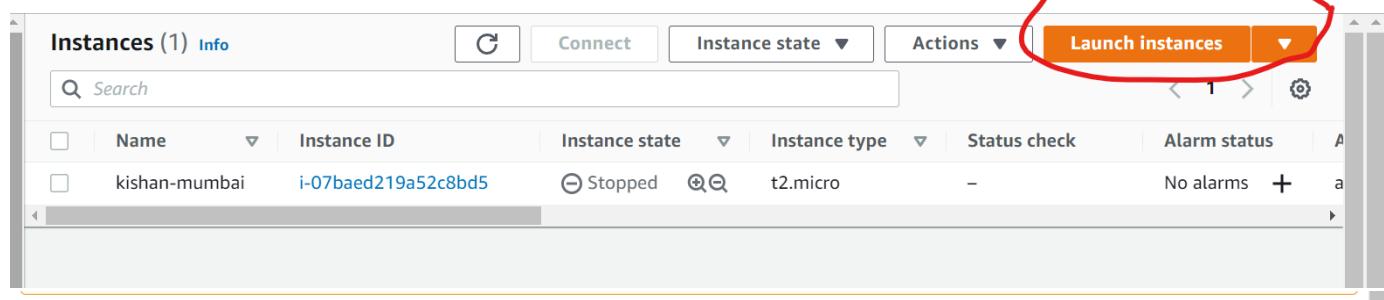


AWS HANDS-ON

After seeing how to connect Linux Ec2-instance now we will see how we can connect with windows server.

1. To connect windows server running on AWS



Instances (1) [Info](#)

Actions [Launch instances](#)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status
kishan-mumbai	i-07baed219a52c8bd5	Stopped	t2.micro	-	No alarms

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 1: Choose an Amazon Machine Image (AMI)

Windows Microsoft Windows 2019 Datacenter edition, Microsoft SQL Server 2019 Enterprise. [English]
Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

Windows Microsoft Windows Server 2022 Base - ami-0ecc68457948da1bc
Free tier eligible Microsoft Windows 2022 Datacenter edition. [English]
Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

[Select](#)

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All instance families Current generation Show/Hide Columns

Currently selected: t2.micro (- ECUs, 1 vCPUs, 2.5 GHz, -, 1 GiB memory, EBS only)

Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
t2	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
t2	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
t2	t2.small	1	2	EBS only	-	Low to Moderate	Yes

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Configure Instance Details](#)

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances [Launch into Auto Scaling Group](#)

Purchasing option Request Spot instances

Network [Create new VPC](#)

Subnet [Create new subnet](#)

Auto-assign Public IP

Hostname type

DNS Hostname Enable IP name IPv4 (A record) DNS requests
 Enable resource-based IPv4 (A record) DNS requests

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Add Storage](#)

Step 4: Add Storage

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. [Learn more](#) about storage options in Amazon EC2.

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encryption
Root	/dev/sda1	snap-0d6fab9d1f272288a	30	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypt

[Add New Volume](#)

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Add Tags](#)

Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver.

A copy of a tag can be applied to volumes, instances or both.

Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

Key	(128 characters maximum)	Value	(256 characters maximum)	Instances	Volumes	Network Interfaces
<i>This resource currently has no tags</i>						
Choose the Add tag button or click to add a Name tag . Make sure your IAM policy includes permissions to create tags.						
Add Tag (Up to 50 tags maximum)						

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Configure Security Group](#)

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: Create a new security group Select an existing security group

Security group name:

Description:

Type	Protocol	Port Range	Source	Description
RDP	TCP	3389	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop

[Add Rule](#)

⚠ Warning

[Cancel](#) [Previous](#) [Review and Launch](#)

Resource Groups & Tag Editor

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 7: Review Instance Launch

Instance Type

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	-	1	1	EBS only	-	Low to Moderate

Security Groups

Type	Protocol	Port Range	Source	Description
RDP	TCP	3389	0.0.0.0/0	

Cancel Previous Launch

Select an existing key pair or create a new key pair X

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance. Amazon EC2 supports ED25519 and RSA key pair types.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Choose an existing key pair

Select a key pair

devopstraining | RSA

I acknowledge that I have access to the corresponding private key file, and that without this file, I won't be able to log into my instance.

Cancel Launch Instances

Instances (1/1) Info

Connect Instance state Actions Launch instances

Search C Clear filters

<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status
<input checked="" type="checkbox"/>	-	i-08b878d583426e763	Running	t2.micro	Initializing	No alarms +

Connect to your instance i-08b878d583426e763 using any of these options

Session Manager | **RDP client** | EC2 serial console

Instance ID: [i-08b878d583426e763](#)

Connection Type:

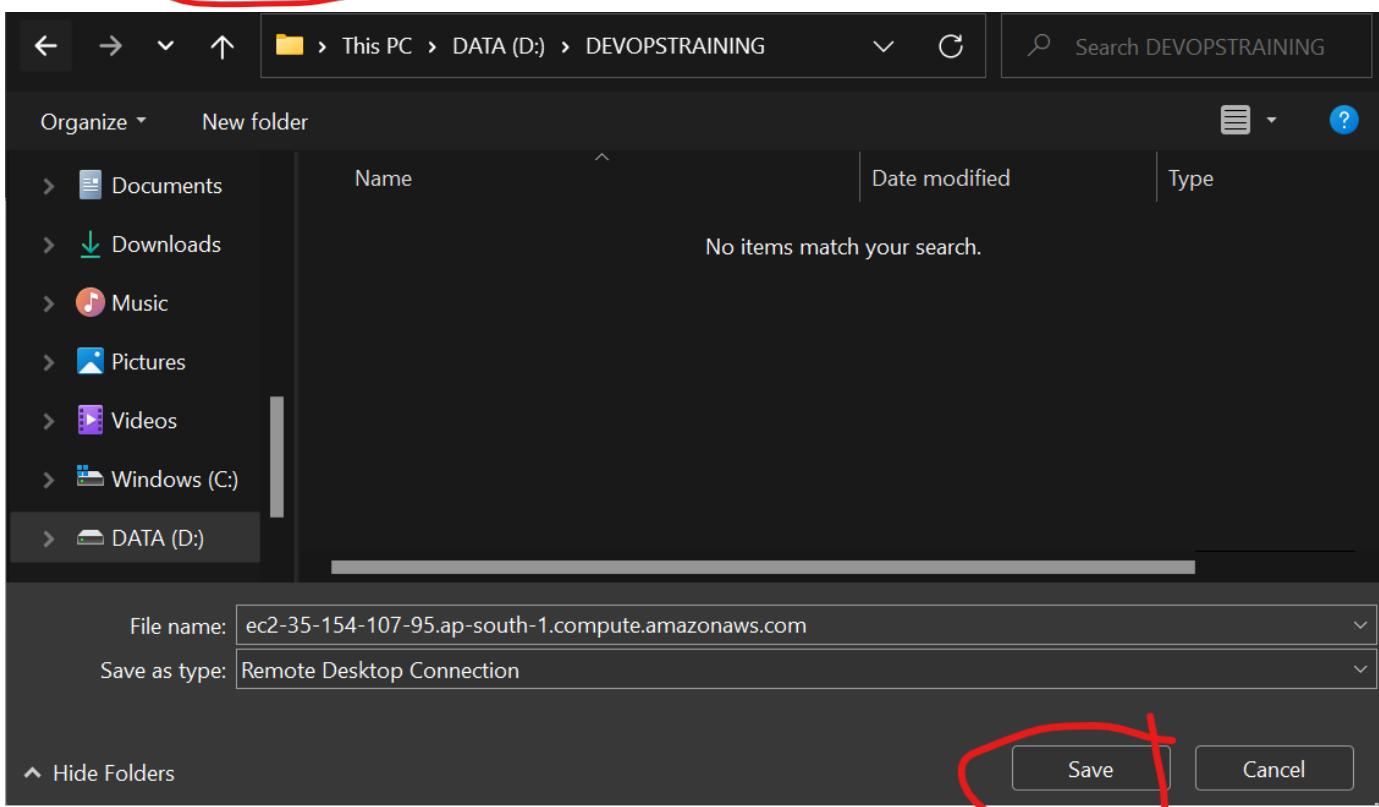
Connect using RDP client
Download a file to use with your RDP client and retrieve your password.

Connect using Fleet Manager
To connect to the instance using Fleet Manager Remote Desktop, the SSM Agent must be installed and running on the instance. For more information, see [Working with SSM Agent](#)

You can connect to your Windows instance using a remote desktop client of your choice, and by downloading and running the RDP shortcut file below:

[Download remote desktop file](#)

When prompted, connect to your instance using the following details:



File name:

Save as type:

running the RDP shortcut file below:

 [Download remote desktop file](#)

When prompted, connect to your instance using the following details:

Public DNS

ec2-35-154-107-95.ap-south-1.compute.amazonaws.com

User name

Administrator

Password [Get password](#)

 If you've joined your instance to a directory, you can use your directory credentials to connect to your instance.

[Cancel](#)

[EC2](#) > [Instances](#) > [i-08d8/8d58342be/b3](#) > [Get Windows password](#)

Get Windows password Info

Retrieve and decrypt the initial Windows administrator password for this instance.

To decrypt the password, you will need your key pair for this instance.



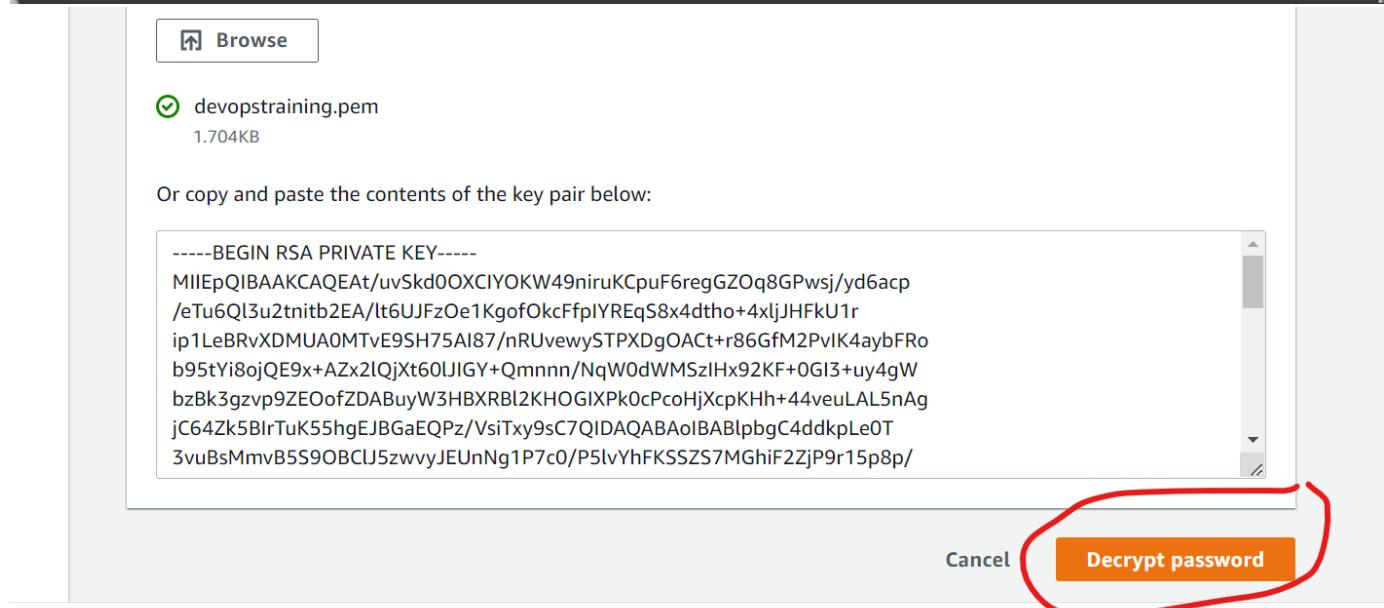
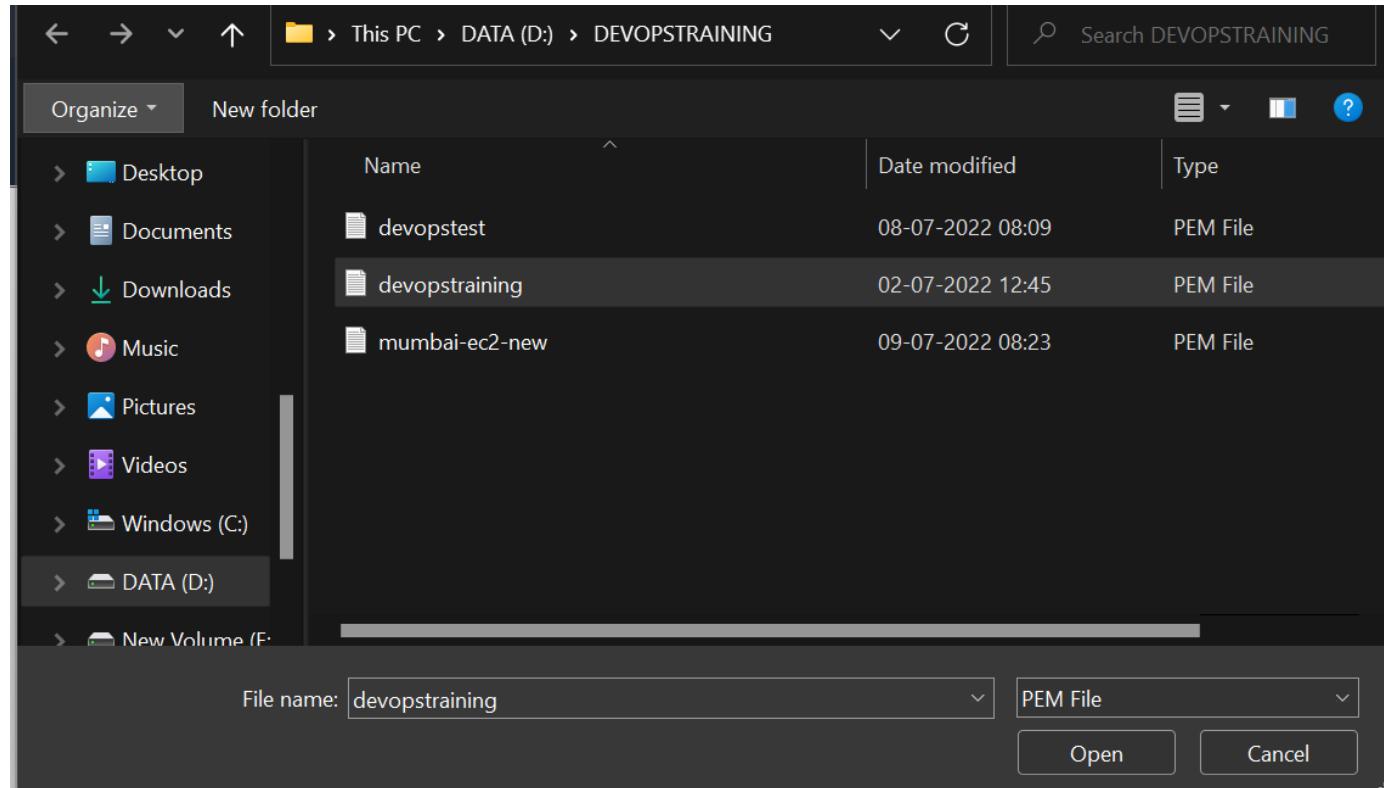
Key pair associated with this instance

devopstraining

Browse to your key pair:

 [Browse](#)

Or copy and paste the contents of the key pair below:



Download remote desktop file

When prompted, connect to your instance using the following details:

Public DNS

ec2-35-154-107-95.ap-south-1.compute.amazonaws.com

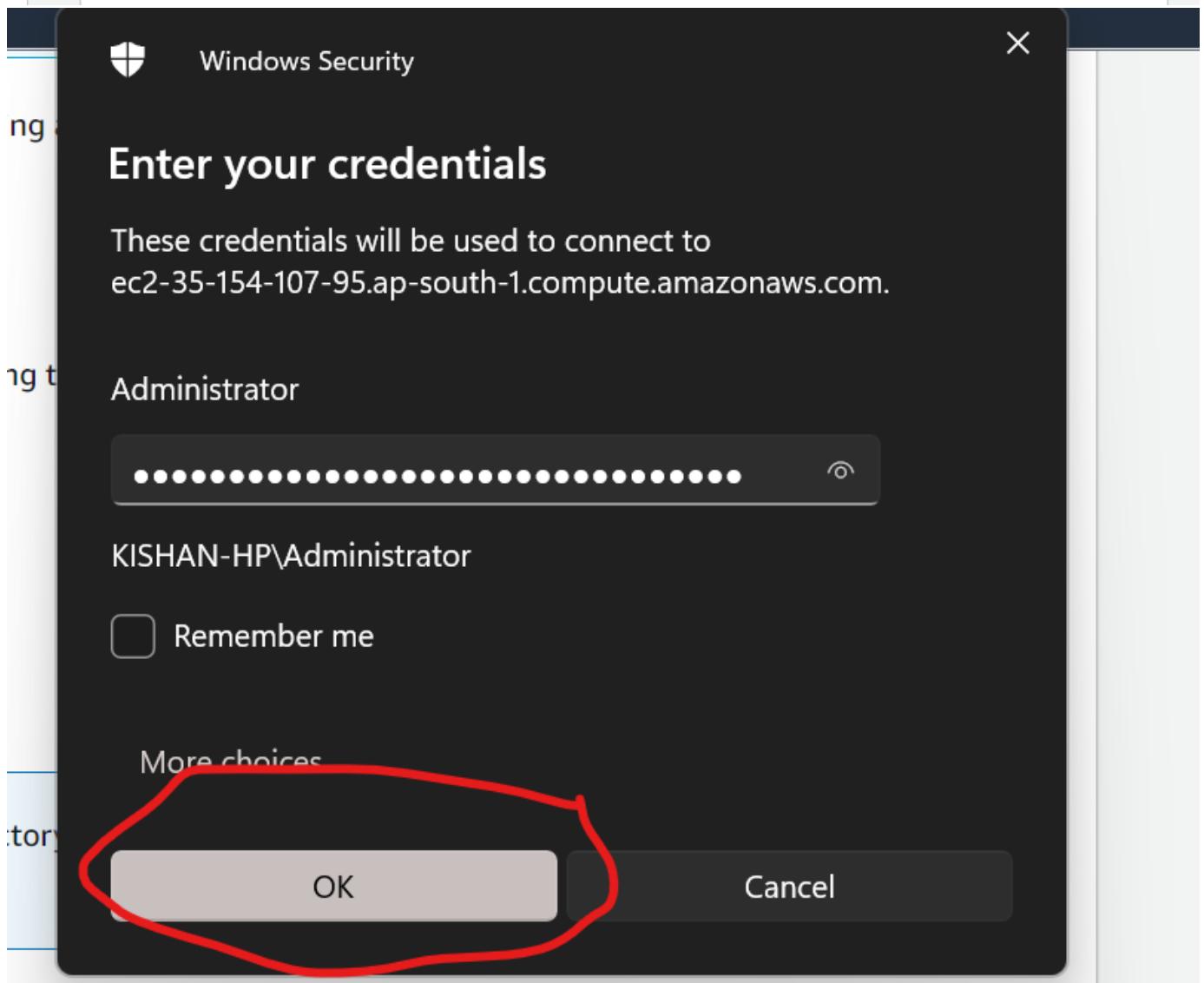
User name

 Administrator

>Password

dmODnA=Itl4DhkfZxH)RnC)RNJ5ggUO.

 If you've joined your instance to a directory, you can use your directory credentials to connect to your instance.





Remote Desktop Connection



The identity of the remote computer cannot be verified. Do you want to connect anyway?

The remote computer could not be authenticated due to problems with its security certificate. It may be unsafe to proceed.

Certificate name



Name in the certificate from the remote computer:

EC2AMAZ-OLFVNN5

Certificate errors

The following errors were encountered while validating the remote computer's certificate:



The certificate is not from a trusted certifying authority.

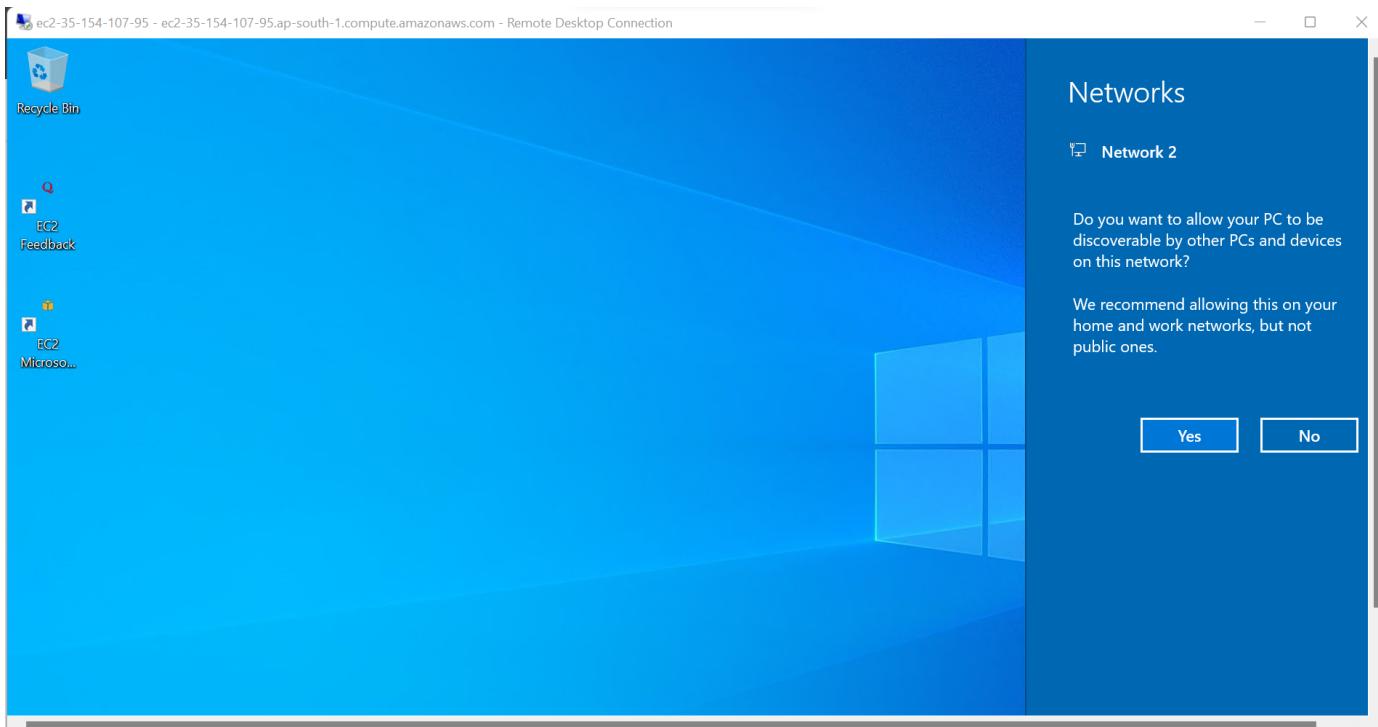
Do you want to connect despite these certificate errors?

Don't ask me again for connections to this computer

[View certificate...](#)

Yes

No



2. Elastic IP address

Resource Groups & Tag Editor

New EC2 Experience Tell us what you think X

EC2 Dashboard

- EC2 Global View
- Events
- Tags
- Limits

Instances

- Instances New
- Instance Types
- Launch Templates
- Spot Requests
- Savings Plans
- Reserved Instances New
- Dedicated Hosts
- Capacity Reservations

Snapshots New

Lifecycle Manager New

Network & Security

- Security Groups
- Elastic IPs**
- Placement Groups
- Key Pairs
- Network Interfaces

Load Balancing

- Load Balancers
- Target Groups New

Auto Scaling

Resources

EC2 Global view Filter Clear Help

You are using the following Amazon EC2 resources in the Asia Pacific (Mumbai) Region:

Instances (running)	0	Dedicated Hosts	0
Elastic IPs	0	Instances	2
Key pairs	2	Load balancers	0
Placement groups	0	Security groups	5
Snapshots	0	Volumes	1

Launch instance Get started

To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.

Service health

Check AWS Health Dashboard

Account attributes

Supported platforms Filter

- VPC

Default VPC Filter

vpc-0fd13d632aab77db1

Settings

- EBS encryption
- Zones
- EC2 Serial Console
- Default credit specification
- Console experiments

Explore AWS

Supported platforms Filter

- VPC

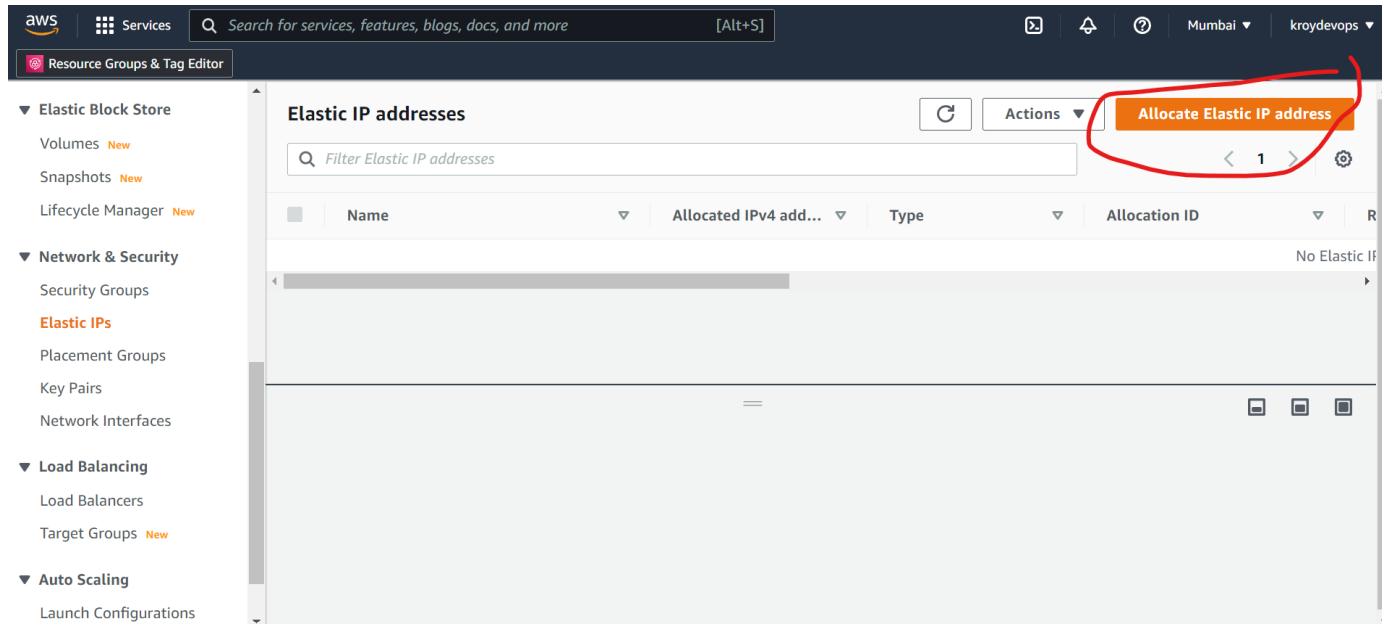
Default VPC Filter

vpc-0fd13d632aab77db1

Settings

- EBS encryption
- Zones
- EC2 Serial Console
- Default credit specification
- Console experiments

Explore AWS



The screenshot shows the AWS Management Console interface for managing Elastic IP addresses. The left sidebar contains navigation links for Elastic Block Store, Network & Security (with 'Elastic IPs' selected), Load Balancing, and Auto Scaling. The main content area is titled 'Elastic IP addresses' and shows a table with columns: Name, Allocated IPv4 add..., Type, Allocation ID, and Region. A search bar at the top says 'Filter Elastic IP addresses'. A red circle highlights the 'Allocate Elastic IP address' button in the top right corner of the table header.

Elastic IP address settings Info

Public IPv4 address pool

- Amazon's pool of IPv4 addresses
- Public IPv4 address that you bring to your AWS account (option disabled because no pools found) [Learn more](#)
- Customer owned pool of IPv4 addresses (option disabled because no customer owned pools found) [Learn more](#)

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.

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](#)

Elastic IP address allocated successfully.
Elastic IP address 15.207.5.133

[Associate this Elastic IP address](#)

Elastic IP addresses (1/1)

[Actions](#) [Allocate Elastic IP address](#)

Filter Elastic IP addresses

Public IPv4 address: 15.207.5.133 [X](#) [Clear filters](#)

<input checked="" type="checkbox"/>	Name	Allocated IPv4 add...	Type	Allocation ID
<input checked="" type="checkbox"/>	15.207.5.133	Public IP	eipalloc-0043624065c68f3eb	

15.207.5.133

[Summary](#) [Tags](#)

Elastic IP address allocated successfully.
Elastic IP address 15.207.5.133

[Associate this Elastic IP address](#)

Elastic IP addresses (1/1)

[Actions](#) [Allocate Elastic IP address](#)

View details [1](#) [>](#) [⚙️](#)

Release Elastic IP addresses

Associate Elastic IP address [Associate](#) [Release](#)

Disassociate Elastic IP address

Update reverse DNS

15.207.5.133

[Summary](#) [Tags](#)

Reserved Instances [New](#)
Dedicated Hosts
Capacity Reservations

AMIs [New](#)
AMI Catalog

Volumes [New](#)
Snapshots [New](#)
Lifecycle Manager [New](#)

Security Groups
Elastic IPs
Placement Groups

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

Elastic IP address: 15.207.5.133

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 to an instance that already has an Elastic IP address associated, this previously associated Elastic IP address will be disassociated but still allocated to your account. [Learn more](#)

Instance

Choose an instance



Private IP address

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

Choose a private IP address

Reassociation

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 to an instance that already has an Elastic IP address associated, this previously associated Elastic IP address will be disassociated but still allocated to your account. [Learn more](#)

Instance

i-07baed219a52c8bd5



Private IP address

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

Choose a private IP address

Reassociation

Specify whether the Elastic IP address can be reassigned to a different resource if it is already associated with a resource.

- Allow this Elastic IP address to be reassigned

Cancel

Associate

EC2 Dashboard

EC2 Global View

Events

Tags

Limits

▼ Instances

Instances New

Instance Types

Launch Templates

Spot Requests

Instances (1/2) Info		G	Connect	Instance state	Actions	Launch instances	▼
		Search					
	Name	Instance ID		Instance state	Instance type	Status check	Alarm status
<input checked="" type="checkbox"/>	kishan-mumbai	i-07baed219a52c8bd5		Stopped 	t2.micro	-	No alarms 
<input type="checkbox"/>	-	i-08b878d583426e763		Terminated 	t2.micro	-	No alarms 

Instance: i-07baed219a52c8bd5 (kishan-mumbai)

Details	Security	Networking	Storage	Status checks	Monitoring	Tags
▼ Instance summary Info						
Instance ID		Public IP v4 address		Private IPv4 addresses		
<input type="checkbox"/> i-07baed219a52c8bd5 (kishan-mumbai)		 15.207.5.133 open address 		<input type="checkbox"/> 172.31.37.58		
IPv6 address		Instance state		Public IPv4 DNS		

Once use is completed please release elastic ip, this is paid service.

Resource Groups & Tag Editor

Snapshots New

Lifecycle Manager New

Network & Security

- Security Groups
- Elastic IPs**
- Placement Groups
- Key Pairs
- Network Interfaces

Load Balancing

- Load Balancers
- Target Groups New

Auto Scaling

- Launch Configurations

Elastic IP address associated successfully.
Elastic IP address 15.207.5.133 has been associated with instance i-07baed219a52c8bd5

Elastic IP addresses (1/1)

Name	Allocated IPv4 address	Actions
-	15.207.5.133	Associate Elastic IP address Disassociate Elastic IP address Update reverse DNS

15.207.5.133

[Summary](#) [Tags](#)

If you disassociate this Elastic IP address, you can reassociate it with a different resource. The Elastic IP address remains allocated to your account. You can have one Elastic IP (EIP) address associated with a running instance at no charge. If you associate additional EIPs with that instance, you will be charged for each additional EIP associated with that instance on a pro rata basis. Additional EIPs are only available in Amazon VPC. To ensure efficient use of Elastic IP addresses, we impose a small hourly charge when these IP addresses are not associated with a running instance or when they are associated with a stopped instance or unattached network interface.

Elastic IP address
15.207.5.133

Instance ID
i-07baed219a52c8bd5

[Cancel](#) [Disassociate](#)

Elastic IP address disassociated successfully.
Elastic IP address 15.207.5.133

Elastic IP addresses (1/1)

Name	Allocated IPv4 address	Actions
-	15.207.5.133	View details Release Elastic IP addresses Associate Elastic IP address Disassociate Elastic IP address Update reverse DNS

Release Elastic IP addresses

X

If you release the following Elastic IP addresses, they will no longer be allocated to your account and you can no longer associate them with your resources.

Elastic IP address

- 15.207.5.133

Cancel

Release

⌚ Elastic IP addresses released.
Elastic IP addresses 15.207.5.133

Elastic IP addresses

Actions ▾

Allocate Elastic IP address

Filter Elastic IP addresses

< 1 >

⚙

Name

Allocated IPv4 add...

Type

Allocation ID

Instances (1/2) Info

C

Connect

Instance state ▾

Actions ▾

Launch instances

Search

< 1 >

⚙

Name

Instance ID

Instance state

Instance type

Status check

Alarm status

kishan-mumbai

i-07baed219a52c8bd5

Stopped

t2.micro

-

No alarms

-

i-08b878d583426e763

Terminated

t2.micro

-

No alarms

Instance: i-07baed219a52c8bd5 (kishan-mumbai)

Details

Security

Networking

Storage

Status checks

Monitoring

Tags

Instance summary Info

Instance ID

i-07baed219a52c8bd5 (kishan-mumbai)

Public IPv4 address

-

Private IPv4 addresses

172.31.37.58

IPv6 address

-

Instance state

Stopped

Public IPv4 DNS

-

3. STORAGE SERVICE

Amzon S3 - How to create bucket and how to upload files.

Services X

- Front-end Web & Mobile
- Game Development
- Internet of Things
- Machine Learning
- Management & Governance
- Media Services
- Migration & Transfer
- Networking & Content Delivery
- Quantum Technologies
- Robotics
- Satellite
- Security, Identity, & Compliance
- Storage

Storage

AWS Backup
AWS Backup centrally manages and automates backups across AWS services

EFS
Managed File Storage for EC2

AWS Elastic Disaster Recovery
Scalable, cost-effective application recovery to AWS

FSx
Fully managed third-party file systems optimized for a variety of workloads

S3
Scalable Storage in the Cloud

S3 Glacier
Archive Storage in the Cloud

Storage Gateway

aws Services [Alt+S] | Global ▾ | kroydevops ▾

Resource Groups & Tag Editor

Amazon S3

Store and retrieve any amount of data from anywhere

Amazon S3 is an object storage service that offers industry-leading scalability, data availability, security, and performance.

Create a bucket

Every object in S3 is stored in a bucket. To upload files and folders to S3, you'll need to create a bucket where the objects will be stored.

Create bucket

How it works

aws Introduction to Amazon S3

Pricing

With S3, there are no minimum fees. You only pay for what you use. Prices are based on the location of your S3 bucket.

Create bucket Info

Buckets are containers for data stored in S3. [Learn more](#)

General configuration

Bucket name

kroydevops

Bucket name must be unique and must not contain spaces or uppercase letters. [See rules for bucket naming](#)

AWS Region

Asia Pacific (Mumbai) ap-south-1

Copy settings from existing bucket - optional

Only the bucket settings in the following configuration are copied.

[Choose 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.



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.

Bucket Versioning

Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. [Learn more](#)

Bucket Versioning

- Disable
 Enable

Tags (0) [Add tags](#) [Edit tags](#)

- Disable
 Enable

► Advanced settings

ⓘ After creating the bucket you can upload files and folders to the bucket, and configure additional bucket settings.

Cancel

Create bucket

Amazon S3

Buckets

- Access Points
- Object Lambda Access Points
- Multi-Region Access Points
- Batch Operations
- Access analyzer for S3

Block Public Access settings for this account

▼ **Storage Lens**

- Dashboards
- AWS Organizations settings

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

Follow security best practices for S3.
[Learn more](#)

Account snapshot
Storage lens provides visibility into storage usage and activity trends. [Learn more](#)

Buckets (1) [Info](#)
Buckets are containers for data stored in S3. [Learn more](#)

[View Storage Lens dashboard](#)

Create bucket

Find buckets by name

Name	AWS Region	Access	Creation date
kroydevops	Asia Pacific (Mumbai) ap-south-1	Objects can be public	July 11, 2022, 20:39:08 (UTC+05:30)

Objects (0)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Actions ▾

Create folder **Upload**

Find objects by prefix

Name **Type** **Last modified** **Size** **Storage class**

No objects
You don't have any objects in this bucket.

Upload

Amazon S3 **X**

Buckets

- Access Points
- Object Lambda Access Points
- Multi-Region Access Points
- Batch Operations
- Access analyzer for S3

Block Public Access settings for this account

Storage Lens

- Dashboards
- AWS Organizations settings

Follow security best practices for S3. [Learn more](#) **X**

configuration to upload an empty folder and specify the appropriate settings.

Folder

Folder name: /

Folder names can't contain "/". [See rules for naming](#)

Server-side encryption

The following settings apply only to the new folder object and not to the objects contained within it.

Server-side encryption: Disable

images

Folder names can't contain "/". [See rules for naming](#)

Server-side encryption

The following settings apply only to the new folder object and not to the objects contained within it.

Server-side encryption: Disable

Enable

Create folder

Cancel

Objects (1)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

[C](#) [Copy S3 URI](#) [Copy URL](#) [Download](#) [Open](#) [Delete](#) [Actions](#)

[Create folder](#) [Upload](#)

<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	images/	Folder	-	-	-

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

[C](#) [Copy S3 URI](#) [Copy URL](#) [Download](#) [Open](#) [Delete](#) [Actions](#)

[Create folder](#) [Upload](#)

[Find objects by prefix](#)

Name ▲ Type ▽ Last modified ▽ Size ▽ Storage class

No objects

You don't have any objects in this folder.

[Upload](#)

Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AWS SDK or Amazon S3 REST API. [Learn more](#)

Drag and drop files and folders you want to upload here, or choose **Add files**, or **Add folders**.

Files and folders (0)

All files and folders in this table will be uploaded.

[Remove](#)

[Add files](#)

[Add folder](#)

[Find by name](#)

Name ▲ Folder ▽ Type ▽ Size ▽

No files or folders

You have not chosen any files or folders to upload.

Files and folders (1 Total, 29.5 KB)

All files and folders in this table will be uploaded.

	Name	Folder	Type	Size
<input type="checkbox"/>	istockphoto-1161702497-612x612.jpg	-	image/jpeg	29.5 KB

Destination
<s3://kroydevops/images/>

▶ Destination details
Bucket settings that impact new objects stored in the specified destination.

▶ Permissions
Grant public access and access to other AWS accounts.

▶ Properties
Specify storage class, encryption settings, tags, and more.

Cancel **Upload** 

Upload succeeded [View details below.](#)

Upload: status **Close**

Summary

Destination	Succeeded	Failed
s3://kroydevops/images/	1 file, 29.5 KB (100.00%)	0 files, 0 B (0%)

Files and folders **Configuration**

AWS Services Search for services, features, blogs, docs, and more [Alt+S] Global kroydevops

Resource Groups & Tag Editor

Amazon S3

Buckets

- Access Points
- Object Lambda Access Points
- Multi-Region Access Points
- Batch Operations
- Access analyzer for S3

Block Public Access settings for this account

Storage Lens

- Dashboards
- AWS Organizations settings

Follow security best practices for S3.

Objects (1)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Open (circled in red)

Actions

Find objects by prefix

✓ Name	Type	Last modified	Size	Storage class
istockphoto-1161702497-612x612.jpg	jpg	July 11, 2022, 20:52:51 (UTC+05:30)	29.5 KB	Standard

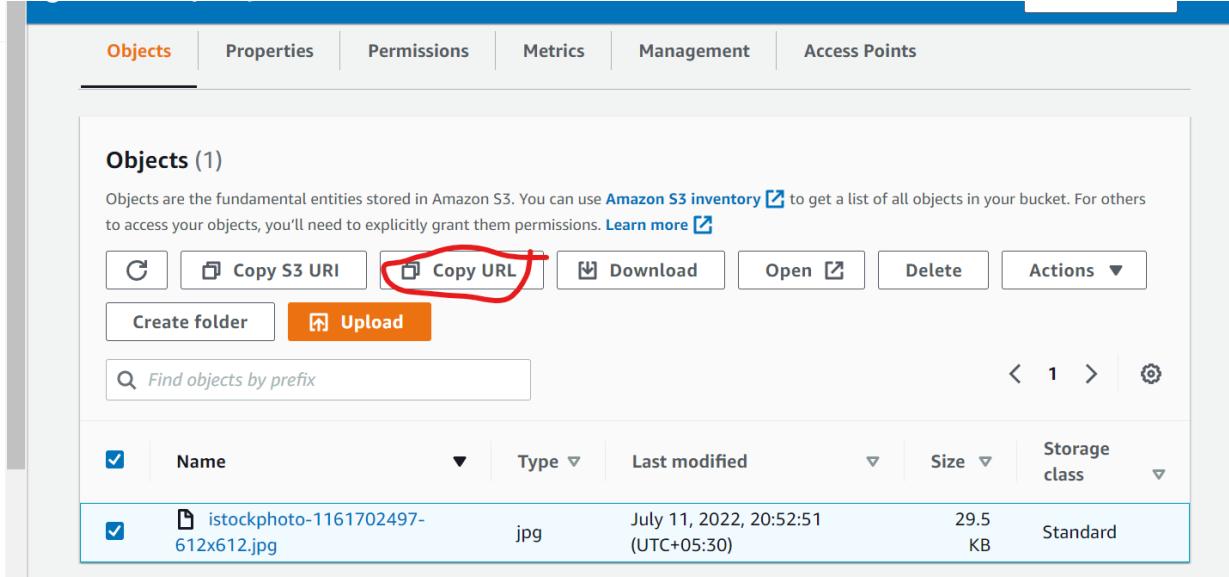
kroydevops - S3 bucket istockphoto-1161702497-612x612 Add Page - AWS HANDS-ON - Kishan https://kroydevops.s3.ap-south-1.amazonaws.com/istockphoto-1161702497-612x612.jpg?r...



nts

js for

js



Objects (1)

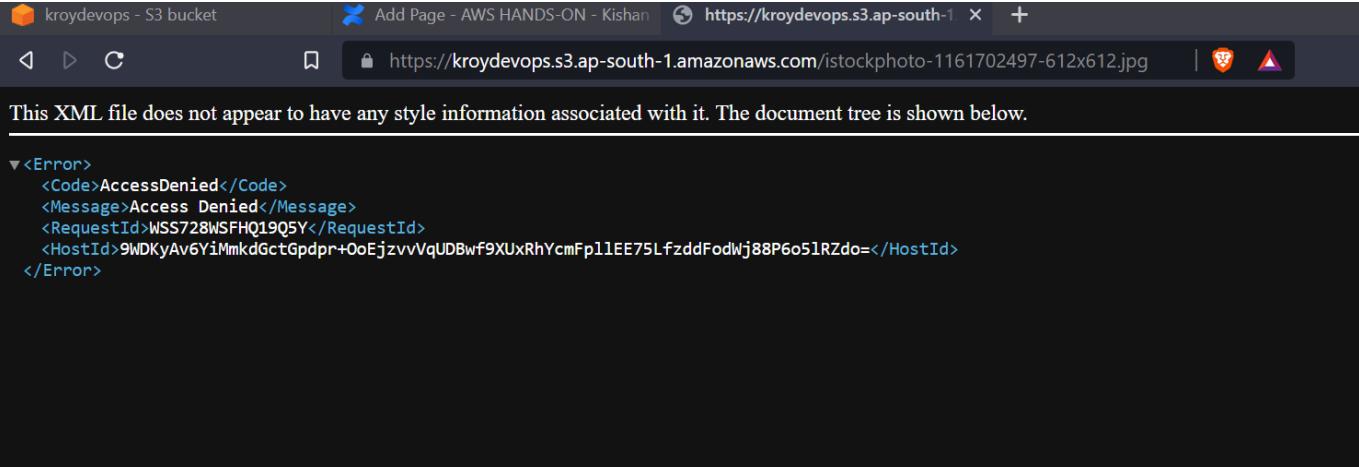
Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

[Copy S3 URI](#) [Copy URL](#) [Download](#) [Open](#) [Delete](#) [Actions](#)

[Create folder](#) [Upload](#)

[Find objects by prefix](#)

<input checked="" type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input checked="" type="checkbox"/>	istockphoto-1161702497-612x612.jpg	jpg	July 11, 2022, 20:52:51 (UTC+05:30)	29.5 KB	Standard



kroydevops - S3 bucket Add Page - AWS HANDS-ON - Kishan <https://kroydevops.s3.ap-south-1.amazonaws.com/istockphoto-1161702497-612x612.jpg>

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
<Error>
  <Code>AccessDenied</Code>
  <Message>Access Denied</Message>
  <RequestId>WSS728WSFHQ19Q5Y</RequestId>
  <HostId>9WDKyAv6YiMmkdGctGpdpr+OoEjzvvVqUBwf9XUxRhYcmFp11EE75LfzddFodWj88P6o5lRzdo=</HostId>
</Error>
```

Publicly no one will able to see your image.

To make it publicly available

► Account snapshotStorage lens provides visibility into storage usage and activity trends. [Learn more](#)[View Storage Lens dashboard](#)**Buckets (1) [Info](#)**Buckets are containers for data stored in S3. [Learn more](#)[Copy ARN](#)[Empty](#)[Delete](#)[Create bucket](#)[Find buckets by name](#)< 1 >**Name****AWS Region****Access****Creation date**

kroydevops	Asia Pacific (Mumbai) ap-south-1	Bucket and objects not public	July 11, 2022, 20:52:12 (UTC+05:30)
----------------------------	----------------------------------	-------------------------------	-------------------------------------

kroydevops [Info](#)[Objects](#)[Properties](#)[Permissions](#)[Metrics](#)[Management](#)[Access Points](#)**Objects (1)**

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

[Copy S3 URI](#)[Copy URL](#)[Download](#)[Open](#)[Delete](#)[Actions ▾](#)[Create folder](#)[Upload](#)[Find objects by prefix](#)< 1 >**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.

[Edit](#)**Object Ownership****Bucket owner enforced**

ACLs are disabled. All objects in this bucket are owned by this account. Access to this bucket and its objects is specified using only policies.

Object Ownership

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.

ACLs disabled (recommended)

All objects in this bucket are owned by this account. Access to this bucket and its objects is specified using only policies.

ACLs enabled

Objects in this bucket can be owned by other AWS accounts. Access to this bucket and its objects can be specified using ACLs.



Enabling ACLs turns off the bucket owner enforced setting for Object Ownership

Once the bucket owner enforced setting is turned off, access control lists (ACLs) and their associated permissions are restored. Access to objects that you do not own will be based on ACLs and not the bucket policy.

I acknowledge that ACLs will be restored.

Object Ownership

Bucket owner preferred

If new objects written to this bucket specify the bucket-owner-full-control canned ACL, they are owned by the bucket owner. Otherwise, they are owned by the object writer.

Object writer

 Once the bucket owner enforced setting is turned off, access control lists (ACLs) and their associated permissions are restored. Access to objects that you do not own will be based on ACLs and not the bucket policy.

I acknowledge that ACLs will be restored.

Object Ownership

Bucket owner preferred

If new objects written to this bucket specify the bucket-owner-full-control canned ACL, they are owned by the bucket owner. Otherwise, they are owned by the object writer.

Object writer

The object writer remains the object owner.

 If you want to enforce object ownership for new objects only, your bucket policy must specify that the bucket-owner-full-control canned ACL is required for object uploads. [Learn more](#) 

Cancel

Save changes

Objects Properties Permissions Metrics Management Access Points

Objects (1)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

[Delete](#) [Actions ▾](#) [Create folder](#) [Upload](#)

[Find objects by prefix](#)

<input checked="" type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input checked="" type="checkbox"/>	istockphoto-1161702497-612x612.jpg	jpg	July 11, 2022, 20:52:51 (UTC+05:30)	29.5 KB	Standard

Objects Properties Permissions Metrics Management Access Points

Objects (1)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

[Delete](#) [Actions ▾](#) [Create folder](#) [Upload](#)

[Find objects by prefix](#)

<input checked="" type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input checked="" type="checkbox"/>	istockphoto-1161702497-612x612.jpg	jpg	July 11, 2022, 20:52:51 (UTC+05:30)	29.5 KB	Standard

[Edit storage class](#)
[Edit server-side encryption](#)
[Edit metadata](#)
[Edit tags](#)
[Make public using ACL](#)

Follow security best practices for S3.

Make public Info

The make public action enables public read access in the object access control list (ACL) settings. [Learn more](#).

⚠️ When public read access is enabled and not blocked by Block Public Access settings, anyone in the world can access the specified objects.

Specified objects

Name	Type	Last modified	Size
istockphoto-1161702497-612x612.jpg	jpg	July 11, 2022, 20:52:51 (UTC+05:30)	29.5 KB

[Cancel](#) [Make public](#)

[Objects](#) [Properties](#) [Permissions](#) [Metrics](#) [Management](#) [Access Points](#)

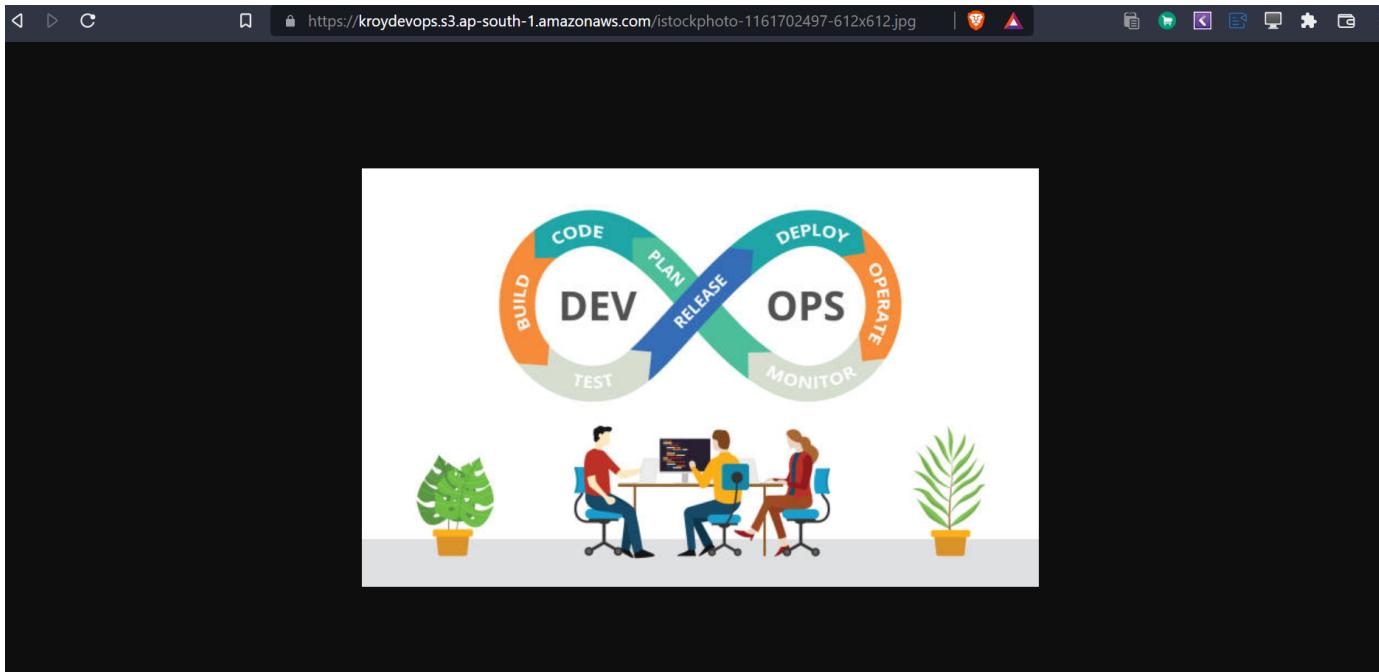
Objects (1)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

[Copy S3 URI](#) [Copy URL](#) [Download](#) [Open](#) [Delete](#) [Actions](#)

[Create folder](#) [Upload](#)

Name	Type	Last modified	Size	Storage class
istockphoto-1161702497-612x612.jpg	jpg	July 11, 2022, 20:52:51 (UTC+05:30)	29.5 KB	Standard



ATTACH EBS VOLUME: How to attach ebs volume to ec2 instance and how you can store your files.

New EC2 Experience X Tell us what you think

EC2 Dashboard

- EC2 Global View
- Events
- Tags
- Limits

Instances

- Instances** New Instances New Instance Types Launch Templates Spot Requests Savings Plans Reserved Instances New Dedicated Hosts Capacity Reservations

Resources

EC2 Global view ⟳ ⟳ ⟳

Instances (running)	0	Dedicated Hosts	0
Elastic IPs	0	Instances	1
Key pairs	2	Load balancers	0
Placement groups	0	Security groups	5
Snapshots	0	Volumes	1

Account attributes

Supported platforms ↗
• VPC

Default VPC ↗
vpc-0fd13d632aab77db1

Settings

EBS encryption

Zones

EC2 Serial Console

Default credit specification

Console experiments

Launch instance

To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.

Service health

⟳

[AWS Health Dashboard](#) ↗

Explore AWS X

Successfully started i-07baed219a52c8bd5

Instances (1/1) Info

Storage (circled)

Block devices

Only one volume is attached currently i.e root volume where os is installed.

Now I will attach new volume of size 2gib

Elastic Block Store (circled)

Volumes (New)

Block devices

Volumes (1)										
	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot			
<input type="checkbox"/>	-	vol-05b679ec75023caba	gp2	8 GiB	100	-	snap-08bbaef...	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	<input type="button" value="Actions"/>

Volume type [Info](#)

General Purpose SSD (gp2)



Size (GiB) [Info](#)

2

Min: 1 GiB, Max: 16384 GiB. The value must be an integer.

IOPS [Info](#)

100 / 3000

Baseline of 3 IOPS per GiB with a minimum of 100 IOPS, burstable to 3000 IOPS.

Throughput (MiB/s) [Info](#)

Not applicable

Availability Zone [Info](#)

ap-south-1a



Snapshot ID - optional [Info](#)

Don't create volume from a snapshot



Encrypt this volume

Tags - optional [Info](#)

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.

You can add 50 more tags.

Successfully created volume [vol-00826e833c6c00cd8](#).

Volumes (2)												Actions ▾	Create volume
<input type="checkbox"/>	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot						
<input type="checkbox"/>	-	vol-05b679ec75023caba	gp2	8 GiB	100	-	snap-08bbaef...						
<input type="checkbox"/>	-	vol-00826e833c6c00cd8	gp2	2 GiB	100	-	-						

Volumes (2)								Actions ▾	Create volume
<input type="checkbox"/>	Created	Availability Zone	Volume state	Alarm status	Attached Instances				
<input type="checkbox"/>	2022/07/09 08:23 GMT+5:...	ap-south-1a	In-use	No alarms		i-07baed219a52c8bd5 (kis...			
<input type="checkbox"/>	2022/07/11 21:22 GMT+5:...	ap-south-1a	Available	No alarms		-			

Volumes (1/2)

Volumes (1/2)								Actions ▾	Create vol
<input type="checkbox"/>	Name	Volume ID	Type	Size	IOPS				
<input type="checkbox"/>	-	vol-05b679ec75023caba	gp2	8 GiB	100				
<input checked="" type="checkbox"/>	-	vol-00826e833c6c00cd8	gp2	2 GiB	100				

Actions ▾

- [Modify volume](#)
- [Create snapshot](#)
- [Create snapshot lifecycle policy](#)
- [Delete volume](#)
- [Attach volume](#)
- [Detach volume](#)
- [Force detach volume](#)
- [Manage auto-enabled I/O](#)
- [Manage tags](#)

Basic details

Volume ID

[vol-00826e833c6c00cd8](#)

Availability Zone

ap-south-1a

Instance [Info](#)



Only instances in the same Availability Zone as the selected volume are displayed.

Device name [Info](#)

[Cancel](#)

Attach volume

[vol-00826e833c6c00cd8](#)

Availability Zone

ap-south-1a

Instance [Info](#)



Only instances in the same Availability Zone as the selected volume are displayed.

Device name [Info](#)

Recommended device names for Linux: /dev/sda1 for root volume. /dev/sd[f-p] for data volumes.

Info Newer Linux kernels may rename your devices to **/dev/xvdf** through **/dev/xvdp** internally, even when the device name entered here (and shown in the details) is **/dev/sdf** through **/dev/sdp**.

[Cancel](#)

Attach volume

✓ Successfully attached volume [vol-00826e833c6c00cd8](#) to instance [i-07baed219a52c8bd5](#).

Volumes (2)

Filter volumes

Not	Created	Availability Zone	Volume state	Alarm status	Attached to
8bbaef...	2022/07/09 08:23 GMT+5:30	ap-south-1a	✓ In-use	No alarms	+ i-07baed219a52c8bd5
	2022/07/11 21:22 GMT+5:30	ap-south-1a	✓ In-use	No alarms	+ i-07baed219a52c8bd5

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

Search

<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Action	
<input checked="" type="checkbox"/>	kishan-mumbai	i-07baed219a52c8bd5	✓ Running	QQ	t2.micro	✓ 2/2 checks passed	No alarms	+ Actions

Instance: [i-07baed219a52c8bd5 \(kishan-mumbai\)](#)

Filter block devices

Volume ID	Device name	Volume size (GiB)	Attachment status	Attachment time
vol-05b679ec75023caba	/dev/xvda	8	✓ Attached	Sat Jul 09 2022 08:23:50 GM...
vol-00826e833c6c00cd8	/dev/sdf	2	✓ Attached	Mon Jul 11 2022 21:29:02 G...

Recent root volume replacement tasks

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

Search

[C](#) [Connect](#)

<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Action	
<input checked="" type="checkbox"/>	kishan-mumbai	i-07baed219a52c8bd5	✓ Running	QQ	t2.micro	✓ 2/2 checks passed	No alarms	+ Actions

Instance: [i-07baed219a52c8bd5 \(kishan-mumbai\)](#)

Filter block devices

Volume ID	Device name	Volume size (GiB)	Attachment status	Attachment time
vol-05b679ec75023caba	/dev/xvda	8	✓ Attached	Sat Jul 09 2022 08:23:50 GM...
vol-00826e833c6c00cd8	/dev/sdf	2	✓ Attached	Mon Jul 11 2022 21:29:02 G...

Recent root volume replacement tasks

EC2 Instance Connect Session Manager SSH client EC2 serial console

Instance ID [i-07baed219a52c8bd5](#) (kishan-mumbai)

Public IP address [3.6.41.89](#)

User name

Connect using a custom user name, or use the default user name ec2-user for the AMI used to launch the instance.

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

[Cancel](#) [Connect](#)

```
sudo su root
fdisk -l
```

```
[ec2-user@ip-172-31-37-58 ~]$ sudo su root
[root@ip-172-31-37-58 ec2-user]# fdisk -l
Disk /dev/xvda: 8 GiB, 8589934592 bytes, 16777216 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: gpt
Disk identifier: 1CF4CE82-5799-4154-B00B-31C2919BF5BD

Device      Start      End  Sectors Size Type
/dev/xvda1    4096  16777182 16773087   8G Linux filesystem
/dev/xvda128  2048      4095     2048   1M BIOS boot
```

Partition table entries are not in disk order.

Disk /dev/xvdf: 2 GiB, 2147483648 bytes, 4194304 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

```
df -h
#disk free no 2gib is mounted
```

```
[root@ip-172-31-37-58 ec2-user]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        474M    0  474M  0% /dev
tmpfs          483M    0  483M  0% /dev/shm
tmpfs          483M  496K  483M  1% /run
tmpfs          483M    0  483M  0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.6G  6.5G  20% /
tmpfs          97M    0   97M  0% /run/user/0
tmpfs          97M    0   97M  0% /run/user/1000
[root@ip-172-31-37-58 ec2-user]#
```

```
fdisk -l
fdisk /dev/xvdf
```

```
[root@ip-172-31-37-58 ec2-user]# fdisk -l
Disk /dev/xvda: 8 GiB, 8589934592 bytes, 16777216 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: gpt
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Device      Start    End  Sectors Size Type
/dev/xvda1    4096 16777182 16773087    8G Linux filesystem
/dev/xvda128   2048      4095      2048    1M BIOS boot

Partition table entries are not in disk order.
```

```
Disk /dev/xvdf: 2 GiB, 2147483648 bytes, 4194304 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
[root@ip-172-31-37-58 ec2-user]# fdisk /dev/xvdf
```

```
press n for new partition
after that press p for primary partition
press three time enter than to create partition of full size 2gib
then press w to save
```

```
[root@ip-172-31-37-58 ec2-user]# fdisk /dev/xvdf
```

```
Welcome to fdisk (util-linux 2.30.2).
```

```
Changes will remain in memory only, until you decide to write them.  
Be careful before using the write command.
```

```
Device does not contain a recognized partition table.
```

```
Created a new DOS disklabel with disk identifier 0x895fef07.
```

```
Command (m for help): n
```

```
[root@ip-172-31-37-58 ec2-user]# fdisk /dev/xvdf
```

```
Welcome to fdisk (util-linux 2.30.2).
```

```
Changes will remain in memory only, until you decide to write them.  
Be careful before using the write command.
```

```
Device does not contain a recognized partition table.
```

```
Created a new DOS disklabel with disk identifier 0x895fef07.
```

```
Command (m for help): n
```

```
Partition type
```

```
  p  primary (0 primary, 0 extended, 4 free)  
  e  extended (container for logical partitions)
```

```
Select (default p): p
```

```
Welcome to fdisk (util-linux 2.30.2).
```

```
Changes will remain in memory only, until you decide to write them.  
Be careful before using the write command.
```

```
Device does not contain a recognized partition table.
```

```
Created a new DOS disklabel with disk identifier 0x895fef07.
```

```
Command (m for help): n
```

```
Partition type
```

```
  p  primary (0 primary, 0 extended, 4 free)  
  e  extended (container for logical partitions)
```

```
Select (default p): p
```

```
Partition number (1-4, default 1):
```

```
First sector (2048-4194303, default 2048):
```

```
Last sector, +sectors or +size{K,M,G,T,P} (2048-4194303, default 4194303):
```

```
Created a new partition 1 of type 'Linux' and of size 2 GiB.
```

```
Command (m for help):
```

```
Command (m for help): n
Partition type
  p  primary (0 primary, 0 extended, 4 free)
  e  extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1):
First sector (2048-4194303, default 2048):
Last sector, +sectors or +size{K.M.G.T.P} (2048-4194303, default 4194303):
Created a new partition 1 of type 'Linux' and of size 2 GiB.
Command (m for help): w
```

```
fdisk -l
mkfs.ext4 /dev/xvdf1
#to use volume to store data we have to first format it
```

```
[root@ip-172-31-37-58 ec2-user]# fdisk -l
Disk /dev/xvda: 8 GiB, 8589934592 bytes, 16777216 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: gpt
Disk identifier: 1CF4CE82-5799-4154-B00B-31C2919BF5BD

Device      Start      End  Sectors Size Type
/dev/xvda1    4096  16777182 16736093  8G Linux filesystem
/dev/xvda128   2048      4095      2048  1M BIOS boot
```

Partition table entries are not in disk order.

```
Disk /dev/xvdf: 2 GiB, 2147483648 bytes, 4194304 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x895fef07
```

```
Device  Boot Start      End  Sectors Size Id Type
/dev/xvdf1        2048 4194303 4192256   2G 83 Linux
[root@ip-172-31-37-58 ec2-user]#
```

```
Device  Boot Start      End  Sectors Size Id Type
/dev/xvdf1        2048 4194303 4192256   2G 83 Linux
[root@ip-172-31-37-58 ec2-user]# mkfs.ext4 /dev/xvdf1
```

```
[root@ip-172-31-37-58 ec2-user]# mkfs.ext4 /dev/xvdf1
mke2fs 1.42.9 (28-Dec-2013)
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
Stride=0 blocks, Stripe width=0 blocks
131072 inodes, 524032 blocks
26201 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=536870912
16 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
            32768, 98304, 163840, 229376, 294912

Allocating group tables: done
Writing inode tables: done
Creating journal (8192 blocks): done
Writing superblocks and filesystem accounting information: done

[root@ip-172-31-37-58 ec2-user]#
```

```
mkdir newvolume
ls
mount /dev/xvdf1 newvolume
```

```
[root@ip-172-31-37-58 ec2-user]# mkdir newvolume
[root@ip-172-31-37-58 ec2-user]# ls
file1  file2  file3  file4  file5  file6.txt  newvolume
[root@ip-172-31-37-58 ec2-user]#
```

```
[root@ip-172-31-37-58 ec2-user]# mkdir newvolume
[root@ip-172-31-37-58 ec2-user]# ls
file1 file2 file3 file4 file5 file6.txt newvolume
[root@ip-172-31-37-58 ec2-user]# mount /dev/xvdf1 newvolume/
[root@ip-172-31-37-58 ec2-user]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        474M    0  474M  0% /dev
tmpfs          483M    0  483M  0% /dev/shm
tmpfs          483M  500K 483M  1% /run
tmpfs          483M    0  483M  0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.6G  6.5G 20% /
tmpfs          97M    0   97M  0% /run/user/0
tmpfs          97M    0   97M  0% /run/user/1000
/dev/xvdf1      2.0G   24K  1.9G  1% /home/ec2-user/newvolume
[root@ip-172-31-37-58 ec2-user]#
```

```
cd newvolume
ls
touch volumefile1 volumefile2
ls
```

```
tmpfs          97M    0   97M  0% /run/user/1000
/dev/xvdf1      2.0G   24K  1.9G  1% /home/ec2-user/newvolume
[root@ip-172-31-37-58 ec2-user]# cd newvolume/
[root@ip-172-31-37-58 newvolume]# ls
lost+found
[root@ip-172-31-37-58 newvolume]# touch volumefile1 volumefile2
[root@ip-172-31-37-58 newvolume]# ls
lost+found  volumefile1  volumefile2
[root@ip-172-31-37-58 newvolume]#
```

```
cat > volumefile1
cat > volumefile2
#add some content in both file
```

```
[root@ip-172-31-37-58 newvolume]# cat > volumefile1
data in file1 stored in ebs volume
[root@ip-172-31-37-58 newvolume]# cat > volumefile2
data in file2 stored in ebs volume
[root@ip-172-31-37-58 newvolume]# ls
lost+found  volumefile1  volumefile2
[root@ip-172-31-37-58 newvolume]#
```

Now unmount this volume

```
cd ..  
umount newvolume  
ls  
cd newvolume  
ls  
#no files because all file stored in volume i.e ebs similar to pen drive  
#if you umount pendrive then you will not able to see data right.
```

```
[root@ip-172-31-37-58 newvolume]# ls  
lost+found  volumefile1  volumefile2  
[root@ip-172-31-37-58 newvolume]# cd ..  
[root@ip-172-31-37-58 ec2-user]# umount newvolume/  
[root@ip-172-31-37-58 ec2-user]# ls  
dir1  dira  file1  file2  file3  file4  newvolume  
[root@ip-172-31-37-58 ec2-user]# cd newvolume/  
[root@ip-172-31-37-58 newvolume]# ls  
[root@ip-172-31-37-58 newvolume]# █
```

```
#To see data again  
mkdir pendrive  
fdisk -l  
mount /dev/xvdf1 pendrive  
cd pendrive  
ls  
cat volumefile1
```

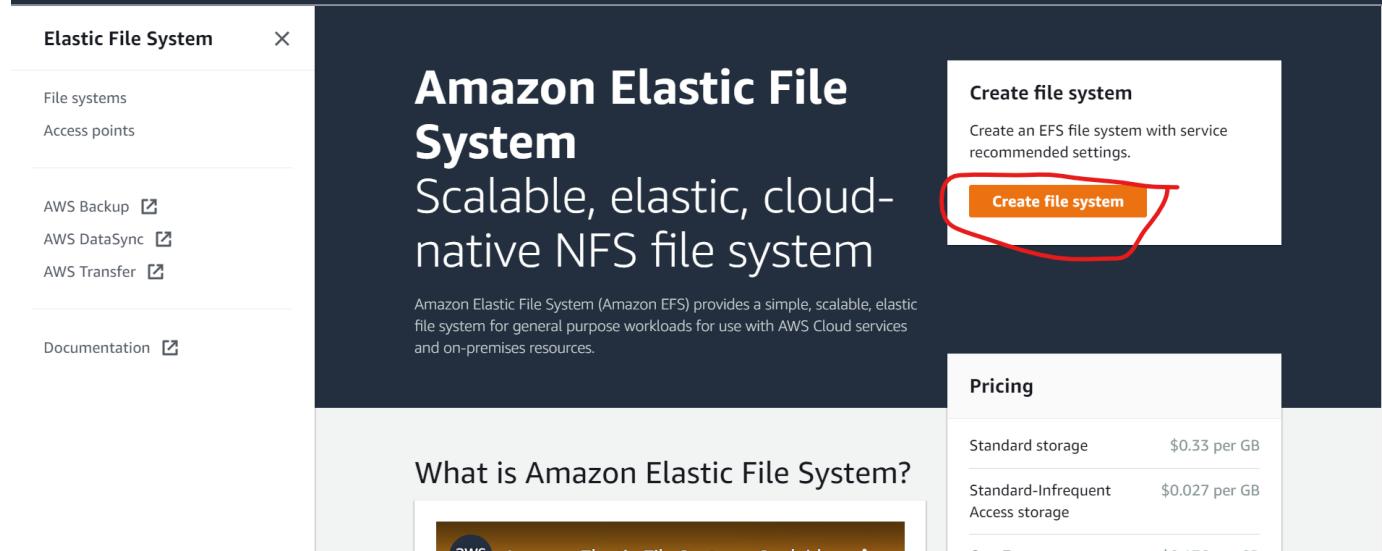
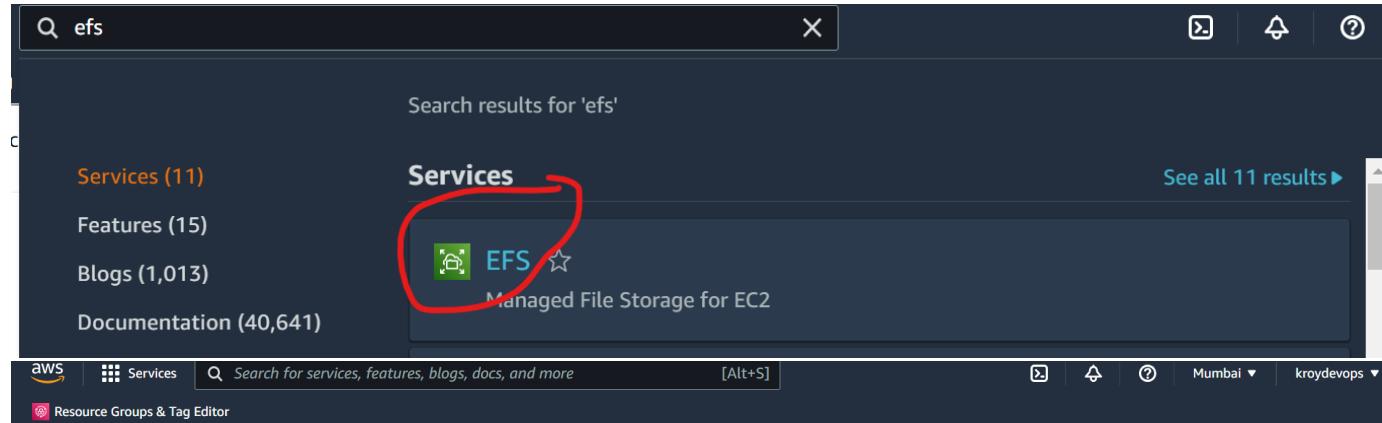
```
[root@ip-172-31-37-58 ec2-user]# ls  
dir1  dira  file1  file2  file3  file4  newvolume  
[root@ip-172-31-37-58 ec2-user]# mkdir pendrive  
[root@ip-172-31-37-58 ec2-user]# ls  
dir1  dira  file1  file2  file3  file4  newvolume  pendrive  
  
Device      Boot Start   End Sectors Size Id Type  
/dev/xvdf1        2048 4194303 4192256   2G 83 Linux  
[root@ip-172-31-37-58 ec2-user]# mount /dev/xvdf1 pendrive/  
[root@ip-172-31-37-58 ec2-user]# cd pendrive  
[root@ip-172-31-37-58 pendrive]# ls  
lost+found  volumefile1  volumefile2  
[root@ip-172-31-37-58 pendrive]# █
```

```
[root@ip-172-31-37-58 pendrive]# ls
lost+found  volumefile1  volumefile2
[root@ip-172-31-37-58 pendrive]# cat volumefile1
data in file1 stored in ebs volume
[root@ip-172-31-37-58 pendrive]#
```

Note: EBS volume can be attached to a single ec2-instance only at a time similar to pendrive that we can connect to a laptop at a time.

If you want to share multiple files at a time across many ec2-instances we use **EFS**.

EFS



Create file system

Create an EFS file system with service recommended settings. [Learn more](#)

Name - optional
Name your file system.

Name can include letters, numbers, and +-=._:/ symbols, up to 256 characters.

Virtual Private Cloud (VPC)
Choose the VPC where you want EC2 instances to connect to your file system. [Learn more](#)

vpc-0fd13d632aab77db1

▼

Storage class [Learn more](#)

Standard
 Stores data redundantly across multiple AZs

One Zone
 Stores data redundantly within a single AZ

Cancel
Customize
Create

Elastic File System X

File systems

Access points

AWS Backup []

AWS DataSync []

AWS Transfer []

Documentation []

Amazon EFS > File systems

Introducing EFS Replication
Keep an up-to-date copy of your file system in a region or availability zone of your choice.
[What's new](#) | [Documentation](#) | [AWS Storage Blog](#)

File systems (1)

Name	File system ID	Encrypted	Total size	Size in Standard / One Zone	Size in Standard-IA / One Zone-IA	Provisioned Throughput (MiB/s)
<input type="radio"/> Myefs	fs-0cc113e5f169b43b5	Encrypted	0 Bytes	0 Bytes	0 Bytes	-

Amazon EFS > File systems > fs-0cc113e5f169b43b5

Myefs (fs-0cc113e5f169b43b5)

Delete
Attach

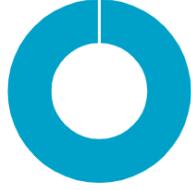
General
Edit

Performance mode	Automatic backups
General Purpose	Enabled
Throughput mode	Encrypted
Bursting	0a733f94-d8c1-407f-885d-5e762edd2275 (aws/elasticfilesystem)
Lifecycle management	File system state
Transition into IA: 30 days since last access	Available
Transition out of IA: On first access	
Availability zone	DNS name
Standard	fs-0cc113e5f169b43b5.efs.ap-south-1.amazonaws.com

Metered size
Monitoring
Tags
File system policy
Access points
Network
Replication

Metered size

Total size	6.00 KiB
Size in Standard / One Zone	6.00 KiB (100%)
Size in Standard-IA / One Zone-IA	



Legend: Size in Standard / One Zone (Blue), Size in Standard-IA / One Zone-IA (Orange)

Availability zone	Mount target ID	Subnet ID	Mount target state	IP address	Network interface ID	Security groups
ap-south-1a	fsmt-004156d011c3be7df	subnet-074c1f55b23961ef3	Available	172.31.32.254	eni-0d07064bf6ae498c8	sg-0d72898e5ee9159b0 (default)
ap-south-1b	fsmt-0436f9156f6e6527c	subnet-07e81590c112c4302	Available	172.31.1.124	eni-0e5cdaffe4577343a	sg-0d72898e5ee9159b0 (default)
ap-south-1c	fsmt-0a2ed88048c41938d	subnet-0b887be8ca52fd7a	Available	172.31.16.184	eni-0b7242cae326b08f3	sg-0d72898e5ee9159b0 (default)

Launch one more EC2-instance

Search Instance state = running X Clear filters

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status
<input type="checkbox"/>	kishan-mumbai	i-07baed219a52c8bd5	Running	t2.micro	2/2 checks passed	No alarms
<input type="checkbox"/>	test-mumbai	i-021931f9266119b9a	Running	t2.micro	Initializing	No alarms

Select an instance

Instances (1/2) Info Connect Instance state Actions Launch instances

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status
<input type="checkbox"/>	kishan-mumbai	i-07baed219a52c8bd5	Running	t2.micro	2/2 checks passed	No alarms
<input checked="" type="checkbox"/>	test-mumbai	i-021931f9266119b9a	Running	t2.micro	Initializing	No alarms

Instance: i-021931f9266119b9a (test-mumbai)

Details Security Networking Storage Status checks Monitoring Tags

EC2 Instance Connect Session Manager SSH client EC2 serial console

Instance ID

Public IP address

User name

Connect using a custom user name, or use the default user name ec2-user for the AMI used to launch the instance.

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

Cancel Connect

```

sudo su root
df -h
mkdir efsvolume
mount 172.31.32.254:/ efsvolume
#ip is of efs volume
#it will not connect because firewall is not allowing

```

```

Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-13-98 ~]$ sudo su root
[root@ip-172-31-13-98 ec2-user]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        474M    0  474M   0% /dev
tmpfs          483M    0  483M   0% /dev/shm
tmpfs          483M  408K  483M   1% /run
tmpfs          483M    0  483M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.6G  6.5G  20% /
tmpfs          97M    0   97M   0% /run/user/1000
[root@ip-172-31-13-98 ec2-user]# mkdir efsvolume
[root@ip-172-31-13-98 ec2-user]# mount 172.31.32.254:/ efsvolume

```

ADD security group- we have to add same security group attached to efs to our ec2-instance also.

Availability zone	Mount target ID	Subnet ID	Mount target state	IP address	Network interface ID	Security groups
ap-south-1a	fsmt-004156d011c3be7df	subnet-074c1f55b23961ef3	Available	172.31.32.254	eni-0d07064bf6ae498c8	sg-0d72898e5ee9159b0 (default)

Instances (1/2) [Info](#)

Name	Instance ID	Instance state	Instance type
kishan-mumbai	i-07baed219a52c8bd5	Running	t2.micro
test-mumbai	i-021931f9266119b9a	Running	t2.micro

Instance: i-021931f9266119b9a (test-mumbai)

Change security groups (highlighted with a red box)

Get Windows password

Modify IAM role

Actions ▾ [Connect](#) [Launch instances](#)

View details

Manage instance state

Instance settings

Networking

Security

Image and templates

Monitor and troubleshoot

Standard Time) [India](#)

Security groups

Instance ID	Network interface ID
i-021931f9266119b9a (test-mumbai)	eni-0cb23c57d5289db47

Associated security groups

Add one or more security groups to the network interface. You can also remove security groups.

Select security groups [Add security group](#)

Security groups associated with the network interface (eni-0cb23c57d5289db47)

Security group name	Security group ID	Remove
launch-wizard-5	sg-0b92e40e8e625e3fd	Remove

[Cancel](#) [Save](#)

Add one or more security groups to the network interface. You can also remove security groups.

Select security groups [Add security group](#)

Security groups associated with the network interface (eni-0cb23c57d5289db47)

Security group name	Security group ID	Remove
launch-wizard-5	sg-0b92e40e8e625e3fd	Remove
default	sg-0d72898e5ee9159b0	Remove

[Cancel](#) [Save](#)

```
mount 172.31.32.254:/ efsvolume
df -h
#8Exabyte storage they provided but you will charge only for the
storage you are using
```

```
[root@ip-172-31-13-98 ec2-user]# mount 172.31.1.124:/ efsvolume
[root@ip-172-31-13-98 ec2-user]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        474M    0  474M   0% /dev
tmpfs           483M    0  483M   0% /dev/shm
tmpfs           483M  412K  483M   1% /run
tmpfs           483M    0  483M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.6G  6.5G  20% /
tmpfs           97M    0   97M   0% /run/user/1000
172.31.1.124:/  8.0E    0  8.0E   0% /home/ec2-user/efsvolume
[root@ip-172-31-13-98 ec2-user]# █
```

- 8 bits equals one byte
- 1,024 bytes equal one kilobyte ([KB](#))
- 1,024 kilobytes equal one megabyte ([MB](#))
- 1,024 megabytes equal one gigabyte
- 1,024 gigabytes equal one terabyte
- 1,024 terabytes equal one petabyte ([PB](#))
- 1,024 petabytes equal an exabyte
- 1,024 exabytes equal a zettabyte ([ZB](#))
- 1,024 zettabytes equal a yottabyte (YB)

```
Add some files
cd efsvolume
touch efsfile1 efsfile2 efsfile3
cat > efsfile1
cat > efsfile2
cat > efsfile3
```

```
[root@ip-172-31-13-98 ec2-user]# cd efsvolume/
[root@ip-172-31-13-98 efsvolume]# ls
[root@ip-172-31-13-98 efsvolume]# touch efsfile1 efsfile2 efsfile3
[root@ip-172-31-13-98 efsvolume]# cat > efsfile1
first efs file
[root@ip-172-31-13-98 efsvolume]# cat > efsfile2
second efs file
[root@ip-172-31-13-98 efsvolume]# cat > efsfile3
third efs file
[root@ip-172-31-13-98 efsvolume]# ls
efsfile1  efsfile2  efsfile3
[root@ip-172-31-13-98 efsvolume]#
```

Now go to other ec2 -instance and again attach the security group

Instances (1/2) [Info](#)

Name	Instance ID	Instance state	Instance type
<input checked="" type="checkbox"/> kishan-mumbai	i-07baed219a52c8bd5	Running	t2.micro
<input type="checkbox"/> test-mumbai	i-021931f9266119b9a	Running	t2.micro

Instance: i-07baed219a52c8bd5 (kishan-mumbai)

[Change security groups](#) (highlighted with a red box)

[Get Windows password](#)

[Modify IAM role](#)

[Details](#) [Security](#) [Networking](#) [Storage](#) [Status](#)

[Connect](#) [View details](#) [Manage instance state](#) [Instance settings](#) [Networking](#) [Security](#) [Image and templates](#) [Monitor and troubleshoot](#)

Associated security groups

Add one or more security groups to the network interface. You can also remove security groups.

[Select security groups](#) [Add security group](#)

Security groups associated with the network interface (eni-0b0c1029fb5b20cf7)

Security group name	Security group ID	
launch-wizard-2	sg-087307dec59062d39	Remove
default	sg-0d72898e5ee9159b0	Remove

[Cancel](#) [Save](#) (highlighted with a red box)

```
mkdir efsvolume
ls
```

```
[root@ip-172-31-37-58 ec2-user]# mkdir efsvolume
[root@ip-172-31-37-58 ec2-user]# ls
dir1  dira  efsvolume  file1  file2  file3  file4  newvolume  pendrive
[root@ip-172-31-37-58 ec2-user]# 
```

```
mount 172.31.1.124:/ efsvolume
df -h
```

```
[root@ip-172-31-37-58 ec2-user]# mount 172.31.1.124:/ efsvolume
[root@ip-172-31-37-58 ec2-user]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        474M    0  474M   0% /dev
tmpfs          483M    0  483M   0% /dev/shm
tmpfs          483M  472K  483M   1% /run
tmpfs          483M    0  483M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.6G  6.5G  20% /
tmpfs          97M    0   97M   0% /run/user/1000
tmpfs          97M    0   97M   0% /run/user/0
172.31.1.124:/  8.0E    0   8.0E   0% /home/ec2-user/efsvolume
[root@ip-172-31-37-58 ec2-user]# 
```

```
cd efsvolume
ls
cat efsfile1
```

```
[root@ip-172-31-37-58 ec2-user]# cd efsvolume/
[root@ip-172-31-37-58 efsvolume]# ls
efsfile1  efsfile2  efsfile3
[root@ip-172-31-37-58 efsvolume]# cat efsfile1
first efs file
[root@ip-172-31-37-58 efsvolume]# 
```

```
[root@ip-172-31-13-98 ec2-user]# mount 172.31.1.124:/ efsvolume
[root@ip-172-31-13-98 ec2-user]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        474M    0  474M  0% /dev
tmpfs          483M    0  483M  0% /dev/shm
tmpfs          483M  412K  483M  1% /run
tmpfs          483M    0  483M  0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.6G  6.5G  20% /
tmpfs          97M    0  97M  0% /run/user/1000
172.31.1.124:/  8.0E    0  8.0E  0% /home/ec2-user/efsvolume
[root@ip-172-31-13-98 ec2-user]# cd efsvolume/
[root@ip-172-31-13-98 efsvolume]# ls
[root@ip-172-31-13-98 efsvolume]# touch efsfile1 efsfile2
[root@ip-172-31-13-98 efsvolume]# cat > efsfile1
first efs file
[root@ip-172-31-13-98 efsvolume]# cat > efsfile2
second efs file
[root@ip-172-31-13-98 efsvolume]# cat > efsfile3
third efs file
[root@ip-172-31-13-98 efsvolume]# ls
efsfile1  efsfile2  efsfile3
[root@ip-172-31-13-98 efsvolume]# ls
efsfile1  efsfile2  efsfile3
[root@ip-172-31-13-98 efsvolume]# cat efsfile2
second efs file
[root@ip-172-31-13-98 efsvolume]# 
```

```
root@ip-172-31-37-58:~/home/ec2-user/efsvolume
[root@ip-172-31-37-58 pendrive]# cd ..
[root@ip-172-31-37-58 ec2-user]# umount pendrive/
[root@ip-172-31-37-58 ec2-user]# ls
dir1  dira  file1  file2  file3  file4  newvolume  pendrive
[root@ip-172-31-37-58 ec2-user]# mkdir efsvolume
[root@ip-172-31-37-58 ec2-user]# ls
dir1  dira  efsvolume  file1  file2  file3  file4  newvolume  pendrive
[root@ip-172-31-37-58 ec2-user]# mount 172.31.1.124:/ efsvolume
[root@ip-172-31-37-58 ec2-user]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        474M    0  474M  0% /dev
tmpfs          483M    0  483M  0% /dev/shm
tmpfs          483M  472K  483M  1% /run
tmpfs          483M    0  483M  0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.6G  6.5G  20% /
tmpfs          97M    0  97M  0% /run/user/1000
tmpfs          97M    0  97M  0% /run/user/0
172.31.1.124:/  8.0E    0  8.0E  0% /home/ec2-user/efsvolume
[root@ip-172-31-37-58 ec2-user]# cd efsvolume/
[root@ip-172-31-37-58 efsvolume]# ls
efsfile1  efsfile2  efsfile3
[root@ip-172-31-37-58 efsvolume]# cat efsfile1
first efs file
[root@ip-172-31-37-58 efsvolume]# 
```

EFS volume connected to both ec2-instance at a time.

To create custom image for webserver

Launch a new Ec2 instance with port 80 open in security group.

Login to ec2-instance

```
root@ip-172-31-13-98:~/home/ec2-user
root@ip-172-31-13-98:~/home/ec2-user
Using username "ec2-user".
Authenticating with public key "imported-openssh-key"
Last login: Tue Jul 12 06:19:32 2022 from 103.251.55.50

      _|_ ( _|_ /     Amazon Linux 2 AMI
      _\|_|_|_|

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-13-98 ~]$ sudo su root
[root@ip-172-31-13-98 ec2-user]# ls
[root@ip-172-31-13-98 ec2-user]# 
```

```
yum install httpd -y
yum install php -y
cd /var/www/html
vi index.php
systemctl start httpd
systemctl status httpd
systemctl enable httpd
```

```

<pre>
<?php
print "welcome to devops training <br />";
print `ifconfig`;
?>
</pre>
#index.php
#``backquote

```

Instance: i-021931f9266119b9a (test-mumbai)

Security group rule ID	Port range	Protocol	Source	Security groups
sgr-08982333ab011144f	22	TCP	0.0.0.0/0	launch-wizard-5
sgr-08c9bc6715f5a2415	80	TCP	0.0.0.0/0	launch-wizard-5
sgr-0647ce2c24ccbfb5d	All	All	sg-0d72898e5ee9159b0	default

Instance: i-021931f9266119b9a (test-mumbai)

Details | Security | Networking | Storage | Status checks | Monitoring | Tags

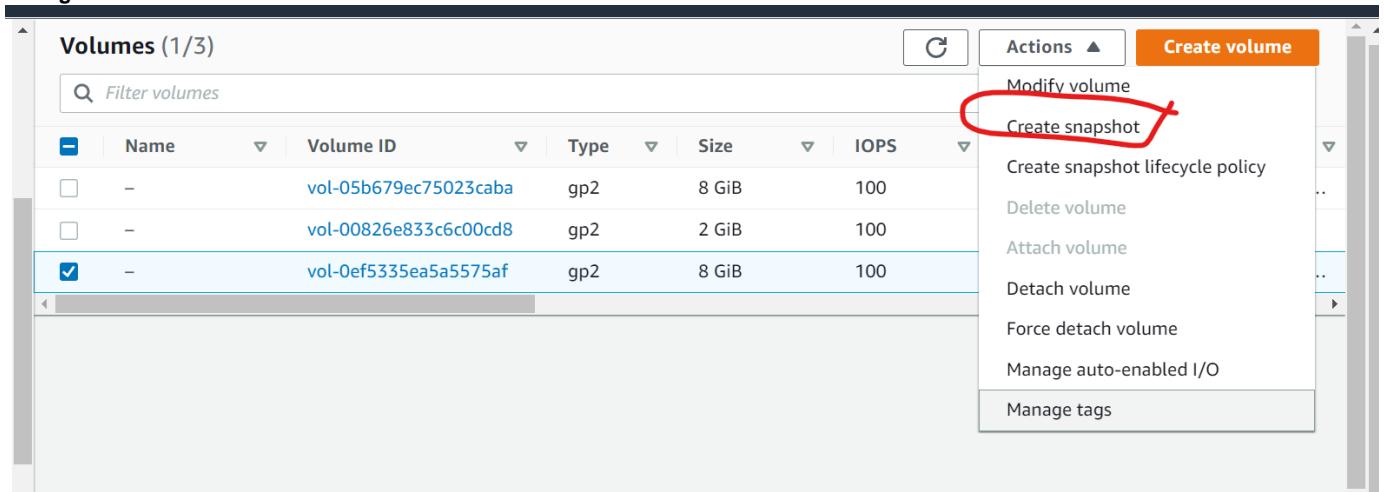
Instance summary [Info](#)

Instance ID i-021931f9266119b9a (test-mumbai)	Public IPv4 address 13.126.88.250 Open address	Private IPv4 addresses 172.31.13.98
IPv6 address	Instance state	Public IPv4 DNS

```
welcome to devops training
eth0: flags=4163 mtu 9001
    inet 172.31.13.98 netmask 255.255.240.0 broadcast 172.31.15.255
        inet6 fe80::8b1:91ff:fe69:db52 prefixlen 64 scopeid 0x20
            ether 0a:b1:91:69:db:52 txqueuelen 1000 (Ethernet)
            RX packets 63156 bytes 87094993 (83.0 MiB)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 6683 bytes 599539 (585.4 KiB)
            TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73 mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
        inet6 ::1 prefixlen 128 scopeid 0x10
            loop txqueuelen 1000 (Local Loopback)
            RX packets 34 bytes 2827 (2.7 KiB)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 34 bytes 2827 (2.7 KiB)
            TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

Now our webserver is up, we will create snapshot of ebs then we will create a custom image so we don't have to do these steps again and again.



The screenshot shows the AWS Lambda Volumes (1/3) page. A list of EBS volumes is displayed in a table with columns: Name, Volume ID, Type, Size, and IOPS. The third volume, with Volume ID 'vol-0ef5335ea5a5575af', has a checkmark next to it. An 'Actions' menu is open for this selected volume, showing options: Modify volume, Create snapshot (which is circled in red), Create snapshot lifecycle policy, Delete volume, Attach volume, Detach volume, Force detach volume, Manage auto-enabled I/O, and Manage tags.

Volumes (1/3)					
<input type="text"/> Filter volumes					
	Name	Volume ID	Type	Size	IOPS
<input type="checkbox"/>	-	vol-05b679ec75023caba	gp2	8 GiB	100
<input type="checkbox"/>	-	vol-00826e833c6c00cd8	gp2	2 GiB	100
<input checked="" type="checkbox"/>	-	vol-0ef5335ea5a5575af	gp2	8 GiB	100

Actions ▲

Modify volume

Create snapshot

Create snapshot lifecycle policy

Delete volume

Attach volume

Detach volume

Force detach volume

Manage auto-enabled I/O

Manage tags

Choose volume of the instance on which webserver is running.

Description
Add a description for your snapshot
webserversnapshot
255 characters maximum.

Encryption [Info](#)
Not encrypted

Tags [Info](#)
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 tag](#)
You can add 50 more tags.

[Cancel](#) **Create snapshot**

⌚ Successfully created snapshot [snap-0ea0c5de72f2a9e3d](#) from volume [vol-0ef5335ea5a5575af](#). [Manage fast snapshot restore](#) [X](#)

Volumes (3)

<input type="checkbox"/>	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot
<input type="checkbox"/>	-	vol-05b679ec75023caba	gp2	8 GiB	100	-	snap-08bbaef...
<input type="checkbox"/>	-	vol-00826e833c6c00cd8	gp2	2 GiB	100	-	-
<input type="checkbox"/>	-	vol-0ef5335ea5a5575af	gp2	8 GiB	100	-	snap-08bbaef...

Instances (1/2) [Info](#)

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type
<input type="checkbox"/>	kishan-mumbai	i-07baed219a52c8bd5	Running	t2.micro
<input checked="" type="checkbox"/>	test-mumbai	i-021931f9266119b9a	Running	t2.micro

[Actions](#) [Launch instances](#) [X](#)

[Connect](#) [Instance state](#)

[Search](#)

[Create image](#) [Create template from instance](#) [Launch more like this](#)

Instance: i-021931f9266119b9a (test-mumbai)

Associated private IP addresses: [IPv4 \(A\)](#)

Instance type: t2.micro

Auto-assigned IP address: [VPC ID](#)

Elastic IP addresses: -

AWS Compute Optimizer findings: -

Create image [Info](#)

An image (also referred to as an AMI) defines the programs and settings that are applied when you launch an EC2 instance. You can create an image from the configuration of an existing instance.

[i-021931f9266119b9a](#) (test-mumbai)

kishanray-webserver-image

Maximum 127 characters. Can't be modified after creation.

webserver image

Maximum 255 characters

Enable

Instance volumes

SuccessFully created [ami-080d9cdab3bfa2e5b](#) from instance i-021931f9266119b9a.

Instances (3) Info		C	Connect	Instance state	Actions	Launch instances
<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status
<input type="checkbox"/>	kishan-mumbai	i-07baed219a52c8bd5	Running		t2.micro	2/2 checks passed
<input type="checkbox"/>	test-mumbai	i-021931f9266119b9a	Running		t2.micro	2/2 checks passed

Go to AMI now and change this image access to public

Amazon Machine Images (AMIs) (1) Info				
<input type="checkbox"/>	Name	AMI ID	AMI name	Source
<input type="checkbox"/>	-	ami-080d9cdab3bfa2e5b	kishanray-webserver-image	900437100429/kishanray-webserver-i...

Select an AMI

Reserved Instances [New](#)

Dedicated Hosts

Capacity Reservations

Images

AMIs [New](#)

AMI Catalog

Elastic Block Store

Volumes [New](#)

Snapshots [New](#)

Lifecycle Manager [New](#)

Network & Security

Security Groups

Elastic IPs

Placement Groups

Key Pairs

Amazon Machine Images (AMIs) (1/1) [Info](#)

[C](#) [Recycle Bin](#) [EC2 Image Builder](#) [Actions](#) [Launch instance from AMI](#)

Owned by me [Search](#)

<input checked="" type="checkbox"/>	Name	AMI ID	AMI name	Source
<input checked="" type="checkbox"/>	-	ami-080d9cdab3bfa2e5b	kishanray-webserver-image	900437100429/kishanray-webserver-i...

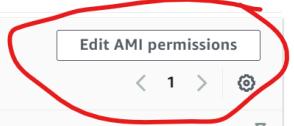
AMI ID: ami-080d9cdab3bfa2e5b

This image is only shared with account IDs, organizations, or OUs that you have specified.

▼ Shared accounts

[Find shared accounts by account ID](#)

Shared account ID

Edit AMI permissions 

Successfully updated permissions for ami-080d9cdab3bfa2e5b.

Amazon Machine Images (AMIs) (1) [Info](#)

[C](#) [Recycle Bin](#) [EC2 Image Builder](#) [Actions](#) [Launch instance from AMI](#)

Owned by me [Search](#)

Source	Owner	Visibility	Status	Creation date
900437100429/kishanray-webserver-i...	900437100429	Public	Available	2022/07/12 12:17 GMT+5:30

Select an AMI

Now to launch a new instance having webserver support with this custom image

Instances (3) [Info](#)

[C](#) [Connect](#) [Instance state](#) [Actions](#) [Launch instances](#) 

[Search](#)

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	A
<input type="checkbox"/>	kishan-mumbai	i-07baed219a52c8bd5	Running	t2.micro	2/2 checks passed	No alarms	a
<input type="checkbox"/>	test-mumbai	i-021931f9266119b9a	Running	t2.micro	2/2 checks passed	No alarms	a
<input type="checkbox"/>	-	i-08e43120ee0ef674d	Terminated	t2.micro	-	No alarms	a

Select an instance

ami-080d9cdab3bfa2e5b
kishanray-webserver-image

Step 1: Choose an Amazon Machine Image (AMI)

Cancel and Exit

Search by Systems Manager parameter

Quick Start (0)

My AMIs (1)

AWS Marketplace (5419)

Community AMIs (1)

kishanray-webserver-image - ami-080d9cdab3bfa2e5b

webserver image

Root device type: ebs Virtualization type: hvm Owner: 900437100429 ENA Enabled: Yes

64-bit (x86)

The following results for "ami-080d9cdab3bfa2e5b" were found in other catalogs:

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All instance families ▾ Current generation ▾ Show/Hide Columns

Currently selected: t2.micro (- ECUs, 1 vCPUs, 2.5 GHz, -, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	t2	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	t2	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.small	1	2	EBS only	-	Low to Moderate	Yes

Cancel

Previous

Review and Launch

Next: Configure Instance Details

Step 6: Configure Security Group

Select an **existing** security group

Security group name:

Description:

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop
HTTP	TCP	80	Anywhere 0.0.0.0/0, ::/0	e.g. SSH for Admin Desktop

Add Rule

⚠ Warning

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Cancel

Previous

Review and Launch

Instances (1/1) Info

Search: i-08753a653141a832a

Clear filters

Actions ▾ Launch instances ▾

✓ Name	Instance ID	Instance state	Instance type	Status check	Alarm status
✓ webserver	i-08753a653141a832a	Pending	t2.micro	-	No alarms +

Instance: i-08753a653141a832a (webserver)

Details Security Networking Storage Status checks Monitoring Tags

Instance summary Info

Instance ID	Public IPv4 address	Private IPv4 addresses
i-08753a653141a832a (webserver)	65.2.80.12 open address	172.31.8.65
IPv6 address	Instance state	Public IPv4 DNS
-	Pending	ec2-65-2-80-12.ap-south-

Not secure | http://65.2.80.12

```
welcome to devops training
eth0: flags=4163 mtu 9001
    inet 172.31.8.65 netmask 255.255.240.0 broadcast 172.31.15.255
    inet6 fe80::8ce:cff:fe16:c2de prefixlen 64 scopeid 0x20
        ether 0a:ce:0c:16:c2:de txqueuelen 1000 (Ethernet)
        RX packets 570 bytes 232609 (227.1 KiB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 608 bytes 72374 (70.6 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73 mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10
        loop txqueuelen 1000 (Local Loopback)
        RX packets 0 bytes 0 (0.0 B)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 0 bytes 0 (0.0 B)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

Directly our webserver is up.

ELB

Classic Load Balancer

For Setting Up classic load balancer practically, first we will launch two ec2-instance with our custom image

```
for mumbai region: ami-080d9cdab3bfa2e5b
for n.virginia region: ami-0656cb75b678c6dbb
or search: kishanray-webserver-image
```

aws | Services | Search for services, features, blogs, docs, and more [Alt+S] | N. Virginia | kroydevops

Resource Groups & Tag Editor

New EC2 Experience Tell us what you think

EC2 Dashboard

EC2 Global View

Events

Tags

Limits

Instances

Instances New

Instance Types

Launch Templates

Spot Requests

No instances

You do not have any instances in this region

Launch instances

Select an instance

kishanray-webserver-image

Quick Start (0)

My AMIs (1)

kishanray-webserver-image - ami-0656cb75b678c6dbb

[Copied ami-080d9cdab3bfa2e5b from ap-south-1] kishanray-webserver-image

Select

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances Launch into Auto Scaling Group

You may want to consider launching these instances into an Auto Scaling Group to help you maintain application availability and for easy scaling in the future. [Learn how Auto Scaling can help your application stay healthy and cost effective](#).

Purchasing option Request Spot instances

Network Create new VPC

Subnet Create new subnet

Auto-assign Public IP

Cancel Previous Review and Launch Next: Add Storage

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: Create a new security group Select an existing security group

Security group name:

Description:

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop
HTTP	TCP	80	Anywhere 0.0.0.0/0, ::/0	e.g. SSH for Admin Desktop

Add Rule

Cancel Previous Review and Launch

New EC2 Experience Tell us what you think

EC2 Dashboard

EC2 Global View

Events

Tags

Limits

Instances

Instances New

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances New

Dedicated Hosts

CloudWatch Metrics

Instances (1/2) [Info](#)

Connect Instance state Actions Launch instances

Search

Name	Instance ID	Instance state	Instance type	Status check	Alarm status
webserver1	i-0892a7fccda4c8173	Running	t2.micro	-	No alarms +
webserver2	i-00cf47c4669fdd1d9	Running	t2.micro	-	No alarms +

Instance: i-00cf47c4669fdd1d9

Details Security Networking Storage Status checks Monitoring Tags

Instance summary [Info](#)

Instance ID i-00cf47c4669fdd1d9	Public IPv4 address 54.89.219.181 open address	Private IPv4 addresses 172.31.92.97
IPv6 address	Instance state	Public IPv4 DNS

Instances (1/2) [Info](#)

Connect Instance state Actions Launch instances

Search

Name	Instance ID	Instance state	Instance type	Status check	Alarm status
webserver1	i-0892a7fccda4c8173	Running	t2.micro	-	No alarms +
webserver2	i-00cf47c4669fdd1d9	Running	t2.micro	-	No alarms +

Instance: i-0892a7fccda4c8173 (webserver1)

Details Security Networking Storage Status checks Monitoring Tags

Instance summary [Info](#)

Instance ID i-0892a7fccda4c8173 (webserver1)	Public IPv4 address 44.201.254.5 open address	Private IPv4 addresses 172.31.90.189
IPv6 address	Instance state	Public IPv4 DNS

◀ ▶ ⌂ ⌂ Not secure | <http://44.201.254.5> ⌂ ⌂

```
welcome to devops training
eth0: flags=4163 mtu 9001
    inet 172.31.90.189 netmask 255.255.240.0 broadcast 172.31.95.255
    inet6 fe80::1046:5eff:feb4:3571 prefixlen 64 scopeid 0x20
    ether 12:46:5e:b4:35:71 txqueuelen 1000 (Ethernet)
    RX packets 634 bytes 251066 (245.1 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 712 bytes 80965 (79.0 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73 mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10
    loop txqueuelen 1000 (Local Loopback)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 0 bytes 0 (0.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

Instance: i-00cf47c4669fdd1d9 (webserver2)

Details | Security | Networking | Storage | Status checks | Monitoring | Tags

Instance summary [Info](#)

Instance ID i-00cf47c4669fdd1d9 (webserver2)	Public IPv4 address 54.89.219.181 open address	Private IPv4 addresses 172.31.92.97
IPv6 address	Instance state Running	Public IPv4 DNS ec2-54-89-219-181.compute...

Not secure | <http://54.89.219.181>

```
welcome to devops training
eth0: flags=4163 mtu 9001
    inet 172.31.92.97 netmask 255.255.240.0 broadcast 172.31.95.255
    inet6 fe80::109e:afff:fea1:f97b prefixlen 64 scopeid 0x20
        ether 12:9e:af:a1:f9:7b txqueuelen 1000 (Ethernet)
        RX packets 630 bytes 250784 (244.9 KiB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 731 bytes 81846 (79.9 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73 mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10
        loop txqueuelen 1000 (Local Loopback)
        RX packets 0 bytes 0 (0.0 B)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 0 bytes 0 (0.0 B)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

Now we will create a load Balancer

AMI Catalog

▼ Elastic Block Store

- Volumes [New](#)
- Snapshots [New](#)
- Lifecycle Manager [New](#)

▼ Network & Security

- Security Groups
- Elastic IPs
- Placement Groups
- Key Pairs
- Network Interfaces

▼ Load Balancing

- Load Balancers** [New](#) (circled in red)
- Target Groups [New](#)

▼ Auto Scaling

Create Load Balancer [Actions](#) [▼](#)

Filter by tags and attributes or search by keyword [None found](#)

<input type="checkbox"/> Name	▼ DNS name	▼ State	▼ VPC ID	▼ Availability Zone
You do not have any load balancers in this region.				

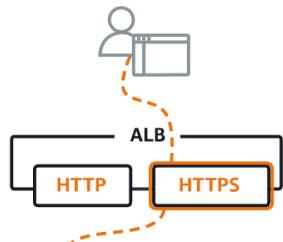
EC2 > [Load balancers](#) > Select load balancer type

Select load balancer type

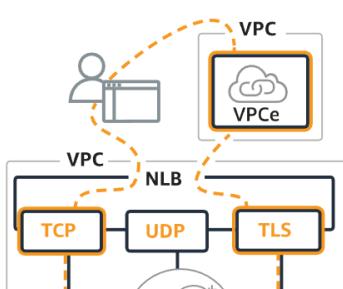
A complete feature-by-feature comparison along with detailed highlights is also available. [Learn more](#)

Load balancer types

Application Load Balancer [Info](#)



Network Load Balancer [Info](#)



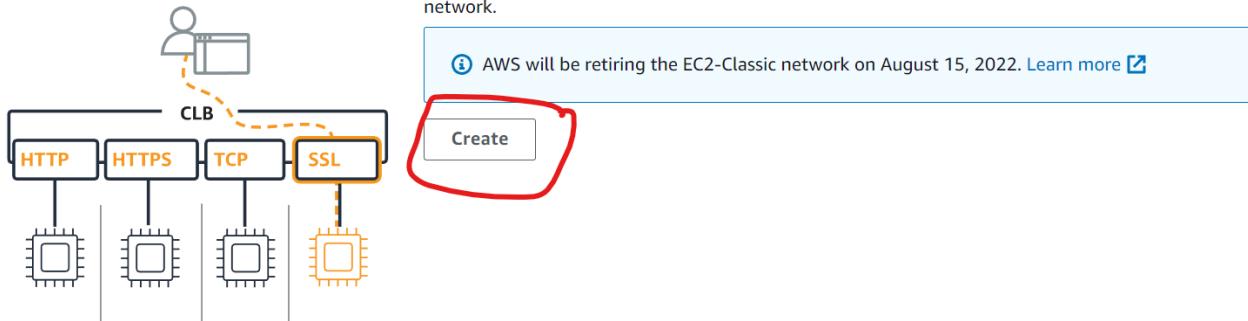
Gateway Load Balancer [Info](#)



▼ Classic Load Balancer - previous generation

Classic Load Balancer Info

Choose a Classic Load Balancer when you have an existing application running in the EC2-Classic network.



1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags

Step 1: Define Load Balancer

Basic Configuration

This wizard will walk you through setting up a new load balancer. Begin by giving your new load balancer a unique name so that you can identify it from other load balancers you might create. You will also need to configure ports and protocols for your load balancer. Traffic from your clients can be routed from any load balancer port to any port on your EC2 instances. By default, we've configured your load balancer with a standard web server on port 80.

Load Balancer name: Create LB Inside:

Create an internal load balancer:

Enable advanced VPC configuration:

Listener Configuration:

Load Balancer Protocol	Load Balancer Port	Instance Protocol	Instance Port	
HTTP	80	HTTP	80	<input type="button" value="X"/>
<input type="button" value="Add"/>				

[Cancel](#) [Next: Assign Security Groups](#)

1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags

Step 2: Assign Security Groups

You have selected the option of having your Elastic Load Balancer inside of a VPC, which allows you to assign security groups to your load balancer. Please select the security groups to assign to this load balancer. This can be changed at any time.

Assign a security group: Create a new security group Select an existing security group

Security group name:

Description: quick-create-2 created on Tuesday, July 12, 2022 at 8:49:55 PM UTC+0

Type	Protocol	Port Range	Source	
HTTP	TCP	80	Anywhere	<input type="button" value="X"/>
<input type="button" value="Add Rule"/>				

[Cancel](#) [Previous](#) [Next: Configure Security Settings](#)

Step 4: Configure Health Check

Your load balancer will automatically perform health checks on your EC2 instances and only route traffic to instances that pass the health check. If an instance fails the health check, it is automatically removed from the load balancer. Customize the health check to meet your specific needs.

Ping Protocol	HTTP
Ping Port	80
Ping Path	/index.php

/index.php

Advanced Details

Response Timeout	5	seconds
Interval	30	seconds
Unhealthy threshold	2	
Healthy threshold	10	

[Cancel](#) [Previous](#) [Next: Add EC2 Instances](#)

[1. Define Load Balancer](#)

[2. Assign Security Groups](#)

[3. Configure Security Settings](#)

[4. Configure Health Check](#)

[5. Add EC2 Instances](#)

[6. Add Tags](#)

[7. Review](#)

Step 5: Add EC2 Instances

The table below lists all your running EC2 Instances. Check the boxes in the Select column to add those instances to this load balancer.

VPC vpc-0f052792f7d9078a1 (172.31.0.0/16)

Select	Instance	Name	State	Security groups	Zone	Subnet ID	Subnet CIDR
<input checked="" type="checkbox"/>	i-0892a7fcda4c8173	webserver1	running	launch-wizard-2	us-east-1d	subnet-012c9ad...	172.31.80.0/20
<input checked="" type="checkbox"/>	i-00cf47c4669fdd1d9	webserver2	running	launch-wizard-2	us-east-1d	subnet-012c9ad...	172.31.80.0/20

Availability Zone Distribution

2 instances in us-east-1d

[Cancel](#) [Previous](#) [Next: Add Tags](#)

1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags 7. Review

Step 6: Add Tags

Apply tags to your resources to help organize and identify them.

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver. [Learn more](#) about tagging your Amazon EC2 resources.

Key	Value
<input type="text"/>	<input type="text"/>

[Create Tag](#)

[Cancel](#) [Previous](#) [Review and Create](#)

1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags 7. Review

Step 7: Review

Please review the load balancer details before continuing

[Edit load balancer definition](#)

Define Load Balancer

Load Balancer name: myclassiclb
Scheme: internet-facing
Port Configuration: 80 (HTTP) forwarding to 80 (HTTP)

[Edit health check](#)

Configure Health Check

Ping Target: HTTP:80/index.php
Timeout: 5 seconds
Interval: 30 seconds
Unhealthy threshold: 2
Healthy threshold: 10

[Edit instances](#)

Add EC2 Instances

Cross-zone load balancing: Enabled

[Cancel](#) [Previous](#) [Create](#)

Load Balancer Creation Status

Success Successfully created load balancer

Load balancer [myclassiclb](#) was successfully created.
 Note: It may take a few minutes for your instances to become active in the new load balancer.

[Close](#)

Load balancer: myclassiclb

Description Instances Health check Listeners Monitoring Tags Migration

Basic Configuration

Load balancer: myclassiclb

Description Instances Health check Listeners Monitoring Tags Migration

Connection Draining: Enabled, 300 seconds (Edit)

Edit Instances

Instance ID	Name	Availability Zone	Status	Actions
i-0892a7fccda4c8173	webserver1	us-east-1d	OutOfService ⓘ	Remove from Load Balancer
i-00cf47c4669fdd1d9	webserver2	us-east-1d	OutOfService ⓘ	Remove from Load Balancer

wait for change of status from out of service to inservice

Load balancer: myclassiclb

Instances

Instance ID	Name	Availability Zone	Status	Actions
i-0892a7fccda4c8173	webserver1	us-east-1d	InService	Remove from Load Balancer
i-00cf47c4669fd1d9	webserver2	us-east-1d	InService	Remove from Load Balancer

Load balancer: myclassiclb

Basic Configuration

Name	myclassiclb	Creation time	July 12, 2022 at 8:51:00 PM UTC+5:30
* DNS name	myclassiclb-797187911.us-east-1.elb.amazonaws.com (A Record)	Hosted zone	Z35SXDOTRQ7X7K
Type	Classic (Migrate Now)	Status	2 of 2 instances in service
		VPC	vpc-0f052792f7d9078a1

copy dns name and paste it in browser

Not secure | <http://myclassiclb-797187911.us-east-1.elb.amazonaws.com>

```
welcome to devops training
eth0: flags=4163 mtu 9001
    inet 172.31.92.97 netmask 255.255.240.0 broadcast 172.31.95.255
    inet6 fe80::109e:afff:fea1:f97b/128 brd fe80::ff:fea1:f97b/128 scopeid 0x20
        ether 12:9e:af:a1:f9:7b txqueuelen 1000 (Ethernet)
        RX packets 1393 bytes 306375 (299.1 KiB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 1510 bytes 208915 (204.0 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73 mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1/128 brd fe80::1/128 scopeid 0x10
        loop txqueuelen 1000 (Local Loopback)
        RX packets 17 bytes 1548 (1.5 KiB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 17 bytes 1548 (1.5 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

```
welcome to devops training
eth0: flags=4163 mtu 9001
    inet 172.31.90.189 netmask 255.255.240.0 broadcast 172.31.95.255
    inetc fe80::1046:5eff:feb4:3571 prefixlen 64 scopeid 0x20
        ether 12:46:5e:b4:35:71 txqueuelen 1000 (Ethernet)
        RX packets 1566 bytes 327445 (319.7 KiB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 1595 bytes 238045 (232.4 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73 mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inetc6 ::1 prefixlen 128 scopeid 0x10
        loop txqueuelen 1000 (Local Loopback)
        RX packets 0 bytes 0 (0.0 B)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 0 bytes 0 (0.0 B)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

same url sending us to two different ec2-instances. We can see ip address is getting changed updo doing refresh.

For setting up stickiness

The screenshot shows the AWS Load Balancer console. At the top, there is a navigation bar with a 'Create Load Balancer' button and an 'Actions' dropdown. Below this is a search bar with the placeholder 'Filter by tags and attributes or search by keyword'. A table lists load balancers, with one entry for 'myclassiclb' selected. The table has columns for Name, DNS name, State, and VPC ID. The 'myclassiclb' row shows 'myclassiclb-797187911.us-e...' as the DNS name and 'vpc-0f052792f7d9078a1' as the VPC ID. Below the table, a 'Port Configuration' section is visible, showing '80 (HTTP) forwarding to 80 (HTTP)' and 'Stickiness: Disabled'. A red circle highlights the 'Edit stickiness' button, which is located within a box.

Name	DNS name	State	VPC ID
myclassiclb	myclassiclb-797187911.us-e...		vpc-0f052792f7d9078a1

Port Configuration

Port Configuration 80 (HTTP) forwarding to 80 (HTTP)
Stickiness: Disabled

Edit stickiness

Edit stickiness

X

- Disable stickiness
- Enable load balancer generated cookie stickiness
- Enable application generated cookie stickiness

Expiration Period: seconds

Leave blank to disable cookie expiration

[Cancel](#) [Save](#)

[Create Load Balancer](#) [Actions](#) 

Filter by tags and attributes or search by keyword K < 1 to 1 of 1 >

<input type="checkbox"/> Name	DNS name	State	VPC ID	Availability Zones
<input type="checkbox"/> myclassiclb	myclassiclb-797187911.us-e...		vpc-0f052792f7d9078a1	us-east-1f, us-east-1

Port Configuration

Port Configuration 80 (HTTP) forwarding to 80 (HTTP)
Stickiness: LBCookieStickinessPolicy, expirationPeriod='60'
[Edit stickiness](#)

Created: [redacted]

Now till 60 second even if you will refresh you will be connected to same ec2-instance. {helpful in payment option based application}

NLB:- Network Load Balancer

Load Balancer Management Interface

Create Load Balancer Actions ▾

Filter by tags and attributes or search by keyword

None found

Name DNS name State VPC ID Availability Zones

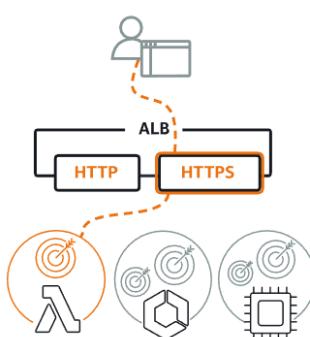
You do not have any load balancers in this region.

Select a load balancer

aws Services Search for services, features, blogs, docs, and more [Alt+S]

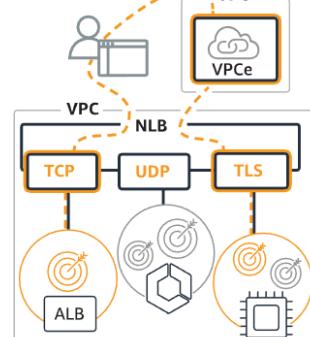
Resource Groups & Tag Editor

Application Load Balancer Info



Choose an Application Load Balancer when you need a flexible feature set for your applications with HTTP and HTTPS traffic. Operating at the request level, Application Load Balancers provide advanced routing and visibility features targeted at application architectures, including microservices and containers.

Network Load Balancer Info



Choose a Network Load Balancer when you need ultra-high performance, TLS offloading at scale, centralized certificate deployment, support for UDP, and static IP addresses for your applications. Operating at the connection level, Network Load Balancers are capable of handling millions of requests per second securely while maintaining ultra-low latencies.

Gateway Load Balancer Info



Choose a Gateway Load Balancer when you need to deploy and manage a fleet of third-party virtual appliances that support GENEVE. These appliances enable you to improve security, compliance, and policy controls.

Create

the default action.

▶ How Network Load Balancers work

Basic configuration

Load balancer name

Name must be unique within your AWS account and cannot be changed after the load balancer is created.

A maximum of 32 alphanumeric characters including hyphens are allowed, but the name must not begin or end with a hyphen.

Scheme

Scheme cannot be changed after the load balancer is created.

- Internet-facing**
An internet-facing load balancer routes requests from clients over the internet to targets. Requires a public subnet. [Learn more](#)

- Internal**
An internal load balancer routes requests from clients to targets using private IP addresses.

IP address type [Info](#)

Select the type of IP addresses that your subnets use.

- IPv4**
Recommended for internal load balancers.
- Dualstack**
Includes IPv4 and IPv6 addresses.

[Edit](#) [Cancel](#)

us-east-1d

Subnet

▼

IPv4 settings

IPv4 address

▼

choose az in which your ec2-instance is running {for me it is 1d}

Listeners and routing [Info](#)

A listener is a process that checks for connection requests, using the protocol and port you configure. Traffic received by the listener is then routed per your specification.

▼ Listener **TCP:80**

[Remove](#)

Protocol

Port

Default action [Info](#)

Forward to [Select a target group](#)

▼

[C](#)

1-65535

[Create target group](#)



[Add listener](#)

Step 1
Specify group detailsStep 2
Register targets

Specify group details

Your load balancer routes requests to the targets in a target group and performs health checks on the targets.

Basic configuration

Settings in this section cannot be changed after the target group is created.

Choose a target type

Instances

- Supports load balancing to instances within a specific VPC.
- Facilitates the use of [Amazon EC2 Auto Scaling](#) to manage and scale your EC2 capacity.

IP addresses

- Supports load balancing to VPC and on-premises resources.
- Facilitates routing to multiple IP addresses and network interfaces on the same instance.
- Offers flexibility with microservice based architectures, simplifying inter-application communication.
- Supports IPv6 targets, enabling end-to-end IPv6 communication, and IPv4-to-IPv6 NAT.

Lambda function

- Facilitates routing to a single Lambda function.
- Accessible to Application Load Balancers only.

Application Load Balancer

Offer the flexibility for a Lambda function to accept and route TCP requests within a specific VPC

Target group name

mywebserver

A maximum of 32 alphanumeric characters including hyphens are allowed, but the name must not begin or end with a hyphen.

Protocol

Port

TCP



: 80

VPC

Select the VPC with the instances that you want to include in the target group.

-
vpc-0f052792f7d9078a1
IPv4: 172.31.0.0/16

Health checks

The associated load balancer periodically sends requests, per the settings below, to the registered targets to test their status.

Health check protocol

TCP



► Advanced health check settings

► Tags - optional

Consider adding tags to your target group. Tags enable you to categorize your AWS resources so you can more easily manage them.

Cancel

Next

Register targets

This is an optional step to create a target group. However, to ensure that your load balancer routes traffic to this target group you must register your targets.

Available instances (2/2)						
Instance ID		Name	State	Security groups	Zone	Subnet ID
<input checked="" type="checkbox"/>	i-0892a7fccda4c8173	webserver1	running	launch-wizard-2	us-east-1d	subnet-012c9ad11a78b8805
<input checked="" type="checkbox"/>	i-00cf47c4669fd1d9	webserver2	running	launch-wizard-2	us-east-1d	subnet-012c9ad11a78b8805
2 selected						
Ports for the selected instances						
Ports for routing traffic to the selected instances.						
80						
1-65535 (separate multiple ports with commas)						
<input type="button" value="include as pending below"/>						

Review targets

Targets (2)											<input type="button" value="Remove all pending"/>
All	<input type="button" value="Filter resources by property or value"/>										
Remove	Health status	Instance ID	Name	Port	State	Security groups	Zone	Subnet ID			
<input type="button" value="X"/>	Pending	i-0892a7fccda4c8173	webserver1	80	running	launch-wizard-2	us-east-1d	subnet-012c9ad11a78b8805			
<input type="button" value="X"/>	Pending	i-00cf47c4669fd1d9	webserver2	80	running	launch-wizard-2	us-east-1d	subnet-012c9ad11a78b8805			

2 pending

Cancel

Previous

EC2 > Target groups

Target groups (1) Info							<input type="button" value="Create target group"/>
<input type="button" value="Search or filter target groups"/>							
<input type="checkbox"/>	Name	ARN	Port	Protocol	Target type	Load balancer	VPC ID
<input type="checkbox"/>	mywebserver	arn:aws:elasticloadbalancing:us-east-1:123456789012:targetgroup/mywebserver/1234567890123456	80	TCP	Instance	None associated	vpc-0f052792f7d9078a1

0 target groups selected

Listeners and routing Info

A listener is a process that checks for connection requests, using the protocol and port you configure. Traffic received by the listener is then routed per your specification.

▼ Listener TCP:80

[Remove](#)[Protocol](#)[Port](#)[Default action](#) Info[TCP](#)[80](#)

1-65535

[Forward to](#)[Select a target group](#)[Create target](#)[mywebserver](#)

Target type: Instance, IPv4

TCP

[Add listener](#)

► Tags - optional

Consider adding tags to your load balancer. Tags enable you to categorize your AWS resources so you can more easily manage them. The 'Key' is required, but 'Value' is optional. For example, you can have Key = production-webserver, or Key = webserver, and Value = production.

Summary

Review and confirm your configurations. [Estimate cost](#)

[Basic configuration](#) [Edit](#)[Network mapping](#) [Edit](#)[Listeners and routing](#) [Edit](#)[Tags](#) [Edit](#)

► Tags - optional

Consider adding tags to your load balancer. Tags enable you to categorize your AWS resources so you can more easily manage them. The 'Key' is required, but 'Value' is optional. For example, you can have Key = production-webserver, or Key = webserver, and Value = production.

Summary

Review and confirm your configurations. [Estimate cost](#)

[Basic configuration](#) [Edit](#)[Network mapping](#) [Edit](#)[Listeners and routing](#) [Edit](#)[Tags](#) [Edit](#)

None

Attributes

ⓘ Certain default attributes will be applied to your load balancer. You can view and edit them after creating the load balancer.

[Cancel](#)[Create load balancer](#)

⌚ Successfully created load balancer: mynetworklb

Note: It might take a few minutes for your load balancer to be fully set up and ready to route traffic. Targets will also take a few minutes to complete the registration process and pass initial health checks.

[EC2](#) > [Load balancers](#) > [Create Network Load Balancer](#)

Create Network Load Balancer



Suggested next steps

- Review, customize, or enable attributes for your load balancer and listeners using the [Description](#) and [Listeners](#) tabs within [mynetworklb](#).
- Discover other services that you can integrate with your load balancer. Visit the [Integrated services](#) tab within [mynetworklb](#).

[View load balancer](#)

Create Load Balancer Actions ▾

search : mynetworklb Add filter

Name	DNS name	State	VPC ID	Availability Zones	Type	Created At
mynetworklb	mynetworklb-aa0cd5d6ce73...	Active	vpc-0f052792f7d9078a1	us-east-1d	network	July 12, 2022 at 9:07:44 PM

Load balancer: mynetworklb

Description Listeners Monitoring Integrated services Tags

Basic Configuration

Name mynetworklb
ARN arn:aws:elasticloadbalancing:us-east-1:900437100429:loadbalancer/net/mynetworklb/aa0cd5d6ce73b3ca
DNS name mynetworklb-aa0cd5d6ce73b3ca.elb.us-east-1.amazonaws.com (A Record)

Not secure | http://mynetworklb-aa0cd5d6ce73b3ca.elb.us-east-1.amazonaws.com

```
welcome to devops training
eth0: flags=4163 mtu 9001
    inet 172.31.92.97 netmask 255.255.240.0 broadcast 172.31.95.255
    inet6 fe80::109e:afff:fea1:f97b prefixlen 64 scopeid 0x20
        ether 12:9e:af:a1:f9:7b txqueuelen 1000 (Ethernet)
        RX packets 2155 bytes 400614 (391.2 KiB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 2182 bytes 369617 (360.9 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73 mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10
        loop txqueuelen 1000 (Local Loopback)
        RX packets 192 bytes 19496 (19.0 KiB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 192 bytes 19496 (19.0 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

```
welcome to devops training
eth0: flags=4163 mtu 9001
    inet 172.31.90.189 netmask 255.255.240.0 broadcast 172.31.95.255
    inet6 fe80::1046:5eff:feb4:3571 prefixlen 64 scopeid 0x20
        ether 12:46:5e:b4:35:71 txqueuelen 1000 (Ethernet)
        RX packets 2206 bytes 408492 (398.9 KiB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 2115 bytes 386106 (377.0 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73 mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10
        loop txqueuelen 1000 (Local Loopback)
        RX packets 120 bytes 12420 (12.1 KiB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 120 bytes 12420 (12.1 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

ALB- application load balancer

Login to both ec2-instances and make one webserver as **chat app** second as **search app**.

Connect to instance [Info](#)

Connect to your instance i-0892a7fccda4c8173 (webserver1) using any of these options

[EC2 Instance Connect](#) [Session Manager](#) [SSH client](#) [EC2 serial console](#)

Instance ID [i-0892a7fccda4c8173 \(webserver1\)](#)

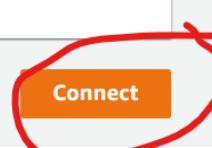
Public IP address [3.84.25.148](#)

User name

Connect using a custom user name, or use the default user name root for the AMI used to launch the instance.

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

[Cancel](#) [Connect](#)



```
cd /var/www/html
vi index.php
#add chat app word
mkdir chat
cp index.php chat/
cat index.php
```

```
Last login: Thu Jul 14 10:56:49 2022 from ec2-18-206-107-24.compute-1.amazonaws.com
```

```
__|__|_ )  
__| ( _ / Amazon Linux 2 AMI  
__| \__|__|
```

```
https://aws.amazon.com/amazon-linux-2/
[root@ip-172-31-90-189 ~]# cd /var/www/html
[root@ip-172-31-90-189 html]# ls
index.php
[root@ip-172-31-90-189 html]# mkdir chat
[root@ip-172-31-90-189 html]# cp index.php chat/
[root@ip-172-31-90-189 html]# cd chat
[root@ip-172-31-90-189 chat]# ls
index.php
[root@ip-172-31-90-189 chat]# cat index.php
<pre>
<?php
print "welcome to devops training - Chat APP <br />";
print `ifconfig`;
?>
</pre>
[root@ip-172-31-90-189 chat]#
```

Connect to instance Info

Connect to your instance i-00cf47c4669fdd1d9 (webserver2) using any of these options

EC2 Instance Connect

Session Manager

SSH client

EC2 serial console

Instance ID

[i-00cf47c4669fdd1d9 \(webserver2\)](#)

Public IP address

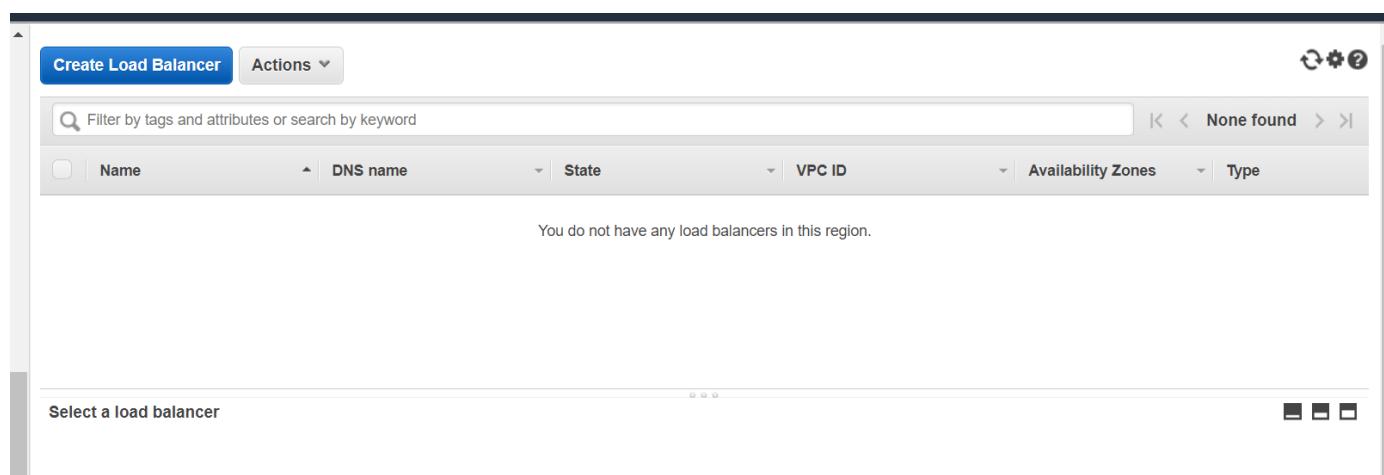
[44.201.168.223](#)

User name

root

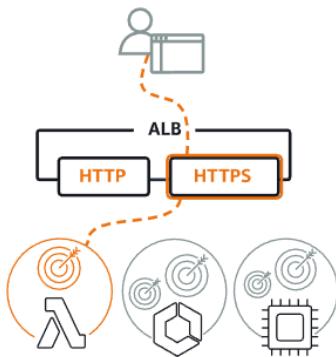
Connect using a custom user name, or use the default user name root for the AMI used to launch the instance.

i **Note:** In most cases, the guessed user name is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI user name.



Load balancer types

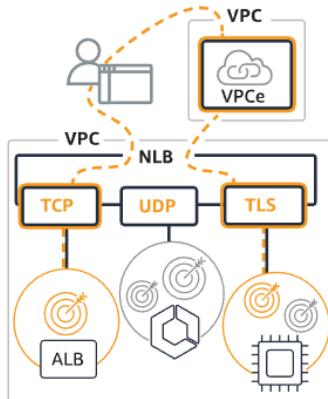
Application Load Balancer [Info](#)



Choose an Application Load Balancer when you need a flexible feature set for your applications with HTTP and HTTPS traffic. Operating at the request level, Application Load Balancers provide advanced routing and visibility features targeted at application architectures, including microservices and containers.

[Create](#)

Network Load Balancer [Info](#)



Choose a Network Load Balancer when you need ultra-high performance, TLS offloading at scale, centralized certificate deployment, support for UDP, and static IP addresses for your applications. Operating at the connection level, Network Load Balancers are capable of handling millions of requests per second securely while maintaining ultra-low latencies.

[Create](#)

Gateway Load Balancer [Info](#)



Choose a Gateway Load Balancer when you need to deploy and manage a fleet of third-party virtual appliances that support GENEVE. These appliances enable you to improve security, compliance, and policy controls.

[Create](#)

Basic configuration

Load balancer name

Name must be unique within your AWS account and cannot be changed after the load balancer is created.

myapplicationlb

A maximum of 32 alphanumeric characters including hyphens are allowed, but the name must not begin or end with a hyphen.

Scheme [Info](#)

Scheme cannot be changed after the load balancer is created.

Internet-facing

An internet-facing load balancer routes requests from clients over the internet to targets. Requires a public subnet. [Learn more](#)

Internal

An internal load balancer routes requests from clients to targets using private IP addresses.

IP address type [Info](#)

Select the type of IP addresses that your subnets use.

IPv4

Recommended for internal load balancers.

Dualstack

Includes IPv4 and IPv6 addresses.

Network mapping [Info](#)

The load balancer routes traffic to targets in the selected subnets, and in accordance with your IP address settings.

VPC [Info](#)

Select the virtual private cloud (VPC) for your targets. Only VPCs with an internet gateway are enabled for selection. The selected VPC cannot be changed after the load balancer is created. To confirm the VPC for your targets, view your target groups

vpc-0f052792f7d9078a1
IPv4: 172.31.0.0/16



Mappings [Info](#)

Select at least one Availability Zone and one subnet for each zone. We recommend selecting at least two Availability Zones. The load balancer will route traffic only to targets in the selected Availability Zones. Zones that are not supported by the load balancer or VPC cannot be selected. Subnets can be added, but not removed, once a load balancer is created.

Search Clear filters

Instance state = running X

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Pu
<input type="checkbox"/>	webserver1	i-0892a7fccda4c8173	Running	t2.micro	2/2 checks passed	No alarms	us-east-1d	ec
<input type="checkbox"/>	webserver2	i-00cf47c4669fd1d9	Running	t2.micro	2/2 checks passed	No alarms	us-east-1d	ec

Mappings Info

Select at least one Availability Zone and one subnet for each zone. We recommend selecting at least two Availability Zones. The load balancer will route traffic only to targets in the selected Availability Zones. Zones that are not supported by the load balancer or VPC cannot be selected. Subnets can be added, but not removed, once a load balancer is created.

us-east-1a

us-east-1b

us-east-1c

Subnet

subnet-016f9e9a8ec7ffddd

IPv4 settings

Assigned by AWS

us-east-1d

Subnet

subnet-012c9ad11a78b8805

IPv4 settings

Assigned by AWS

Security groups

Select up to 5 security groups ▼ G

Create new security group [

default sg-0b0a3f2c160ad535f X
VPC: vpc-0f052792f7d9078a1

Listeners and routing Info

A listener is a process that checks for connection requests, using the protocol and port you configure. Traffic received by the listener is then routed per your specification. You can specify multiple rules and multiple certificates per listener after the load balancer is created.

▼ Listener HTTP:80 Remove

Protocol	Port	Default action	Info
HTTP	: 80 1-65535	Forward to: Select a target group	G

Create target group [

Add listener

▼ Add-on services - optional

Additional AWS services can be integrated with this load balancer at launch. You can also add these and other services after your load balancer is created by reviewing the "Integrated services" section of the Load Balancer console.

Protocol version

HTTP1

Send requests to targets using HTTP/1.1. Supported when the request protocol is HTTP/1.1 or HTTP/2.

HTTP2

Send requests to targets using HTTP/2. Supported when the request protocol is HTTP/2 or gRPC, but gRPC-specific features are not available.

gRPC

Send requests to targets using gRPC. Supported when the request protocol is gRPC.

Health checks

The associated load balancer periodically sends requests, per the settings below, to the registered targets to test their status.

Health check protocol

HTTP

Health check path

Use the default path of "/" to ping the root, or specify a custom path if preferred.

/index.php

Up to 1024 characters allowed.

► Advanced health check settings

► Tags - optional

Consider adding tags to your target group. Tags enable you to categorize your AWS resources so you can more easily manage them.

Cancel

Next

	Instance ID	Name	State	Security groups	Zone	Subnet ID
<input type="checkbox"/>	i-0892a7fccda4c8173	webserver1	running	launch-wizard-2	us-east-1d	subnet-012c9ad11a78b8805
<input type="checkbox"/>	i-00cf47c4669fd1d9	webserver2	running	launch-wizard-2	us-east-1d	subnet-012c9ad11a78b8805

0 selected

Ports for the selected instances

Ports for routing traffic to the selected instances.

80

1-65535 (separate multiple ports with commas)

1 selection is now pending below. Include more or register targets when ready.

Review targets

Targets (1)

All

Filter resources by property or value

< 1 >

Remove	Health status	Instance ID	Name	Port	State	Security groups	Zone	Subnet ID
<input type="button" value="X"/>	Pending	i-0892a7fccda4c8173	webserver1	80	running	launch-wizard-2	us-east-1d	subnet-012c9ad11a78b8805

1 pending

EC2 > Target groups

Target groups (1) Info

<input type="checkbox"/>	Name	ARN	Port	Protocol	Target type	Load balancer	VPC ID
<input type="checkbox"/>	chatos	arn:aws:elasticloadbalancing:us-east-1:123456789012:targetgroup/chatos/54321	80	HTTP	Instance	None associated	vpc-0f052792f7d9078a1

0 target groups selected

Select a target group above.

Target group name

A maximum of 32 alphanumeric characters including hyphens are allowed, but the name must not begin or end with a hyphen.

Protocol **Port**

:

VPC
Select the VPC with the instances that you want to include in the target group.

-
vpc-0f052792f7d9078a1
IPv4: 172.31.0.0/16

Protocol version

HTTP1
Send requests to targets using HTTP/1.1. Supported when the request protocol is HTTP/1.1 or HTTP/2.

HTTP2
Send requests to targets using HTTP/2. Supported when the request protocol is HTTP/2 or gRPC, but gRPC-specific features are not available.

gRPC
Send requests to targets using gRPC. Supported when the request protocol is gRPC.

Health checks

The associated load balancer periodically sends requests, per the settings below, to the registered targets to test their status.

Health check protocol

Health check path
Use the default path of "/" to ping the root, or specify a custom path if preferred.

Up to 1024 characters allowed.

<input type="checkbox"/>	i-0892a7fccda4c8173	webserver1	running	launch-wizard-2	us-east-1d	subnet-012c9ad11a78b8805
<input type="checkbox"/>	i-00cf47c4669fd1d9	webserver2	running	launch-wizard-2	us-east-1d	subnet-012c9ad11a78b8805
0 selected						
Ports for the selected instances						
Ports for routing traffic to the selected instances.						
80						
1-65535 (separate multiple ports with commas)						
Include as pending below						
1 selection is now pending below. Include more or register targets when ready.						

Review targets

Targets (1)

All	<input type="text"/> Filter resources by property or value	Remove all pending						
Remove	Health status	Instance ID	Name	Port	State	Security groups	Zone	Subnet ID
X	Pending	i-00cf47c4669fd1d9	webserver2	80	running	launch-wizard-2	us-east-1d	subnet-012c9ad11a78b8805

1 pending

[Cancel](#)

[Previous](#)

[Create target group](#)

Listeners and routing Info

A listener is a process that checks for connection requests, using the protocol and port you configure. Traffic received by the listener is then routed per your specification. You can specify multiple rules and multiple certificates per listener after the load balancer is created.

▼ Listener HTTP:80

[Remove](#)

Protocol [Info](#)

HTTP [▼](#) : 80

Port [Info](#)

Forward to [Info](#)
chatos
Target type: Instance, IPv4

HTTP [▼](#)

[C](#)

[Create target group](#)

[Add listener](#)

▼ Add-on services - optional

Additional AWS services can be integrated with this load balancer at launch. You can also add these and other services after your load balancer is created by reviewing the "Integrated Services" tab for the selected load balancer.

applications. [Additional charges apply](#)

► Tags - optional

Consider adding tags to your load balancer. Tags enable you to categorize your AWS resources so you can more easily manage them. The 'Key' is required, but 'Value' is optional. For example, you can have Key = production-webserver, or Key = webserver, and Value = production.

Summary

Review and confirm your configurations. [Estimate cost](#)

Basic configuration [Edit](#)

- myapplicationlb
- Internet-facing
 - IPv4

Security groups [Edit](#)

- default
sg-0b0a3f2c160ad535f

Network mapping [Edit](#)

- VPC [vpc-0f052792f7d9078a1](#)
- us-east-1c
subnet-016f9e9a8ec7ffdd
 - us-east-1d
subnet-012c9ad11a78b8805

Listeners and routing [Edit](#)

- HTTP:80 defaults to
[chatos](#)

Add-on services [Edit](#)

None

Tags [Edit](#)

None

Attributes

ⓘ Certain default attributes will be applied to your load balancer. You can view and edit them after creating the load balancer.

[Cancel](#)

[Create load balancer](#)

 myapplicationlb

myapplicationlb-585571731....

Provisioning

vpc-0f052792f7d9078a1

us-east-1d, us-eas

Load balancer: **myapplicationlb**

[Description](#) **Listeners** [Monitoring](#) [Integrated services](#) [Tags](#)

Listeners listen for connection requests using their protocol and port. You can add, remove, or update listeners and listener rules.

To view and edit listener attributes, select the listener and choose Edit.

[Add listener](#) [Edit](#) [Delete](#)

<input type="checkbox"/>	Listener ID	Security policy	SSL Certificate	Rules
<input type="checkbox"/>	HTTP : 80 arn:aws:elasticloadbalancing:us-east-1:123456789012:listener/app/myapplicationlb/80	N/A	N/A	Default: forwarding to chatos View/edit rules

myapplicationlb | HTTP:80 (2 rules)

▶ Rule limits for condition values, wildcards, and total rules.

RULE ID		IF (all match)	THEN
1 A rule ID (ARN) is generated when you save your rule.		Path... is <input type="text" value="/chat/*"/> or <input type="text" value="Value"/> <input checked="" type="checkbox"/> + Add condition	1. Forward to... Target group : Weight (0-999) chatos <input type="text" value="chatos"/> 1 <input type="button" value="x"/> Traffic distribution 100% Select a target group <input type="text" value="Select a target group"/> 0 <input type="button" value="x"/> Group-level stickiness <input checked="" type="checkbox"/> + Add action

▶ Rule limits for condition values, wildcards, and total rules.

RULE ID		IF (all match)	THEN
1 A rule ID (ARN) is generated when you save your rule.		Path... is <input type="text" value="/search/*"/> or <input type="text" value="Value"/> <input checked="" type="checkbox"/> + Add condition	1. Forward to... Target group : Weight (0-999) searchos <input type="text" value="searchos"/> 1 <input type="button" value="x"/> Traffic distribution 100% Select a target group <input type="text" value="Select a target group"/> 0 <input type="button" value="x"/> Group-level stickiness <input checked="" type="checkbox"/> + Add action

2

arn...4539c

IF

THEN

myapplicationlb | HTTP:80

◀ □ ?

Click a location for your new rule. Each rule must include one action of type forward, redirect, fixed response.

✓ New rule was created successfully.

myapplicationlb | HTTP:80 (3 rules)

▶ Rule limits for condition values, wildcards, and total rules.

1 am...b0680		IF	THEN
		Path is /search/*	Forward to searchos : 1 (100%) Group-level stickiness: Off

2 am...4539c		IF	THEN
		Path is /chat/*	Forward to chatos : 1 (100%) Group-level stickiness: Off

last		IF	THEN
HTTP 80: default action <i>This rule cannot be moved or deleted</i>		Requests otherwise not routed	Forward to chatos : 1 (100%) Group-level stickiness: Off

Search: myapplicationlb Add filter

Name	DNS name	State	VPC ID	Availability Zones	Type	Created At	Monitoring
myapplicationlb	myapplicationlb-585571731...	Active	vpc-0f052792f7d9078a1	us-east-1d, us-east-1c	application	July 14, 2022 at 4:39:42 PM ...	

IPv4 address: Assigned by AWS

subnet-016f9e9a8ec7ffdd - us-east-1c

IPv4 address: Assigned by AWS

Hosted zone: Z35SXDOTRQ7X7K

Creation time: July 14, 2022 at 4:39:42 PM UTC+5:30

Security

Security groups: sg-00eb937b22524fe43, httpsecuritygroup

- allow http

sg-0b0a3f2c160ad535f, default

- default VPC security group

Attributes

Deletion protection: Disabled

Idle timeout: 60 seconds

Edit security groups

Select security groups to associate with your load balancer.

Security group ID	Name	Description
sg-0b0a3f2c160ad535f	default	default VPC security group
sg-00eb937b22524fe43	httpsecuritygroup	allow http
sg-0c69a14b73051...	launch-wizard-1	launch-wizard-1 created 2022-07-08T08:20:737+05:30
sg-05103deed0572...	launch-wizard-2	launch-wizard-2 created 2022-07-12T20:23:43.379+05:30
sg-07d06252f0a2b6...	quick-create-1	quick-create-1 created on Tuesday, July 12, 2022 at 8:45:58 PM UTC+5:30
sg-0d38977c20f22d...	quick-create-2	quick-create-2 created on Tuesday, July 12, 2022 at 8:49:55 PM UTC+5:30

Cancel **Save**

Create Load Balancer Actions

Search: myapplicationlb Add filter

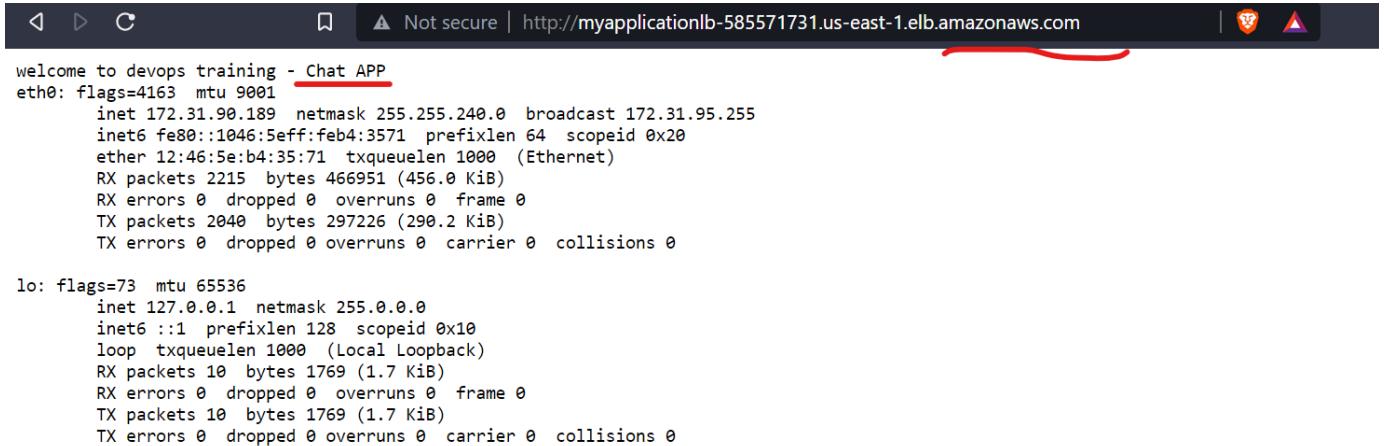
Name	DNS name	State	VPC ID	Availability Zones	Type	Created At	Monitoring
myapplicationlb	myapplicationlb-585571731...	Active	vpc-0f052792f7d9078a1	us-east-1d, us-east-1c	application	July 14, 2022 at 4:39:42 PM ...	

Load balancer: myapplicationlb

Description | Listeners | Monitoring | Integrated services | Tags

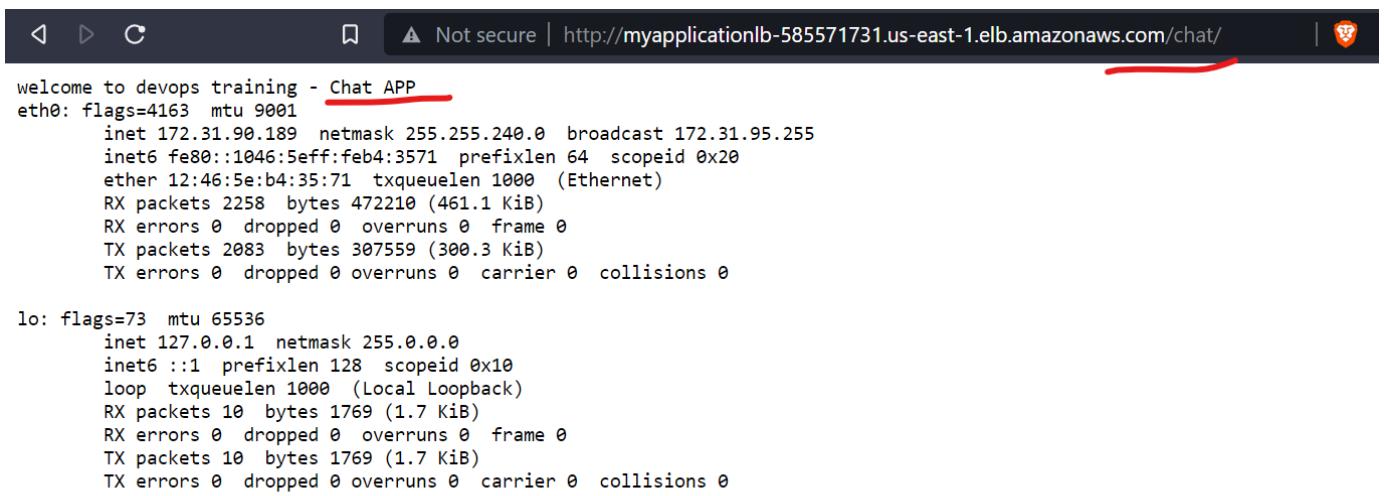
Basic Configuration

Name	myapplicationlb
ARN	arn:aws:elasticloadbalancing:us-east-1:508-01400429:loadbalancer/app/myapplicationlb/8b1f46f344e25ef6
DNS name	myapplicationlb-585571731.elb.amazonaws.com (A Record)
State	Active
Type	application
Scheme	internet-facing



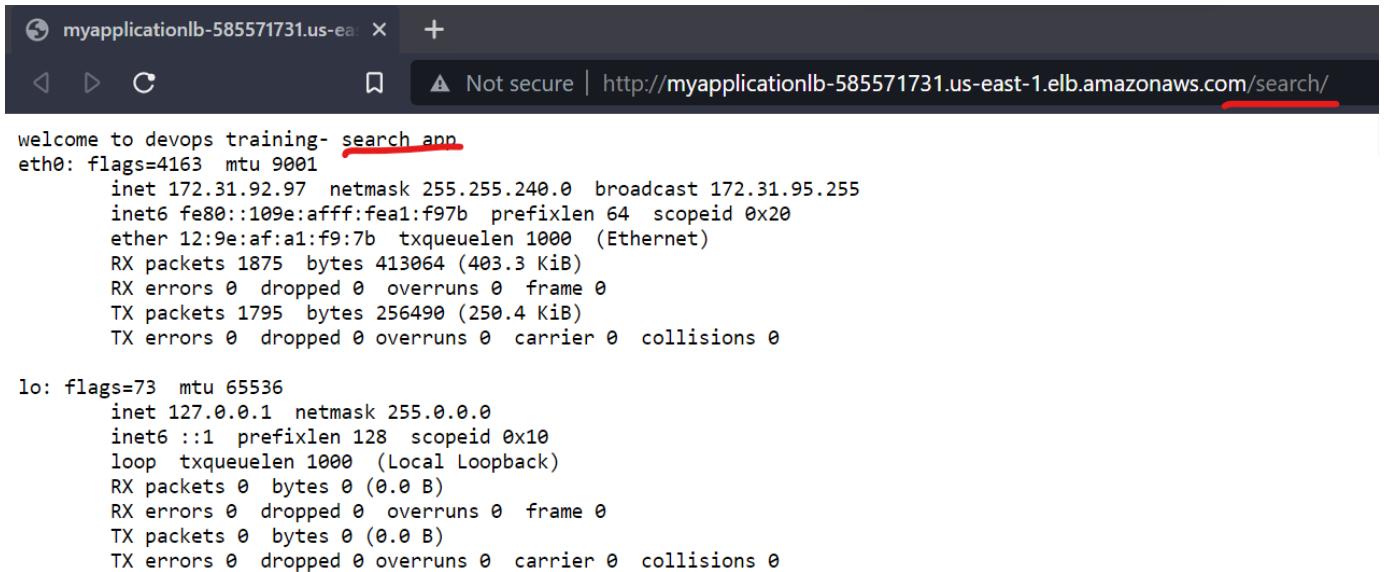
```
welcome to devops training - Chat APP
eth0: flags=4163 mtu 9001
    inet 172.31.90.189 netmask 255.255.240.0 broadcast 172.31.95.255
    inet6 fe80::1046:5eff:feb4:3571 prefixlen 64 scopeid 0x20
        ether 12:46:5e:b4:35:71 txqueuelen 1000 (Ethernet)
        RX packets 2215 bytes 466951 (456.0 KiB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 2040 bytes 297226 (290.2 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73 mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10
        loop txqueuelen 1000 (Local Loopback)
        RX packets 10 bytes 1769 (1.7 KiB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 10 bytes 1769 (1.7 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```



```
welcome to devops training - Chat APP
eth0: flags=4163 mtu 9001
    inet 172.31.90.189 netmask 255.255.240.0 broadcast 172.31.95.255
    inet6 fe80::1046:5eff:feb4:3571 prefixlen 64 scopeid 0x20
        ether 12:46:5e:b4:35:71 txqueuelen 1000 (Ethernet)
        RX packets 2258 bytes 472210 (461.1 KiB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 2083 bytes 307559 (300.3 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

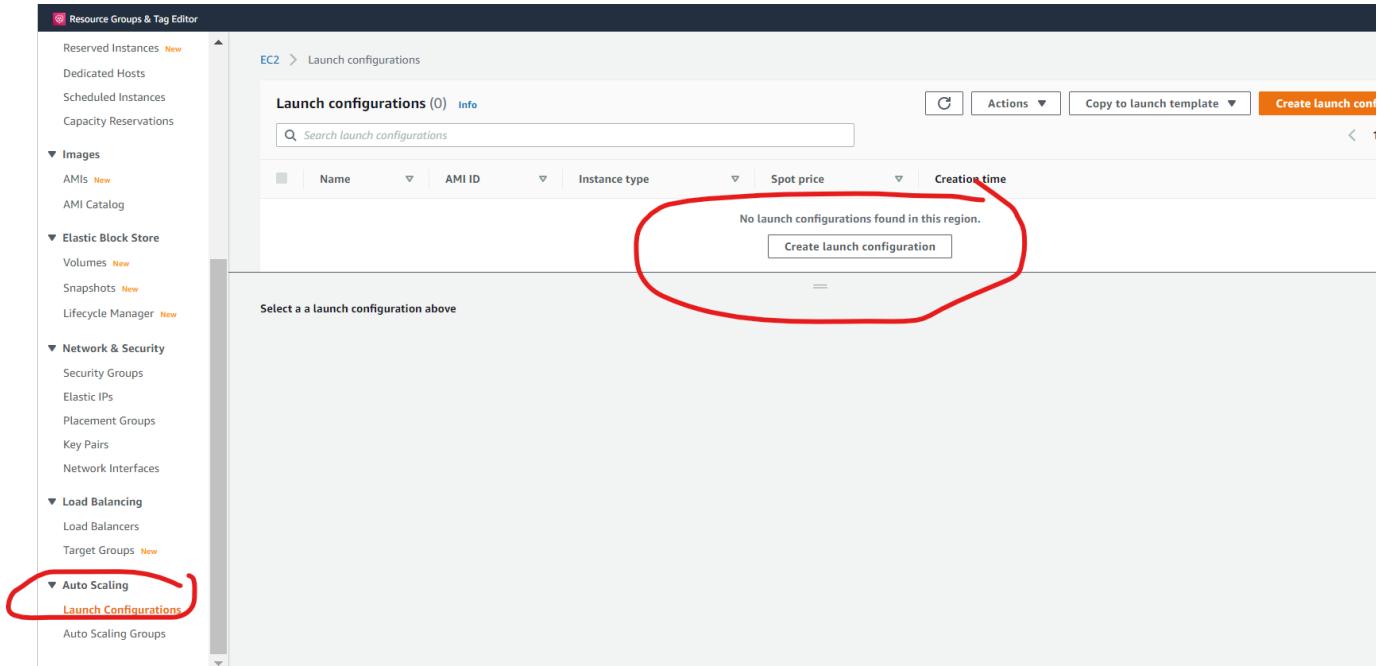
lo: flags=73 mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10
        loop txqueuelen 1000 (Local Loopback)
        RX packets 10 bytes 1769 (1.7 KiB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 10 bytes 1769 (1.7 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```



```
welcome to devops training- search app
eth0: flags=4163 mtu 9001
    inet 172.31.92.97 netmask 255.255.240.0 broadcast 172.31.95.255
    inet6 fe80::109e:afff:fea1:f97b prefixlen 64 scopeid 0x20
        ether 12:9e:af:a1:f9:7b txqueuelen 1000 (Ethernet)
        RX packets 1875 bytes 413064 (403.3 KiB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 1795 bytes 256490 (250.4 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73 mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10
        loop txqueuelen 1000 (Local Loopback)
        RX packets 0 bytes 0 (0.0 B)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 0 bytes 0 (0.0 B)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

AutoScaling Group



Resource Groups & Tag Editor

EC2 > Launch configurations

Launch configurations (0) [Info](#)

Search launch configurations

Name	AMI ID	Instance type	Spot price	Creation time
No launch configurations found in this region.				

Create launch configuration

Select a launch configuration above

Auto Scaling

Launch Configurations [Info](#)

Auto Scaling Groups

Instead of using launch configurations to create your EC2 Auto Scaling groups, we recommend that you use launch templates to make sure that you're getting the latest features from EC2. [See the latest features](#)

EC2 > Launch configurations > Create launch configuration

Create launch configuration [Info](#)

Launch configuration name

Name

Amazon machine image (AMI) [Info](#)

AMI

Instance type [Info](#)

Instance type

[Choose instance type](#)

Additional configuration - *optional*

Security groups [Info](#)

Assign a security group

Create a new security group

Select an existing security group

Security group name

AutoScaling-Security-Group-2

Description

AutoScaling-Security-Group-2 (2022-07-14T12:17:04.801Z)

Rules

Type	Protocol	Port range	Source type	Source
SSH	TCP	22	Anywhere	0.0.0.0/0
HTTP	TCP	80	Anywhere	0.0.0.0/0
SSH	TCP	22	Anywhere	0.0.0.0/0

[+ Add new rule](#)

[+ Add new rule](#)

⚠ Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Key pair (login) [Info](#)

Key pair options

Choose an existing key pair

Existing key pair

devopstest

I acknowledge that I have access to the selected private key file (devopstest.pem), and that without this file, I won't be able to log into my instance.

[Cancel](#) [Create launch configuration](#)

⌚ Successfully created launch configuration: weblauchconfig

EC2 > Launch configurations

Launch configurations (1) [Info](#)

[Actions](#) [Copy to launch template](#) [Create launch configuration](#)

Name	AMI ID	Instance type	Spot price	Creation time
weblauchconfig	ami-0656cb75b6...	t2.micro	-	Thu Jul 14 2022 17:49:08 GMT+0530 (India Standard Time)

Select a launch configuration above

AWS Services Search for services, features, blogs, docs, and more [Alt+S] N. Virginia kroydevops

Resource Groups & Tag Editor

Reserved Instances New

Dedicated Hosts

Scheduled Instances

Capacity Reservations

Images AMIs New

AMI Catalog

Elastic Block Store Volumes New Snapshots New Lifecycle Manager New

Network & Security Security Groups Elastic IPs Placement Groups Key Pairs Network Interfaces

Load Balancing Load Balancers Target Groups New

Auto Scaling Launch Configurations Auto Scaling Groups

Amazon EC2 Auto Scaling

helps maintain the availability of your applications

Auto Scaling groups are collections of Amazon EC2 instances that enable automatic scaling and flexible management features. These features help you maintain the health and availability of your applications.

Create Auto Scaling group

Get started with EC2 Auto Scaling by creating an Auto Scaling group.

Create Auto Scaling group

Pricing

Amazon EC2 Auto Scaling features have no additional fees beyond the service fees for Amazon EC2, CloudWatch (for scaling policies), and the other AWS resources that you use. Visit the pricing page of each service to learn more.

Getting started

What is Amazon EC2 Auto Scaling?

Getting started with Amazon EC2 Auto Scaling

Set up a scaled and load-balanced application

FAQ

How it works

An Auto Scaling group is a collection of Amazon EC2 instances that are treated as a logical unit.

Specify a launch template that contains settings common to all EC2 instances that are launched by this Auto Scaling group. If you currently use launch configurations, you might consider migrating to launch templates.

Name

Auto Scaling group name

Enter a name to identify the group.

webautoscaling

Must be unique to this account in the current Region and no more than 255 characters.

Launch configuration [Info](#) [Switch to launch template](#)

Launch configuration

Choose a launch configuration that contains the instance-level settings, such as the Amazon Machine Image (AMI), instance type, key pair, and security groups.

weblauchconfig

[Create a launch configuration](#)

Launch configuration weblauchconfig

Security groups [sg-076a462c835679477](#)

AMI ID ami-0656cb75b678c6dbb

Instance type t2.micro

Date created Thu Jul 14 2022 17:49:08 GMT+0530 (India Standard Time)

Key pair name devopstest

[Cancel](#) [Next](#)

Step 1
Choose launch template or configuration

Step 2
Choose instance launch options

Step 3 (optional)
Configure advanced options

Step 4 (optional)
Configure group size and scaling policies

Step 5 (optional)
Add notifications

Step 6 (optional)
Add tags

Step 7
Review

Choose instance launch options Info

Choose the VPC network environment that your instances are launched into, and customize the instance types and purchase options.

Network Info

For most applications, you can use multiple Availability Zones and let EC2 Auto Scaling balance your instances across the zones. The default VPC and default subnets are suitable for getting started quickly.

VPC
Choose the VPC that defines the virtual network for your Auto Scaling group.

vpc-0f052792f7d9078a1
172.31.0.0/16 Default

[Create a VPC](#)

Availability Zones and subnets
Define which Availability Zones and subnets your Auto Scaling group can use in the chosen VPC.

Select Availability Zones and subnets

us-east-1a | subnet-09472be4f70ea9ab2 X
172.31.16.0/20 Default

us-east-1b | subnet-084d1dcaa1100a14e X
172.31.32.0/20 Default

[Create a subnet](#)

[Cancel](#) [Previous](#) [Skip to review](#) **Next**

Choose launch template or configuration

Step 2
Choose instance launch options

Step 3 (optional)
Configure advanced options

Step 4 (optional)
Configure group size and scaling policies

Step 5 (optional)
Add notifications

Step 6 (optional)
Add tags

Step 7
Review

Load balancing - optional Info

Choose a load balancer to distribute incoming traffic for your application across instances to make it more reliable and easily scalable. You can also set options that give you more control over health check replacements and monitoring.

Load balancing - optional Info

Use the options below to attach your Auto Scaling group to an existing load balancer, or to a new load balancer that you define.

No load balancer
Traffic to your Auto Scaling group will not be fronted by a load balancer.

Attach to an existing load balancer
Choose from your existing load balancers.

Attach to a new load balancer
Quickly create a basic load balancer to attach to your Auto Scaling group.

Attach to a new load balancer

Define a new load balancer to create for attachment to this Auto Scaling group.

Load balancer type
Choose from the load balancer types offered below. Type selection cannot be changed after the load balancer is created. If you need a different type of load balancer than those offered here, [visit the Load Balancing console](#).

Application Load Balancer
HTTP, HTTPS

Network Load Balancer
TCP, UDP, TLS

Load balancer name
Name cannot be changed after the load balancer is created.

webautoscaling-1

Load balancer scheme
Scheme cannot be changed after the load balancer is created.

Internal

Internet-facing

Network mapping

Protocol	Port	Default routing (forward to)
TCP	80	<input type="button" value="Create a target group"/> ▼
<p>New target group name An instance target group with default settings will be created.</p> <input type="text" value="webautoscaling-1"/>		
<p>Tags - optional Consider adding tags to your load balancer. Tags enable you to categorize your AWS resources so you can more easily manage them.</p> <p><input type="button" value="Add tag"/></p> <p>50 remaining</p>		

Health checks - *optional*

Health check type [Info](#)

EC2 Auto Scaling automatically replaces instances that fail health checks. If you enabled load balancing, you can enable ELB health checks in addition to the EC2 health checks that are always enabled.

EC2 ELB

Health check grace period

The amount of time until EC2 Auto Scaling performs the first health check on new instances after they are put into service.

seconds

Additional settings - *optional*

Health checks - *optional*

Health check type [Info](#)

EC2 Auto Scaling automatically replaces instances that fail health checks. If you enabled load balancing, you can enable ELB health checks in addition to the EC2 health checks that are always enabled.

EC2 ELB

Health check grace period

The amount of time until EC2 Auto Scaling performs the first health check on new instances after they are put into service.

seconds

Additional settings - *optional*

Monitoring [Info](#)

Enable group metrics collection within CloudWatch

Default instance warmup [Info](#)

The amount of time that CloudWatch metrics for new instances do not contribute to the group's aggregated instance metrics, as their usage data is not reliable yet.

Enable default instance warmup

Configure group size and scaling policies Info

Set the desired, minimum, and maximum capacity of your Auto Scaling group. You can optionally add a scaling policy to dynamically scale the number of instances in the group.

Group size - *optional* Info

Specify the size of the Auto Scaling group by changing the desired capacity. You can also specify minimum and maximum capacity limits. Your desired capacity must be within the limit range.

Desired capacity

2

Minimum capacity

2

Maximum capacity

5

Scaling policies - *optional*

Choose whether to use a scaling policy to dynamically resize your Auto Scaling group to meet changes in demand. Info

Target tracking scaling policy

Choose a desired outcome and leave it to the scaling policy to add and remove capacity as needed to achieve that outcome.

None

Scaling policy name

Target Tracking Policy

Metric type

Average CPU utilization

Target value

60

Instances need

100

seconds warm up before including in metric

Disable scale in to create only a scale-out policy

Instance scale-in protection - *optional*

Instance scale-in protection

If protect from scale in is enabled, newly launched instances will be protected from scale in by default.

Enable instance scale-in protection

Cancel

Previous

Skip to review

Next

Step 1
Choose launch template or configuration

Step 2
Choose instance launch options

Step 3 (optional)
Configure advanced options

Step 4 (optional)
Configure group size and scaling policies

Step 5 (optional)
Add notifications

Step 6 (optional)
Add tags

Step 7
Review

Add notifications Info

Send notifications to SNS topics whenever Amazon EC2 Auto Scaling launches or terminates the EC2 instances in your Auto Scaling group.

[Add notification](#)

Cancel

[Previous](#)

[Skip to review](#)

Next

ⓘ The old Auto Scaling groups console is no longer available. We will keep improving the new console based on your feedback.

Step 1
Choose launch template or configuration

Step 2
Choose instance launch options

Step 3 (optional)
Configure advanced options

Step 4 (optional)
Configure group size and scaling policies

Step 5 (optional)
Add notifications

Step 6 (optional)
Add tags

Add tags Info

Add tags to help you search, filter, and track your Auto Scaling group across AWS. You can also choose to automatically add these tags to instances when they are launched.

ⓘ You can optionally choose to add tags to instances (and their attached EBS volumes) by specifying tags in your launch template. We recommend caution, however, because the tag values for instances from your launch template will be overridden if there are any duplicate keys specified for the Auto Scaling group. X

Tags (0)

[Add tag](#)

50 remaining

Cancel

[Previous](#)

Next

Take the action Add or remove capacity units as required	Instances need 100 seconds to warm up before including in metric	Scale in Enabled
---	---	---------------------

Instance scale-in protection

Instance scale-in protection
Enable instance protection from scale in

Step 5: Add notifications

Notifications

No notifications

Step 6: Add tags

Tags (0)

Key	Value	Tag new instances
No tags		

Cancel **Create Auto Scaling group**

The old Auto Scaling groups console is no longer available. We will keep improving the new console based on your feedback.

webautoscaling, 1 Scaling policy, 1 Load balancer, 1 Target group, 1 Listener created successfully. 1 new target group has been attached to ASG.

EC2 > Auto Scaling groups

Auto Scaling groups (1) Info

<input type="checkbox"/>	Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	Availability Zones
<input type="checkbox"/>	webautoscaling	weblaunchconfig	0	Updating capacity	2	2	5	us-east-1a, us-east-1b

The old Auto Scaling groups console is no longer available. We will keep improving the new console based on your feedback.

EC2 > Auto Scaling groups

Auto Scaling groups (1) Info

<input type="checkbox"/>	Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	Availability Zones
<input type="checkbox"/>	webautoscaling	weblaunchconfig	2	-	2	2	5	us-east-1a, us-east-1b

Instances (2) Info

Search Instance state = running Clear filters

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP
<input type="checkbox"/>	-	i-066680c7ccfa129a8	Running (Q)	t2.micro	2/2 checks passed	No alarms +	us-east-1a	ec2-54-163-204-145.co...	54.163.204.145	-
<input type="checkbox"/>	-	i-0e8d624b029f2dee4	Running (Q)	t2.micro	2/2 checks passed	No alarms +	us-east-1b	ec2-34-235-131-50.co...	34.235.131.50	-

Create Load Balancer Actions ▼

Filter by tags and attributes or search by keyword

<input type="checkbox"/>	Name	DNS name	State	VPC ID	Availability Zones	Type	Created At	Monitoring
<input type="checkbox"/>	webautoscaling-1	webautoscaling-1-0beadd01a5c52582	Active	vpc-0f052792f7d9078a1	us-east-1a, us-east-1b	network	July 14, 2022 at 5:55:17 PM ...	

Load balancer: webautoscaling-1

Description Listeners Monitoring Integrated services Tags

Basic Configuration

Name	webautoscaling-1
ARN	arn:aws:elasticloadbalancing:us-east-1:900437100429:loadbalancer/net/webautoscaling-1-0beadd01a5c52582
DNS name	webautoscaling-1-0beadd01a5c52582.elb.us-east-1.amazonaws.com (A Record)
State	Active
Type	network
Scheme	internet-facing
IP address type	ipv4
VPC	vpc-0f052792f7d9078a1
Availability Zones	subnet-09472be4f70ea9ab2 - us-east-1a (IPv4 address: Assigned by AWS) subnet-084d1dcaa1100a14e - us-east-1b

Not secure | <http://webautoscaling-1-0beadd01a5c52582.elb.us-east-1.amazonaws.com>

```
welcome to devops training
eth0: flags=4163 mtu 9001
    inet 172.31.45.244 netmask 255.255.240.0 broadcast 172.31.47.255
    inet6 fe80::c5b:b0ff:fe9c:4577 prefixlen 64 scopeid 0x20
    ether 0e:5b:b0:9c:45:77 txqueuelen 1000 (Ethernet)
    RX packets 756 bytes 256158 (250.1 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 801 bytes 106276 (103.7 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73 mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10
    loop txqueuelen 1000 (Local Loopback)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 0 bytes 0 (0.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

```
welcome to devops training
eth0: flags=4163 mtu 9001
    inet 172.31.17.255 netmask 255.255.240.0 broadcast 172.31.31.255
        inet6 fe80::898:b2ff:fe65:715d prefixlen 64 scopeid 0x20
            ether 0a:98:b2:65:71:5d txqueuelen 1000 (Ethernet)
                RX packets 914 bytes 269262 (262.9 KiB)
                RX errors 0 dropped 0 overruns 0 frame 0
                TX packets 982 bytes 146260 (142.8 KiB)
                TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73 mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
        inet6 ::1 prefixlen 128 scopeid 0x10
            loop txqueuelen 1000 (Local Loopback)
                RX packets 0 bytes 0 (0.0 B)
                RX errors 0 dropped 0 overruns 0 frame 0
                TX packets 0 bytes 0 (0.0 B)
                TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

```
#To increase cpu usage
top -i
yes > /dev/null &
```

```
[root@ip-172-31-17-255 ~]# yes > /dev/null &
[1] 3837
[root@ip-172-31-17-255 ~]#
```



```
top - 12:37:04 up 10 min, 1 user, load average: 0.28, 0.09, 0.03
Tasks: 100 total, 2 running, 57 sleeping, 0 stopped, 0 zombie
%Cpu(s): 98.3 us, 1.7 sy, 0.0 ni, 0.0 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
KiB Mem : 988672 total, 674460 free, 104656 used, 209556 buff/cache
KiB Swap: 0 total, 0 free, 0 used. 749400 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
3837	root	20	0	114640	756	692	R	99.7	0.1	0:17.66	yes

2nd instance also

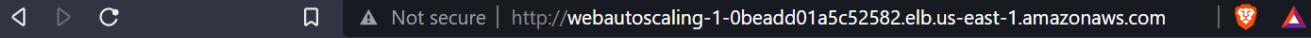
```
Last login: Tue Jul 12 06:45:24 2022
```

```
_)  
| ( / Amazon Linux 2 AMI  
| \_ |
```

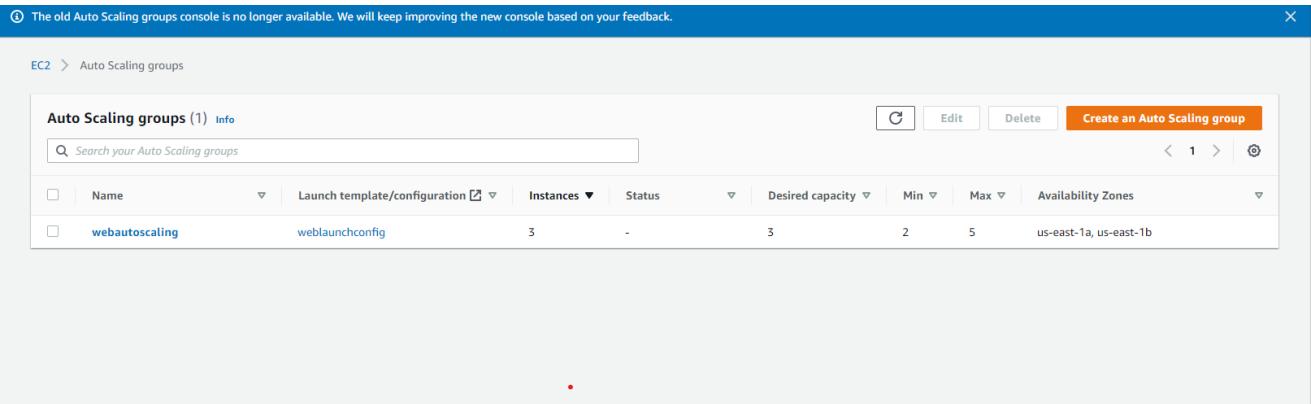
```
https://aws.amazon.com/amazon-linux-2/  
[root@ip-172-31-34-202 ~]# yes > /dev/null &  
[1] 3756  
[root@ip-172-31-34-202 ~]#
```

```
top - 12:38:16 up 2 min, 1 user, load average: 0.40, 0.15, 0.05  
Tasks: 104 total, 2 running, 56 sleeping, 0 stopped, 0 zombie  
%Cpu(s): 99.0 us, 1.0 sy, 0.0 ni, 0.0 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st  
KiB Mem : 988672 total, 677620 free, 101544 used, 209508 buff/cache  
KiB Swap: 0 total, 0 free, 0 used. 748532 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
3756	root	20	0	114640	680	616	R	99.7	0.1	0:22.82	yes



```
welcome to devops training  
eth0: flags=4163 mtu 9001  
    inet 172.31.34.202 netmask 255.255.240.0 broadcast 172.31.47.255  
    inet6 fe80::c19:6bff:fe41:d051 prefixlen 64 scopeid 0x20  
        ether 0e:19:6b:41:d0:51 txqueuelen 1000 (Ethernet)  
        RX packets 897 bytes 301662 (294.5 KiB)  
        RX errors 0 dropped 0 overruns 0 frame 0  
        TX packets 940 bytes 136889 (133.6 KiB)  
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0  
  
lo: flags=73 mtu 65536  
    inet 127.0.0.1 netmask 255.0.0.0  
    inet6 ::1 prefixlen 128 scopeid 0x10  
        loop txqueuelen 1000 (Local Loopback)  
        RX packets 0 bytes 0 (0.0 B)  
        RX errors 0 dropped 0 overruns 0 frame 0  
        TX packets 0 bytes 0 (0.0 B)  
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```



Auto Scaling groups (1) Info										
Create an Auto Scaling group										
	Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	Availability Zones		
	webautoscaling	weblaunchconfig	3	-	3	2	5	us-east-1a, us-east-1b		

The old Auto Scaling groups console is no longer available. We will keep improving the new console based on your feedback.

EC2 > Auto Scaling groups

Auto Scaling groups (1) info

Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	Availability Zones
webautoscaling	weblauchconfig	4	-	4	2	5	us-east-1a, us-east-1b

Instances (4) Info

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 IP	Elastic IP
-	i-0e9f20447b34cd055	Running	t2.micro	Initializing	No alarms	us-east-1a	ec2-3-90-199-126.com...	3.90.199.126	-
-	i-066680c7ccfa129a8	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	ec2-54-163-204-145.co...	54.163.204.145	-
-	i-0862bd832a03fc049	Running	t2.micro	2/2 checks passed	No alarms	us-east-1b	ec2-52-90-212-221.co...	52.90.212.221	-
-	i-044f7c1441b4a7343	Running	t2.micro	Initializing	No alarms	us-east-1b	ec2-204-236-211-4.co...	204.236.211.4	-

Select an instance

IAM

To create a IAM user with dashboard(console) access.

Search: iam

Search results for 'iam'

Services (5)

- Features (15)
- Blogs (1,332)
- Documentation (104,297)
- Knowledge Articles (30)
- Events (5)
- Marketplace (342)

Services

See all 5 results ▶

 IAM 	Manage access to AWS resources
 Resource Access Manager 	Share AWS resources with other accounts or AWS Organizations
 Amazon VPC IP Address Manager 	Managed IP address management service
 Serverless Application Repository 	Assemble, deploy, and share serverless applications within teams or publicly

Identity and Access Management (IAM)

IAM dashboard

Security recommendations 1

Add MFA for root user
Add MFA for root user - Enable multi-factor authentication (MFA) for the root user to improve security for this account.

Root user has no active access keys
Using access keys attached to an IAM user instead of the root user improves security.

IAM resources

User groups	Users	Roles	Policies	Identity providers
0	0	7	0	0

What's new 1
Updates for features in IAM

AWS Account

Account ID: 900437100429
Account Alias: 900437100429 **Create**
Sign-in URL for IAM users in this account: <https://900437100429.signin.ws.amazon.com/console>

Quick Links

My security credentials
Manage your access keys, multi-factor authentication (MFA) and other credentials.

Identity and Access Management (IAM)

IAM dashboard

Security recommendations 1

Add MFA for root user
Add MFA for root user - Enable multi-factor authentication (MFA) for the root user to improve security for this account.

Root user has no active access keys
Using access keys attached to an IAM user instead of the root user improves security.

IAM resources

User groups	Users	Roles	Policies	Identity providers
0	0	7	0	0

AWS Account

Account ID: 900437100429
Account Alias: 900437100429 **Create**
Sign-in URL for IAM users in this account: <https://900437100429.signin.ws.amazon.com/console>

Quick Links

My security credentials

Identity and Access Management (IAM)

IAM > Users

Users (0) Info
An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.

Add users

Find users by username or access key

User name	Groups	Last activity	MFA	Password age	Active key age
No resources to display					

Add user

1 2 3 4 5

Set user details

You can add multiple users at once with the same access type and permissions. [Learn more](#)

User name*

[+ Add another user](#)

Select AWS access type

Select how these users will primarily access AWS. If you choose only programmatic access, it does NOT prevent users from accessing the console using an assumed role. Access keys and autogenerated passwords are provided in the last step. [Learn more](#)

Select AWS credential type*

Access key - Programmatic access

Enables an **access key ID** and **secret access key** for the AWS API, CLI, SDK, and other development tools.

Password - AWS Management Console access

Enables a **password** that allows users to sign-in to the AWS Management Console.

* Required

[Cancel](#)

[Next: Permissions](#)

Select AWS access type

Select how these users will primarily access AWS. If you choose only programmatic access, it does NOT prevent users from accessing the console using an assumed role. Access keys and autogenerated passwords are provided in the last step. [Learn more](#)

Select AWS credential type*

Access key - Programmatic access

Enables an **access key ID** and **secret access key** for the AWS API, CLI, SDK, and other development tools.

Password - AWS Management Console access

Enables a **password** that allows users to sign-in to the AWS Management Console.

Console password*

Autogenerated password

Custom password

Require password reset

User must create a new password at next sign-in

Users automatically get the [IAMUserChangePassword](#) policy to allow them to change their own password.

* Required

[Cancel](#)

[Next: Permissions](#)

Add user

1 2 3 4 5

Set permissions

 [Add user to group](#)

 [Copy permissions from existing user](#)

 [Attach existing policies directly](#)

[Get started with groups](#)

You haven't created any groups yet. Using groups is a best-practice way to manage users' permissions by job functions, AWS service access, or your custom permissions. Get started by creating a group. [Learn more](#)

[Create group](#)

Set permissions boundary

[Cancel](#)

[Previous](#)

[Next: Tags](#)

Add user

1 2 3 4 5

▼ Set permissions

 Add user to group  Copy permissions from existing user  Attach existing policies directly

Get started with groups
You haven't created any groups yet. Using groups is a best-practice way to manage users' permissions by job functions, AWS service access, or your custom permissions. Get started by creating a group. [Learn more](#)

Create group

► Set permissions boundary

Cancel Previous Next: Tags

Add user

1 2 3 4 5

▼ Set permissions

 Add user to group  Copy permissions from existing user  Attach existing policies directly

Create policy 

Filter policies  poweruseraccess **Showing 1 result**

	Policy name	Type	Used as
<input checked="" type="checkbox"/>	 PowerUserAccess	Job function	None

PowerUserAccess
Provides full access to AWS services and resources, but does not allow management of Users and groups.

Policy summary  

Service	Access level	Resource	Request condition
Allow (330 of 330 services)			
Access Analyzer	Full access	All resources	None
Account	Full: List	All resources	None
Activate	Full access	All resources	None
Alexa for Business	Full access	All resources	None
AMP	Full access	All resources	None
Amplify	Full access	All resources	None
Amplify Admin	Full access	All resources	None

Cancel Previous Next: Tags

Add user

1 2 3 4 5

Set permissions

Add user to group

Copy permissions from existing user

Attach existing policies directly

Create policy



Filter policies

poweruseraccess

Showing 1 result

Policy name

PowerUserAccess

Type

Used as

Job function

None

PowerUserAccess

Provides full access to AWS services and resources, but does not allow management of Users and groups.

Policy summary

{ } JSON

Filter

Cancel

Previous

Next: Tags

Add user

1 2 3 4 5

Add tags (optional)

IAM tags are key-value pairs you can add to your user. Tags can include user information, such as an email address, or can be descriptive, such as a job title. You can use the tags to organize, track, or control access for this user. [Learn more](#)

Key	Value (optional)	Remove
-----	------------------	--------

Add new key

You can add 50 more tags.

Cancel

Previous

Next: Review

Review your choices. After you create the user, you can view and download the autogenerated password and access key.

User details

User name	kishanraydevops
AWS access type	AWS Management Console access - with a password
Console password type	Autogenerated
Require password reset	Yes
Permissions boundary	Permissions boundary is not set

Permissions summary

The following policies will be attached to the user shown above.

Type	Name
Managed policy	PowerUserAccess
Managed policy	IAMUserChangePassword

Tags

No tags were added

[Cancel](#)

[Previous](#)

[Create user](#)

Review your choices. After you create the user, you can view and download the autogenerated password and access key.

User details

User name	kishanraydevops
AWS access type	AWS Management Console access - with a password
Console password type	Autogenerated
Require password reset	Yes
Permissions boundary	Permissions boundary is not set

Permissions summary

The following policies will be attached to the user shown above.

Type	Name
Managed policy	PowerUserAccess
Managed policy	IAMUserChangePassword

Tags

No tags were added

[Cancel](#)

[Previous](#)

[Create user](#)

Success

You successfully created the users shown below. You can view and download user security credentials. You can also email users instructions for signing in to the AWS Management Console. This is the last time these credentials will be available to download. However, you can create new credentials at any time.

Users with AWS Management Console access can sign-in at: <https://900437100429.signin.aws.amazon.com/console>

 [Download .csv](#)

	User	Password	Email login instructions
▶	kishanraydevops	***** Show	Send email

[Close](#)**Success**

You successfully created the users shown below. You can view and download user security credentials. You can also email users instructions for signing in to the AWS Management Console. This is the last time these credentials will be available to download. However, you can create new credentials at any time.

Users with AWS Management Console access can sign-in at: <https://900437100429.signin.aws.amazon.com/console>

 [Download .csv](#)

	User	Password	Email login instructions
▶	kishanraydevops	***** Show	Send email

[Close](#)

From: roykishan8@gmail.com



To:

Cc & Bcc

Welcome to Amazon Web Services

Hello,

You now have access to the AWS Management Console for the account ending in 0429. -----

Sign-in URL: <https://900437100429.signin.aws.amazon.com/console>

User name: kishanraydevops

Your password will be provided separately by your AWS account administrator. During your first sign-in, you must change your password.

Stay connected with AWS by creating a profile: <https://pages.awscloud.com/IAM-communication-preferences.html>

Sincerely,

Your AWS Account Administrator

Sent from [Mail](#) for Windows

Success

You successfully created the users shown below. You can view and download user security credentials. You can also email users instructions for signing in to the AWS Management Console. This is the last time these credentials will be available to download. However, you can create new credentials at any time.

Users with AWS Management Console access can sign-in at: <https://900437100429.signin.aws.amazon.com/console>

Download .csv

	User	Password	Email login instructions
--	------	----------	--------------------------

► kishanraydevops

***** Show

Send email



Sign in as IAM user

Account ID (12 digits) or account alias

IAM user name

Password

Remember this account

Sign in

[Sign in using root user email](#)

[Forgot password?](#)



Sign in as IAM user

Account ID (12 digits) or account alias

900437100429

IAM user name

kishanraydevops

Password

.....

Remember this account

Sign in

[Sign in using root user email](#)

[Forgot password?](#)

S3 Object Lambda

Add your own code to process data retrieved from Amazon S3 before returning it to an application



You must change your password to continue

AWS account 900437100429

IAM user name kishanraydevops

Old password

New password

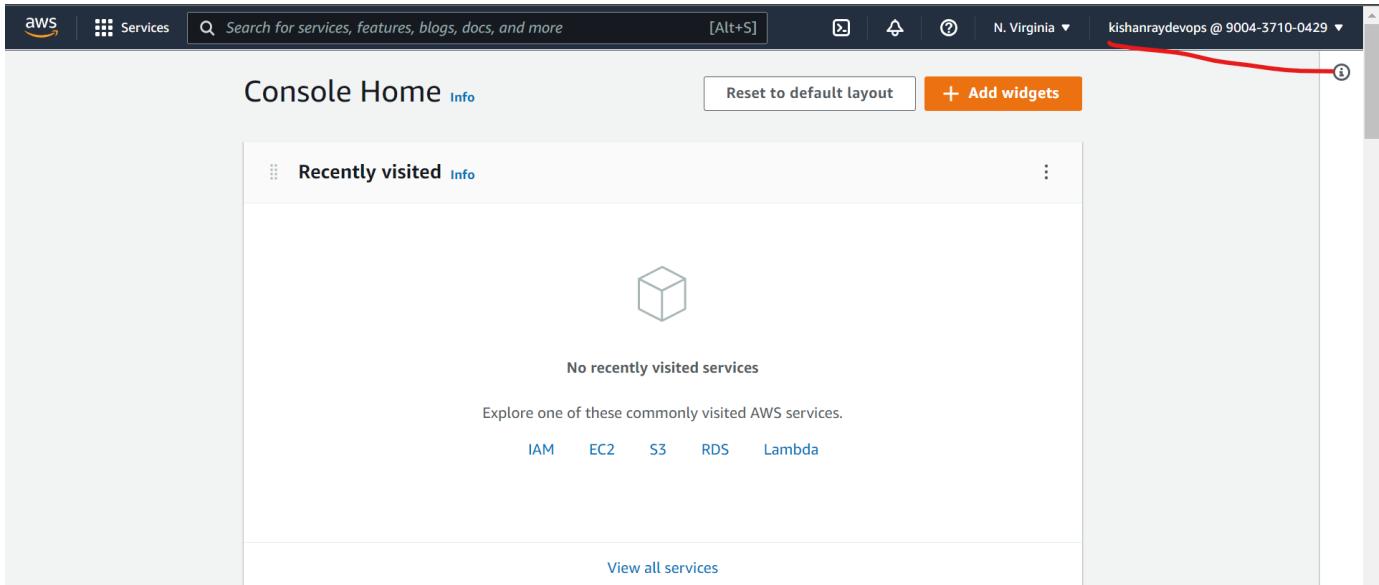
Retype new password

Confirm password change

[Sign in using root user email](#)

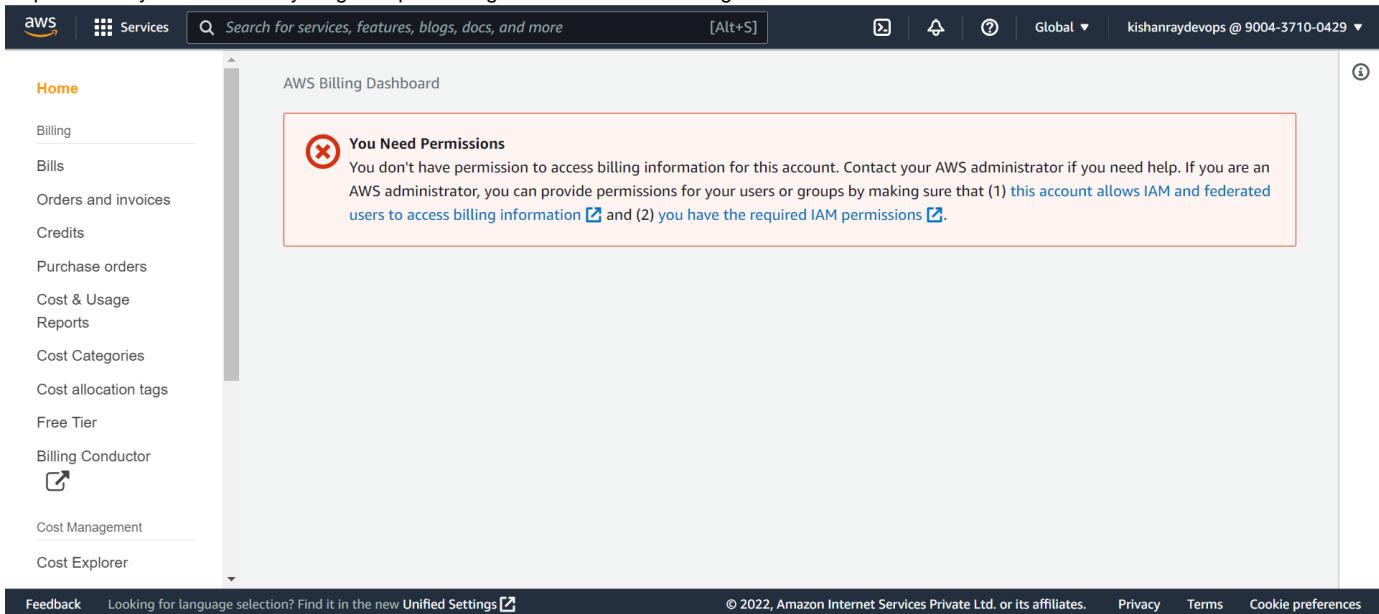
English ▾

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The screenshot shows the AWS Console Home page. At the top, there is a search bar with the placeholder "Search for services, features, blogs, docs, and more". To the right of the search bar are buttons for "[Alt+S]" and a user profile with the email "kishanraydevops @ 9004-3710-0429". Below the search bar, the title "Console Home" is displayed with an "Info" link. To the right of the title are buttons for "Reset to default layout" and "+ Add widgets". A red arrow points from the top right towards the "+ Add widgets" button. The main content area is titled "Recently visited" with an "Info" link. It displays a message "No recently visited services" with a small cube icon. Below this, it says "Explore one of these commonly visited AWS services." with links to IAM, EC2, S3, RDS, and Lambda. At the bottom of the content area is a "View all services" link.

As poweruser you can do everything except creating new user and use billing.



The screenshot shows the AWS Billing Dashboard. The left sidebar contains a list of navigation links: Home, Billing, Bills, Orders and invoices, Credits, Purchase orders, Cost & Usage Reports, Cost Categories, Cost allocation tags, Free Tier, Billing Conductor (with a refresh icon), Cost Management, and Cost Explorer. The main content area is titled "AWS Billing Dashboard". A red-bordered box contains an error message: "You Need Permissions" with a red X icon. The message states: "You don't have permission to access billing information for this account. Contact your AWS administrator if you need help. If you are an AWS administrator, you can provide permissions for your users or groups by making sure that (1) [this account allows IAM and federated users to access billing information](#) and (2) [you have the required IAM permissions](#)". At the bottom of the page, there are links for "Feedback", "Unified Settings", "© 2022, Amazon Internet Services Private Ltd. or its affiliates.", "Privacy", "Terms", and "Cookie preferences".

USER GROUP

If you want to give similar permissions to multiple users in your organisation then you can create usergroup and add all users in that group. All users added in that group will have the same permission.

Identity and Access Management (IAM)

Search IAM

Dashboard

Access management

User groups (0) **Create group**

Users

Roles

Policies

Identity providers

Account settings

Access reports

Access analyzer

Archive rules

Analyzers

Settings

Credential report

Organization activity

IAM > User groups > Create user group

Create user group

Name the group

User group name
Enter a meaningful name to identify this group.

devspoweruser

Maximum 128 characters. Use alphanumeric and '+-, @_-' characters.

Add users to the group - *Optional* (1) Info

An IAM user is an entity that you create in AWS to represent the person or application that uses it to interact with AWS. A user can belong to up to 10 groups.

Search

< 1 >

Add users to the group - *Optional* (Selected 1/1) Info

An IAM user is an entity that you create in AWS to represent the person or application that uses it to interact with AWS. A user can belong to up to 10 groups.

Search

< 1 >

User name

Groups Last activity Creation time

kishanraydevops

0 11 minutes ago 17 minutes ago

Attach permissions policies - *Optional* (Selected 1/753)

Info
You can attach up to 10 policies to this user group. All the users in this group will have permissions that are defined in the selected policies.

Filter policies by property or policy name and press enter

"poweruseraccess" X Clear filters

Policy name	Type	Description
PowerUserAccess	AWS managed - job function	Provides full access to AWS services and resour...

Cancel Create group

devopspoweruser user group created.

View group X

IAM > User groups

User groups (1) *Info*
A user group is a collection of IAM users. Use groups to specify permissions for a collection of users.

Filter User groups by property or group name and press enter

Group name	Users	Permissions	Creation time
devopspoweruser	1	Defined	

Now try to add a new user (with programmatic access) in same group. Programmatic access means using aws with cli not with console.

Identity and Access Management (IAM)

Search IAM

Dashboard

Access management

User groups

Users

Roles

Policies

Identity providers

Account settings

Access reports

IAM > Users

Users (1) *Info*
An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.

Find users by username or access key

User name	Groups	Last activity	MFA	Password age	Active key age
kishanraydevops	None	14 minutes ago	None	13 minutes ago	

Add users

Resource Groups & Tag Editor

Add user

1 2 3 4 5

Set user details

You can add multiple users at once with the same access type and permissions. [Learn more](#)

User name* kishanraycli

[+ Add another user](#)

Select AWS access type

Select how these users will primarily access AWS. If you choose only programmatic access, it does NOT prevent users from accessing the console using an assumed role. Access keys and autogenerated passwords are provided in the last step. [Learn more](#)

Select AWS credential type* Access key - Programmatic access
Enables an **access key ID** and **secret access key** for the AWS API, CLI, SDK, and other development tools.

Password - AWS Management Console access
Enables a **password** that allows users to sign-in to the AWS Management Console.

* Required

Cancel [Next: Permissions](#)

Set permissions

Add user to group 

Copy permissions from existing user

Attach existing policies directly

Add user to an existing group or create a new one. Using groups is a best-practice way to manage user's permissions by job functions. [Learn more](#)

Add user to group

[Create group](#) [Refresh](#)

Search: Showing 1 result

Group	Attached policies
devopspoweruser	PowerUserAccess

 Set permissions boundary

Cancel Previous [Next: Tags](#)

▼ Set permissions

 Add user to group

 Copy permissions from existing user

 Attach existing policies directly

Add user to an existing group or create a new one. Using groups is a best-practice way to manage user's permissions by job functions. [Learn more](#)

Add user to group

[Create group](#)

 Refresh

 Search

Showing 1 result

Group ▾

Attached policies

devopspoweruser

PowerUserAccess

► Set permissions boundary

[Cancel](#)

[Previous](#)

[Next: Tags](#)

Add user

1

2

3

4

5

Add tags (optional)

IAM tags are key-value pairs you can add to your user. Tags can include user information, such as an email address, or can be descriptive, such as a job title. You can use the tags to organize, track, or control access for this user. [Learn more](#)

Key	Value (optional)	Remove
Add new key		

You can add 50 more tags.

[Cancel](#)

[Previous](#)

[Next: Review](#)

Review

Review your choices. After you create the user, you can view and download the autogenerated password and access key.

User details

User name	kishanraycli
AWS access type	Programmatic access - with an access key
Permissions boundary	Permissions boundary is not set

Permissions summary

The user shown above will be added to the following groups.

Type	Name
Group	devopspoweruser

Tags

No tags were added

[Cancel](#) [Previous](#) [Create user](#)

Success

You successfully created the users shown below. You can view and download user security credentials. You can also email users instructions for signing in to the AWS Management Console. This is the last time these credentials will be available to download. However, you can create new credentials at any time.

Users with AWS Management Console access can sign-in at: <https://900437100429.signin.aws.amazon.com/console>

[Download .csv](#)

User	Access key ID	Secret access key
kishanraycli	AKIA5DJR3Y6GU7F6WB5Q	***** Show

[Close](#)

Identity and Access Management (IAM)

[Search IAM](#)

[Dashboard](#)

Access management

[User groups](#)

[Users](#)

[Roles](#)

[Policies](#)

[Identity providers](#)

[Account settings](#)

Access reports

[Access analyzer](#)
[Archive rules](#)

[The user kishanraycli have been created.](#)

[IAM](#) > [Users](#)

Users (2) [Info](#)

An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.

<input type="checkbox"/>	User name	Groups	Last activity	MFA	Password a...	Active key age
<input type="checkbox"/>	kishanraycli	devopspoweruser		None	None	<input checked="" type="checkbox"/> Now
<input type="checkbox"/>	kishanraydevops	devopspoweruser		None	<input checked="" type="checkbox"/> 20 minutes ago	-

To connect with aws using cli

Google x Microphone Search

All Books Videos News Images More Tools

About 5,84,00,000 results (0.37 seconds)

<https://docs.aws.amazon.com/cli/2.0/getting-started/install> ::

Installing or updating the latest version of the AWS CLI

Install or update the **AWS CLI** · Unzip the installer. If your Linux distribution doesn't have a built-in unzip command, use an equivalent to unzip it. · Run the ...

[Past releases](#) · [Installing, updating, and...](#) · [Prerequisites to use the AWS...](#) · [Docker](#)

Installing or updating the latest version of the AWS CLI

[PDF](#) | [RSS](#)

This topic describes how to install or update the latest release of the AWS Command Line Interface (AWS CLI) on supported operating systems. For information on the latest releases of AWS CLI, see the [AWS CLI change notes](#) on GitHub.

To install a past release of the AWS CLI, see [Installing past releases of the AWS CLI version 2](#). For uninstall instructions, see [Uninstalling the AWS CLI version 2](#).

Topics

- [AWS CLI installation instructions](#)
- [Troubleshooting AWS CLI install and uninstall errors](#)



from AWS CLI version 1 to version 2.

For installation instructions, expand the section for your operating system.

► **Linux**

► **macOS**

► **Windows**

You can follow the steps as per your operating system

▼ Windows

Installation requirements

- We support the AWS CLI on Microsoft-supported versions of 64-bit Windows.
- Admin rights to install software

Install or update the AWS CLI

To update your current installation of AWS CLI on Windows, download a new installer each time you update to overwrite previous versions. AWS CLI is updated regularly. To see when the latest version was released, see the [AWS CLI changelog](#) on GitHub.

1. Download and run the AWS CLI MSI installer for Windows (64-bit):

<https://awscli.amazonaws.com/AWSCLIV2.msi>

Alternatively, you can run the `msiexec` command to run the MSI installer.

```
C:\> msiexec.exe /i https://awscli.amazonaws.com/AWSCLIV2.msi
```

For various parameters that can be used with `msiexec`, see [msiexec](#) on the *Microsoft Docs* website.

2. To confirm the installation, open the **Start** menu, search for `cmd` to open a command prompt window, and at the command prompt use the `aws --version` command.

```
C:\> aws --version
aws-cli/2.4.5 Python/3.8.8 Windows/10 exe/AMD64 prompt/off
```

If Windows is unable to find the program, you might need to close and reopen the command prompt window to refresh the path, or follow the troubleshooting in [Troubleshooting AWS CLI errors](#).

On this page

AWS CLI installation in:

Troubleshooting AWS CLI and uninstall errors

Next steps

Name	Date modified	Type	Size
AWSCLIV2	15-07-2022 21:25	Windows Installer ...	29,888 KB



Welcome to the AWS Command Line Interface v2 Setup Wizard

The Setup Wizard will install AWS Command Line Interface v2 on your computer. Click Next to continue or Cancel to exit the Setup Wizard.

[Back](#)[Next](#)[Cancel](#)



End-User License Agreement

Please read the following license agreement carefully

AWS Command Line Interface

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<http://aws.amazon.com/apache2.0/>

I accept the terms in the License Agreement

Print

Back

Next

Cancel



Custom Setup

Select the way you want features to be installed.

..... AWS Command Line Interface V2

The AWS Command Line Interface is a unified tool to manage your AWS services.

This feature requires 63MB on your hard drive.

Location: C:\Program Files\Amazon\AWSCLIV2\

[Browse...](#)

[Reset](#)

[Disk Usage](#)

[Back](#)

[Next](#)

[Cancel](#)

Ready to install AWS Command Line Interface v2



Click **Install** to begin the installation. Click **Back** to review or change any of your installation settings. Click **Cancel** to exit the wizard.

Back

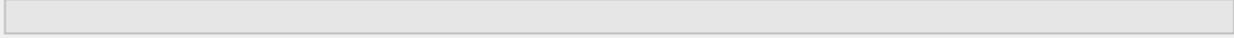
Install

Cancel

**Installing AWS Command Line Interface v2**

Please wait while the Setup Wizard installs AWS Command Line Interface v2.

Status:

[Back](#)[Next](#)[Cancel](#)



Completed the AWS Command Line Interface v2 Setup Wizard

Click the Finish button to exit the Setup Wizard.

Back

Finish

Cancel

2. To confirm the installation, open the **Start** menu, search for `cmd` to open a command prompt window, and at the command prompt use the `aws --version` command.

```
C:\> aws --version
aws-cli/2.4.5 Python/3.8.8 Windows/10 exe/AMD64 prompt/off
```

If Windows is unable to find the program, you might need to close and reopen the command prompt window to refresh the path, or follow the troubleshooting in [Troubleshooting AWS CLI errors](#).

Open cmd in windows

```
C:\Users\royki>aws --version
aws-cli/2.7.15 Python/3.9.11 Windows/10 exe/AMD64 prompt/off

C:\Users\royki>
```

Now aws is installed you can use aws cli now.

First we have to login to aws using command:

```
aws configure
```

```
C:\Users\royki>aws configure
AWS Access Key ID [*****JZZP]: AKIA5DJR3Y6GU7F6WB5Q
AWS Secret Access Key [*****jhgv]: RCMVppM*****2hZ4yWHYZfP52YxCBX
Default region name [ap-south-1]:
Default output format [None]:
```

```
C:\Users\royki>
```

```
aws
```

```
C:\Users\royki>aws
usage: aws [options] <command> <subcommand> [<subcommand> ...] [parameters]
To see help text, you can run:
```

```
aws help
aws <command> help
aws <command> <subcommand> help
```

```
aws: error: the following arguments are required: command
```

```
C:\Users\royki>
```

```
aws ec2 help
```

```
C:\Users\royki>aws ec2 help
```

```
ec2
^^^
```

Description

```
*****
```

Amazon Elastic Compute Cloud (Amazon EC2) provides secure and resizable computing capacity in the Amazon Web Services Cloud. Using Amazon EC2 eliminates the need to invest in hardware up front, so you can develop and deploy applications faster. Amazon Virtual Private Cloud (Amazon VPC) enables you to provision a logically isolated section of the Amazon Web Services Cloud where you can launch Amazon Web Services resources in a virtual network that you've defined. Amazon Elastic Block Store (Amazon EBS) provides block level storage volumes for use with EC2 instances. EBS volumes are highly available and reliable storage volumes that can be attached to any running instance and used like a hard drive.

To learn more, see the following resources:

```
aws ec2 describe-instances
```

```
C:\Users\royki>aws ec2 describe-instances
```

```
{  
  "Reservations": [  
    {  
      "Groups": [],  
      "Instances": [  
        {  
          "AmiLaunchIndex": 0,  
          "ImageId": "ami-08df646e18b182346",  
          "InstanceId": "i-07baed219a52c8bd5",  
          "InstanceType": "t2.micro",  
          "KeyName": "mumbai-ec2-new",  
          "LaunchTime": "2022-07-15T02:13:57+00:00",  
          "Monitoring": {  
            "State": "disabled"  
          }  
        }  
      ]  
    }  
  ]  
}
```

```
#similarly for s3
aws s3 help
```

```
C:\Users\royki>aws s3 help
```

```
s3
^^
```

Description

```
*****
```

This section explains prominent concepts and notations in the set of high-level S3 commands provided.

If you are looking for the low level S3 commands for the CLI, please see the "s3api" command reference page.

Path Argument Type

```
=====
```

Whenever using a command, at least one path argument must be specified. There are two types of path arguments: "LocalPath" and "S3Uri".

"LocalPath": represents the path of a local file or directory. It can be written as an absolute path or relative path.

```
aws s3 ls
```

```
C:\Users\royki>aws s3 ls
2022-07-12 13:53:22 kroybucket
```

```
C:\Users\royki>
```

Amazon S3

Buckets

Access Points

Object Lambda Access Points

Multi-Region Access Points

Batch Operations

Access analyzer for S3

Block Public Access settings for this account

Storage Lens

Dashboards

AWS Organizations settings

Amazon S3 > Buckets

Account snapshot

View Storage Lens dashboard

Buckets (1) Info

Buckets are containers for data stored in S3. [Learn more](#)

[Create bucket](#)

Find buckets by name

Name	AWS Region	Access	Creation date
kroybucket	Asia Pacific (Mumbai) ap-south-1	Bucket and objects not public	July 12, 2022, 13:20:44 (UTC+05:30)

To launch new ec2 instance using cli

Resource Groups & Tag Editor

Elastic Block Store

Volumes [New](#)

Snapshots [New](#)

Lifecycle Manager [New](#)

Network & Security

Security Groups [Create security group](#)

Elastic IPs

Placement Groups

Key Pairs

Network Interfaces

Load Balancing

Load Balancers

Target Groups [New](#)

Auto Scaling

Launch Configurations

Security Groups (10) Info

Actions

Export security groups to CSV

Filter security groups

Name	Security group ID	Security group name	VPC ID	Description
sg-006b57ffee517f0a1	launch-wizard-9	vpc-0fd13d632aab77db1	launch-wiz	
sg-04181163735abd692	launch-wizard-1	vpc-0fd13d632aab77db1	launch-wiz	
sg-07099e90ae75fd704	launch-wizard-4	vpc-0fd13d632aab77db1	launch-wiz	
sg-087307dec59062d39	launch-wizard-2	vpc-0fd13d632aab77db1	launch-wiz	
sg-0963f51f356df7227	launch-wizard-3	vpc-0fd13d632aab77db1	launch-wiz	
sg-0b92e40e8e625e3fd	launch-wizard-5	vpc-0fd13d632aab77db1	launch-wiz	
sg-0d72898e5ee9159b0	default	vpc-0fd13d632aab77db1	default VP	

Create security group Info

A security group acts as a virtual firewall for your instance to control inbound and outbound traffic. To create a new

Basic details

Security group name Info

Name cannot be edited after creation.

Description Info

VPC Info

 X

Inbound rules Info

Type Info

Protocol Info

Port range Info

Source Info

Description - optional Info

SSH

TCP

22

Anywh...

▼



0.0.0.0/0

X

Del
ete

Add rule

Add rule

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.

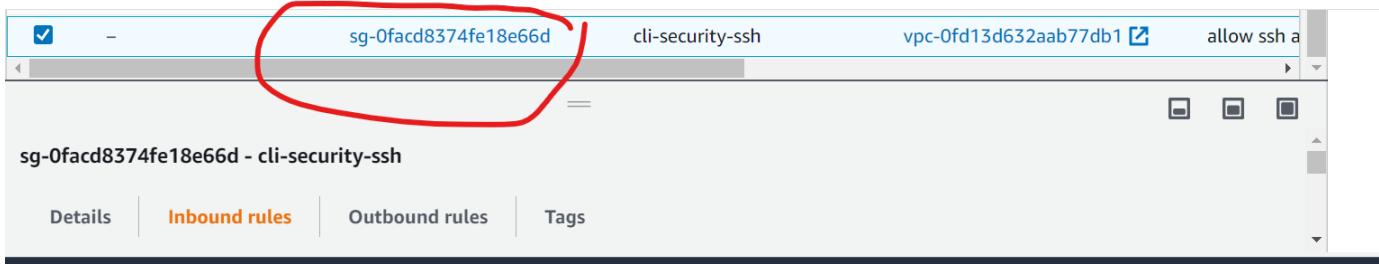
No tags associated with the resource.

Add new tag

You can add up to 50 more tags

Cancel

Create security group

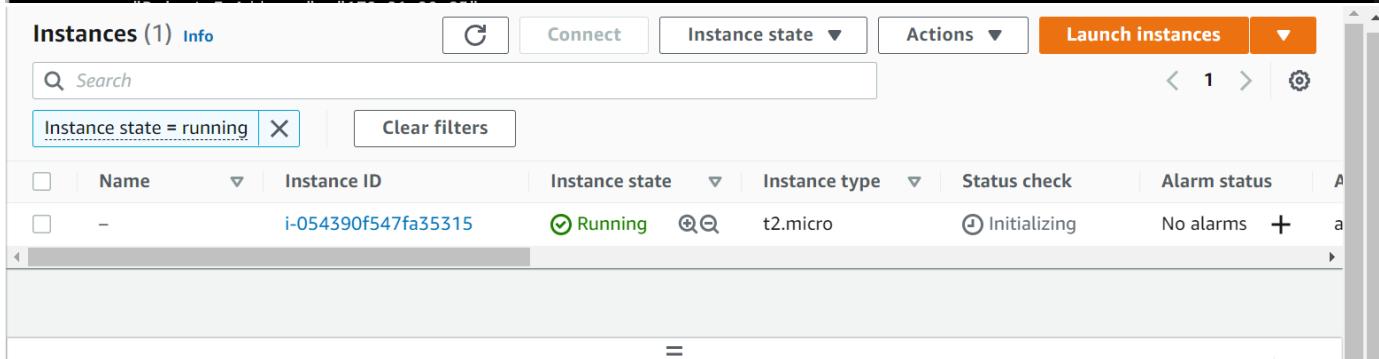


sg-0facd8374fe18e66d - cli-security-ssh

Details **Inbound rules** Outbound rules Tags

```
aws ec2 run-instances --image-id ami-08df646e18b182346 --instance-type t2.micro --count 1 --security-groups-ids <replace with cli-security-ssh id> --key-name <your key pair name>
```

```
C:\Users\royki>aws ec2 run-instances --image-id ami-08df646e18b182346 --instance-type t2.micro --count 1 --security-group-ids sg-0facd8374fe18e66d --key-name mumbai-ec2-new
{
  "Groups": [],
  "Instances": [
    {
      "AmiLaunchIndex": 0,
      "ImageId": "ami-08df646e18b182346",
      "InstanceId": "i-054390f547fa35315",
      "InstanceType": "t2.micro",
      "KeyName": "mumbai-ec2-new",
      "LaunchTime": "2022-07-15T17:03:02+00:00",
      "Monitoring": {
        "State": "disabled"
      },
      "Placement": {
        "AvailabilityZone": "ap-south-1a",
        "GroupName": "",
        "Tenancy": "default"
      },
      "PrivateDnsName": "ip-172-31-39-85.ap-south-1.compute.internal",
      "PrivateIpAddress": "172.31.39.85"
    }
  ]
}
```



Instances (1) [Info](#)

[C](#) [Connect](#) [Instance state ▾](#) [Actions ▾](#) [Launch instances](#) ▾

Search

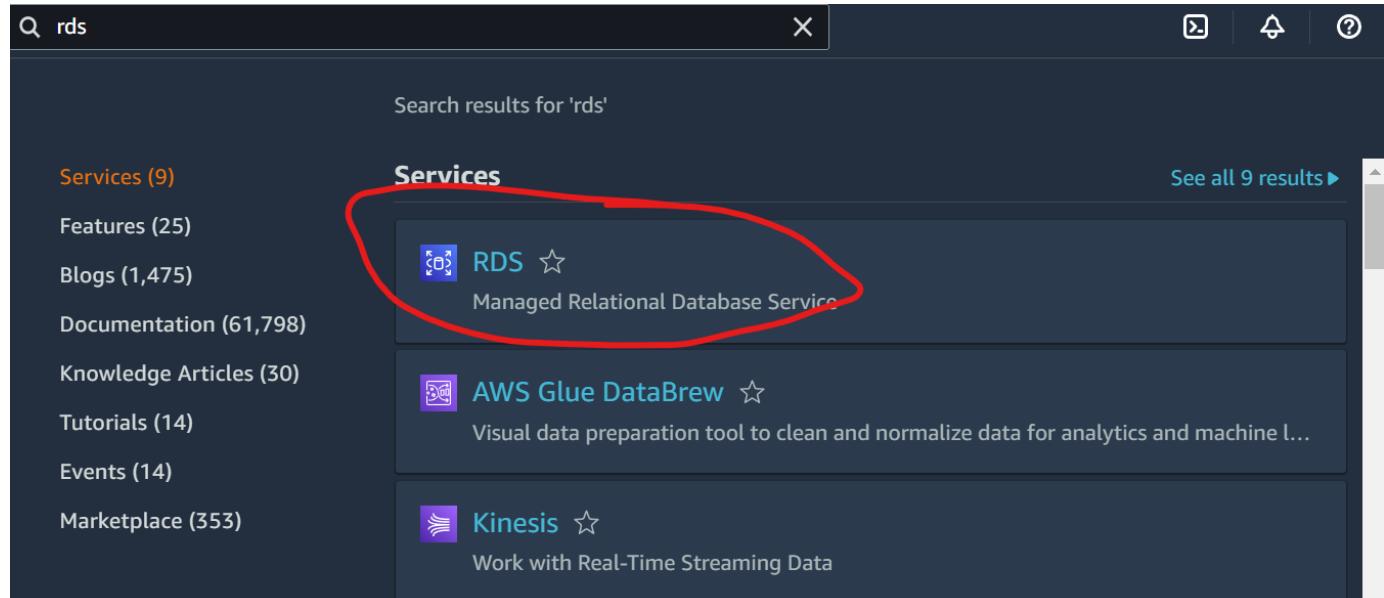
Instance state = running [X](#) [Clear filters](#)

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status
<input type="checkbox"/>	—	i-054390f547fa35315	Running	t2.micro	Initializing	No alarms +

```
aws ec2 describe-instance-status
```

```
C:\Users\royki>aws ec2 describe-instance-status
{
  "InstanceStatuses": [
    {
      "AvailabilityZone": "ap-south-1a",
      "InstanceId": "i-054390f547fa35315",
      "InstanceState": {
        "Code": 16,
        "Name": "running"
      },
      "InstanceStatus": {
        "Details": [
          {
            "Name": "reachability",
            "Status": "passed"
          }
        ],
        "Status": "ok"
      },
      "SystemStatus": {
        "Details": [
          {
            "Name": "reachability",
            "Status": "passed"
          }
        ],
        "Status": "ok"
      }
    }
  ]
}
```

To connect with RDS database



The screenshot shows the AWS search interface with the search term 'rds' entered. The results are filtered for 'Services' (9 results). The 'RDS' service card is highlighted with a red circle. The card displays the service name 'RDS' with a star icon, and the description 'Managed Relational Database Service'.

Category	Count	Service	Description
Services	9	RDS	Managed Relational Database Service
Features	25		
Blogs	1,475		
Documentation	61,798		
Knowledge Articles	30		
Tutorials	14		
Events	14		
Marketplace	353		

Amazon RDS

Dashboard

Databases

Query Editor

Performance Insights

Snapshots

Automated backups

Reserved instances

Proxies

Subnet groups

Parameter groups

Option groups

Custom engine versions

Events

Amazon Aurora

Amazon Aurora is a MySQL- and PostgreSQL-compatible enterprise-class database, starting at <\$1/day. Aurora supports up to 64TB of auto-scaling storage capacity, 6-way replication across three availability zones, and 15 low-latency read replicas.

[Learn more](#)

Create database

Or, [Restore Aurora DB cluster from S3](#)

Resources

Refresh

You are using the following Amazon RDS resources in the Asia Pacific (Mumbai) region (used/quota)

DB Instances (0/20)

Allocated storage (0 TB/100 TB)

[Increase DB instances limit](#)

DB Clusters (0/40)

Reserved instances (0/20)

Parameter groups (0)

Default (0)

Custom (0/40)

Option groups (0)

Default (0)

Recommended for you

Time-Series Tables in PostgreSQL

Step-by-step guide to design high-performance time series data tables on Amazon RDS for PostgreSQL. [Learn more](#)

Implementing Cross-Region DR

Learn how to set up Cross-Region DR for Amazon RDS. [Learn more](#)

RDS > Create database

Create database

Choose a database creation method [Info](#)

Standard create

You set all of the configuration options, including ones for availability, security, backups, and maintenance.

Easy create

Use recommended best-practice configurations. Some configuration options can be changed after the database is created.

Configuration

Configuration

Engine type [Info](#)

Amazon Aurora



MySQL



MariaDB



PostgreSQL



Oracle

ORACLE®

Microsoft SQL Server



DB instance size

DB instance size

Production

db.r6g.xlarge
4 vCPUs
32 GiB RAM
500 GiB
1.146 USD/hour

Dev/Test

db.r6g.large
2 vCPUs
16 GiB RAM
100 GiB
0.260 USD/hour

Free tier

db.t3.micro
2 vCPUs
1 GiB RAM
20 GiB
0.029 USD/hour

DB instance identifier

Type a name for your DB instance. The name must be unique across all DB instances owned by your AWS account in the current AWS Region.

database-1

The DB instance identifier is case-insensitive, but is stored as all lowercase (as in "mydbinstance"). Constraints: 1 to 60 alphanumeric characters or hyphens. First character must be a letter. Can't contain two consecutive hyphens. Can't end with a hyphen.

Master username [Info](#)

Type a login ID for the master user of your DB instance.

admin

1 to 16 alphanumeric characters. First character must be a letter.

Master username [Info](#)

Type a login ID for the master user of your DB instance.

admin

1 to 16 alphanumeric characters. First character must be a letter.

Auto generate a password

Amazon RDS can generate a password for you, or you can specify your own password.

Master password [Info](#)

Constraints: At least 8 printable ASCII characters. Can't contain any of the following: / (slash), '(single quote), "(double quote) and @ (at sign).

Confirm password [Info](#)

Amazon RDS can generate a password for you, or you can specify your own password.

Master password [Info](#)

.....

Constraints: At least 8 printable ASCII characters. Can't contain any of the following: / (slash), '(single quote), "(double quote) and @ (at sign).

Confirm password [Info](#)

.....

► View default settings for Easy create

Easy create sets the following configurations to their default values, some of which can be changed later. If you want to change any of these settings now, use [Standard Create](#).

 You are responsible for ensuring that you have all of the necessary rights for any third-party products or services that you use with AWS services.

Cancel

Create database

 Resource Groups & Tag Editor

Amazon RDS X

Creating database **database-1**
Your database might take a few minutes to launch.

View credential details X

RDS > Databases

Databases Group resources     

DB identifier	Role	Engine	Region & AZ	Size
database-1	Instance	MySQL Community	ap-south-1a	db.t3.micro

RDS > Databases

Databases Group resources     

Engine	Region & AZ	Size	Status	CPU	Current activity	Mail
MySQL Community	ap-south-1a	db.t3.micro	 Available	 4.68%	 0 Connections	none

Login to ec2-instance

Meanwhile open this : https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER_ConnectToInstance.html

```
Last login: Fri Jul 15 02:15:11 2022 from 103.209.71.64
```

```
__|__|_) Amazon Linux 2 AMI  
__|\\__|__|
```

```
https://aws.amazon.com/amazon-linux-2/  
9 package(s) needed for security, out of 18 available  
Run "sudo yum update" to apply all updates.  
[ec2-user@ip-172-31-37-58 ~]$
```

i-07baed219a52c8bd5 (kishan-mumbai)

Public IPs: 3.108.184.185 Private IPs: 172.31.37.58

```
sudo su root  
yum update -y
```

```
Last login: Fri Jul 15 02:15:11 2022 from 103.209.71.64
```

```
__|__|_) Amazon Linux 2 AMI  
__|\\__|__|
```

```
https://aws.amazon.com/amazon-linux-2/  
9 package(s) needed for security, out of 18 available  
Run "sudo yum update" to apply all updates.  
[ec2-user@ip-172-31-37-58 ~]$ sudo su root  
[root@ip-172-31-37-58 ec2-user]# yum update
```

- To learn how to authenticate to MySQL using one of the authentication methods for MySQL, see [Authentication method](#) in the MySQL documentation.
- To learn how to authenticate to MySQL using IAM database authentication, see [IAM database authentication for MariaDB, MySQL, and PostgreSQL](#).

You can connect to a MySQL DB instance by using tools like the MySQL command-line client. For more information on using the MySQL command-line client, see [mysql - the MySQL command-line client](#) in the MySQL documentation. One GUI-based application you can use to connect is MySQL Workbench. For more information, see the [Download MySQL Workbench](#) page. For information about installing MySQL (including the MySQL command-line client), see [Installing and upgrading MySQL](#).

Most Linux distributions include the MariaDB client instead of the Oracle MySQL client. To install the MySQL command-line client on most RPM-based Linux distributions, including Amazon Linux 2, run the following command:

```
yum install mariadb
```

To install the MySQL command-line client on most DEB-based Linux distributions, run the following command:

```
apt-get install mariadb-client
```

To check the version of your MySQL command-line client, run the following command:

```
mysql --version
```

To read the MySQL documentation for your current client version, run the following command:

```
man mysql
```

```
yum install mariadb -y
```

```
Complete!
[root@ip-172-31-37-58 ec2-user]# yum install mariadb
```

i-07baed219a52c8bd5 (kishan-mumbai)

```
Installing:
mariadb           x86_64        1:5.5.68-1.amzn2          amzn2-core        8.8 M
Transaction Summary
=====
Install 1 Package

Total download size: 8.8 M
Installed size: 49 M
Downloading packages:
mariadb-5.5.68-1.amzn2.x86_64.rpm
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : 1:mariadb-5.5.68-1.amzn2.x86_64          1/1
  Verifying  : 1:mariadb-5.5.68-1.amzn2.x86_64          1/1

Installed:
  mariadb.x86_64 1:5.5.68-1.amzn2

Complete!
[root@ip-172-31-37-58 ec2-user]#
```

```
mysql --version
```

```
[root@ip-172-31-37-58 ec2-user]# mysql --version
mysql  Ver 15.1 Distrib 5.5.68-MariaDB, for Linux (x86_64) using readline 5.1
[root@ip-172-31-37-58 ec2-user]#
```

Connectivity & security

Monitoring

Connectivity & security

Endpoint & port

Endpoint

database-1.cl3xkbpbih3i.ap-south-1.rds.amazonaws.com

Port

3306

Network

Availability

ap-south-

VPC

[vpc-0fd13d63](#)

Subnet group

default-vpc

0fd13d63

Subnets

Engine version	vCPU	Storage type	Database activity stream
8.0.28	2	General Purpose SSD (gp2)	
DB name	RAM	Storage	Status
-	1 GB	20 GiB	Stopped
License model	Availability		
General Public License	Master username	Provisioned IOPS	
	admin	-	
Option groups	IAM DB authentication	Storage autoscaling	
default:mysql-8-0 In sync	Not enabled	Enabled	
Amazon Resource Name (ARN)	Multi-AZ	Maximum storage threshold	
arn:aws:rds:ap-south-1:900437100429:db:database-1	No	1000 GiB	
Resource ID	Secondary Zone		
db- WR37RUIVJB5W3I5ZKJFG4L CHXU	-		

```
mysql -h <endpoint> -P 3306 -u admin -p
```

```
[root@ip-172-31-37-58 ec2-user]# mysql -h database-1.cl3xkpbih3i.ap-south-1.rds.amazonaws.com -P 3306 -u admin -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MySQL connection id is 27
Server version: 8.0.28 Source distribution
```

```
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.
```

```
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
```

```
MySQL [(none)]> 
```

```
show databases;
```

```
MySQL [(none)]> show databases;  
+-----+  
| Database |  
+-----+  
| information_schema |  
| mysql |  
| performance_schema |  
| sys |  
+-----+  
4 rows in set (0.00 sec)
```

```
MySQL [(none)]> █
```

```
create database mydb;  
show databases;
```

```
MySQL [(none)]> create database mydb;  
Query OK, 1 row affected (0.01 sec)
```

```
MySQL [(none)]> show databases;
+-----+
| Database      |
+-----+
| information_schema |
| mydb          |
| mysql          |
| performance_schema |
| sys           |
+-----+
5 rows in set (0.00 sec)
```

```
MySQL [(none)]> █
```

```
use mydb;
```

refer this link to know about sql: <https://phoenixnap.com/kb/how-to-create-a-table-in-mysql>

```
MySQL [(none)]> use mydb;
Database changed
MySQL [mydb]> CREATE TABLE movies(title VARCHAR(50) NOT NULL,genre VARCHAR(30) NOT NULL,director VARCHAR(60) NOT NULL,release_year INT NOT NULL,PRIMARY KEY(title));
Query OK, 0 rows affected (0.03 sec)

MySQL [mydb]> █
```

```
MySQL [mydb]> DESCRIBE movies;
+-----+-----+-----+-----+-----+-----+
| Field      | Type       | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| title      | varchar(50) | NO   | PRI | NULL    |       |
| genre      | varchar(30) | NO   |     | NULL    |       |
| director   | varchar(60) | NO   |     | NULL    |       |
| release_year | int        | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

```
MySQL [mydb]> █
```

```
MySQL [mydb]> INSERT INTO movies VALUE ("Joker", "psychological thriller", "Todd Phillips", 2019);
Query OK, 1 row affected (0.01 sec)

MySQL [mydb]> select * from movies;
+-----+-----+-----+-----+
| title | genre          | director      | release_year |
+-----+-----+-----+-----+
| Joker | psychological thriller | Todd Phillips | 2019 |
+-----+-----+-----+-----+
1 row in set (0.00 sec)

MySQL [mydb]> █
```

That's all about aws demo.....

Happy Learning 😊 😊

kishan ray 🙌