Placement Empowerment Program

Cloud Computing and DevOps Centre

Set Up a Virtual Machine in the Cloud Create a free-tier AWS, Azure, or GCP account. Launch a virtual machine and SSH into it.

Name: Akshyram M   Department : ADS

Introduction

Cloud computing has revolutionized how businesses manage IT resources. In this task, we will focus on deploying a virtual machine (VM) in the cloud. This hands-on activity will provide an understanding of cloud platforms, virtual machine provisioning, and secure SSH access.

Objectives

1. Understand the concept of cloud computing and VMs.

2. Create a free-tier account on a cloud provider (AWS, Azure, or GCP).

3. Launch a Linux virtual machine.

4. Connect to the VM securely using SSH.

Steps

1. **Create a Free-Tier Cloud Account:**

   o Sign up for a free-tier account on AWS, Azure, or GCP.

   o Verify your account to access free-tier services.

2. **Launch a Virtual Machine:**

   o Access the cloud provider's dashboard.

   o Create a new Linux VM instance.

   o Configure the instance with basic settings such as region, operating system, and instance type.

3. **Connect to the Virtual Machine:**

   o Retrieve the public IP address of your VM.

   o Use the following SSH command to connect:

   ssh <user>@<IP_address>

   Replace <user> with the default username for your chosen cloud provider (e.g., ec2-user for AWS) and <IP_address> with your VM's public IP.

Key Learnings

- Basics of cloud computing.

- Creating and configuring a virtual machine.

- Using SSH to access remote servers securely.

Document 2: Hosting a Static Website on a Cloud VM

Introduction

Hosting a static website on a cloud virtual machine is a fundamental step in understanding web server setup. This task demonstrates how to install a web server, configure it, and deploy a static HTML website.

Objectives

1. Learn how to install and configure a web server (Apache or Nginx).

2. Transfer static website files to the server.

3. Serve the static website over the internet.

Steps

1. **Connect to the Cloud VM:**

   o Use the SSH command to access your cloud VM.

   ssh <user>@<IP_address>

2. **Install Apache or Nginx:**

   o Update the package list:

   sudo apt update

   o Install Apache:

   sudo apt install apache2 -y

   OR Install Nginx:

   sudo apt install nginx -y

3. **Transfer HTML Files to the VM:**

   o Use SCP (Secure Copy Protocol) to transfer files:

   scp index.html <user>@<IP_address>:/var/www/html/

4. **Configure the Web Server:**

   o Ensure the web server is running:

   sudo systemctl start apache2

   OR

   sudo systemctl start nginx

   o Access the website using the VM's public IP in a browser: http://<IP_address>.

Key Learnings

- Basics of web servers (Apache/Nginx).
- Transferring files using SCP.
- Hosting a static website on a cloud VM.