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PLACEMENT EMPOWERMENT PROGRAM

CLOUD COMPUTING AND DEVOPS CENTRE

**TASK 18 - Set Up a Private Network in
Azure – Create a VNet with Subnets and
Configure Routing for Internal
Communication**

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Task: Set Up a Private Network in Azure – Create a VNet with Subnets and Configure Routing for Internal Communication

Description:

In this task, we will set up a private network in the cloud using **Azure Virtual Network (VNet)**. The process includes:

1. **Creating a Virtual Network (VNet)** to provide an isolated environment for cloud resources.
2. **Dividing the VNet into multiple subnets** to segment different types of workloads.
3. **Configuring routing tables** to allow internal communication between subnets.

Step-by-Step Implementation

Step 1: Create a Virtual Network (VNet)

1. Go to **Azure Portal** → **Virtual Networks** → Click **Create**.
2. Enter:
 - **Name:** MyPrivateVNet
 - **Region:** Select a region where you want to deploy your resources.
 - **IP Address Space:** e.g., 10.0.0.0/16 (Defines the overall address range).
3. Click **Next: IP Addresses**.

Step 2: Create Subnets Within the VNet

1. Under **IP Addresses**, click **Add Subnet**.
2. Enter:
 - **Subnet Name:** Subnet1
 - **Subnet Address Range:** 10.0.1.0/24 (For first subnet).
3. Click **Add another subnet** and define:
 - **Subnet Name:** Subnet2
 - **Subnet Address Range:** 10.0.2.0/24 (For second subnet).
4. Click **Review + Create** → **Create**.

Step 3: Configure Routing for Internal Communication

1. Go to **Azure Portal** → **Route Tables** → Click **Create**.
2. Enter:
 - **Name:** InternalRoutingTable
 - **Region:** Same as the VNet.

3. Click **Review + Create** → **Create**.

Associate the Route Table with Subnets:

1. Open the **Route Table** → Click **Subnets** → **Associate**.
2. Select **VNet (MyPrivateVNet)** and **Subnet1**, then click **OK**.
3. Repeat the process for **Subnet2**.

Step 4: Verify Internal Communication

1. Deploy two Virtual Machines, one in **Subnet1** and one in **Subnet2**.
2. SSH into one VM and try pinging the private IP of the other VM.
3. nginx
4. CopyEdit