Azure PowerShell Guide: Create a Virtual Machine (VM)

Objective

Provision a Virtual Machine in Azure using PowerShell, step-by-step.

Prerequisites

- Azure PowerShell installed
  [Install Guide](#)

- Login to Azure:

```
Connect-AzAccount
```

Step 1: Set Variables

```
$resourceGroup = "MyResourceGroup"

$location = "EastUS"

$vmName = "MyVmPS"

$vnetName = "MyVnet"

$subnetName = "MySubnet"

$ipName = "MyPublicIP"

$nicName = "MyNIC"

$securityGroupName = "MyNSG"

$image = "Win2019Datacenter"

$adminUsername = "azureuser"

$adminPassword = ConvertTo-SecureString "P@ssword123!" -AsPlainText -Force
```

Step 2: Create a Resource Group

```
New-AzResourceGroup -Name $resourceGroup -Location $location
```

Step 3: Create a Virtual Network and Subnet

```
$vnet = New-AzVirtualNetwork `

  -ResourceGroupName $resourceGroup `

  -Location $location `

  -Name $vnetName `

  -AddressPrefix "10.0.0.0/16"


$subnetConfig = Add-AzVirtualNetworkSubnetConfig `

  -Name $subnetName `
```

```
 -AddressPrefix "10.0.0.0/24" `

 -VirtualNetwork $vnet
```

```
$vnet | Set-AzVirtualNetwork
```

Step 4: Create a Public IP Address

```
$pip = New-AzPublicIpAddress `

 -Name $ipName `

 -ResourceGroupName $resourceGroup `

 -Location $location `

 -AllocationMethod Dynamic
```

Step 5: Create a Network Security Group

```
$nsg = New-AzNetworkSecurityGroup `

 -ResourceGroupName $resourceGroup `

 -Location $location `

 -Name $securityGroupName
```

Step 6: Create a Network Interface Card (NIC)

```
$subnet = Get-AzVirtualNetworkSubnetConfig -Name $subnetName -VirtualNetwork $vnet
```

```
$nic = New-AzNetworkInterface `

 -Name $nicName `

 -ResourceGroupName $resourceGroup `

 -Location $location `

 -Subnet $subnet `

 -NetworkSecurityGroup $nsg `

 -PublicIpAddress $pip
```

Step 7: Create the Virtual Machine

```
$vmConfig = New-AzVMConfig -VMName $vmName -VMSize "Standard_DS1_v2"

 Set-AzVMOperatingSystem -Windows -ComputerName $vmName -Credential (New-Object
PSCredential($adminUsername, $adminPassword))

 Set-AzVMSourceImage -PublisherName "MicrosoftWindowsServer" -Offer "WindowsServer" -Skus
$image -Version "latest"

 Add-AzVMNetworkInterface -Id $nic.Id
```

```
New-AzVM -ResourceGroupName $resourceGroup -Location $location -VM $vmConfig
```

Step 8: (Optional) Clean-Up

```
Remove-AzResourceGroup -Name $resourceGroup -Force
```

Summary

Step	Description
1	Set variables
2	Create resource group
3	Create VNet and Subnet
4	Create Public IP
5	Create NSG
6	Create NIC
7	Create the VM
8	(Optional) Clean-up