

CI/CD in-sem Lab Exam

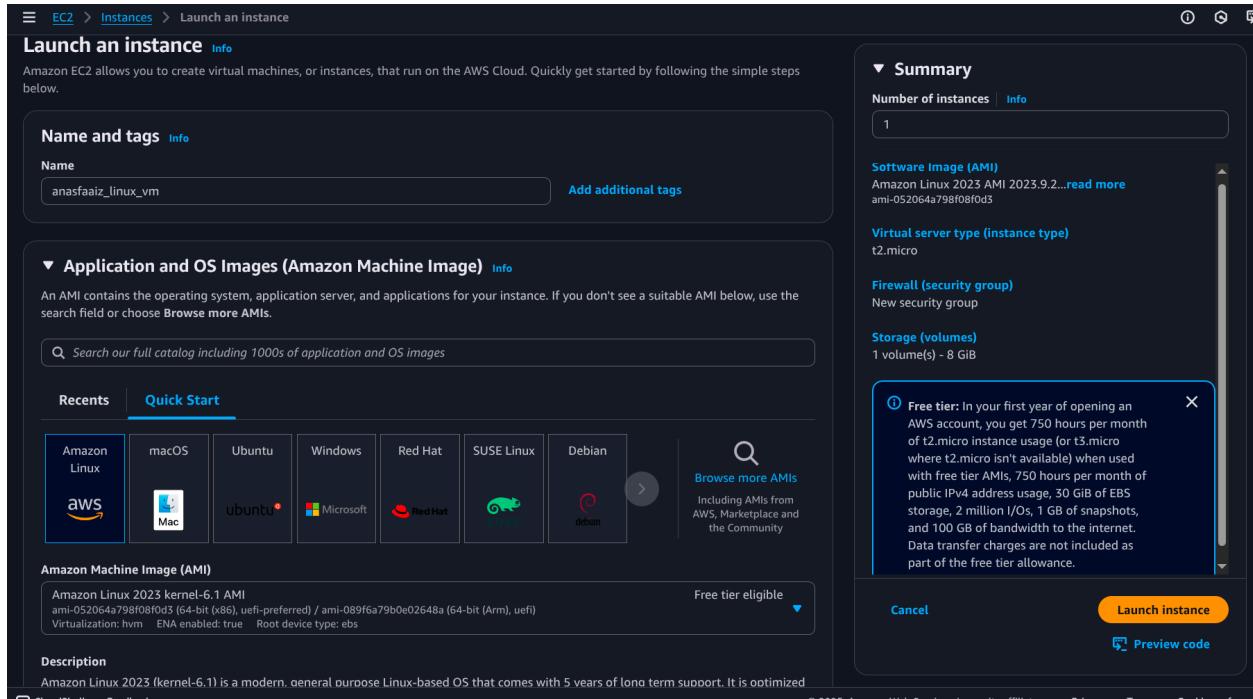
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Q) Launch a Linux virtual machine in AWS and access the same from a local machine which has linux OS

Step 1: Navigate to the EC2 Dashboard

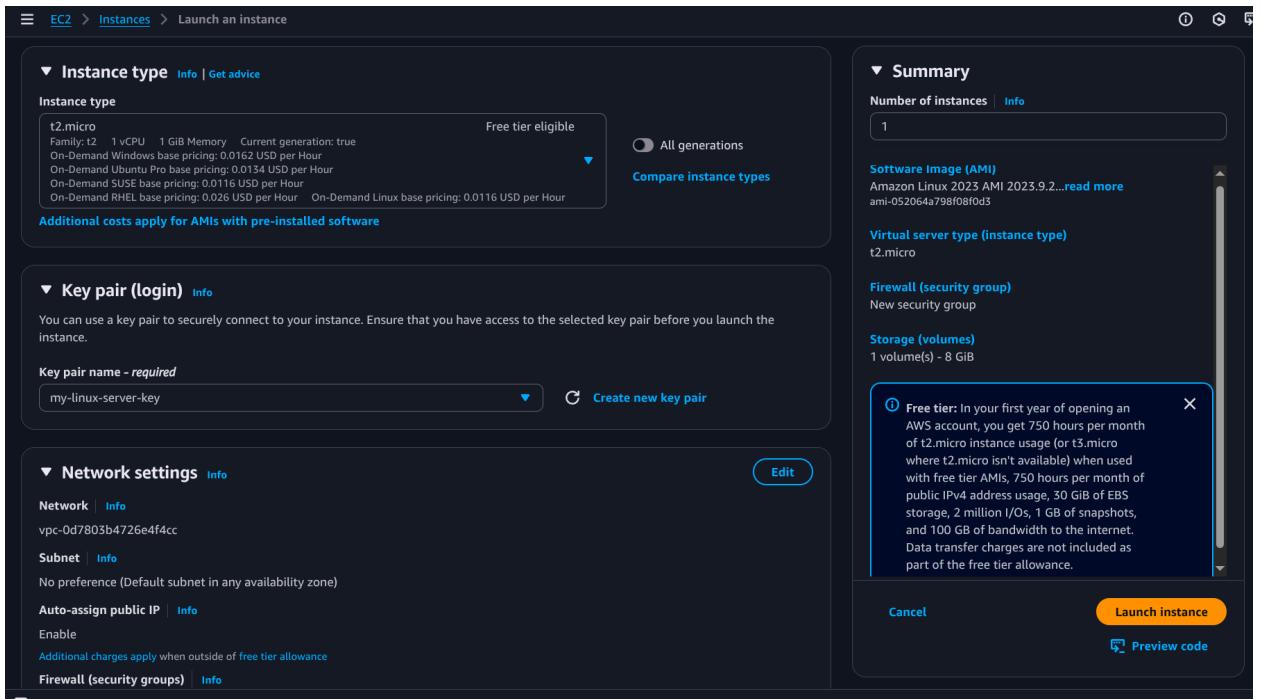
Step 2: Start the Instance Launch Process



Step 3: Name and Choose the Operating System (AMI)

- Name: Give your instance a name, for example, “**anasfaaiz_linux_vm**”.

- Application and OS Images (AMI): Select Amazon Linux. The “**Amazon Linux 2023**”



Step 4: Select the Instance Type

- Scroll down to the "Instance type" section.
- Choose **t2.micro**,

Step 5: Create a Secure Key Pair

- In the "Key pair (login)" section, click on Create new key pair.
- Click Create key pair. Your browser will immediately download the **.pem** file.

Step 6: Configure Network and Firewall (Security Group)

- In the "Network settings" section, click Edit.
- Under "Firewall (security groups)", ensure Create security group is selected.

Step 7: Launch the Instance

- Review the details in the "Summary" panel on the right.

- Click the orange Launch instance button.

The screenshot shows the AWS EC2 Instances page. On the left, there's a navigation sidebar with sections like EC2, Dashboard, EC2 Global View, Events, Instances (selected), Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images (AMIs, AMI Catalog), Elastic Block Store (Volumes, Snapshots, Lifecycle Manager), Network & Security (Security Groups, Elastic IPs, Placement Groups), and Lambda. The main area shows a table of instances with one row selected. The instance details are shown in a modal below:

Instance summary	
Instance ID	i-0da2fe9f5cb3a8d71
IPv6 address	-
Hostname type	IP name: ip-172-31-29-255.ec2.internal
Answer private resource DNS name	IPv4 (A)
Auto-assigned IP address	184.72.214.115 [Public IP]
Public IPv4 address	184.72.214.115 open address
Instance state	Running
Private IP DNS name (IPv4 only)	ip-172-31-29-255.ec2.internal
Instance type	t2.micro
VPC ID	vpc-0d7803b4726e4f4cc
Private IPv4 addresses	172.31.29.255
Public DNS	ec2-184-72-214-115.compute-1.amazonaws.com open address
Elastic IP addresses	-
AWS Compute Optimizer finding	Opt-in to AWS Compute Optimizer for recommendations

Step 8: Wait for the Instance and Get the Public IP Address

- After launching, click the View all instances button.
- Find your new instance in the list. Wait for a few minutes until:
 - The Instance state changes from Pending to Running.
 - The Status check changes from Initializing to 2/2 checks passed.
- Once it's ready, select your instance by clicking the checkbox next to its name.

- In the "Details" tab below, find and copy the Public IPv4 address. It will be a series of numbers, like **184.72.214.115**

The screenshot shows the AWS EC2 Instances Details page for an instance named "anasfaaiz_linux_vm". The Public IPv4 address is listed as 184.72.214.115. Other details include Instance ID (i-0da2fe9f5cb3a8d71), Instance state (Running), and VPC ID (vpc-0d7803b4726e4f4cc).

Detail	Value
Public IPv4 address	184.72.214.115
Instance state	Running
VPC ID	vpc-0d7803b4726e4f4cc
Subnet ID	subnet-048fb13b380ee2740
Instance ARN	arn:aws:ec2:us-east-1:211125529370:instance/i-0da2fe9f5cb3a8d71

Step 9: Open Your Local Terminal

- On your own Linux computer, open the terminal application.

Step 10: Navigate to Your Key File's Location

Use the **cd** command to move into the directory where you saved your **.pem** key file. This is typically the **Downloads** folder.

Bash

```
cd ~/Downloads
```

Step 11: Secure Your Private Key File

Change the permissions on your key file so that only you can read it.

Bash

```
chmod 400 my-aws-key.pem
```

Step 12: Connect Using the SSH Command

- Use the **ssh** command with your key file, the default username (**ec2-user**),

Bash

```
ssh -i my-aws-key.pem ec2-user@184.72.214.115
```

Step 13: Accept the Host Authenticity

- The first time you connect, your terminal will show a message and ask, "Are you sure you want to continue connecting (yes/no/[fingerprint])?".
- Type yes and press Enter.

```
Applications Oct 9 1:06 PM ec2-user@ip-172-31-29-255~$ ls
→ Downloads ls
A4-Studnets-QP.xlsx      melonDS-ubuntu-x86_64
discord-0.0.111.deb      melonDS-ubuntu-x86_64.zip
'DNA_Lab_Workbook_E1-5.pdf'   mGBA-0.10.5-appimage-x64.appimage
'Document 46.pdf'        my-linux-server-key.pem
dolphin-2506a-x86_64.flatpak   photo-6206183333214406221_y.jpg
'Firmware_18.1.0.zip'     ProdKeys.net-v18.-1-0
'Firmware_20.0.1'         ProdKeys.net-v18.-1-0.zip
'Firmware_20.0.1.zip'    ProdKeys.net-v20.0.1
Fonts                   ProdKeys.net-v20.0.1.zip
'Hackathon Registrations Final.xlsx' 'ProdKeys.net-v20.3.0 (1).zip'
'List of Skills.pdf'      ProdKeys.net-v20.3.0.zip
→ Downloads chmod 400 my-linux-server-key.pem
→ Downloads ssh -i my-linux-server-key.pem ec2-user@184.72.214.115
#                                     Amazon Linux 2023
###                                     \####
~~~                                     \####
~~~                                     \#/
~~~                                     \#/.-->
~~~                                     \~.-
~~~                                     / \
~~~                                     \m/
Last login: Thu Oct 9 07:35:58 2025 from 103.255.144.74
[ec2-user@ip-172-31-29-255 ~]$
```

```
Applications Oct 9 1:07 PM us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh/home?addressFamily=ipv4&connType=standard&instanceId=i-0da2fe9f5cb3a...
[Alt+S] Account ID: 2111-2552-9370
Amazon Linux 2023
https://aws.amazon.com/linux/amazon-linux-2023
Last login: Thu Oct 9 07:36:26 2025 from 103.255.144.74
[ec2-user@ip-172-31-29-255 ~]$ ls
[ec2-user@ip-172-31-29-255 ~]$
```

i-0da2fe9f5cb3a8d71 (anasfaaiz_linux_vm)
PublicIPs: 184.72.214.115 PrivateIPs: 172.31.29.255

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