

Module 2: Azure Virtual Machines And Networking

Demo - 2

edureka!

edureka!

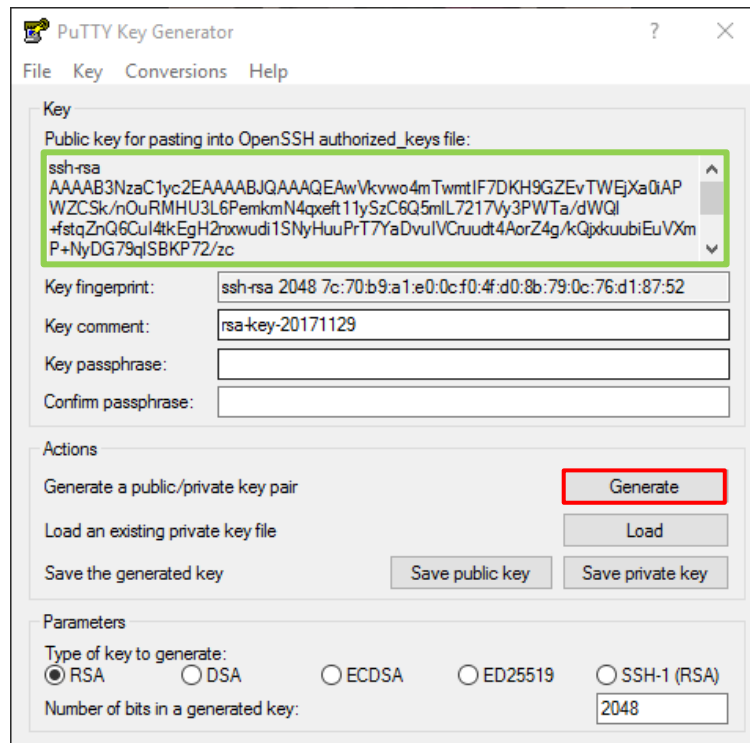
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Demo 2 – Deploy A Linux Virtual Machine And Connect To It

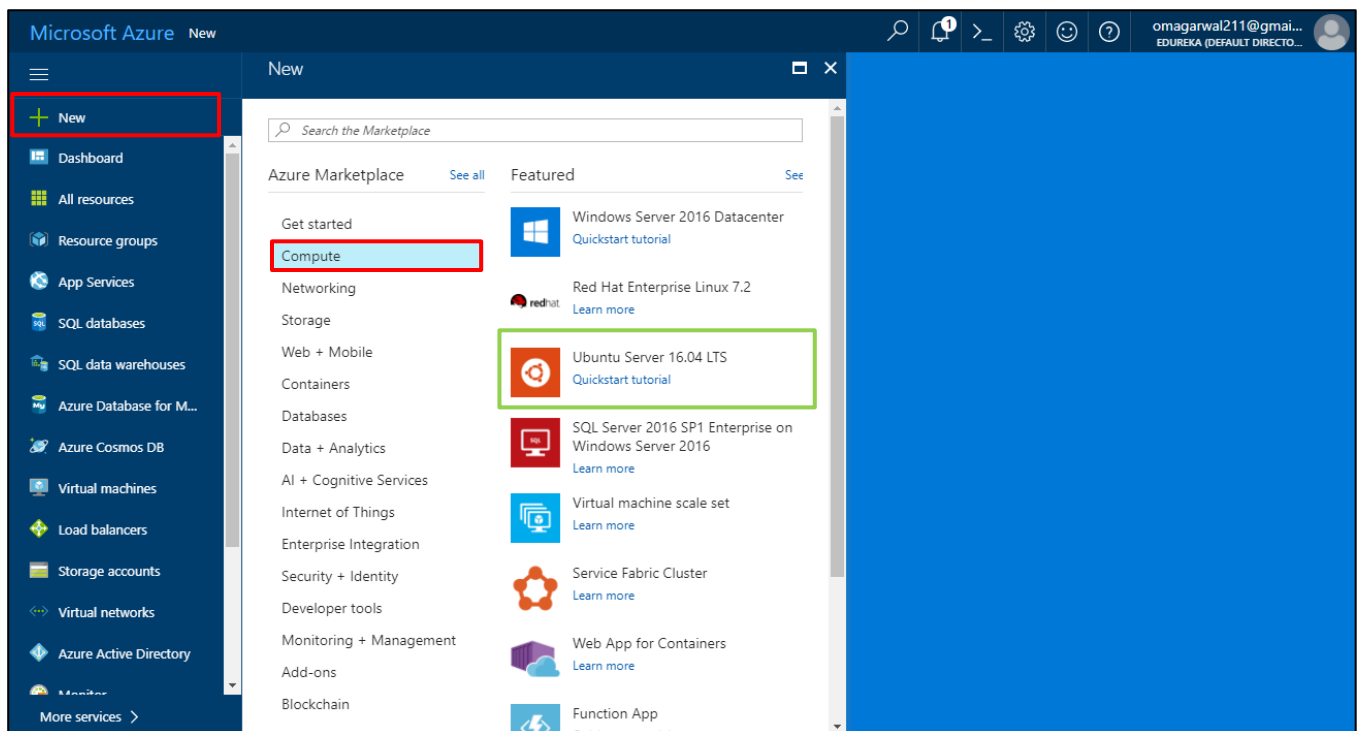
➤ Creating a LINUX VM using Azure Portal

Step 1: Once you have downloaded the Putty tool, Open the PuttyGen on your system

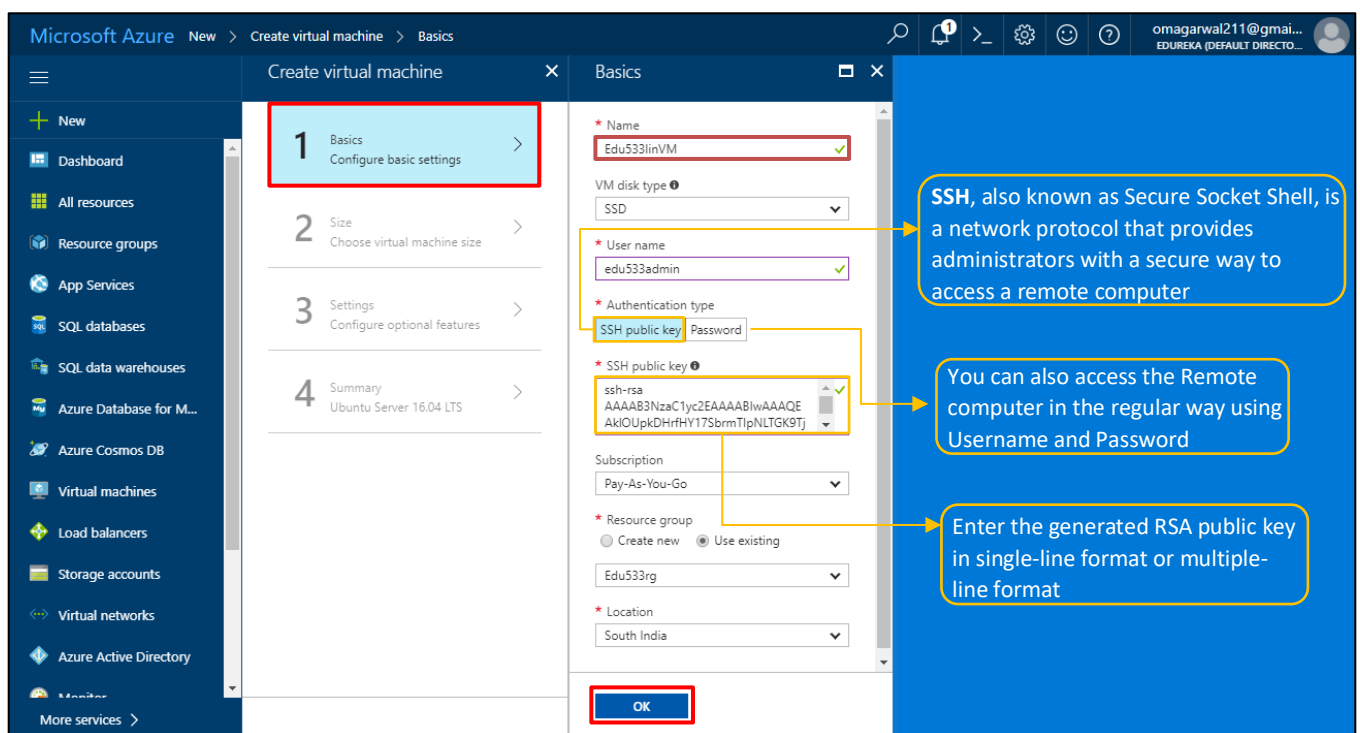
> Click on **Generate** option:



Step 2: In the Azure Portal and Goto: **+New** > Compute > **Ubuntu Server** and fill the required details just like Windows:



Step 3: Fill all the details as same as that of a Windows creation except for a typical SSH public key login> Click **Create**:



Step 4: Select the required VM disk size in the **Size** blade:

Microsoft Azure New > Create virtual machine > Choose a size

Create virtual machine

- 1 Basics Done
- 2 Size Choose virtual machine size
- 3 Settings Configure optional features
- 4 Summary Ubuntu Server 16.04 LTS

Choose a size

Browse the available sizes and their features

Prices presented are estimates in your local currency that include only Azure infrastructure costs and any discounts for the subscription and location. The prices don't include any applicable software costs. Recommended sizes are determined by the publisher of the selected image based on hardware and software requirements.

Supported disk type: SSD Minimum vCPUs: 1 Minimum memory (GiB): 0

★ Recommended | View all

DS1_V2 Standard	DS2_V2 Standard	DS11_V2 Standard
1 vCPU	2 vCPUs	14 vCPUs
3.5 GB	7 GB	14 GB
2 Data disks	4 Data disks	4 Data disks
3200 Max IOPS	6400 Max IOPS	6400 Max IOPS
7 GB Local SSD	14 GB Local SSD	28 GB Local SSD
Premium disk support	Premium disk support	Premium disk support
Load balancing	Load balancing	Load balancing
4,179.93 INR/MONTH (ESTIMATED)	8,310.68 INR/MONTH (ESTIMATED)	9,343.37 INR/MONTH (ESTIMATED)

Select

Step 5: Configure the VM settings in the same way you did for Windows VM and click **OK**:

Microsoft Azure New > Create virtual machine > Settings

Create virtual machine

- 1 Basics Done
- 2 Size Done
- 3 Settings Configure optional features
- 4 Summary Ubuntu Server 16.04 LTS

Settings

High availability

- * Availability set: None

Storage

- Use managed disks: No Yes

Network

- * Virtual network: Edu533rg-vnet
- * Subnet: default (10.0.0.0/24)
- * Public IP address: (new) Edu533linVM-ip
- * Network security group (firewall): (new) Edu533linVM-nsg

Extensions

- Extensions

OK

Step 6: Once the settings is configured, it is **Validated** and upon clicking **OK**, VM is deployed:

Microsoft Azure New > Create virtual machine > Create

Create virtual machine

- 1 Basics Done ✓
- 2 Size Done ✓
- 3 Settings Done ✓
- 4 Summary Ubuntu Server 16.04 LTS >

Validation passed

Summary

Basics

Subscription	Pay-As-You-Go
Resource group	Edu533rg
Location	South India

Settings

Computer name	Edu533linVM
Disk type	SSD
User name	edu533admin
Size	Standard DS1 v2
Managed	Yes
Virtual network	Edu533rg-vnet
Subnet	default (10.0.0.0/24)
Public IP address	(new) Edu533linVM-ip

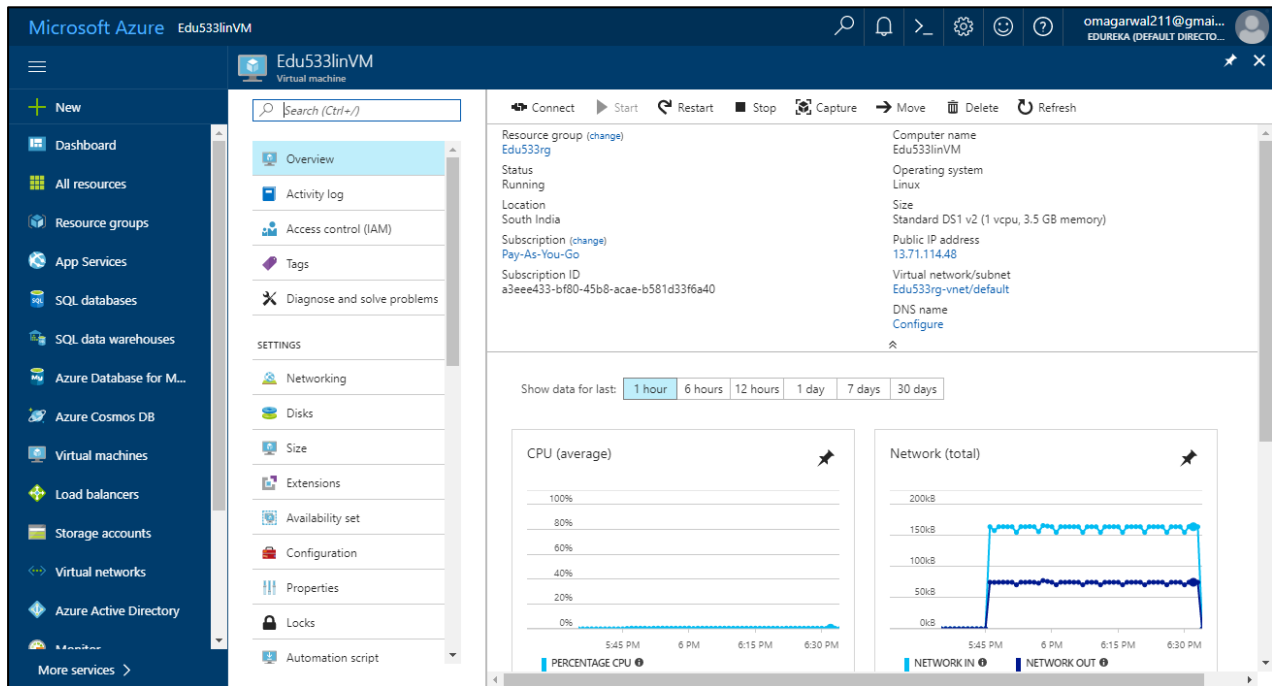
Terms of use

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with each Marketplace offering above, (b) authorize Microsoft to charge or bill my current payment method for the fees associated with my use of the offering(s), including applicable taxes, with the same billing frequency as my Azure subscription, until I discontinue use of the offering(s), and (c)

☒ I give Microsoft permission to use and share my contact information so that Microsoft or the Provider can contact me regarding this product and related products.

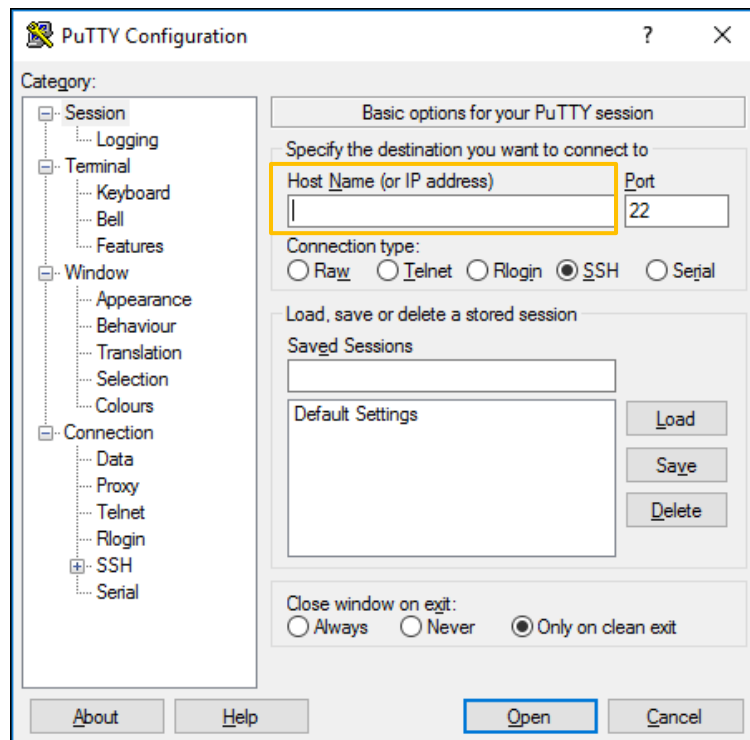
Create Download template and parameters

Step 7: Once the new VM is deployed and running, you will be redirected to the Overview window as shown below:



➤ Connect to a LINUX VM

Step 1: Open your local remote desktop client (PuTTY) and connect to the IP address or DNS name of your Linux VM:

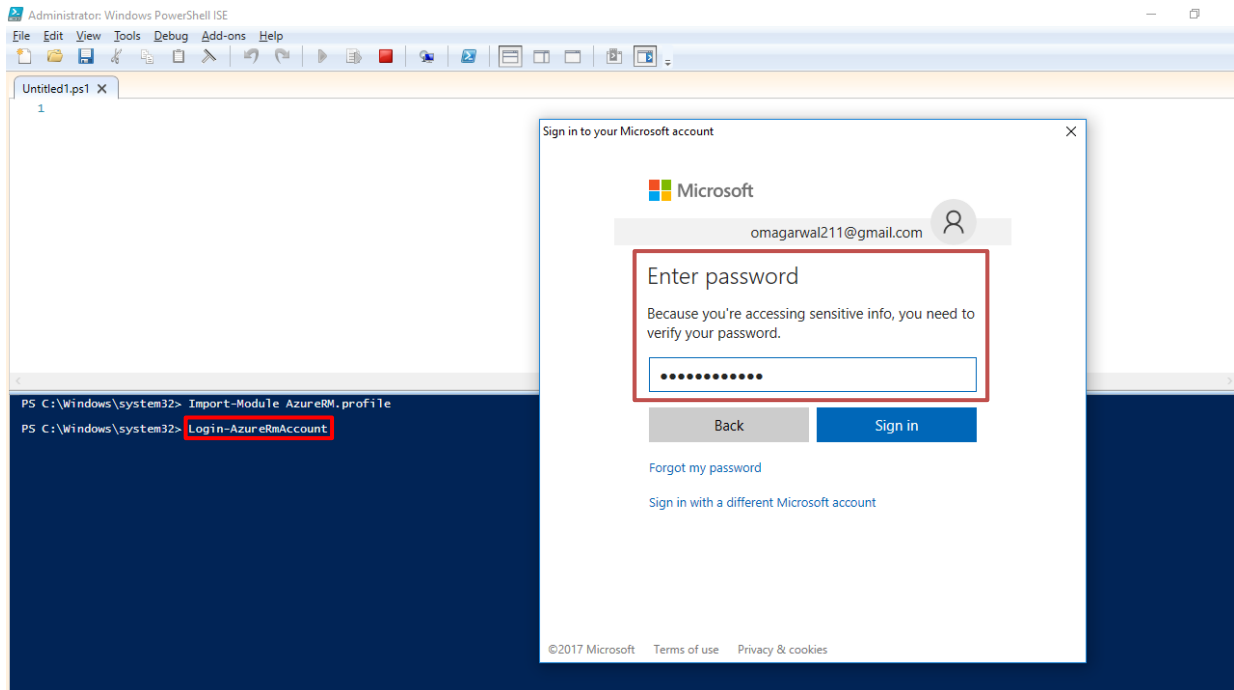


Step 2: Once you have established a connection to your Linux VM, the below terminal will be accessible:

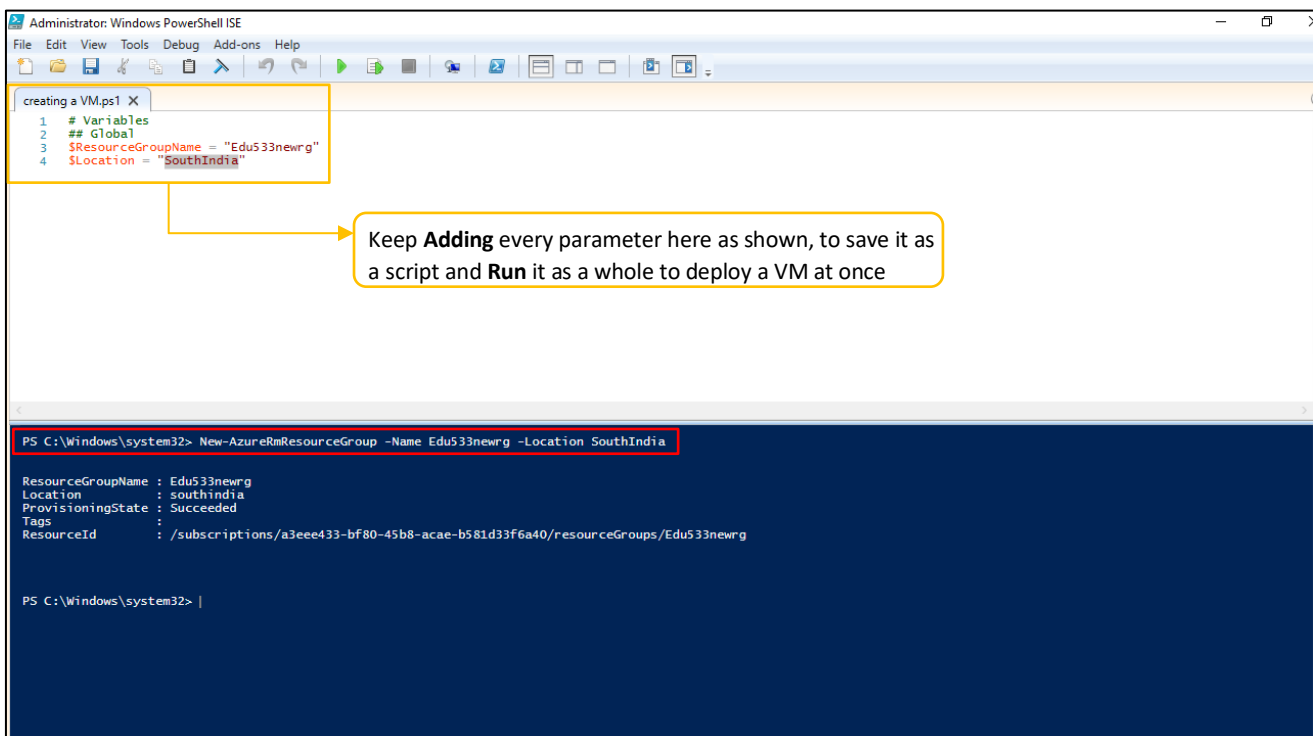
```
edurekara01@edurekalinvn: ~  
Using username "edurekara01".  
edurekara01@edurekalinvn's password:  
  
The programs included with the Kali GNU/Linux system are free software;  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/*/copyright.  
  
Kali GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent  
permitted by applicable law.  
edurekara01@edurekalinvn:~$
```

➤ Connect to a LINUX VM

Step 1: Once you have opened the PowerShell, Run **Login-AzureRmAccount** and enter the Account credentials:



Step 2: In the Command line, Enter the below shown command to create a **Resource Group**:



Step 3: In the Command line, Enter the below shown command to create a **Storage Account**:

```

1 # Variables
2 ## Global
3 $ResourceGroupName = "Edu533newrg"
4 $Location = "SouthIndia"
5
6 # Resource Group
7 New-AzureRmResourceGroup -Name $ResourceGroupName -Location $Location
8
9 ## Storage
10 $StorageName = "edu533storage"
11 $StorageType = "Standard_GRS"
12
13 # Storage
14 $StorageAccount = New-AzureRmStorageAccount -ResourceGroupName $ResourceGroupName -Name $StorageName -Type $StorageType -Location $Location
  
```

```

PS C:\Windows\system32> New-AzureRmStorageAccount -ResourceGroupName Edu533newrg -Name edu533storage -Type Standard_GRS -Location SouthIndia

ResourceGroupName : edu533newrg
StorageAccountName : edu533storage
Id                : /subscriptions/a3eee433-bf80-45b8-acae-b581d33f6a40/resourceGroups/edu533newrg/providers/Microsoft.Storage/storageAccounts/edu533storage
Location          : southindia
Sku               : Microsoft.Azure.Management.Storage.Models.Sku
Kind              : Storage
Encryption        : Microsoft.Azure.Management.Storage.Models.Encryption
AccessTier        :
CreationTime      : 09-11-2017 14:33:51
CustomDomain      :
Identity          :
LastGeoFailoverTime :
PrimaryEndpoints  : Microsoft.Azure.Management.Storage.Models.Endpoints
PrimaryLocation    : southindia
ProvisioningState  : Succeeded
SecondaryEndpoints :
SecondaryLocation  : centralindia
StatusOfPrimary    : Available
StatusOfSecondary  : Available
Tags              : {}
EnabledHttpsTrafficOnly : False
Context           : Microsoft.WindowsAzure.Commands.Common.Storage.LazyAzureStorageContext
ExtendedProperties : {}
  
```

Step 4: Enter the below commands to create **PIP, Subnet, VNet, and NIC** one after the other respectively as shown:

```

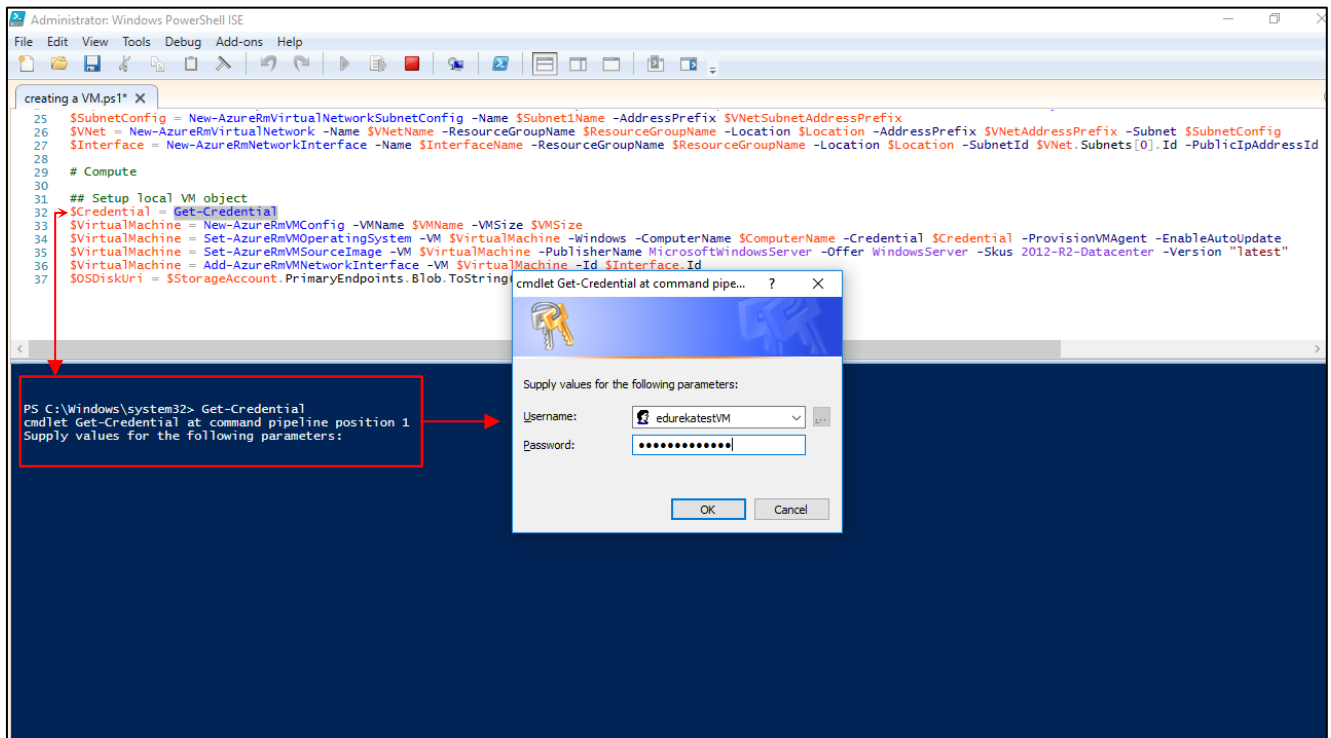
13 # Storage
14 $StorageAccount = New-AzureRmStorageAccount -ResourceGroupName $ResourceGroupName -Name $StorageName -Type $StorageType -Location $Location
15
16 ## Network
17 $InterfaceName = "ServerInterface533"
18 $SubnetName = "Subnet1"
19 $VNetName = "Edu533VNet"
20 $VNetAddressPrefix = "10.0.0.0/16"
21 $VNetSubnetAddressPrefix = "10.0.0.0/24"
22
23 # Network
24 $PIP = New-AzureRmPublicIpAddress -Name $InterfaceName -ResourceGroupName $ResourceGroupName -Location $Location -AllocationMethod Dynamic
25 $SubnetConfig = New-AzureRmVirtualNetworkSubnetConfig -Name $SubnetName -AddressPrefix $VNetSubnetAddressPrefix
26 $VNet = New-AzureRmVirtualNetwork -Name $VNetName -ResourceGroupName $ResourceGroupName -Location $Location -AddressPrefix $VNetAddressPrefix -Subnet $SubnetConfig
27 $Interface = New-AzureRmNetworkInterface -Name $InterfaceName -ResourceGroupName $ResourceGroupName -Location $Location -SubnetId $VNet.Subnets[0].Id -PublicIpAddressId $PIP.Id
  
```

```

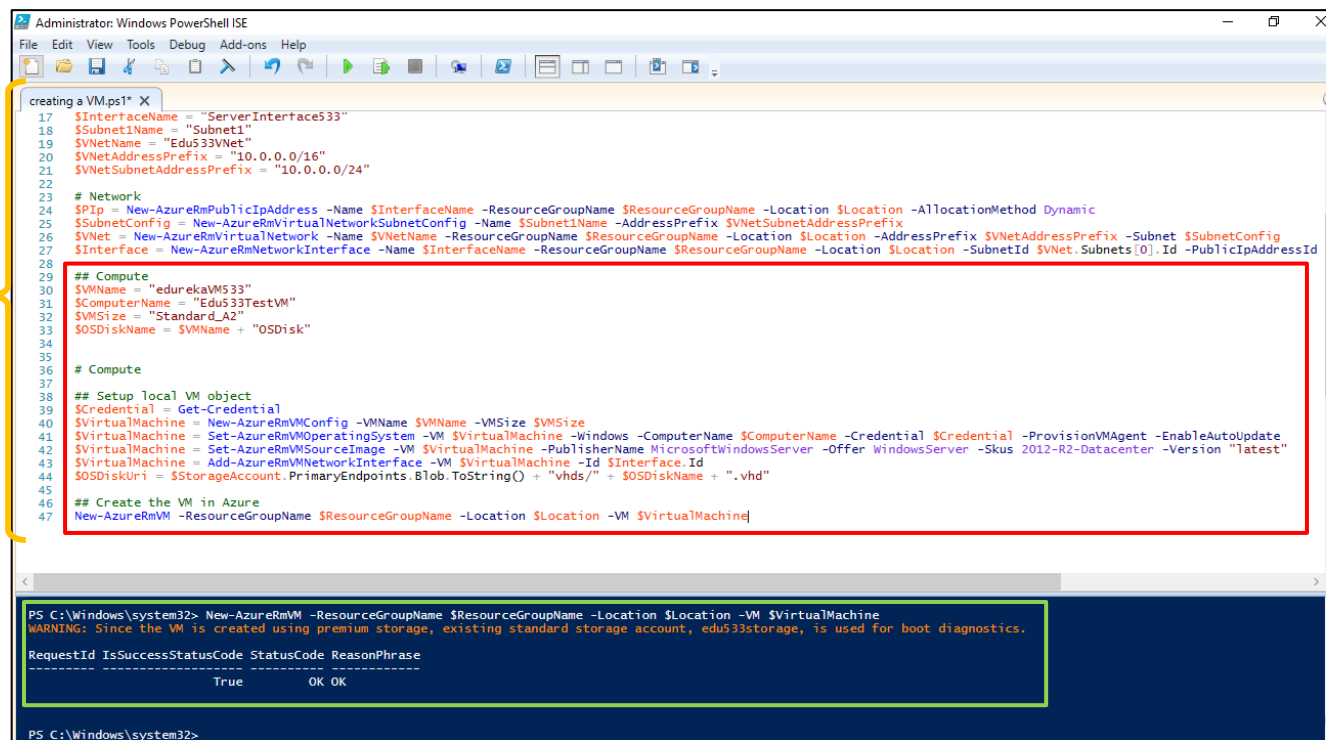
PS C:\Windows\system32> New-AzureRmNetworkInterface -Name ServerInterface533 -ResourceGroupName Edu533newrg -Location SouthIndia -SubnetId $VNet.Subnets[0].Id -PublicIpAddressId $PIP.Id
WARNING: The output object type of this cmdlet will be modified in a future release.

Name                : ServerInterface533
ResourceGroupName    : Edu533newrg
Location             : southindia
Id                  : /subscriptions/a3eee433-bf80-45b8-acae-b581d33f6a40/resourceGroups/Edu533newrg/providers/Microsoft.Network/networkInterfaces/ServerInterface533
Etag                 : W/"33456084-849f-43b5-8cf7-b95e2a762b44"
ResourceGuid         : daa37558-f483-49f1-8cb3-c0cdf55c23c0
ProvisioningState     : Succeeded
Tags                 :
VirtualMachine       : null
IpConfigurations     : [
  {
    "Name": "ipconfig1",
    "Etag": "W/A/33456084-849f-43b5-8cf7-b95e2a762b44",
    "Id": "/subscriptions/a3eee433-bf80-45b8-acae-b581d33f6a40/resourceGroups/Edu533newrg/providers/Microsoft.Network/networkInterfaces/ServerInterface533/ipConfigurations/ipconfig1",
    "PrivateIpAddress": "10.0.0.4",
    "PrivateIpAllocationMethod": "Dynamic",
    "Subnet": {
      "Id": "/subscriptions/a3eee433-bf80-45b8-acae-b581d33f6a40/resourceGroups/Edu533newrg/providers/Microsoft.Network/virtualNetworks/Edu533VNet/subnets/Subnet1",
      "ResourceNavigationLinks": []
    }
  }
]
  
```

Step 5: First step to create a VM is to provide the desired credentials to that VM as shown below:



Step 6: After creating Network resources, **Setup Local VM Object** > Deploy the VM:



Step 7: Once the VM Creation command has been executed successfully, You can check the same on **Portal**:

The screenshot shows the Microsoft Azure portal interface. On the left is a navigation pane with various service categories. The main area displays 'All resources' for the 'edureka (Default Directory)'. A table lists 6 items, which are highlighted with a green border. The table has columns for NAME, TYPE, RESOURCE GROUP, LOCATION, and SUBSCRIPTION. All resources are located in 'South India' and belong to the 'Pay-As-You-Go' subscription.

NAME	TYPE	RESOURCE GROUP	LOCATION	SUBSCRIPTION
edu533storage	Storage account	Edu533newrg	South India	Pay-As-You-Go
Edu533VNet	Virtual network	Edu533newrg	South India	Pay-As-You-Go
edurekaVM533	Virtual machine	Edu533newrg	South India	Pay-As-You-Go
edurekaVM533_OsDisk_1_6f171c2dabc1443a864ea...	Disk	EDU533NEWRG	South India	Pay-As-You-Go
ServerInterface533	Network interface	Edu533newrg	South India	Pay-As-You-Go
ServerInterface533	Public IP address	Edu533newrg	South India	Pay-As-You-Go