

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:

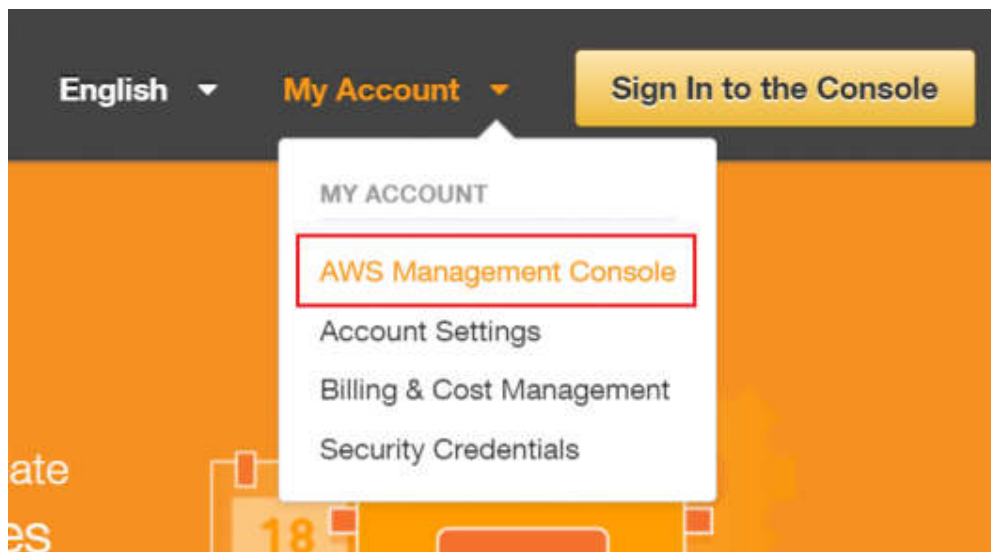
Provisioned IOPS: This category is for workloads which are mission critical, it provides high IOPS rates.

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

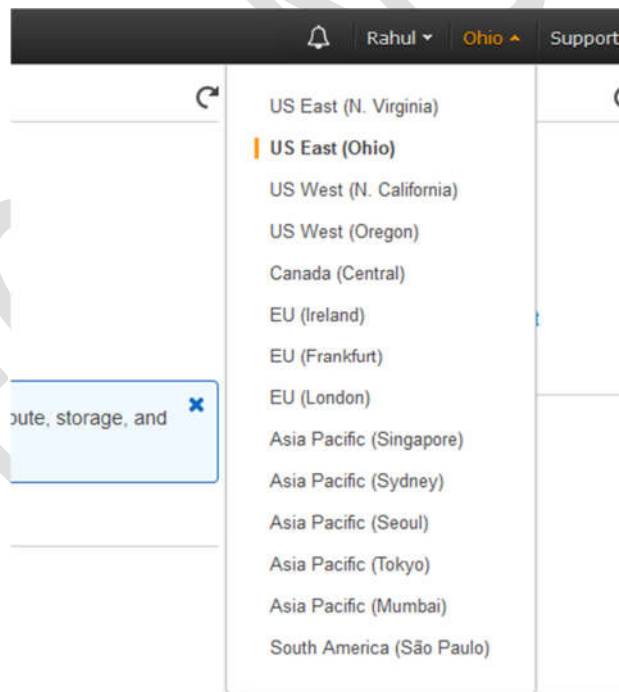
Magnetic: for data which is accessed less frequently and also retrieval time is more because they are slow.

- 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.

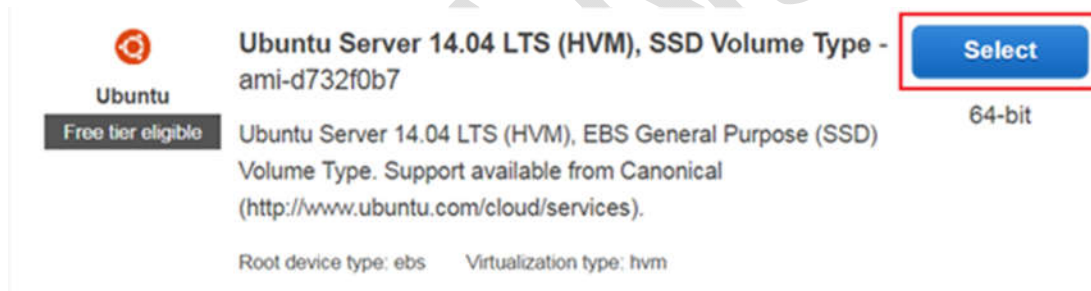
Amazon Web Services

Compute

-  **EC2**
Virtual Servers in the Cloud
-  **EC2 Container Service**
Run and Manage Docker Containers
-  **Elastic Beanstalk**
Run and Manage Web Apps
-  **Lambda**
Run Code without Thinking about Servers

- Click Launch Instance.

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



Ubuntu
Free tier eligible

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

64-bit



Ubuntu Server 14.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical (<http://www.ubuntu.com/cloud/services>).

Root device type: ebs Virtualization type: hvm

- Choose an Instance

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

Step 2: Choose an Instance Type

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)
	General purpose	t2.nano	1	0.5	EBS only
	General purpose	t2.micro Free tier eligible	1	1	EBS only

- Configure Instance Details.

Configure all the details and then click on add storage

Step 3: Configure Instance Details

Number of instances [Launch into Auto Scaling Group](#)

Purchasing option ☐ Request Spot instances

Network [Create new VPC](#)

Subnet [Create new subnet](#)
245 IP Addresses available

Auto-assign Public IP

IAM role [Create new IAM role](#)

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

- Add Storage

Step 4: Add Storage

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS
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	Value
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:

Description:

Type	Protocol	Port Range
SSH	TCP	22

- 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
eligible

Ubuntu Server 14.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical

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

- 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.

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

RahulSir

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

- Check the details of a launched instance.

Launch Instance Connect Actions

Filter by tags and attributes or search by keyword

	Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks
<input type="checkbox"/>	WPS Instance	i-89bf6251	m4.large	us-west-2a	running	2/2 checks
<input type="checkbox"/>	Ec21_linux	i-8d263195	t2.micro	us-west-2a	running	2/2 checks
<input type="checkbox"/>	DoNotTouch	i-4d3f9ccf	m1.large	us-west-2b	stopped	

Instances: i-8226319a (Ec21_linux), i-8326319b (Ec21_linux)

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)`