

VERZEO ARURE CLOUD COMPUTONG MINOR PROJECT 01

TO DO IN THIS PROJECT :

Azure Minor Project 01

- Create 2 Vnets – Vnet 1 and Vnet 2
- Create 2 Subnets in each Vnet.
- Create VM each Vnet1 and 2
- Assign Public IP to VM in Vnet 1.
- Peer Vnet 1 and 2
- Login to Vm1 and if peering is successful you should be able to login to VM in Vnet 2
- Create a data disk and attach to VM 1
- Logon to VM and initialize the disk

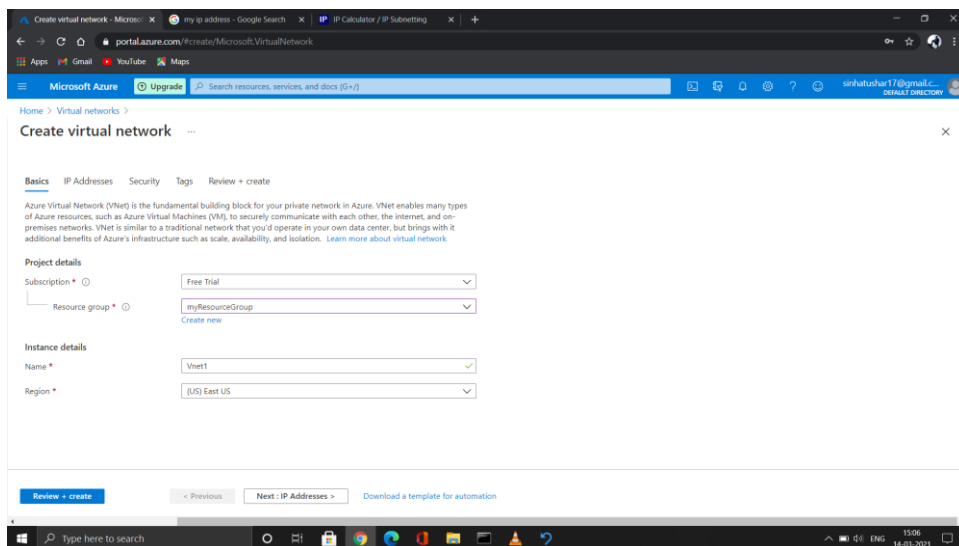
Output – Provide the Architecture diagram using PowerPoint

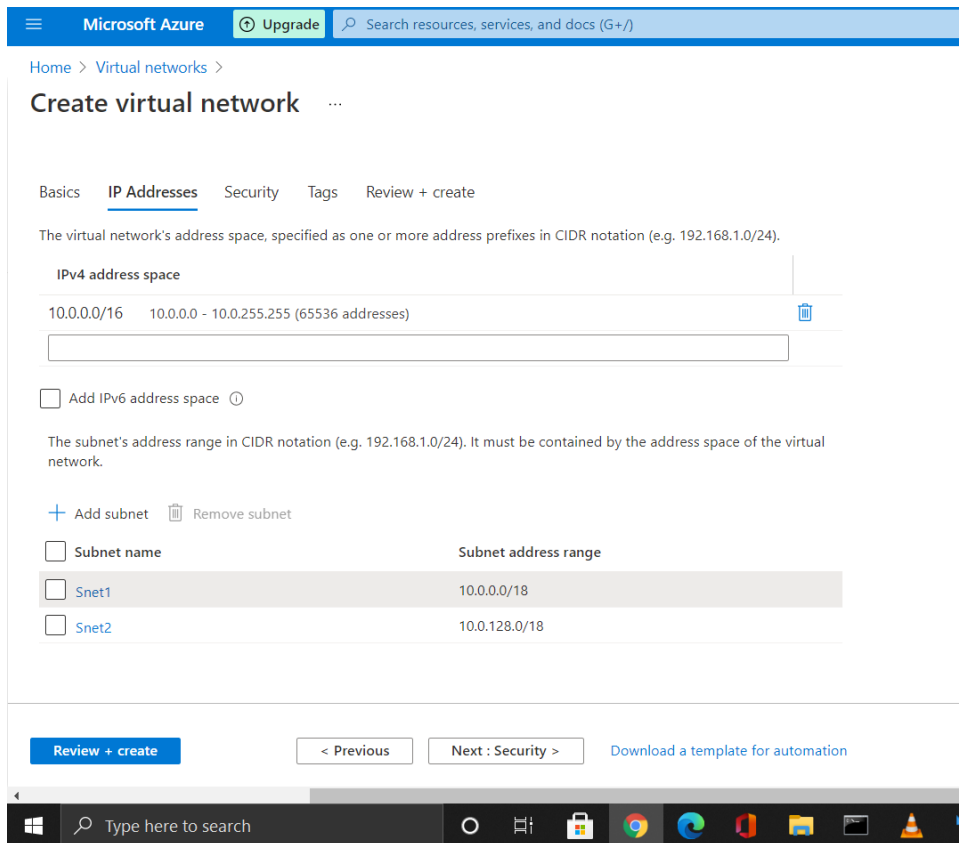
Provide screenshots of step by step in a word document

STEPS FOR PROJECTION MAKING ARE AS FOLLOWS :

(Logged into Azure Portal with my Ms. Account)

*Step 1: Creating two Virtual Networks Vnet 1 and Vnet 2.





***Step 2: Creating Sub Networks.**

Two SubNets Snet1 and Snet2 created in Vnet1.

[Home](#) > [Virtual networks](#) >

Create virtual network ...

Basics IP Addresses **Security** Tags Review + create

BastionHost ⓘ ☒ Disable
☐ Enable

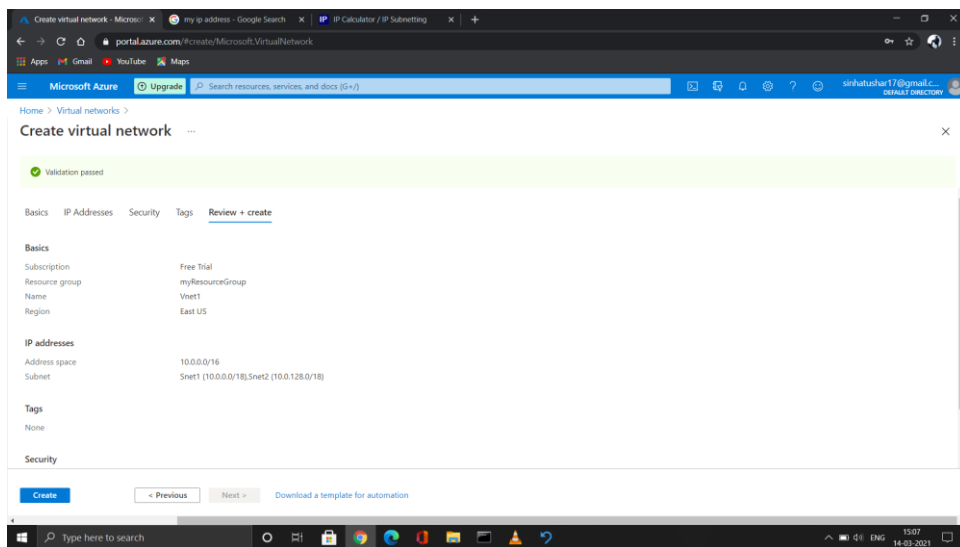
DDoS Protection Standard ⓘ ☒ Disable
☐ Enable

Firewall ⓘ ☒ Disable
☐ Enable

Review + create

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Next : Tags >



(Public IP Address assigned to Vnet1)

Home > Virtual Network >

Create virtual network ...

Basics IP Addresses Security Tags Review + create

Azure Virtual Network (VNet) is the fundamental building block for your private network in Azure. VNet enables many types of Azure resources, such as Azure Virtual Machines (VM), to securely communicate with each other, the internet, and on-premises networks. VNet is similar to a traditional network that you'd operate in your own data center, but brings with it additional benefits of Azure's infrastructure such as scale, availability, and isolation. [Learn more about virtual network](#)

Project details

Subscription *

Free Trial

Resource group *

myResourceGroup

Create new

Instance details

Name *

Vnet2

Region *

(US) East US

Review + create

< Previous

Next : IP Addresses >

[Download a template for automation](#)



Home > Virtual Network >

Create virtual network ...

Basics IP Addresses Security Tags Review + create

The virtual network's address space, specified as one or more address prefixes in CIDR notation (e.g. 192.168.1.0/24).

IPv4 address space

10.1.0.0/16

10.1.0.0 - 10.1.255.255 (65536 addresses)

☐ Add IPv6 address space

The subnet's address range in CIDR notation (e.g. 192.168.1.0/24). It must be contained by the address space of the virtual network.

+ Add subnet Remove subnet

Subnet name	Subnet address range
<input type="checkbox"/> Snet3	10.1.0.0/18
<input type="checkbox"/> Snet4	10.1.128.0/18

Review + create

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Next : Security >

[Download a template for automation](#)



Two Subnets Snet3 and Snet4 created in Vnet2.

(Private IP Address assigned to Vnet2)

The image consists of two screenshots from the Microsoft Azure portal.

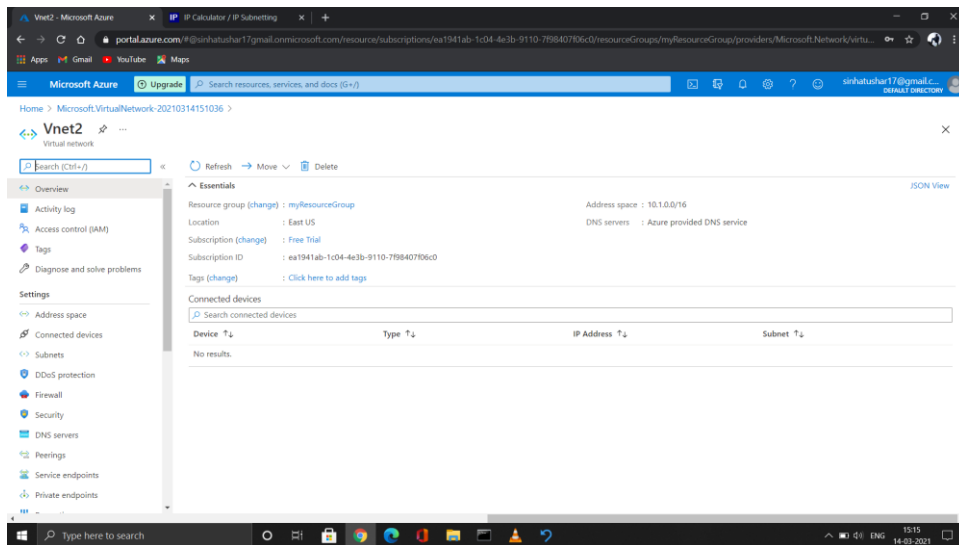
The top screenshot shows the 'Create virtual network' wizard. The 'Review + create' tab is selected, showing a summary of the configuration:

- Basics**
 - Subscription: Free Trial
 - Resource group: myResourceGroup
 - Name: Vnet2
 - Region: East US
- IP addresses**
 - Address space: 10.1.0.0/16
 - Subnet: Snet3 (10.1.0.0/18), Snet4 (10.1.128.0/18)
- Tags**
 - None
- Security**
 - None

The bottom screenshot shows the 'Overview' page of the created virtual network, 'Microsoft.VirtualNetwork-20210314151036'. It displays a 'Deployment succeeded' message with the following details:

- Deployment name: Microsoft.VirtualNetwork-20210314151036
- Subscription: Free Trial
- Resource group: myResourceGroup
- Start time: 3/14/2021, 3:14:06 PM
- Correlation ID: 39c8a88-45c4-42cb-8333-76

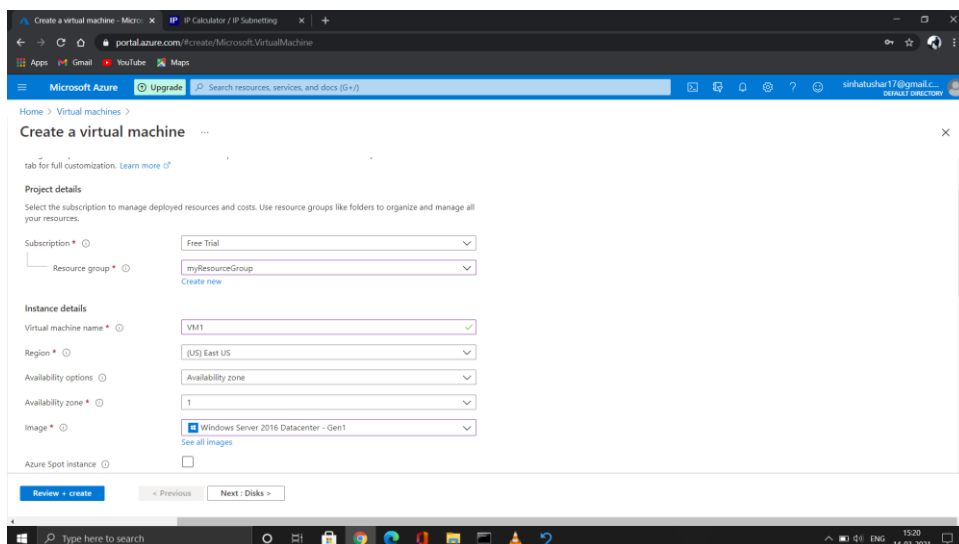
A 'Notifications' panel on the right side of the screen shows two 'Deployment succeeded' notifications, both indicating that the deployment of 'Microsoft.VirtualNetwork-20210314151036' to the resource group 'myResourceGroup' was successful.



(Vnet1 and Vnet2 created successfully according to the requirement)

***Step 3: Creating Virtual Machines inside Virtual Networks.**

Virtual Machine VM1 is created inside Vnet1.



Microsoft Azure

Upgrade

Search resources, services, and docs (G+)

Home > Virtual machines >

Create a virtual machine ...

Size *

Standard_B1s - 1 vcpu, 1 GiB memory (₹736.30/month)

See all sizes

Administrator account

Username *

azurets

Password *

.....

Confirm password *

.....

Inbound port rules

Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

Public inbound ports *

☐ None

☒ Allow selected ports

Select inbound ports *

RDP (3389)

This will allow all IP addresses to access your virtual machine. This is only recommended for testing. Use the Advanced controls in the Networking tab to create rules to limit inbound traffic to known IP addresses.

Review + create

< Previous

Next : Disks >

Microsoft Azure

Upgrade

Search resources, services, and docs (G+)

Home > Virtual machines >

Create a virtual machine ...

Basics

Disks

Networking

Management

Advanced

Tags

Review + create

Azure VMs have one operating system disk and a temporary disk for short-term storage. You can attach additional data disks. The size of the VM determines the type of storage you can use and the number of data disks allowed. [Learn more](#)

Disk options

OS disk type *

Standard HDD

The selected VM size supports premium disks. We recommend Premium SSD for high IOPS workloads. Virtual machines with Premium SSD disks qualify for the 99.9% connectivity SLA.

Encryption type *

(Default) Encryption at-rest with a platform-managed key

Enable Ultra Disk compatibility

☐

Data disks

You can add and configure additional data disks for your virtual machine or attach existing disks. This VM also comes with a temporary disk.

LUN	Name	Size (GiB)	Disk type	Host caching
-----	------	------------	-----------	--------------

[Create and attach a new disk](#) [Attach an existing disk](#)

Review + create

< Previous

Next : Networking >

Disk creation in VM1 (attached to VM1) :

[Home](#) > [Virtual machines](#) > [Create a virtual machine](#) >

Create a new disk ...

Create a new disk to store applications and data on your VM. Disk pricing varies based on factors including disk size, storage type, and number of transactions. [Learn more](#)

Name *	<input type="text" value="VM1_DataDisk_0"/>
Source type * ⓘ	<input type="text" value="None (empty disk)"/>
Size * ⓘ	<div>4 GiB Standard HDD LRS Change size</div>
Encryption type *	<input type="text" value="(Default) Encryption at-rest with a platform-managed key"/>
Enable shared disk	<div><input type="radio"/> Yes <input checked="" type="radio"/> No Shared disk not available for the selected size.</div>

OK

[Home](#) > [Virtual machines](#) >



Create a virtual machine ...

Disk options

OS disk type * ⓘ	<input type="text" value="Standard HDD"/> <small>The selected VM size supports premium disks. We recommend Premium SSD for high IOPS workloads. Virtual machines with Premium SSD disks qualify for the 99.9% connectivity SLA.</small>
Encryption type *	<input type="text" value="(Default) Encryption at-rest with a platform-managed key"/>
Enable Ultra Disk compatibility ⓘ	<input type="checkbox"/>

Data disks

You can add and configure additional data disks for your virtual machine or attach existing disks. This VM also comes with a temporary disk.

LUN	Name	Size (GiB)	Disk type	Host caching	
0	VM1_DataDisk_0	4	Standard HDD LRS	None	 

[Create and attach a new disk](#) [Attach an existing disk](#)

▼ Advanced

Review + create

< Previous

Next : Networking >

https://portal.azure.com/#

Home > Virtual machines >

Create a virtual machine

[Learn more](#)

Network interface

When creating a virtual machine, a network interface will be created for you.

Virtual network * 📄 Vnet1 ▼
[Create new](#)

Subnet * 📄 Snet1 (10.0.0.0/18) ▼
[Manage subnet configuration](#)

Public IP 📄 (new) VM1-ip ▼
[Create new](#)

NIC network security group 📄 ☐ None ☒ Basic ☐ Advanced

Public inbound ports * 📄 ☐ None ☒ Allow selected ports

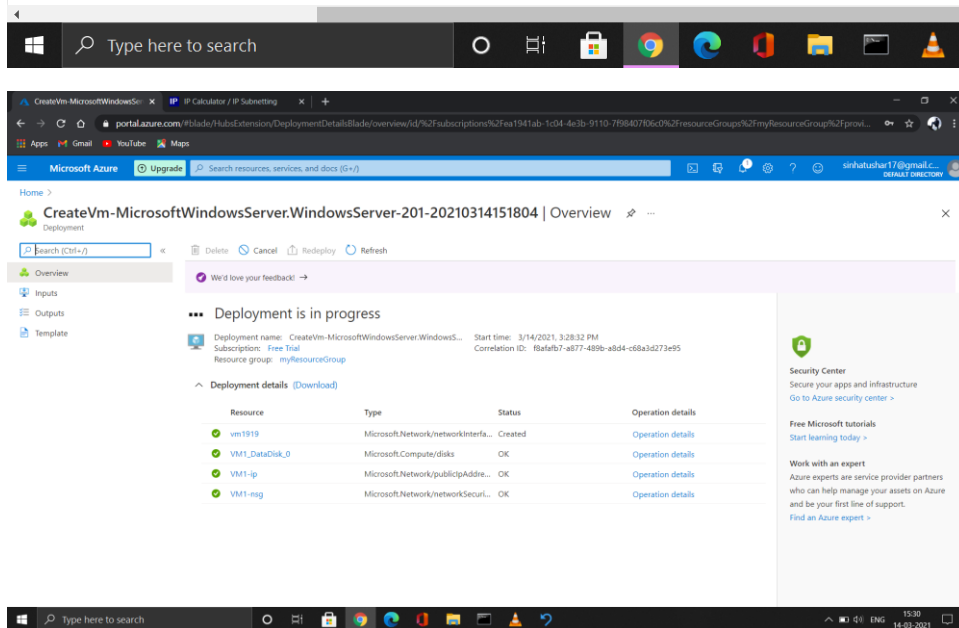
Select inbound ports * 📄 RDP (3389) ▼

⚠️ This will allow all IP addresses to access your virtual machine. This is only

[Review + create](#)

[< Previous](#)

[Next : Management >](#)

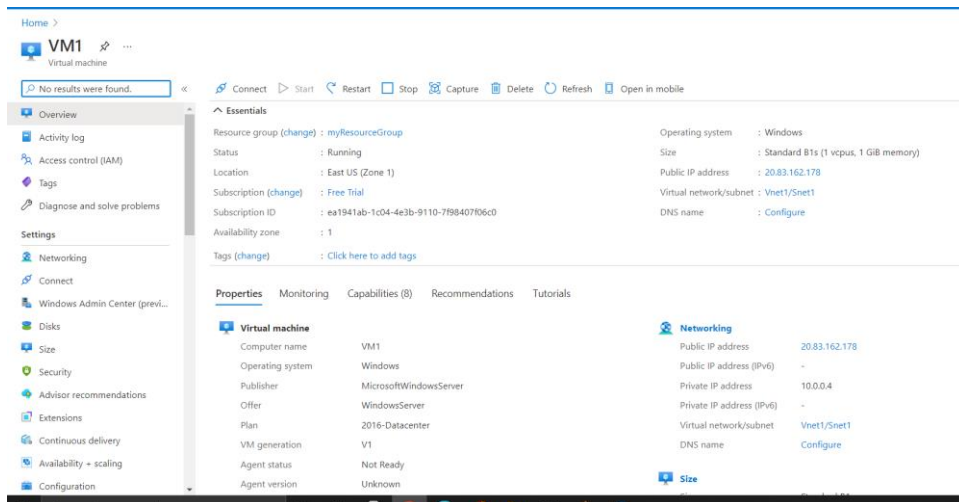


The screenshot shows the Azure portal interface for a deployment. The top navigation bar includes the Microsoft Azure logo and a search bar. The main content area displays the deployment progress for a virtual machine. The deployment is in progress, and the resources are being created. The deployment details table shows the following resources:

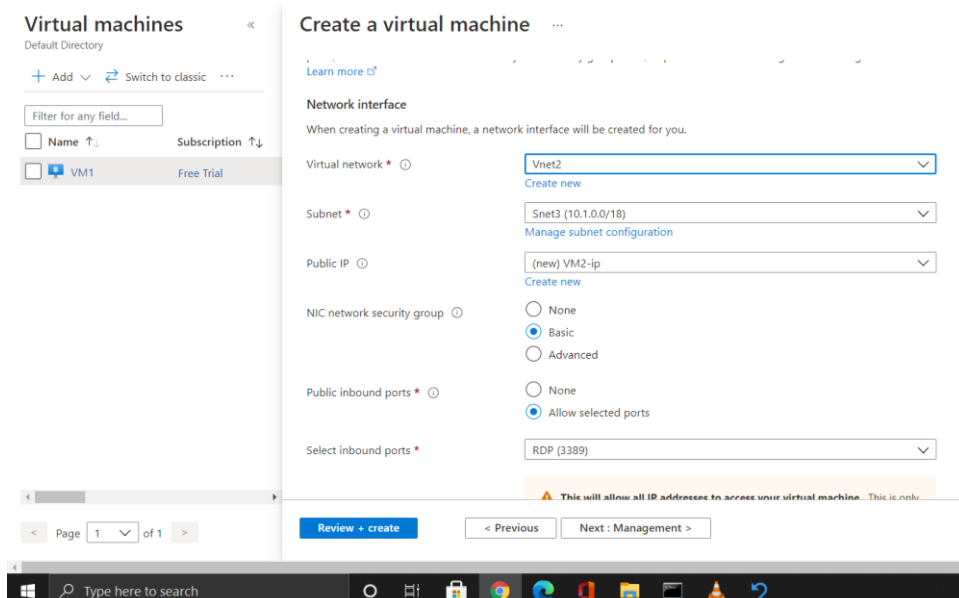
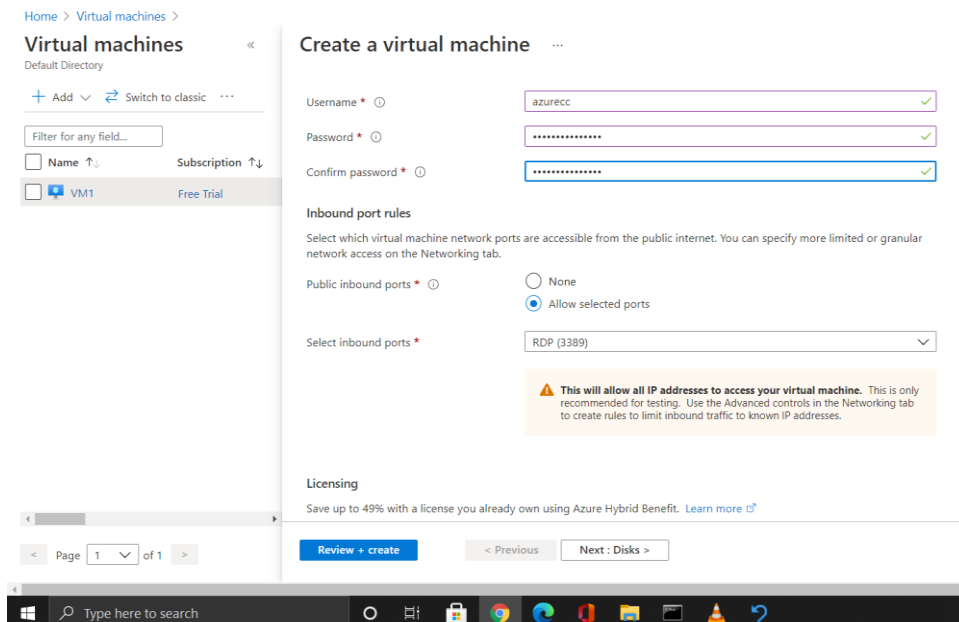
Resource	Type	Status	Operation details
vm1919	Microsoft.Network/networkInterface...	Created	Operation details
VM1_DataDisk_0	Microsoft.Compute/disks	OK	Operation details
VM1-ip	Microsoft.Network/publicIpAddres...	OK	Operation details
VM1-nsg	Microsoft.Network/networkSecur...	OK	Operation details

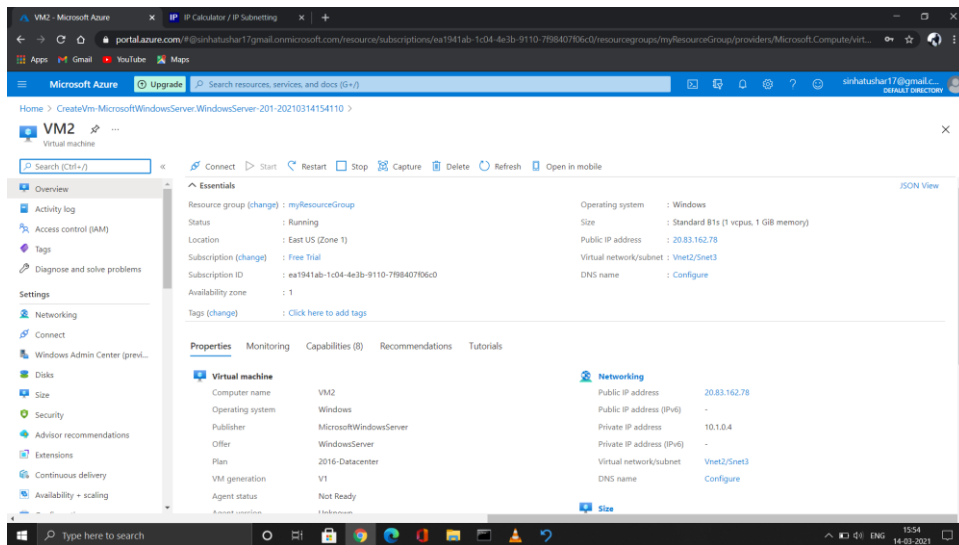
On the right side of the deployment details, there are links to [Security Center](#), [Free Microsoft tutorials](#), and [Work with an expert](#).

(Reviewing is Successful)



VM1 Created Successfully. In the same way I created VM2 .

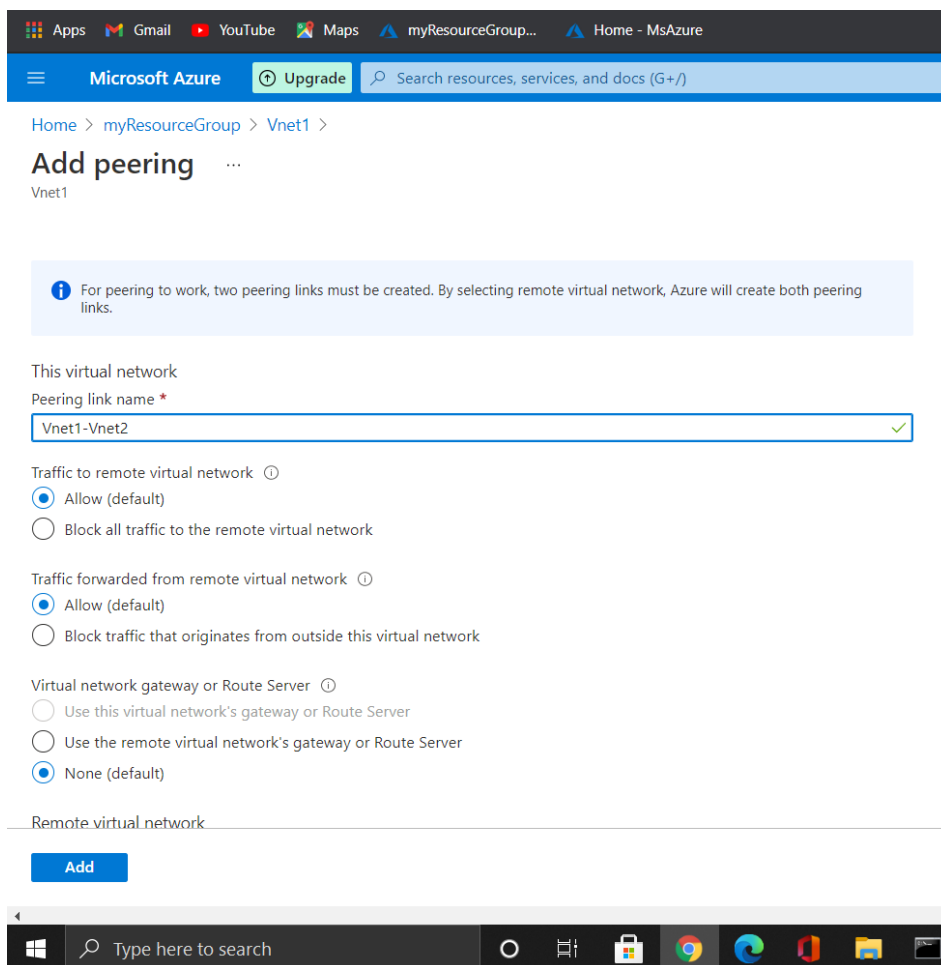




(VM2 created Successfully)

***Step 4 : Peering VNets.**

Going to - Vnet1 > Peering menu



[Home](#) > [myresourcegroup](#) > [vnet1](#) >

Add peering ...

Vnet1

This virtual network

Peering link name *

Vnet1-Vnet2 ✓

Traffic to remote virtual network ⓘ

- ☒ Allow (default)
- ☐ Block all traffic to the remote virtual network

Traffic forwarded from remote virtual network ⓘ

- ☒ Allow (default)
- ☐ Block traffic that originates from outside this virtual network

Virtual network gateway or Route Server ⓘ

- ☐ Use this virtual network's gateway or Route Server
- ☐ Use the remote virtual network's gateway or Route Server
- ☒ None (default)

Remote virtual network

Peering link name *

Vnet2-Vnet1 ✓

Virtual network deployment model ⓘ

Classic

Add

[Home](#) > [myResourceGroup](#) > [Vnet1](#) >

Add peering ...

Vnet1

- ☐ Classic
- ☐ I know my resource ID ⓘ

Subscription * ⓘ

Free Trial ▼

Virtual network * ⓘ

Vnet2 ▼

Traffic to remote virtual network ⓘ

- ☒ Allow (default)
- ☐ Block all traffic to the remote virtual network

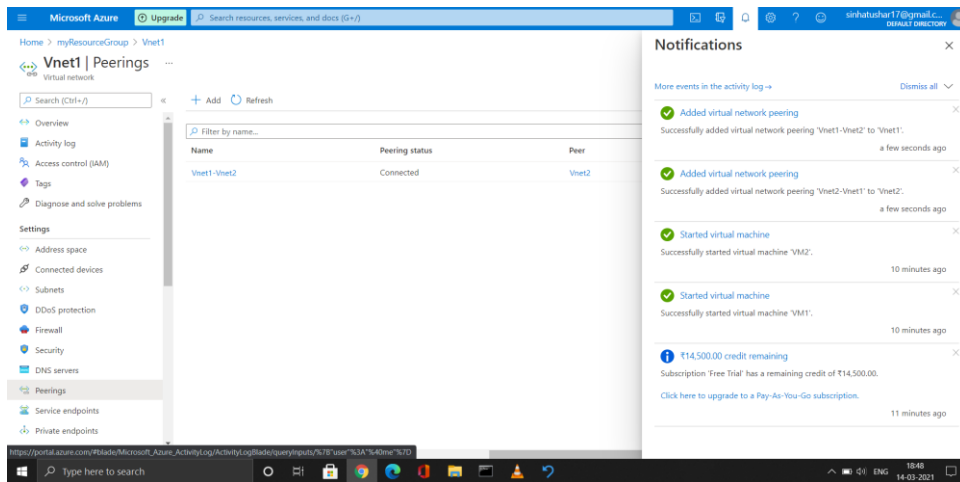
Traffic forwarded from remote virtual network ⓘ

- ☒ Allow (default)
- ☐ Block traffic that originates from outside this virtual network

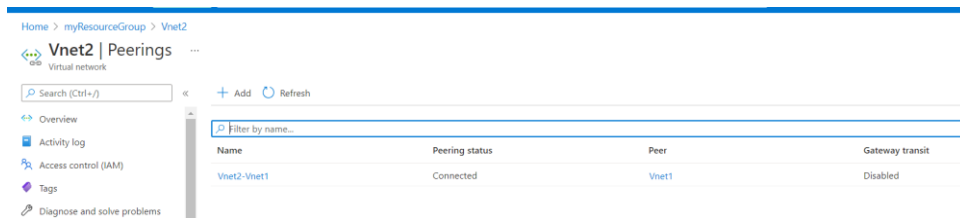
Virtual network gateway or Route Server ⓘ

- ☐ Use this virtual network's gateway or Route Server
- ☐ Use the remote virtual network's gateway or Route Server
- ☒ None (default)

Add



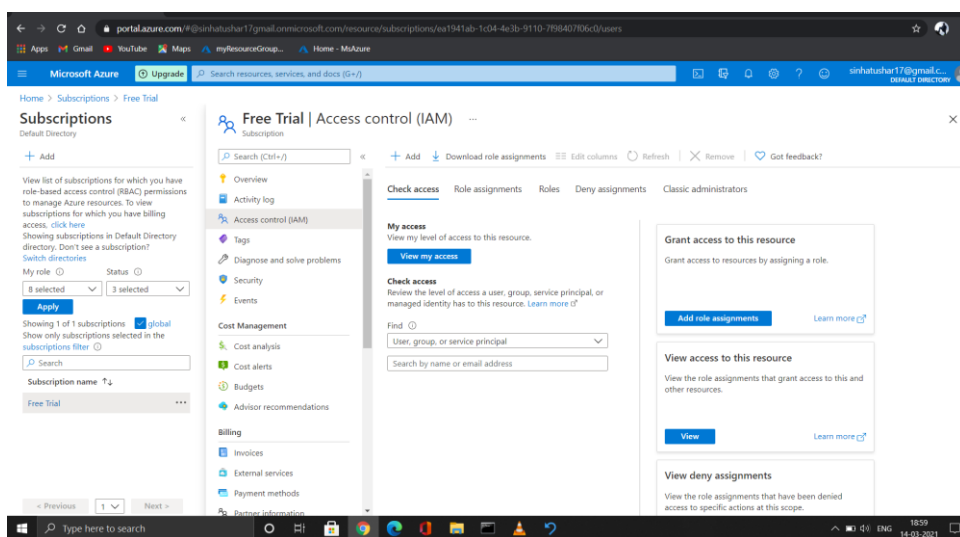
Vnet1 and Vnet2 are Peered successfully.



(Peering status from vnet2's side).

*Step 5 : Providing a User Access to the VMs.

Going to - Subscriptions > Access Control(IAM) and then clicking on the Add Role Assignments Option.



Entering the Email ID of the person whom I have to grant Access

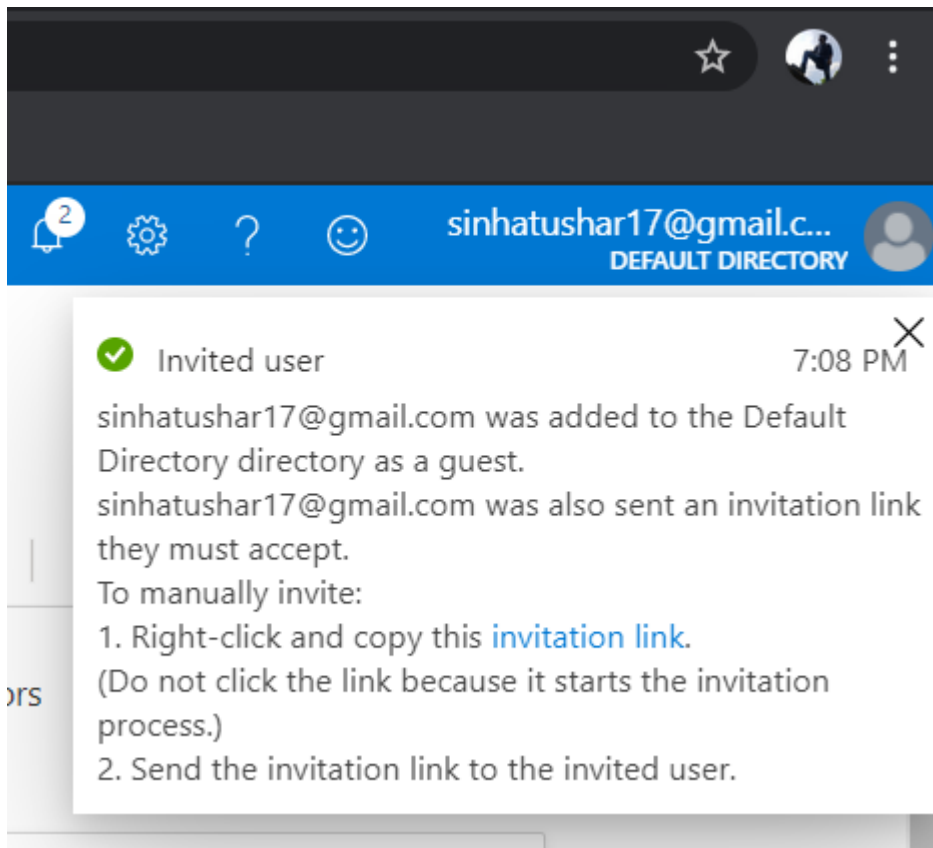
The image displays two side-by-side screenshots of the 'Add role assignment' dialog box in a Microsoft 365 environment. Both screenshots show the same user, 'sinhatushar17@gmail.com', and the same 'Selected members' list containing 'sinhatushar17@gmail.com (Guest)' with a 'Remove' link.

Left Screenshot (Owner Role):

- Role:** Owner
- Assign access to:** User, group, or service principal
- Select:** sinhatushar17@gmail.com
- Message:** No users, groups, or service principals found.
- Selected members:** sinhatushar17@gmail.com (Guest) [Remove]
- Buttons:** Save, Discard

Right Screenshot (Contributor Role):

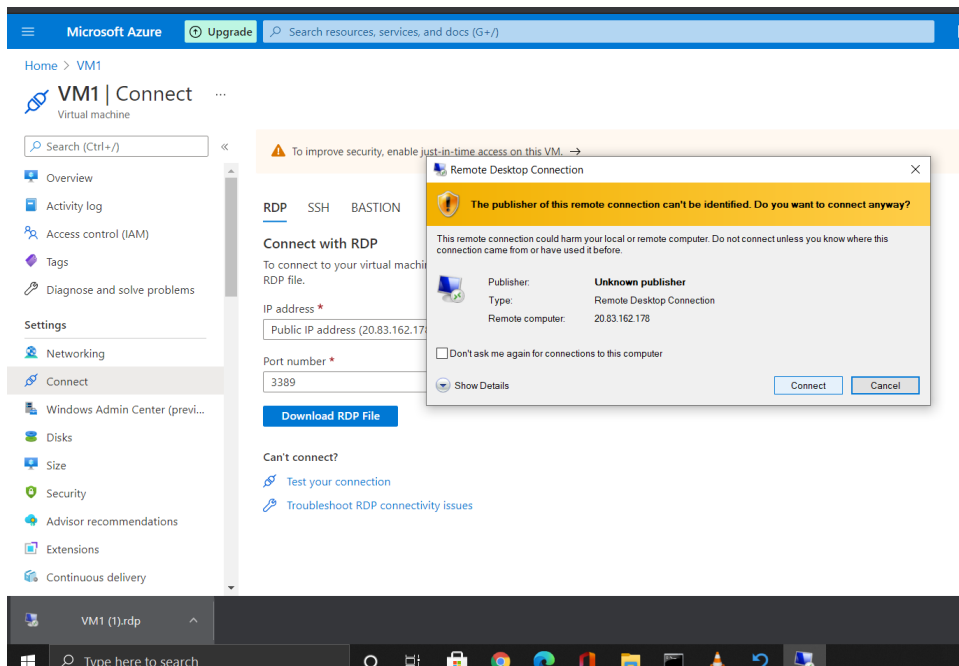
- Role:** Contributor
- Assign access to:** User, group, or service principal
- Select:** sinhatushar17@gmail.com
- Message:** No users, groups, or service principals found.
- Selected members:** sinhatushar17@gmail.com (Guest) [Remove]
- Buttons:** Save, Discard



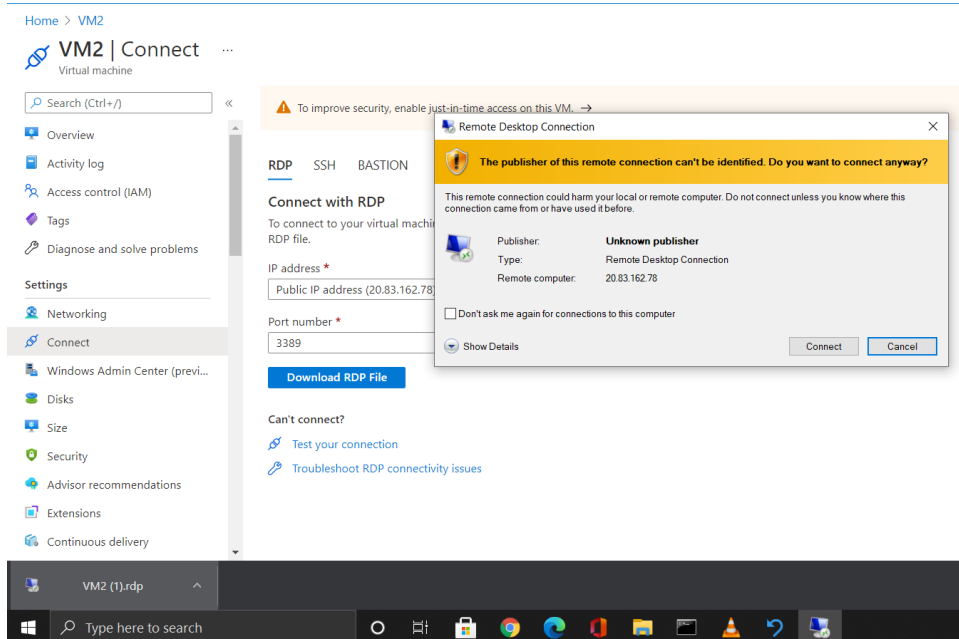
User Access has been Granted.

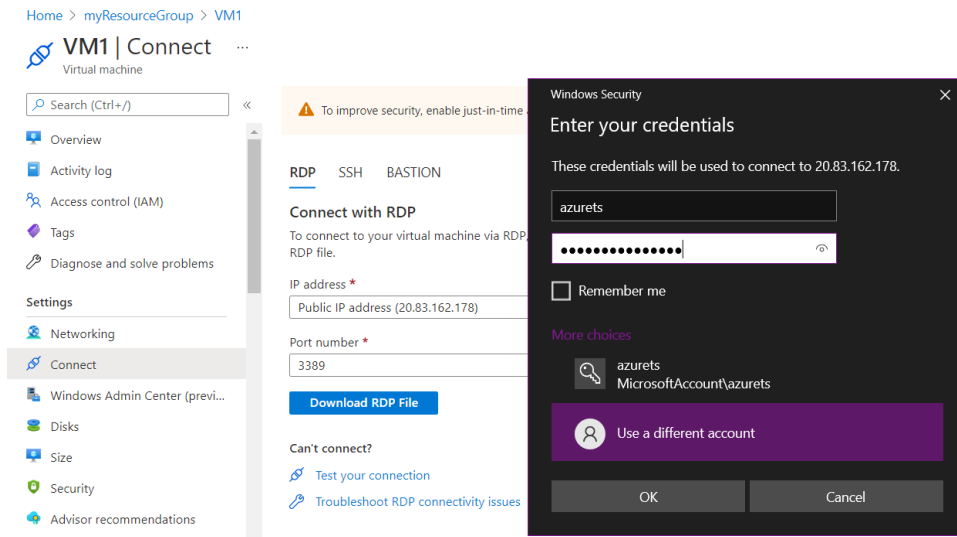
*Step 6 : Logging In to our VMs.

Going to our VM1 and Clicking on Connect option and selecting RDP, and then clicking on Download RDP File option. Then opening the downloaded RDP File.

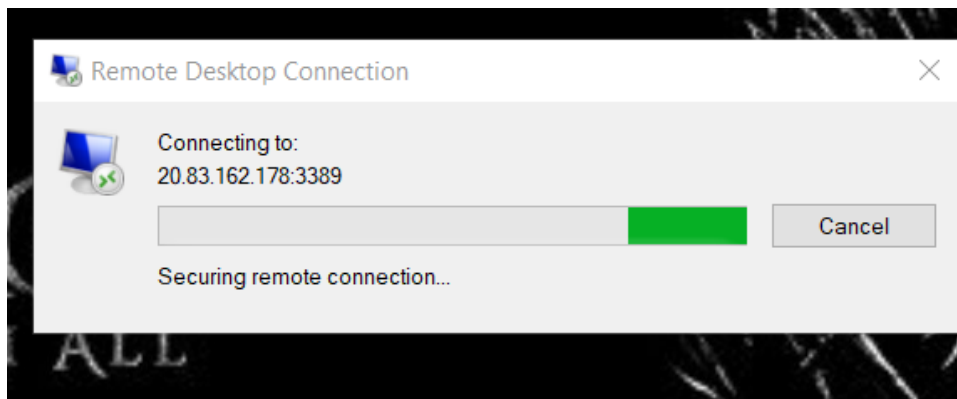


Proceeding Further...





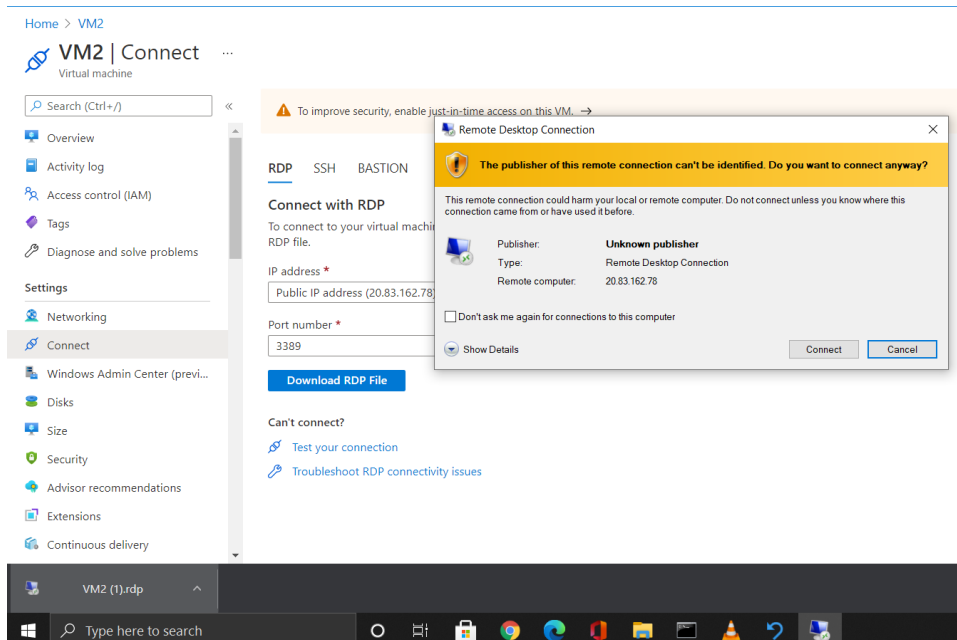
Using different account for Logging In and entering our user ID and Password that we created during making VM1.

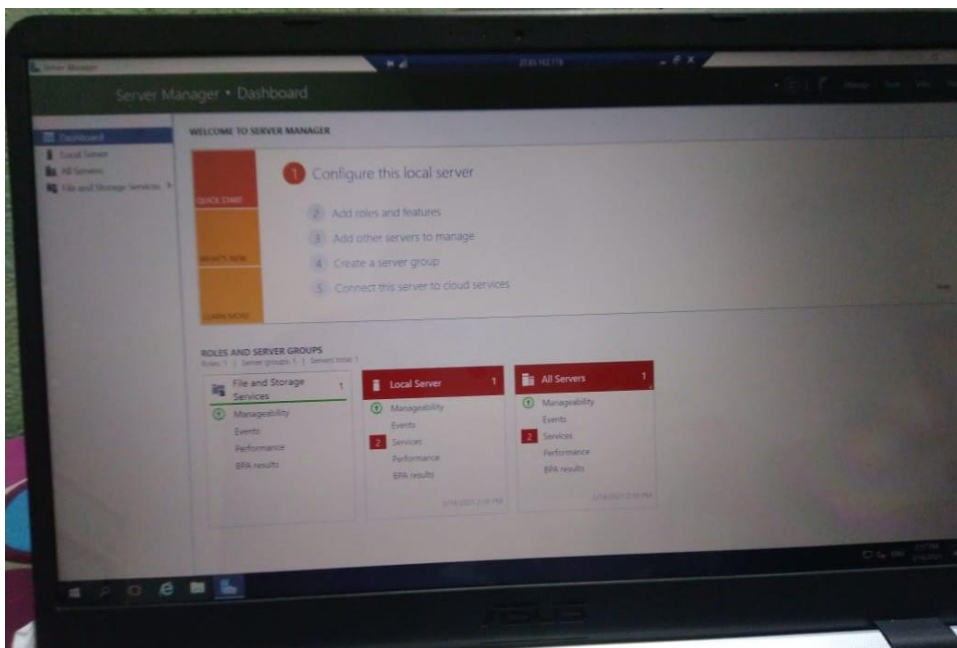
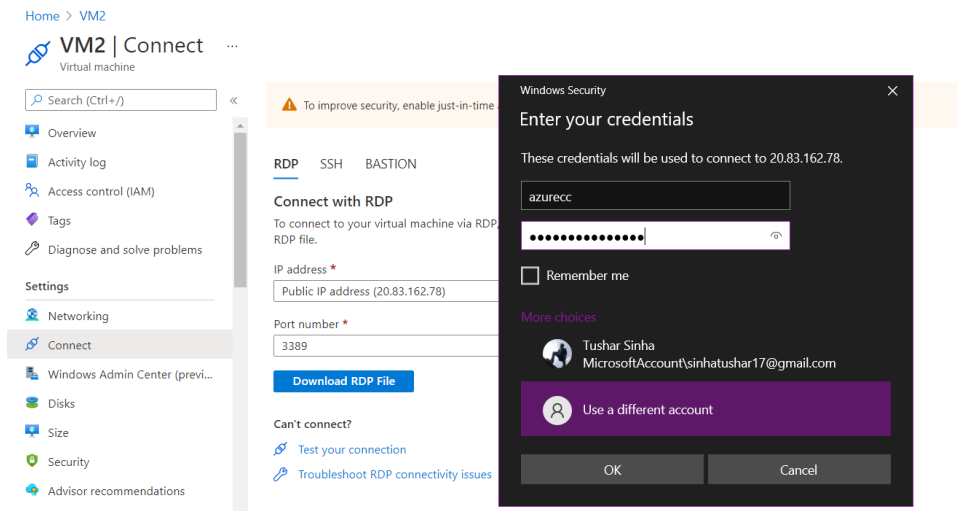


After this 'Connecting to' dialog box appears, our VM1 will Start. We get a User Interface like this :



Doing the same for VM2(for checking whether we are able to Login or Not).



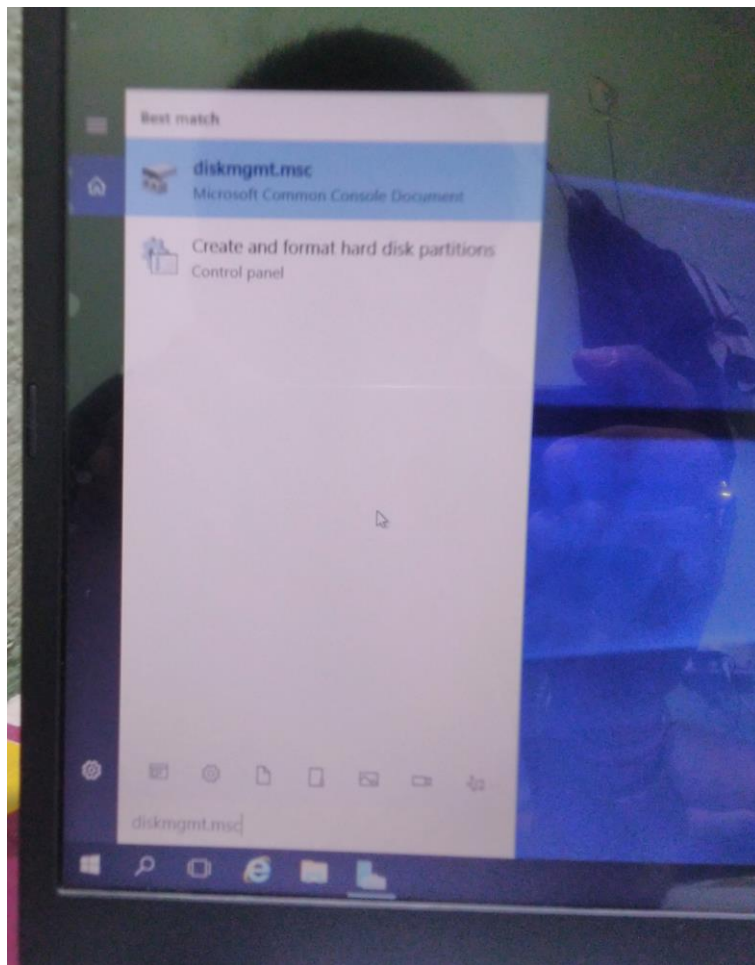


We are Successfully able to Login to both the VMs.

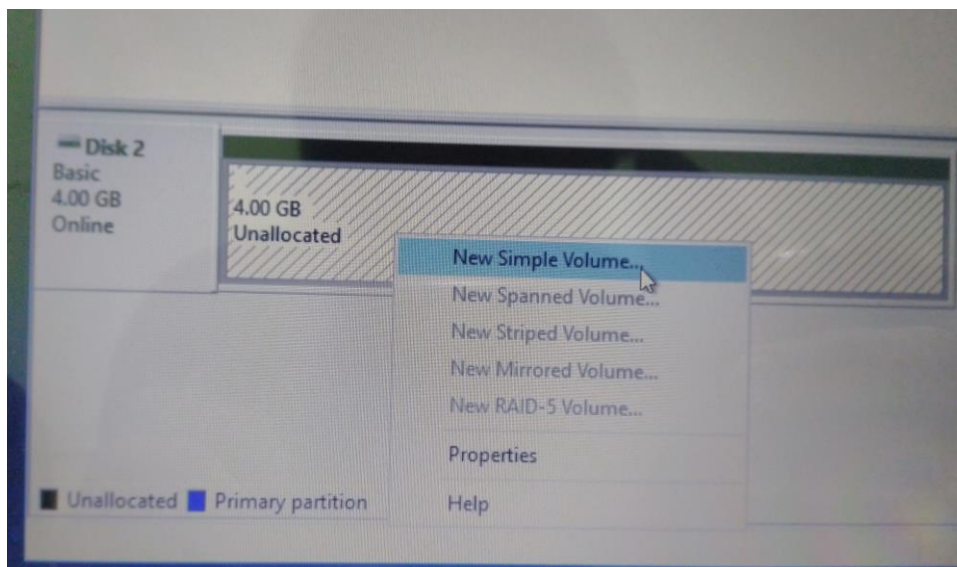
*Step 7 : Logging into VM and Initializing the Disk.

Connecting to VM1.

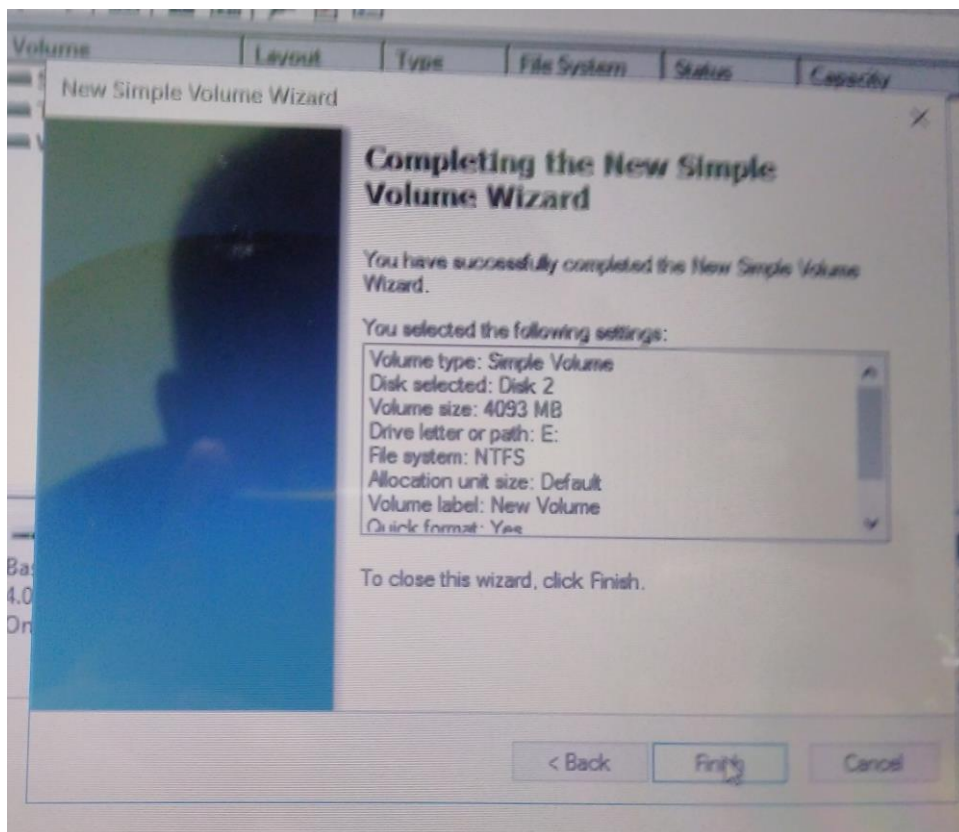
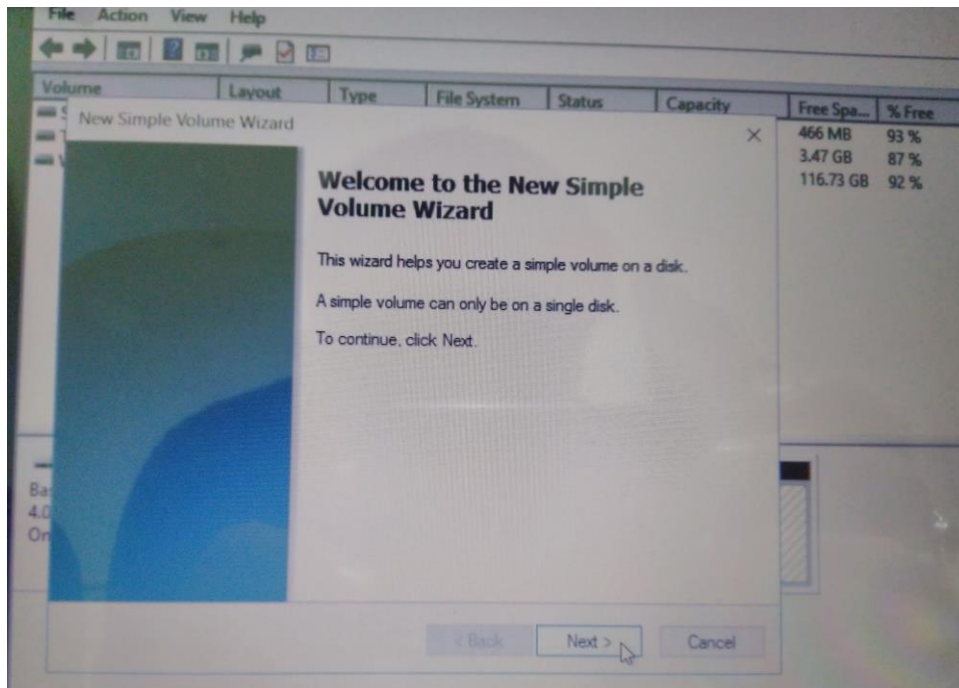
Searching for DISKMGMT.MSC in Search Box and entering into it.



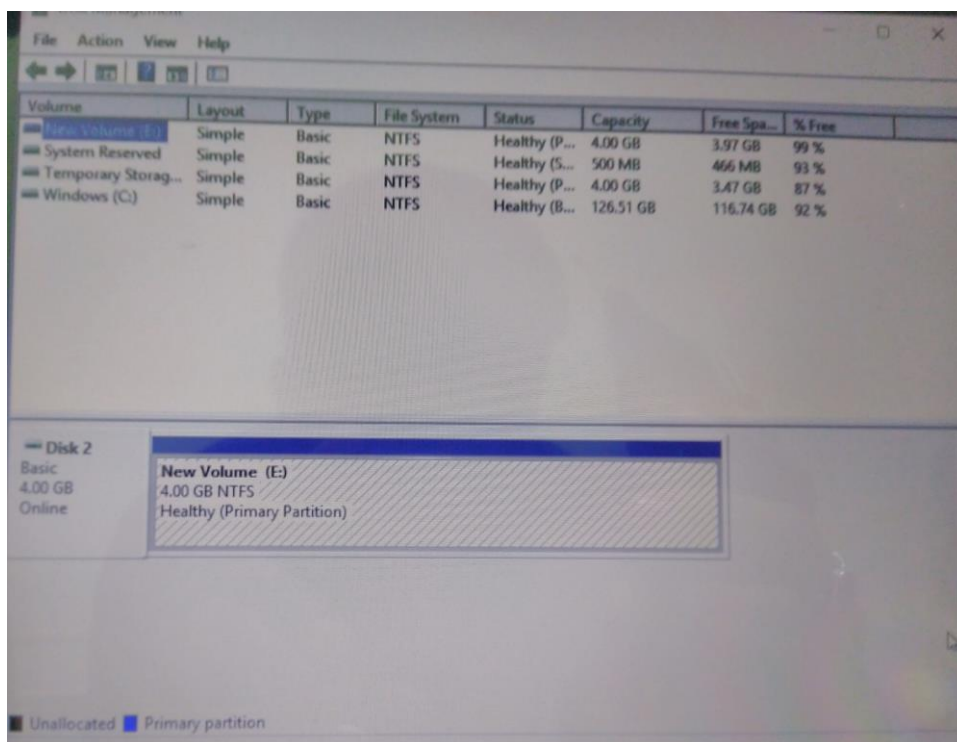
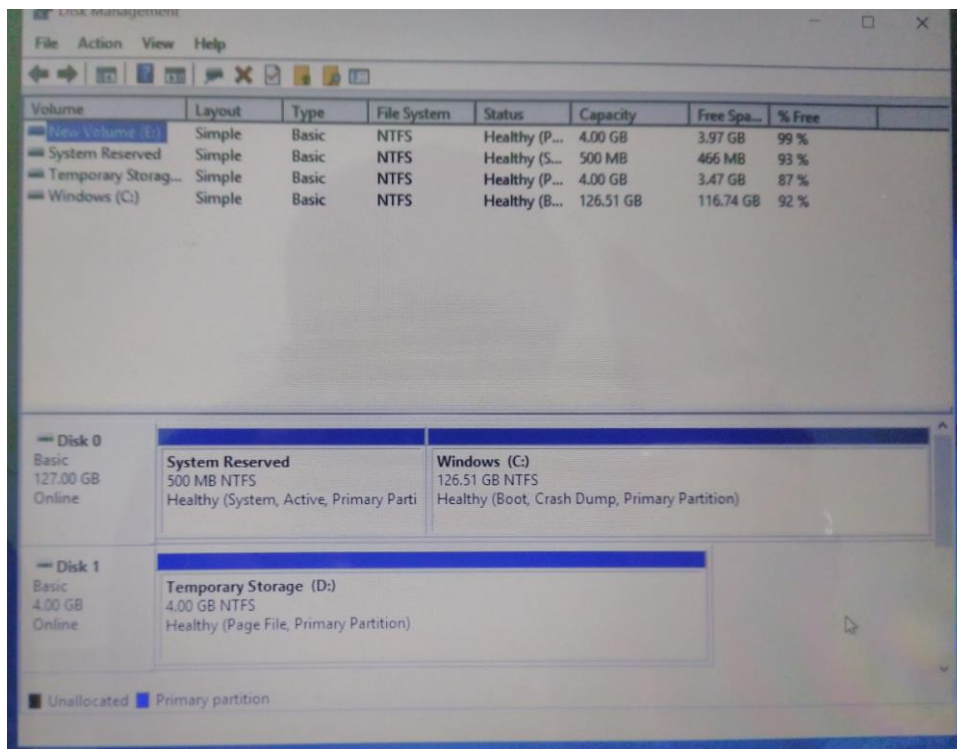
Selecting Disk2(Unallocated State) and Right Clicking on it and then clicking on New Simple Volume.



‘Initialise Disk’ Dialog Box appears, continuing with it and a ‘New Simple Volume Wizard’ appears and proceeding into it further... -

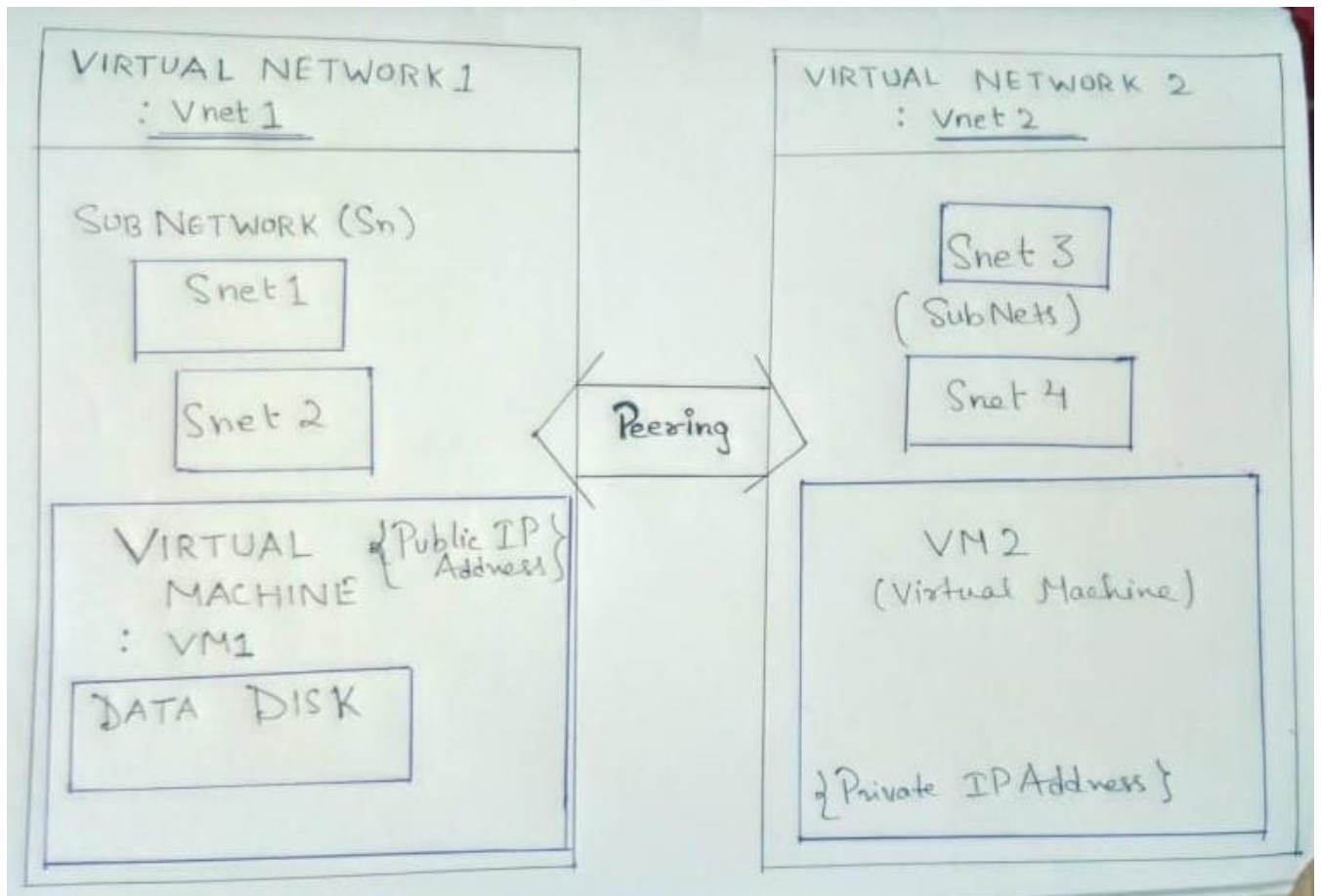


Now Disk2 has been Initialized and Allocated.



So, This was all which we had to do.

- **Final Architecture Diagram:**



(So this was the required presentation...)

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