Azure Monitor Hands-On Lab

Lab Overview

This lab will guide you through setting up and using Azure Monitor to track metrics, set up alerts, and analyze logs for troubleshooting virtual machines (VMs) and other Azure resources.

🟢 Step 1: Create an Azure Virtual Machine (VM)

1. Log in to Azure Portal – https://portal.azure.com
2. Go to 'Virtual Machines' and click 'Create' > 'Azure Virtual Machine'.
3. Fill in the required details:
    - Subscription: Select your subscription
    - Resource Group: Create a new one or use an existing one
    - VM Name: Monitor-Test-VM
    - Region: Choose a nearby region
    - Image: Select Windows Server 2022 or Ubuntu 22.04
    - Size: Standard_B1s (for cost efficiency)
    - Administrator Credentials: Set a username and password
4. Allow inbound RDP (for Windows) or SSH (for Linux) access.
5. Click 'Review + Create' and then 'Create'.

🟢 Step 2: Enable Azure Monitor for VM

1. Navigate to Azure Monitor in the portal.
2. Under Insights, select Virtual Machines.
3. Find Monitor-Test-VM, click Enable to start monitoring.

4. After a few minutes, click on the VM to see metrics like CPU, Memory, and Network usage.

🟢 Step 3: Configure Alerts in Azure Monitor

1. Navigate to Azure Monitor > Alerts.
2. Click 'New alert rule'.
3. Select a Target:
    - Click 'Select resource', choose Monitor-Test-VM.
4. Define the Condition:
    - Click 'Add condition' and select CPU Percentage.
    - Set condition: Greater than 80% for 5 minutes.
5. Create an Action Group:
    - Click 'Create new action group', name it HighCPUAlert.
    - Select Email or SMS notification.
6. Review & Create Alert Rule.

🟢 Step 4: Analyzing Logs with Log Analytics

1. Navigate to Azure Monitor > Logs.
2. Click 'New Query' and enter:
3. InsightsMetrics
4. | where Name == 'CPU Utilization'
5. | order by TimeGenerated desc
6. Click Run to see CPU trends.

🟢 Step 5: Test and Validate Monitoring

1. Simulate high CPU usage by running a stress test on the VM:
    - For Windows: Open PowerShell and run:
    - while ($true) { Start-Process -FilePath notepad.exe }
    - For Linux: SSH into the VM and run:
    - sudo apt install stress -y
    - stress --cpu 2 --timeout 300
2. Wait for the alert to trigger (check Azure Monitor > Alerts).

🟢 Step 6: Clean Up Resources

1. Go to 'Resource Groups', find your group.
2. Click 'Delete resource group' to remove all resources.

✅ Conclusion

You have successfully set up Azure Monitor, created alerts, analyzed logs, and tested real-time monitoring on a VM. This hands-on practice is essential for roles requiring cloud monitoring and incident response.