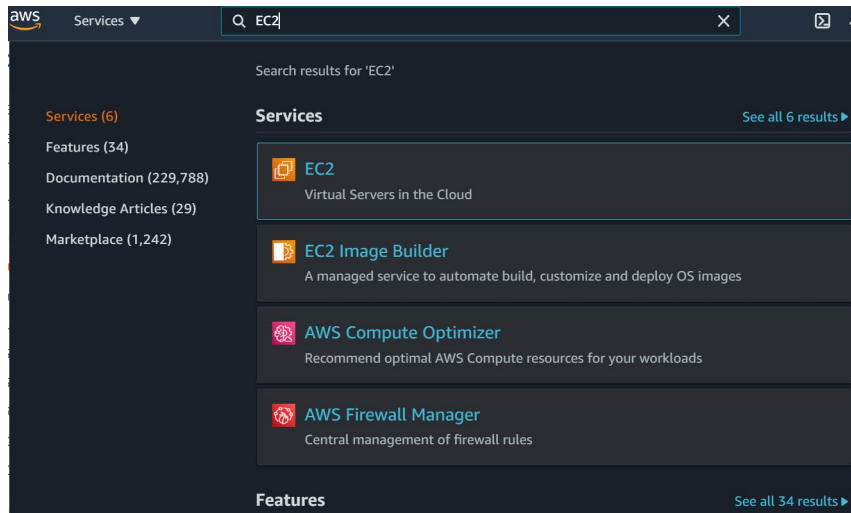


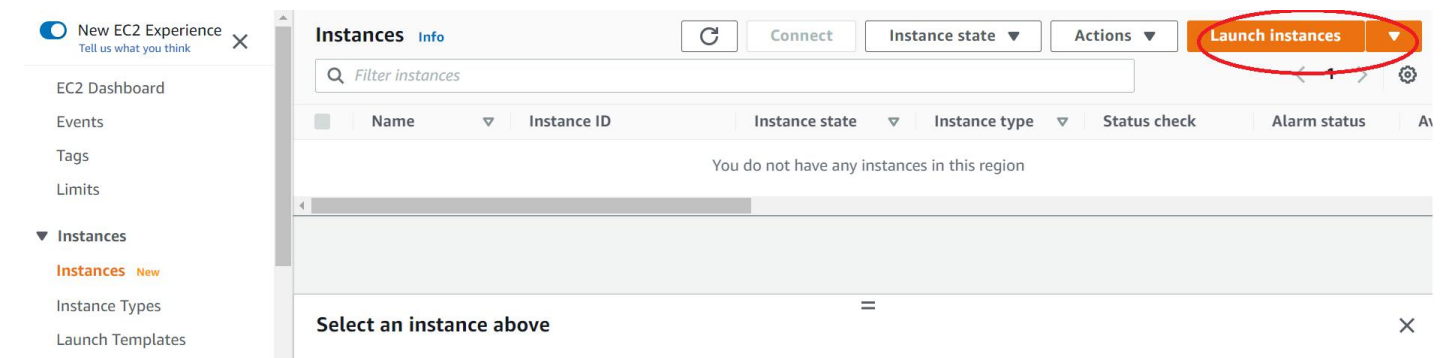
EC2 in action: Creating an EC2 instance

performed by: **Rohit Sah**

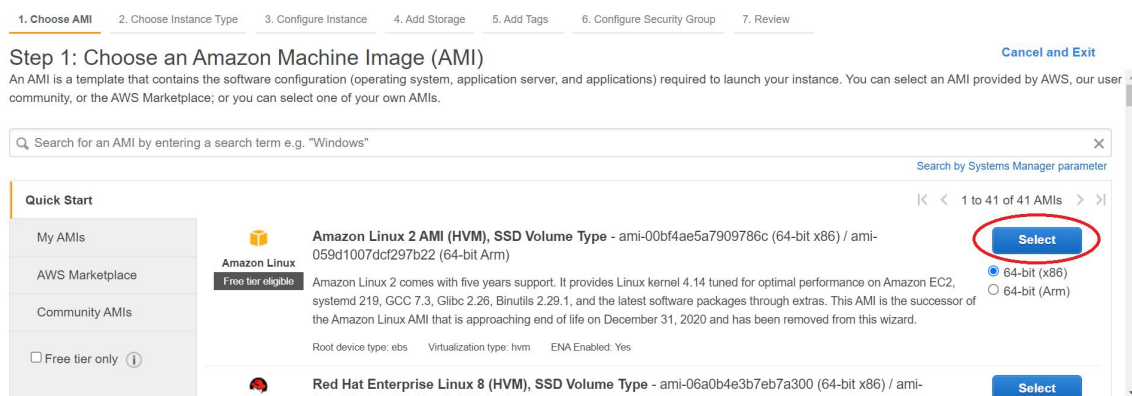
First go to the EC2 section



Then Click on Launch Instance



Select the AMI(Amazon Machine Image) that you want



Select the Instance type or the machine that you want

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 families

Current generation

[Show/Hide Columns](#)

Currently selected: t2.micro (- ECU, 1 vCPUs, 2.5 GHz, -, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	t2	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	t2	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.small	1	2	EBS only	-	Low to Moderate	Yes

[Cancel](#)
[Previous](#)
[Review and Launch](#)
[Next: Configure Instance Details](#)

Then configure the 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
☐ Request Spot instances

Network

vpc-fd905f96 (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
☐ Add instance to placement group

Capacity Reservation

Open

Domain join directory

No directory

[Create new directory](#)

IAM role

None

[Create new IAM role](#)

Shutdown behavior

Stop

Stop - Hibernate behavior
☐ Enable hibernation as an additional stop behavior

Enable termination protection
☐ Protect against accidental termination

Monitoring
☐ Enable CloudWatch detailed monitoring
Additional charges apply.

Tenancy

Shared - Run a shared hardware instance

Additional charges will apply for dedicated tenancy.

Credit specification
☐ Unlimited

[Cancel](#)
[Previous](#)
[Review and Launch](#)
[Next: Add Storage](#)

Select the storage details

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-039680514ac8c6b1a	8	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypte

Add New Volume

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

[Cancel](#)
[Previous](#)
[Review and Launch](#)
[Next: Add Tags](#)

Add a tag to the EC2 machine but it is optional

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver.

A copy of a tag can be applied to volumes, instances or both.

Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

Key (128 characters maximum)	Value (256 characters maximum)	Instances	Volumes	Network Interfaces
Machine	Test	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

[Add another tag](#) (Up to 50 tags maximum)

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Configure Security Group](#)

Now the most important part is to configure the security groups, here we are setting an SSH from our own IP and HTTP from everywhere so everyone can access the machine through the IP but only we can SSH

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

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: SGforEC2

Description: securityGroupForEC2

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	My IP 223.238.122.133/32	sshForAdmin
HTTP	TCP	80	Anywhere 0.0.0.0/0, ::/0	HttpForEveryone

[Add Rule](#)

[Cancel](#) [Previous](#) [Review and Launch](#)

Now we set a key pair and download it for ssh into our instance from our terminal

1. Choose AMI 2. Choose Instance Type

Step 7: Review Instance Launch

Please review your instance launch details.

AMI Details

Amazon Linux 2 AMI (HVM)

Free tier eligible

Amazon Linux 2 comes with five years of support, including updates to 2.29.1, and the latest software.

Root Device Type: ebs Virtualization: paravirtual

Instance Type

Instance Type	ECUs
t2.micro	-

Security Groups

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: ec2_test_instance

[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.

[Cancel](#) [Launch Instances](#)

Review the launch process.

[Edit AMI](#)

bc 2.26, Binutils

[Edit instance type](#)

Network Performance

Low to Moderate

[Edit security groups](#)

[Cancel](#) [Previous](#) [Launch](#)

We can see the listed instance that we just created

New EC2 Experience
Tell us what you think

EC2 Dashboard
Events
Tags
Limits
▼ Instances
Instances **New**
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances **New**

Instances (1) Info

Filter instances

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Avi
<input type="checkbox"/>	-	i-018efec048689dff4	Running	t2.micro	Initializing	No alarms	ap-

Select an instance above

Now to ssh from our local machine to the EC2 instance we got the terminal and enter the command as shown below with the user as ec2@user and at the public IP of the instance

```
\Desktop>ssh -i "ec2_test_instance.pem" ec2-user@13.127.243.87

 _ | _ | _ )
 _ | ( _ | /   Amazon Linux 2 AMI
 _ | \ _ | _ |

https://aws.amazon.com/amazon-linux-2/
16 package(s) needed for security, out of 18 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-36-66 ~]$
[ec2-user@ip-172-31-36-66 ~]$
[ec2-user@ip-172-31-36-66 ~]$
```