Exercise 4: Resource Graph

Scenario

Azure Resource Graph is a service in Azure that is designed to extend Azure Resource Management by providing efficient and performant resource exploration with the ability to query at scale across all subscriptions and management groups so that you can effectively govern your environment.

For more details on Azure Resource Graph please visit [Resource Graph Overview](https://docs.microsoft.com/en-us/azure/governance/resource-graph/overview)

1. In the portal, click **All Services** and search for **Resource Graph**
2. Click

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and run the following queries using Azure CLI:

* Add the Resource Graph extension to the Azure CLI environment

az extension add --name resource-graph

* Check the extension list (note that you may have other extensions installed)

az extension list

* Count Azure resources

az graph query -q "summarize count()"

* List resources sorted by name

az graph query -q "project name, type, location | order by name asc"

* Show all virtual machines ordered by name in descending order

az graph query -q "project name, location, type| where type =~ 'Microsoft.Compute/virtualMachines' | order by name desc"

* Show first five virtual machines by name and their OS type

az graph query -q "where type =~ 'Microsoft.Compute/virtualMachines' | project name, properties.storageProfile.osDisk.osType | top 5 by name desc"

* Count virtual machines by OS type

az graph query -q "where type =~ 'Microsoft.Compute/virtualMachines' | summarize count() by tostring(properties.storageProfile.osDisk.osType)"

* List all public IP addresses

az graph query -q "where type contains 'publicIPAddresses' and properties.ipAddress != '' | project properties.ipAddress | limit 100"

* Count resources that have IP addresses configured by subscription

az graph query -q "where type contains 'publicIPAddresses' and properties.ipAddress != '' | summarize count () by subscriptionId"

* Virtual machines by location

az graph query -q "where type =~ 'Microsoft.Compute/virtualMachines' | summarize count() by location"

* Virtual machines by SKU

az graph query -q "where type =~ 'Microsoft.Compute/virtualMachines' and properties.hardwareProfile.vmSize == 'Standard\_B2s' | project name, resourceGroup"

[Explore your Azure resources with more queries from Resource Graph](https://docs.microsoft.com/en-us/azure/governance/resource-graph/concepts/explore-resources)

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