**What is Amazon EC2 Instance?**

An EC2 instance is nothing but a virtual server in Amazon Web services terminology. It stands for Elastic ComputeCloud. It is a web service where an AWS subscriber can request and provision a compute server in AWS cloud.

An on-demand EC2 instance is an offering from AWS where the subscriber/user can rent the virtual server per hour and use it to deploy his/her own applications.

Amazon EC2 supports the processing, storage, and transmission of credit card data by a merchant or service provider, and has been validated as being compliant with Payment Card Industry (PCI) Data Security Standard (DSS

The instance will be charged per hour with different rates based on the type of the instance chosen. AWS provides multiple instance types for the respective business need of the user.

Thus, you can rent an instance based on your own CPU and memory requirements and use it as long as you want. You can terminate the instance when it's no more used and save on costs. This is the most striking advantage of an on-demand instance- you can drastically save on your САРЕХ.

**Features of Amazon EC2**

Amazon EC2 provides the following high-level features:

**Instances**

Virtual servers.

**Amazon Machine Images (AMIs)**

Preconfigured templates for your instances that package the components you need for your

server (including the operating system and additional software).

**Instance types**

Various configurations of CPU, memory, storage, networking capacity, and graphics hardware for your instances.

**Key pairs**

Secure login information for your instances. AWS stores the public key and you store the private key in a secure place.

**Instance store volumes**

Storage volumes for temporary data that is deleted when you stop, hibernate, or terminate your instance.

**Amazon EBS volumes**

Persistent storage volumes for your data using Amazon Elastic Block Store (Amazon EBS).

**Regions, Availability Zones, Local Zones, AWS Outposts, and Wavelength Zones**

Multiple physical locations for your resources, such as instances and Amazon EBS volumes.

**Security groups**

A virtual firewall that allows you to specify the protocols, ports, and source IP ranges that can

reach your instances, and the destination IP ranges to which your instances can connect.

**Elastic IP addresses**

Static IPv4 addresses for dynamic cloud computing.

**Tags**

Metadata that you can create and assign to your Amazon EC2 resources.

**Virtual private clouds (VPCs)**

Virtual networks you can create that are logically isolated from the rest of the AWS Cloud. You can optionally connect these virtual networks to your own network

Let us see in detail how to launch an on-demand EC2 instance in AWS Cloud.

Login and access to AWS services

Step 1) In this step,

Login to your AWS account and go to the AWS Services tab at the top left corner.

Here, you will see all of the AWS Services categorized as per their area viz. Compute, Storage, Database, etc. For creating an EC2 instance, we have to choose Computeà EC2 as in the next step.