

## Lesson 08 Demo 08

### Monitoring Clusters and Node Logs

**Objective:** To monitor cluster health and inspect node logs in Azure

**Tools required:** Azure management tools

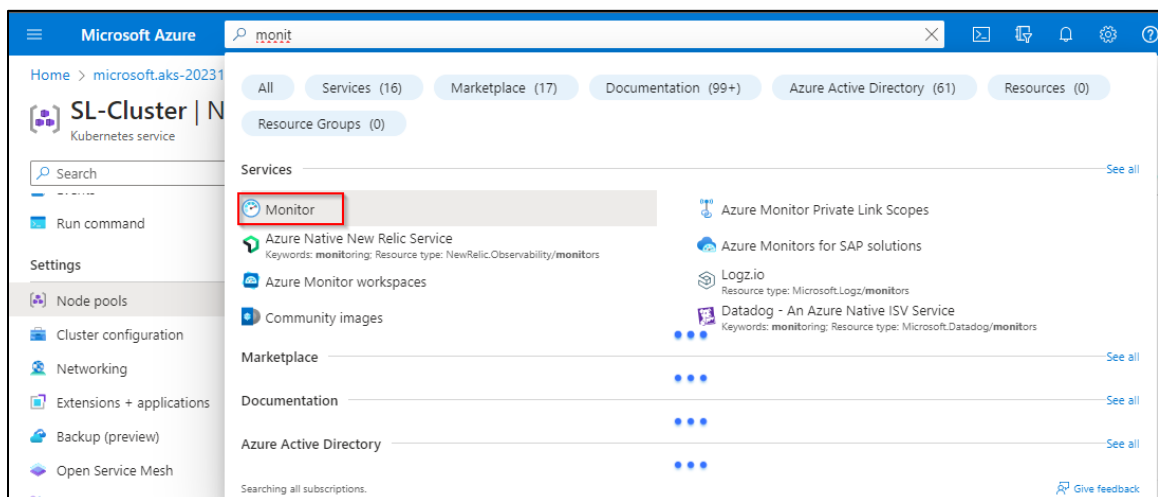
**Prerequisites:** A Kubernetes cluster should already be set up (refer to the steps provided in Lesson 08, Demo 01 for guidance).

Steps to be followed:

1. Monitor cluster health via Azure monitor
2. Inspect the logs of a live pod

#### Step 1: Monitor cluster health via Azure monitor

1.1 Navigate to the Azure portal homepage, search for, and select the **Monitor** service

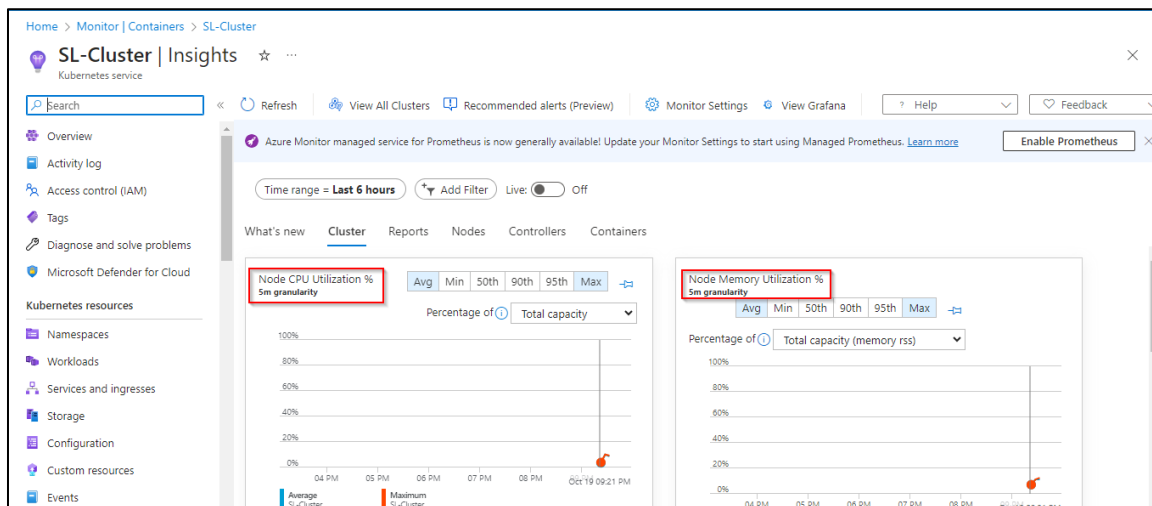


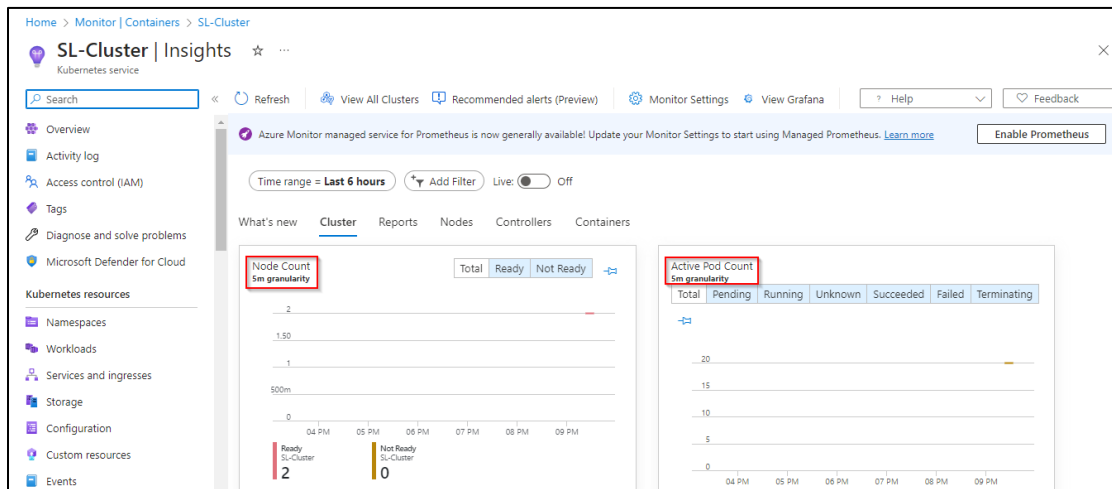
## 1.2 Navigate to **Containers** and click on **Monitored clusters (1)** followed by **SL-Cluster**

The screenshot shows the Azure Monitor 'Containers' page. In the left sidebar, 'Containers' is highlighted. The main area shows 'Monitored clusters (1)' and 'Unmonitored clusters (0)'. Below this, a 'Cluster Status Summary' displays counts for Total (1), Critical (0), Warning (0), Unknown (0), Healthy (1), and Unmonitored (0). A table lists the cluster 'SL-Cluster' with type 'AKS', version '1.27.3', and status 'Healthy'. The table also shows '2 / 2' nodes, '0' user pods, and '20 / 20' system pods.

CLUSTER NAME	CLUSTER TYPE	VERSION	MANAGED PROMETHEUS...	STATUS	↑ ↓ NODES	USER PODS	SYSTEM PODS
SL-Cluster	AKS	1.27.3	Configure	Healthy	2 / 2	0	20 / 20

On the SL-Cluster insights page, you can assess the cluster health using various graphs. These include **Node CPU Utilization %**, **Node Memory Utilization %**, **Node Count**, and **Active Pod Count**.





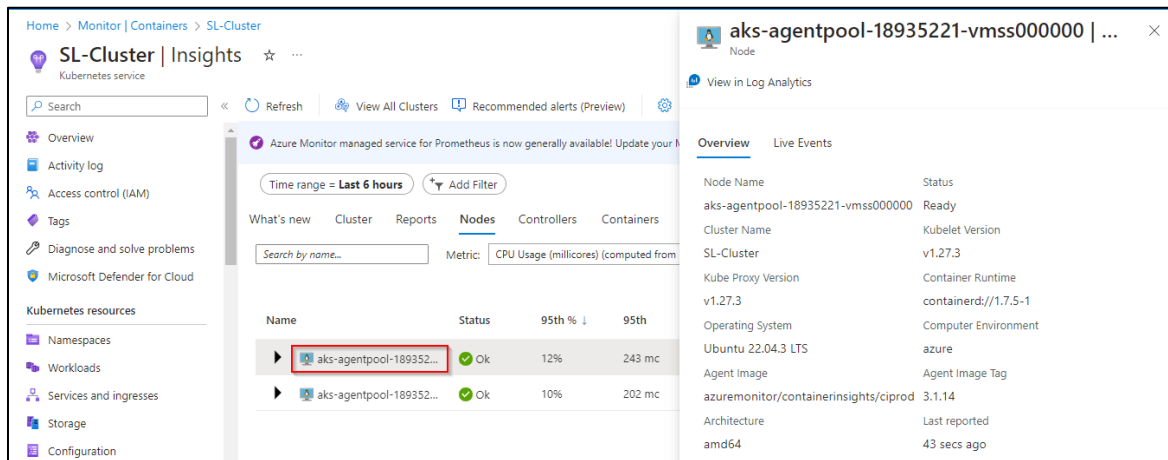
## Step 2: Inspect the logs of a live pod

### 2.1 To monitor the node logs, choose the **Nodes** option

The screenshot shows the 'SL-Cluster | Insights' dashboard with the 'Nodes' tab selected. The 'Nodes' tab displays a table of node details. The table has columns for Name, Status, 95th % ↓, 95th, Containers, UpTime, Controller, and Trend 95th % (1 bar = 15m). There are two items listed in the table.

Name	Status	95th % ↓	95th	Containers	UpTime	Controller	Trend 95th % (1 bar = 15m)
aks-agentpool-189352...	Ok	12%	243 mc	18	37 mins	-	==
aks-agentpool-189352...	Ok	10%	202 mc	16	1 hour	-	==

## 2.2 Next, click on **aks-agentpool** to view the monitoring window



The screenshot shows the Azure Monitor interface for a Kubernetes cluster named 'SL-Cluster'. The 'Nodes' tab is selected, showing a table of node metrics. The first node, 'aks-agentpool-18935221-vmss000000', is highlighted with a red box. The right-hand pane shows the 'Overview' tab for this node, displaying various system details.

Name	Status	95th % ↓	95th
aks-agentpool-18935221-vmss000000	Ok	12%	243 mc
aks-agentpool-18935221-vmss000000	Ok	10%	202 mc

The right-hand pane shows the 'Overview' tab for the selected node, displaying various system details:

Node Name	Status
aks-agentpool-18935221-vmss000000	Ready
Cluster Name	Kubernetes
SL-Cluster	v1.27.3
Kube Proxy Version	Container Runtime
v1.27.3	containerd://1.7.5-1
Operating System	Computer Environment
Ubuntu 22.04.3 LTS	azure
Agent Image	Agent Image Tag
azuremonitor/containerinsights/ciprod	3.1.14
Architecture	Last reported
amd64	43 secs ago

You can monitor different metrics by selecting them individually.

By following these steps, you have successfully monitored cluster health and inspected node logs for maintaining efficient and effective cloud operations.