Web Development and Designing Internship

By

The Sparks Foundation

Submitted by

Tridisha Gogoi

Task 4: CI/CD: Cloud Computing

AWS : Amazon Web Service (AWS) is a subsidiary of Amazon providing on-demand cloud computing platforms and APIs to individuals, companies, and governments, on a metered pay-as-you-go basis. These cloud computing web services provide a variety of basic abstract technical infrastructure and distributed computing building blocks and tools. One of these services is Amazon Elastic Compute Cloud (EC2), which allows users to have at their disposal a virtual cluster of computers, available all the time, through the Internet. AWS's version of virtual computers emulates most of the attributes of a real computer, including hardware central processing units (CPUs) and graphics processing units (GPUs) for processing; local/RAM memory; hard-disk/SSD storage; a choice of operating systems; networking; and pre-loaded application software such as web servers, databases, and customer relationship management (CRM).

EC2 : Elastic Compute Cloud(EC2) instance is a virtual server that can be used to run applications in Amazon's cloud platform Amazon Web Services (AWS). We can create and run Virtual Machines (VM) through EC2.

The steps of setup and essentials of AWS EC2 :

1. Log in/ Sign up to an AWS Account : Log in/ Sign up to the AWS Management Console and set up the root account.

2. Select an AMI (Amazon Machine Image) according to your needs.
3. <u>Choose an Instance type</u> : Choose t2.micro instance type which is a 1vCPU and 1 GB memory server offered by AWS and then click on "Configure Instance Details".
4. <u>Configure Instance</u> : Choose number of instance: 1 and provide other necessary information.
5. Click on "Next: Add Storage".
6. Click on "Next: Add Tags".
7. Name your instance and click on " Next: Configure Security Group".
8. Choose Review and Launch.
9. Create a new key pair and download it.
10. Click on view instances.
11. Select the currently running instance and give it a name.
12. Connect it and get the password. We'll have to wait for 4 minutes to get the password.
13. Browse the keypair and decrypt the password.
14. Copy the password and download the remote desktop file.
15. Paste the password in remote desktop file.
16. The new virtual machine has been created.

<u>Amazon S3 Bucket</u> : An Amazon S3 bucket is a public cloud storage resource available in Amazon Web Services' (AWS) Simple Storage Service (S3), an object storage offering. Amazon S3 buckets, which are similar to file folders, store objects, which consists of data and its descriptive metadata.

<u>Features</u> : AWS offers several features for Amazon S3 buckets. An IT professional can enable versioning for S3 buckets to preserve every version of an object when an operation is performed on it, such as a copy or delete operation. This helps an IT team prevent accidental deletion of an object. Likewise, upon bucket creation, a user can set

up server access logs, object-level API logs, tags and encryption. Also, S3 Transfer Acceleration helps execute fast, secure transfers from a client to an S3 bucket via AWS edge locations.

<u>Application running on EC2</u> : 13.233.139.41