

AMAZON EC₂

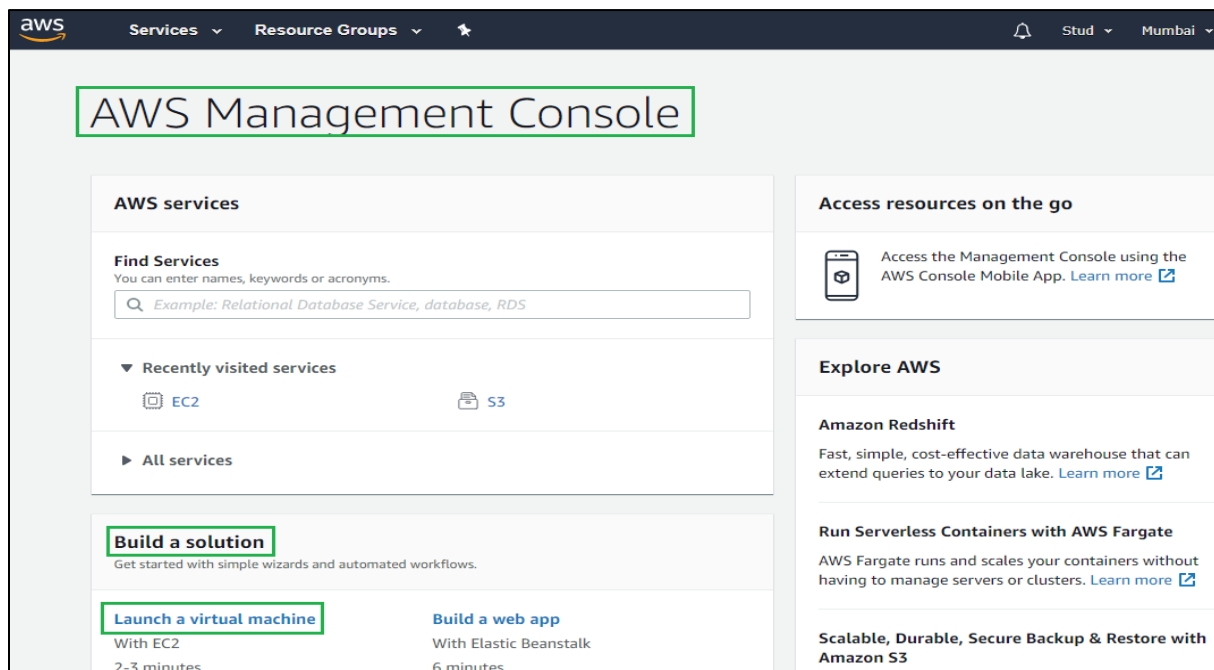
Elastic Compute Cloud

Amazon Web Services: - is a Public Cloud used worldwide most comprehensive and broadly adopted. AWS provides a number of services based on the Project/Customer needs.

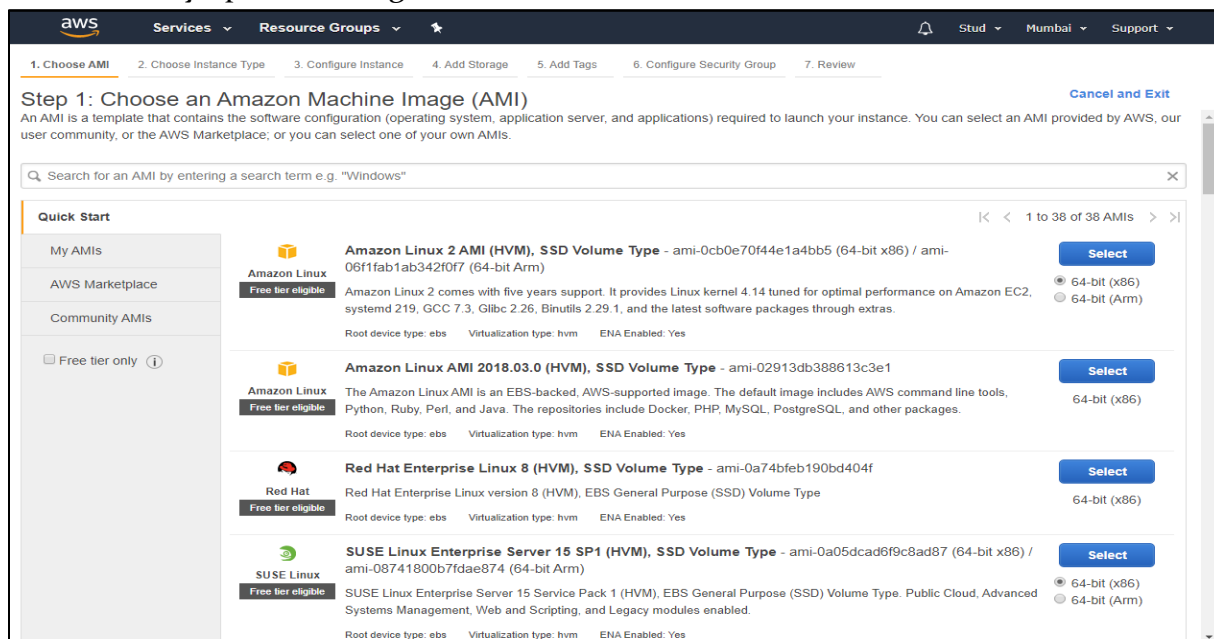
AWS EC2: - Amazon EC2 “Elastic Compute Cloud” provide scalable computing capacity. It is mainly used to create Instance/VM. The hardware resource are configured during the creation of the instance.

AWS EC2 Instance Creation: - Instance are nothing but creation of VM and only Server are created. The Steps mention below describe how to create an instance steps by steps,

1. Login into your AWS Account and to create a AMI there are two ways to select to do it and the following steps are mention below
2. Single step to select and create a AMI
 - a. In AWS Management Console search for the title named **Build a solution** and select **Launch a Virtual Machine**

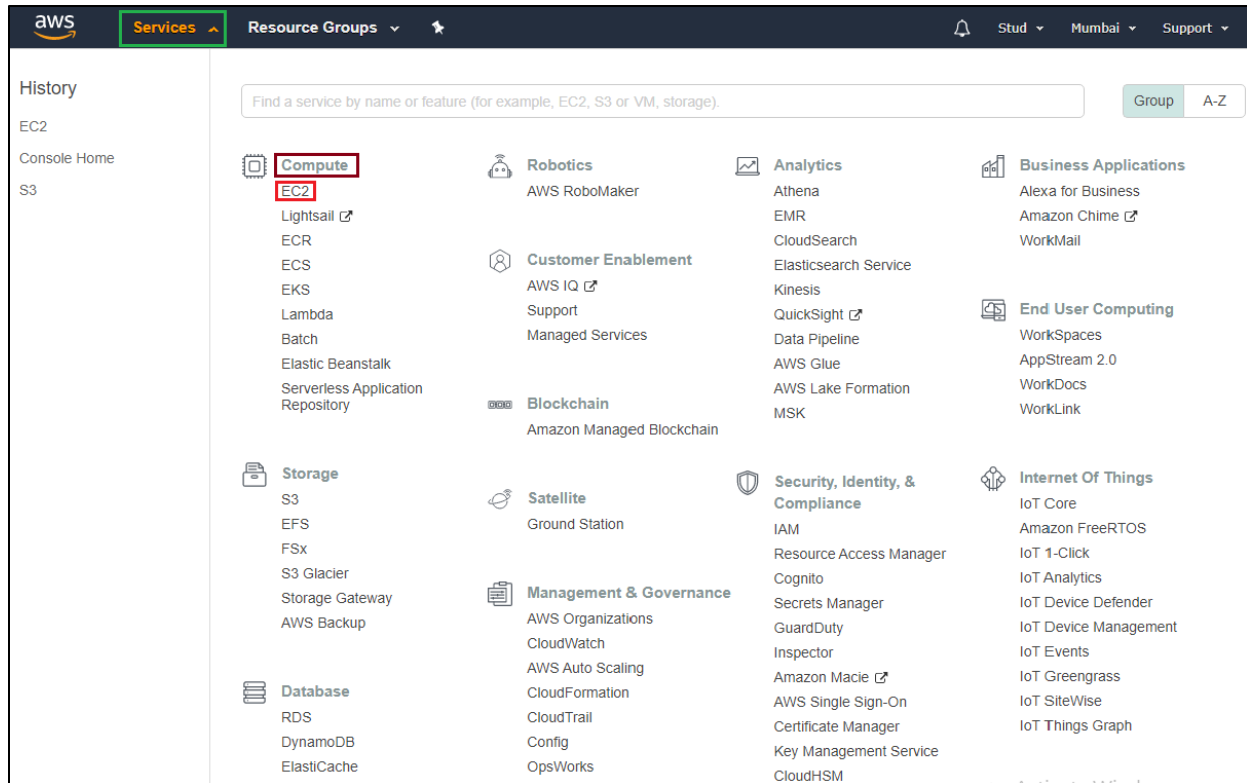


- b. It will directly open AMI Page where locate and list number of Server OS

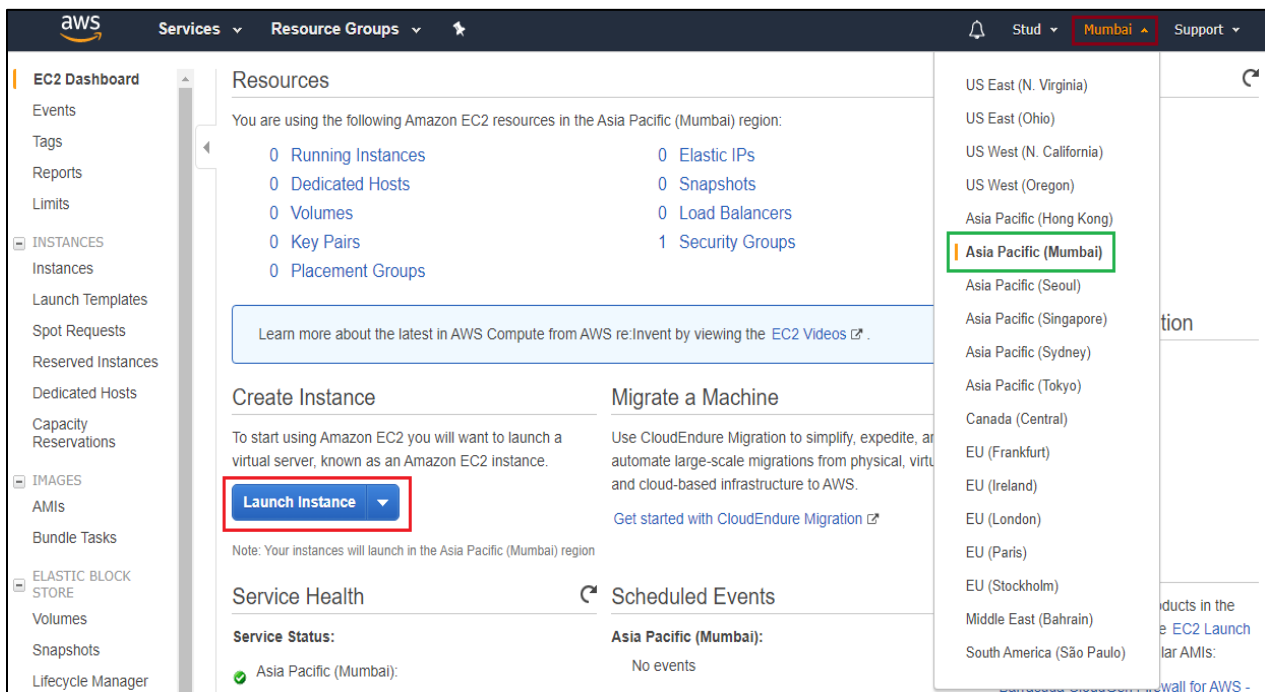


3. It a three steps method and they are mention below,

- Search and select the **Services** option present above in the left side of the page and it will expand to open the list of service available. Search and select the **Compute Category** in it select **EC2** it will open a new page known as **EC2 Instance Dashboard** where you overview and track the previously created AMI's.



- Select the **Launch Instance** button it will open a new page and list of Server AMI OS in Amazon will be presented.



- On the top Right side Region **"Mumbai"** selection is available and any region can be selected based on your location and in these region some features change but other's remain the same.

4. Click select to create a new Instance. If you want to use free Instance the select the once labeled **FREE TIER ELIGIBLE**

Step 1: Choose an Amazon Machine Image (AMI)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Search for an AMI by entering a search term e.g. "Windows"

Quick Start 1 to 38 of 38 AMIs

My AMIs

AWS Marketplace

Community AMIs

☐ Free tier only

Amazon Linux

Free tier eligible

Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-0cb0e70f44e1a4bb5 (64-bit x86) / ami-06f1fab1ab342f0f7 (64-bit Arm)

Amazon Linux 2 comes with five years support. It provides Linux kernel 4.14 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras.

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

Select

64-bit (x86)

64-bit (Arm)

Amazon Linux

Free tier eligible

Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type - ami-02913db388613c3e1

The Amazon Linux AMI is an EBS-backed, AWS-supported image. The default image includes AWS command line tools, Python, Ruby, Perl, and Java. The repositories include Docker, PHP, MySQL, PostgreSQL, and other packages.

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

Select

64-bit (x86)

Red Hat

Free tier eligible

Red Hat Enterprise Linux 8 (HVM), SSD Volume Type - ami-0a74bfeb190bd404f

Red Hat Enterprise Linux version 8 (HVM), EBS General Purpose (SSD) Volume Type

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

Select

64-bit (x86)

5. Select the processor based on your need if you required for free then select Free Tier Eligible

Step 2: Choose an Instance Type

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

Filter by: **All instance types** **Current generation** **Show/Hide Columns**

Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	General purpose	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.xlarge	4	16	EBS only	-	Moderate	Yes
<input type="checkbox"/>	General purpose	t2.2xlarge	8	32	EBS only	-	Moderate	Yes
<input type="checkbox"/>	General purpose	t3.nano	2	0.5	EBS only	Yes	Up to 5 Gigabit	Yes

6. On the next Configuration setup it will ask to configure Instance details

Step 3: Configure Instance Details

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

Number of instances	1	Launch into Auto Scaling Group
Purchasing option	<input type="checkbox"/> Request Spot instances	
Network	vpc-9d7f7bf5 (default)	Create new VPC
Subnet	No preference (default subnet in any Availability Zone)	Create new subnet
Auto-assign Public IP	Use subnet setting (Enable)	
Placement group	<input type="checkbox"/> Add instance to placement group	
Capacity Reservation	Open	Create new Capacity Reservation
IAM role	None	Create new IAM role
Shutdown behavior	Stop	
Enable termination protection	<input type="checkbox"/> Protect against accidental termination	
Monitoring	<input type="checkbox"/> Enable CloudWatch detailed monitoring Additional charges apply.	
Tenancy	Shared - Run a shared hardware instance Additional charges will apply for dedicated tenancy.	
T2/T3 Unlimited	<input type="checkbox"/> Enable Additional charges may apply	

7. In the next step Adding Storage and basically only 8GB is given

Step 4: Add Storage

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

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encryption
Root	/dev/xvda	snap-05b6e99480172f2f3	8	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypt
Add New Volume								

8. Add a tag if you want and in next step we will be Configuring Security Group

Step 6: Configure Security Group

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

Assign a security group: ☒ Create a new security group

☐ Select an existing security group

Security group name: launch-wizard-1

Description: launch-wizard-1 created 2019-10-11T16:02:24.561+05:30

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop
All ICMP - IPv4	ICMP	0 - 65535	Anywhere 0.0.0.0/0, ::/0	e.g. SSH for Admin Desktop
Add Rule				



Warning

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

9. To make it accessible we need to add a new Rule by selecting Add Rule and select ALL ICMP- IPV4 later the Source type is anywhere. So it can be accessed by anywhere.

10. Once all the configuration has been completed we can reviews and Launch it. During the Launch it will ask for Key Pair and with it only we can access the Instance. A Key is a Password for the Instance and it needs to be created then select Launch Instance

Step 7: Review Instance Launch
Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

Improve your instances' security. Your security group, launch-wizard-1, is open to the world. Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only. You can also open additional ports for your instances. [Edit security groups](#)

AMI Details
Amazon Linux 2 AMI (HVM)
Free tier eligible
Amazon Linux 2 comes with the latest version of Amazon Linux 2.29.1, and the latest software updates.
Root Device Type: ebs Virtualization: paravirt

Instance Type

Instance Type	ECUs
t2.micro	Variable

Security Groups

Security group name	Description
launch-wizard-1	launch-wizard-1

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

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

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

Create a new key pair
Key pair name
Key
Download Key Pair

You have to download the private key file (*.pem file) before you can continue. Store it in a secure and accessible location. You will not be able to download the file again after it's created.

Launch Instances

Network Performance
Low to Moderate
[Edit instance type](#)

[Edit security groups](#)

Description ⓘ

Cancel Previous Launch