

Introduction To Cloud Computing

LAB 06

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BS-SE 7B

This screenshot shows the 'Create a virtual machine' wizard in Microsoft Azure, specifically the 'Basics' tab. The top navigation bar includes 'Microsoft Azure', a search bar, and user information 'bsse2280149@szabist.pk'. Below the navigation is a breadcrumb trail 'Home > Compute infrastructure | Virtual machines > Create a virtual machine'. The main title 'Create a virtual machine' is followed by three help cards: 'Help me choose the right VM size for my workload', 'Help me create a VM optimized for high availability', and 'Help me create a low cost VM'. The 'Basics' tab is selected, showing options for 'Subscription', 'Disk', 'Networking', 'Management', 'Monitoring', 'Advanced', and 'Tags'. A note states: 'Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image. Complete the Basics tab then Review + create to provision a virtual machine with default parameters or review each tab for full customization.' A link 'Learn more' is provided. A warning message in a box says: 'This subscription may not be eligible to deploy VMs of certain sizes in certain regions.' At the bottom are buttons for '< Previous', 'Next : Disks >', and 'Review + create'.

This screenshot shows the 'Create a virtual machine' wizard in Microsoft Azure, specifically the 'Networking' tab. The top navigation bar and breadcrumb trail are identical to the previous screenshot. The main title 'Create a virtual machine' is followed by the same three help cards. The 'Networking' tab is selected, showing fields for 'Edit subnet' (set to '172.16.0.0 - 172.16.0.255 (256 addresses)'), 'Public IP' (set to 'None'), and 'NIC network security group' (radio buttons for 'None', 'Basic', and 'Advanced'). A warning message in a box says: 'All ports on this virtual machine may be exposed to the public internet. This is a security risk. Use a network security group to limit public access to specific ports. You can also select a subnet that already has network security groups defined or remove the public IP address.' At the bottom are buttons for '< Previous', 'Next : Management >', and 'Review + create'.

Microsoft Azure Search resources, services, and docs (G+/-) Copilot Home > Compute infrastructure | Virtual machines > Create a virtual machine Help me choose the right VM size for my workload Help me create a VM optimized for high availability Help me create a low cost VM

Help me create a low cost VM Help me create a VM optimized for high availability Help me choose the right VM size for my workload

Basics Disks Networking Management **Monitoring** Advanced Tags Review + create

Configure monitoring options for your VM.

Alerts

Enable recommended alert rules

Diagnostics

Boot diagnostics Enable with managed storage account (recommended) Enable with custom storage account Disable

Enable OS guest diagnostics

< Previous Next : Advanced > **Review + create** Give feedback

Microsoft Azure Search resources, services, and docs (G+/-) Copilot Home > Compute infrastructure | Virtual machines > Create a virtual machine Help me choose the right VM size for my workload Help me create a VM optimized for high availability Help me create a low cost VM

Validation passed

Help me create a low cost VM Help me create a VM optimized for high availability Help me choose the right VM size for my workload

Basics Disks Networking Management Monitoring Advanced Tags **Review + create**

Price

1 X Standard D2s v3 by Microsoft Subscription credits apply **0.1970 USD/hr** Pricing for other VM sizes

TERMS

By clicking "Create", I agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed

< Previous Next > **Create** Download a template for automation Give feedback

Microsoft Azure Search resources, services, and docs (G+/-) Copilot Home > CreateVm-MicrosoftWindowsServer.WindowsServer-201-20251107211647 | Overview Copilot

Deployment

Search Delete Cancel Redeploy Download Refresh

Overview

Your deployment is complete

Deployment name : CreateVm-MicrosoftWindows... Start time : 11/7/2025, 9:20:08 PM
Subscription : Azure for Students Correlation ID : 6ce0f108-8ee8-4ba4-991f-5b...
Resource group : mn-rg

Deployment details

Next steps

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

Go to resource Create another VM

Give feedback Add or remove favorites by pressing Ctrl+Shift+F

Microsoft Azure Search resources, services, and docs (G/+) Copilot Home > CreateVm-MicrosoftWindowsServer.WindowsServer-201-20251107211647 | Overview > SimpleWinVM

SimpleWinVM | Network settings

Virtual machine

Search Access control (IAM) Tags Diagnose and solve problems Resource visualizer Connect Networking Network settings Load balancing Application security groups Network manager Settings

List all my network interfaces for SimpleWinVM. What are the requirements for attaching or detaching a network interface?

Attach network interface Detach network interface View topology Troubleshoot Refresh Give feedback

Network interface / IP configuration simplewinvm77_z2 (primary) / ipconfig1 (primary)

Essentials

Network interface	simplewinvm77_z2	Load balancers	0 (Configure)
Virtual network / subnet	vnet-centralindia / snet-centralindia-1	Application security groups	0 (Configure)
Public IP address	98.70.33.50	Network security group	-
Private IP address	172.16.0.4	Accelerated networking	Enabled

Add or remove favorites by pressing Ctrl+Shift+F

Microsoft Azure Search resources, services, and docs (G/+) Copilot Home > Network foundation

Network foundation | Network security groups

Preview

Search Overview Virtual network Virtual Network overview Virtual networks NAT gateways Public IP addresses Network interfaces Network security groups Application security groups Bastions

Create Manage view Refresh Export to CSV Open query Assign tags Group by none

You are viewing a new version of Browse experience. Click here to access the old experience.

Filter for any field... Subscription equals all Resource Group equals all Location equals all Add filter

No network security groups to display

Create a network security group with rules to filter inbound traffic to, and outbound traffic from, virtual machines and subnets.

Create

Add or remove favorites by pressing Ctrl+Shift+F

Microsoft Azure Search resources, services, and docs (G/+) Copilot Home > Network foundation | Network security groups >

Create network security group

Basics Tags Review + create

Project details

Subscription * Azure for Students

Resource group * (New) Lab06-RG Create new

Instance details

Name * myNSGSecure

Region * Central India

Review + create < Previous Next : Tags > Download a template for automation

Microsoft Azure Search resources, services, and docs (G+/) Copilot

All services > Network foundation | Network security groups >

Create network security group

X

Validation passed

Basics Tags Review + create

Basics

Subscription: Azure for Students
Resource group: (new) Lab06-RG
Region: Central India
Name: myNSGSecure

Tags

None

Create

< Previous

Next >

Download a template for automation

Microsoft Azure Search resources, services, and docs (G+/) Copilot

All services >

CreateNetworkSecurityGroupBladeV2-20251107212525 | Overview

X

Deployment

Search

Delete Cancel Redeploy Download Refresh

Overview

Inputs Outputs Template

✓ Your deployment is complete

Deployment name: CreateNetworkSecurityGroupBladeV2-20251107212525 Start time: 11/7/2025, 9:28:30 PM
Subscription: Azure for Students Correlation ID: b2cfda65-68be-4e58-b044-072...

Resource group: Lab06-RG

Deployment details

Next steps

Go to resource

Give feedback

Tell us about your experience with deployment



Cost management

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[Set up cost alerts >](#)



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Microsoft Azure Search resources, services, and docs (G+/) Copilot

All services > CreateNetworkSecurityGroupBladeV2-20251107212525 | Overview > myNSGSecure

myNSGSecure | Network interfaces

X

Network security group

Search Tags Diagnose and solve problems Resource visualizer Settings Inbound security rules Outbound security rules Network interfaces Subnets Properties Locks Monitoring Automation

Associate Refresh Dissociate

Search network interfaces

Name ↑ Public IP address ↑

No results.

Associate network interface

myNSGSecure

Network interface associations *

simplewinvm77_z2

OK

The screenshot shows the Microsoft Azure portal interface for managing a Network Security Group (NSG). The top navigation bar includes the Microsoft Azure logo, a search bar, and various icons for Copilot, settings, and user profile. The main title is "myNSGSecure | Network interfaces". The left sidebar menu is expanded to show "Network interfaces" under "Settings". Other options in the sidebar include "Diagnose and solve problems", "Resource visualizer", "Inbound security rules", "Outbound security rules", "Subnets", "Properties", "Locks", "Monitoring", and "Automation". A "Copilot" button is located at the bottom of the sidebar. The main content area displays a table titled "Search network interfaces" with columns: Name, Public IP address, Private IP address, and Virtual machine. One row is listed: "simplewinvm77_z2" with Public IP 98.70.33.50, Private IP 172.16.0.4, and Virtual machine SimpleWinVM.

Task 3: Configure Inbound Security Rule (Allow RDP)

The screenshot shows the Microsoft Azure portal interface for a virtual machine named "SimpleWinVM". The top navigation bar includes the Microsoft Azure logo, a search bar, and various icons for Copilot, settings, and user profile. The main title is "SimpleWinVM". The left sidebar menu is expanded to show "Overview" under "Networking". Other options in the sidebar include "Activity log", "Access control (IAM)", "Tags", "Diagnose and solve problems", "Resource visualizer", "Connect", "Networking", "Network settings", "Load balancing", and "Application security groups". A "Copilot" button is located at the bottom of the sidebar. The main content area displays the "Overview" tab for the virtual machine. It shows the following details:

Essentials	Value
Resource group	MN-RG
Status	Running
Location	Central India (Zone 2)
Subscription	Azure for Students
Subscription ID	504ba03b-5612-41db-b87d-61c0d67009e3
Availability zone	2
Operating system	Windows (Windows Server 2019 Datacenter)
Size	Standard D2s v3 (2 vcpus, 8 GiB memory)
Primary NIC public IP	98.70.33.50
Associated public IPs	1 associated public IPs
Virtual network/subnet	vnet-centralindia/snet-centralindia-1
DNS name	Not configured
Health state	-

Microsoft Azure Search resources, services, and docs (G+/-) Copilot bse2280149@szabist.pk DEFAULT DIRECTORY (BSE22801..)

All services > Resource Manager | All resources > SimpleWinVM

SimpleWinVM | Connect

Virtual machine

Search Overview Activity log Access control (IAM) Tags Diagnose and solve problems Resource visualizer Connect Connect Bastion Windows Admin Center Networking

Source IP Address: 98.70.33.50 Port: 3389

Destination VM
VM IP address: Public IP | 98.70.33.50
VM port: 3389

Connection prerequisites
VM access: Check inbound NSG rules

Check access

Connect using RDP file
Download and open file to connect Download RDP file

OK Help

Remote Desktop Connection
Remote Desktop can't connect to the remote computer for one of these reasons:
1) Remote access to the server is not enabled
2) The remote computer is turned off
3) The remote computer is not available on the network
Make sure the remote computer is turned on and connected to the network, and that remote access is enabled.

Microsoft Azure Search resources, services, and docs (G+/-) Copilot bse2280149@szabist.pk DEFAULT DIRECTORY (BSE22801..)

All services > Resource Manager | All resources > SimpleWinVM

SimpleWinVM | Network settings

Virtual machine

Search network Connect Networking Network settings Load balancing Network manager

Network security group myNSGSecure (attached to networkInterface: simplewinvm77_z2)
Impacts 0 subnets, 1 network interfaces

+ Create port rule

Prio...	Name	Port	Protocol	Source	Destination	Action
65000	AllowVnetInBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	AllowAzureLoadBalancerInB...	Any	Any	AzureLoadBalancer	Any	Allow
65500	DenyAllInBound	Any	Any	Any	Any	Deny

Inbound port rules (3)

Outbound port rules (3)

Microsoft Azure Search resources, services, and docs (G+/-) Copilot bse2280149@szabist.pk DEFAULT DIRECTORY (BSE22801..)

All services > Resource Manager | All resources > SimpleWinVM

SimpleWinVM | Network settings

Virtual machine

Search network Connect Networking Network settings Load balancing Network manager

Network security group myNSGSecure (attached to networkInterface: simplewinvm77_z2)
Impacts 0 subnets, 1 network interfaces

Add inbound security rule

myNSGSecure

Source: Any

Source port ranges: *

Destination: Any

Service: Custom

Destination port ranges: * 3389

Protocol: TCP

Add Cancel Give feedback

Microsoft Azure Search resources, services, and docs (G+/) Copilot bsse2280149@szabist.pk DEFAULT DIRECTORY (BSSE22801...)

All services > Resource Manager | All resources > SimpleWinVM

SimpleWinVM | Network settings

Virtual machine

network

Connect Networking Network settings Load balancing Network manager

Search rules Source == all Destination == all Protocol == all Action == all Port == all

Prio... ↑ Name Port Protocol Source Destination Action

Inbound port rules (4)

	Name	Port	Protocol	Source	Destination	Action
300	AllowRDP	3389	TCP	Any	Any	Allow
65000	AllowVnetInBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	AllowAzureLoadBalancerInB...	Any	Any	AzureLoadBalancer	Any	Allow
65500	DenyAllInBound	Any	Any	Any	Any	Deny

Outbound port rules (3)

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Microsoft Azure Search resources, services, and docs (G+/) Copilot bsse2280149@szabist.pk DEFAULT DIRECTORY (BSSE22801...)

All services > SimpleWinVM

SimpleWinVM | Connect

Virtual machine

Search Overview Activity log Access control (IAM) Tags Diagnose and solve problems Resource visualizer Connect Connect Bastion Windows Admin Center Networking

Windows Security Enter your credentials

These credentials will be used to connect to 98.70.33.50.

azureuser

Remember me

More choices OK Cancel

Connect using RDP file Download and open file to connect Download RDP file

Username azureuser Forgot password? Reset password

Microsoft Azure Search resources, services, and docs (G+/) Copilot bsse2280149@szabist.pk DEFAULT DIRECTORY (BSSE22801...)

All services > SimpleWinVM

SimpleWinVM | Connect

Virtual machine

Search Overview Activity log Access control (IAM) Tags Diagnose and solve problems Resource visualizer Connect Connect Bastion Windows Admin Center Networking

Native RDP

Source machine Source machine OS Source IP address

Destination VM VM IP address VM port

Connection prerequisites VM access

Check access

Remote Desktop Connection

The identity of the remote computer cannot be verified. Do you want to connect anyway?

The remote computer could not be authenticated due to problems with its security certificate. It may be unsafe to proceed.

Certificate name Name in the certificate from the remote computer: SimpleWinVM

Certificate errors The following errors were encountered while validating the remote computer's certificate:

The certificate is not from a trusted certifying authority.

Do you want to connect despite these certificate errors?

Don't ask me again for connections to this computer

View certificate... Yes No

Connect using RDP file Download and open file to connect Download RDP file

Username azureuser Forgot password? Reset password



