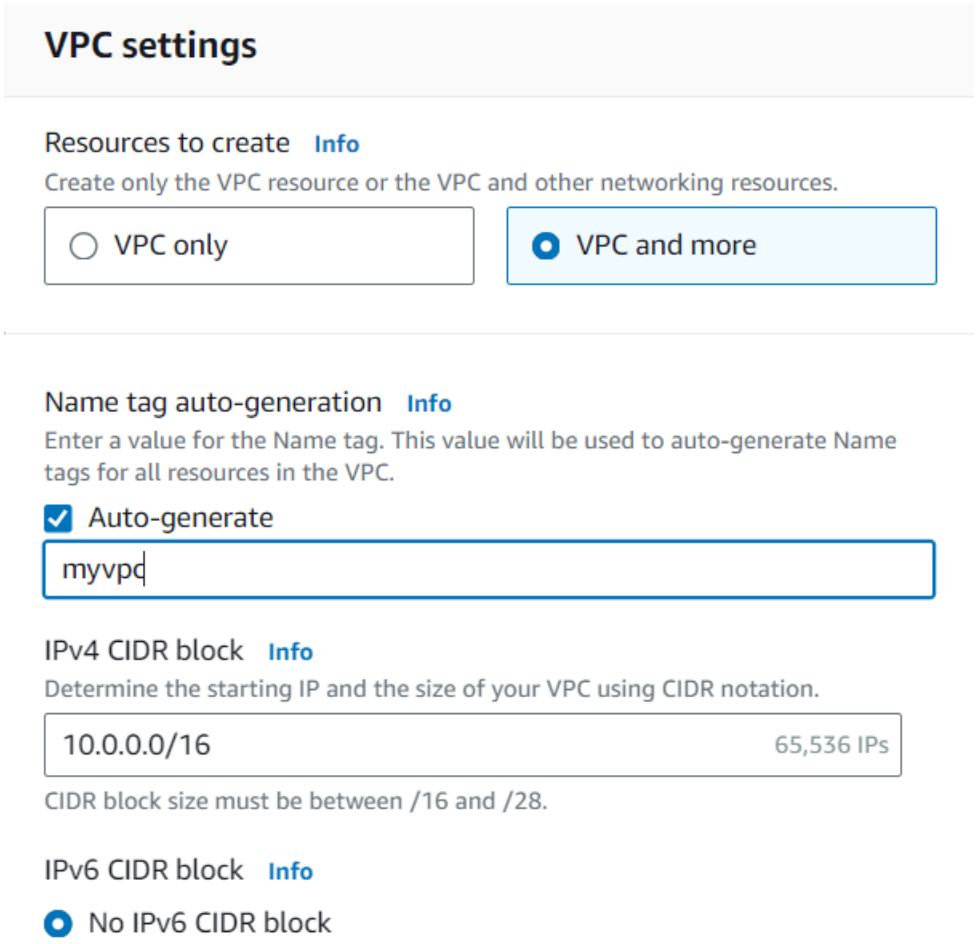
Task 14: set up a VPC with an Internet gateway, create a public subnet, a private subnet make a route table connecting the Internet gateway and the subnets, and launch a Linux EC2 instance by using the above vpc and public subnet.

1. **set up a VPC with an Internet gateway, create a public subnet, a private subnet make a route table connecting the Internet gateway and the subnets:**



Number of Availability Zones (AZs) Info

Choose the number of AZs in which to provision subnets. We recommend at least two AZs for high availability.

1	**2**	3

▶ **Customize AZs**

Number of public subnets Info

The number of public subnets to add to your VPC. Use public subnets for web applications that need to be publicly accessible over the internet.

0	**2**

Number of private subnets Info

The number of private subnets to add to your VPC. Use private subnets to secure backend resources that don't need public access.

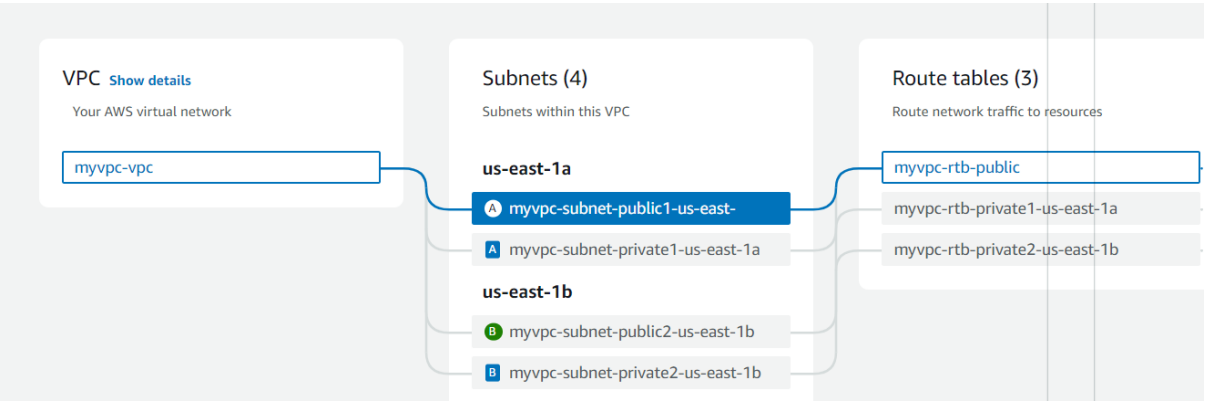
0	**2**	4

▶ **Customize subnets CIDR blocks**

NAT gateways ($) Info

Choose the number of Availability Zones (AZs) in which to create NAT gateways. Note that there is a charge for each NAT gateway

None	**In 1 AZ**	1 per AZ



Success

Details

- Create VPC: vpc-0f7afbc35ba2e5403
- Enable DNS hostnames
- Enable DNS resolution
- Verifying VPC creation: vpc-0f7afbc35ba2e5403
- Create S3 endpoint: vpce-07610f54271d23191
- Create subnet: subnet-0341c8d1e0c5142e4
- Create subnet: subnet-0bbf6ec87487354c2
- Create subnet: subnet-040d82dbe6d5c9f7a
- Create subnet: subnet-0207ff93240153ea2
- Create internet gateway: igw-0f9437af6a44b2870
- Attach internet gateway to the VPC
- Create route table: rtb-001abb5ac4af67e53
- Create route
- Associate route table
- Associate route table
- Allocate elastic IP: eipalloc-0c3bdfd1bfb989a43
- Create NAT gateway: nat-0858e524041ba2572
- Wait for NAT Gateways to activate
- Create route table: rtb-0f03df9da6eeac99b
- Create route
- Associate route table

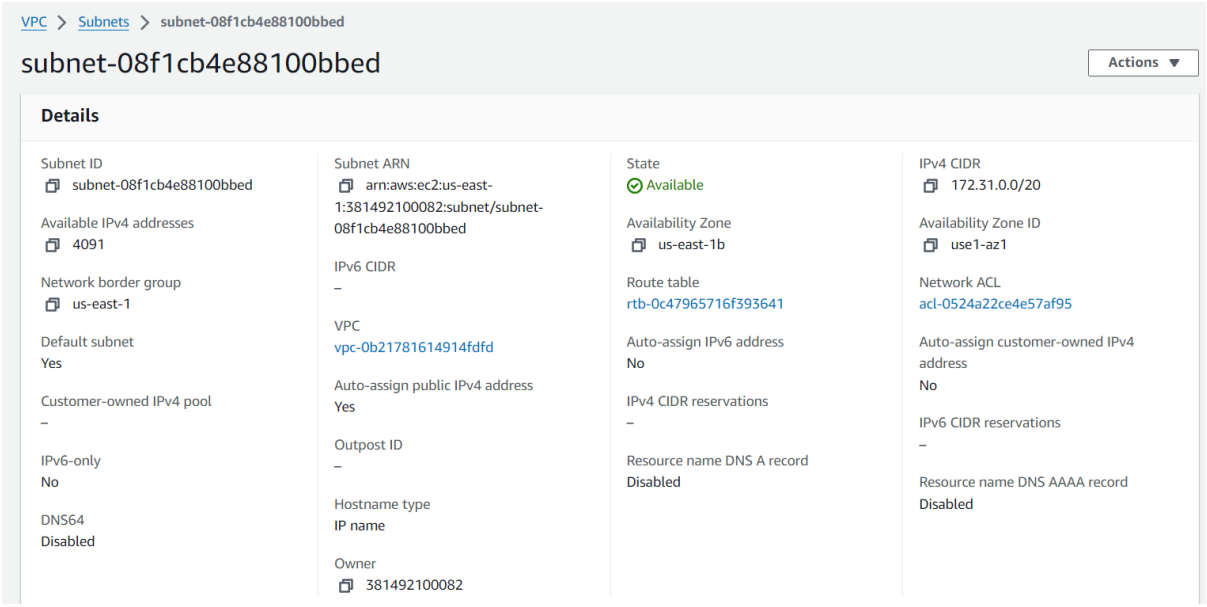
VPC > Your VPCs > vpc-0f7afbc35ba2e5403

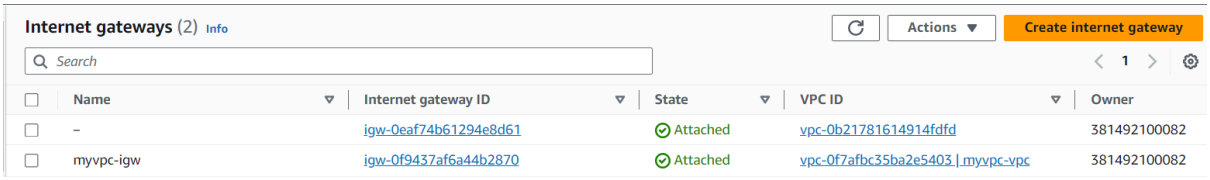
vpc-0f7afbc35ba2e5403 / myvpc-vpc

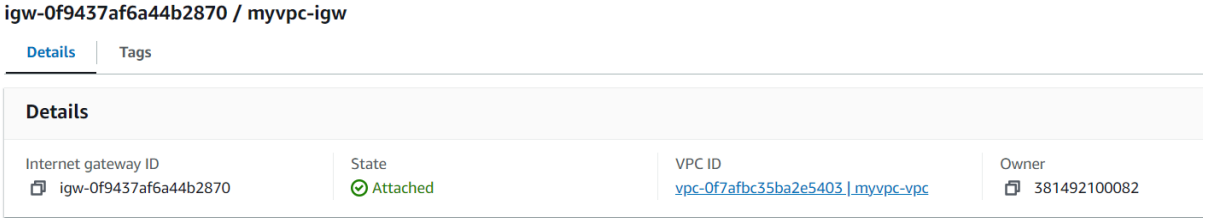
Actions

Details Info

VPC ID vpc-0f7afbc35ba2e5403	State Available	DNS hostnames Enabled	DNS resolution Enabled
Tenancy Default	DHCP option set dopt-0f6fee14b8effce8e	Main route table rtb-0439c431ca8b767c3	Main network ACL acl-0ecd507984a5d2a84
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 381492100082	


VPC > Subnets > subnet-08f1cb4e88100bbed
subnet-08f1cb4e88100bbed
Actions
Details
Subnet ID
subnet-08f1cb4e88100bbed
Available IPv4 addresses
4091
Network border group
us-east-1
Default subnet
Yes
Customer-owned IPv4 pool
–
IPv6-only
No
DNS64
Disabled
Subnet ARN
arn:aws:ec2:us-east-1:381492100082:subnet/subnet-08f1cb4e88100bbed
IPv6 CIDR
–
VPC
vpc-0b21781614914fdfd
Auto-assign public IPv4 address
Yes
Outpost ID
–
Hostname type
IP name
Owner
381492100082
State
Available
Availability Zone
us-east-1b
Route table
rtb-0c47965716f393641
Auto-assign IPv6 address
No
IPv4 CIDR reservations
–
Resource name DNS A record
Disabled
IPv4 CIDR
172.31.0.0/20
Availability Zone ID
use1-az1
Network ACL
acl-0524a22ce4e57af95
Auto-assign customer-owned IPv4 address
No
IPv6 CIDR reservations
–
Resource name DNS AAAA record
Disabled


Internet gateways (2) Info
Actions
Create internet gateway
Search
1
Name
Internet gateway ID
State
VPC ID
Owner
–
igw-0eaf74b61294e8d61
Attached
vpc-0b21781614914fdfd
381492100082
myvpc-igw
igw-0f9437af6a44b2870
Attached
vpc-0f7afbc35ba2e5403 | myvpc-vpc
381492100082


igw-0f9437af6a44b2870 / myvpc-igw
Details
Tags
Details
Internet gateway ID
igw-0f9437af6a44b2870
State
Attached
VPC ID
vpc-0f7afbc35ba2e5403 | myvpc-vpc
Owner
381492100082

VPC > Route tables > Create 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-routetable

VPC

The VPC to use for this route table.

vpc-0f7afbc35ba2e5403 (myvpc-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	Value - *optional*	
Name	vpc-routetable	Remove

Route table rtb-0e520ff5cd55d5112 | vpc-routetable was created successfully.

VPC > Route tables > rtb-0e520ff5cd55d5112

rtb-0e520ff5cd55d5112 / vpc-routetable

Actions

Details Info

Route table ID	Main	Explicit subnet associations	Edge associations
rtb-0e520ff5cd55d5112	No	–	–

VPC	Owner ID
vpc-0f7afbc35ba2e5403 | myvpc-vpc	381492100082

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

Routes (1)

Both | Edit routes

Filter routes

1

Destination	Target	Status	Propagated
10.0.0.0/16	local	Active	No

VPC > Route tables > rtb-0e520ff5cd55d5112 > Edit subnet associations

Edit subnet associations

Change which subnets are associated with this route table.

Available subnets (2/4)

Filter subnet associations

1

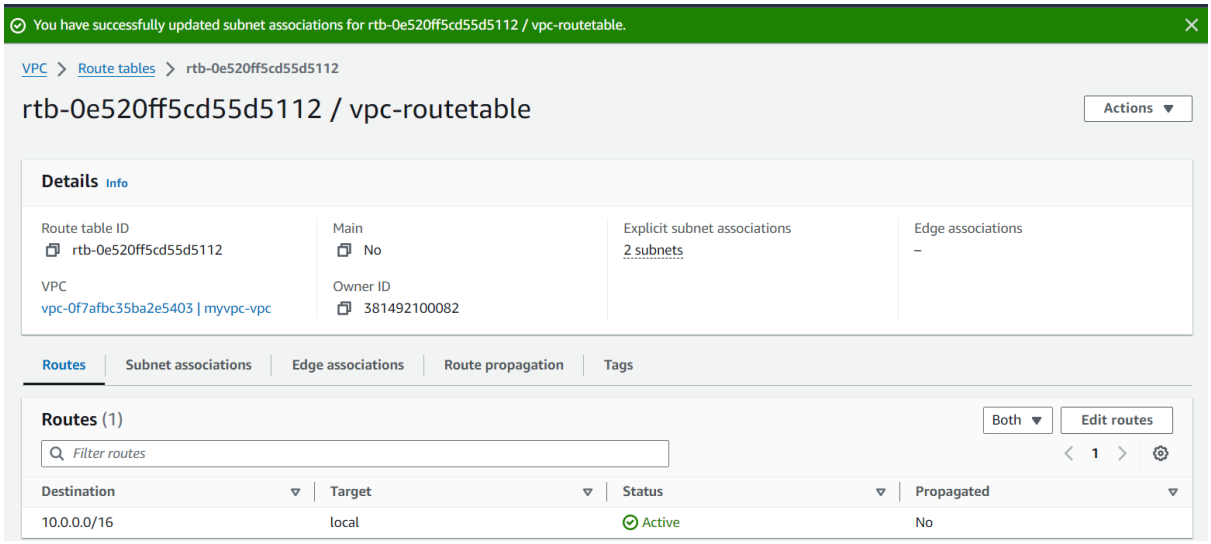
	Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID
☐	myvpc-subnet-private1-us-east-1a	subnet-040d82dbe6d5c9f7a	10.0.128.0/20	–	rtb-0f03df9da6eeac99b / myvpc-rtb-p...
☑	myvpc-subnet-public1-us-east-1a	subnet-0341c8d1e0c5142e4	10.0.0.0/20	–	rtb-001abb5ac4af67e53 / myvpc-rtb-...
☐	myvpc-subnet-private2-us-east-1b	subnet-0207ff93240153ea2	10.0.144.0/20	–	rtb-009bdbc1b92c570e1 / myvpc-rtb-...
☑	myvpc-subnet-public2-us-east-1b	subnet-0bbf6ec87487354c2	10.0.16.0/20	–	rtb-001abb5ac4af67e53 / myvpc-rtb-...

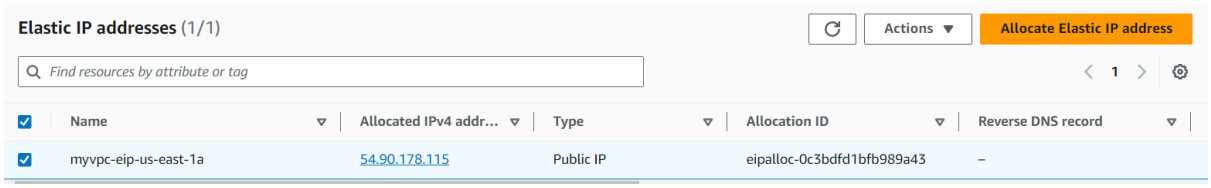
Selected subnets

subnet-0341c8d1e0c5142e4 / myvpc-subnet-public1-us-east-1a

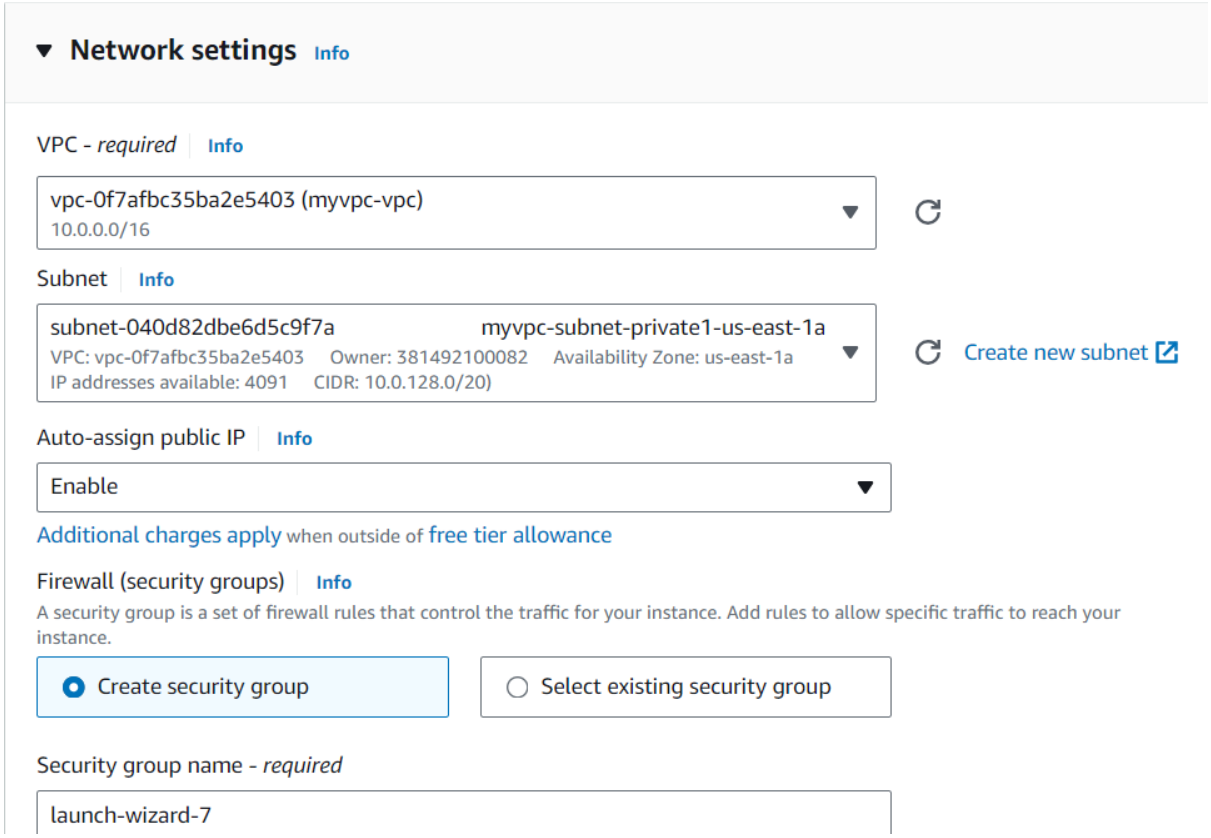
subnet-0bbf6ec87487354c2 / myvpc-subnet-public2-us-east-1b

Cancel | Save associations





2. launch a Linux EC2 instance by using the above vpc and public subnet:-



Firewall (security groups) 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.

(•) Create security group ( ) Select existing security group

Security group name - *required*

vpc-securitygroup

This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and ._-:/()#,@[]+=&;{}!$*

Description - *required* Info

vpc-securitygroupforec2

Inbound Security Group Rules

▼ Security group rule 1 (TCP, 22, 0.0.0.0/0) Remove

Type Info	Protocol Info	Port range Info
ssh ▼	TCP	22