

## Create EC2 Instance:

**Steps:** Launch instance>enter name>choose AMI type>create a key pair and select it> create a security group and map it>click on launch

The screenshot shows the 'Launch an instance' page in the AWS Management Console. The breadcrumb navigation at the top reads 'EC2 > Instances > Launch an instance'. The main heading is 'Launch an instance' with an 'Info' link. Below this, a brief introduction states: 'Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.'

The first step is 'Name and tags'. The 'Name' field contains 'Sangeetha' and there is an 'Add additional tags' link.

The second step is 'Application and OS Images (Amazon Machine Image)'. It includes a search bar with the placeholder text 'Search our full catalog including 1000s of application and OS images'. Under 'Quick Start', there are buttons for 'Amazon Linux', 'macOS', 'Ubuntu', 'Windows', and 'Red Hat'. The 'Amazon Linux' button is selected, and a 'Browse more AMIs' link is visible to the right.

The selected AMI is 'Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type'. The ID is 'ami-072bfb8ae2c884cc4 (64-bit (x86)) / ami-0089d4ff0b093a1b7 (64-bit (Arm))'. It is marked as 'Free tier eligible'. The description is 'Amazon Linux 2 Kernel 5.10 AMI 2.0.20221103.3 x86\_64 HVM gp2'.



Instance type Info

Instance type

t2.micro Free tier eligible

Family: t2 1 vCPU 1 GiB Memory  
On-Demand Linux pricing: 0.0152 USD per Hour  
On-Demand Windows pricing: 0.0198 USD per Hour

Compare instance types

Key pair (login) Info

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required

Select

Create new key pair

Network settings Info

Edit

Network Info

vpc-0e3d221f42e5633d6

Subnet Info

No preference (Default subnet in any availability zone)

Auto-assign public IP Info

Enable

Firewall (security groups) Info

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Create security group Select existing security group

We'll create a new security group called 'launch-wizard-1' with the following rules:

Allow SSH traffic from Anywhere

Create key pair

Key pairs allow you to connect to your instance securely.

Enter the name of the key pair below. When prompted, store the private key in a secure and accessible location on your computer. You will need it later to connect to your instance. [Learn more](#)

Key pair name

Sangeeth

The name can include upto 255 ASCII characters. It can't include leading or trailing spaces.

Key pair type

RSA  
RSA encrypted private and public key pair

ED25519  
ED25519 encrypted private and public key pair (Not supported for Windows instances)

Private key file format

.pem  
For use with OpenSSH

.ppk  
For use with PuTTY

Cancel Create key pair

**Network settings** [Info](#) Edit

Network [Info](#)  
vpc-0e3d221f42e5633d6

Subnet [Info](#)  
No preference (Default subnet in any availability zone)

Auto-assign public IP [Info](#)  
Enable

**Firewall (security groups)** [Info](#)  
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Create security group  Select existing security group

We'll create a new security group called 'launch-wizard-1' with the following rules:

Allow SSH traffic from Anywhere  
0.0.0.0/0  
Helps you connect to your instance

Allow HTTPS traffic from the internet  
To set up an endpoint, for example when creating a web server

Allow HTTP traffic from the internet  
To set up an endpoint, for example when creating a web server

**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.** ×

ap-northeast-1.console.aws.amazon.com

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Services Search [Option+5] Tokyo Sangetha

EC2 > Instances > Launch an Instance

**Success**  
Successfully initiated launch of instance (i-0f8e76eb2f476987)  
▶ Launch log

**Next Steps**

**Create billing and free tier usage alerts**

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

[Create billing alerts](#)

**Connect to your instance**

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

[Connect to instance](#)

[Learn more](#)

**Connect an RDS database** Help

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

[Connect an RDS database](#)

[Create a new RDS database](#) [Learn more](#)

[View all instances](#)

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# Create Elastic Block Store

Steps: go to EC2 instance>select volumes>create volume>volume type>choose size>create

**Volume settings**

Volume type [Info](#)  
General Purpose SSD (gp2)

Size (GiB) [Info](#)  
1  
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-northeast-1a

Snapshot ID - optional [Info](#)  
Don't create volume from a snapshot

Encryption [Info](#)  
Use Amazon EBS encryption as an encryption solution for your EBS resources associated with your EC2 instances.  
 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.

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

[Cancel](#) [Create volume](#)

Successfully created volume vol-09592e403cab8b9a.

You can now create Amazon Data Lifecycle Manager policies to automate snapshot management directly from this screen. Select the volumes to back up, and then choose **Actions, Create snapshot lifecycle policy**. For more information, see the [Knowledge Center article](#).

**Volumes (3)**

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created	Availability Zone	Volume st...	Alarm status	Attached Instances	Volume st...
-	vol-09592e403cab8b9a	gp2	1 GiB	100	-	-	2022/11/27 20:51 GMT...	ap-northeast-1a	Creating	No alarms	+	-
-	vol-029995e8e0d3fe63e	gp2	8 GiB	100	-	snap-07d1fa1...	2022/11/27 20:34 GMT...	ap-northeast-1c	In-use	No alarms	+	i-0f8e7deb2f47f6987 (Sa...)
-	vol-062883e6859b01...	gp2	8 GiB	100	-	snap-07d1fa1...	2022/11/27 20:39 GMT...	ap-northeast-1c	In-use	No alarms	+	i-0086b1cbe8c6472d6 (D...

## Snapshot Screenshot creation

Steps: create a snapshot>select volume>name>click on create snapshot

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

Create a point-in-time snapshot of an EBS volume and use it as a baseline for new volumes or for data backup. You can create snapshots from an individual volume, or you can create multi-volume snapshots from all of the volumes attached to an instance.

**Snapshot settings**

**Resource type** [Info](#)

**Volume**  
 Create a snapshot from a specific volume.

**Instance**  
 Create multi-volume snapshots from an instance.

**Volume ID**  
 The volume from which to create the snapshot.

**Description**  
 Add a description for your snapshot.  
  
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.

You can add 50 more tags.

Successfully created snapshot snap-0e55533adc0b830ec.

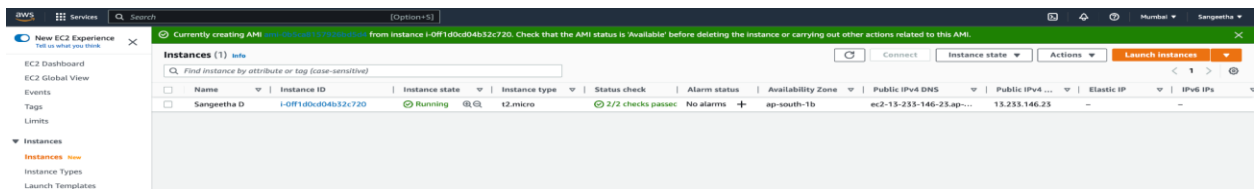
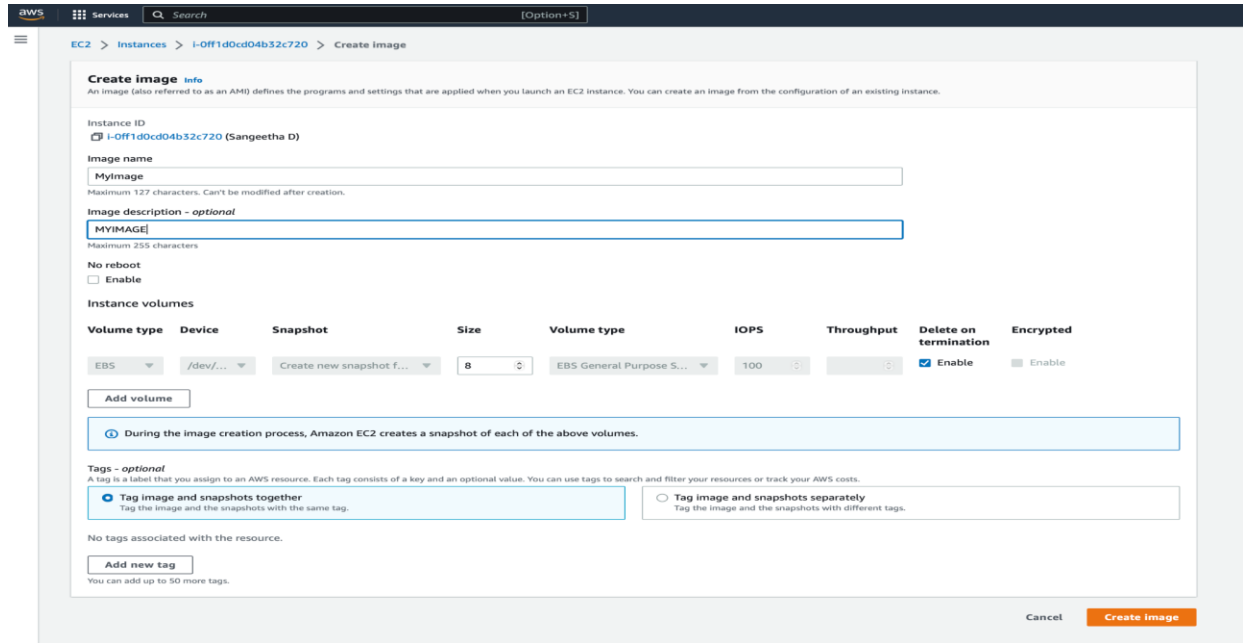
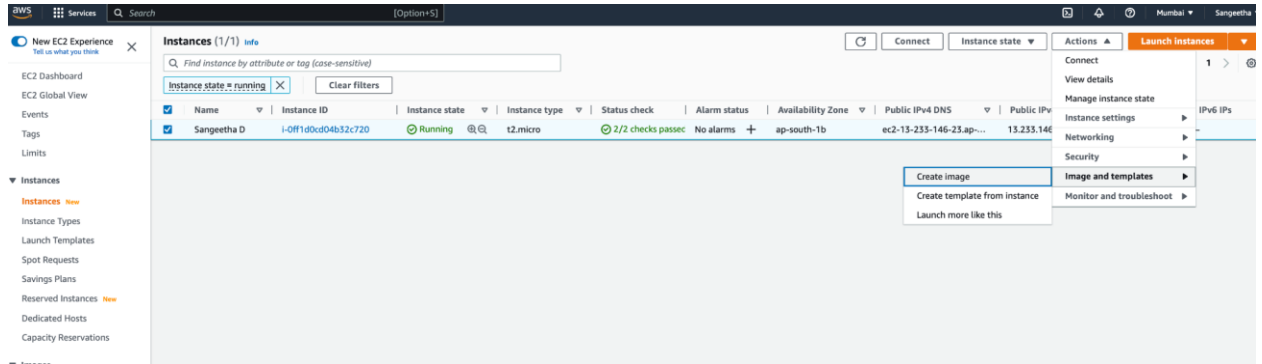
**Snapshots (1)**

Owned by me

<input type="checkbox"/>	Name	Snapshot ID	Size	Description	Storage...	Snapshot status	Started	Progress	En
<input type="checkbox"/>	-	snap-0e55533adc0b830ec	8 GiB	my snapshot	Standard	Pending	2022/11/27 20:45 GMT+5...	Unavailable (0%)	No

## AMI Creation

Steps: go to instance>actions>click image and snapshot>create image>image name>create



## Load Balancer creation

## Steps:create a application LB>name>select subnet>protocol>create

aws Services Search [Option+S]

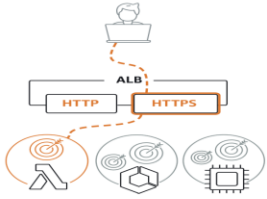
EC2 > Load balancers > Select load balancer type

### Select load balancer type

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

#### Load balancer types

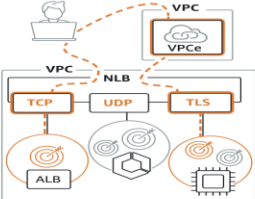
##### Application Load Balancer [Info](#)



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](#)

▶ [Classic Load Balancer - previous generation](#)

[Close](#)

aws Services Search [Option+S]

EC2 > Load balancers > Create Application Load Balancer

## Create Application Load Balancer [Info](#)

The Application Load Balancer distributes incoming HTTP and HTTPS traffic across multiple targets such as Amazon EC2 instances, microservices, and containers, based on request attributes. When the load balancer receives a connection request, it evaluates the listener rules in priority order to determine which rule to apply, and if applicable, it selects a target from the target group for the rule action.

### ▶ How Elastic Load balancing works

### 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** [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.

**Security groups Info**

A security group is a set of firewall rules that control the traffic to your load balancer.

**Security groups**

Select up to 5 security groups

Create new security group [↗](#)

default sg-0ecbe5196a23e94a9   
VPC: vpc-0fcfb22e6159da16

**Listeners and routing Info**

A listener is a process that checks for connection requests using the port and protocol you configure. The rules that you define for a listener determine how the load balancer routes requests to its registered targets.

▼ Listener HTTP:80

Protocol: HTTP Port: 80 Default action: MyGrp   
Target type: Instance, IPv4   
[Create target group ↗](#)

**Listener tags - optional**  
Consider adding tags to your listener. Tags enable you to categorize your AWS resources so you can more easily manage them.  
  
You can add up to 50 more tags.

▼ **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.

**AWS Global Accelerator Info**  
Create an accelerator to get static IP addresses and improve the performance and availability of your 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**

MyAppLB  
• Internet-facing  
• IPv4

**Security groups Edit**

• default sg-0ecbe5196a23e94a9 [↗](#)

**Network mapping Edit**

VPC vpc-0fcfb22e6159da16 [↗](#)  
• ap-south-1a subnet-08983cffd143c8375 [↗](#)  
• ap-south-1b subnet-0eff7ab8697053426 [↗](#)  
• ap-south-1c subnet-0e023a61ca3961b7c [↗](#)

**Listeners and routing Edit**

• HTTP:80 defaults to MyGrp [↗](#)

**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.



default sg-0ecbe5196a23e94a9 X  
VPC: vpc-0fcfb22e6159da16

**Listeners and routing Info**  
A listener is a process that checks for connection requests using the port and protocol you configure. The rules that you define for a listener determine how the load balancer routes requests to its registered targets.

▼ Listener HTTP:80 Remove

Protocol: HTTP Port: 80 Default action: Forward to MyGrp  
 1-65535 Target type: Instance, IPv4 HTTP ⊞  
[Create target group](#)

Listener tags - optional  
Consider adding tags to your listener. Tags enable you to categorize your AWS resources so you can more easily manage them.  
Add listener tag  
 You can add up to 50 more tags.

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.

**AWS Global Accelerator Info**  
 Create an accelerator to get static IP addresses and improve the performance and availability of your 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](#)

<b>Basic configuration Edit</b> MyAppLB <ul style="list-style-type: none"> <li>Internet-facing</li> <li>IPv4</li> </ul>	<b>Security groups Edit</b> <ul style="list-style-type: none"> <li>default sg-0ecbe5196a23e94a9</li> </ul>	<b>Network mapping Edit</b> VPC vpc-0fcfb22e6159da16 <ul style="list-style-type: none"> <li>ap-south-1a subnet-08983cffd143c8375</li> <li>ap-south-1b subnet-0eff7ab8697053426</li> <li>ap-south-1c subnet-0e023a61ca3961b7c</li> </ul>	<b>Listeners and routing Edit</b> <ul style="list-style-type: none"> <li>HTTP:80 defaults to MyGrp</li> </ul>
<b>Add-on services Edit</b> None	<b>Tags Edit</b> 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

aws Services Search [Option+S]

➤ **Successfully created load balancer: MyAppLB**  
 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 > MyAppLB > Create Application Load Balancer

**Create Application Load Balancer**

ⓘ **Suggested next steps**

- Review, customize, or enable attributes for your load balancer and listeners using the **Description** and **Listeners** tabs within MyAppLB.
- Discover other services that you can integrate with your load balancer. Visit the **Integrated services** tab within MyAppLB.

View load balancer