

Karthick VM

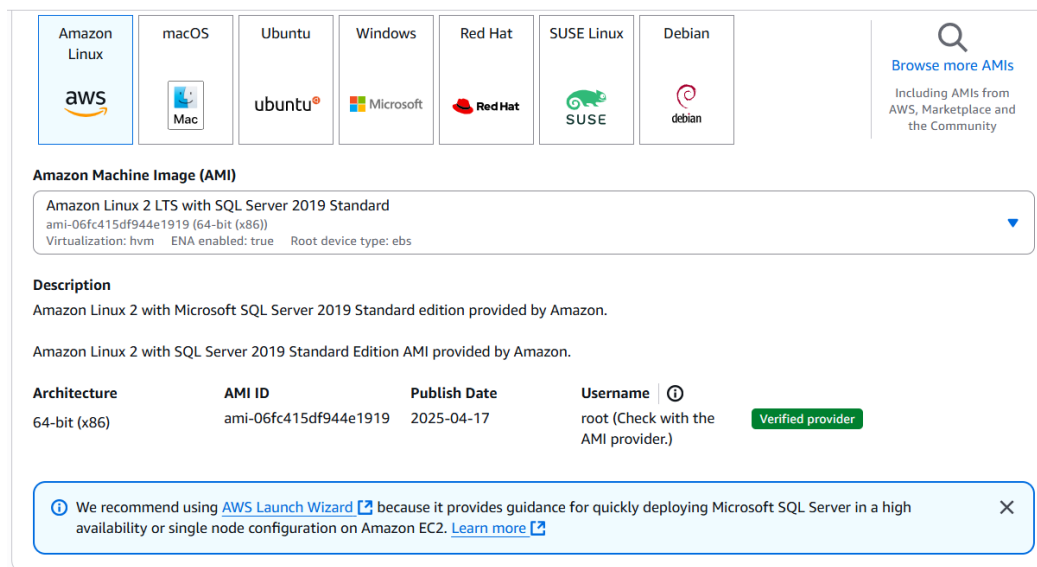
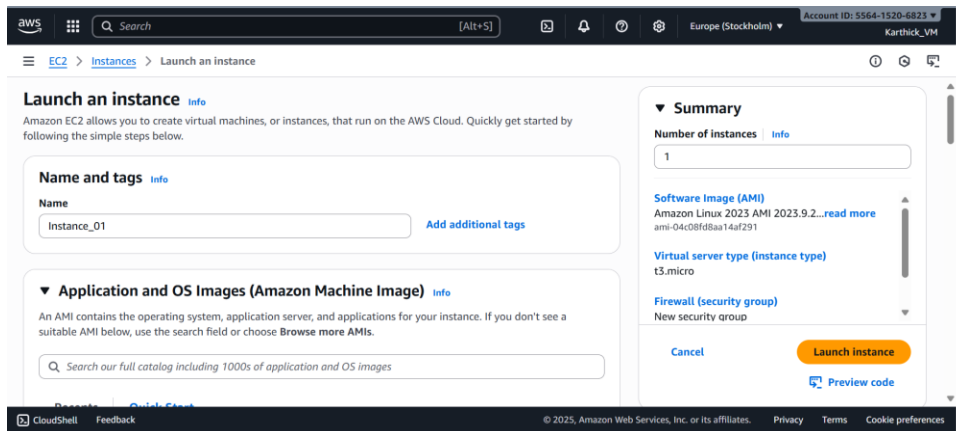
Batch – CIS 1.3

Weekly Assessment 3 – AWS

You are a Cloud Administrator for a startup called LTIM, which is developing a webbased application for its clients. The goal is to host the web application on AWS using EC2 instances, store files in S3, and design a secure and scalable VPC architecture with both public and private subnets.

Questions:

1. Launch an EC2 instance with Amazon Linux 2 in a new VPC and connect via SSH.



aws

Q Search

[Alt+S]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

EC2 > Instances > Launch an instance

Success

Successfully initiated launch of instance (i-02da054d536fcf30b)

Launch log

Next Steps

Q What would you like to do next with this instance, for example "create alarm" or "create backup"

< 1 2 3 4 5 6 >

Create billing usage alerts

To manage costs and avoid surprise bills, set up email notifications for billing usage thresholds.

Create billing alerts

Connect to your instance

Once your instance is running, log into it from your local computer.

Connect to instance

Learn more

Connect an RDS database

Configure the connection between an EC2 instance and a database to allow traffic flow between them.

Connect an RDS database

Create a new RDS database

Learn more

Create EBS snapshot policy

Create a policy that automates the creation, retention, and deletion of EBS snapshots

Create EBS snapshot policy

CloudShell Feedback

© 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

aws

Q Search

[Alt+S]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

EC2 > Instances > Launch an instance

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

Karthick\_710

Create new key pair

Network settings

Info

VPC - required

Info

vpc-08afa11e26bfbca09 (vpc-public-1)

10.0.0.0/16

Subnet

Info

subnet-0de91edf343e6359c

subnet-pub-1

VPC: vpc-08afa11e26bfbca09 Owner: 556415206823 Availability Zone: eu-north-1a (eu-n1-az1) Zone type: Availability Zone IP addresses available: 251 CIDR: 10.0.1.0/24

Create new subnet

Auto-assign public IP

Info

Enable

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

Summary

Number of instances

Info

1

Software Image (AMI)

Amazon Linux 2023.9.2...read more

ami-04c08fd8aa14af291

Virtual server type (instance type)

t3.micro

Firewall (security group)

-

Storage (volumes)

1 volume(s) - 8 GiB

Cancel

Launch instance

Preview code

CloudShell Feedback

© 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

aws

Q Search

[Alt+S]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

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.

route-1

VPC

The VPC to use for this route table.

vpc-08afa11e26bfbca09 (vpc-public-1)

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

Value - optional

Q route-1

Remove

Add new tag

You can add 49 more tags.

Cancel

Create route table

CloudShell Feedback

© 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

aws

Search

[Alt+S]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

VPC > Route tables > rtb-0389d2962458cc859 > Edit subnet associations

### Edit subnet associations

Change which subnets are associated with this route table.

Available subnets (1/4)

Filter subnet associations

<input type="checkbox"/>	Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID
<input type="checkbox"/>	subnet-private-2	<a href="#">subnet-0a38f4f0d9c90742f</a>	10.0.4.0/24	–	<a href="#">Main (rtb-059c33e960ce991a9)</a>
<input type="checkbox"/>	subnet-pub-2	<a href="#">subnet-0956eaa8727dfdee1</a>	10.0.2.0/24	–	<a href="#">Main (rtb-059c33e960ce991a9)</a>
<input checked="" type="checkbox"/>	subnet-pub-1	<a href="#">subnet-0de91edf343e6359c</a>	10.0.1.0/24	–	<a href="#">Main (rtb-059c33e960ce991a9)</a>
<input type="checkbox"/>	subnet-private-1	<a href="#">subnet-0a4c012fc2d2355d7</a>	10.0.3.0/24	–	<a href="#">Main (rtb-059c33e960ce991a9)</a>

Selected subnets

subnet-0de91edf343e6359c / subnet-pub-1

Cancel Save associations

CloudShell Feedback

© 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

aws

Search

[Alt+S]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

VPC > Internet gateways > Create internet gateway

### Create internet gateway

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.

ig-gateway-1

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

Q Name

X

Q ig-gateway-1

X

Remove

Add new tag

You can add 49 more tags.

Cancel Create internet gateway

CloudShell Feedback

© 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

aws

Search

[Alt+5]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

VPC > Internet gateways > Attach to VPC (igw-0cd79d3737a611d92)

### Attach to VPC (igw-0cd79d3737a611d92)

**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.

► **AWS Command Line Interface command**

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

CloudShell Feedback © 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

aws

Search

[Alt+5]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

VPC > Route tables > rtb-0389d2962458cc859 > Edit routes

### Edit routes

Destination	Target	Status	Propagated	Route Origin
10.0.0.0/16	local	Active	No	CreateRouteTable
<input type="text" value="0.0.0.0/0"/>	Internet Gateway	-	No	CreateRoute

[Add route](#) [Remove](#)

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

aws

Search

[Alt+5]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

VPC > Route tables > rtb-0389d2962458cc859

VPC dashboard

AWS Global View

Filter by VPC

▼ Virtual private cloud

- Your VPCs
- Subnets
- Route tables
- Internet gateways
- Egress-only internet gateways
- DHCP option sets
- Elastic IPs
- Managed prefix lists
- NAT gateways
- Peering connections

▼ Security

- Network ACLs
- Security groups

Updated routes for rtb-0389d2962458cc859 / route-1 successfully

Details

rtb-0389d2962458cc859 / route-1

Details

Route table ID: rtb-0389d2962458cc859

VPC: vpc-08afa11e26bfbca09 | vpc-public-1

Main: No

Owner ID: 556415206823

Explicit subnet associations: subnet-0de91edf343e6359c / subnet-pub-1

Edge associations: -

Routes

Subnet associations

Edge associations

Route propagation

Tags

Routes (2)

Filter routes

Destination	Target	Status	Propagated	Route Origin
0.0.0.0/0	igw-0cd79d3737a611d92	Active	No	Create Route
10.0.0.0/16	local	Active	No	Create Route Table

aws [Search] [Alt+S] Europe (Stockholm) Account ID: 5564-1520-6823 Karthick\_VM

EC2 > Instances > i-02da054d536fcf30b > Connect to instance

EC2 Instance Connect Session Manager SSH client EC2 serial console

Instance ID  
i-02da054d536fcf30b (Instance\_01)

Connection type

☒ Connect using a Public IP  
Connect using a public IPv4 or IPv6 address

☐ Connect using a Private IP  
Connect using a private IP address and a VPC endpoint

☒ Public IPv4 address  
16.170.162.242

☐ IPv6 address  
-

Username  
Enter the username defined in the AMI used to launch the instance. If you didn't define a custom username, use the default username, ec2-user.

ec2-user

Note: In most cases, the default username, ec2-user, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

Cancel Connect

CloudShell Feedback © 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

## 2. Create an S3 bucket, upload a file, and make it publicly accessible.

aws [Search] [Alt+S] Europe (Stockholm) Account ID: 5564-1520-6823 Karthick\_VM

Amazon S3 > Buckets > Create bucket

Buckets are containers for data stored in S3.

General configuration

AWS Region  
Europe (Stockholm) eu-north-1

Bucket type Info

☒ General purpose  
Recommended for most use cases and access patterns. General purpose buckets are the original S3 bucket type. They allow a mix of storage classes that redundantly store objects across multiple Availability Zones.

☐ Directory  
Recommended for low-latency use cases. These buckets use only the S3 Express One Zone storage class, which provides faster processing of data within a single Availability Zone.

Bucket name Info  
vmk-bucket-01  
Bucket names must be 3 to 63 characters and unique within the global namespace. Bucket names must also begin and end with a letter or number. Valid characters are a-z, 0-9, periods (.), and hyphens (-). [Learn More](#)

Copy settings from existing bucket - optional  
Only the bucket settings in the following configuration are copied.  
[Choose bucket](#)  
Format: s3://bucket/prefix

Object Ownership Info  
Control ownership of objects written to this bucket from other AWS accounts and the use of access control lists (ACLs). Object ownership determines who can specify access to objects.

Object Ownership

CloudShell Feedback © 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

### Block Public Access settings for this bucket

Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to this bucket and its objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to this bucket or objects within, you can customize the individual settings below to suit your specific storage use cases. [Learn more](#)

- ☐ **Block all public access**  
Turning this setting on is the same as turning on all four settings below. Each of the following settings are independent of one another.
- ☐ **Block public access to buckets and objects granted through new access control lists (ACLs)**  
S3 will block public access permissions applied to newly added buckets or objects, and prevent the creation of new public access ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs.
  - ☐ **Block public access to buckets and objects granted through any access control lists (ACLs)**  
S3 will ignore all ACLs that grant public access to buckets and objects.
  - ☐ **Block public access to buckets and objects granted through new public bucket or access point policies**  
S3 will block new bucket and access point policies that grant public access to buckets and objects. This setting doesn't change any existing policies that allow public access to S3 resources.
  - ☐ **Block public and cross-account access to buckets and objects through any public bucket or access point policies**  
S3 will ignore public and cross-account access for buckets or access points with policies that grant public access to buckets and objects.

**Turning off block all public access might result in this bucket and the objects within becoming public**  
AWS recommends that you turn on block all public access, unless public access is required for specific and verified use cases such as static website hosting.

☒ I acknowledge that the current settings might result in this bucket and the objects within becoming public.

Search [Alt+S]

Europe (Stockholm) Account ID: 5564-1520-6823 Karthick\_VM

Amazon S3 Buckets

Successfully created bucket "vmk-bucket-01"  
To upload files and folders, or to configure additional bucket settings, choose [View details](#).

General purpose buckets All AWS Regions Directory buckets

General purpose buckets (1) info

Buckets are containers for data stored in S3.

Find buckets by name

Name	AWS Region	Creation date
vmk-bucket-01	Europe (Stockholm) eu-north-1	October 4, 2025, 17:53:13 (UTC+05:30)

Account snapshot info

Updated daily

Storage Lens provides visibility into storage usage and activity trends.

[View dashboard](#)

External access summary - new info

Open

Desktop

Organize New folder

Name	Date modified
Training Notes	9/30/2025 8:59 AM
Assignment -1	9/11/2025 8:15 AM
Assignment -2	9/16/2025 9:08 AM
Assignment -3.docx	9/16/2025 9:50 AM
Assignment -4	9/16/2025 12:11 PM
Assignment -5.docx	9/16/2025 10:49 AM
Assignment -6	9/17/2025 10:46 PM
Assignment -7	9/17/2025 11:11 PM

File name: "Assignment -2" "Assignment -1" All files

Upload from mobile Open Cancel

Amazon S3 REST API. Learn more

Upload here, or choose [Add files](#) or [Add folder](#).

[Remove](#) [Add files](#) [Add folder](#)

Type Size

You have not chosen any files or folders to upload.

Destination info

Destination

s3://vmk-bucket-01

Destination details

CloudShell Feedback

© 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Search [Alt+S]

Europe (Stockholm) Account ID: 5564-1520-6823 Karthick\_VM

Upload succeeded  
For more information, see the [Files and folders](#) table.

Upload: status [Close](#)

After you navigate away from this page, the following information is no longer available.

Summary

Destination

s3://vmk-bucket-01

Succeeded

2 files, 41.6 KB (100.00%)

Failed

0 files, 0 B (0%)

Files and folders Configuration

Files and folders (2 total, 41.6 KB)

Find by name

Name	Folder	Type	Size	Status	Error
Assignment -1.docx	-	application/vnd.openxmlforma...	21.5 KB	Succeeded	-
Assignment -2.docx	-	application/vnd.openxmlforma...	20.1 KB	Succeeded	-

CloudShell Feedback

© 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

### 3. Configure a VPC with 2 public and 2 private subnets.

aws [Search] [Alt+S] Europe (Stockholm) Account ID: 5564-1520-6823 Karthick\_VM

VPC > Your VPCs > Create 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.

vpc-public-1

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

**IPv4 CIDR**  
10.0.0.0/16

CloudShell Feedback © 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

aws [Search] [Alt+S] Europe (Stockholm) Account ID: 5564-1520-6823 Karthick\_VM

VPC > Your VPCs > Create VPC

☐ IPAM-allocated IPv6 CIDR block  
☐ Amazon-provided IPv6 CIDR block  
☐ IPv6 CIDR owned by me

**Tenancy** [Info](#)  
Default

### 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-public-1	<a href="#">Remove tag</a>

[Add tag](#)

You can add 49 more tags

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

CloudShell Feedback © 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

aws

Search

[Alt+S]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

VPC > Your VPCs > vpc-08afa11e26bfbc09

You successfully created vpc-08afa11e26bfbc09 / vpc-public-1

vpc-08afa11e26bfbc09 / vpc-public-1

Actions

Details

VPC ID

vpc-08afa11e26bfbc09

DNS resolution

Enabled

Main network ACL

acl-006765921d2b2eee6

IPv6 CIDR (Network border group)

-

State

Available

Tenancy

default

Default VPC

No

Network Address Usage metrics

Disabled

Block Public Access

Off

DHCP option set

dopt-0d24ddca6267889e8

IPv4 CIDR

10.0.0.0/16

Route 53 Resolver DNS Firewall rule groups

-

DNS hostnames

Disabled

Main route table

rtb-059c33e960ce991a9

IPv6 pool

-

Owner ID

556415206823

Resource map

CIDRs

Flow logs

Tags

Integrations

CloudShell

Feedback

© 2025, Amazon Web Services, Inc. or its affiliates.

Privacy

Terms

Cookie preferences

aws

Search

[Alt+S]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

VPC > Subnets > Create subnet

Create subnet

VPC

VPC ID

Create subnets in this VPC.

vpc-08afa11e26bfbc09 (vpc-public-1)

Associated VPC CIDRs

IPv4 CIDRs

10.0.0.0/16

Subnet settings

Specify the CIDR blocks and Availability Zone for the subnet.

CloudShell

Feedback

© 2025, Amazon Web Services, Inc. or its affiliates.

Privacy

Terms

Cookie preferences



aws

Search

[Alt+S]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

VPC

Subnets

Create subnet

Subnet 1 of 1

Subnet name

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

subnet-pub-1

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-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

10.0.1.0/24

256 IPs

CloudShell

Feedback

© 2025, Amazon Web Services, Inc. or its affiliates.

Privacy

Terms

Cookie preferences

aws

Search

[Alt+S]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

VPC

Subnets

VPC dashboard

AWS Global View

Filter by VPC

Virtual private cloud

Your VPCs

Subnets

Route tables

Internet gateways

Egress-only internet gateways

DHCP option sets

Elastic IPs

Managed prefix lists

NAT gateways

You have successfully created 1 subnet: subnet-0de91edf343e6359c

Subnets (1)

Info

Last updated less than a minute ago

Actions

Create subnet

Find subnets by attribute or tag

Subnet ID: subnet-0de91edf343e6359c

Clear filters

Name	Subnet ID	State	VPC
subnet-pub-1	subnet-0de91edf343e6359c	Available	vpc-08afa11e26bfbc09   vpc-p..

Select a subnet

CloudShell

Feedback

© 2025, Amazon Web Services, Inc. or its affiliates.

Privacy

Terms

Cookie preferences

aws

Search

[Alt+S]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

VPC

Subnets

Create subnet

Create subnet

Info

VPC

VPC ID

Create subnets in this VPC.

vpc-08afa11e26bfba09 (vpc-public-1)

Associated VPC CIDRs

IPv4 CIDRs

10.0.0.0/16

Subnet settings

Specify the CIDR blocks and Availability Zone for the subnet.

CloudShell

Feedback

© 2025, Amazon Web Services, Inc. or its affiliates.

Privacy

Terms

Cookie preferences

Subnet 1 of 1

Subnet name

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

subnet-pub-2

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) / eun1-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

10.0.2.0/24

256 IPs

< > ^ v

Tags - optional

CloudShell

Feedback

© 2025, Amazon Web Services, Inc. or its affiliates.

Privacy

Terms

Cookie preferences

aws

Search

[Alt+S]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

VPC > Subnets

VPC dashboard

AWS Global View

Filter by VPC

Virtual private cloud

Your VPCs

Subnets

Route tables

Internet gateways

Egress-only internet gateways

DHCP option sets

Elastic IPs

Managed prefix lists

NAT gateways

You have successfully created 1 subnet: subnet-0956eaa8727dfdee1

Subnets (1)

Info

Last updated less than a minute ago

Actions

Create subnet

Find subnets by attribute or tag

Subnet ID : subnet-0956eaa8727dfdee1

Clear filters

< 1 >

<input type="checkbox"/>	Name	Subnet ID	State	VPC
<input type="checkbox"/>	subnet-pub-2	subnet-0956eaa8727dfdee1	Available	vpc-08afa11e26bfbca09   vpc-p...

Select a subnet

aws

Search

[Alt+S]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

VPC > Subnets > Create subnet

Subnet name

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

subnet-private-1

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) / eun1-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

10.0.3.0/24

256 IPs

< > ^ v

Tags - optional

Key

Value - optional

aws

Search

[Alt+S]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

VPC

Subnets

Create subnet

Subnet 1 of 1

Subnet name

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

subnet-private-2

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) / eun1-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

10.0.4.0/24

256 IPs

Tags - optional

CloudShell

Feedback

© 2025, Amazon Web Services, Inc. or its affiliates.

Privacy

Terms

Cookie preferences

VPC

Subnets

You have successfully created 1 subnet: subnet-0a38f4fd9c90742f

Last updated less than a minute ago

Actions

Create subnet

Subnets (7)

Info

Find subnets by attribute or tag

<input type="checkbox"/>	Name	Subnet ID	State	VPC
<input type="checkbox"/>	subnet-pub-1	<a href="#">subnet-0de91edf343e6359c</a>	Available	<a href="#">vpc-08afa11e26bfbc09</a>   <a href="#">vpc-p..</a>
<input type="checkbox"/>	subnet-pub-2	<a href="#">subnet-0956eaa8727dfdee1</a>	Available	<a href="#">vpc-08afa11e26bfbc09</a>   <a href="#">vpc-p..</a>
<input type="checkbox"/>	subnet-private-1	<a href="#">subnet-0a4c012fc2d2355d7</a>	Available	<a href="#">vpc-08afa11e26bfbc09</a>   <a href="#">vpc-p..</a>
<input type="checkbox"/>	subnet-private-2	<a href="#">subnet-0a38f4fd9c90742f</a>	Available	<a href="#">vpc-08afa11e26bfbc09</a>   <a href="#">vpc-p..</a>

Select a subnet

#### 4. Attach an Internet Gateway to a VPC and update the route table to enable internet access.

The screenshot shows the 'Create route table' page in the AWS Management Console. The breadcrumb navigation is 'VPC > Route tables > Create route table'. The page title is 'Create route table' with an 'info' icon. A subtitle states: '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.  
Input field: route-1

**VPC**  
The VPC to use for this route table.  
Dropdown menu: vpc-08afa11e26bfba09 (vpc-public-1)

**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**  
Input field: Name

**Value - optional**  
Input field: route-1

Buttons: Add new tag, Remove, Cancel, Create route table

Footer: CloudShell, Feedback, © 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

The screenshot shows the 'Edit subnet associations' page in the AWS Management Console. The breadcrumb navigation is 'VPC > Route tables > rtb-0389d2962458cc859 > Edit subnet associations'. The page title is 'Edit subnet associations'. A subtitle states: 'Change which subnets are associated with this route table.'

**Available subnets (1/4)**

Filter subnet associations

	Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID
<input type="checkbox"/>	subnet-private-2	subnet-0a38f4fd9c90742f	10.0.4.0/24	-	Main (rtb-059c33e960ce991a9)
<input type="checkbox"/>	subnet-pub-2	subnet-0956eaa8727dfdee1	10.0.2.0/24	-	Main (rtb-059c33e960ce991a9)
<input checked="" type="checkbox"/>	subnet-pub-1	subnet-0de91edf343e6359c	10.0.1.0/24	-	Main (rtb-059c33e960ce991a9)
<input type="checkbox"/>	subnet-private-1	subnet-0a4c012fc2d2355d7	10.0.3.0/24	-	Main (rtb-059c33e960ce991a9)

**Selected subnets**

Input field: subnet-0de91edf343e6359c / subnet-pub-1

Buttons: Cancel, Save associations

Footer: CloudShell, Feedback, © 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

aws

Search

[Alt+S]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

VPC

Internet gateways

Create internet gateway

1

2

3

### 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.

ig-gateway-1

#### 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	
Q Name	Q ig-gateway-1	Remove

Add new tag

You can add 49 more tags.

Cancel

Create internet gateway

CloudShell

Feedback

© 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

aws

Search

[Alt+S]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

VPC

Internet gateways

Attach to VPC (igw-0cd79d3737a611d92)

1

2

3

### Attach to VPC (igw-0cd79d3737a611d92) [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.

Q vpc-08afa11e26bfbca09

► AWS Command Line Interface command

Cancel

Attach internet gateway

CloudShell

Feedback

© 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

aws

Search

[Alt+S]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

VPC

Route tables

rtb-0389d2962458cc859

Edit routes

1

2

3

### Edit routes

Destination	Target	Status	Propagated	Route Origin	
10.0.0.0/16	local	Active	No	CreateRouteTable	
Q 0.0.0.0/0	Q local	-	No	CreateRoute	Remove
	Internet Gateway				
	Q igw-0cd79d3737a611d92				

Add route

Cancel

Preview

Save changes

CloudShell

Feedback

© 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

aws [Search] [Alt+S] Europe (Stockholm) Account ID: 5564-1520-6823 Karthick\_VM

VPC > Route tables > rtb-0389d2962458cc859

VPC dashboard < AWS Global View [?] Filter by VPC

Virtual private cloud  
Your VPCs  
Subnets  
Route tables  
Internet gateways  
Egress-only internet gateways  
DHCP option sets  
Elastic IPs  
Managed prefix lists  
NAT gateways  
Peering connections

Security  
Network ACLs  
Security groups

Updated routes for rtb-0389d2962458cc859 / route-1 successfully  
Details

### rtb-0389d2962458cc859 / route-1

Actions

**Details** [Info](#)

<b>Route table ID</b> rtb-0389d2962458cc859	<b>Main</b> No	<b>Explicit subnet associations</b> subnet-0de91edf343e6359c / subnet-pub-1	<b>Edge associations</b> -
<b>VPC</b> vpc-08afa11e26bfbc09   vpc-public-1	<b>Owner ID</b> 556415206823		

**Routes** Subnet associations Edge associations Route propagation Tags

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

Destination	Target	Status	Propagated	Route Origin
0.0.0.0/0	igw-0cd79d3737a611d92	Active	No	Create Route
10.0.0.0/16	local	Active	No	Create Route Table

5. Create a NAT Gateway in a public subnet and configure private subnet instances to access the internet.

aws [Search] [Alt+S] Europe (Stockholm) Account ID: 5564-1520-6823 Karthick\_VM

VPC > NAT gateways > Create NAT gateway

Elastic IP address 13.62.109.21 (eipalloc-019bd90f6cfd58ff) allocated.

### Create NAT gateway

A highly available, managed Network Address Translation (NAT) service that instances in private subnets can use to connect to services in other VPCs, on-premises networks, or the internet.

**NAT gateway settings**

**Name - optional**  
Create a tag with a key of 'Name' and a value that you specify.  
nat-gw-1  
The name can be up to 256 characters long.

**Subnet**  
Select a subnet in which to create the NAT gateway.  
subnet-0de91edf343e6359c (subnet-pub-1)

**Connectivity type**  
Select a connectivity type for the NAT gateway.  
☒ Public  
☐ Private

**Elastic IP allocation ID** [Info](#)  
Assign an Elastic IP address to the NAT gateway.  
eipalloc-019bd90f6cfd58ff [Allocate Elastic IP](#)

[Additional settings](#) [Info](#)

CloudShell Feedback © 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

aws

Search

[Alt+S]

Europe (Stockholm)Account ID: 5564-1520-6823Karthick\_VM

VPC > NAT gateways > nat-0df954e5ebd970c59

VPC dashboard

AWS Global View

Filter by VPC

Virtual private cloud

Your VPCs

Subnets

Route tables

Internet gateways

Egress-only internet gateways

DHCP option sets

Elastic IPs

Managed prefix lists

NAT gateways

Peering connections

Security

Network ACLs

Security groups

NAT gateway nat-0df954e5ebd970c59 | nat-gw-1 was created successfully.

nat-0df954e5ebd970c59 / nat-gw-1

Actions

Details

NAT gateway ID

nat-0df954e5ebd970c59

NAT gateway ARN

arn:aws:ec2:eu-north-1:556415206823:natgateway/nat-0df954e5ebd970c59

VPC

vpc-08afa11e26bfbca09 / vpc-public-1

Connectivity type

Public

Primary public IPv4 address

-

Subnet

subnet-0de91edf343e6359c / subnet-pub-1

State

Pending

Created

Saturday, October 4, 2025 at 18:09:01 GMT+5:30

State message

info

Primary network interface ID

-

Deleted

-

Secondary IPv4 addresses

Monitoring

Tags

Secondary IPv4 addresses

Edit secondary IPv4 address associations

Search

Private IPv4 address

Network interface ID

Status

Failure message

Secondary IPv4 addresses are not available for this nat gateway.

CloudShellFeedback© 2025, Amazon Web Services, Inc. or its affiliates. PrivacyTermsCookie preferences

aws

Search

[Alt+S]

Europe (Stockholm)Account ID: 5564-1520-6823Karthick\_VM

VPC > Route tables > rtb-07362ea6f937f3ebd > Edit routes

Edit routes

Destination

10.0.0.0/16

Target

local

Status

Active

Propagated

No

Route Origin

CreateRouteTable

0.0.0.0/0

NAT Gateway

-

No

CreateRoute

Remove

Add route

Cancel

Preview

Save changes

aws

Search

[Alt+S]

Europe (Stockholm)Account ID: 5564-1520-6823Karthick\_VM

VPC > Route tables > rtb-07362ea6f937f3ebd

VPC dashboard

AWS Global View

Filter by VPC

Virtual private cloud

Your VPCs

Subnets

Route tables

Internet gateways

Egress-only internet gateways

DHCP option sets

Elastic IPs

Managed prefix lists

NAT gateways

Peering connections

Security

Network ACLs

Security groups

Updated routes for rtb-07362ea6f937f3ebd / route-2 successfully

Details

rtb-07362ea6f937f3ebd / route-2

Actions

Details

Route table ID

rtb-07362ea6f937f3ebd

VPC

vpc-08afa11e26bfbca09 / vpc-public-1

Main

No

Owner ID

556415206823

Explicit subnet associations

subnet-0a4c012fc2d2355d7 / subnet-private-1

Edge associations

-

Routes

Subnet associations

Edge associations

Route propagation

Tags

Routes (2)

Filter routes

Both

Edit routes

Destination

Target

Status

Propagated

Route Origin

0.0.0.0/0

nat-0df954e5ebd970c59

Active

No

Create Route

10.0.0.0/16

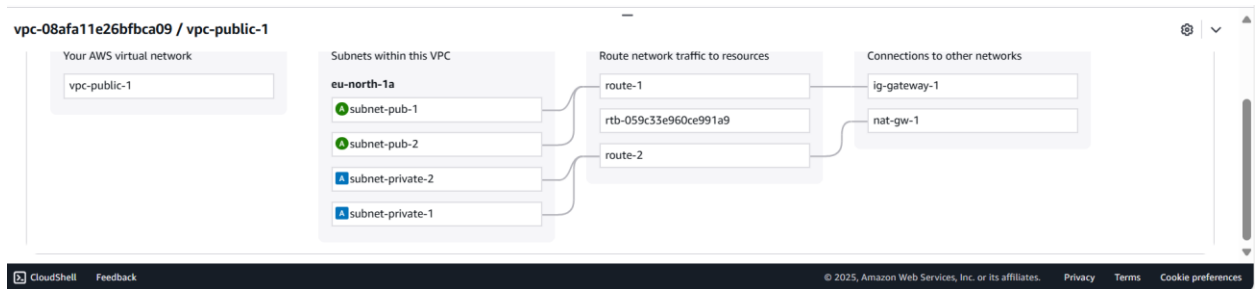
local

Active

No

Create Route Table





## 6. Allocate and associate an Elastic IP with an EC2 instance.

The screenshot shows the **Allocate Elastic IP address** page in the AWS console. The page is for the `eu-north-1` region and the `Karthick_VM` account.

**Public IPv4 address pool**

- ☒ Amazon's pool of IPv4 addresses
  - Public IPv4 address that you bring to your AWS account with BYOIP. (option disabled because no pools found) [Learn more](#)
  - Customer-owned pool of IPv4 addresses created from your on-premises network for use with an Outpost. (option disabled because no customer owned pools found) [Learn more](#)
  - Allocate using an IPv4 IPAM pool (option disabled because no public IPv4 IPAM pools with AWS service as EC2 were found)

**Network border group** [Info](#)

**Global static IP addresses**

AWS Global Accelerator can provide global static IP addresses that are announced worldwide using anycast from AWS edge locations. This can help improve the availability and latency for your user traffic by using the Amazon global network. [Learn more](#)

[Create accelerator](#)

**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.

No tags associated with the resource.

[Add new tag](#)

You can add up to 50 more tag

[Cancel](#) [Allocate](#)

The screenshot shows the **Elastic IP addresses** page in the AWS console, displaying details for the IP address `13.49.113.178`.

**Summary**

Field	Value
Allocated IPv4 address	13.49.113.178
Association ID	-
Network interface ID	-
Address pool	Amazon
Type	Public IP
Scope	VPC
Network interface owner account ID	-
Network border group	eu-north-1
Allocation ID	eipalloc-0d9ed44df2513e392
Associated instance ID	-
Public DNS	-
Service managed	-
Reverse DNS record	-
Private IP address	-
NAT Gateway ID	-

**Tags(0)**

No tags associated with this resource

Click the Manage tags button to add your first tag

[Manage tags](#)

aws

Search

[Alt+S]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

VPC > Elastic IP addresses > 13.49.113.178 > Associate Elastic IP address

Associate Elastic IP address

Choose the instance or network interface to associate to this Elastic IP address (13.49.113.178)

Elastic IP address: 13.49.113.178

Resource type

Choose the type of resource with which to associate the Elastic IP address.

☒ Instance

☐ Network interface

⚠ If you associate an Elastic IP address with an instance that already has an Elastic IP address associated, the previously associated Elastic IP address will be disassociated, but the address will still be allocated to your account.

[Learn more](#)

If no private IP address is specified, the Elastic IP address will be associated with the primary private IP address.

Instance

Private IP address

The private IP address with which to associate the Elastic IP address.

Use: "10.0.1.112"

10.0.1.112

Cancel

Associate

CloudShell

Feedback

© 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

aws

Search

[Alt+S]

Europe (Stockholm)

Account ID: 5564-1520-6823

Karthick\_VM

VPC > Elastic IP addresses > 13.49.113.178

13.49.113.178

Actions Associate Elastic IP address

VPC dashboard

AWS Global View

Filter by VPC

Virtual private cloud

Your VPCs

Subnets

Route tables

Internet gateways

Egress-only internet gateways

DHCP option sets

Elastic IPs

Managed prefix lists

NAT gateways

Peering connections

Security

Network ACLs

Security groups

✓ Elastic IP address associated successfully.

Elastic IP address 13.49.113.178 has been associated with instance i-02da054d536fcf30b

Summary

Allocated IPv4 address

13.49.113.178

Association ID

eipassoc-030c265e86d2dad4f

Network interface ID

eni-07f6e81df56c64844

Address pool

Amazon

Type

Public IP

Scope

VPC

Network interface owner account ID

556415206823

Network border group

eu-north-1

Allocation ID

eipalloc-0d9ed44df2513e392

Associated instance ID

i-02da054d536fcf30b

Public DNS

-

Service managed

-

Reverse DNS record

-

Private IP address

10.0.1.112

NAT Gateway ID

-

Tags(0)

Manage tags

< 1 >

No tags associated with this resource

Click the Manage tags button to add your first tag

CloudShell

Feedback

© 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences