How to run systems in EC2?

- Login to your AWS account and click on AWS EC2.

- Under create instance, click on launch instance.

Now you have to select an **Amazon Machine Image (AMI),** AMIs are templates of OS and they provide the information needed to launch an instance.

When we want to launch an instance, we have to specify which AMI we want to use. It could be Ubuntu, windows server etc.

- The AMIs could be preconfigured or you can configure it on your own according to your requirements.

    - For preconfigured AMIs you have to select it from AWS marketplace.

    - For setting up your own, go to quick-start and select one.

- While configuring you will reach a point where you have to select an **EBS** storage option.

Elastic Block Storage (EBS) is a persistent block level storage volume which are used with EC2. Here each block acts as a hard drive.

But why do we need EBS with EC2?

Just like your computer needs a hard drive, you need AWS EC2 Tutorial, AWS EC2 needs a storage volume to store the OS that your instance will be specifying. Options for EBS are:

Provisioned IOPS: This category is for workloads which are mission critical, it provides high IOPS rates.

General Purpose: It is for workloads which need a performance and cost balance.

Magnetic: for data which is accessed less frequently and also retrieval time is more because they are slow.

- After selecting a suitable option in EBS, we give the instance a name and then we create a **security group**.

- A security group acts as a firewall to control inbound and outbound traffic. Each security group has rules according to which the traffic is governed.

- Each instance, can be assigned up to 5 security groups.

- Finally, in the last step the console shows all the gatherings that you have done, you can verify and launch it.

Login to AWS Management Console.
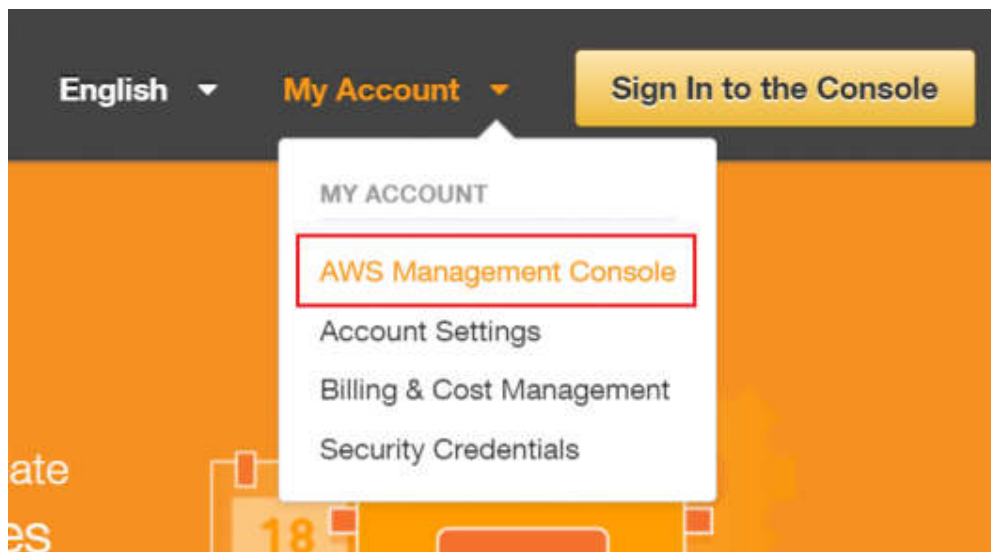
Select your preferred Region. Select a region from the drop down.
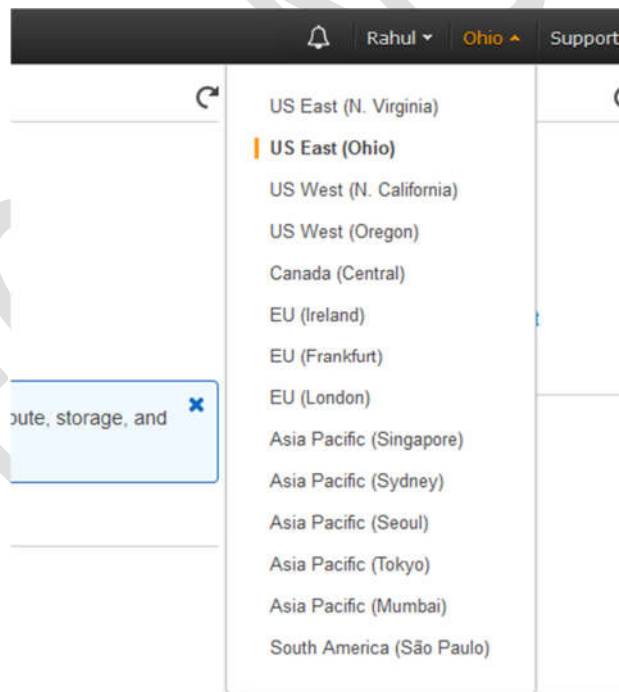
Select EC2 Service Click EC2 under Compute section. This will take you to EC2 dashboard.
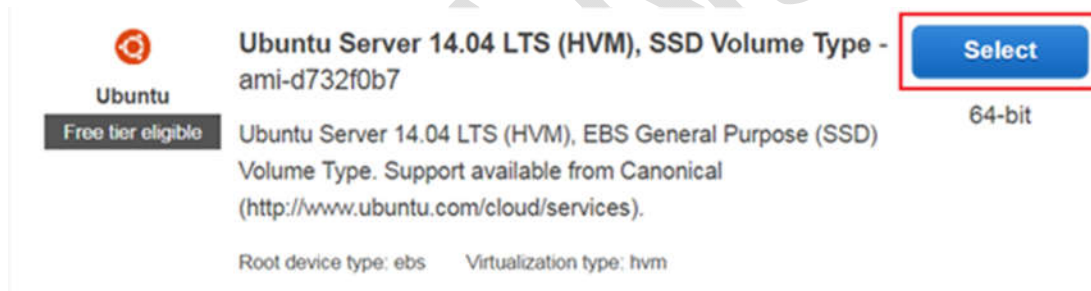

- **Click Launch Instance.**

Select an AMI: because you require a Linux instance, in the row for the basic 64-bit Ubuntu AMI, click Select.

- **Choose an Instance**

 Select t2.micro instance, which is free tier eligible.

- Configure Instance Details.

Configure all the details and then click on add storage

Step 3: Configure Instance Details

Number of instances (i)	1	Launch into Auto Scaling Group (i)
Purchasing option (i)	☐ Request Spot instances	
Network (i)	vpc-b34ccad6 (172.30.0.0/16) ▾	C Create new VPC
Subnet (i)	subnet-eb972b9c(172.30.0.0/24) | us-west-2a ▾	Create new subnet
	245 IP Addresses available	
Auto-assign Public IP (i)	Use subnet setting (Enable) ▾	
IAM role (i)	None ▾	C Create new IAM role

Cancel   Previous   **Review and Launch**   Next: Add Storage

- Add Storage

Step 4: Add Storage

Volume Type (i)	Device (i)	Snapshot (i)	Size (GiB) (i)	Volume Type (i)	IOPS (i)
Root	/dev/sda1	snap-47713105	8	General Purpose SSD (GP2) ▾	100 / 3000

Add New Volume   Cancel   Previous   **Review and Launch**   Next: Tag Instance

- Name an Instance (or) Tag an instance

  Type a name for your AWS EC2 instance in the value box. This name, more correctly known as tag, will appear in the console when the instance launches. It makes it easy to keep track of running machines in a complex environment. Use a name that you can easily recognize and remember.

Step 5: Tag Instance

Key (127 characters maximum)	Value (255 characters maximum)	
Name	ec21-linux	⊗

Create Tag   (Up to 50 tags maximum) Cancel   Previous   **Review and Launch**   Next: Configure Security Group

- Create a Security Group

Step 6: Configure Security Group

Assign a security group: ● Create a **new** security group

○ Select an **existing** security group

Security group name: launch-wizard-15

Description: launch-wizard-15 created 2016-10-12T18:31:14.820+05:30

Type ⓘ	Protocol ⓘ	Port Range ⓘ
SSH ▼	TCP	22

Add Rule   Cancel   Previous   **Review and Launch**

- Review and Launch an Instance

   Verify the details that you have configured to launch an instance.

Step 7: Review Instance Launch

▼ AMI Details   Edit AMI

   Ubuntu Server 14.04 LTS (HVM), SSD Volume Type - ami-d732f0b7

   Free tier   Ubuntu Server 14.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical
   eligible   Root Device Type: ebs   Virtualization type: hvm

▼ Instance Type   Edit instance type

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)
t2.micro	Variable	1	1	EBS only

Cancel   Previous   **Launch**

- Create a Key Pair & launch an Instance

    Next, select the option 'Create a new key pair' and give a name of a key pair. After that, download it

    in your system and save it for future use.

- Check the details of a launched instance.

Connect to the instance using Putty SSH utility.

Putty needs PPK file which is obtained from PEM file by using the Puttygen utility.

To install Apache Web Server

1) sudo apt-get update

2) sudo apt-get install apache2

3) sudo service apache2 status (stop / start / restart)