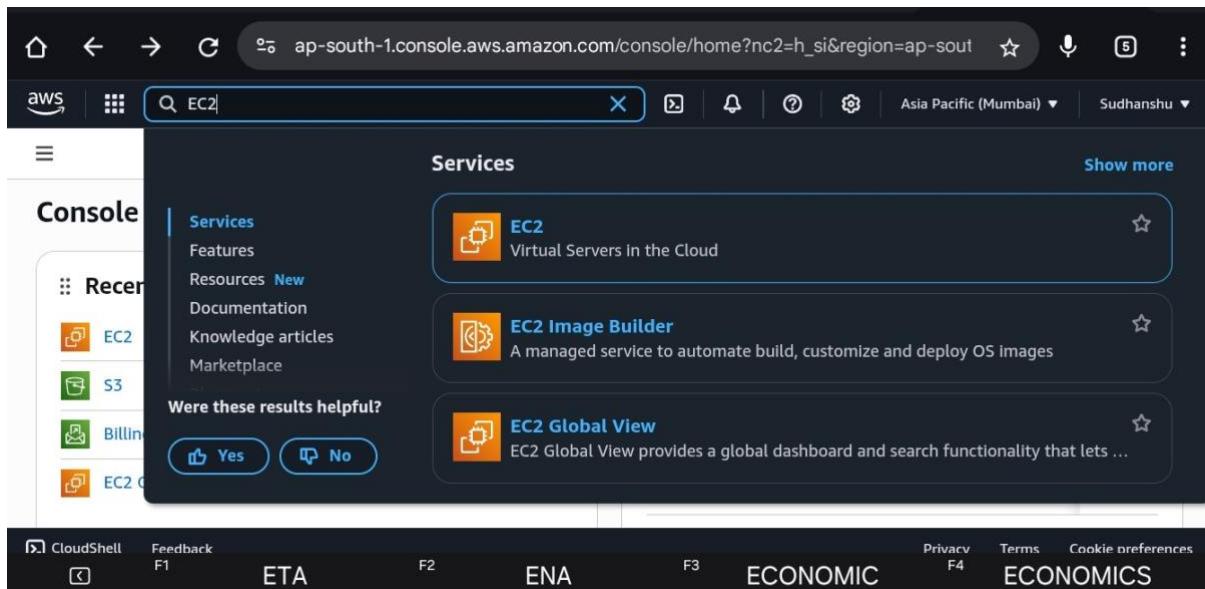


AWS EC2 Project

- **Launching Instances and perform hosting in Windows and Linux.**
- **AMI (Amazon Machine Image) creation and launching Instances from AMI.**
- **Using EBS (Elastic Block Store) to create and attach volume to the Instance and making Snapshots.**
- **Creating Auto Scaling Groups.**
- **Using Load Balancing.**

Launching Instances and perform hosting in Windows and Linux.

Windows:



- Login to your AWS console and search EC2
- Once the page opens, click on Launch an Instance.
- Enter the Name of the Instance.

A screenshot of the AWS EC2 'Launch an instance' wizard. The top navigation bar shows the date 'Tue, 15 Jul' and location 'Asia Pacific (Seoul)'. The main title is 'Launch an instance' with an 'Info' link. A sub-section titled 'Name and tags' has a 'Name' input field containing 'winser' and a 'Add additional tags' button. Below this is a section titled 'Application and OS Images (Amazon Machine Image)' with an 'Info' link. It contains a note about AMIs and a search bar with placeholder text 'Search our full catalog including 1000s of application and OS images'. At the bottom, there are links for 'CloudShell', 'Feedback', 'Privacy', 'Terms', and 'Cookie preferences', along with a copyright notice '© 2025, Amazon Web Services, Inc. or its affiliates.'



▼ Application and OS Images (Amazon Machine Image) [Info](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

[Search our full catalog including 1000s of application and OS images](#)

Quick Start



[Browse more AMIs](#)
Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Microsoft Windows Server 2025 Base Free tier eligible
ami-070ab5648ed3cf9a5 (64-bit (x86))
Virtualization: hvm ENA enabled: true Root device type: ebs

Description

Microsoft Windows 2025 Datacenter edition. [English]

Microsoft Windows Server 2025 Full Locale English AMI provided by Amazon

Architecture	AMI ID	Publish Date	Username
64-bit (x86)	ami-070ab5648ed3cf9a5	2025-06-12	Administrator

- Select the desired Amazon Machine Image (AMI) on which you want to run the Instance.



More ▾

☰ EC2 > Instances > Launch an instance



▼ Instance type [Info](#) | [Get advice](#)

Instance type

t2.micro

Free tier eligible

Family: t2 1 vCPU 1 GiB Memory

Current generation: true

On-Demand Ubuntu Pro base pricing: 0.0162 USD per Hour

On-Demand RHEL base pricing: 0.0288 USD per Hour

On-Demand Linux base pricing: 0.0144 USD per Hour

On-Demand SUSE base pricing: 0.0144 USD per Hour

On-Demand Windows base pricing: 0.019 USD per Hour



All generations

[Compare instance types](#)

Additional costs apply for AMIs with pre-installed software

▼ 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*

[Create new key pair](#)

For Windows instances, you use a key pair to decrypt the administrator password. You then use the decrypted password to connect to your instance.

- Select the Instance type and key pair
- If key pair is not created then create a new key pair.

Create key pair



Key pair name

Key pairs allow you to connect to your instance securely.

Seoul1

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

Key pair type



RSA

RSA encrypted private and public key pair



ED25519

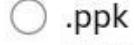
ED25519 encrypted private and public key pair (Not supported for Windows instances)

Private key file format



.pem

For use with OpenSSH



.ppk

For use with PuTTY



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](#)

[Cancel](#)

[Create key pair](#)

- Enter a new key pair name and click on create key pair.

▼ Network settings [Info](#)

[Edit](#)

Network [Info](#)

vpc-05ceb4b7dfda38905

Subnet [Info](#)

No preference (Default subnet in any availability zone)

Auto-assign public IP [Info](#)

Enable

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

Firewall (security groups) [Info](#)

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

Create security group

Select existing security group

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

Allow RDP traffic from

Helps you connect to your instance

Anywhere

0.0.0.0/0



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.



- On network settings, check on allow both https and http traffic from the internet.

▼ Summary

Number of instances | [Info](#)

1

Software Image (AMI)

Microsoft Windows Server 2025 ...[read more](#)

ami-070ab5648ed3cf9a5

Virtual server type (instance type)

t3.small

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 30 GiB

i **Free tier:** In your first year of opening an AWS account, you get 750 hours per month of t2.micro instance usage (or t3.micro where t2.micro isn't available) when used with free tier AMIs, 750 hours per month of public IPv4 address usage, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

X

[Cancel](#)

[Launch instance](#)

 [Preview code](#)

- Scroll down and click on Launch Instance, the Instance will get launched.

The screenshot shows the AWS EC2 Instances page. At the top, there is a search bar with the placeholder "Search" and a "Connect" button. Below the search bar, the heading "Instances (1/1) Info" is displayed, along with a timestamp "Last updated less than a minute ago". To the right of the timestamp are buttons for "Instance state", "Actions", and "Launch instances". A "Find Instance by attribute or tag (case-sensitive)" input field is present, followed by a "All states" dropdown and navigation arrows. The main table lists one instance: "winser" (i-06352185293de05bf), which is "Running" (t3.small). The status check is currently "Initializing". Below the table, a modal window titled "i-06352185293de05bf (winser)" is open, showing the instance details and a footer with "CloudShell", "Feedback", "Privacy", "Terms", and "Cookie preferences".

- Go back to instances and view the launched Instance and wait until the status check gets passed.
- Once the status check gets passed click on connect.

The screenshot shows the AWS EC2 Instances page again. The instance "winser" is now listed with a status check of "3/3 checks passed". The rest of the interface is identical to the first screenshot, including the "Connect" button, search bar, and modal window.



≡ EC2 > Instances > i-06352185293de05bf > Connect t...  

Connect Info

Connect to an instance using the browser-based client.

Session Manager

RDP client

EC2 serial console

Record RDP connections

You can now record RDP connections using AWS Systems Manager just-in-time node access.

[Learn more !\[\]\(0ac73c45806a78de248a19d9a2dbe7a6_img.jpg\)](#)

[Try for free !\[\]\(147b0c7dce349edf02b6b21226344f99_img.jpg\)](#)

Instance ID

 [i-06352185293de05bf \(winser\)](#)

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](#)

- Download the remote desktop file, it will be used for launching the remote windows server.

The screenshot shows the AWS EC2 Instances page for an instance named i-06352185293de05bf. The 'Connect to instance' section is active. It displays the Public DNS (ec2-15-164-245-160.ap-northeast-2.compute.amazonaws.com) and a dropdown for the Username (Administrator). Below these, there's a 'Password' field with a 'Get password' link. A note indicates that if the instance is joined to a directory, directory credentials can be used. At the bottom right is a 'Cancel' button.

- Scroll down and click on get password to retrieve the password from the key pair created to establish the connection.

The screenshot shows the 'Get Windows password' page for the same instance. It instructs the user to use their private key to retrieve and decrypt the initial Windows administrator password. It shows the Instance ID (i-06352185293de05bf), Key pair associated with this instance (Seoul1), and a Private key section where a file named Seoul1.pem (1.678KB) has been uploaded. The private key contents are displayed as a large string of characters. At the bottom are 'Cancel' and 'Decrypt password' buttons.

- Upload the downloaded key pair file with (.pem) extension and click on Decrypt password.

aws | [Alt+S] | Search | Asia Pacific (Seoul) | Sudhanshu

EC2 > Instances > i-06352185293de05bf > Connect to instance

When prompted, connect to your instance using the following username and password:

Public DNS
ec2-15-164-245-160.ap-northeast-2.compute.amazonaws.com

Password copied

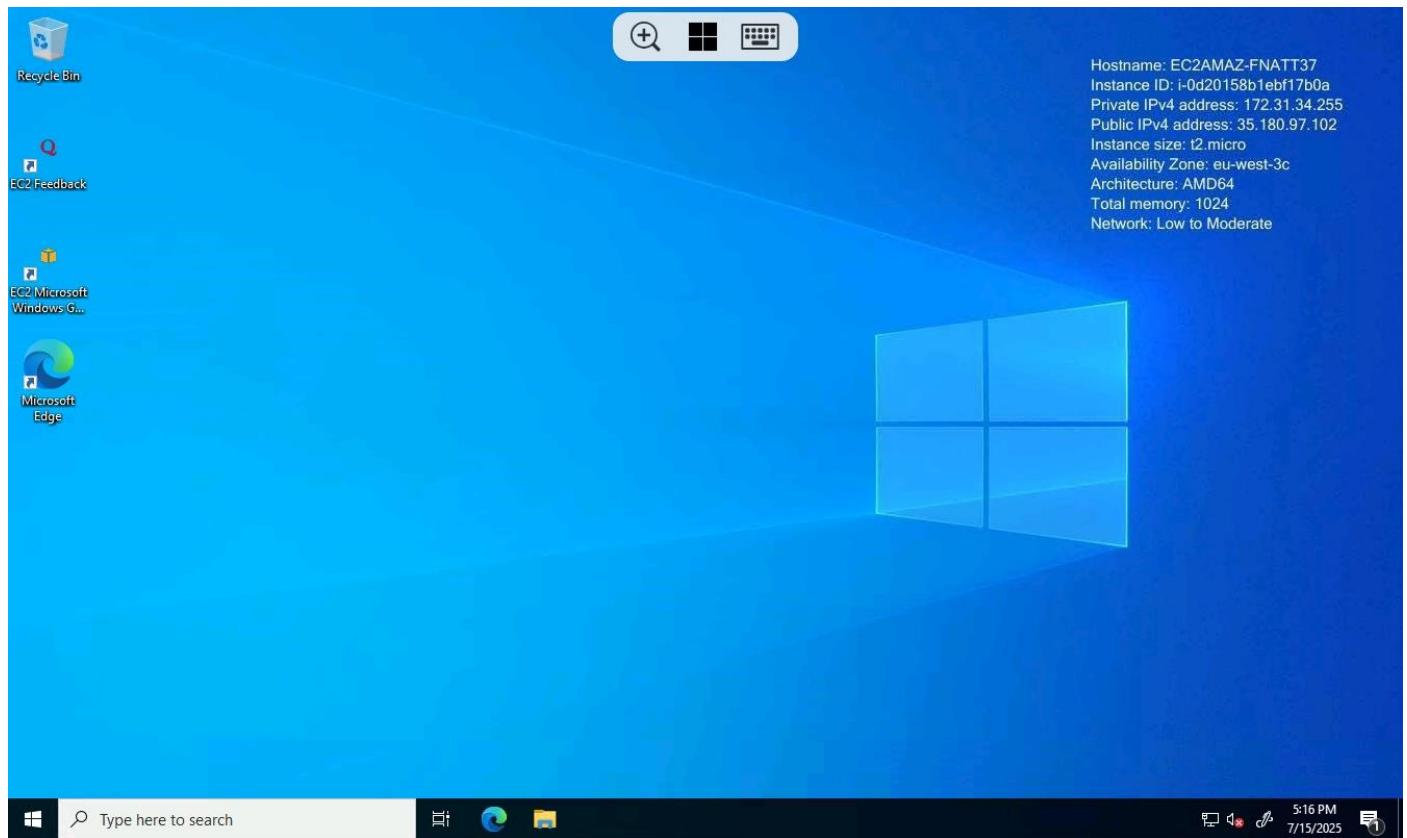
Administrator

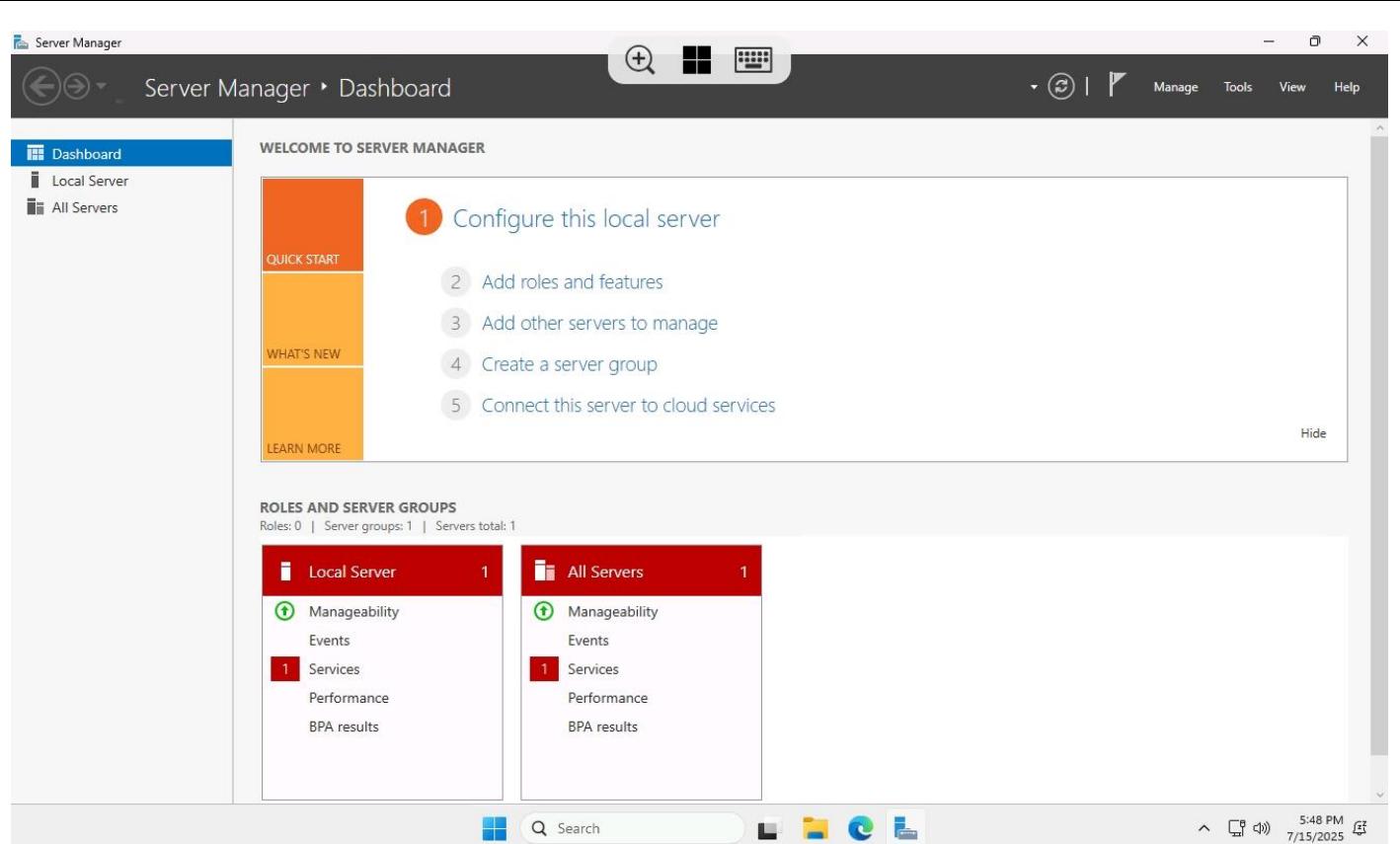
!2?@VwoqiqKOG9C0)Sq=aZqtmBTh3lOp

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

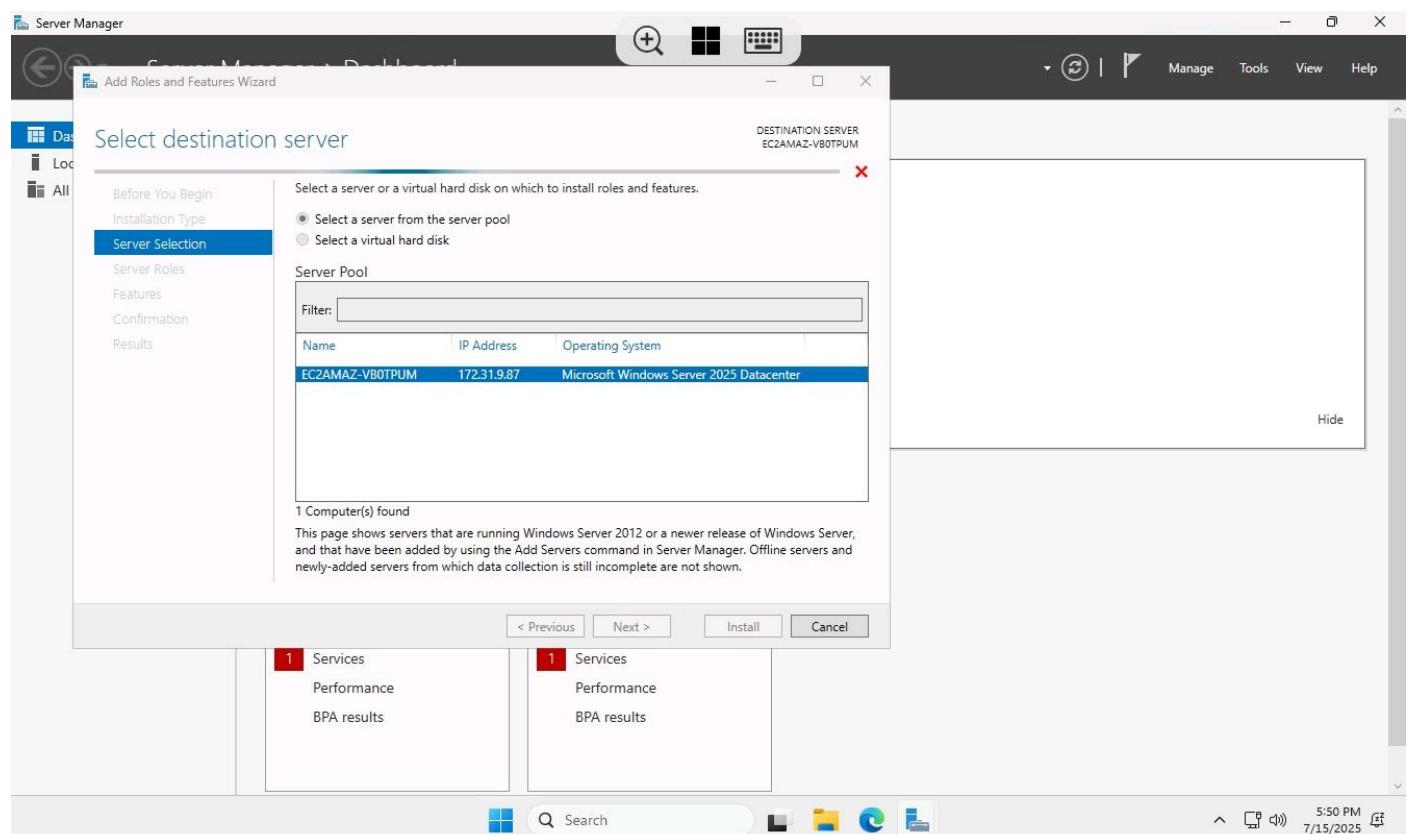
CloudShell Feedback Privacy Terms Cookie preferences © 2025, Amazon Web Services, Inc. or its affiliates.

- Copy the decrypted password and open the remote desktop file on your downloads in the browser and enter the copied password.
- A window like this will be open.

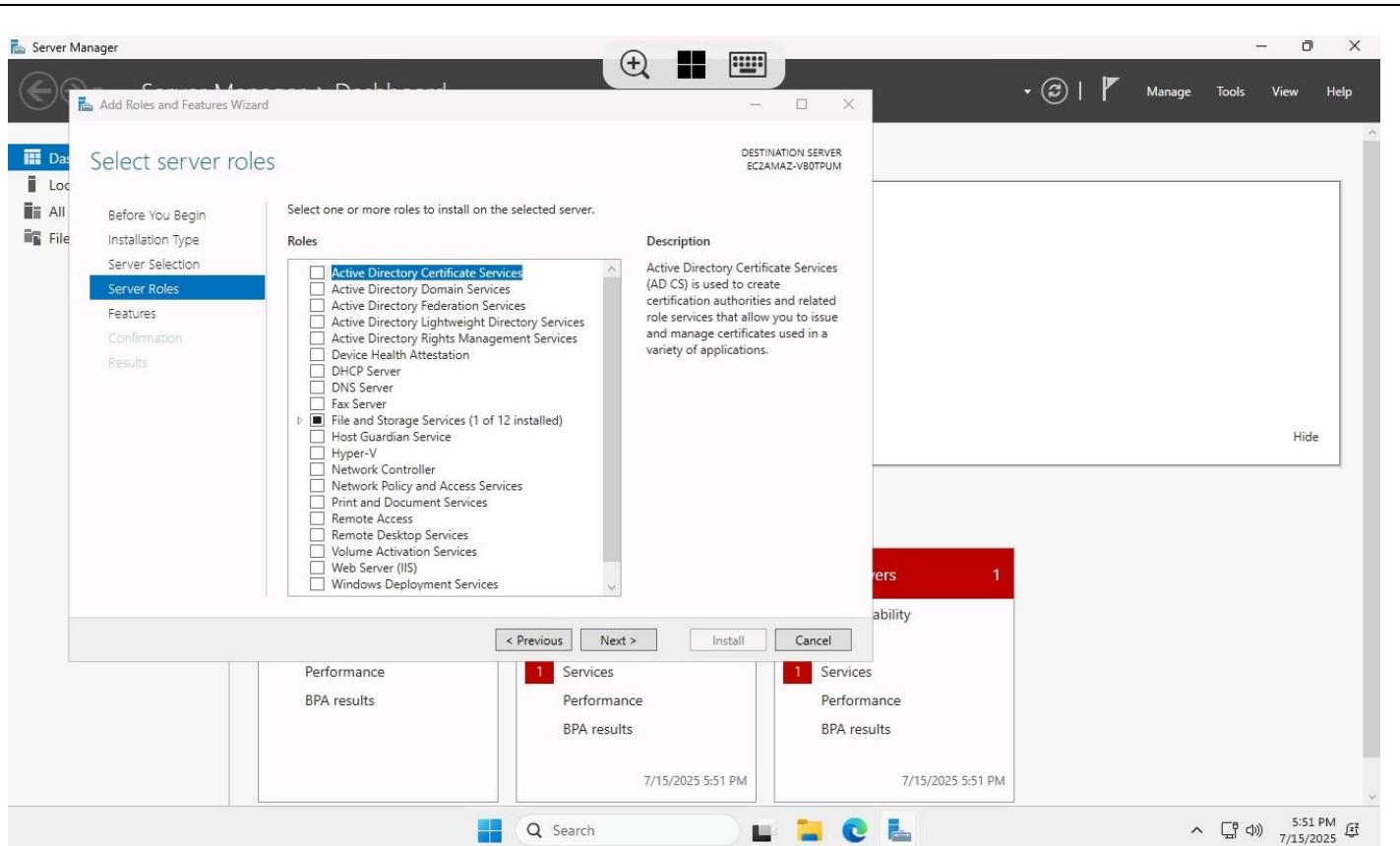




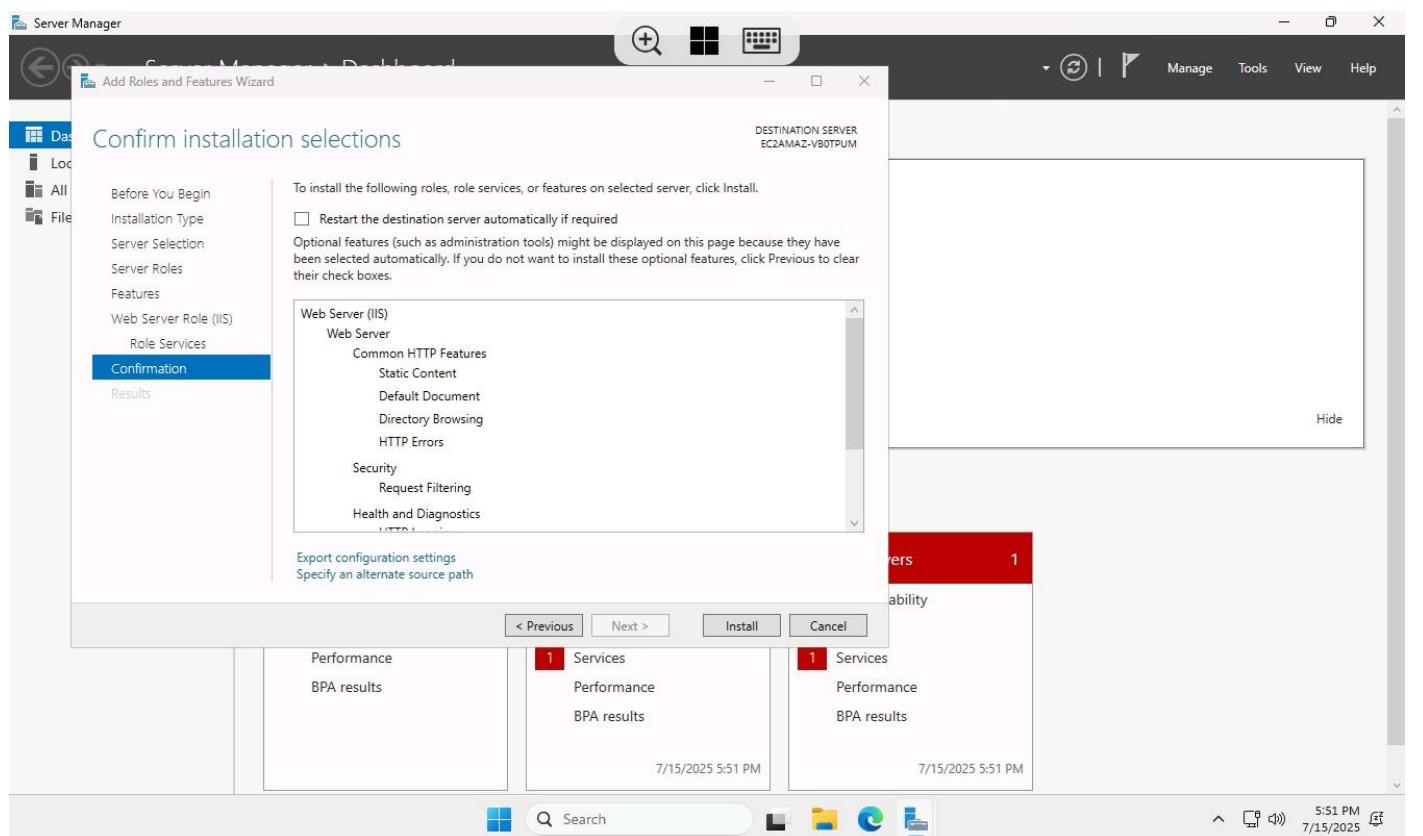
- Click on start, go to server manager and wait for some time until this window open.



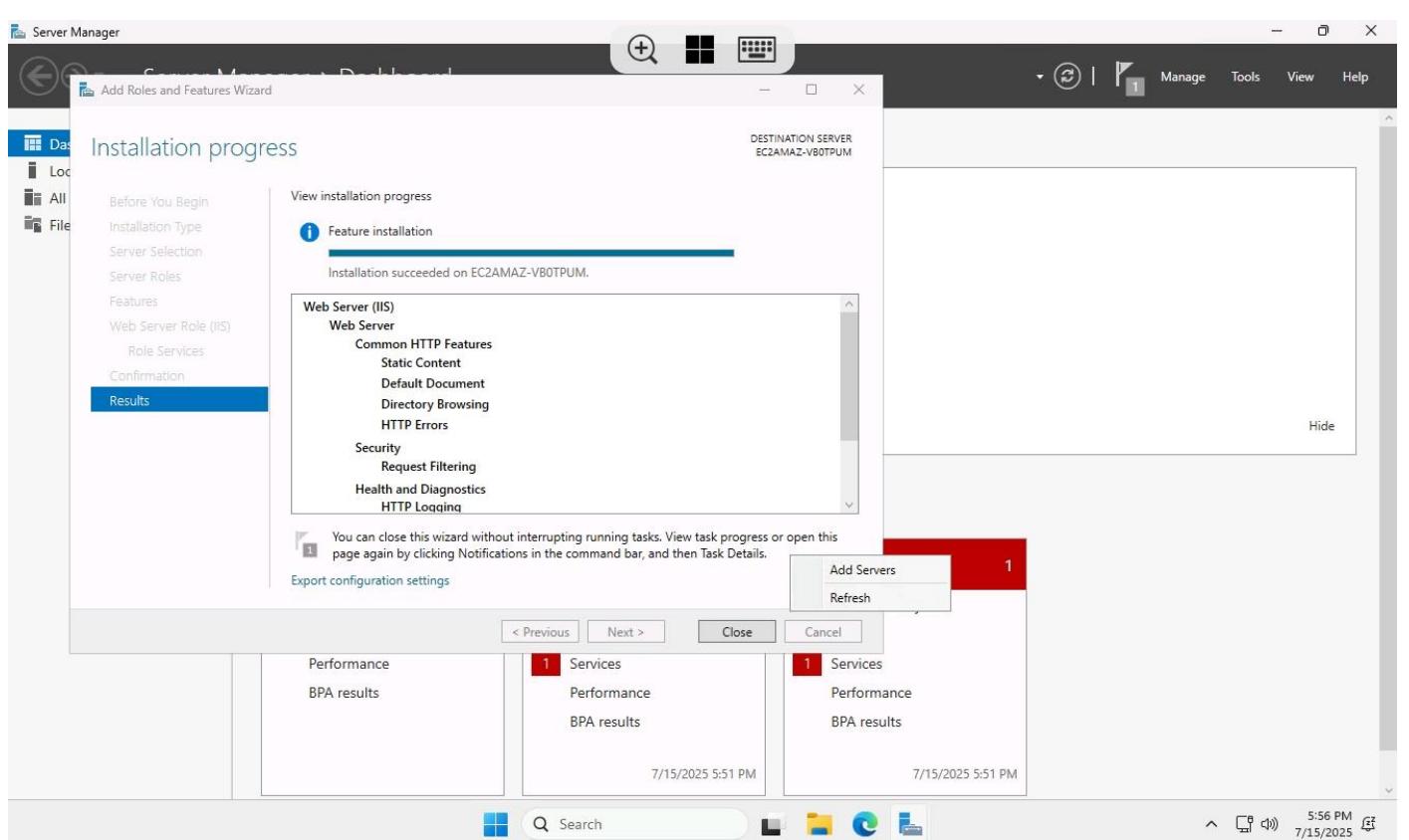
- Click on add roles and features and click next several times and wait until this window open and wait for some time for its loading.



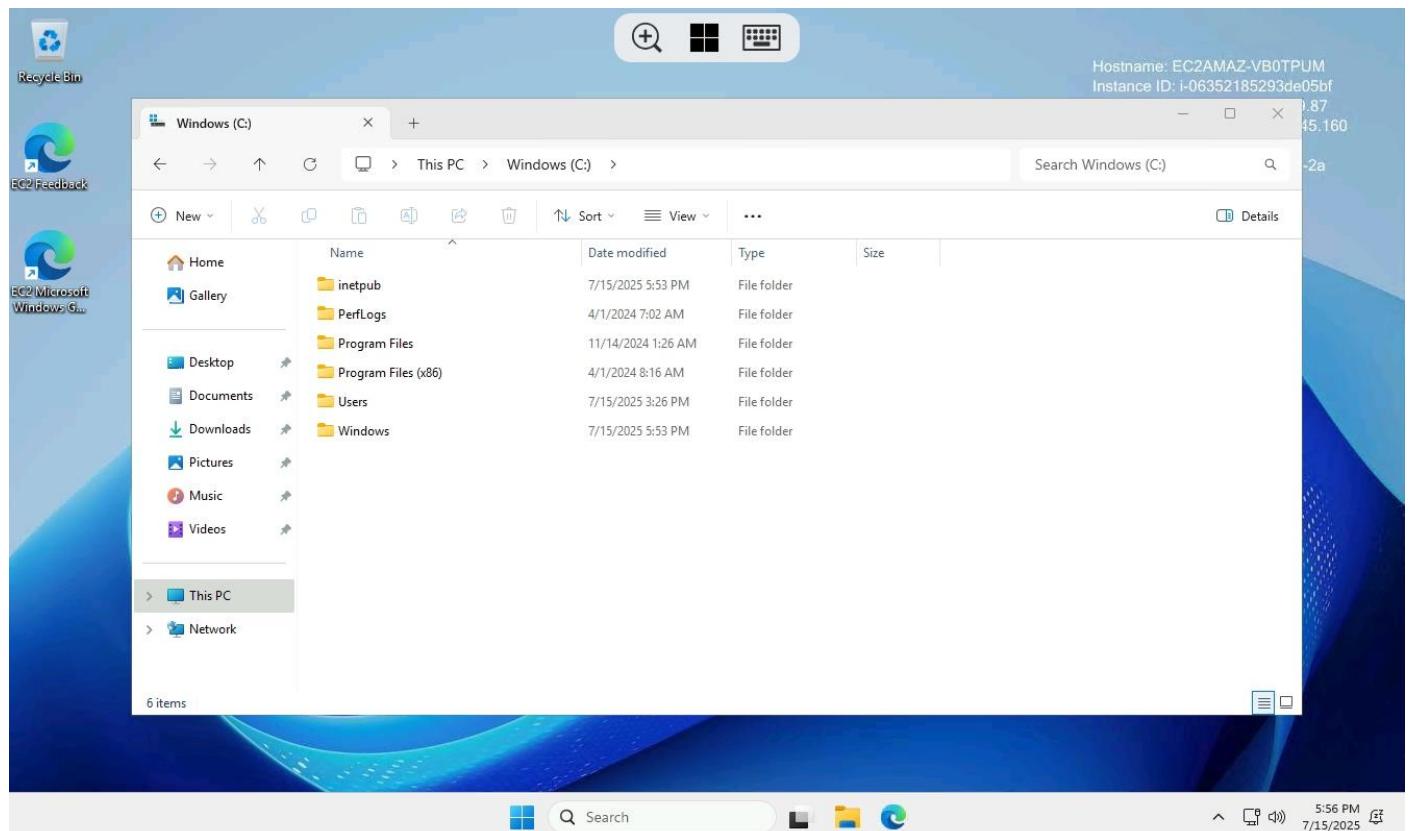
- Go all the way down and click on web server and add it to features.



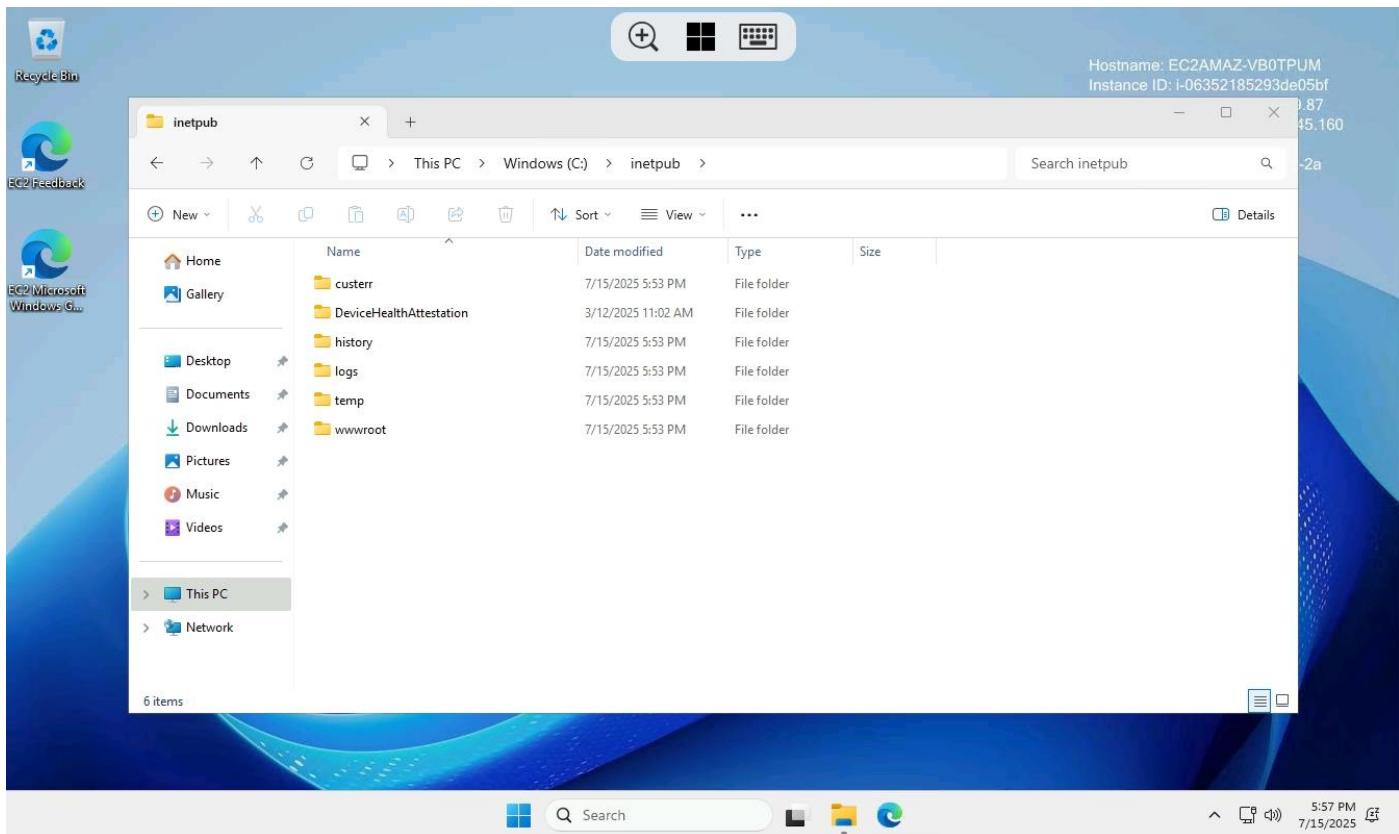
- Click next several more times until the install button gets active and click install and wait for the installation to complete.



- After the installation completed, close the window and open C drive.



- Click and open **inetpub**.



- Click and open **wwwroot** and delete all the files permanently in this folder and create a new text file and write something in it and save as index.html.

A screenshot of the AWS EC2 Instances page. The top navigation bar includes the AWS logo, a search bar, and account information for 'Asia Pacific (Seoul)' and 'Sudhanshu'. Below the navigation is a table with columns for Name, Instance ID, Instance state, Instance type, Status check, and Alarm status. One row is selected for the instance 'winser' with Instance ID 'i-06352185293de05bf', which is 'Running'. A status check of '3/3 checks passed' is shown. The main content area displays the instance details for 'i-06352185293de05bf (winser)'. It shows the Instance summary with fields for Instance ID (i-06352185293de05bf), IPv6 address, and Instance state (Running). It also shows the Public IPv4 address (15.164.245.160) with a 'copy' button, Private IPv4 addresses (172.31.9.87), and Public DNS. At the bottom, there are links for CloudShell, Feedback, Privacy, Terms, and Cookie preferences, along with a copyright notice for 2025.

- Now come back to main Instances window and copy the public IPv4 address and paste in the new tab.

buhvbgufyS

- A page like this will open.
- Now, go back to instances, click on Instance state, click on Terminate(delete) Instance and click on Terminate(delete).

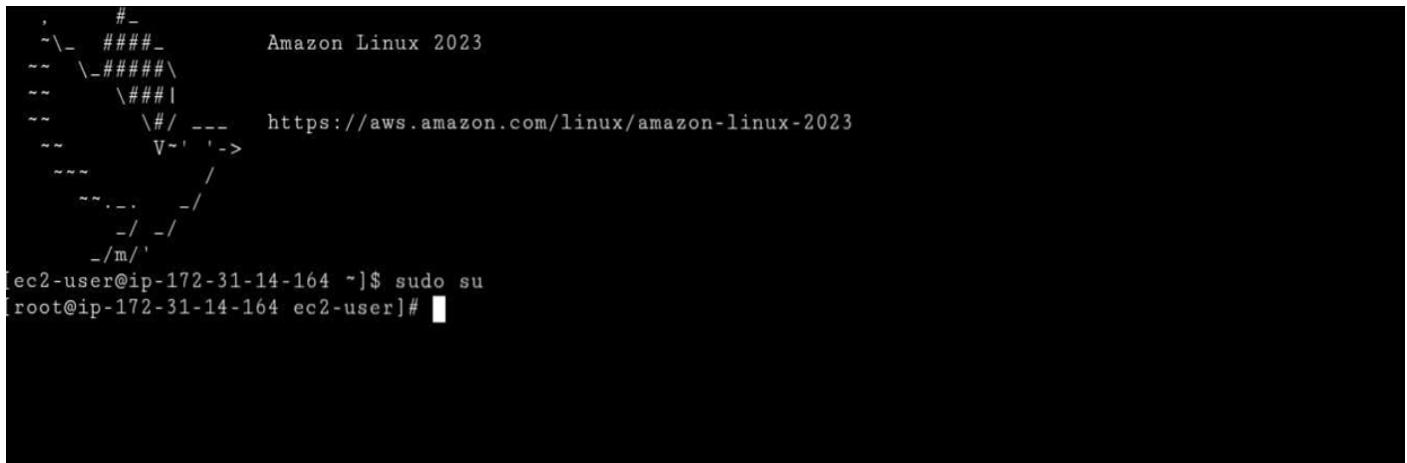
The screenshot shows the AWS EC2 Instances page. At the top, there's a search bar and navigation icons. Below it, a table lists one instance: 'winser' (Instance ID: i-06352185293de05bf, State: Running). To the right of the instance table is a context menu for the selected instance. The menu includes options: Stop instance, Start instance, Reboot instance, Hibernate instance, and Terminate (delete) instance. The 'Terminate (delete) instance' option is highlighted. At the bottom of the page, there's a footer with links for CloudShell, Feedback, Privacy, Terms, and Cookie preferences.

The screenshot shows the same AWS EC2 Instances page after the instance has been terminated. The instance table now shows the 'winser' instance with a status of 'Terminated'. The context menu is no longer visible. The footer at the bottom of the page remains the same.

- Wait until the Instance state gets Terminated

Linux:

- Like windows, launch the Instance but with Amazon Linux AMI and for now keep the instance type as it is predefined.
- You can create a new key pair or take the previous key pair in the selected region.
- Keep the network settings as previous and launch the Instance.
- Wait for the Status check pass and then Click on connect.
- A new tab will open like this as shown below.



```
  _#_
~\_- #####_      Amazon Linux 2023
~~ \#####\
~~ \###|
~~ \#/ --- https://aws.amazon.com/linux/amazon-linux-2023
~~ V~' '->
~~~ /
~~ . . -/
~~ . -/
~~ / -/
~/m//'
[ec2-user@ip-172-31-14-164 ~]$ sudo su
root@ip-172-31-14-164 ec2-user]#
```

- Type command **sudo su** for going from local to root user.
- Then type the following command for hosting:

```
yum update -y
```

```
yum install httpd -y
```

```
systemctl start httpd (start the apache server)
```

```
systemctl status httpd (check the status of the server as it is active or not)
```

```
press ctrl+z then enter.
```

```
ls
```

```
cd /
```

```
ls
```

```
cat > index.html /var/www/html
```

```
cd var
```

```
ls
```

```
cd www
```

ls

cd html/

cat > index.html (after this command press enter and write something) then press enter.

press ctrl+d to save.

- After the commands, copy the public IPv4 address same as windows and open it in new tab then terminate the Instance.

AMI (Amazon Machine Image) creation and launching Instances from AMI.

AMI (Amazon Machine Image):

- To create an AMI, launch an Instance and connect to server (In this case we are using Linux)
- Go to Instances → Image and Templates → Create Image → Enter the Image name and click Create Image.

The screenshot shows the AWS EC2 Instances page. On the left, there's a navigation sidebar with options like Dashboard, EC2 Global View, Events, Instances (selected), Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images (selected), AMIs, and AMI Catalog. The main area displays 'Instances (1/1) Info' for a single instance named 'Ami1' with the ID 'i-080eadca5652be9a1'. The instance is listed as 'Running' with an 't2.micro' type and '2/2 checks passed'. A context menu is open over the instance, with 'Create image' highlighted. Below the instance list, there's a detailed view for 'i-080eadca5652be9a1 (Ami1)' with tabs for Details, Status and alarms, Monitoring, Security, Networking, Storage, and Tags. Under 'Details', there's an 'Instance summary' section with fields for Instance ID (i-080eadca5652be9a1), Public IPv4 address (13.126.191.249), Private IPv4 addresses (172.31.4.13), IP6 address (empty), Instance state (Running), and Public DNS (ec2-13-126-191-249.ap-south-1.compute.amazonaws.com).

The screenshot shows the 'Create image' wizard. At the top, it says 'EC2 > Instances > i-080eadca5652be9a1 > Create image'. The main section is titled 'Instance volumes' and lists one volume: '/dev/xvda' (Storage type: EBS, Device: /dev/xvda, Snapshot: Create new snapshot from volume, Size: 8, Volume type: EBS General Purpose SSG, IOPS: 3000, Throughput: 125, Delete on termination: checked, Encrypted: checked). Below this, a note says 'During the image creation process, Amazon EC2 creates a snapshot of each of the above volumes.' There are two radio button options for 'Tags - optional': 'Tag image and snapshots together' (selected) and 'Tag image and snapshots separately'. Both options include a note: 'Tag the image and the snapshots with the same tag.' and 'Tag the image and the snapshots with different tags.' At the bottom, there's a note 'No tags associated with the resource.', a 'Add new tag' button, and a note 'You can add up to 50 more tags.' At the very bottom right are 'Cancel' and 'Create image' buttons.

- Go to AMIs and Select the created AMI and click Launch Instance from AMI.
- This time when launching Instance the AMI details will be defined.
- Enter required details and click on launch Instance.

The screenshot shows the AWS EC2 AMIs page. At the top, there's a search bar and navigation links for 'EC2 > AMIs'. Below the header, a table lists one AMI entry:

Name	AMI ID	Source	Owner	Visibility	Status
Ami1	ami-02af988eed562a28	780139019906/Ami1	780139019906	Private	Available

Below the table, a specific AMI detail is shown for 'Ami1':

AMI ID: ami-02af988eed562a28

Details tab selected. Other tabs include Permissions, Storage, and Tags.

AMI ID ami-02af988eed562a28	Image type machine	Platform details Linux/UNIX	Root device type EBS
AMI name Ami1	Owner account ID 780139019906	Architecture x86_64	Usage operation RunInstances
Root device name /dev/xvda	Status Available	Source 780139019906/Ami1	Virtualization type hvm

At the bottom, there are links for CloudShell and Feedback, and a copyright notice: © 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

The screenshot shows the AWS EC2 Instances page with the 'Launch an instance' wizard open. The left sidebar shows 'EC2 > Instances > Launch an instance'.

Launch an instance

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.

Name and tags

Name: ami inst

Application and OS Images (Amazon Machine Image)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below.

Search bar: Search our full catalog including 1000s of application and OS images

AMI from catalog

Name: Ami1

Description: -

Image ID: ami-02af988eed562a28

Summary

Number of instances: 1

Software Image (AMI): Ami1 ami-02af988eed562a28

Virtual server type (instance type): t2.micro

Firewall (security group): New security group

Storage (volumes): 1 volume(s) - 8 GiB

Free tier: In your first year of opening an AWS account, you get 750 hours per month of t2.micro instance usage (or t3.micro where t2.micro isn't available) when used with free

Cancel, Launch instance, Preview code

At the bottom, there are links for CloudShell and Feedback, and a copyright notice: © 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

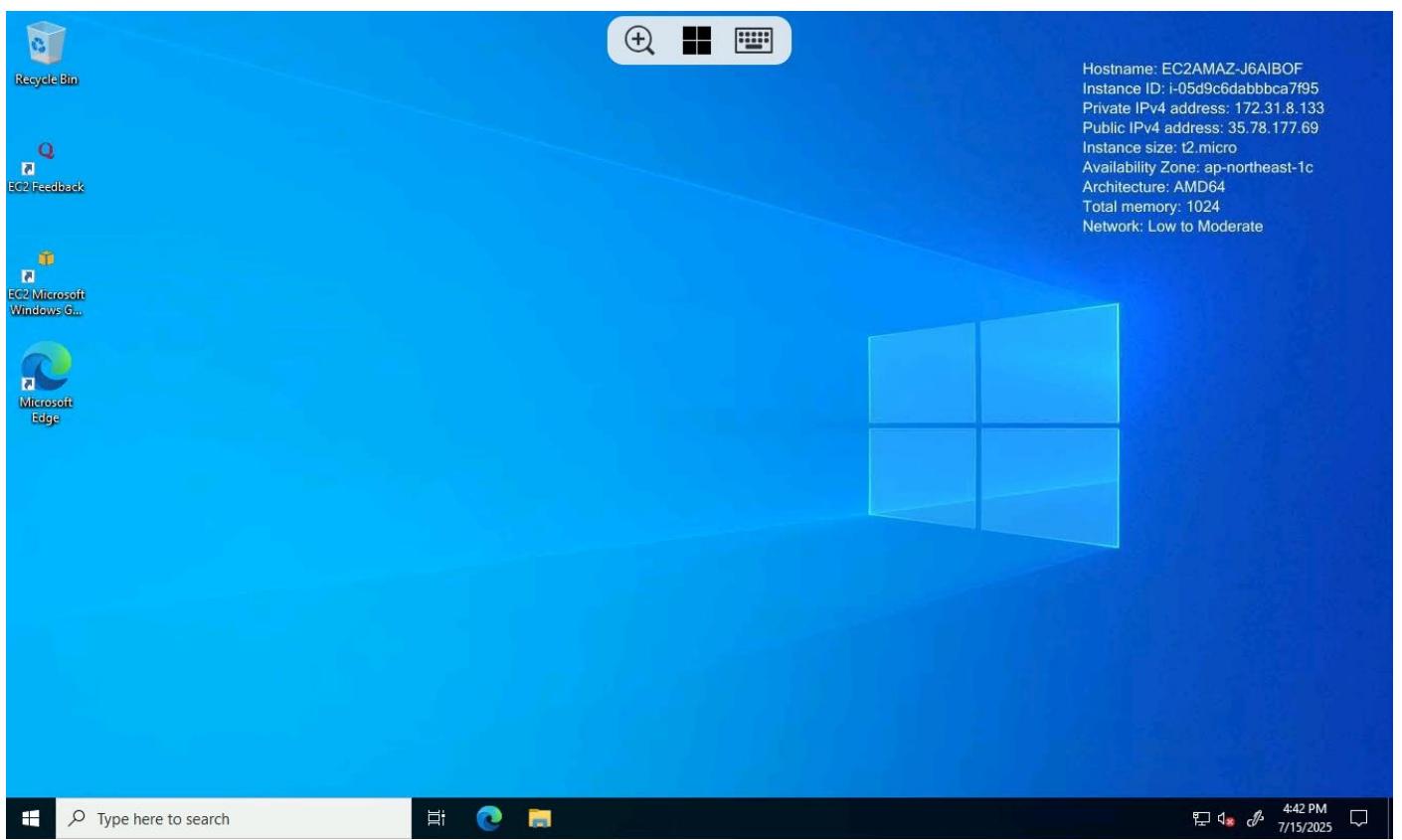
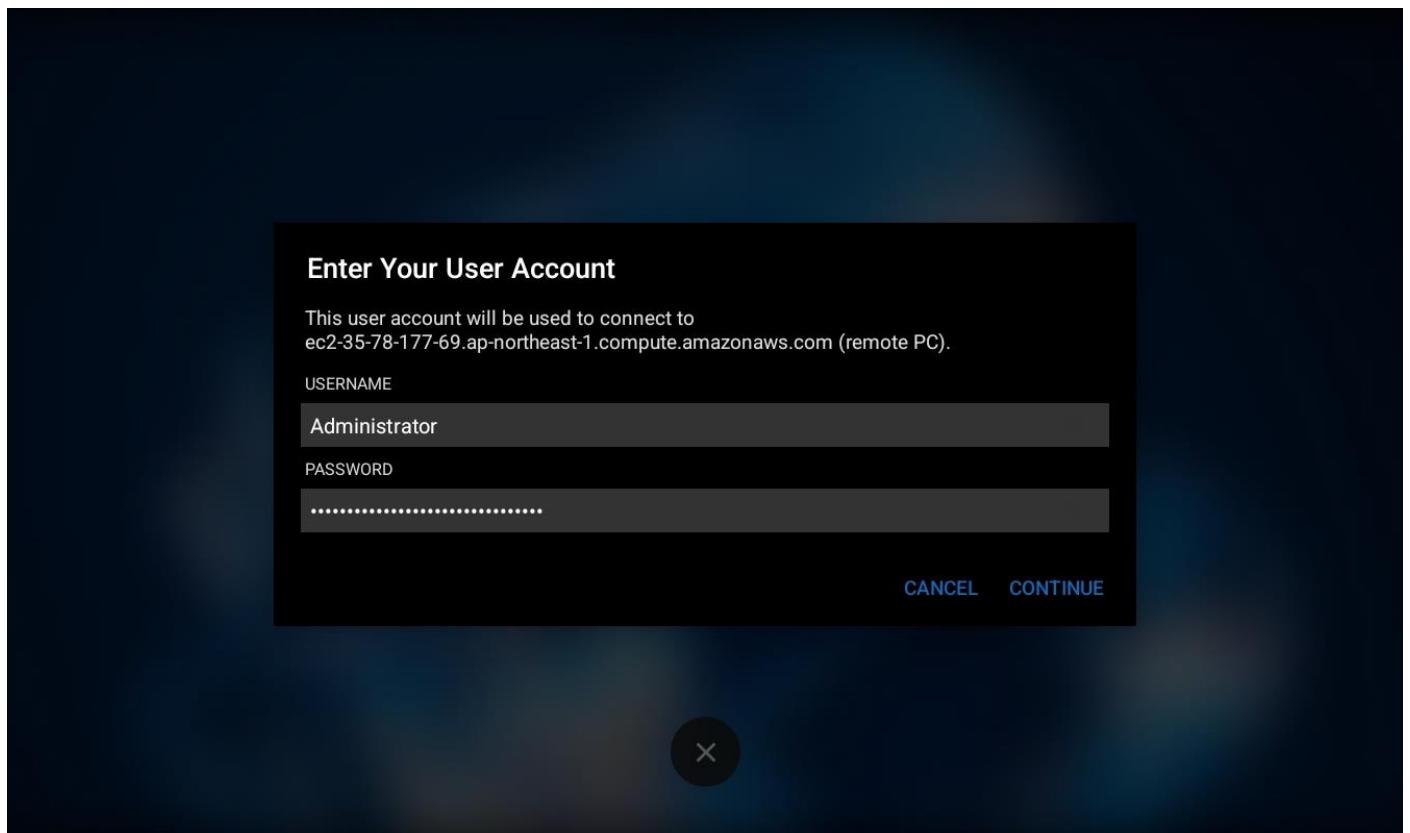
- After launching the Instance from AMI terminate that instance.

The screenshot shows the AWS EC2 Instances page. At the top, there are three tabs: 'aws - Search', 'Instances | EC2 | ap-south-1', and 'EC2 Instance Connect | ap-south-1'. The main content area is titled 'Instances (1/1) [Info](#)'. A search bar contains the placeholder 'Find Instance by attribute or tag (case-sensitive)' and a dropdown set to 'Running'. Below the search bar is a table with the following columns: Name, Instance ID, Instance state, Instance type, Status check, Alarm status, Availability Zone, Public IPv4 DNS, and Public IPv4 IP. One row is selected, showing 'ami inst' with Instance ID 'i-047e6689d3bd7e690', State 'Running', Type 't2.micro', Status '2/2 checks passed', Alarm status 'View alarms +', Availability Zone 'ap-south-1b', Public IPv4 DNS 'ec2-52-66-247-206.ap...', and Public IPv4 IP '52.66.247.206'. The status bar at the bottom indicates it was last updated 'less than a minute ago'.

This screenshot is similar to the one above, showing the EC2 Instances page with a single instance named 'ami inst'. However, the 'Actions' dropdown menu is open over the selected instance row. The visible options in the dropdown are: Stop instance, Start instance, Reboot instance, Hibernate instance, and Terminate (delete) instance. The rest of the interface is identical to the first screenshot, including the table headers and the status bar at the bottom.

Using EBS (Elastic Block Store) to create and attach volume to the Instance and making Snapshots.

- Launch a windows server (Instance) and connect through the (rdp) remote desktop file.



- Go to volumes → Click on Create Volume → Enter details, scroll down and create the new volume. (You can choose the volume type as per need, in this case we took magnetic type of volume assign its size of 10 gb and check the availability zone before proceed)

The screenshot shows the AWS EBS 'Create volume' configuration page. At the top, there's a navigation bar with the AWS logo, search, notifications, and a 'More' dropdown. Below it, the breadcrumb navigation shows 'EC2 > Volumes > Create volume'. The main section is titled 'Create volume' with an 'Info' link. A descriptive text says 'Create an Amazon EBS volume to attach to any EC2 instance in the same Availability Zone.' The configuration area is titled 'Volume settings'.

Volume type: Magnetic (standard) (Info)

Size (GiB): 10 (Info)
Min: 1 GiB, Max: 1024 GiB.

IOPS: Not applicable (Info)

Throughput (MiB/s): Not applicable (Info)

Availability Zone: ap-northeast-1c (Info)

Snapshot ID - optional: Don't create volume from a snapshot (Info)

Encryption: Use Amazon EBS encryption as an encryption solution for your EBS resources associated with your EC2 instances.
 Encrypt this volume

- Attach the newly created volume to the instance.

Successfully created volume vol-0da077f5e20c4723a.

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

Last updated less than a minute ago

Actions ▾

Create volume

Name	Volume ID	Type	Size
<input checked="" type="checkbox"/> vol-0da077f5e20c4723a	vol-0da077f5e20c4723a	standard	10 GiB
<input type="checkbox"/>	vol-07c98c5e6f6a38bba	gp2	30 GiB

Modify volume

Snapshot ID

Volume ID: vol-0da077f5e20c4723a

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Attach volume [Info](#)

Attach a volume to an instance to use it as you would a regular physical hard disk drive.

Basic details

Volume ID

vol-0da077f5e20c4723a

Availability Zone

ap-northeast-1c

Instance [Info](#)

i-05d9c6dabbca7f95
(WindowsEBS) (running)

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

Device name [Info](#)

xvdb

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

Cancel **Attach volume**

aws | [Alt+S] | Search | Asia Pacific (Tokyo) | Sudhanshu

Successfully attached volume vol-0da077f5e20c4723a to Instance i-05d9c6dabbca7f95.

Volumes (2) Info

Last updated less than a minute ago

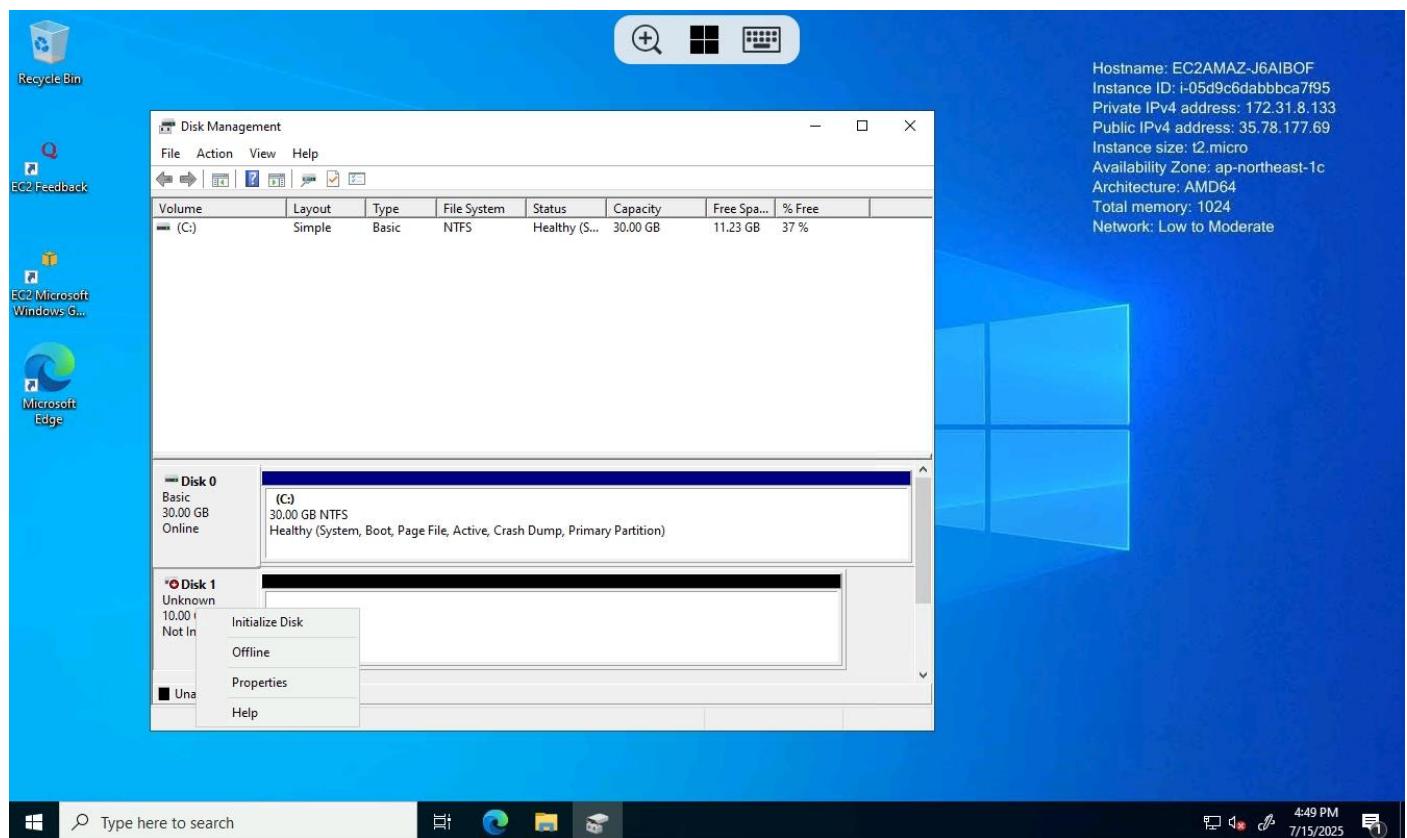
Actions | Create volume

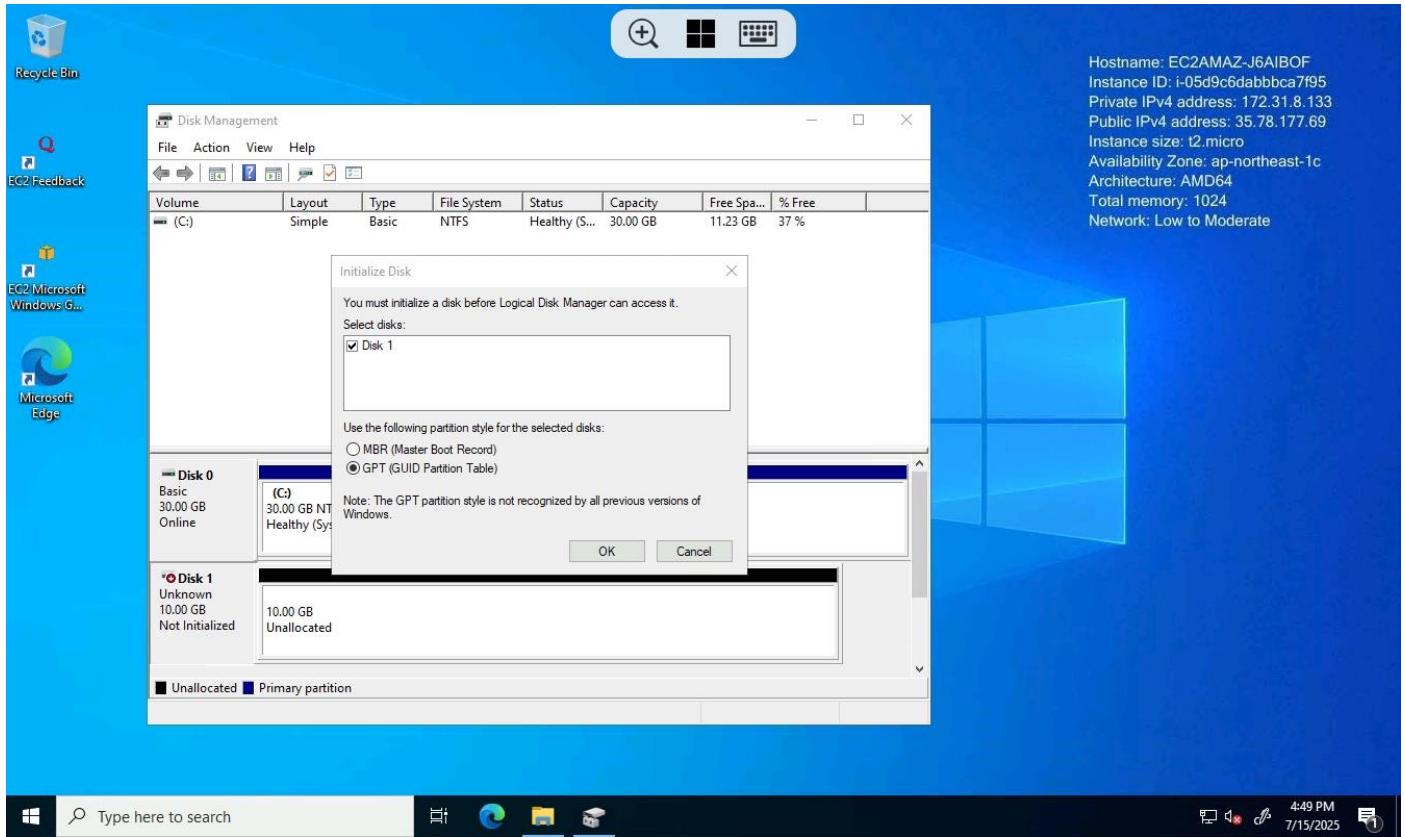
IOPS	Throughput	Snapshot ID	Created	Availability Zone	Volume state
-	-	-	2025/07/15 22:14 GMT+5:...	ap-northeast-1c	In-use
100	-	snap-0e33fb0...	2025/07/15 21:57 GMT+5:...	ap-northeast-1c	In-use

Fault tolerance for all volumes in this Region

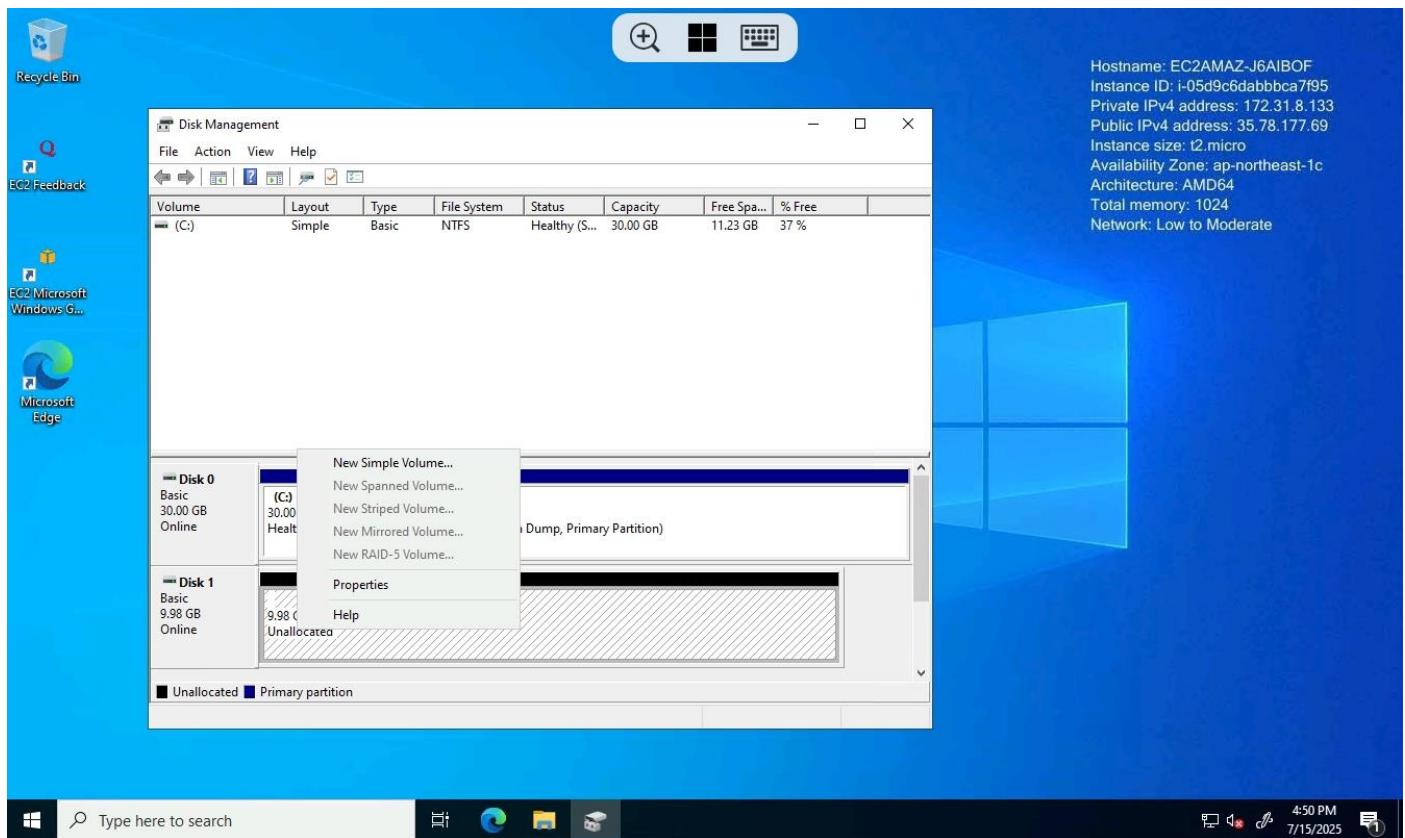
CloudShell Feedback Privacy Terms Cookie preferences © 2025, Amazon Web Services, Inc. or its affiliates.

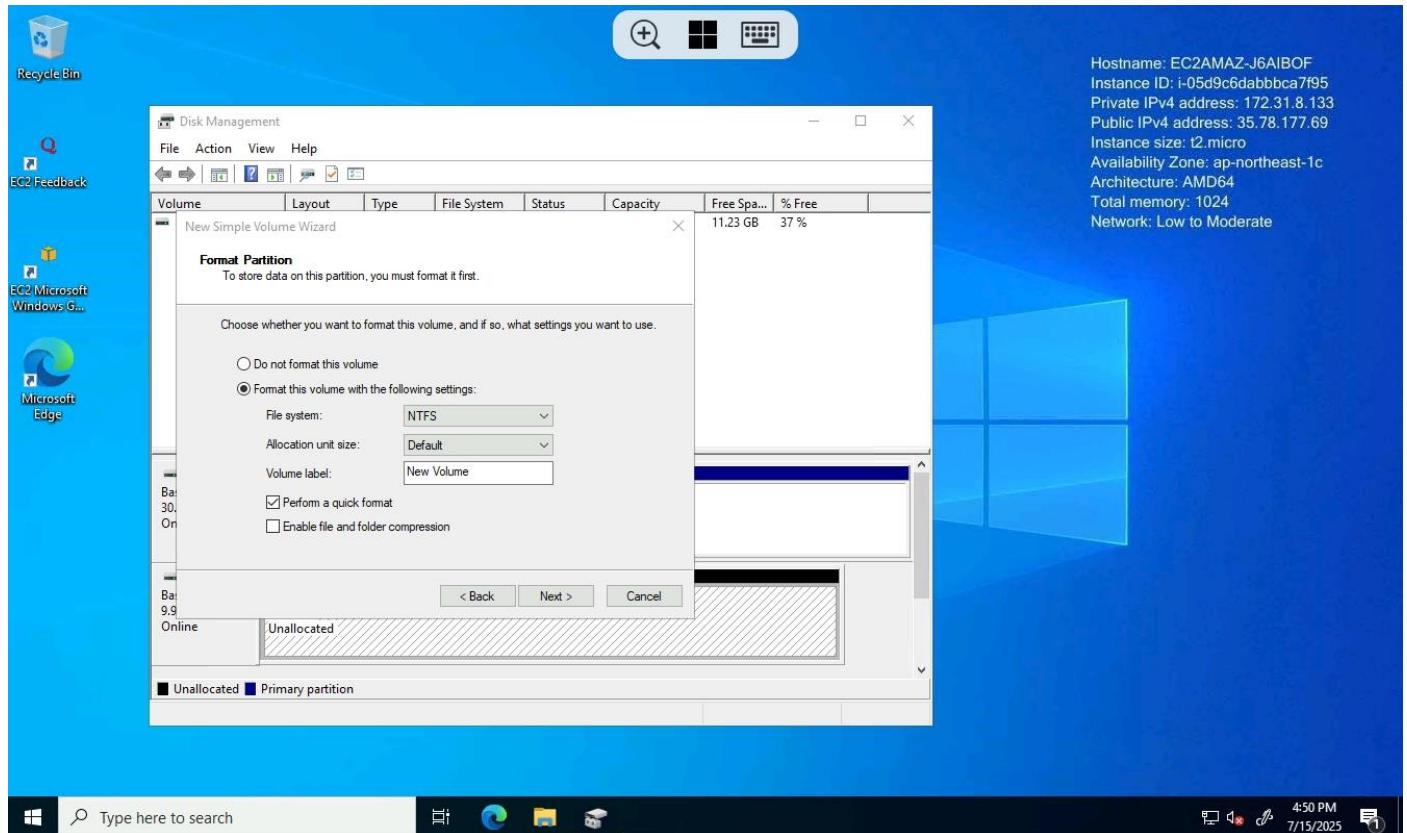
- Now Remote Server → Start button → Search disk mgmt. → Click on create partition from hard disk → Initialize disk → Choose GPT.



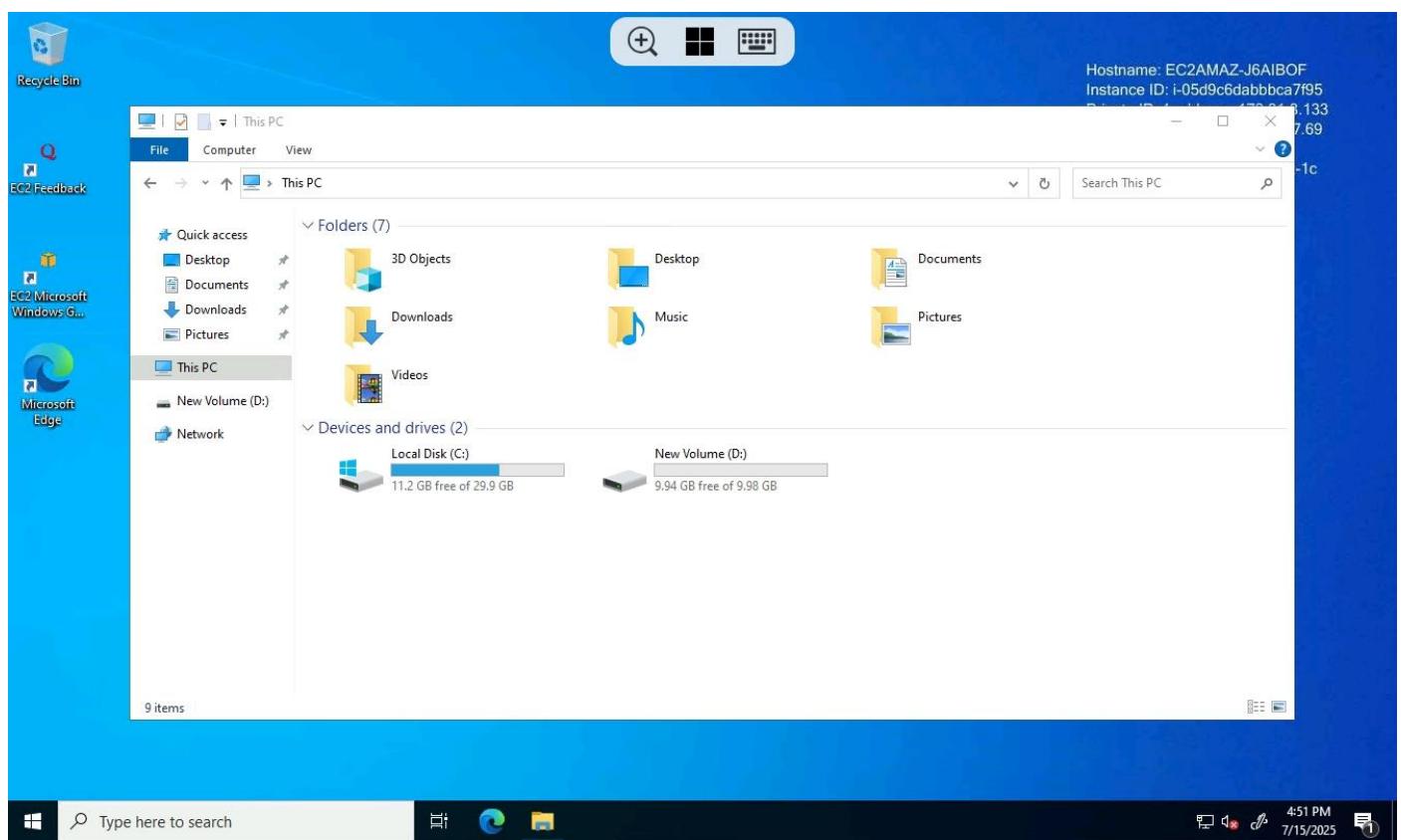


- Allocate the disk.





- In the newly created volume create a new text file.



Now Snapshots:

- Go to snapshots → Create Snapshot

The screenshot shows the 'Source' section of the 'Create snapshot' wizard. It includes a 'Resource type' dropdown set to 'Volume' (selected with a blue outline) and a 'Volume ID' dropdown containing 'vol-0da077f5e20c4723a' from 'ap-northeast-1c'. There is also an 'Instance' option available.

The screenshot shows the 'Snapshot details' section. It includes a 'Description' field with 'snap10' entered, a note that it's 255 characters maximum, and an 'Encryption' section indicating 'Not encrypted'.

The screenshot shows the 'Tags' section. It includes a note about tags being labels for AWS resources, a message stating 'No tags associated with the resource.', and a 'Add tag' button. A note at the bottom says 'You can add 50 more tags.'

Cancel

Create snapshot

The screenshot shows the AWS EBS Snapshots page. A green success message at the top right says "Successfully created snapshot snap-0f50c9ccce8a14022." The main table has one row, showing a snapshot named "snap-0f50c9ccce8a14022" with a size of 10 GiB. The "Actions" dropdown menu is open for this snapshot, showing options like "Modify permissions", "Manage snapshot lock", "Manage fast snapshot restore", "Snapshot settings", and "Archiving".

AMI Catalog

▼ Elastic Block Store

- Volumes
- Snapshots**
- Lifecycle Manager

▼ Network & Security

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

▼ Load Balancing

- Load Balancers

Snapshots (1/1) [Info](#) Last updated 1 minute ago [Recycle Bin](#) [Actions](#) [Create snapshot](#)

Owned by me [Search](#)

Name	Snapshot ID	Full snapshot size	Volume size
snap-0f50c9ccce8a14022	-	10 GiB	

Snapshot ID: snap-0f50c9ccce8a14022

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- Go to Snapshot settings → Modify Permissions → Make it public.

The screenshot shows the same AWS EBS Snapshots page as above, but with the "Actions" dropdown menu open over the first snapshot row. The menu items listed are: "Modify permissions", "Manage snapshot lock", "Manage fast snapshot restore", "Snapshot settings", and "Archiving".

AMI Catalog

▼ Elastic Block Store

- Volumes
- Snapshots**
- Lifecycle Manager

▼ Network & Security

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

▼ Load Balancing

- Load Balancers

Snapshots (1/1) [Info](#) Last updated 1 minute ago [Recycle Bin](#) [Actions](#) [Create snapshot](#)

Owned by me [Search](#)

Name	Snapshot ID	Full snapshot size	Volume size
snap-0f50c9ccce8a14022	-	10 GiB	

Snapshot ID: snap-0f50c9ccce8a14022

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Modify permissions [Info](#)

By modifying the permissions of a snapshot, you can share it with the AWS accounts that you specify.

Settings

Encryption by default and block public access are account-level settings that can be updated on the [Settings page](#)

This snapshot is unencrypted

When you share an unencrypted snapshot, you give the specified accounts permission to copy the snapshot and to create volumes from it.



Snapshot ID

snap-0f50c9cce8a14022

Snapshot availability

Public access

Not blocked

Sharing options

Public

Share the snapshot publicly with all AWS users.

Private (current setting)

Share the snapshot with specific accounts.[Learn more](#)

Share snapshot publicly

Sharing a snapshot publicly shares the snapshot and its contents with all AWS users in this Region.

[Cancel](#)

[Modify permissions](#)

- Go to Snapshots → Action → copy snapshot.

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

Last updated
less than a minute ago



[Recycle Bin](#)

[Actions](#) ▾

[Create snapshot](#)

< 1 > |

▼ |

Sta

Owned by me	▼	Search	▼	Name	▼	Snapshot ID	▼	Full snapshot size	▼
<input checked="" type="checkbox"/>						snap-0f50c9cce8a14022		34 MiB	

- [Create volume from snapshot](#)
- [Create image from snapshot](#)
- [Copy snapshot](#)
- [Launch copy duration calculator](#)
- [Delete snapshot](#)
- [Manage tags](#)
- [Snapshot settings](#) ▾
- [Archiving](#) ▾

- Copy snapshot → enter destination region → Launch instance in that region and connect to remote server → Snapshots → Create Volume from Snapshot.

Copy snapshot Info

Copy a snapshot from one AWS Region to another, or within the same Region.

Source snapshot

The original snapshot that is to be copied.

Snapshot ID

snap-0f50c9ccce8a14022

Region

ap-northeast-1

Snapshot copy details

Description

A description for the snapshot copy.

[Copied snap-0f50c9ccce8a14022 from ap-northeast-1] snap1!

255 characters maximum.

Destination Region

The Region in which to create the snapshot copy.

eu-west-3



Time-based copy - new Info

Specify a completion duration for the snapshot copy operation. Additional costs apply.

[Learn more](#)

Enable time-based copy

Encryption Info

Use Amazon EBS encryption as an encryption solution for your EBS resources.

Encrypt this snapshot

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](#)

[Copy snapshot](#)

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

Last updated less than a minute ago

Owned by me [Search](#)

Name [Edit](#) [▼](#) Snapshot ID [▼](#) Full snapshot size [▼](#)

snap-0b33c7139d444c2a2 34 MiB

[Recycle Bin](#) [Actions ▾](#) [Create snapshot](#)

Create volume from snapshot
Create image from snapshot
Copy snapshot
Launch copy duration calculator
Delete snapshot
Manage tags
[Snapshot settings ▾](#)
Archiving

CloudShell Feedback Privacy Terms Cookie preferences

- Create and attach the Volume.

Create volume [Info](#)

Create an Amazon EBS volume to attach to any EC2 instance in the same Availability Zone.

Volume settings

Snapshot ID

snap-0b33c7139d444c2a2

Volume type [Info](#)

Magnetic (standard)

Size (GiB) [Info](#)

10

Min: 1 GiB, Max: 1024 GiB.

IOPS [Info](#)

Not applicable

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

Not applicable

Availability Zone [Info](#)

eu-west-3c

Fast snapshot restore [Info](#)

Not enabled for selected snapshot

Volume initialization rate (MiB/s) - new. optional [Info](#)

EC2 > ... > snap-0b33c7139d444c2a2 > Create volume

Fast snapshot restore | Info

Not enabled for selected snapshot

Volume initialization rate (MiB/s) - new, optional | Info

Specify the rate at which the snapshot blocks are to be downloaded from Amazon S3 to the volume. [Additional costs apply](#)

Enter a value

Min: 100 MiB/s, Max: 300 MiB/s.

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.

Snapshot summary

 Click refresh to view backup information

The volume type that you select and the tags that you assign determine whether the volume will be backed up by any Data Lifecycle Manager policies.

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

Volumes (2) Info		Last updated less than a minute ago	Actions	Create volume		
Saved filter sets						
Choose filter set		<input type="text"/> Search				
	Name 	Type	Size	IOPS		
	Volume ID			Throughput		
<input type="checkbox"/>	vol-087892b1207878e9e	standard	10 GiB	-	-	snap-0b33c71..
<input type="checkbox"/>	vol-0545c9fbdb709467	gp2	30 GiB	100	-	snap-059e491..

- Attach the volume → open the other region remote server and initialize the disk the text file will be there.

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

Last updated less than a minute ago [Actions](#) [Create volume](#)

Saved filter sets [Choose filter set](#) [Search](#)

Name	Volume ID	Type	Size
<input checked="" type="checkbox"/> vol-087892b1207878e9e	standard	10 GiB	
<input type="checkbox"/> vol-0545c9fbdb709467	gp2	30 GiB	

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

Volume ID: **vol-087892b1207878e9e**

aws | [More](#)

EC2 > ... > [vol-087892b1207878e9e](#) > Attach volume [i](#) [q](#) [e](#)

Attach volume [Info](#)

Attach a volume to an instance to use it as you would a regular physical hard disk drive.

Basic details

Volume ID
 [vol-087892b1207878e9e](#)

Availability Zone
eu-west-3c

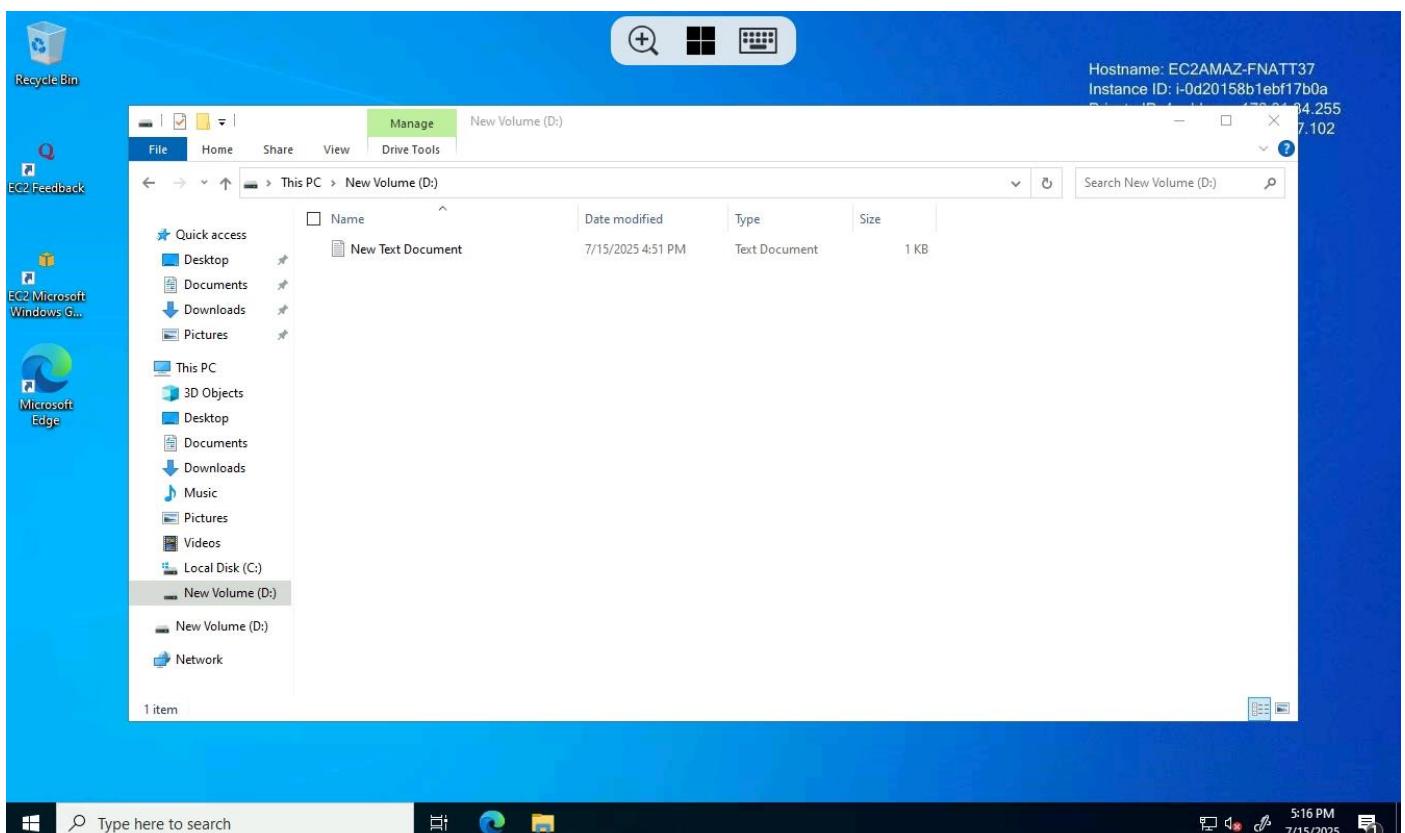
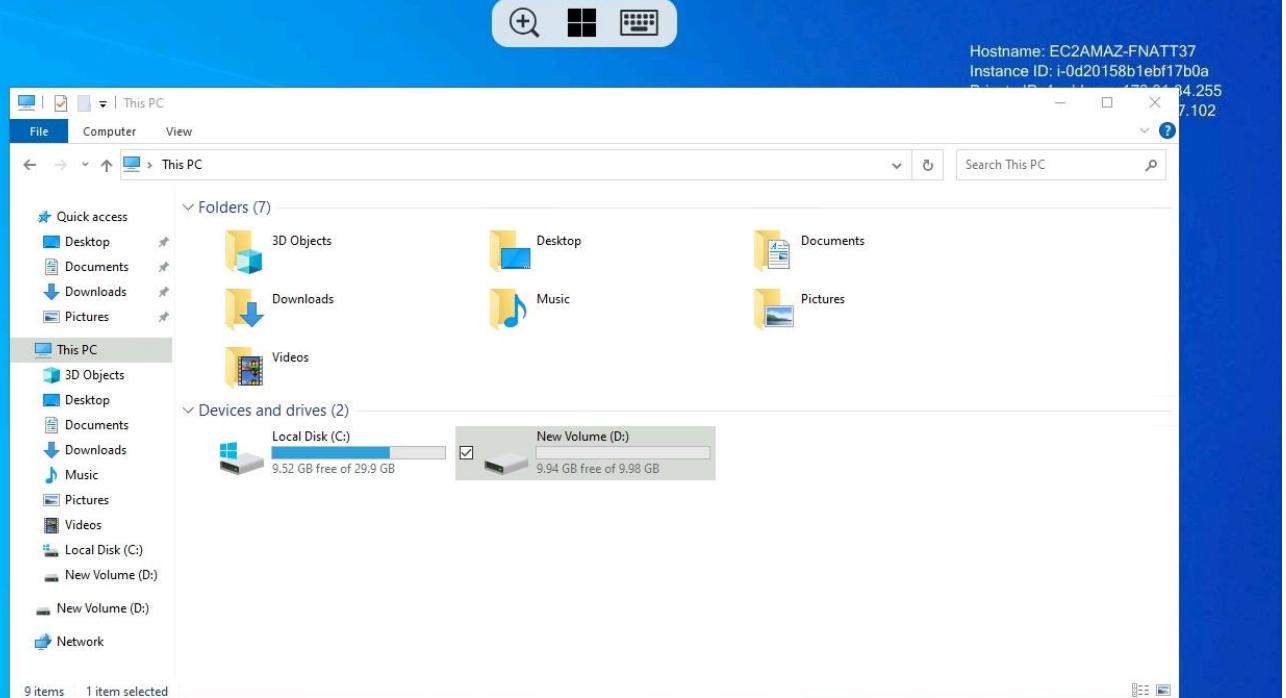
Instance [Info](#)
[i-0d20158b1ebf17b0a](#) [\(parisebs\) \(running\)](#) [C](#)

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

Device name [Info](#)

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

[Cancel](#) [Attach volume](#)



Creating Auto Scaling Groups:

- Launch instance → hosting → AMI → Creating Launch template → Auto scaling group.

The screenshot shows the 'Create launch template' page in the AWS Management Console. At the top, there's a navigation bar with the AWS logo, search bar, and account information ('Asia Pacific (Mumbai)' and 'Sudhanshu'). Below the navigation is a breadcrumb trail: 'EC2 > Launch templates > Create launch template'. On the left, a sidebar titled 'Create launch template' contains sections for 'Launch template name and description' (with 'tmp1' entered), 'Template version description' (with a note about a prod webserver for MyApp), and 'Application and OS Images (Amazon Machine Image)'. The main content area has tabs for 'Instance type', 'Key pair (login)', 'Network settings', and 'Availability Zone'. Each tab has its own configuration section. At the bottom, there are links for 'Privacy', 'Terms', and 'Cookie preferences', and a copyright notice: '© 2025, Amazon Web Services, Inc. or its affiliates.'

This screenshot shows the 'Create launch template' page with more detailed configurations visible. The 'Instance type' tab is selected, showing the 't2.micro' option as 'Free tier eligible'. It provides details about the instance family, generation, and pricing for On-Demand Windows, RHEL, Linux, Ubuntu Pro, and SUSE base pricing. The 'Advanced' tab is also visible. The 'Key pair (login)' tab is shown with a key pair named 'Serlinux'. The 'Network settings' tab includes options for subnet and availability zone. The 'Availability Zone' tab is partially visible at the bottom. The left sidebar shows 'My AMIs' selected, displaying an AMI named 'Ami1' with its details: AMI ID 'ami-02af988eed562a28', creation date '2025-07-15T14:55:50.000Z', virtualization type 'hvm', ENA enabled status, root device type 'ebs', and boot mode 'uefi-preferred'. The 'Description' and 'Architecture' sections are also visible.

▼ Network settings Info

Subnet Info

Don't include in launch template

Create new subnet

When you specify a subnet, a network interface is automatically added to your template.

Availability Zone Info

Don't include in launch template

Enable additional zones

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.

Select existing security group

Create security group

Security groups Info

Select security groups


 Specify a custom value...

launch-wizard-16 sg-03f629cf654f2b7a
VPC: vpc-03853a7d222826976

launch-wizard-33 sg-02fec08d347df5f5b
VPC: vpc-03853a7d222826976

launch-wizard-4 sg-02077361b26ab0450
VPC: vpc-03853a7d222826976

launch-wizard-1 sg-0628900b0fa1e222e
VPC: vpc-03853a7d222826976

Compare security group rules

Hide details

► Advanced details Info

▼ Summary

Software Image (AMI)

Ami1

ami-02af988eead562a28

Virtual server type (instance type)

t2.micro

Firewall (security group)

3 security groups

Storage (volumes)

1 volume(s) - 8 GiB

Free tier: In your first year of opening an AWS account, you get 750 hours per month of t2.micro instance usage (or t3.micro where t2.micro isn't available) when used with free tier AMIs, 750 hours per month of public IPv4 address usage, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel

Create launch template

aws | **Search** [Alt+S] | **EC2** > Auto Scaling groups | Asia Pacific (Mumbai) | Sudhanshu

ASG1, 1 Scaling policy created successfully

Auto Scaling groups (0) Info

Last updated 6 minutes ago **Create Auto Scaling group**

Search your Auto Scaling groups

Name	Launch template/configuration	Instances	Status
No Auto Scaling groups found in the current region			

Create an Auto Scaling group

0 Auto Scaling groups selected

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aws | **Search** [Alt+S] | **EC2** > Auto Scaling groups > Create Auto Scaling group | Sudhanshu

Step 1 **Choose launch template**

Step 2 Choose instance launch options

Step 3 - optional Integrate with other services

Step 4 - optional Configure group size and scaling

Step 5 - optional Add notifications

Choose launch template Info

Specify a launch template that contains settings common to all EC2 instances that are launched by this Auto Scaling group.

Name
Auto Scaling group name
Enter a name to identify the group.

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

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aws | **Search** [Alt+S] | **EC2** > Auto Scaling groups > Create Auto Scaling group | Sudhanshu

Step 7 Review

Launch template Info

i For accounts created after May 31, 2023, the EC2 console only supports creating Auto Scaling groups with launch templates. Creating Auto Scaling groups with launch configurations is not recommended but still available via the CLI and API

Search launch templates
tmp1
temp1
Select a launch template
Create a launch template

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aws | Search [Alt+S] | Asia Pacific (Mumbai) | Sudhanshu

EC2 > Auto Scaling groups > Create Auto Scaling group

Security groups	-	Request spot instances	No
Key pair name	Serlinux	Security group IDs	sg-03f629cfe654f2b7a sg-02fec08d347df5f5b sg-02077361b26ab0450
Additional details		Date created	Tue Jul 15 2025 21:25:53 GMT+0530 (India Standard Time)
Storage (volumes)	-		

Cancel **Next**

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9:27 Tue, 15 Jul

aws | Search [Alt+S] | Asia Pacific (Mumbai) | Sudhanshu

EC2 > Auto Scaling groups > Create Auto Scaling group

Step 1 Choose launch template

Step 2 Choose instance launch options

Step 3 - optional Integrate with other services

Step 4 - optional Configure group size and scaling

Step 5 - optional Add notifications

Step 6 - optional Add tags

Step 7

Choose instance launch options Info

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

Instance type requirements Info

Override launch template

You can keep the same instance attributes or instance type from your launch template, or you can choose to override the launch template by specifying different instance attributes or manually adding instance types.

Launch template tmp1 lt-09204d40de6af5eff	Version Default
Description -	Instance type t2.micro

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Select Availability Zones and subnets

- aps1-az1 (ap-south-1a) | subnet-00beb8f4eafca22fe
172.31.32.0/20 Default
- aps1-az2 (ap-south-1c) | subnet-08a1f7a781be8d679
172.31.16.0/20 Default
- aps1-az3 (ap-south-1b) | subnet-05a166862867a36d5
172.31.0.0/20 Default

Create a subnet

Health checks

Health checks increase availability by replacing unhealthy instances. When you use multiple health checks, all are evaluated, and if at least one fails, instance replacement occurs.

EC2 health checks

Always enabled

Additional health check types - optional

Turn on Elastic Load Balancing health checks
Elastic Load Balancing monitors whether instances are available to handle requests. When it reports an unhealthy instance, EC2 Auto Scaling can replace it on its next periodic check.

Turn on VPC Lattice health checks
VPC Lattice can monitor whether instances are available to handle requests. If it considers a target as failed a health check, EC2 Auto Scaling replaces it after its next periodic check.

Turn on Amazon EBS health checks
EBS monitors whether an instance's root volume or attached volume stalls. When it reports an unhealthy volume, EC2 Auto Scaling can replace the instance on its next periodic health check.

Health check grace period

This time period delays the first health check until your instances finish initializing. It doesn't prevent an instance from terminating when placed into a non-running state.

30 seconds

Cancel Skip to review Previous Next

Step 4 of 7

Configure group size and scaling - optional Info

Define your group's desired capacity and scaling limits. You can optionally add automatic scaling to adjust the size of your group.

Group size Info

Set the initial size of the Auto Scaling group. After creating the group, you can change its size to meet demand, either manually or by using automatic scaling.

Desired capacity type

Choose the unit of measurement for the desired capacity value. vCPUs and Memory(GiB) are only supported for mixed instances groups configured with a set of instance attributes.

Units (number of instances) ▾

Desired capacity

Specify your group size.

4

Scaling Info

You can resize your Auto Scaling group manually or automatically to meet changes in demand.

Scaling limits

Set limits on how much your desired capacity can be increased or decreased.

Min desired capacity

1

Equal or less than desired capacity

Max desired capacity

7

Equal or greater than desired capacity

Automatic scaling - optional

Choose whether to use a target tracking policy Info

You can set up other metric-based scaling policies and scheduled scaling after creating your Auto Scaling group.



No scaling policies

Your Auto Scaling group will remain at its initial size and will not dynamically resize to meet demand.



Target tracking scaling policy

Choose a CloudWatch metric and target value and let the scaling policy adjust the desired capacity in proportion to the metric's value.

Scaling policy name

Target Tracking Policy

Metric type Info

Monitored metric that determines if resource utilization is too low or high. If using EC2 metrics, consider enabling detailed monitoring for better scaling performance.

Average CPU utilization ▾



Target value

70

Instance warmup Info

30 seconds

Additional capacity settings

Capacity Reservation preference | [Info](#)

Select whether you want Auto Scaling to launch instances into an existing Capacity Reservation or Capacity Reservation resource group.

Default

Auto Scaling uses the Capacity Reservation preference from your launch template.

None

Instances will not be launched into a Capacity Reservation.

Capacity Reservations only

Instances will only be launched into a Capacity Reservation. If capacity isn't available, the instances fail to launch.

Capacity Reservations first

Instances will attempt to launch into a Capacity Reservation first. If capacity isn't available, instances will run in On-Demand capacity.

Additional settings

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

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

[Cancel](#)

[Skip to review](#)

[Previous](#)

[Next](#)



More ▾

Step 5 of 7

Add notifications - optional [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](#)

[Skip to review](#)

[Previous](#)

[Next](#)



More ▾



Step 6 of 7

Add tags - *optional* 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.

i 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.



Tags (0)

[Add tag](#)

50 remaining

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

Disabled

Disabled

Default instance warmup
Disabled

Capacity Reservation preference

Preference
Default**Capacity Reservation IDs**
-**Resource Groups**
-

Step 5: Add notifications

[Edit](#)

Notifications

No notifications

Step 6: Add tags

[Edit](#)

Tags (0)

Key | Value

Tag new instances

No tags

[Cancel](#)[Previous](#)[Create Auto Scaling group](#) [Preview code](#)

The screenshot shows the AWS EC2 Instances page. At the top, there are navigation links for 'EC2 > Instances'. Below this is a search bar and a 'Find Instance by attribute or tag (case-sensitive)' input field. A 'Running' filter is applied. The main table lists five instances, all of which are running and have passed 2/2 checks. Each instance is associated with an 'Autoscaling' group and has a 'View alarms' link.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status
Autoscaling	i-0796e964609e7213f	Running	t2.micro	2/2 checks passed	View alarms
	i-092778182d04a4e6b	Running	t2.micro	2/2 checks passed	View alarms
	i-023f5f9937362fdb5	Running	t2.micro	2/2 checks passed	View alarms
	i-070261314cd11b424	Running	t2.micro	2/2 checks passed	View alarms
	i-0447dc373c8f11312	Running	t2.micro	2/2 checks passed	View alarms

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- Go to auto scaling group and delete the auto scaling group.
- When ASG deleted then only you will be able to terminate the instances otherwise the instances will auto initialize after termination.
- To confirm deletion, type delete.

The screenshot shows the AWS Auto Scaling groups page. A modal dialog box is open, titled 'Delete Auto Scaling group'. It asks to delete the 'asg2' group, which contains two running instances. A warning message states that deleting the group will terminate all instances and this action cannot be undone. A text input field contains the word 'delete' for confirmation. There are 'Cancel' and 'Delete' buttons at the bottom of the dialog.

The screenshot shows the AWS Auto Scaling groups page. The 'asg2' group is listed with a status of 'Deleting'. The group is associated with a launch template named 'tmp1 | Version Default'. The table includes columns for Name, Launch template/configuration, Instances, Status, and Desired capacity.

Name	Launch template/configuration	Instances	Status	Desired
asg2	tmp1 Version Default	2	Deleting	0

Instances (6) [Info](#)Last updated
less than a minute ago[Connect](#)[Instance state ▾](#)[Actions ▾](#)[Launch instances](#) [Find Instance by attribute or tag \(case-sensitive\)](#)

Terminated (Deleted) ▾



1



<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status
<input type="checkbox"/>		i-092778182d04a4e6b	Terminated	t2.micro	-	View alarms +
<input type="checkbox"/>		i-023f5f9937362fdb5	Terminated	t2.micro	-	View alarms +
<input type="checkbox"/>		i-070261314cd11b424	Terminated	t2.micro	-	View alarms +
<input type="checkbox"/>		i-0447dc373c8f11312	Terminated	t2.micro	-	View alarms +

Select an instance

Using Load Balancing:

- Launch instance (In summary add no. of instances to 3) → Connect to Linux server → hosting.



This is server 1.



This is Server 2.



This is Server 3.

The screenshot shows the AWS EC2 Instances page. On the left, there's a navigation sidebar with sections for Placement Groups, Key Pairs, Network Interfaces, Load Balancing (which is expanded to show Load Balancers, Target Groups, and Trust Stores), and Auto Scaling (which is expanded to show Auto Scaling Groups). The main content area is titled "Instances (3) Info". It shows a table with three rows, each representing an instance. The columns are Name, Instance ID, Instance state, Instance type, and Status. The instances are all listed as "Running". The "Actions" button is highlighted in orange at the top right of the table area. A search bar at the top of the table says "Find Instance by attribute or tag (case-sensitive)".

Name	Instance ID	Instance state	Instance type	Status
ALB1	i-037b482ef1911b75b	Running	t2.micro	Green
ALB2	i-00c7ba0af2df21c1f	Running	t2.micro	Green
ALB3	i-04869bd6e8e68343f	Running	t2.micro	Green

- Go to Load Balancer → Create Load Balancer

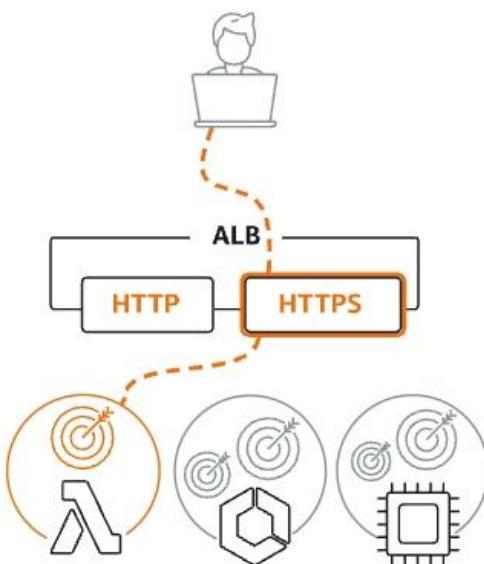
The screenshot shows the AWS EC2 Load balancers page. The left sidebar has a "Load balancers" section. The main content area is titled "Load balancers" and contains the message "Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.". Below this is a table header with columns for Name, DNS name, State, VPC ID, and Availability Zones. A large message at the bottom center says "No load balancers" and "You don't have any load balancers in ap-south-1". At the bottom right, there's a prominent orange "Create load balancer" button.

Compare and 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



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](#)

- Select Application Load Balancer → Create Application Load Balancer.

The screenshot shows the AWS Management Console interface for creating an Application Load Balancer. The top navigation bar includes the AWS logo, search bar, and various navigation links like [Alt+S], Home, Help, and Sudhanshu. The main title is "Create Application Load Balancer" with an "Info" link. A descriptive text explains the function of the load balancer. Below it, a section titled "How Application Load Balancers work" is shown. The "Basic configuration" section starts with "Load balancer name", which is a required field. A note says the name must be unique within your AWS account and can't be changed after creation. A placeholder text box is provided for input, with a note below stating that names can be up to 32 alphanumeric characters and cannot start or end with a hyphen. Below this, there are tabs for "Scheme" and "Info". The bottom navigation bar includes CloudShell, Feedback, Privacy, Terms, and Cookie preferences.

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 Application Load Balancers work

Basic configuration

Load balancer name

Name must be unique within your AWS account and can't 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](#)

CloudShell Feedback Privacy Terms Cookie preferences

IP pools - new | [Info](#)

You can optionally choose to configure an IPAM pool as the preferred source for your load balancer's IP addresses. Create or view [Pools](#) in [Amazon VPC IP Address Manager console](#).

Use IPAM pool for public IPv4 addresses

The IPAM pool you choose will be the preferred source of public IPv4 addresses. If the pool is depleted IPv4 addresses will be assigned by AWS.

Availability Zones and subnets | [Info](#)

Select at least two Availability Zones and a subnet for each zone. A load balancer node will be placed in each selected zone and will automatically scale in response to traffic. The load balancer routes traffic to targets in the selected Availability Zones only.

ap-south-1a (aps1-az1)

Subnet

Only CIDR blocks corresponding to the load balancer IP address type are used. At least 8 available IP addresses are required for your load balancer to scale efficiently.

subnet-00beb8f4eafca22fe

IPv4 subnet CIDR: 172.31.32.0/20

ap-south-1b (aps1-az3)

Subnet

Only CIDR blocks corresponding to the load balancer IP address type are used. At least 8 available IP addresses are required for your load balancer to scale efficiently.

subnet-05a166862867a36d5

IPv4 subnet CIDR: 172.31.0.0/20

ap-south-1c (aps1-az2)

Subnet

Only CIDR blocks corresponding to the load balancer IP address type are used. At least 8 available IP addresses are required for your load balancer to scale efficiently.

subnet-08a1f7a781be8d679

IPv4 subnet CIDR: 172.31.16.0/20

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EC2 > Load balancers > Create Application Load Balancer

Security groups Info

A security group is a set of firewall rules that control the traffic to your load balancer. Select an existing security group, or you can [create a new security group](#).

Security groups

Select up to 5 security groups ▾ 

- launch-wizard-4 sg-02077361b26ab0450 VPC: vpc-03853a7d222826976 
- launch-wizard-25 sg-026c687bf5c8415e8 VPC: vpc-03853a7d222826976 
- default sg-02c2d0096c5f359ec VPC: vpc-03853a7d222826976 

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EC2 > Load balancers > Create Application Load Balancer

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	Port
HTTP	80 1-65535

Default action Info

Forward to  
[Create target group](#)

Listener tags - optional

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- Create target group.

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EC2 > Target groups > Create target group

Step 1
 Specify group details
Step 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 can't 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.

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EC2 > Target groups > Create target group

specific VPC.
• Facilitates using static IP addresses and PrivateLink with an Application Load Balancer.

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

Protocol for load balancer-to-target communication. Can't be modified after creation.

HTTP

Port

Port number where targets receive traffic. Can be overridden for individual targets during registration.

80
1-65535

IP address type

Only targets with the indicated IP address type can be registered to this target group.

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Attributes

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

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

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EC2 > Target groups > Create target group

Specify group details
Step 2
Register targets

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 (3/3)

Instance ID	Name	State
i-037b482ef1911b75b	ALB1	Running
i-00c7ba0af2df21c1f	ALB2	Running
i-04869bd6e8e68343f	ALB3	Running

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aws | More

EC2 > Target groups > Create target group

Step 2 of 2

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 (3/3)

Instance ID	Name
i-037b482ef1911b75b	ALB1
i-00c7ba0af2df21c1f	ALB2
i-04869bd6e8e68343f	ALB3

3 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

Review targets

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- Click Include as pending below → Create Target group.

The screenshot shows the 'Create target group' page in the AWS EC2 console. At the top, there's a search bar and navigation links for 'EC2 > Target groups > Create target group'. Below the navigation is a table titled 'Targets (3)' with columns for Instance ID, Name, Port, State, and Security groups. The targets are listed as 'Running' in the state column. A button 'Remove all pending' is at the top right of the table. Below the table, a message says '3 pending' with buttons for 'Cancel', 'Previous', and 'Create target group'. The bottom of the page includes standard AWS footer links for CloudShell, Feedback, Privacy, Terms, and Cookie preferences.

The screenshot shows the 'TG1' page for a successfully created target group. At the top, it displays the creation message: 'Successfully created the target group: TG1. Anomaly detection is automatically applied to all registered targets. Results can be viewed in the Targets tab.' Below this, the target group details are shown in a table. The 'Details' section includes fields for Target type (Instance), Protocol (HTTP: 80), Protocol version (HTTP1), and VPC (vpc-03853a7d222826976). Metrics at the bottom show 3 healthy targets, 0 unhealthy targets, 3 unused targets, 0 initial targets, and 0 draining targets. The bottom of the page includes standard AWS footer links for CloudShell, Feedback, Privacy, Terms, and Cookie preferences.

7:26 Tue, 15 Jul 23

aws | Search [Alt+S] | Asia Pacific (Mumbai) | Sudhanshu

EC2 > Load balancers > Create Application Load Balancer

Protocol: HTTP | Port: 80 | 1-65535

Default action | Info
Forward to: TG1 | 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.

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- Choose the target group → Scroll down & Create Load Balancer.

7:26 Tue, 15 Jul 23

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EC2 > Load balancers > Create Application Load Balancer

AWS Global Accelerator: -

Attributes

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

Creation workflow and status

► **Server-side tasks and status**
After completing and submitting the above steps, all server-side tasks and their statuses become available for monitoring.

Cancel Create load balancer

- Wait until status gets active.

7:30 Tue, 15 Jul

aws | Search [Alt+S] | Actions ▾ | Create load balancer | ▾

EC2 > Load balancers

Load balancers (1/1)

Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.

Filter load balancers

Name | DNS name | State | VPC ID | Availability Zones

Name	DNS name	State	VPC ID	Availability Zones
Application-Load-Balan...	Application-Load-Balancer1...	Active	vpc-03853a7d222826976	3 Availability Zones

Load balancer: Application-Load-Balancer1

This is Server 2.

This is server 1.

This is Server 3.

- Copy the DNS and paste in new tab.
- The above result changes when page get refreshed.
- To check the load type **top** on linux server.

7:34 Tue, 15 Jul

ArtSt | pm d | Dow | Load | Target | EC X | EC2 | EC2 | 13.20 | 13.23 | 15.20 | applic | +

ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh/home?region= Asia Pacific (Mumbai) Sudhanshu

```
top - 14:04:32 up 39 min. 2 users, load average: 0.04, 0.03, 0.01
Tasks: 108 total, 1 running, 107 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.0 us, 0.0 sy, 0.0 ni, 100.0 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 949.4 total, 466.7 free, 150.5 used, 332.2 buff/cache
MiB Swap: 0.0 total, 0.0 free, 0.0 used, 655.5 avail Mem

PID USER PR NI VIRT RES SHR S %CPU %MEM TIME+ COMMAND
28308 root 20 0 223996 3284 2640 R 0.3 0.3 0:00.10 top
  1 root 20 0 107300 17596 10700 S 0.0 1.8 0:01.30 systemd
  2 root 20 0 0 0 0 S 0.0 0.0 0:00.00 kthreadd
  3 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 rcu_gp
  4 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 rcu_par_gp
  5 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 slub_flushwq
  6 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 netns
  8 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 kworker/0:0H-events_highpri
 10 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 mm_percpu_wq
 11 root 20 0 0 0 I 0.0 0.0 0:00.00 rcu_tasks_kthread
 12 root 20 0 0 0 T 0.0 0.0 0:00.00 rcu_tasks_rude_kthread
```

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- Delete the load balancer and terminate all instances.
- Sign out.