Lab 1  
CST8912\_011  
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Submitted to :   
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Practice creating and monitoring virtual machines on Azure cloud platform

**Introduction or Purpose**

Introduction:

A virtual machine (VM) is a digital version of a physical computer. Virtual machine software can run programs and operating systems, store data, connect to networks, and do other computing functions, and requires maintenance such as updates and system monitoring.

Compute Engine lets you create virtual machines that run different operating systems, including multiple flavors of Linux (Debian, Ubuntu, Suse, Red Hat, CoreOS) and Windows Server, on cloud infrastructure. You can run thousands of virtual CPUs on a system that is designed to be fast and to offer strong consistency of performance.

Purpose:

The purpose of this lab is to learn how to configure and start my first compute service with Azure (Virtual Machine (VM)) on Linux for Canada central region.

**Steps covered in the lab**

**Step 1:**

Aim:

Create a resource group CTS8912 for all the resources that will be created under this resource group as part of my future labs.

Steps:

Log into Azure portal homepage and select “Resource Groups” under “Azure Services”, Then choose “Creat”, then select “Azure for Students” under “Subscription” and fill in “CTS8912” under “Resource group”, then select “(Canada) Canada Central” under “Region”.

Finally, click “Review + Create” then click “create”.

**Step 2:**

Aim:

Create a new instance of the resource (Azure virtual Machine) and select Ubuntu Server 18.04 LTS image from the marketplace.

Steps:

Under Resource Group CTS8912, choose “Create”. This will lead us to the “Marketplace”. Find “Virtual machine” and choose “Creat”. Then create a “Virtual machine name” and choose “Ubuntu Server 22.04 LTS – x64 Gen2” as the system image. Change the disk size to “standard\_B1s- 1vcpu, 1 GiB memory”, then set “Authentication type” as “SSH public key”. Set the “Username” as you like. Then click “Next: Disks”. Choose “Premium SSD” under “OS disk type”. Keep default settings under “Networking”, “Management”, “Monitoring”, “Advanced” and “Tags”, then click “Review + create” to create the VM.

After deployment, we can choose “Go to resource” to check our VM.

**Step 3:**

Aim:

Perform basic VM controls (start, stop, restart, delete).

Steps:

On the “Overview” page, we can try performing basic VM controls (start, stop, restart, delete).

**Step 4:**

Aim:

Create log analytics workspace and configure it with the same region as the existing resources.

Steps:

Go back to the homepage and choose “Log Analytics workspaces”, then chose “Create Log Analytics workspace”. Set “Resource group” to “CST8912”, “Region” to “Canada Central” and create Name. Then review and create.

Go to resource after finished creating and choose “Azure virtual machines (VMs)” under “Connect a data source”. Set a rule name and change the Reigion to “Canada Central”, “Platform Type” to”Linux”. Then go to “Resources”.

In “Resources”, choose “Add resources” first and choose the VM created, click “Apply”. Then create an end point and set everything properly. Then go to “Collect and deliver” and click “Add data source”, configure the “Data source type” to “Linux Syslog” and choose the Facility we need. Finally config the “Destination(s)” as shown in the screen print and create the resource.

**Step 5:**

Aim:

Go to “insights” and see monitoring information from the VM selected. Switch to health/agents tabs to get more details on the VM monitored.

Steps:

Go back to “Home” and choose the “Log Analytics workspace” we just created, then go to “Monitoring” -> “Insights”, check “Overview”, “Health” and “Agents” for detailed info.

**Results**

**Step 1:**

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**Step 5:**

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**References**

None.