Azure VM Backup and Alert Configuration Guide

Objective

- Schedule daily backup of VM at 3:00 AM using Recovery Services Vault

- Create alert rule for VM CPU usage > 80% with email notification

- Provision backups in Backup Center

- Configure retention period and retain old backups

Prerequisites

- Azure VM running

- Azure CLI or Azure Portal access

- Recovery Services Vault created or ready

- Backup Center access

- Email address for alerts

1. Create a Recovery Services Vault

az backup vault create --name MyRecoveryVault --resource-group MyResourceGroup --location eastus

2. Register VM with Vault and Enable Backup

az backup protection enable-for-vm \

  --resource-group MyResourceGroup \

  --vault-name MyRecoveryVault \

  --vm MyVM \

  --policy-name DefaultPolicy

3. Create a Backup Policy with Daily Schedule at 3:00 AM

Azure CLI does not support full complex JSON policy creation easily, so you can create a policy in the Azure Portal Backup Center:

- Go to **Backup Center > Backup Policies**

- Create a new policy with:

    - **Schedule**: Daily at 3:00 AM

    - **Retention**: Set desired retention days (e.g., 30 days)

Or use Azure PowerShell/Azure REST API for advanced policy creation.

4. Assign Backup Policy to VM

If created custom policy via Portal, assign it to your VM backup.

5. Create an Action Group for Email Alerts

az monitor action-group create \

  --resource-group MyResourceGroup \

  --name CPUAlertGroup \

  --short-name alertgrp \

  --email-receiver name=AdminEmail email=admin@example.com

6. Create Metric Alert Rule for CPU Usage > 80%

az monitor metrics alert create \

  --name HighCPUAlert \

  --resource-group MyResourceGroup \

  --scopes $(az vm show --name MyVM --resource-group MyResourceGroup --query id -o tsv) \

  --condition "avg Percentage CPU > 80" \

  --description "Alert when CPU > 80%" \

  --action-group CPUAlertGroup

7. Provision Backups in Backup Center

- Navigate to **Backup Center** in Azure Portal
- Select **+ Backup**
- Choose workload: **Azure Virtual Machines**
- Select the VM(s)
- Select the Recovery Services Vault
- Select the backup policy with daily 3 AM schedule
- Enable backup

8. Configure Retention Period

Retention settings are part of the backup policy:

- Typically set retention for 30 days or as required
- Old backups beyond retention period are automatically deleted

9. (Optional) Backup Now & Retain Old Backup Manually

az backup protection backup-now \

  --resource-group MyResourceGroup \

  --vault-name MyRecoveryVault \

  --item-name MyVM \

  --retain-until 2025-01-01T03:00:00Z

Replace date with your retention end date.

Summary

Task	Tool	Description
Create Vault	CLI/Portal	Recovery Services Vault
Enable VM Backup	CLI	Register VM with vault & policy
Schedule Backup	Portal	Daily at 3 AM
Create Alert	CLI	CPU > 80% triggers email
Backup Provision	Backup Center	Central management
Retention	Policy	Retain backups (e.g., 30 days)