

Lab 1

CST8912\_011

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Submitted to :

Prof. Tanishq Bansal

## **Lab Report Format**

### **Title**

Configuring and Monitoring Azure Virtual Machines

### **Introduction or Purpose**

This lab report explains how to configure and monitor a Linux virtual machine (VM) in Azure cloud. For this hands-on lab, beginners will be familiarized with the creation, management, and monitoring of virtual machines through cloud services. The tasks go hand in hand with concepts of cloud architecture (reliability, resiliency, and scalability) to ensure the incorporation of core cloud computing features in the curriculum. This lab focuses on deploying a VM in the Canada Central region, configuring it with essential services, and utilizing Azure's monitoring tools to track its performance and health.

### **Steps covered in the lab**

1. 1.Create a new instance of the resource (Azure virtual Machine) and select Ubuntu Server 18.04 LTS image from the marketplace
2. Configuring and launching a VM for region Canada central and with sku size standard\_B1s-1vcpu, 1 GiB memory and use SSH public key as authentication type
3. Configure disk type Premium SSD
4. Configure networking to create a virtual network and keep the default settings.
5. Keep default options on management tab, advanced and tags respectively
6. Perform basic VM controls (start, stop, restart, delete)
7. Create log analytics workspace and configure it with the same region as the existing resources.
8. Connect your virtual machine to log analytics to monitor virtual machine's health.
9.
  - a. Create a data collection rule and select the VM created in scope
  - b. In collect and deliver tab, select "Linux syslog" as data source
  - c. Go to "insights" and see monitoring information from the VM selected
  - d. Switch to health/agents tabs to get more details on the VM monitored

## Results

Microsoft Azure

Search resources, services, and docs (G+/I)

Copilot

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Home >

**SamLab1** Virtual machine

Search

Help me copy this VM in any region

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Connect

Networking

Settings

Availability + scale

Security

Backup + disaster recovery

Operations

Monitoring

Automation

Help

Connect Start Restart Stop Hibernate Capture Delete Refresh Open in mobile Feedback CLI / PS

**Essentials**

Resource group (move) : [CST8912](#)

Status : Running

Location : Canada Central (Zone 1)

Subscription (move) : [Azure for Students](#)

Subscription ID : 63593e07-b1bc-4b20-8c26-b7fafac46e9f

Availability zone : 1 (Azure-selected zone)

Tags (edit) : [Add tags](#)

Operating system : Linux (ubuntu 24.04)

Size : Standard B1s (1 vcpu, 1 GiB memory)

Public IP address : [20.151.59.1](#)

Virtual network/subnet : [SamLab1-vnet/default](#)

DNS name : [Not configured](#)

Health state : -

Time created : 15/1/2025, 11:50 pm UTC

JSON View

**Properties** Monitoring Capabilities (7) Recommendations Tutorials

**Virtual machine**

Computer name : SamLab1

Operating system : Linux (ubuntu 24.04)

VM generation : V2

VM architecture : x64

Agent status : Ready

**Networking**

Public IP address : [20.151.59.1](#) ( Network interface [samlab1904-8cbcb8c5](#) )

Public IP address (IPv6) : -

Private IP address : 10.0.0.4

Private IP address (IPv6) : -

Virtual network/subnet : [SamLab1-vnet/default](#)

1.

2.

Microsoft Azure

Search resources, services, and docs (G+/I)

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Connect Start Restart Stop Hibernate Capture Delete Refresh Open in mobile Feedback CLI / PS

**Virtual machine**

Computer name : SamLab1

Operating system : Linux (ubuntu 24.04)

VM generation : V2

VM architecture : x64

Agent status : Ready

Agent version : 2.12.0.2

Hibernation : Disabled

Host group : -

Host : -

Proximity placement group : -

Colocation status : N/A

Capacity reservation group : -

Disk controller type : SCSI

**Azure Spot**

Azure Spot : -

Azure Spot eviction policy : -

**Networking**

Public IP address : [20.151.59.1](#) ( Network interface [samlab1904-8cbcb8c5](#) )

Public IP address (IPv6) : -

Private IP address : 10.0.0.4

Private IP address (IPv6) : -

Virtual network/subnet : [SamLab1-vnet/default](#)

DNS name : [Configure](#)

**Size**

Size : Standard B1s

vCPUs : 1

RAM : 1 GiB

**Source image details**

Source image publisher : canonical

Source image offer : ubuntu-24\_04-its

Source image plan : server

**Disk**

OS disk : [SamLab1\\_disk1\\_6e7c751a791e415dac9d0a759cc38ffe](#)

3.

The screenshot shows the Microsoft Azure portal interface. At the top, there's a navigation bar with the Microsoft Azure logo, a search bar, and a Copilot button. Below the navigation bar, the breadcrumb trail shows 'Home > SamLab1'. The main content area is titled 'Virtual machine' and includes a 'Help me copy this VM in any region' button. On the left, there's a sidebar with various management options like Activity log, Access control (IAM), Tags, Diagnose and solve problems, Connect, Networking, Settings, Availability + scale, Security, Backup + disaster recovery, Operations, Monitoring, Automation, and Help. The main area displays the 'Overview' tab for the virtual machine 'SamLab1'. It shows various settings and configurations, including Azure Spot, Availability + scaling, Security, Health monitoring, Extensions + applications, Source image plan, Disk, and Auto-shutdown.

Category	Item	Value
Availability + scaling	Azure Spot	-
	Azure Spot eviction policy	-
	Availability zone (edit)	1
	Scale Set	-
Security	Security type	Standard
	Health monitoring	Not enabled
Extensions + applications	Extensions	-
	Applications	-
Source image plan	Source image plan	server
	Disk	
Disk	OS disk	SamLab1_disk1_6e7c751a791e415dac9d0a759cc38f1e
	Encryption at host	Disabled
	Azure disk encryption	Not enabled
	Ephemeral OS disk	N/A
	Data disks	0
Auto-shutdown	Auto-shutdown	Not enabled
	Scheduled shutdown	-

4.

The screenshot shows the 'Create Log Analytics workspace' wizard in the Microsoft Azure portal. The breadcrumb trail is 'Home > Log Analytics workspaces > Create Log Analytics workspace'. A green banner at the top indicates 'Validation passed'. The wizard has three tabs: 'Basics', 'Tags', and 'Review + Create'. The 'Review + Create' tab is active, showing a summary of the workspace configuration. The configuration includes the subscription 'Azure for Students', resource group 'CST8912', name 'SamLab', and region 'Canada Central'. The pricing tier is 'Pay-as-you-go (Per GB 2018)'. A note at the bottom explains that the cost depends on the volume of data ingested and how long it is retained, and provides a link to learn more about Log Analytics pricing models. At the bottom of the wizard, there are buttons for 'Create', '< Previous', and 'Download a template for automation'.

Category	Item	Value
Basics	Subscription	Azure for Students
	Resource group	CST8912
	Name	SamLab
	Region	Canada Central
Pricing	Pricing tier	Pay-as-you-go (Per GB 2018)

The cost of your workspace depends on the volume of data ingested and how long it is retained. Regional pricing details are available on the [Azure Monitor pricing page](#). You can change to a different pricing tier after the workspace is created. [Learn more](#) about Log Analytics pricing models.

5.

Microsoft Azure

Search resources, services, and docs (G+/I)

Copilot

Home > Microsoft.LogAnalyticsOMS | Overview

Deployment

Search

Delete Cancel Redeploy Download Refresh

Overview

Inputs

Outputs

Template

✓ Your deployment is complete

Deployment name : Microsoft.LogAnalyticsOMS

Subscription : Azure for Students

Resource group : CST8912

Start time : 15/1/2025, 7:08:21 pm

Correlation ID : 9a6b8ee4-ae96-40a1-97e6-f50b3320a592

> Deployment details

Next steps

Go to resource

Give feedback

Tell us about your experience with deployment

Cost management

Get notified to stay within your budget and prevent unexpected charges on your bill.

Set up cost alerts >

Microsoft Defender for Cloud

Secure your apps and infrastructure

Go to Microsoft Defender for Cloud >

Free Microsoft tutorials

Start learning today >

Work with an expert

Azure experts are service provider partners who can help manage your assets on Azure and be your first line of support.

Find an Azure expert >

6.

Microsoft Azure

Search resources, services, and docs (G+/I)

Copilot

Home > Microsoft.LogAnalyticsOMS | Overview > SamLab >

Create Data Collection Rule

Data collection rule management

✓ Validation passed

To create a Data Collection Rule that collects platform metrics, click here.

Basics Resources Collect and deliver Tags Review + create

Basics

Data rule name Rule1

Subscription Azure for Students

Resource Group CST8912

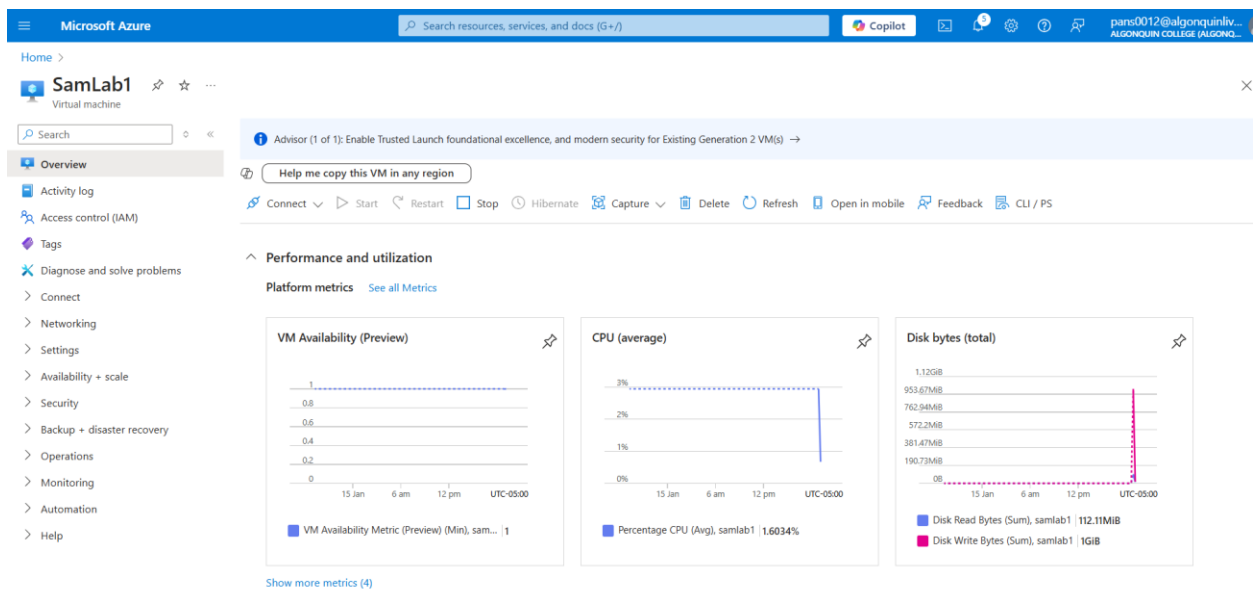
Selected resources

Resources	Type
samlab1	microsoft.compute/virtualmachines

Showing 1 - 1 of 1 results.

Create < Previous Next >

7.



8.

