

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 [Info](#)
Creates a tag with a key of 'Name' and a value that you specify.

my-vpc

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

IPv4 CIDR
10.0.0.0/16
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](#)
Default

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

☒ None ☐ Monitor mode ☐ Enforce mode

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	
<input type="text" value="Name"/>	<input type="text" value="my-vpc"/>	<input type="button" value="Remove tag"/>
<input type="button" value="Add tag"/>		

You can add 49 more tags.

2. VPC created

You successfully created vpc-0c4163713c0598753 / my-vpc

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

Details [Info](#)

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

3. Creating subnets with 256 IP addresses.

Create subnet info

VPC
VPC ID
Create subnets in this VPC.
vpc-0c4163713c0598753 (my-vpc)
Associated VPC CIDRs
IPv4 CIDRs
10.0.0.0/16

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.
public-subnet
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.
Europe (Stockholm) / eu-n1-az1 (eu-north-1a)
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.
10.0.0.0/16
IPv4 subnet CIDR block
10.0.0.0/24 256 IPs
Tags - optional

Key	Value - optional
Name	public-subnet

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

Subnet 2 of 2
Subnet name
Create a tag with a key of 'Name' and a value that you specify.
private-subnet
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.
Europe (Stockholm) / eu-n1-az1 (eu-north-1a)
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.
10.0.0.0/16
IPv4 subnet CIDR block
10.0.0.0/24 256 IPs
Tags - optional

Key	Value - optional
Name	private-subnet

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

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

4. Created subnets.

subnet-03bf7e797aefa3d48 / private-subnet					Actions
Details					
Subnet ID subnet-03bf7e797aefa3d48	Subnet ARN arn:aws:ec2:eu-north-1:484733236792:subnet/subnet-03bf7e797aefa3d48	State Available	Block Public Access Off		
IPv4 CIDR 10.0.1.0/24	Available IPv4 addresses 251	IPv6 CIDR -	IPv6 CIDR association ID -		
Availability Zone eu-n1-az1 (eu-north-1a)	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			

subnet-04e1993f20af84a8f / public-subnet

[Actions](#)

Details

Subnet ID

subnet-04e1993f20af84a8f

IPv4 CIDR

10.0.0.0/24

Availability Zone

eu-n1-az2 (eu-north-1b)

Network ACL

-

Auto-assign customer-owned IPv4 address

No

IPv6 CIDR reservations

-

Resource name DNS AAAA record

Disabled

Subnet ARN

arn:aws:ec2:eu-north-1:484733236792:subnet/subnet-04e1993f20af84a8f

Available IPv4 addresses

251

Network border group

eu-north-1

Default subnet

No

Customer-owned IPv4 pool

-

IPv6-only

No

DNS64

Disabled

State

Available

IPv6 CIDR

-

VPC

vpc-0c4163713c0598753 | my-vpc

Auto-assign public IPv4 address

No

Outpost ID

-

Hostname type

IP name

Owner

484733236792

Block Public Access

Off

IPv6 CIDR association ID

-

Route table

-

Auto-assign IPv6 address

No

IPv4 CIDR reservations

-

Resource name DNS A record

Disabled

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

Q Name

Value - optional

Q my IGW

Remove

Add new tag

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

Tags (1)

Q Search tags

Key

Name

Value

my IGW

Manage tags

< 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

Tags (1)

Q Search tags

Key

Name

Value

my IGW

Manage tags

< 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.

my-route-table

VPC
The VPC to use for this route table.

vpc-0c4163713c0598753 (my-vpc)

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
Q Name X

Value - optional
Q my-route-table X 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 No	Explicit subnet associations -	Edge associations -
VPC vpc-0c4163713c0598753 my-vpc	Owner ID 484733236792		

Routes | Subnet associations | Edge associations | Route propagation | Tags

Routes (1) [Both](#) [Edit routes](#)

Filter routes

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

10. Added route to internet gate way.

Routes | Subnet associations | Edge associations | Route propagation | Tags

Routes (2) [Both](#) [Edit routes](#)

Filter routes

Destination	Target	Status	Propagated	Route Origin
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).

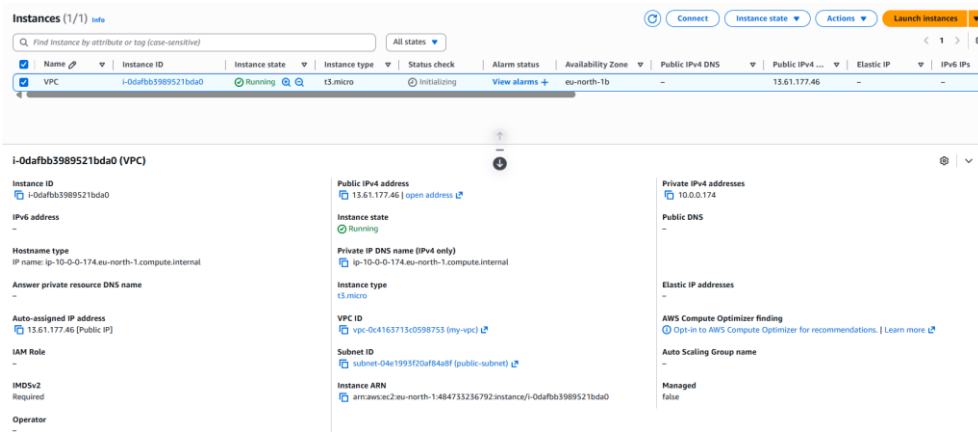
Auto-assign customer-owned IPv4 address No	Default subnet No	Outpost ID -	IPv4 CIDR reservations -
IPv6 CIDR reservations -	Customer-owned IPv4 pool -	Hostname type IP name	Resource name DNS A record Disabled
Resource name DNS AAAA record Disabled	IPv6-only No	Owner 484733236792	

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

Routes (2) [Filter routes](#) [1](#)

Destination	Target
10.0.0.0/16	local
0.0.0.0/0	igw-08f91e542a571199b

12. EC2 instances created.



The screenshot shows the AWS Management Console. At the top, there's a table of instances. The first instance is selected, and its details are shown below.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IPv6 IPs
VPC	i-0dafbb3989521bda0	Running	t3.micro	Initializing	View alarms +	eu-north-1b	-	13.61.177.46	-	-

i-0dafbb3989521bda0 (VPC)

Instance ID: i-0dafbb3989521bda0

IPv6 address: -

Hostname type: IP name: ip-10-0-0-174.eu-north-1.compute.internal

Answer private resource DNS name: -

Auto-assigned IP address: 13.61.177.46 (Public IP)

IAM Role: -

IMDSv2: Required

Operator: -

Public IPv4 address: 13.61.177.46 | open address

Instance state: Running

Private IP DNS name (IPv4 only): ip-10-0-0-174.eu-north-1.compute.internal

Instance type: t3.micro

VPC ID: vpc-0c4163713c0598753 (my-vpc)

Subnet ID: subnet-04e1993f20af84df (public-subnet)

Instance ARN: arn:aws:ec2:eu-north-1:484733236792:instance/i-0dafbb3989521bda0

Private IPv4 addresses: 10.0.0.174

Public DNS: -

Elastic IP addresses: -

AWS Compute Optimizer finding: Opt-in to AWS Compute Optimizer for recommendations. | Learn more

Auto Scaling Group name: -

Managed: false

13. Login to EC2 instance

```
Ravali@DESKTOP-IAS39G4 MINGW64 ~ (master)
$ ssh -i "C:\Users\krant\Downloads\RavaliDevOps.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_pMLJNSN1x1rH33kkrcWwkkb21DMLqB-EQ8mxwcpexB2o0Y6sg==

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

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