

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:

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 auto-generation [Info](#)

Enter a value for the Name tag. This value will be used to auto-generate Name tags for all resources in the VPC.

☒ Auto-generate

myvpd

IPv4 CIDR block [Info](#)

Determine the starting IP and the size of your VPC using CIDR notation.

10.0.0.0/16

65,536 IPs

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

IPv6 CIDR block [Info](#)

☒ No IPv6 CIDR block

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

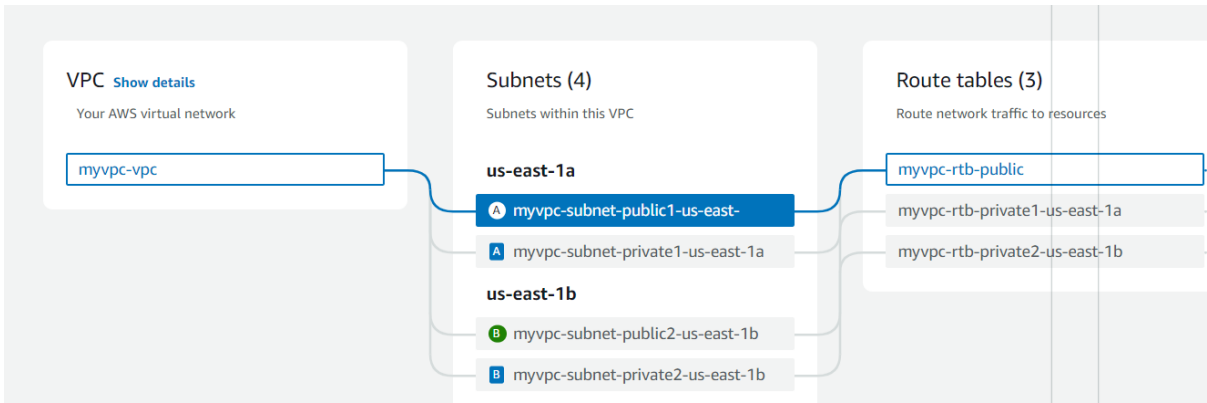
NAT gateways (\$) [Info](#)

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 ▼

DetailsInfo

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
<input type="checkbox"/>	-	igw-0eaf74b61294e8d61	Attached	vpc-0b21781614914fdfd	381492100082
<input type="checkbox"/>	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

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

Q Name X

Value - optional

Q vpc-routetable X

Remove

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

rtb-0e520ff5cd55d5112 / vpc-routetable

Actions ▼

Details Info

Route table ID
rtb-0e520ff5cd55d5112

Main
No

Explicit subnet associations
-

Edge associations
-

VPC
vpc-0f7afbc35ba2e5403 | myvpc-vpc

Owner ID
381492100082

Routes Subnet associations Edge associations Route propagation Tags

Routes (1)

Both ▼

Edit routes

Q Filter routes

< 1 > ⚙

Destination	Target	Status	Propagated
10.0.0.0/16	local	Active	No

Edit subnet associations

Change which subnets are associated with this route table.

Available subnets (2/4)

Q Filter subnet associations

< 1 > ⚙

	Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID
<input type="checkbox"/>	myvpc-subnet-private1-us-east-1a	subnet-040d82dbe6d5c9f7a	10.0.128.0/20	-	rtb-0f03df9da6eeac99b / myvpc-rtb-p...
<input checked="" type="checkbox"/>	myvpc-subnet-public1-us-east-1a	subnet-0341c8d1e0c5142e4	10.0.0.0/20	-	rtb-001abb5ac4af67e53 / myvpc-rtb-...
<input type="checkbox"/>	myvpc-subnet-private2-us-east-1b	subnet-0207ff93240153ea2	10.0.144.0/20	-	rtb-009bdbc1b92c570e1 / myvpc-rtb-...
<input checked="" type="checkbox"/>	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 X subnet-0bbf6ec87487354c2 / myvpc-subnet-public2-us-east-1b X

Cancel

Save associations

You have successfully updated subnet associations for rtb-0e520ff5cd55d5112 / vpc-routetable. ✕

VPC > Route tables > rtb-0e520ff5cd55d5112

rtb-0e520ff5cd55d5112 / vpc-routetable Actions ▾

Details [Info](#)

Route table ID rtb-0e520ff5cd55d5112	Main No	Explicit subnet associations 2 subnets	Edge associations -
VPC vpc-0f7afbc35ba2e5403 myvpc-vpc	Owner ID 381492100082		

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

Routes (1) Both ▾ Edit routes

Destination ▾	Target ▾	Status ▾	Propagated ▾
10.0.0.0/16	local	Active	No

Elastic IP addresses (1/1) Actions ▾ Allocate Elastic IP address

<input checked="" type="checkbox"/>	Name ▾	Allocated IPv4 addr... ▾	Type ▾	Allocation ID ▾	Reverse DNS record ▾
<input checked="" type="checkbox"/>	myvpc-eip-us-east-1a	54.90.178.115	Public IP	eipalloc-0c3bdfd1bfb989a43	-

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

▼ Network settings [Info](#)

VPC - *required* [Info](#)

vpc-0f7afbc35ba2e5403 (myvpc-vpc)
10.0.0.0/16

Subnet [Info](#)

subnet-040d82dbe6d5c9f7a
myvpc-subnet-private1-us-east-1a
VPC: vpc-0f7afbc35ba2e5403 Owner: 381492100082 Availability Zone: us-east-1a
IP addresses available: 4091 CIDR: 10.0.128.0/20

Auto-assign public IP [Info](#)

Enable

Additional charges apply when outside of [free tier allowance](#)

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*

launch-wizard-7

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

Instances (1/6) [Info](#)

↻

Connect

Instance state ▼

Actions ▼

Launch instances ▼

Find Instance by attribute or tag (case-sensitive)

All states ▼

< 1 > ⚙

<input type="checkbox"/>	Name ↗ ▼	Instance ID	Instance state ▼	Instance type ▼	Status check	Alarm status	Availability Zone ▼	Public IPv4 D
<input type="checkbox"/>	Windows	i-010bea8e956331687	⏸ Stopped 🔍 🔍	t2.micro	–	View alarms +	us-east-1c	–
<input type="checkbox"/>	Devops	i-0fd57259ae191de36	⏸ Stopped 🔍 🔍	t2.micro	–	View alarms +	us-east-1d	–
<input checked="" type="checkbox"/>	vpc-ec2	i-0f10fe8b8aac7de8b	⌚ Pending 🔍 🔍	t2.micro	–	View alarms +	us-east-1a	ec2-18-234-56
<input type="checkbox"/>	jenkins	i-0e65afae6574dec81	⏸ Stopped 🔍 🔍	t2.micro	–	View alarms +	us-east-1d	–
<input type="checkbox"/>	windows-webs...	i-08cf8e9693210a64a	⏸ Stopped 🔍 🔍	t2.micro	–	View alarms +	us-east-1d	–
<input type="checkbox"/>	linux-webserver	i-0rhd37881778e7840	⏸ Stopped 🔍 🔍	t2.micro	–	View alarms +	us-east-1d	–

i-0f10fe8b8aac7de8b (vpc-ec2)

[⚙](#) [✕](#)

Details

Status and alarms

Monitoring

Security

Networking

Storage

Tags

▼ Instance summary [Info](#)

Instance ID
i-0f10fe8b8aac7de8b (vpc-ec2)

IPv6 address
–

Public IPv4 address
18.234.56.51 | [open address](#) [🔗](#)

Instance state
⌚ Pending

Private IPv4 addresses
10.0.142.16

Public IPv4 DNS
ec2-18-234-56-51.compute-1.amazonaws.com |