

MES'S WADIA COLLEGE OF ENGINEERING, PUNE - 01

<b>SUBJECT: LABORATORY PRACTICE II (CLOUD COMPUTING)</b>	
<b>NAME:</b>	
<b>CLASS:</b>	<b>ROLL NO.:</b>
<b>SEMESTER: II</b>	<b>YEAR: 2024-25</b>
<b>DATE OF PERFORMANCE:</b>	<b>DATE OF SUBMISSION:</b>
<b>EXAMINED:</b>	

**Assignment No-01**

**Title:-**Case study on Amazon EC2 and learn about Amazon EC2 web services.

**Objective:-**

To learn the concept of Amazon EC2 and its uses.

**Outcome:**

- Students will be able to understand concept of virtualization.
- Students will be able to understand Amazon EC2 and its uses.

**Prerequisite:-**

AWS User ID and Password. Student must have registered on AWS.

**Hardware Requirement:-**

Desktop PC

**Software Requirement-**

Ubuntu 18.04 or above.

**Introduction:-**

**Theory:**

Virtualization is a computer architecture technology by which multiple virtual machines (VMs) are multiplexed in the same hardware machine. The purpose of a virtual machine is to enhance resource sharing by many users and improve computer performance in terms of resource utilization and application flexibility.

Amazon Elastic Compute Cloud (Amazon EC2) provides scalable computing capacity in the Amazon Web Services (AWS) Cloud. Using Amazon EC2 eliminates your need to invest in hardware up front, so you can develop and deploy applications faster. You can use Amazon EC2 to launch as many or as few virtual servers as you need, configure security and networking, and manage storage. Amazon EC2 enables you to scale up or down to handle changes in requirements or spikes in popularity, reducing your need to forecast traffic.

**Features of Amazon EC2**

Amazon EC2 provides the following features:

- Virtual computing environments, known as *instances*
- Preconfigured templates for your instances, known as *Amazon Machine Images (AMIs)*, that package the bits you need for your server (including the operating system and additional software)

- Various configurations of CPU, memory, storage, and networking capacity for your instances, known as *instance types*
- Secure login information for your instances using *key pairs* (AWS stores the public key, and you store the private key in a secure place)
- Storage volumes for temporary data that's deleted when you stop, hibernate, or terminate your instance, known as *instance store volumes*
- Persistent storage volumes for your data using Amazon Elastic Block Store (Amazon EBS), known as *Amazon EBS volumes*

Amazon EC2 provides a web-based user interface, the Amazon EC2 console.

**Conclusion:** -Hence, we have successfully launched virtual instance, Amazon EC2 and studied about Amazon web services.

**Questions:**

1. Enlist the characteristics of EC2.
2. Give the requirements of EC2.
3. Give the steps to launch Amazon EC2 Linux instance using command line interface.