

Introduction to Cloud Computing

LAB 02

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BS-SE 7B

Task 1: Create a Virtual Network

Sign in to the Azure portal at <https://portal.azure.com>

The screenshot shows the Microsoft Azure portal interface. At the top, there's a search bar labeled "Search resources, services, and docs (G+)" and a Copilot button. On the right, a user profile is shown with the email "bsse2280155@szabist.pk" and options to "Sign out", "My Microsoft account", and "Switch directory". Below the header, there's a section titled "Azure services" with icons for "Create a resource", "Resource groups", "Quickstart Center", "Azure AI Foundry", "Kubernetes services", "Virtual machines", "App Services", "Storage accounts", and "SQL databases". A "Resources" section follows, with "Recent" selected under "Recent" and "Favorite". It lists resources with their names, types, and last viewed times:

Name	Type	Last Viewed
myVM	Virtual machine	38 minutes ago
myVM-ip	Public IP address	3 hours ago
vnet-centralindia	Virtual network	3 hours ago
myVM-nsg	Network security group	3 hours ago
myvm701	Network Interface	3 hours ago

At the bottom, there's a "Navigate" section with links to "Subscriptions", "Resource groups", "All resources", and "Dashboard".

- From the All services blade, search for and select Virtual networks, and then click + Add, + Create, + New.

Virtual network

Microsoft | Azure Service

★ 4.6 (36 ratings)

Azure benefit eligible

Subscription: Azure for Students | Plan: Virtual network | Create

Overview Plans Usage Information + Support Ratings + Reviews

Create a logically isolated section in Microsoft Azure with this networking service. You can securely connect it to your on-premises datacenter or a single client machine using an IPsec connection. Virtual Networks make it easy for you to take advantage of the scalable, on-demand infrastructure of Azure while providing connectivity to data and applications on-premises, including systems running on Windows Server, mainframes, and UNIX.

Use Virtual Network to:

- Extend your datacenter
- Build distributed applications
- Remotely debug your applications

More products from Microsoft [See All](#)

Give feedback

vnet1-1761848764979 | Overview

Deployment

Search | Delete | Cancel | Redeploy | Download | Refresh

Overview

Your deployment is complete

Deployment name : vnet1-1761848764979
Subscription : Azure for Students
Resource group : rg1

Start time : 10/30/2025, 11:26:12 PM
Correlation ID : d60ec258-b222-4f41-8fdb-0b10ea221e54

Deployment details

Resource	Type	Status	Operation details
vnet1	Virtual network	OK	Operation details

Next steps

[Go to resource](#)

Give feedback

Tell us about your experience with deployment

Add or remove favorites by pressing [Ctrl+Shift+F](#)

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Task 2: Create Two Virtual Machines

1. From the All services blade, search for Virtual machines and then click + Add, + Create, + New, from the dropdown select Virtual Machine.

2. Basics tab:

Basics	
Subscription	Azure for Students
Resource group	rg1
Virtual machine name	vm1
Region	Central India
Availability options	No infrastructure redundancy required
Zone options	Self-selected zone
Security type	Trusted launch virtual machines
Enable secure boot	Yes
Enable vTPM	Yes
Integrity monitoring	No
Image	Windows Server 2025 Datacenter - Gen2
VM architecture	x64
Size	Standard D2s v3 (2 vcpus, 8 GiB memory)
Enable Hibernation	No
Username	yahya
Public inbound ports	RDP
Already have a Windows license?	No

3. Select the Networking tab. Make sure the virtual machine is placed in the vnet1 virtual network. Review the default settings, but do not make any other changes.

VM1:

The screenshot shows the 'Create a virtual machine' wizard in the Microsoft Azure portal. The 'Networking' tab is selected. The configuration includes:

- Virtual network:** vnet1 (rg1)
- Subnet:** (New) snet-centralindia-1 (10.0.1.0 - 10.0.1.255 (256 addresses))
- Public IP:** (new) vm1-ip
- NIC network security group:** Basic (selected)
- Public inbound ports:** Allow selected ports (selected)

At the bottom, there are buttons for < Previous, Next : Management >, and Review + create.

VM2:

The screenshot shows the 'Deployment' overview page for VM2. The deployment is complete, with the following details:

- Deployment name:** CreateVm-MicrosoftWindowsServer.WindowsServer-202-20251030234420
- Subscription:** Azure for Students
- Resource group:** rg1
- Start time:** 10/31/2025, 12:03:47 AM
- Correlation ID:** 0df48a70-1106-4df4-818b-9d4fac133270

The 'Deployment details' section lists the resources created:

Resource	Type	Status	Operation details
vm2	Virtual machine	OK	Operation details
vm2590	Microsoft.Network/networkInterface	OK	Operation details
network-interface-associated-virtual-network	Deployment	OK	Operation details
vm2-ip	Public IP address	OK	Operation details
vm2-nsg	Network security group	OK	Operation details

The 'Next steps' section provides recommendations:

- [Set up auto-shutdown](#) Recommended
- [Monitor VM health, performance, and network dependencies](#) Recommended
- [Run a script inside the virtual machine](#) Recommended

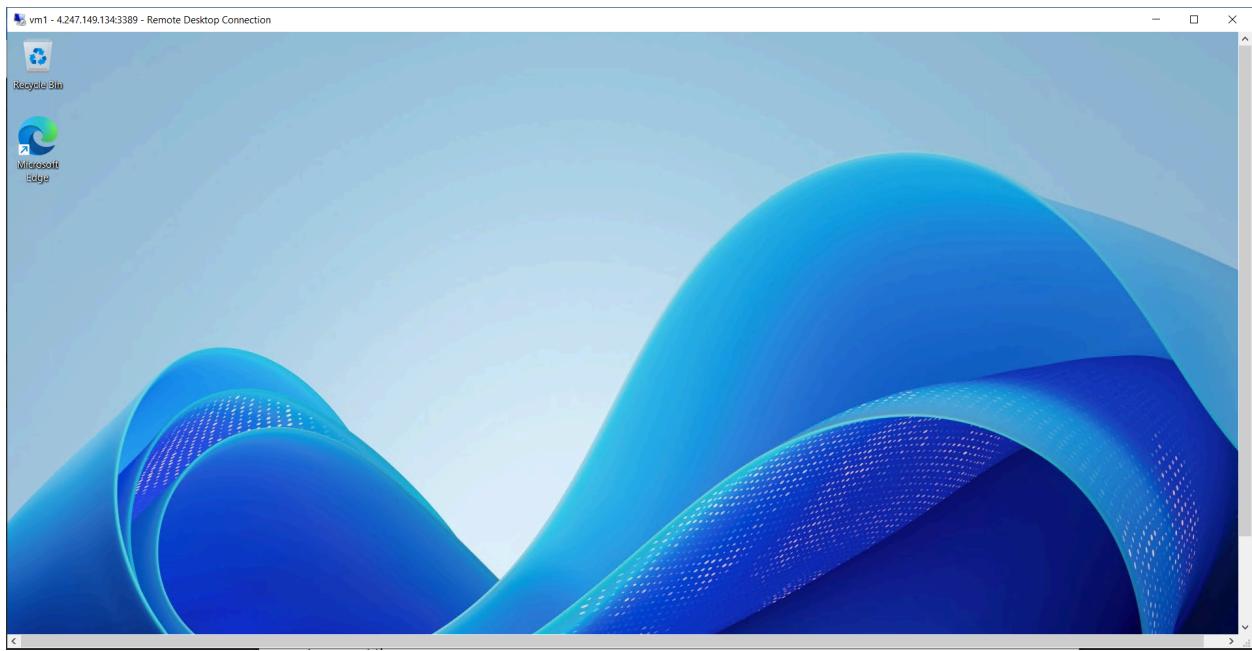
Task 3: Test the Connection

VM1:

- On the Connect with RDP blade, keep the default options to connect by IP address over port 3389 and click Download RDP File.
- Open the downloaded RDP file and click Connect when prompted.

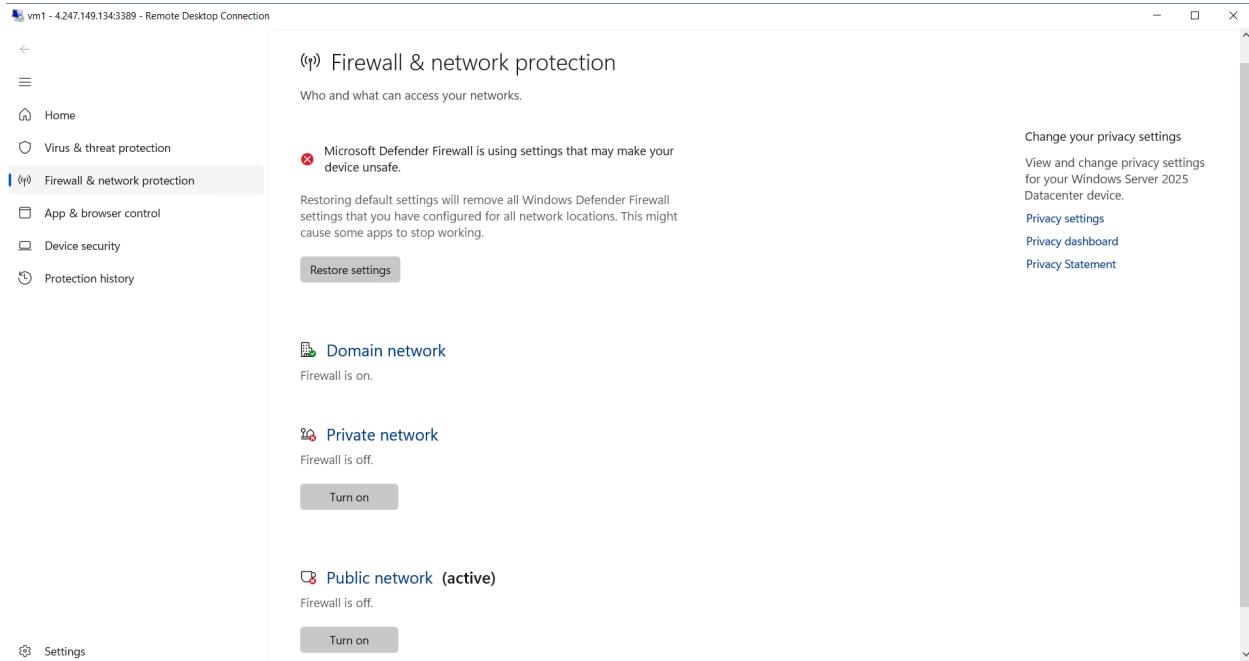
The screenshot shows the Azure portal interface for a virtual machine named 'vm1'. The left sidebar contains navigation links such as Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Resource visualizer, Connect, Connect (selected), Bastion, Windows Admin Center, Networking, Settings, Disks, Extensions + applications, Operating system, Configuration, and Advanced. The main content area is titled 'Native RDP' and displays connection details for the source machine and destination VM. It includes sections for Source machine (OS: Windows, IP: Local IP | 103.244.175.38), Destination VM (IP: Public IP | 4.247.149.134, Port: 3389), Connection prerequisites (Check inbound NSG rules), and a 'Check access' button. Below these are options for connecting using an RDP file (Download RDP file) or a username (yahya). A 'More ways to connect (4)' link is also present at the bottom.

- In the Windows Security window, type the username **yahya** and password **Pa\$\$w0rd1234** and then click OK.

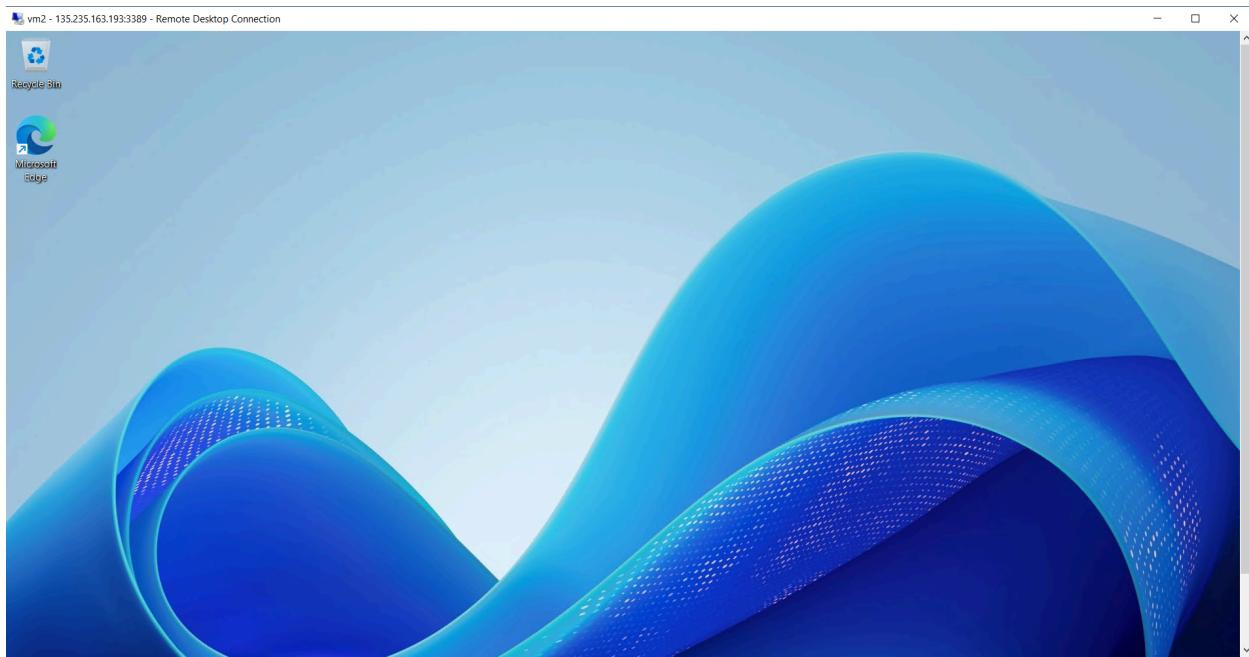


Connected.

- In both newly created virtual machines, connect via RDP and disable both the public and private firewall by opening the Start menu > Settings > Network and Internet > Locate Windows Firewall.



VM2:



vm2 - 135.235.163.193:3389 - Remote Desktop Connection

Windows Security

Firewall & network protection

Who and what can access your networks.

Microsoft Defender Firewall is using settings that may make your device unsafe.

Restoring default settings will remove all Windows Defender Firewall settings that you have configured for all network locations. This might cause some apps to stop working.

Restore settings

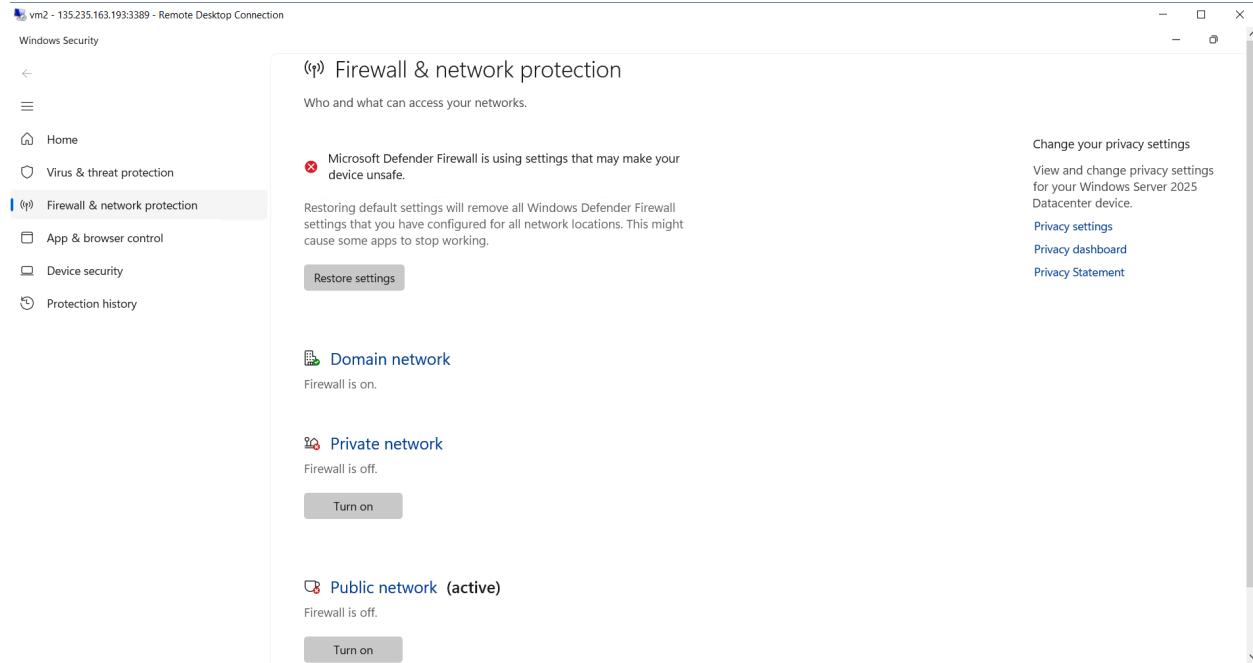
Change your privacy settings
View and change privacy settings for your Windows Server 2025 Datacenter device.
Privacy settings
Privacy dashboard
Privacy Statement

Home
Virus & threat protection
Firewall & network protection
App & browser control
Device security
Protection history

Domain network
Firewall is on.

Private network
Firewall is off.
Turn on

Public network (active)
Firewall is off.
Turn on



- Pinged VM2 from VM1:

vm1 - 4.247.149.134:3389 - Remote Desktop Connection

Administrator: Windows PowerShell

Windows PowerShell
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Install the latest PowerShell for new features and improvements! <https://aka.ms/PSWindows>

```
PS C:\Windows\system32> ping vm2

Pinging vm2.h5j2gtke1c2uvpl2pi2ctqk5c.rx.internal.cloudapp.net [10.0.2.4] with 32 bytes of data:
Reply from 10.0.2.4: bytes=32 time=1ms TTL=128
Reply from 10.0.2.4: bytes=32 time=1ms TTL=128
Reply from 10.0.2.4: bytes=32 time=1ms TTL=128
Reply from 10.0.2.4: bytes=32 time<1ms TTL=128

Ping statistics for 10.0.2.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
PS C:\Windows\system32> |
```

Microsoft Edge

Search

7:31 PM 10/30/2025

