" value="251"/>	IPv6 CIDR -	Route table -	Auto-assign IPv6 address No		
Availability Zone <input type="text" value="eu-north-1a (eu-north-1a)"/>	Network border group <input type="text" value="eu-north-1"/>	VPC <input type="text" value="vpc-0c4163713c0598753 my-vpc"/>	Outpost ID -	IPv4 CIDR reservations -		
Network ACL -	Default subnet No	Auto-assign public IPv4 address No	Hostname type IP name	Resource name DNS A record Disabled		
Auto-assign customer-owned IPv4 address No	Customer-owned IPv4 pool -	Owner <input type="text" value="484733236792"/>				
IPv6 CIDR reservations -	IPv6-only No					
Resource name DNS AAAA record Disabled	DNS64 Disabled					

subnet-04e1993f20af84a8f / public-subnet

Actions ▾

Details

Subnet ID	subnet-04e1993f20af84a8f	Subnet ARN	arn:aws:ec2:eu-north-1:484733236792:subnet/subnet-04e1993f20af84a8f	State	Available	Block Public Access	Off
IPv4 CIDR	10.0.0.0/24	Available IPv4 addresses	251	IPv6 CIDR	-	IPv6 CIDR association ID	-
Availability Zone	eun1-az2 (eu-north-1b)	Network border group	eu-north-1	VPC	vpc-0c4163713c0598753 my-vpc	Route table	-
Network ACL	-	Default subnet	No	Auto-assign public IPv4 address	No	Auto-assign IPv6 address	No
Auto-assign customer-owned IPv4 address	No	Customer-owned IPv4 pool	-	Outpost ID	-	IPv4 CIDR reservations	-
IPv6 CIDR reservations	-	IPv6-only	No	Hostname type	IP name	Resource name DNS A record	Disabled
Resource name DNS AAAA record	Disabled	DNS64	Disabled	Owner	484733236792	Owner	484733236792

5. Creating internet gateway.

Create internet gateway Info

An internet gateway is a virtual router that connects a VPC to the internet. To create a new internet gateway specify the name for the gateway below.

Internet gateway settings

Name tag
Creates a tag with a key of 'Name' and a value that you specify.
my IGW

Tags - optional

A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key Value - optional
Name my IGW

You can add 49 more tags.

Cancel

Create internet gateway

6. Internet gate way created.

igw-08f91e542a571199b / my IGW

Actions ▾

Details Info

Internet gateway ID	igw-08f91e542a571199b	State	Detached	VPC ID	-	Owner	484733236792
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Tags (1)

<input type="text" value="Search tags"/>
Key Value
Name my IGW

< 1 > | ⚙

7. VPC attached to the internet gateway

igw-08f91e542a571199b / my IGW

Actions ▾

Details Info

Internet gateway ID	igw-08f91e542a571199b	State	Attached	VPC ID	vpc-0c4163713c0598753 my-vpc	Owner	484733236792
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Tags (1)

<input type="text" value="Search tags"/>
Key Value
Name my IGW

< 1 > | ⚙

8. Creating Route table.

Create route table [Info](#)

A route table specifies how packets are forwarded between the subnets within your VPC, the internet, and your VPN connection.

Route table settings

Name - optional
Create a tag with a key of 'Name' and a value that you specify.

VPC
The VPC to use for this route table.

Tags
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key Value - optional Remove

Add new tag

You can add 49 more tags.

[Cancel](#) [Create route table](#)

9. Route table created.

Route table rtb-0809917817b849f0a | my-route-table was created successfully.

rtb-0809917817b849f0a / my-route-table

[Actions](#)

Details [Info](#)

Route table ID rtb-0809917817b849f0a	Main <input checked="" type="checkbox"/> No	Explicit subnet associations -	Edge associations -
VPC vpc-0c4163713c0598753 my-vpc	Owner ID 484733236792		

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

Routes (1)

Filter routes		Destination	Target	Status	Propagated	Route Origin
Both	Edit routes	< 1 >	1	1	No	Create Route Table
10.0.0.0/16		local		Active		

10. Added route to internet gate way.

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

Routes (2)

Filter routes		Destination	Target	Status	Propagated	Route Origin
Both	Edit routes	< 1 >	1	1	No	Create Route
0.0.0.0/0		igw-08f91e542a571199b		Active	No	Create Route
10.0.0.0/16		local		Active	No	Create Route Table

11. Edited route table association with internet gate way in public subnet.

Subnet (subnet-04e1993f20af84a8f) has been successfully associated with route table (rtb-0809917817b849f0a).

[Route table](#) [Network ACL](#) [CIDR reservations](#) [Sharing](#) [Tags](#)

Route table: [rtb-0809917817b849f0a / my-route-table](#) [Edit route table association](#)

Routes (2)

Filter routes		Destination	Target
Both	Edit routes	< 1 >	1
10.0.0.0/16		local	
0.0.0.0/0		igw-08f91e542a571199b	

12. EC2 instances created.

The screenshot shows the AWS CloudWatch Metrics interface for an EC2 instance. The top navigation bar includes 'Connect', 'Actions', and 'Launch instances'. The main table lists metrics such as CPU Utilization, Network In, Network Out, and Memory Utilization over time. A detailed view of the instance's configuration is shown below, including its VPC ID (i-0daffb3989521bda0), instance state (Running), instance type (t3.micro), and various network and security details.

13. Login to EC2 instance

```
Raval@DESKTOP-TAS39G4 MINGW64 ~ (master)
$ ssh -i "C:\Users\krant\Downloads\RavalDevOps.pem.txt" ubuntu@13.61.177.46

" Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/pro

System information as of Mon Jan  5 10:00:45 UTC 2026
System load: 0.02      Temperature:      -273.1 C
Usage of /: 29.7% of 6.71GB  Processes:          118
Memory usage: 27%        Users logged in:    0
Swap usage:  0%          IPv4 address for ens5: 10.0.0.174

Expanded Security Maintenance for Applications is not enabled.

74 updates can be applied immediately.
28 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Last login: Mon Jan  5 09:48:55 2026 from 49.37.147.115
ubuntu@ip-10-0-0-174:~$ |
```

14. Testing outbound connectivity. (can ec2 reach the world or not)

```
ubuntu@ip-10-0-0-174:~$ curl -I https://www.amazon.com
HTTP/2 503
content-type: text/html
server: Server
date: Mon, 05 Jan 2026 10:05:41 GMT
x-amz-rid: WV7K2Y11GPNNQS83T9YD
vary: Content-Type,Accept-Encoding,User-Agent
last-modified: Thu, 13 Nov 2025 20:25:43 GMT
etag: "a6f-6437faf67ffc0"
accept-ranges: bytes
strict-transport-security: max-age=47474747; includeSubDomains; preload
x-cache: Error from cloudfront
via: 1.1 ce6aa43c72ee1bea26f47b9ee0b4eafc.cloudfront.net (CloudFront)
x-amz-cf-pop: ARN53-P1
alt-svc: h3=":443"; ma=86400
x-amz-cf-id: yxc_pmlJNSN1x1rh33kkcrcwkkb2lDMLqb-EQ8mxwcpexB2oOY6sg==

ubuntu@ip-10-0-0-174:~$ |
```

15. Reaching the world.setup VPC with internet completed successfully.