 

**Placement Empowerment Program**

***Cloud Computing and DevOps Centre***

Host a static website on a cloud VM :Install Apache /Nginx on your cloud VM and host a simple HTML website.

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**Introduction and Overview**

Hosting a static website on a cloud virtual machine (VM) allows individuals and businesses to deploy simple web pages without relying on traditional hosting providers. A static website consists of HTML, CSS, and JavaScript files without server-side processing, making it efficient, fast, and cost-effective.

In this guide, we will explore how to install and configure Apache or Nginx on a cloud VM to host a static website. This process provides full control over web hosting while ensuring flexibility and scalability.

**Objective**

The objective of this guide is to:

* Install and configure a web server (Apache/Nginx) on a cloud VM.
* Deploy a simple static website.
* Understand the importance of local hosting using a cloud VM.
* Provide a step-by-step approach for setting up and managing a basic web server.

**Importance of Local Hosting on a Cloud VM**

1. **Full Control** – Users have complete control over their website, server configurations, and security settings.
2. **Cost-Effective** – Hosting a static site on a cloud VM is often cheaper than using managed hosting services.
3. **Scalability** – Cloud providers allow easy upgrades to accommodate growing traffic needs.
4. **Customization** – Users can configure the server environment according to specific requirements.
5. **Learning Opportunity** – Setting up a cloud VM provides hands-on experience with cloud computing and web server management.

**Step-by-Step Overview**

**Step 1: Create a Cloud VM**

* Choose a cloud provider (AWS, Google Cloud, Azure, DigitalOcean, etc.).
* Create a new VM instance with a Linux OS (Ubuntu, Debian, CentOS, etc.).
* Configure firewall settings to allow HTTP (port 80) and HTTPS (port 443) traffic.

**Step 2: Install Apache/Nginx**

**For Apache:**

sudo apt update

sudo apt install apache2 -y

sudo systemctl enable apache2

sudo systemctl start apache2

**For Nginx:**

sudo apt update

sudo apt install nginx -y

sudo systemctl enable nginx

sudo systemctl start nginx

**Step 3: Upload Website Files**

* Navigate to the web server's root directory:
  + Apache: /var/www/html/
  + Nginx: /usr/share/nginx/html/
* Replace the existing index.html file with your static website files.
* Use SCP or FTP to transfer files from your local machine to the server.

scp -r mywebsite/\* username@your-vm-ip:/var/www/html/

**Step 4: Configure Web Server (Optional)**

* Modify Apache/Nginx configuration files for custom settings.
* Restart the server to apply changes:
* sudo system ctl restart apache2 # For Apache

sudo system ctl restart nginx # For Nginx

**Step 5: Test and Access Your Website**

* Open a web browser and enter the VM's public IP address.
* The static website should be displayed.

**Expected Outcome**

By following these steps, you will have:

* A functional static website hosted on a cloud VM.
* A properly configured Apache or Nginx web server.
* Improved understanding of server management and cloud hosting.
* The ability to scale and customize the hosting environment as needed.