St. JOSEPH'S GROUP OF INSTITUTIONS
OMR, CHENNAI - 119

PLACEMENT EMPOWERMENT PROGRAM

CLOUD COMPUTING AND DEVOPS CENTRE

TASK 9- SET UP A VIRTUAL MACHINE IN CLOUDCREATE IN AWS, AZURE OR GCP CONSOLE. Launch a Virtual Machine and SSH into it.

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1. Introduction

A Virtual Machine (VM) in Azure is a scalable, on-demand computing resource that provides flexibility in hosting applications and services. Azure VMs allow users to deploy and manage applications without the need for physical hardware, providing benefits such as cost-effectiveness, scalability, and security. In this guide, we will explore how to create a VM in the Azure portal and understand its significance in cloud computing.

2. Overview

Azure Virtual Machines offer a range of compute resources that can be used for development, testing, and running applications. By creating a VM in Azure, users can deploy Windows or Linux-based operating systems and install necessary software to run applications or workloads.

Key Features of Azure VMs:

- **Scalability**: Increase or decrease computing resources based on demand.
- **Multiple OS Support**: Choose from Windows, Linux, or custom images.
- **Security & Compliance**: Integrate with Azure Security Center and Microsoft Defender.
- **Cost-Effective**: Pay-as-you-go pricing model.
- **Integration**: Connect with Azure services such as databases, storage, and networking.

3. Objectives

The main objectives of creating an Azure Virtual Machine are:

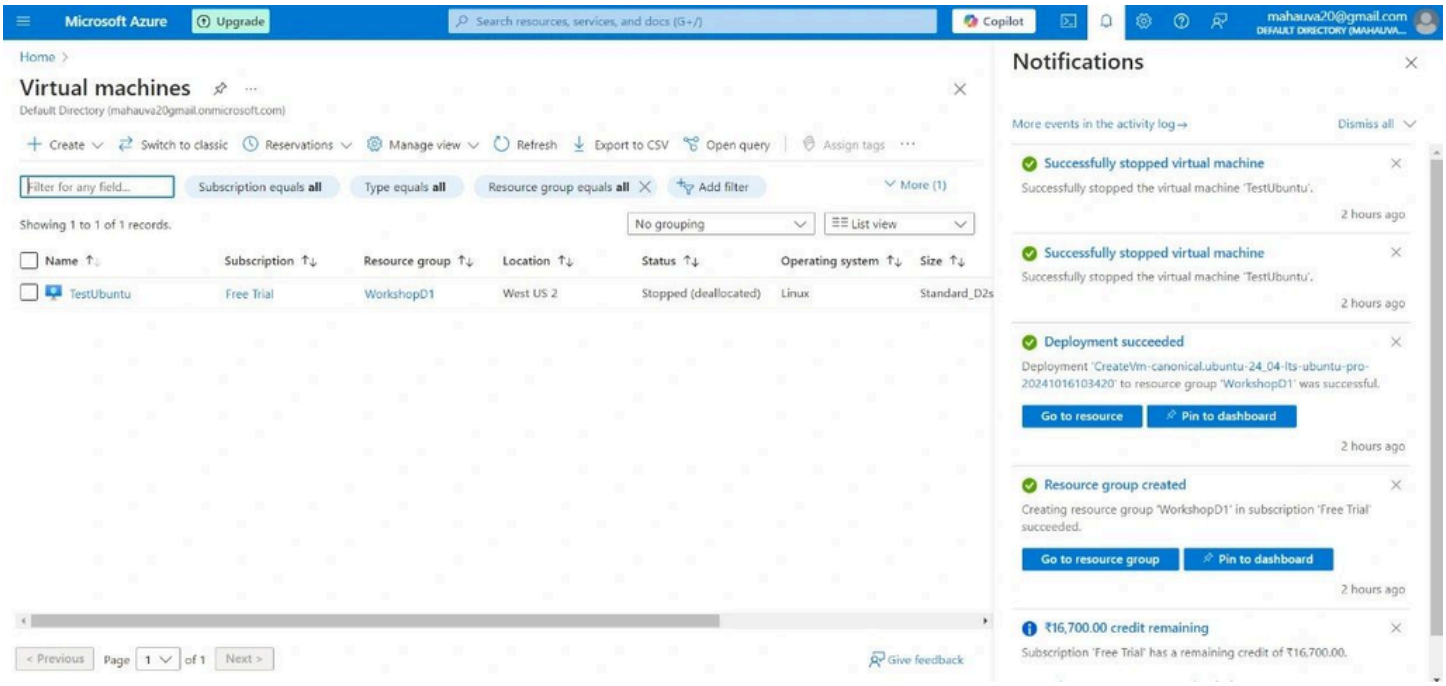
- **Understand the Azure Virtual Machine concept** and its use cases.
- **Learn to create a VM in the Azure portal** with basic configurations.
- **Deploy a VM with a selected operating system** (Windows or Linux).
- **Set up networking and security rules** to control access.
- **Manage and connect to the VM** using Remote Desktop Protocol (RDP) or SSH.

- **Understand cost implications** and monitoring options for the VM.

STEP 1

Step 1: Sign in to Azure Portal

1. Open a web browser and go to Azure Portal.
2. Sign in with your Microsoft Azure account credentials.



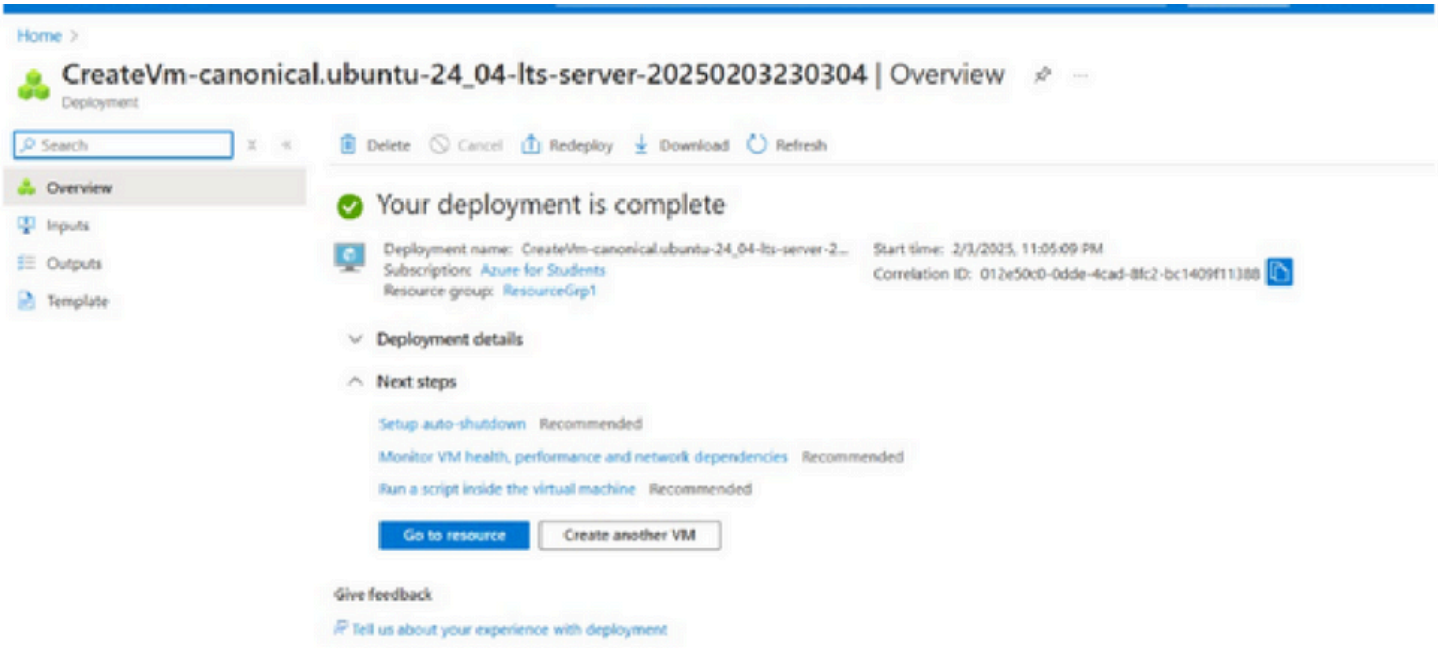
STEP 2

Step 2: Create a Virtual Machine

1. In the Azure Portal, search for "Virtual Machines" in the search bar.
2. Click on "Create" and select "Azure Virtual Machine".

Configure Basic Settings

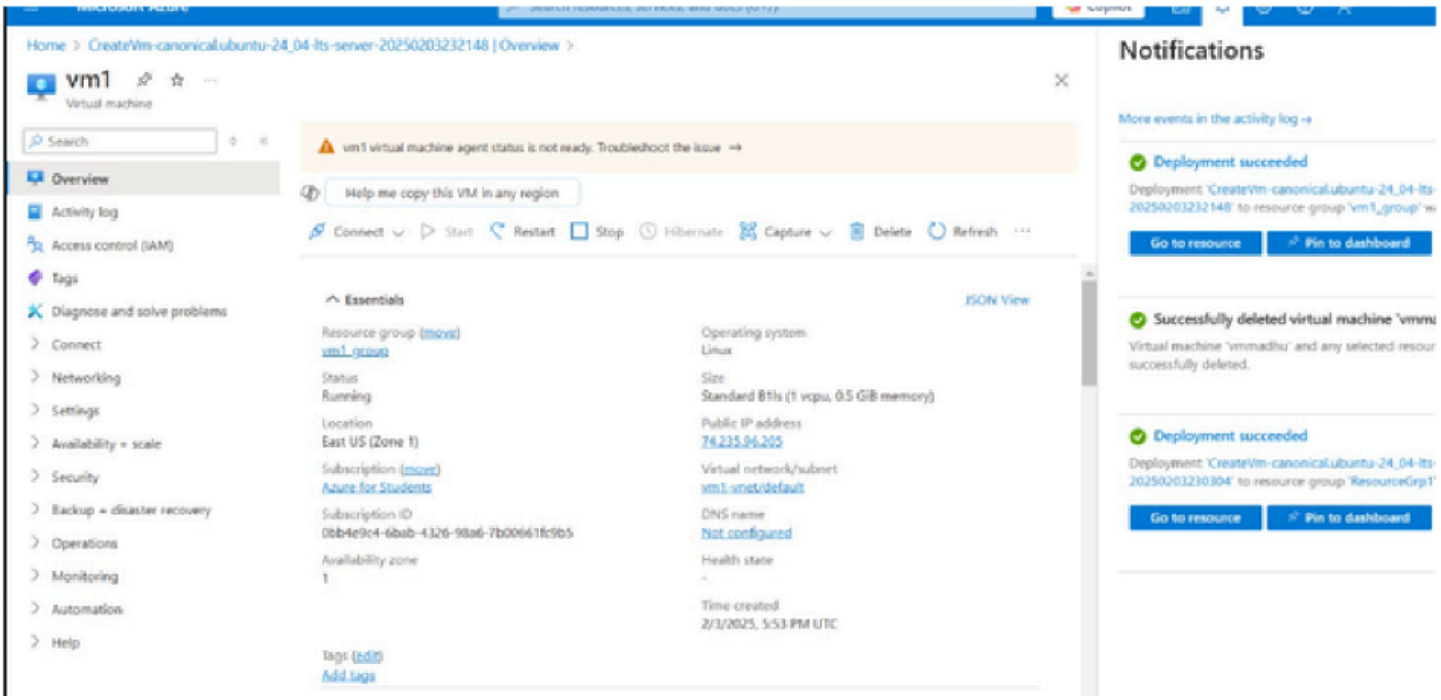
- **Subscription**: Select your Azure subscription.
- **Resource Group**: Create a new resource group or select an existing one.
- **Virtual Machine Name**: Provide a unique name for your VM.
- **Region**: Choose the Azure region closest to your users for better performance.
- **Image**: Select the OS image (Windows Server, Ubuntu, etc.).
- **Size**: Choose the VM size based on CPU, RAM, and storage requirements.



STEP 3

Step 3: Configure Networking

- **Virtual Network (VNet)**: Select an existing VNet or create a new one.
- **Subnet**: Choose a subnet for the VM.
- **Public IP**: Assign a public IP address to access the VM remotely.
- **Inbound Ports**: Allow RDP (3389) for Windows or SSH (22) for Linux.



STEP 4

Step 8: Review and Create

- Click **Review + Create** to validate the settings.
- Once validated, click **Create** to deploy the VM.
- Azure will take a few minutes to provision the VM.

STEP 5

Find the Public IP: Go to Azure Portal → Virtual Machines → Select VM → Copy Public IP.

SSH into VM: Open terminal and run ssh <username>@<Public-IP> (or ssh -i /path/to/key.pem <username>@<Public-IP> for SSH key).