# Challenge #2

We need to write code that will query the meta data of an instance within AWS or Azure or GCP

and provide a json formatted output.

The choice of language and implementation is up to you.

# Solution

Step 1: Create Virtual Machine in Azure Subscription

Step 2: Connect to the Virtual Machine created.

Step 3: Run the below PowerShell script on the virtual machine to get the required metadata.

**Note:**

IMDS (Azure Instance Metadata Service) endpoint:

http://169.254.169.254/metadata/instance/compute?api-version=2021-01-01

Parameters:

| **Name** | **Value** |
| --- | --- |
| api-version | 2021-01-01 |
| format | json |

###For all metadata###########################

$result= Invoke-RestMethod -Headers @{"Metadata"="true"} -Method Get -Proxy $null -Uri "http://169.254.169.254/metadata/instance?api-version=2021-01-01"

Write-Host `n"The VM metadata:"

$result | ConvertTo-Json

###For network metadata###########################

$resultnetwork= Invoke-RestMethod -Headers @{"Metadata"="true"} -Method Get -Proxy $null -Uri "http://169.254.169.254/metadata/instance/network/interface?api-version=2021-01-01"

Write-Host `n"The VM network metadata:"

$resultnetwork | ConvertTo-Json

#network dig in using key value pair

Write-Host `n"ipv4 metadata:"

$resultnetwork.ipv4 | ConvertTo-Json

$resultnetwork.macAddress | ConvertTo-Json

###For Compute metadata##############################

$resultcompute= Invoke-RestMethod -Headers @{"Metadata"="true"} -Method Get -Proxy $null -Uri "http://169.254.169.254/metadata/instance/compute?api-version=2021-01-01"

Write-Host `n"The VM compute metadata:"

$resultcompute | ConvertTo-Json

Write-Host `n"VM's image reference metadata:"

$resultcompute.storageProfile.imageReference | ConvertTo-Json

###For tags########################################

$resulttags= Invoke-RestMethod -Headers @{"Metadata"="true"} -Method Get -Proxy $null -Uri "http://169.254.169.254/metadata/instance/compute/tagsList?api-version=2021-01-01"

Write-Host `n"The VM tags metadata:"

$resulttags| ConvertTo-Json

Write-Host `n"VM's tag names metadata:"

$resulttags.name | ConvertTo-Json