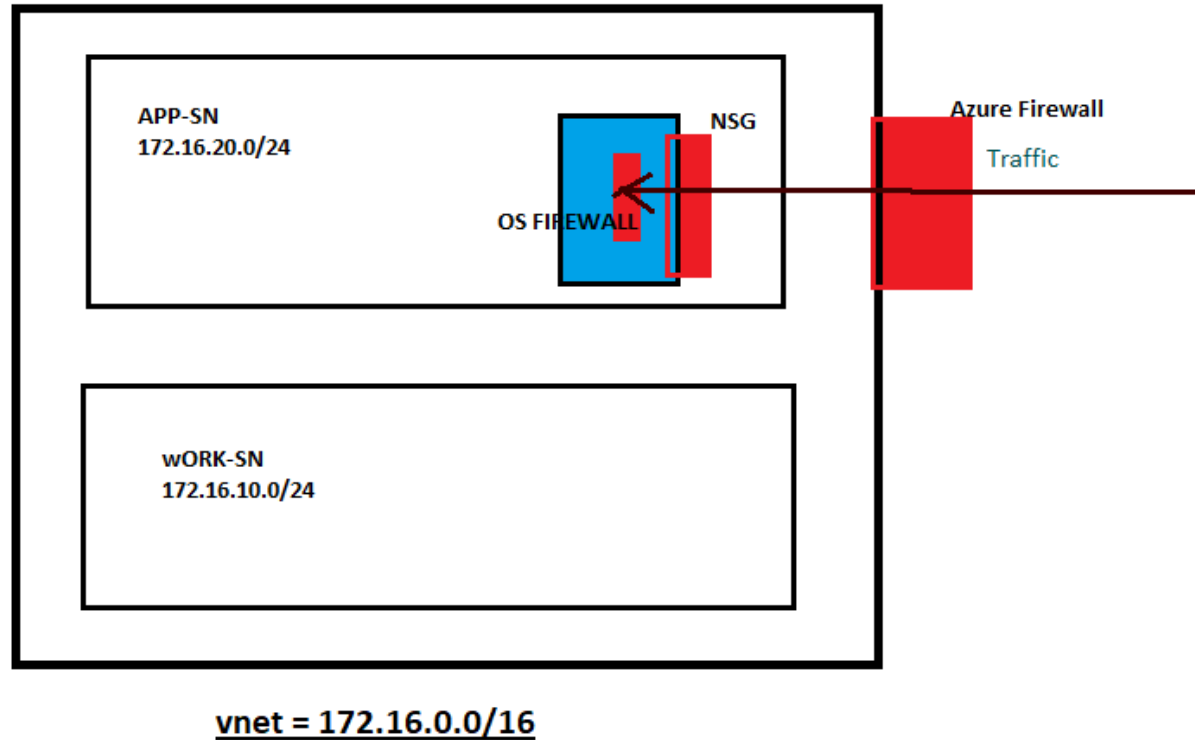


## NSG (Network Security Group)



A network security group contains security rules that allow or deny inbound network traffic to, or outbound network traffic from, several types of Azure resources. For each rule, you can specify source and destination, port, and protocol.

## How to Create a NSG and Create Rules for it in Azure

- ✓ **STEP 1:** Create Resource Group
- ✓ **STEP2:** Create Vnet and Subnets
- ✓ **STEP3:** Create NSG
- ✓ **STEP4:** Create Virtual Machine

✓ **STEP5:** Import Security Rules

**STEP 1: Create Resource Group**

Home > Resource groups >

## Create a resource group ...

Basics Tags Review + create

Resource group - A container that holds related resources for an Azure solution. The resource group can include all the resources for the solution, or only those resources that you want to manage as a group. You decide how you want to allocate resources to resource groups based on what makes the most sense for your organization. [Learn more](#)

**Project details**

Subscription \* ⓘ Azure subscription 1 ▼

Resource group \* ⓘ NSG\_Class ✓

**Resource details**

Region \* ⓘ (US) East US ▼

Review + create < Previous Next : Tags >

## **STEP2: Create Vnet and Subnets**

Home > Virtual networks >

### Create virtual network

Basics Security IP addresses Tags Review + create

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription \* Azure subscription 1

Resource group \* NSG\_Class

[Create new](#)

#### Instance details

Virtual network name \* Vnet

Region \* (US) East US

[Previous](#) [Next](#) [Review + create](#)

Home > Virtual networks >

### Create virtual network

Basics Security IP addresses Tags Review + create

172.16.0.0/16

172.16.0.0 /16

172.16.0.0 - 172.16.255.255 65,536 addresses

+ Add a subnet

Subnets	IP address range	Size
default	172.16.20.0 - 172.16.20.255	/24 (256 addresses)

[A NAT gateway is recommended for outbound internet access from subnets. Edit the](#)

[Previous](#) [Next](#) [Review + create](#)

<https://portal.azure.com/#>

#### Edit subnet

Select an address space and configure your subnet. You can customize a default subnet or select from subnet templates if you plan to add select services later. [Learn more](#)

Subnet purpose Default

Name \* App-SN

**IPv4**

Include an IPv4 address space ☒

IPv4 address range \* 172.16.0.0/16

172.16.0.0 - 172.16.255.255

Starting address \* 172.16.20.0

Size /24 (256 addresses)

Subnet address range 172.16.20.0 - 172.16.20.255

**IPv6**

Include an IPv6 address space ☐ This virtual network has no IPv6 address ranges.

[Save](#) [Cancel](#)

Home > Virtual networks >

## Create virtual network ...

Basics Security IP addresses Tags Review + create

172.16.0.0/16 [Delete address space](#)

172.16.0.0 - 172.16.255.255 65,536 addresses

[+ Add a subnet](#)

Subnets	IP address range	Size	NAT gateway
<a href="#">App-SN</a>	172.16.20.0 - 172.16.20.255	/24 (256 addresses)	-
<a href="#">Work-SN</a>	172.16.10.0 - 172.16.10.255	/24 (256 addresses)	-

[Previous](#) [Next](#) [Review + create](#)

### **STEP3: Create NSG(Network Security Group)**

Home > Network security groups >

## Create network security group ...

Basics Tags Review + create

Project details

Subscription \*

Resource group \*  [Create new](#)

Instance details

Name \*

Region \*

[Review + create](#) [< Previous](#) [Next : Tags >](#) [Download a template for automation](#)

**Vnet**  
Virtual network

Search

Move Delete Refresh Give feedback

**Overview**

Activity log  
Access control (IAM)  
Tags  
Diagnose and solve problems

**Settings**

Address space  
Connected devices  
**Subnets**  
Bastion  
DDoS protection  
Firewall  
Microsoft Defender for Cloud

**Essentials**

Resource group (move): [NSG\\_Class](#)  
Location (move): East US  
Subscription (move): [Azure subscription 1](#)  
Subscription ID: 88c4ed80-2b43-4585-8abc-9258e0694420

Address space: 10.0.0.0/16  
DNS servers: [Azure provided DNS service](#)  
Flow timeout: [Configure](#)  
BGP community string: [Configure](#)  
Virtual network ID: 638ddf2f-5835-4114-b772-8294cda71614

Tags (edit): [Add tags](#)

Topology Properties **Capabilities (5)** Recommendations Tutorials

**DDoS protection**  
Configure additional protection from distributed denial of service attacks.  
● Not configured

**Azure Firewall**  
Protect your network with a stateful L3-L7 firewall.  
● Not configured

**Peerings**  
Seamlessly connect two or more virtual networks.  
● Not configured

**Network\_Security | Subnets**  
Network security group

Search

+ Associate

Search subnets

Name

No results.

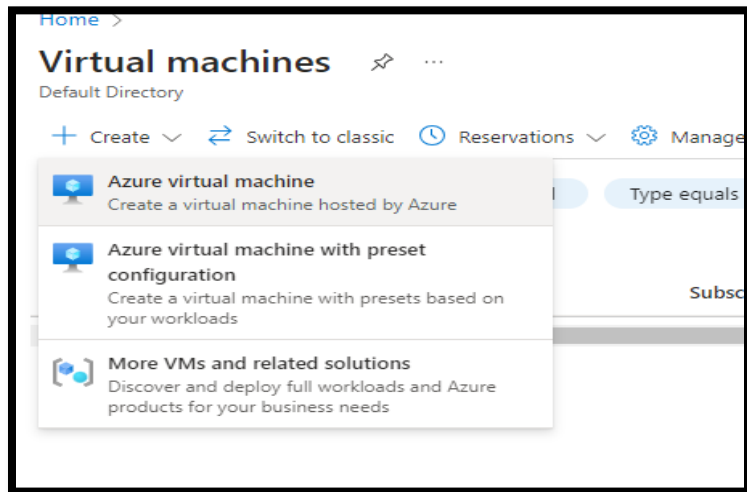
**Associate subnet**  
Network\_Security

Virtual network \*   
Vnet (NSG\_Class)

Subnet \*   
App-SN

OK

### **STEP4: Create Virtual Machine**



Home > Virtual machines >

## Create a virtual machine

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

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. [Learn more](#)

### Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription \* ⓘ Azure subscription 1

Resource group \* ⓘ NSG\_Class

[Create new](#)



### Instance details



Virtual machine name \* ⓘ VM1 ✓



Region \* ⓘ (US) East US


[Review + create](#) < Previous Next : Disks >

### Create a virtual machine

Virtual network \*  Vnet   
[Create new](#)

Subnet \*  App-SN (172.16.20.0/24)   
[Manage subnet configuration](#)

Public IP  (new) VM1ip759   
[Create new](#)

NIC network security group 
☒ None  
☐ Basic  
☐ Advanced

**i** The selected subnet 'App-SN (172.16.20.0/24)' is already associated to a network security group 'Network\_Security'. We recommend managing connectivity to this virtual machine via the existing network security group instead of creating a new one here.

[Review + create](#) [< Previous](#) [Next : Management >](#)

**Note:** By default, NIC network security group has been taken as None.

### **STEP5: Import Security Rules**

Home > Network\_Security

#### Network\_Security | Inbound security rules

Network security group

Search

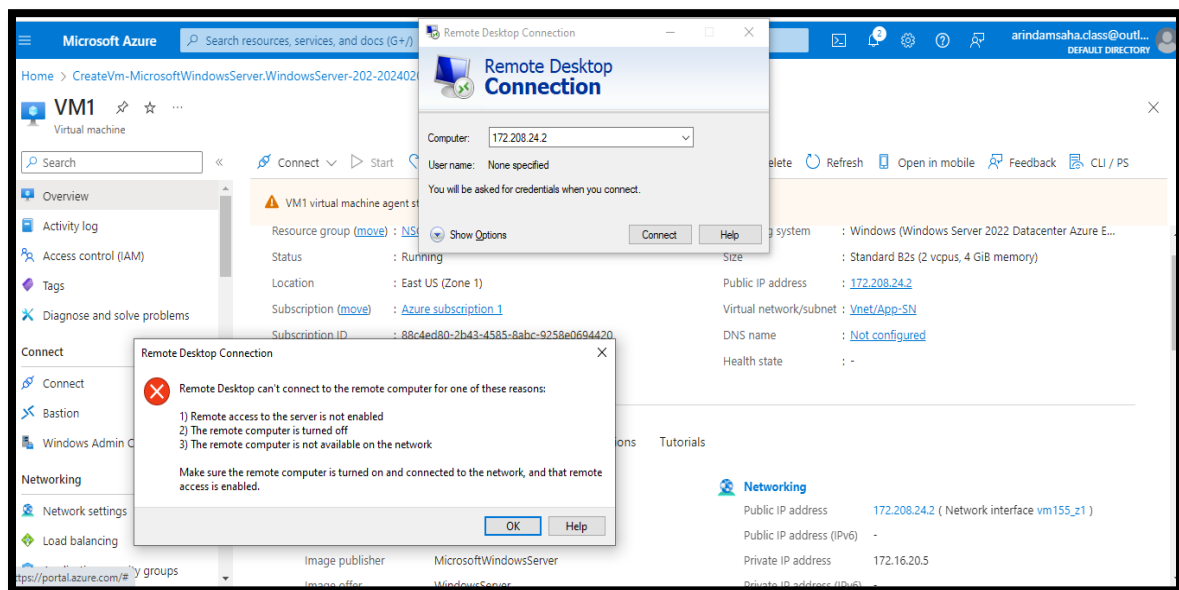
+ Add Hide default rules Refresh Delete Give feedback

Network security group security rules are evaluated by priority using the combination of source, source port, destination, destination port, and protocol to allow or deny the traffic. A security rule can't have the same priority and direction as an existing rule. You can't delete default security rules, but you can override them with rules that have a higher priority. [Learn more](#)

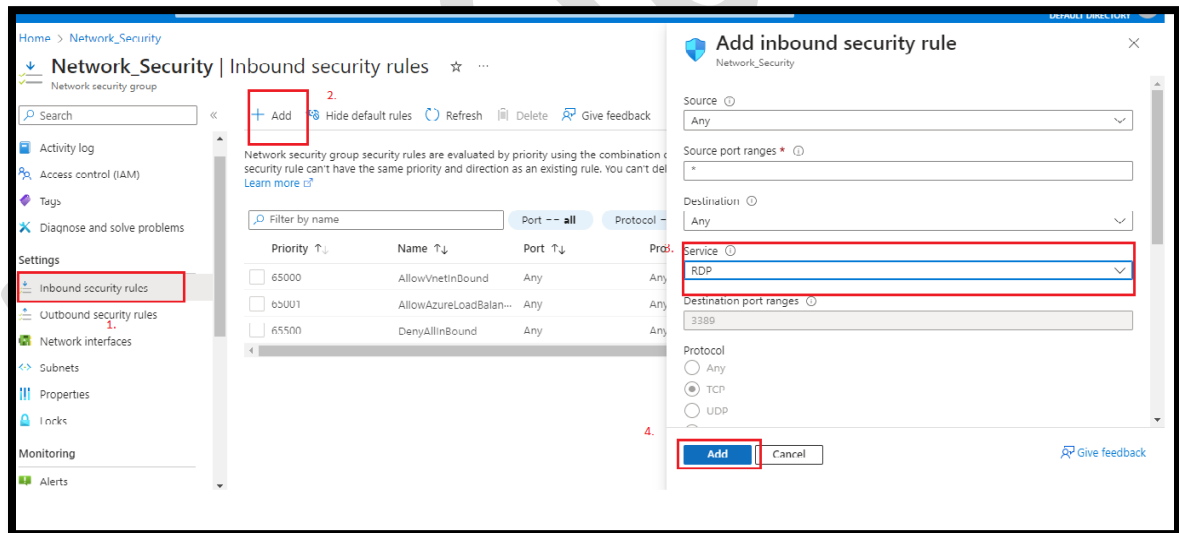
Filter by name Port == all Protocol == all Source == all Destination == all Action == all

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

In the previous picture, We can see there are no rule for **RDP** in the **Inbound Security rule**. So The vm should **not be accessible** through **RDP**.

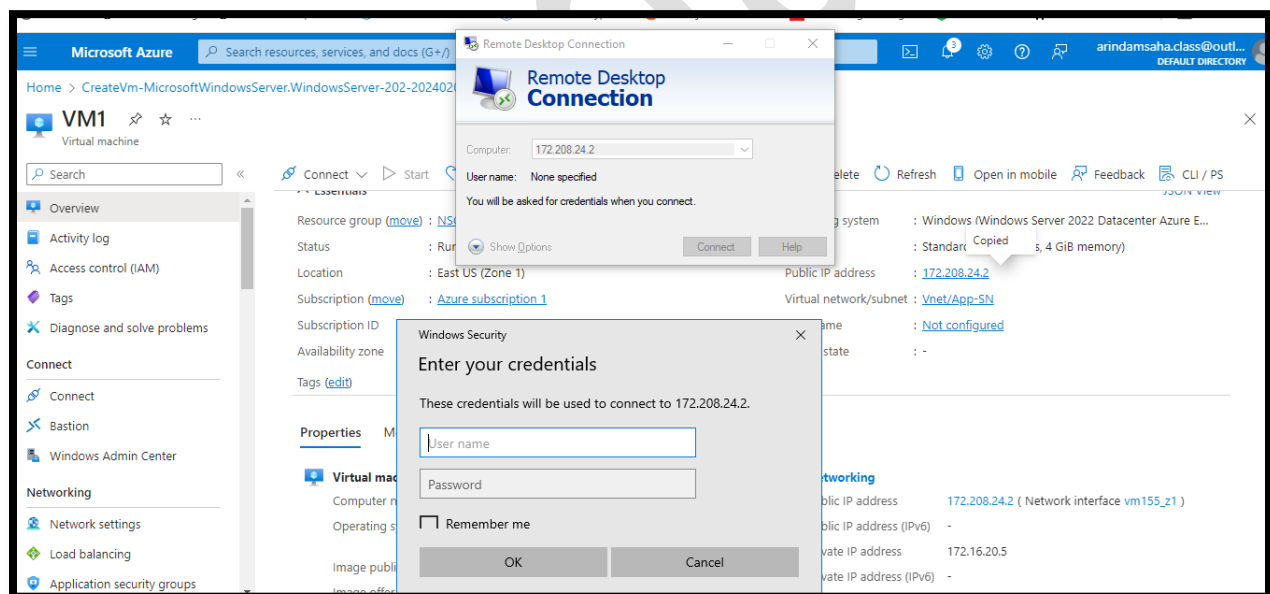
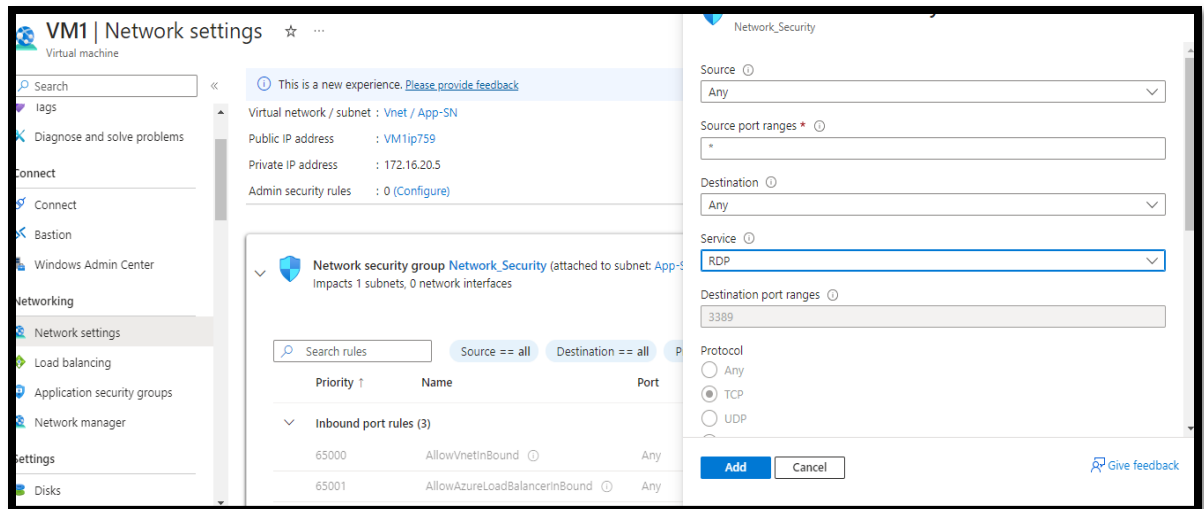


Now, we are trying to import rule for RDP in the **Inbound Security rule**.



And also import rule for RDP in the Inbound Security rule of Network settings of the VM.





Now ,we can see this vm is accessible through RDP.