

Linux Intro:

Linux is a free and open-source operating system that is widely used in servers, supercomputers, and mobile devices. It is based on the Unix operating system.

Linux versions:

Linux distributions come in different flavors, including Ubuntu, Debian, CentOS, Fedora, and many others. These distributions typically come with a package manager, which allows users to easily install and update software from a central repository. The Linux community is very active and provides extensive support and resources for users and developers.

The most popular Linux distributions: -

https://en.wikipedia.org/wiki/List_of_Linux_distributions

Ubuntu: Ubuntu is one of the most popular Linux distributions and is designed to be easy to use and install. It comes with a graphical interface and a large repository of software packages.

Debian: Debian is a stable and reliable distribution that is popular among developers and system administrators. It comes with a wide range of software packages and is known for its strict adherence to open-source principles.

CentOS: CentOS is a free and open-source distribution that is based on Red Hat Enterprise Linux. It is popular among businesses and is known for its stability and security.

Fedora: Fedora is a community-driven distribution that is known for being on the cutting edge of technology. It is popular among developers and enthusiasts and is often used as a testbed for new features.

Red Hat Enterprise Linux: Red Hat Enterprise Linux is a commercial distribution that is popular among businesses and enterprises. It is known for its stability, security, and support.

Arch Linux: Arch Linux is a lightweight and customizable distribution that is popular among advanced users. It is known for its minimalist approach and its rolling-release model, which provides frequent updates.

Mint: Mint is a user-friendly distribution that is designed to be easy to use and install. It comes with a variety of software packages and is known for its polished interface.

create a Linux server in local desktop/laptop: -

- Download and install VMware Workstation Player or VMware Workstation Pro on your local desktop or laptop.

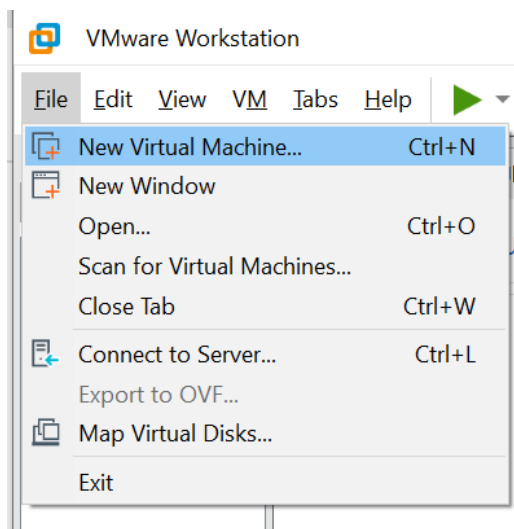
<https://www.vmware.com/in/products/workstation-pro/workstation-pro-evaluation.html>



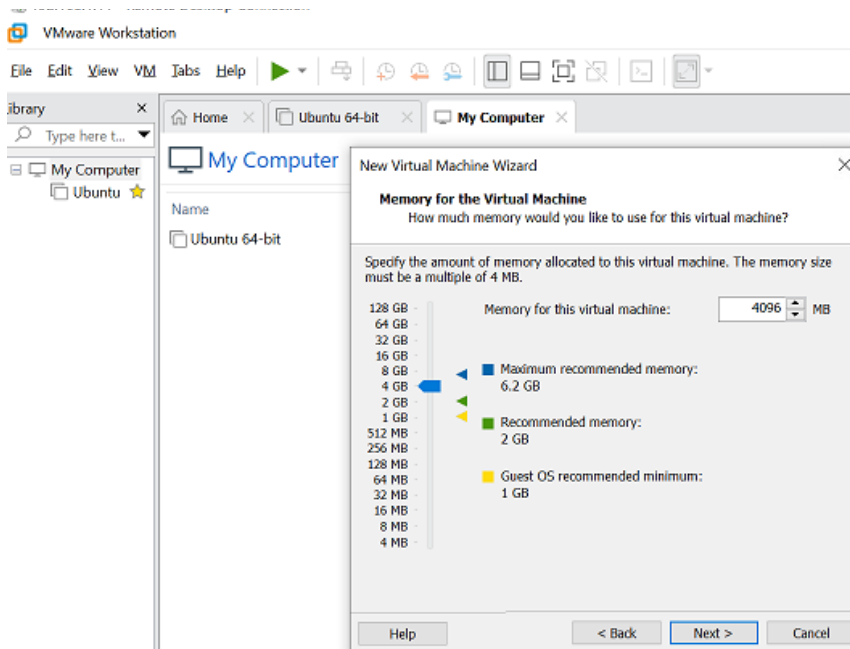
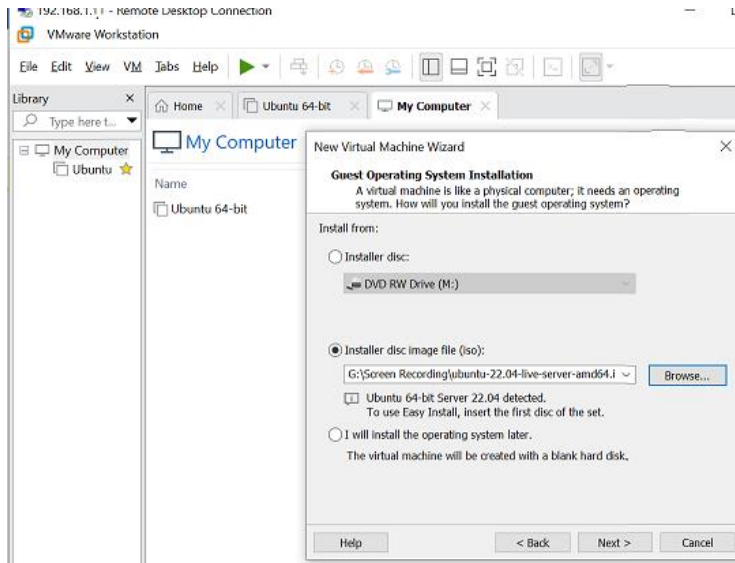
- Download the ISO image for the Linux distribution that you want to use for your server.

<https://ubuntu.com/download/server>

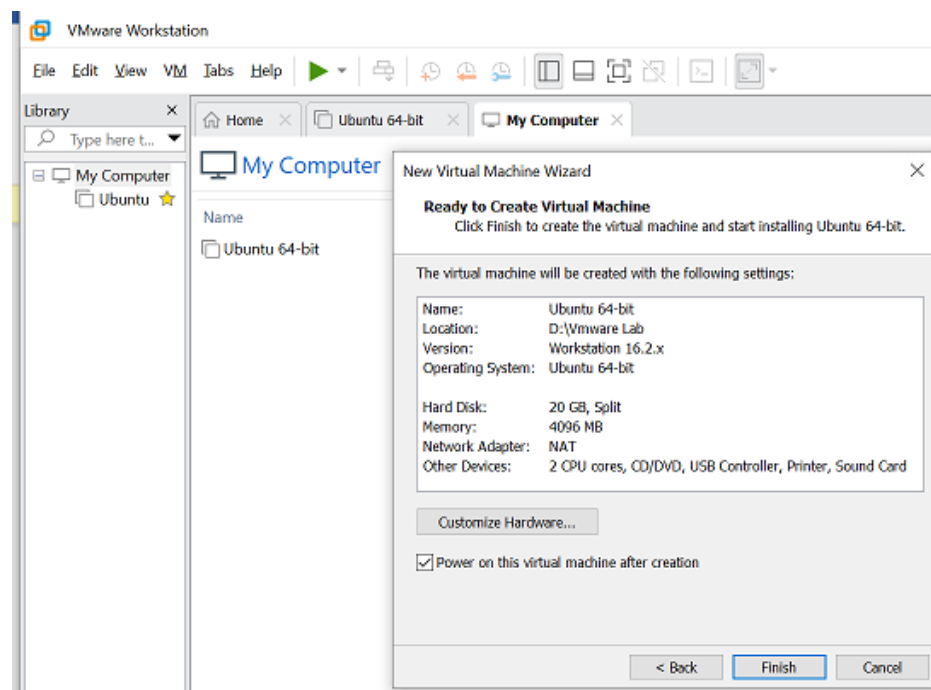
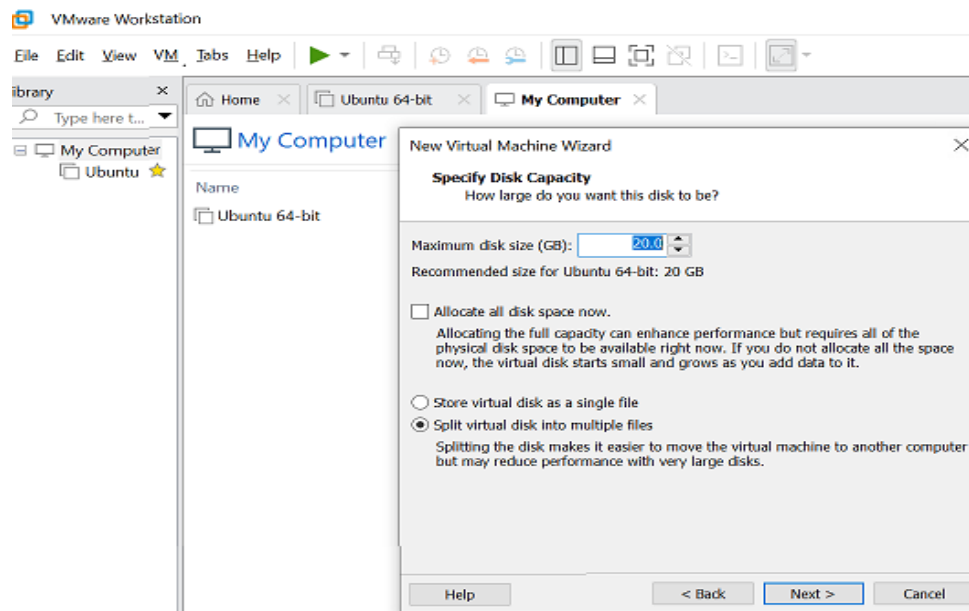
- Open VMware Workstation and click on "Create a New Virtual Machine" to start the New Virtual Machine Wizard.



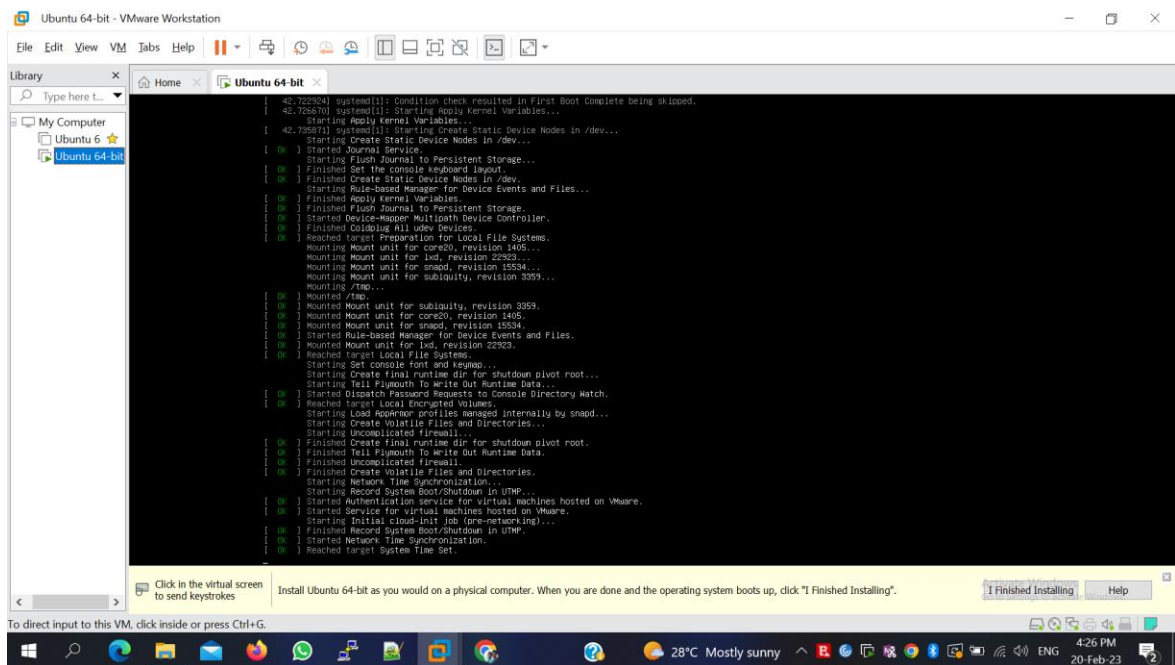
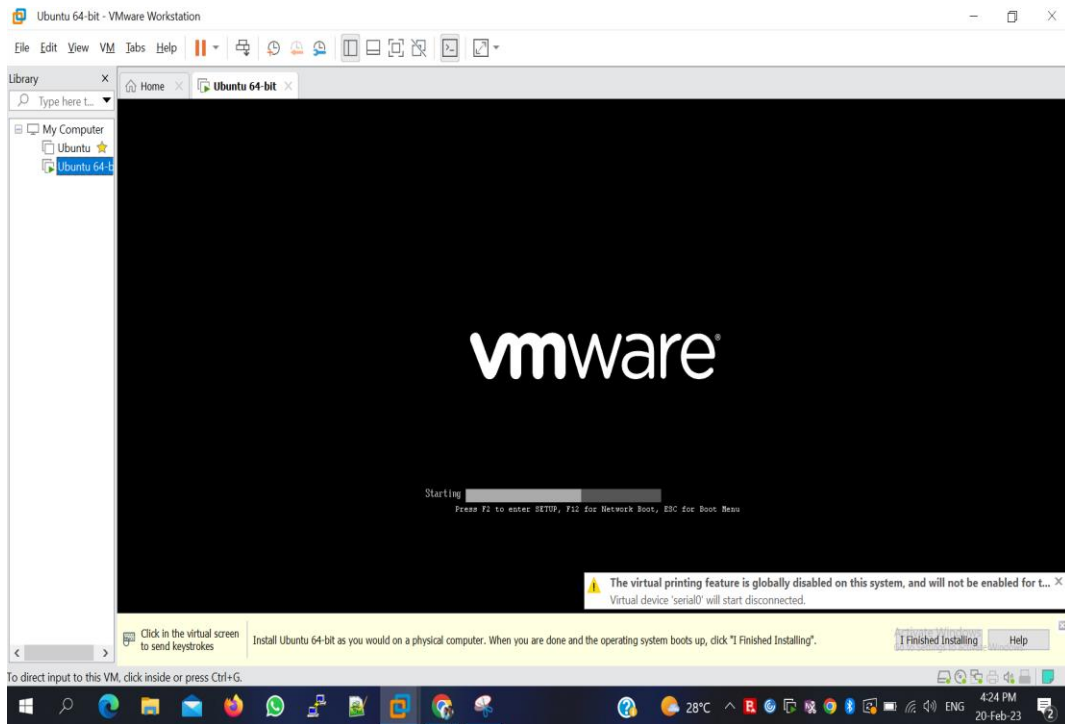
- Choose "Typical" as the configuration type and click "Next".
- Select the location of the Ubuntu ISO image that you downloaded and click "Next".



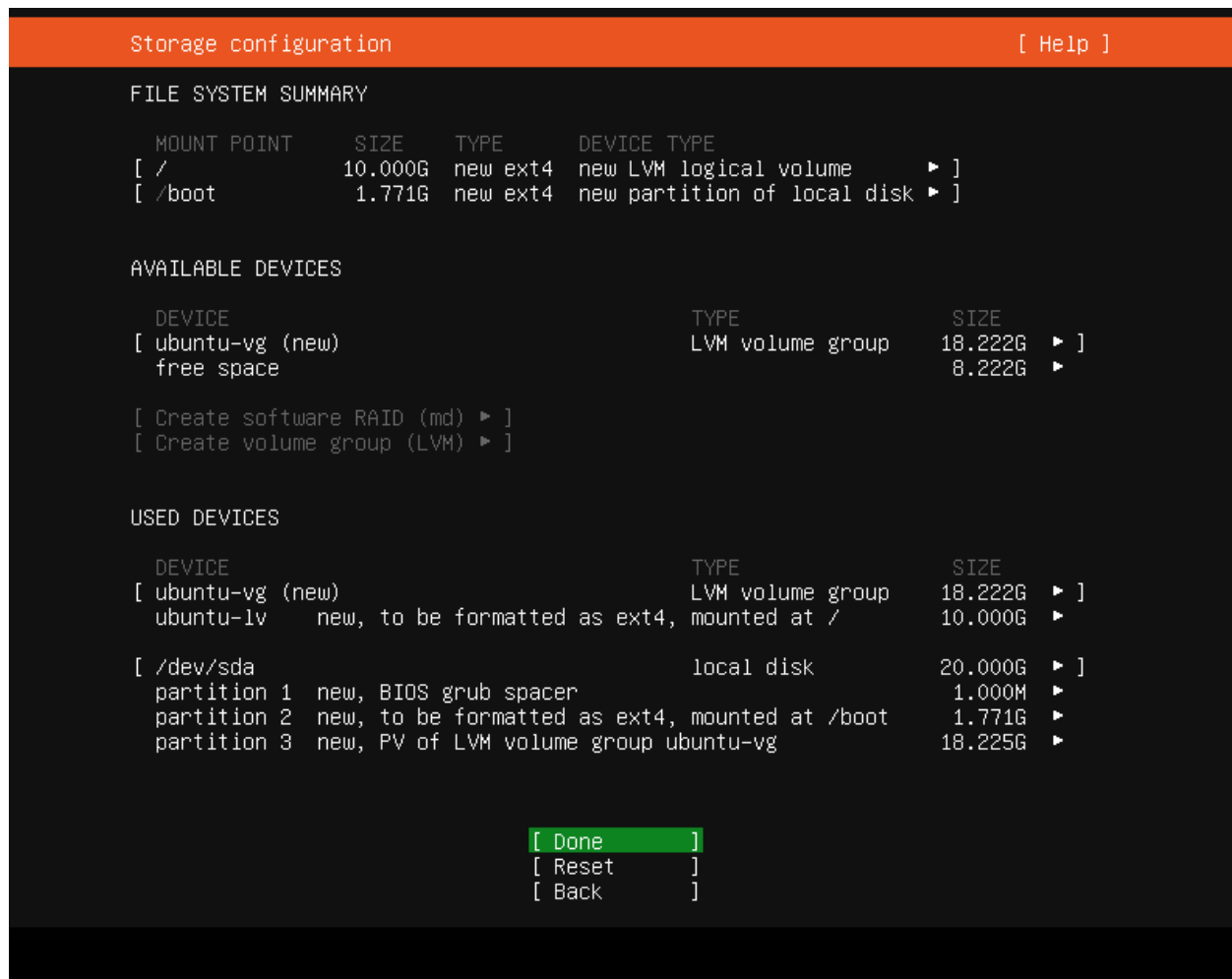
- Choose the guest operating system as Linux and the version as the specific distribution that you downloaded. If your distribution is not listed, you can choose "Other Linux" and specify the version manually. Click "Next".
- Choose a name and location for the virtual machine files and click "Next".
- Specify the disk capacity and choose either "Store virtual disk as a single file" or "Split virtual disk into multiple files". Click "Next".



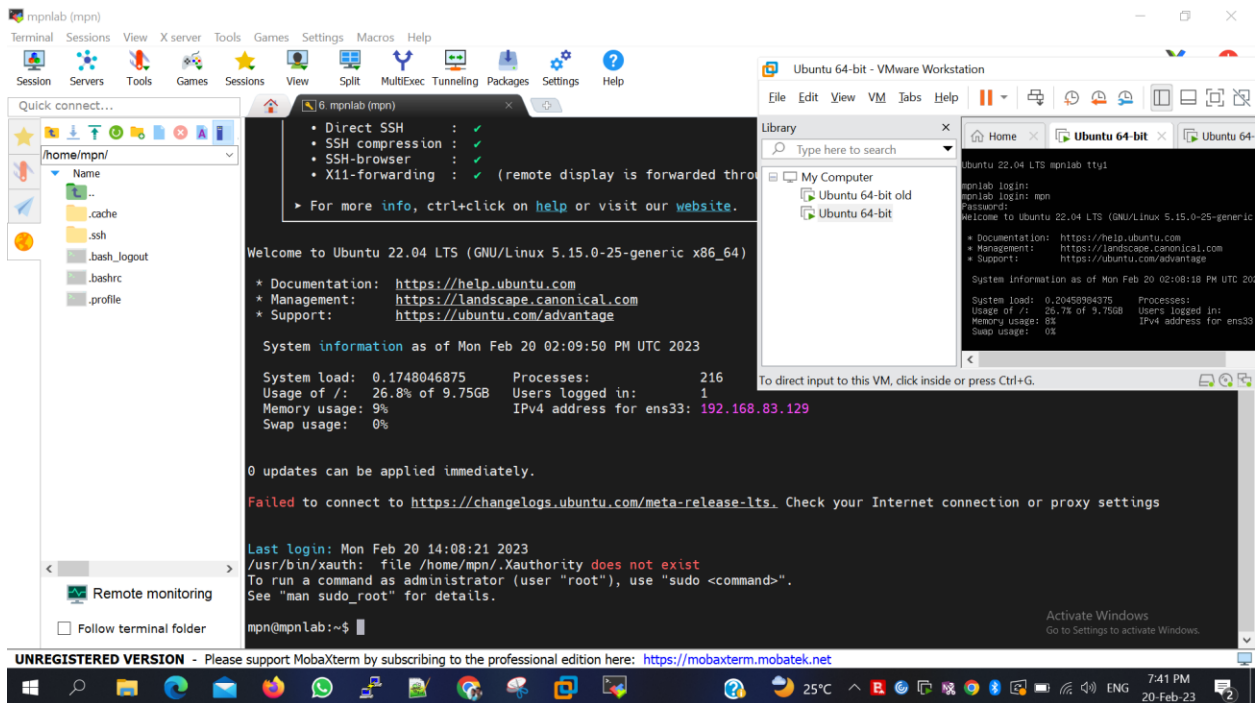
- Review the settings and click "Finish" to create the virtual machine.



- Power on the virtual machine and follow the installation wizard for your chosen Linux distribution. Choose the appropriate options, such as the language, time zone, partitioning, and root password.



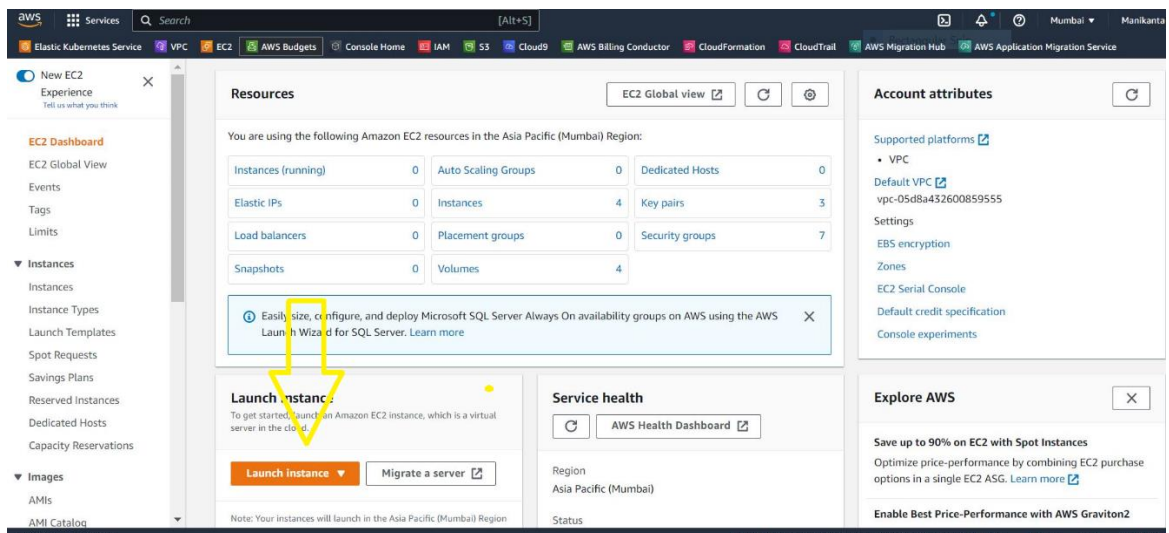
- Once the installation is complete, you can configure the server as needed. This may involve installing additional software packages, setting up a network connection, and configuring services such as SSH.



- You can then access the server through the virtual machine console or a remote connection tool like Putty/Mobixterm.

Create Linux server in AWS.

- Log in to your AWS account and navigate to the EC2 dashboard. <https://signin.aws.amazon.com/>
- Click "Launch Instance" to start the instance creation process.



- Choose an Amazon Machine Image (AMI). For this example, we'll select "Amazon Linux 2 AMI".
- Choose an instance type. This determines the computing resources allocated to your instance.
- Configure the instance details. Here you can set options like the number of instances to launch, network settings, and storage settings.
- Add storage. By default, AWS provides an 8GB EBS volume for the root device. You can add additional volumes as needed.
- Configure security groups. Security groups control the inbound and outbound traffic for your instance. For this example, we'll allow SSH access (port 22) from any IP address.
- Review and launch the instance. Double-check your settings and launch the instance.

[EC2](#) > [Instances](#) > Launch an instance

Launch an instance [Info](#)

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 [Info](#)

Name

[Add additional tags](#)

▼ 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

Quick Start

Amazon Linux

macOS

Ubuntu

Windows

Red Hat

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

Amazon Machine Image (AMI)

Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type

ami-0e742cca61fb65051 (64-bit (x86)) / ami-0b903415af59b1162 (64-bit (Arm))

Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

Description

Amazon Linux 2 Kernel 5.10 AMI 2.0.20230207.0 x86_64 HVM gp2

Architecture

AMI ID

ami-0e742cca61fb65051

Verified provider

▼ Summary

Number of instances [Info](#)

Software Image (AMI)

Amazon Linux 2 Kernel 5.10 AMI...[read more](#)

ami-0e742cca61fb65051

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 includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

[Cancel](#)
[Launch instance](#)

- Create a key pair. You will need to create a key pair if you plan to connect to your instance via SSH. Store the private key in a safe location, as you will not be able to download it again.


EC2 > Instances > Launch an instance


Success
 Successfully initiated launch of instance (i-040adbef78c71e21)

▼ Launch log
















Initializing requests	Succeeded
Creating security groups	Succeeded
Creating security group rules	Succeeded
Launch initiation	Succeeded

- Connect to the instance. Once the instance is running, you can connect to it using an SSH client like PuTTY/ Mobxtrem.
- Use the public IP address of your instance and the key pair you created to log in.

MPN_Lab i-040adbef78c71e21 Running  t2.micro 2/2 checks passed No alarms + ap-south-1a










EC2 > Instances > i-040adbef78c71e21

Instance summary for i-040adbef78c71e21 (MPN_Lab) Updated less than a minute ago Connect Instance

Instance ID  i-040adbef78c71e21 (MPN_Lab) IPv6 address -- Hostname type IP name: ip-172-31-39-184.ap-south-1.compute.internal Answer private resource DNS name IPv4 (A) -- Auto-assigned IP address  13.233.111.70 (Public IP) IAM Role --	Public IPv4 address  13.233.111.70 open address  Instance state  Running Private IP DNS name (IPv4 only)  ip-172-31-39-184.ap-south-1.compute.internal Instance type t2.micro VPC ID  vpc-05d8a432600859555  Subnet ID  subnet-0a45b1ab21696345b 	Private IPv4 addresses  172.31.39.184 Public IPv4 DNS  ec2-13-233-111-70.ap-south-1.compute.amazonaws.com open address  Elastic IP addresses -- AWS Compute Optimizer finding  Opt-in to AWS Compute Optimizer for recommendations. Learn more  Auto Scaling Group name --
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Details | Security | Networking | Storage | Status checks | Monitoring | Tags

▼ **Instance details** info

Platform  Amazon Linux (Inferred) Platform details  Linux/UNIX Stop protection Disabled Instance auto-recovery Default AMI Launch index 0 Credit specification standard Usage operation  RunInstances Enclaves Support --	AMI ID  ami-0c742cca61fb65051 AMI name  amzn2-ami-kernel-5.10-hvm-2.0.20230207.0-x86_64-gp2 Launch time  Mon Feb 20 2023 20:08:57 GMT+0530 (India Standard Time) (5 minutes) Lifecycle normal Key pair name  Linux_lab Kernel ID -- RAM disk ID -- Boot mode --	Monitoring disabled Termination protection Disabled AMI location  amazon/amzn2-ami-kernel-5.10-hvm-2.0.20230207.0-x86_64-gp2 Stop-hibernate behavior disabled State transition reason -- State transition message -- Owner  557822060553 Allow tags in instance metadata Disabled
---	--	--

```
11. 13.233.111.70 (ec2-user) x +
Authenticating with public key "Imported-Openssh-Key"

• MobaXterm Personal Edition v22.3 •
(SSH client, X server and network tools)

► SSH session to ec2-user@13.235.238.119
  • Direct SSH      : ✓
  • SSH compression : ✓
  • SSH-browser     : ✓
  • X11-forwarding  : ✗ (disabled or not supported by server)

► For more info, ctrl+click on help or visit our website.

Last login: Mon Feb 20 14:41:54 2023 from 61.3.36.109

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 _ | ( _ | /   Amazon Linux 2 AMI
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https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-39-184 ~]$ uname
Linux
[ec2-user@ip-172-31-39-184 ~]$ uname -r
5.10.165-143.735.amzn2.x86_64
[ec2-user@ip-172-31-39-184 ~]$ uptime
14:48:05 up 1 min, 1 user, load average: 0.07, 0.05, 0.01
[ec2-user@ip-172-31-39-184 ~]$ hostname
ip-172-31-39-184.ap-south-1.compute.internal
[ec2-user@ip-172-31-39-184 ~]$ last reboot
reboot    system boot  5.10.165-143.735 Mon Feb 20 14:46 - 14:48 (00:01)
reboot    system boot  5.10.165-143.735 Mon Feb 20 14:39 - 14:44 (00:05)
```

That's it! You now have a Linux server running in AWS