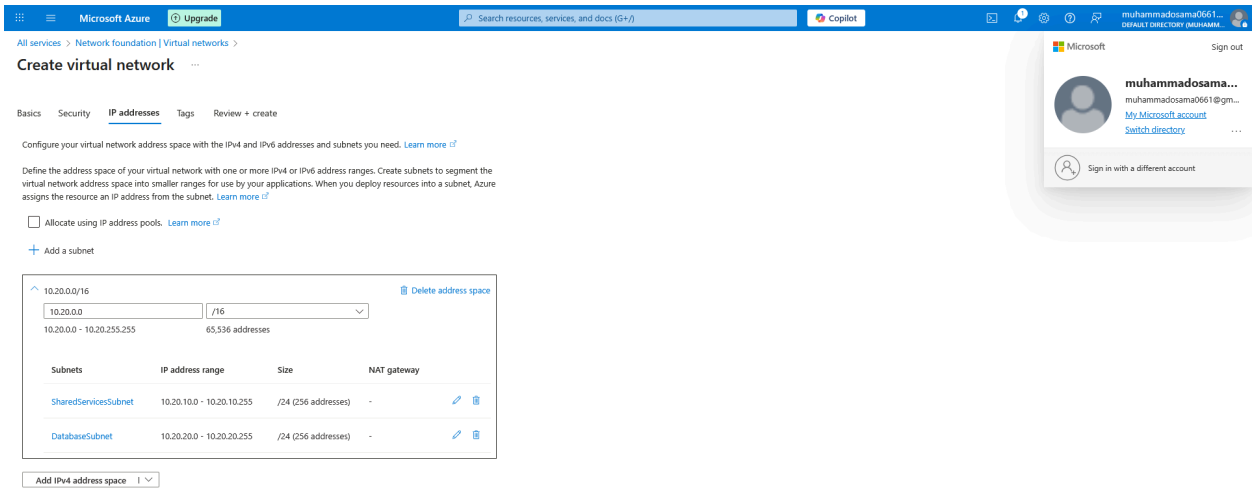
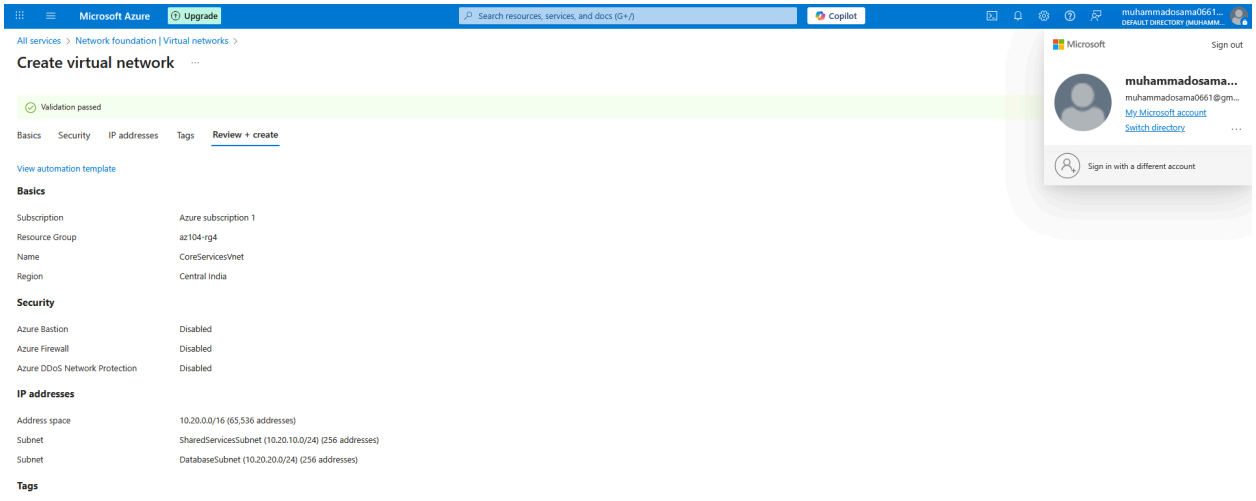
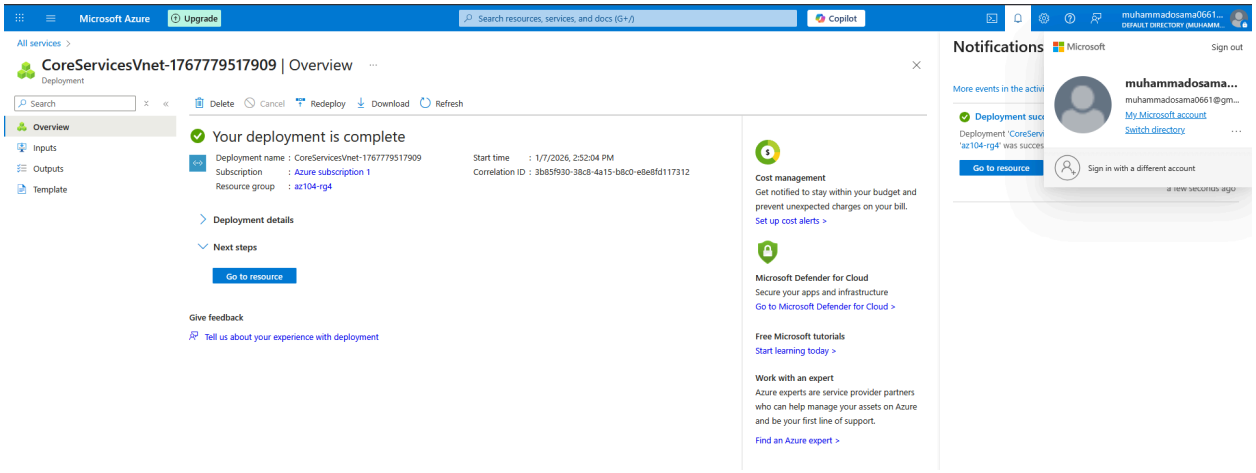
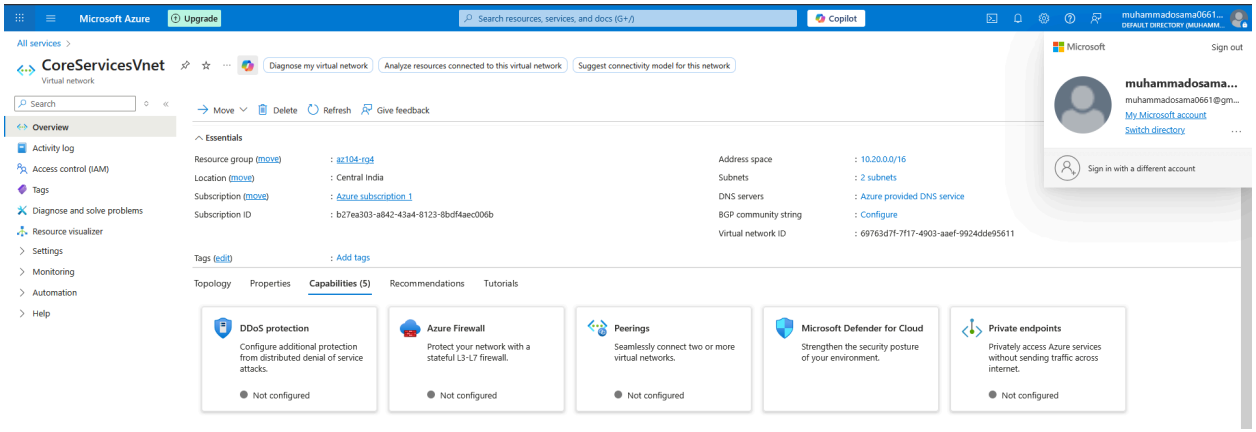
Name: Muhammad Osama
Reg no: 2280151
Section: B
LAB: 04

Task 1 - Create a virtual network with subnets using the portal:






Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Copilot
muhammadosama0661...
DEFAULT DIRECTORY (MUHAMM...
All services
CoreServicesVnet-1767779517909 | Overview
Deployment
Search
Overview
Inputs
Outputs
Template
Delete
Cancel
Redeploy
Download
Refresh
Your deployment is complete
Deployment name : CoreServicesVnet-1767779517909
Subscription : Azure subscription 1
Resource group : az104-rg4
Start time : 1/7/2026, 2:52:04 PM
Correlation ID : 3b85f930-38c8-4a15-b8c0-e8e8fd117312
Deployment details
Next steps
Go to resource
Give feedback
Tell us about your experience with deployment
Cost management
Get notified to stay within your budget and prevent unexpected charges on your bill.
Set up cost alerts >
Microsoft Defender for Cloud
Secure your apps and infrastructure
Go to Microsoft Defender for Cloud >
Free Microsoft tutorials
Start learning today >
Work with an expert
Azure experts are service provider partners who can help manage your assets on Azure and be your first line of support.
Find an Azure expert >
Notifications
More events in the activi
Deployment succ
Deployment 'CoreServi
'az104-rg4' was succes
Go to resource
a few seconds ago
Microsoft
Sign out
muhammadosama...
muhammadosama0661@gm...
My Microsoft account
Switch directory
Sign in with a different account


Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Copilot
muhammadosama0661...
DEFAULT DIRECTORY (MUHAMM...
All services
CoreServicesVnet
Virtual network
Diagnose my virtual network
Analyze resources connected to this virtual network
Suggest connectivity model for this network
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Resource visualizer
Settings
Monitoring
Automation
Help
Move
Delete
Refresh
Give feedback
Essentials
Resource group (move) : az104-rg4
Location (move) : Central India
Subscription (move) : Azure subscription 1
Subscription ID : b27ea303-a842-43a4-8123-8bdf4aec006b
Address space : 10.20.0.0/16
Subnets : 2 subnets
DNS servers : Azure provided DNS service
BGP community string : Configure
Virtual network ID : 69763d7f-7f17-4903-aaef-9924dde95611
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
Microsoft Defender for Cloud
Strengthen the security posture of your environment.
Private endpoints
Privately access Azure services without sending traffic across internet.
Not configured
Microsoft
Sign out
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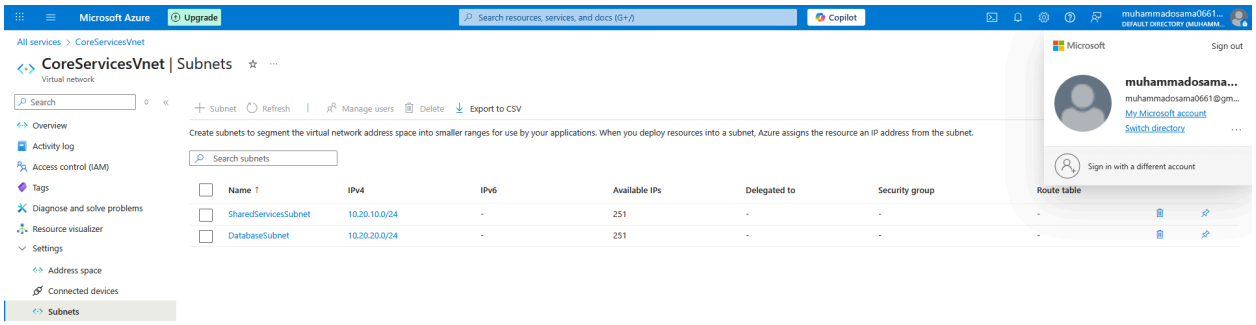
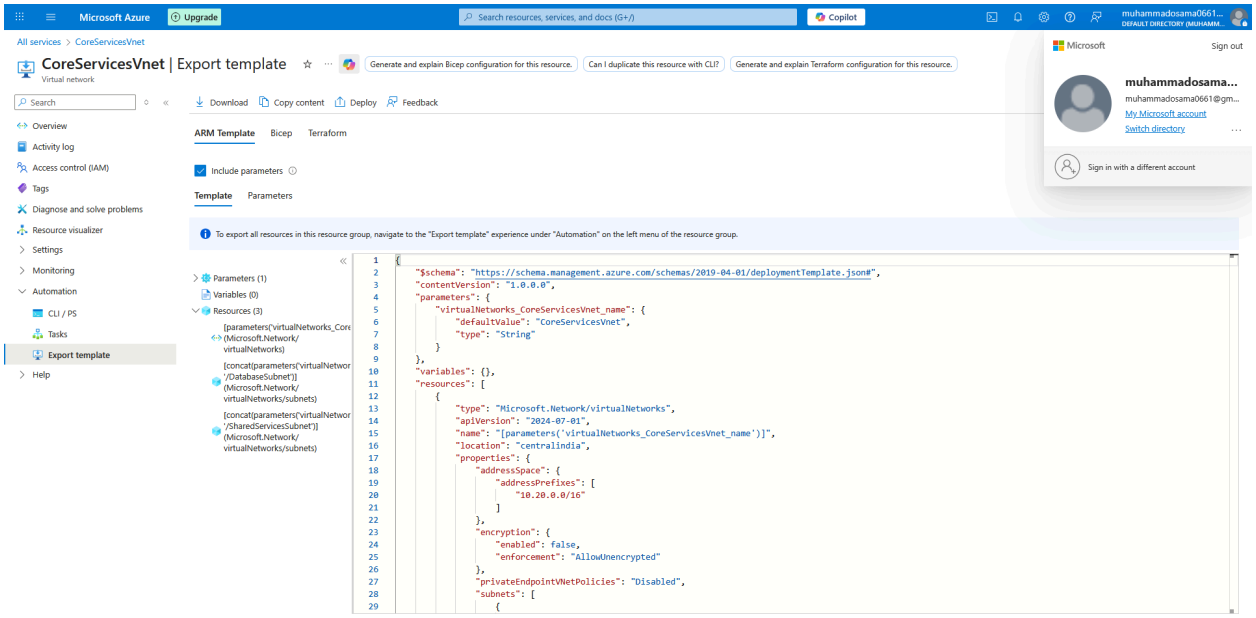
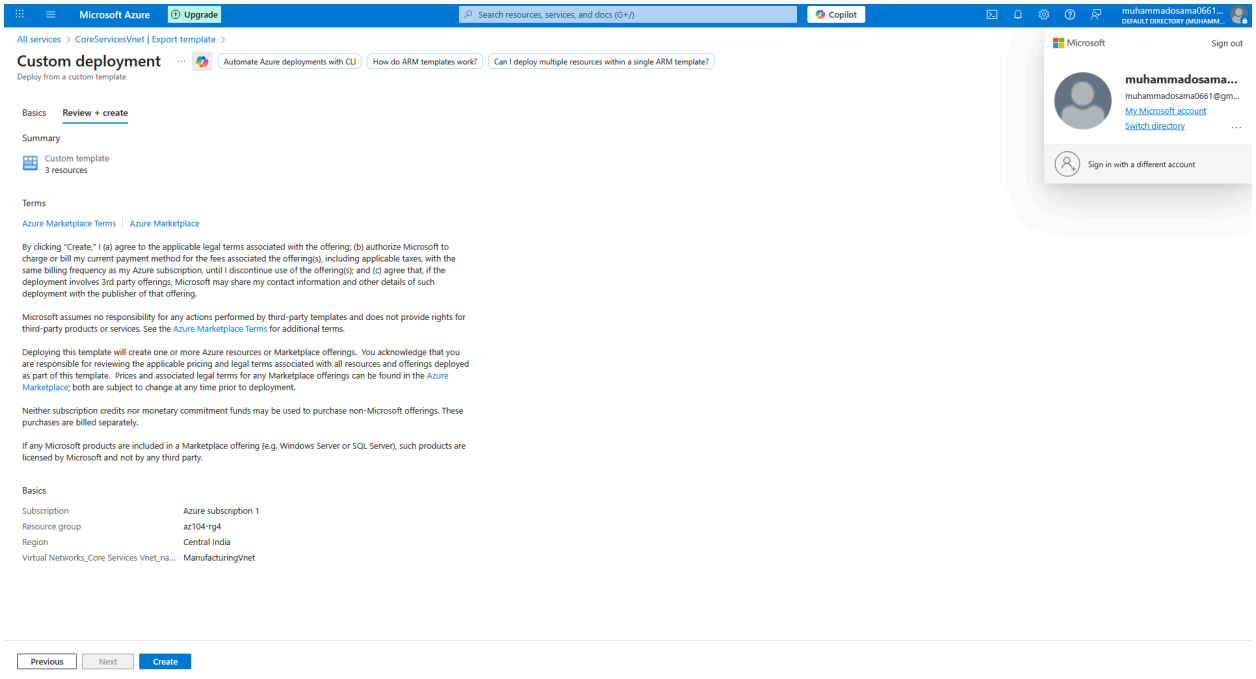
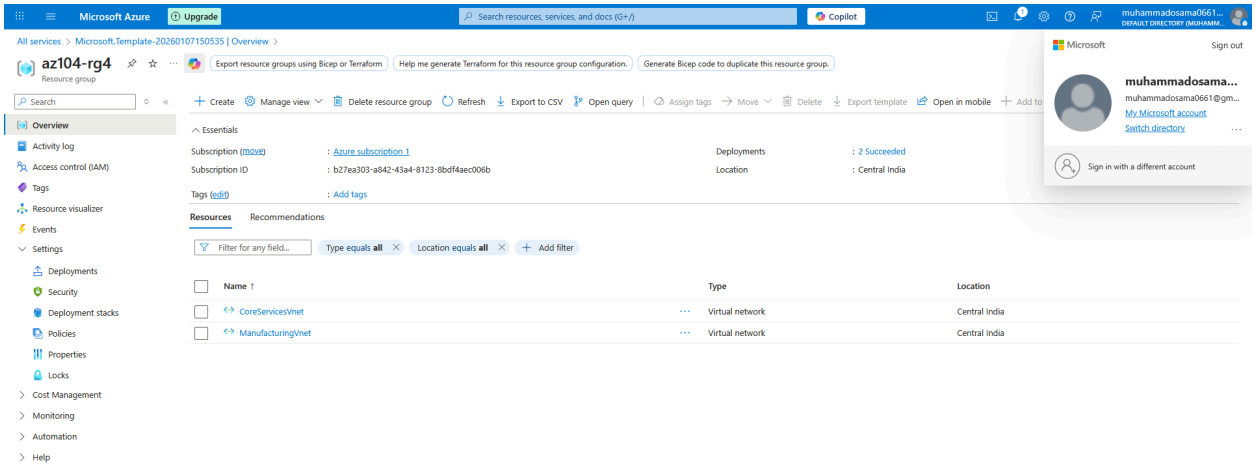
muhammadosama0661@gm...
My Microsoft account
Switch directory
Sign in with a different account


Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Copilot
muhammadosama0661...
DEFAULT DIRECTORY (MUHAMM...
All services
CoreServicesVnet
CoreServicesVnet | Subnets
Virtual network
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Resource visualizer
Settings
Address space
Connected devices
Subnets
Subnet
Refresh
Manage users
Delete
Export to CSV
Create subnets to segment the virtual network address space into smaller ranges for use by your applications. When you deploy resources into a subnet, Azure assigns the resource an IP address from the subnet.
Search subnets
Name
IPv4
IPv6
Available IPs
Delegated to
Security group
Route table
SharedServicesSubnet 10.20.10.0/24 - 251 - - -
DatabaseSubnet 10.20.20.0/24 - 251 - - -
Microsoft
Sign out
muhammadosama...
muhammadosama0661@gm...
My Microsoft account
Switch directory
Sign in with a different account

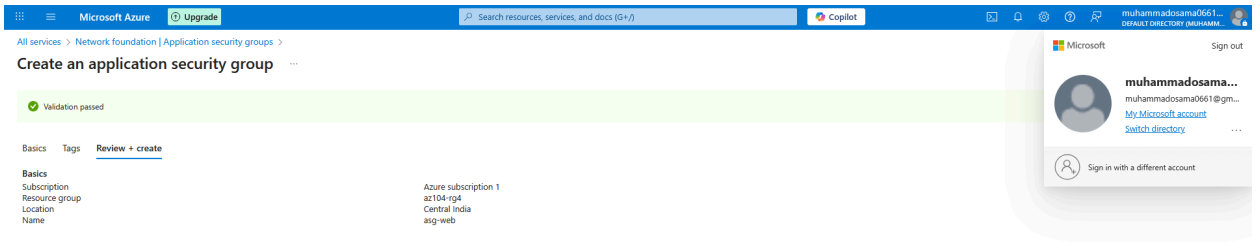
Task 2 - Create a virtual network and subnets using a template:

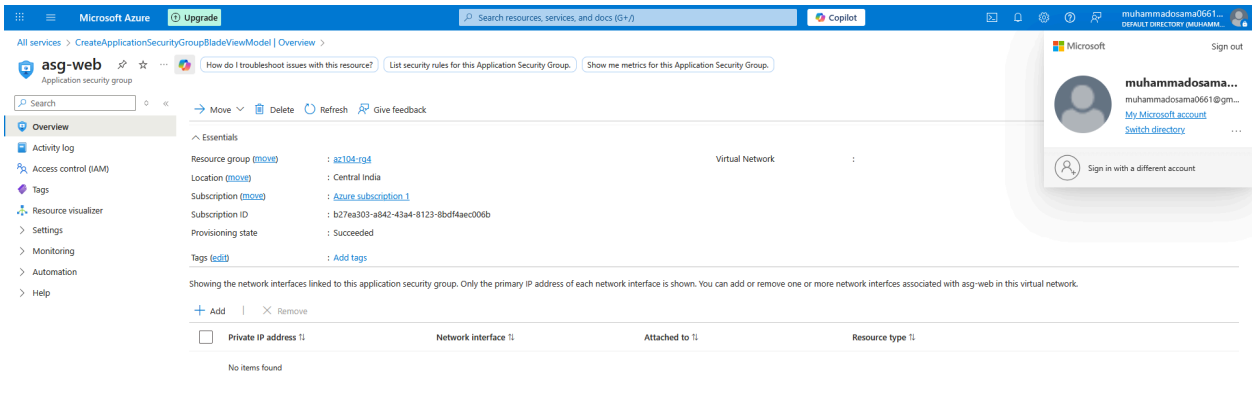


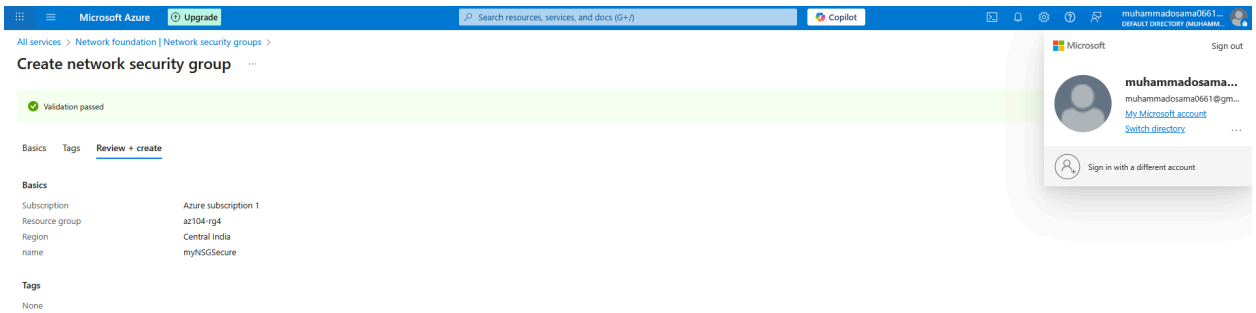


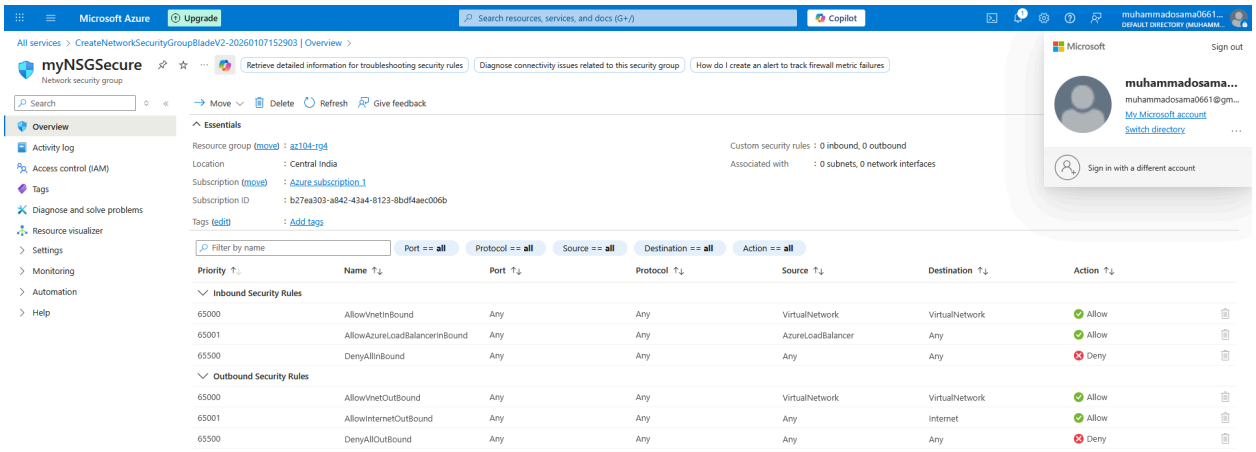


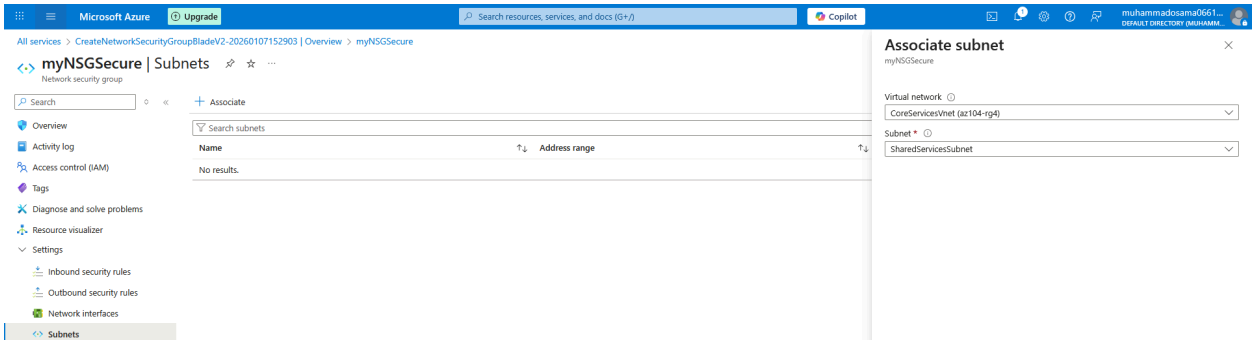
Task 3 - Create and configure communication between an Application Security Group and a Network Security Group:

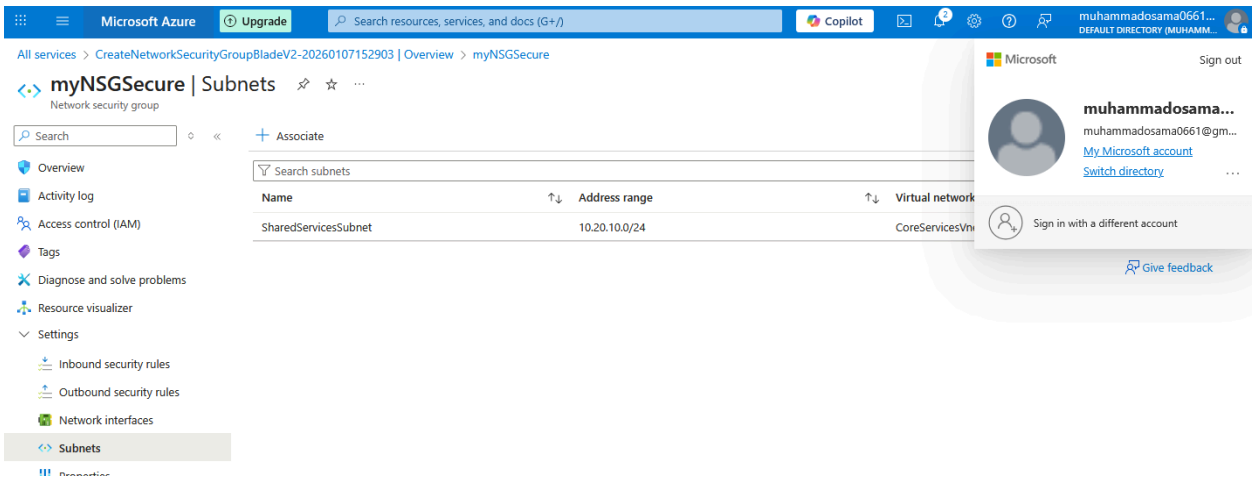







Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Copilot
All services > CreateNetworkSecurityGroupBladeV2-20260107152903 | Overview >
myNSGSecure
Network security group
Retrieve detailed information for troubleshooting security rules
Diagnose connectivity issues related to this security group
How do I create an alert to track firewall metric failures
Search
Move
Delete
Refresh
Give feedback
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Resource visualizer
Settings
Monitoring
Automation
Help
Essentials
Resource group (move) : az104-rg4
Location : Central India
Subscription (move) : Azure subscription 1
Subscription ID : b27ea303-a842-43a4-8123-8bdf4aec006b
Tags (edit) : Add tags
Custom security rules : 0 inbound, 0 outbound
Associated with : 0 subnets, 0 network interfaces
Filter by name
Port == all
Protocol == all
Source == all
Destination == all
Action == all
Priority
Name
Port
Protocol
Source
Destination
Action
Inbound Security Rules
65000 AllowVnetInBound Any Any VirtualNetwork VirtualNetwork Allow
65001 AllowAzureLoadBalancerInBound Any Any AzureLoadBalancer Any Allow
65500 DenyAllInBound Any Any Any Any Deny
Outbound Security Rules
65000 AllowVnetOutBound Any Any VirtualNetwork VirtualNetwork Allow
65001 AllowInternetOutBound Any Any Any Internet Allow
65500 DenyAllOutBound Any Any Any Any Deny
Microsoft
Sign out
muhammadosama...
muhammadosama0661@gm...
My Microsoft account
Switch directory
Sign in with a different account


Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Copilot
All services > CreateNetworkSecurityGroupBladeV2-20260107152903 | Overview > myNSGSecure
myNSGSecure | Subnets
Network security group
Search
Associate
Search subnets
Name
Address range
No results.
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Resource visualizer
Settings
Inbound security rules
Outbound security rules
Network interfaces
Subnets
Associate subnet
myNSGSecure
Virtual network
CoreServicesVnet (az104-rg4)
Subnet *
SharedServicesSubnet


Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Copilot
All services > CreateNetworkSecurityGroupBladeV2-20260107152903 | Overview > myNSGSecure
myNSGSecure | Subnets
Network security group
Search
Associate
Search subnets
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Resource visualizer
Settings
Inbound security rules
Outbound security rules
Network interfaces
Subnets
Name
Address range
Virtual network
SharedServicesSubnet
10.20.10.0/24
CoreServicesVn
Microsoft
Sign out
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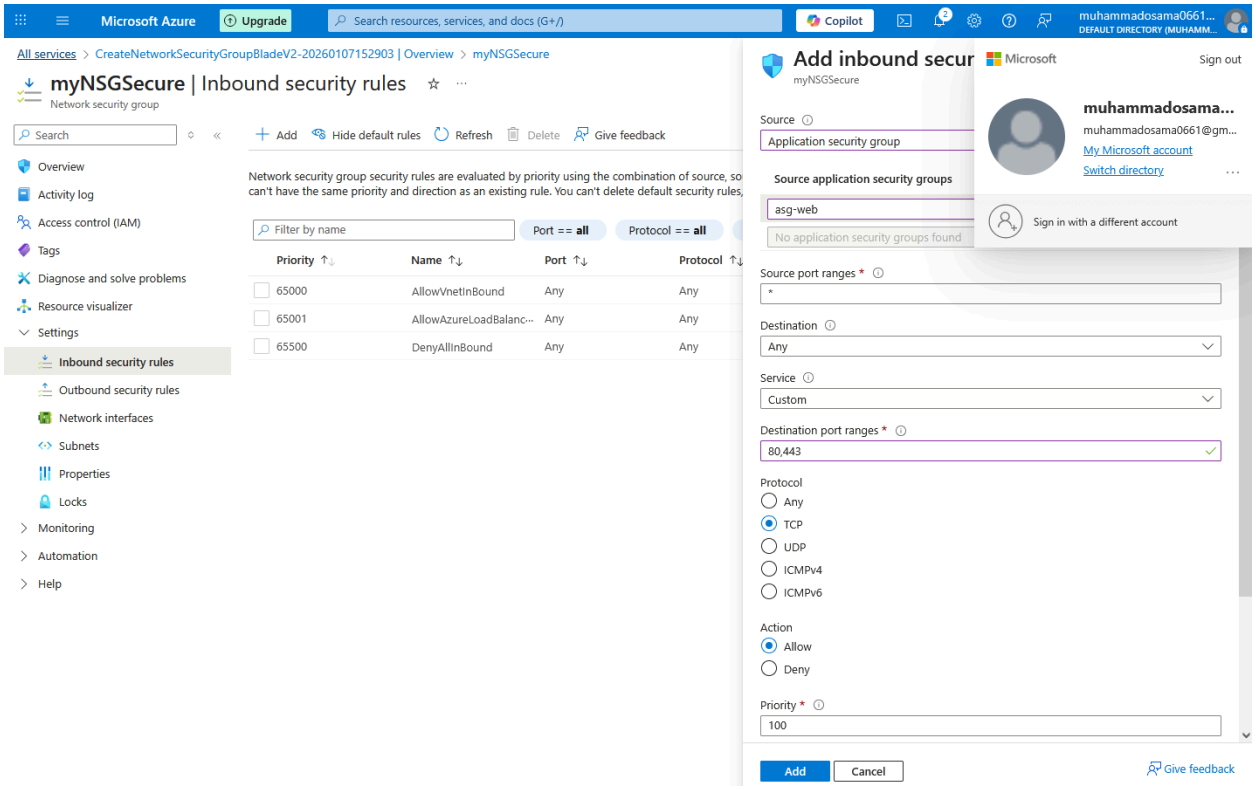
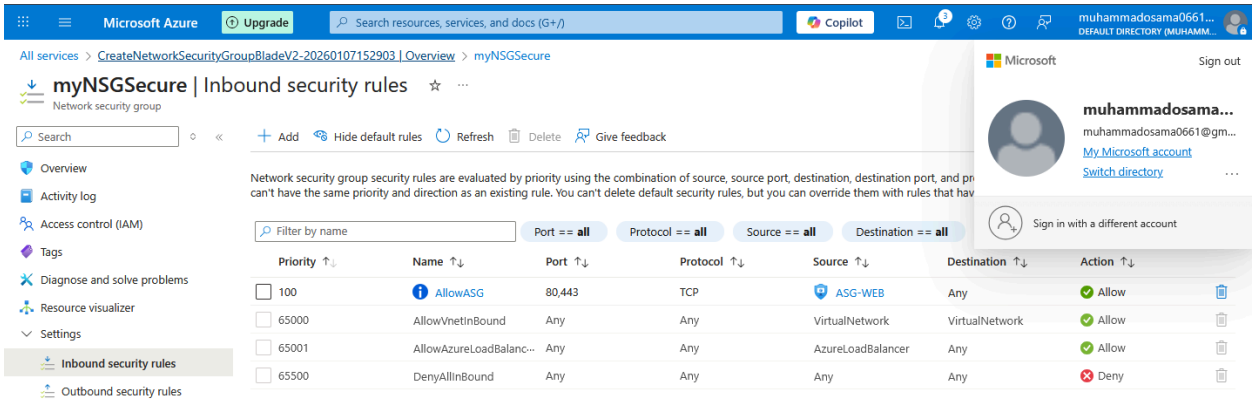
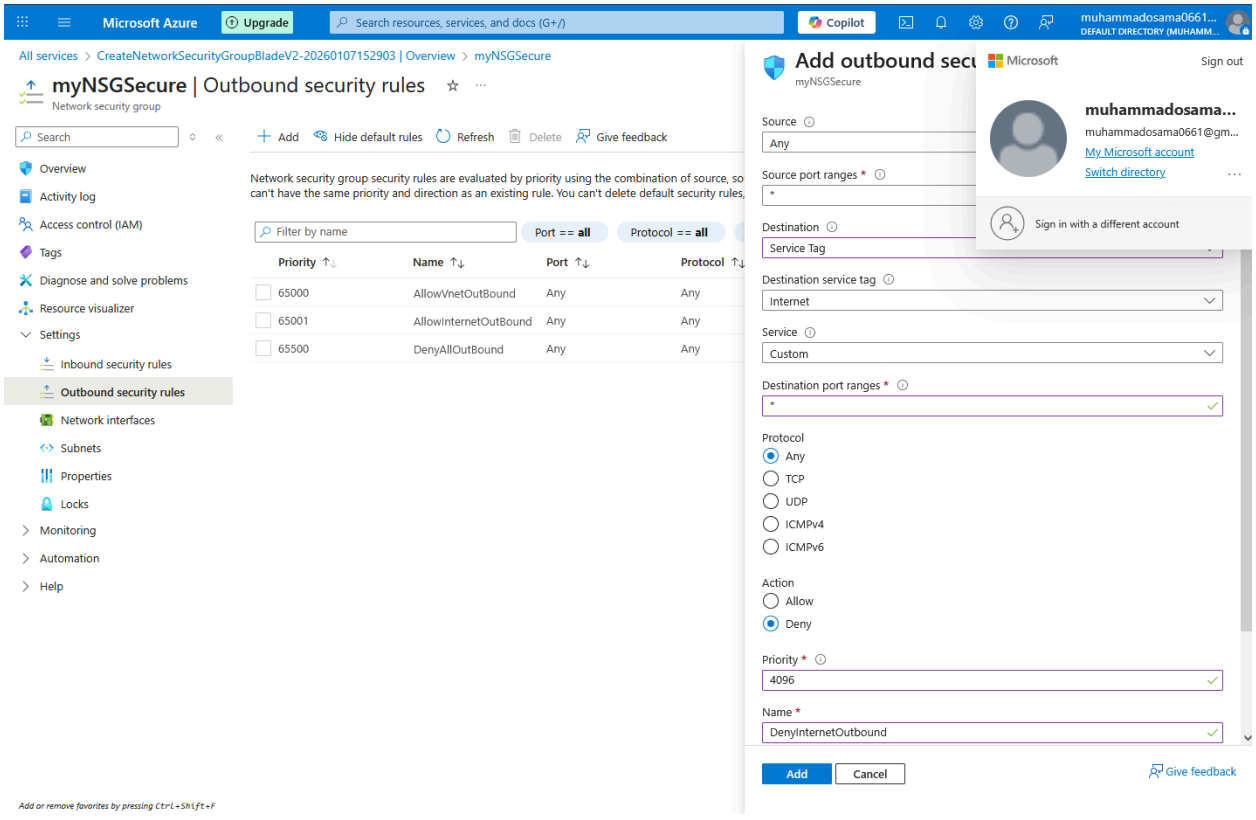
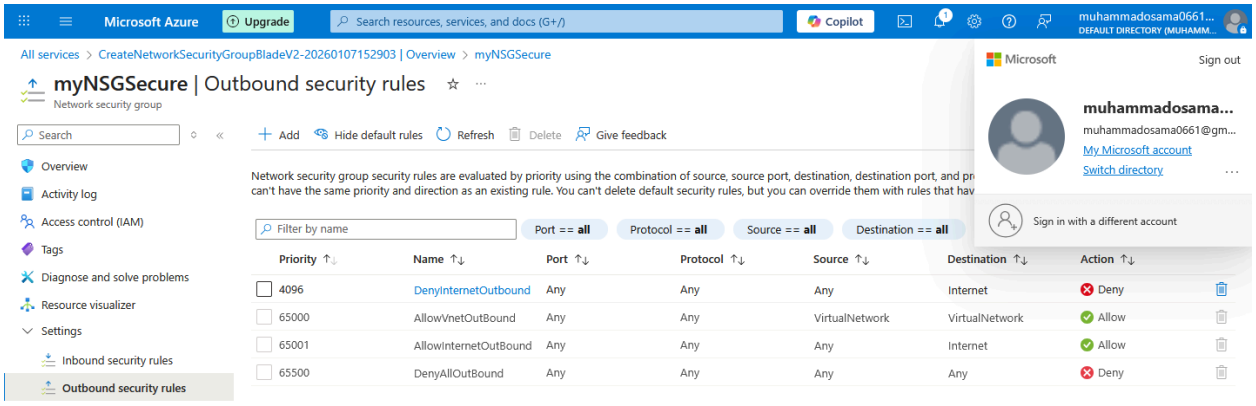
muhammadosama0661@gm...
My Microsoft account
Switch directory
Sign in with a different account
Give feedback

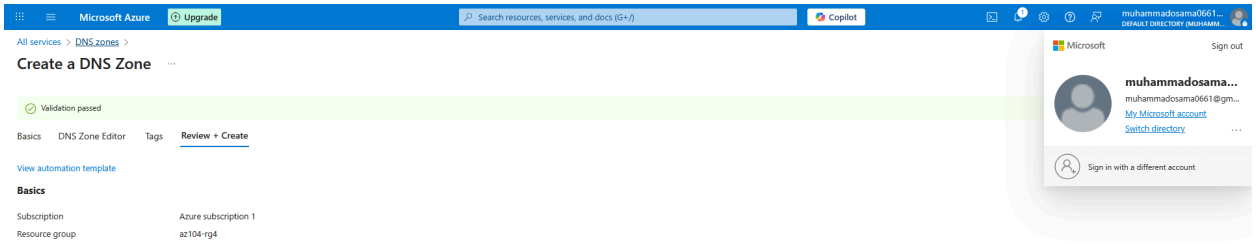

Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Copilot
muhammadosama0661...
DEFAULT DIRECTORY (MUHAMM...
All services > CreateNetworkSecurityGroupBladeV2-20260107152903 | Overview > myNSGSecure
myNSGSecure | Inbound security rules
Network security group
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Resource visualizer
Settings
Inbound security rules
Outbound security rules
Network interfaces
Subnets
Properties
Locks
Monitoring
Automation
Help
Add
Hide default rules
Refresh
Delete
Give feedback
Network security group security rules are evaluated by priority using the combination of source, so
can't have the same priority and direction as an existing rule. You can't delete default security rules,
Filter by name
Port == all
Protocol == all
Priority
Name
Port
Protocol
65000 AllowVnetInBound Any Any
65001 AllowAzureLoadBalanc... Any Any
65500 DenyAllInBound Any Any
Add inbound secur
myNSGSecure
Source
Application security group
Source application security groups
asg-web
No application security groups found
Source port ranges *
*
Destination
Any
Service
Custom
Destination port ranges *
80,443
Protocol
Any
TCP
UDP
ICMPv4
ICMPv6
Action
Allow
Deny
Priority *
100
Add
Cancel
Give feedback
Microsoft
Sign out
muhammadosama...
muhammadosama0661@gm...
My Microsoft account
Switch directory
Sign in with a different account

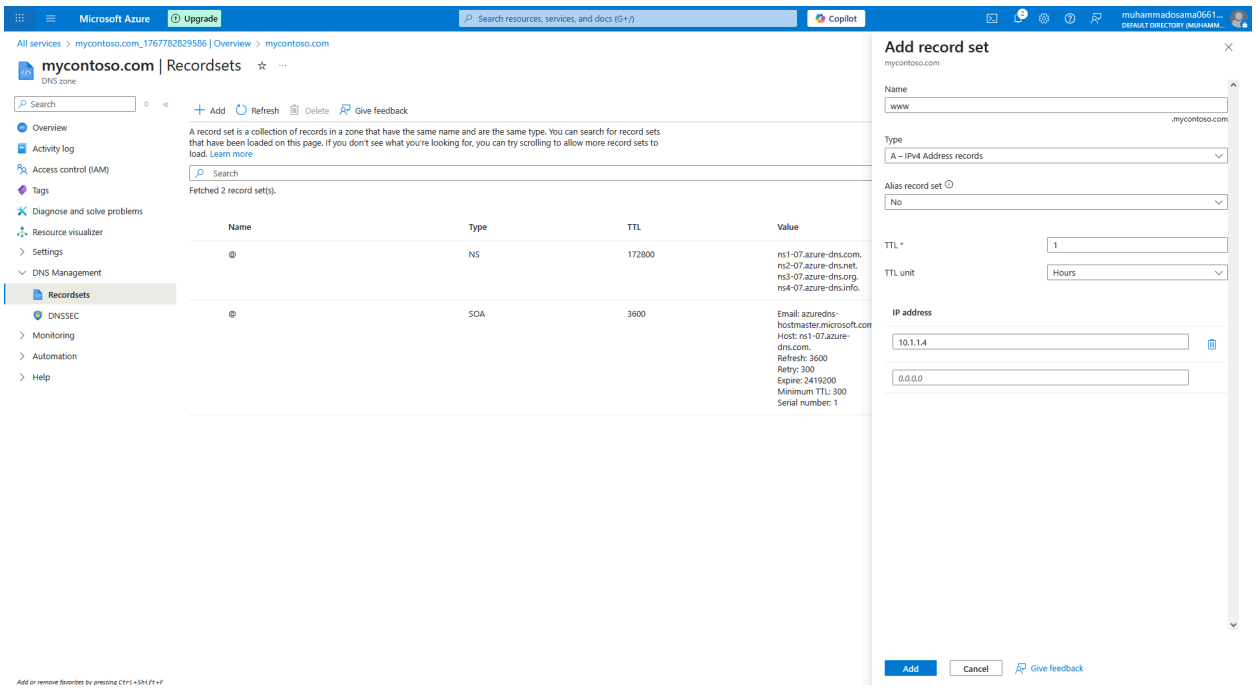

Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Copilot
muhammadosama0661...
DEFAULT DIRECTORY (MUHAMM...
All services > CreateNetworkSecurityGroupBladeV2-20260107152903 | Overview > myNSGSecure
myNSGSecure | Inbound security rules
Network security group
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Resource visualizer
Settings
Inbound security rules
Outbound security rules
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 pr
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 hav
Filter by name
Port == all
Protocol == all
Source == all
Destination == all
Priority
Name
Port
Protocol
Source
Destination
Action
100 AllowASG 80,443 TCP ASG-WEB Any Allow
65000 AllowVnetInBound Any Any VirtualNetwork VirtualNetwork Allow
65001 AllowAzureLoadBalanc... Any Any AzureLoadBalancer Any Allow
65500 DenyAllInBound Any Any Any Any Deny
Microsoft
Sign out
muhammadosama...
muhammadosama0661@gm...
My Microsoft account
Switch directory
Sign in with a different account

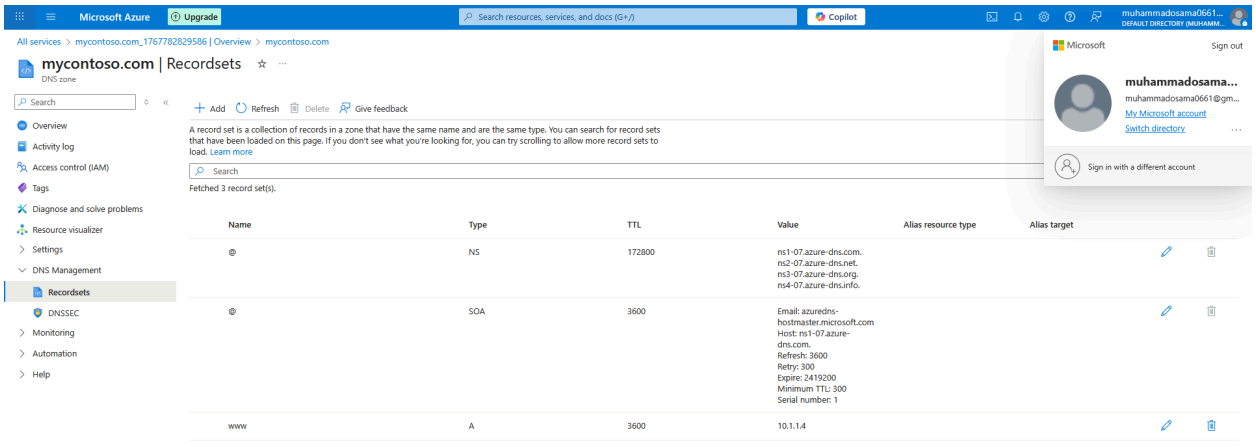

Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Copilot
muhammadosama0661...
DEFAULT DIRECTORY (MUHAMM...
All services > CreateNetworkSecurityGroupBladeV2-20260107152903 | Overview > myNSGSecure
myNSGSecure | Outbound security rules
Network security group
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Resource visualizer
Settings
Inbound security rules
Outbound security rules
Network interfaces
Subnets
Properties
Locks
Monitoring
Automation
Help
Add
Hide default rules
Refresh
Delete
Give feedback
Network security group security rules are evaluated by priority using the combination of source, so
can't have the same priority and direction as an existing rule. You can't delete default security rules,
Filter by name
Port == all
Protocol == all
Priority
Name
Port
Protocol
65000 AllowVnetOutBound Any Any
65001 AllowInternetOutBound Any Any
65500 DenyAllOutBound Any Any
Add or remove favorites by pressing Ctrl+Shift+F
Add outbound secu
myNSGSecure
Source
Any
Source port ranges *
*
Destination
Service Tag
Destination service tag
Internet
Service
Custom
Destination port ranges *
*
Protocol
Any
TCP
UDP
ICMPv4
ICMPv6
Action
Allow
Deny
Priority *
4096
Name *
DenyInternetOutbound
Add
Cancel
Give feedback
Microsoft
Sign out
muhammadosama...
muhammadosama0661@gm...
My Microsoft account
Switch directory
Sign in with a different account

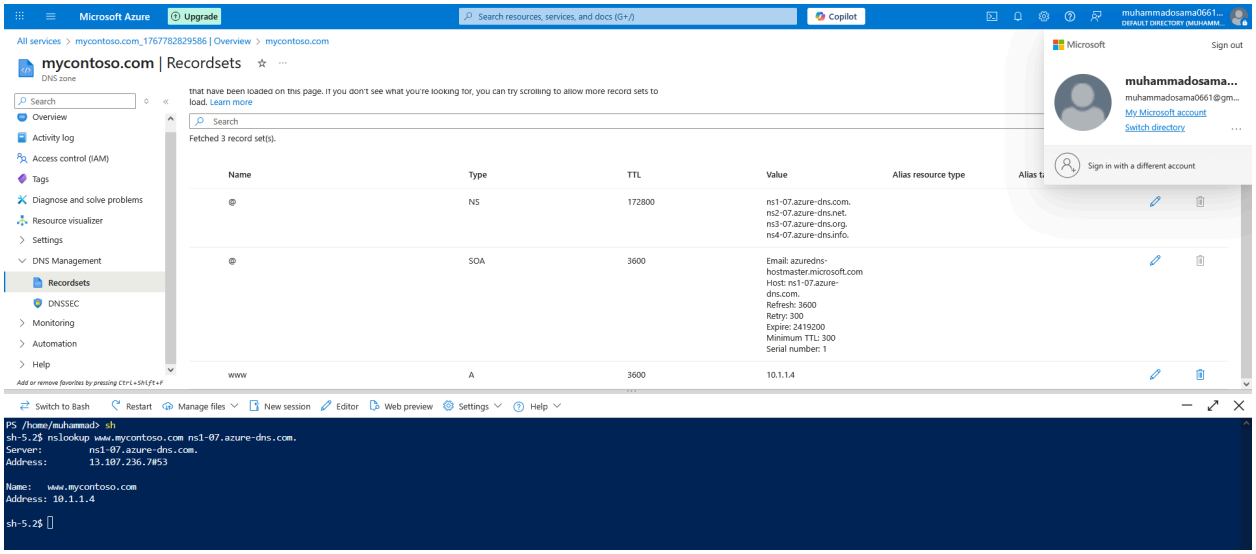

Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Copilot
muhammadosama0661...
DEFAULT DIRECTORY (MUHAMM...
All services > CreateNetworkSecurityGroupBladeV2-20260107152903 | Overview > myNSGSecure
myNSGSecure | Outbound security rules
Network security group
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Resource visualizer
Settings
Inbound security rules
Outbound security rules
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 pr
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 hav
Filter by name
Port == all
Protocol == all
Source == all
Destination == all
Priority
Name
Port
Protocol
Source
Destination
Action
4096 DenyInternetOutbound Any Any Any Internet Deny
65000 AllowVnetOutBound Any Any VirtualNetwork VirtualNetwork Allow
65001 AllowInternetOutBound Any Any Any Internet Allow
65500 DenyAllOutBound Any Any Any Any Deny
Microsoft
Sign out
muhammadosama...
muhammadosama0661@gm...
My Microsoft account
Switch directory
Sign in with a different account

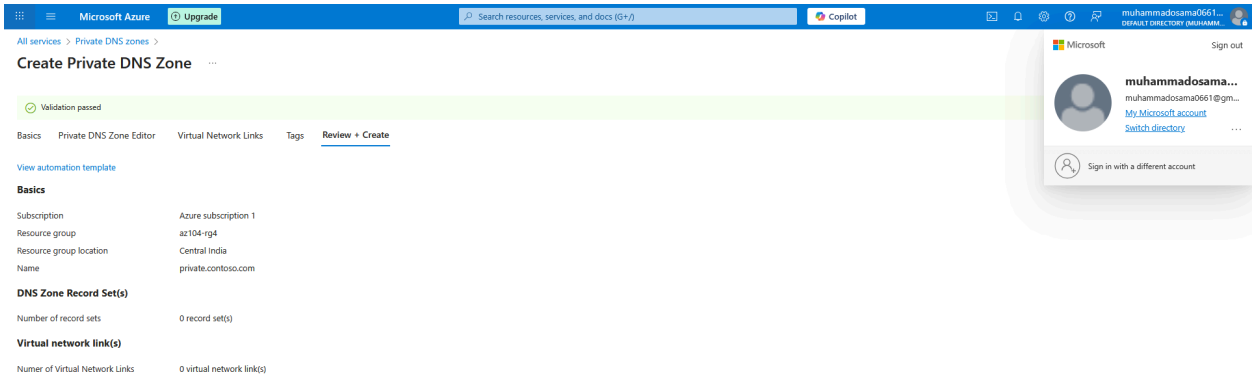
Task 4 - Configure public and private Azure DNS zones:

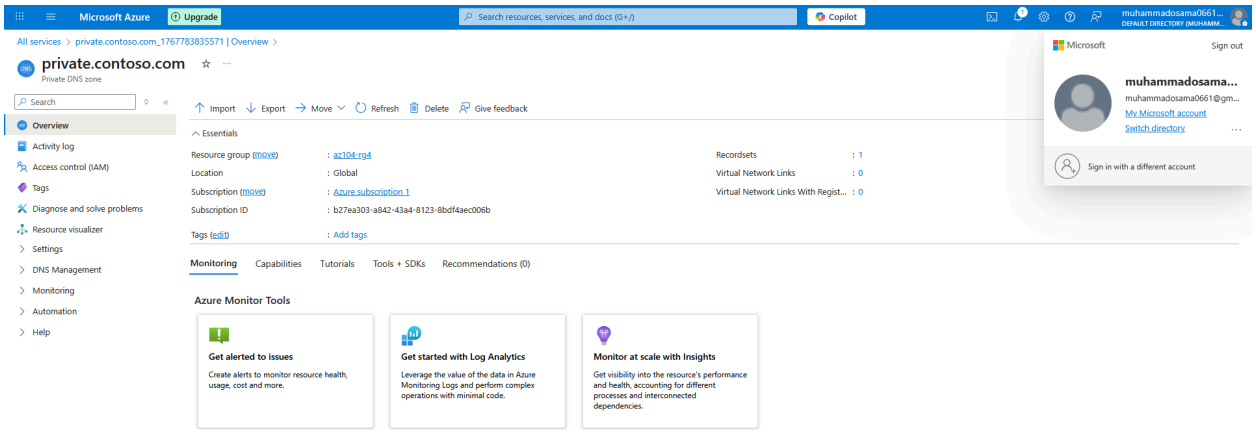


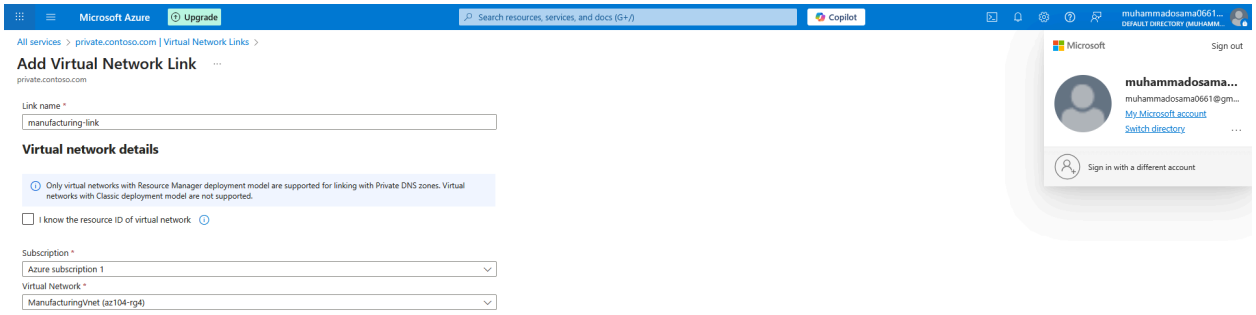





Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Copilot
All services > mycontoso.com_1767782829586 | Overview > mycontoso.com
mycontoso.com | Recordsets
DNS zone
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Resource visualizer
Settings
DNS Management
Recordsets
DNSSEC
Monitoring
Automation
Help
that have been loaded on this page. If you don't see what you're looking for, you can try scrolling to allow more record sets to load. Learn more
Search
Fetched 3 record set(s).
Name
Type
TTL
Value
Alias resource type
@
NS
172800
ns1-07.azure-dns.com.
ns2-07.azure-dns.net.
ns3-07.azure-dns.org.
ns4-07.azure-dns.info.
@
SOA
3600
Email: azuredns-hostmaster.microsoft.com
Host: ns1-07.azure-dns.com.
Refresh: 3600
Retry: 300
Expire: 2419200
Minimum TTL: 300
Serial number: 1
www
A
3600
10.1.1.4
Microsoft
Sign out
muhammadosama...
muhammadosama0661@gm...
My Microsoft account
Switch directory
Sign in with a different account
Switch to Bash
Restart
Manage files
New session
Editor
Web preview
Settings
Help
PS /home/muhammad> sh
sh-5.2$ nslookup www.mycontoso.com ns1-07.azure-dns.com.
Server: ns1-07.azure-dns.com.
Address: 13.107.236.7#53
Name: www.mycontoso.com
Address: 10.1.1.4
sh-5.2$


Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Copilot
All services > Private DNS zones >
Create Private DNS Zone
Validation passed
Basics
Private DNS Zone Editor
Virtual Network Links
Tags
Review + Create
View automation template
Basics
Subscription
Azure subscription 1
Resource group
az104-rg4
Resource group location
Central India
Name
private.contoso.com
DNS Zone Record Set(s)
Number of record sets
0 record set(s)
Virtual network link(s)
Numer of Virtual Network Links
0 virtual network link(s)
Microsoft
Sign out
muhammadosama...
muhammadosama0661@gm...
My Microsoft account
Switch directory
Sign in with a different account


Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Copilot
All services > private.contoso.com_1767783835571 | Overview >
private.contoso.com
Private DNS zone
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Resource visualizer
Settings
DNS Management
Monitoring
Automation
Help
Import
Export
Move
Refresh
Delete
Give feedback
Essentials
Resource group (move) : az104-rg4
Location : Global
Subscription (move) : Azure subscription 1
Subscription ID : b27ea303-a842-43a4-8123-8bdf4aec006b
Tags (edit) : Add tags
Recordsets : 1
Virtual Network Links : 0
Virtual Network Links With Regist... : 0
Monitoring
Capabilities
Tutorials
Tools + SDKs
Recommendations (0)
Azure Monitor Tools
Get alerted to issues
Create alerts to monitor resource health, usage, cost and more.
Get started with Log Analytics
Leverage the value of the data in Azure Monitoring Logs and perform complex operations with minimal code.
Monitor at scale with Insights
Get visibility into the resource's performance and health, accounting for different processes and interconnected dependencies.
Microsoft
Sign out
muhammadosama...
muhammadosama0661@gm...
My Microsoft account
Switch directory
Sign in with a different account


Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Copilot
muhammadosama0661...
DEFAULT DIRECTORY (MUHAMM...
All services > private.contoso.com | Virtual Network Links >
Add Virtual Network Link
private.contoso.com
Link name *
manufacturing-link
Virtual network details
Only virtual networks with Resource Manager deployment model are supported for linking with Private DNS zones. Virtual networks with Classic deployment model are not supported.
I know the resource ID of virtual network
Subscription *
Azure subscription 1
Virtual Network *
ManufacturingVnet (az104-rg4)
Microsoft
Sign out
muhammadosama...
muhammadosama0661@gm...
My Microsoft account
Switch directory
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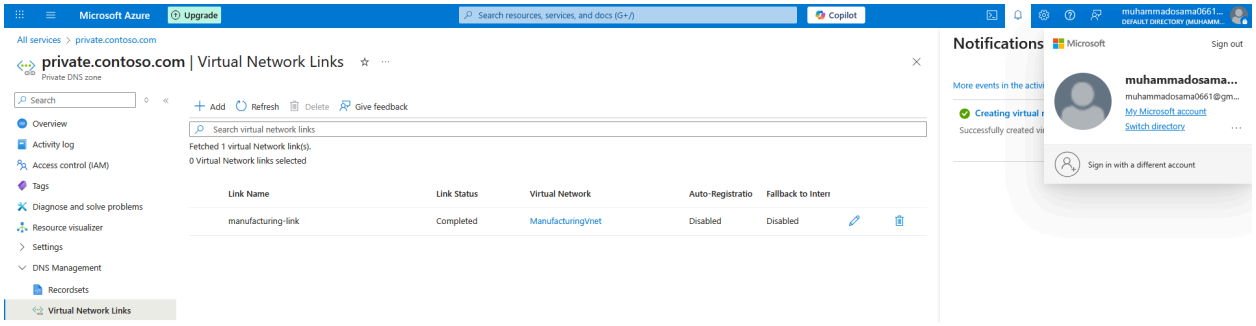
Microsoft Azure
Upgrade
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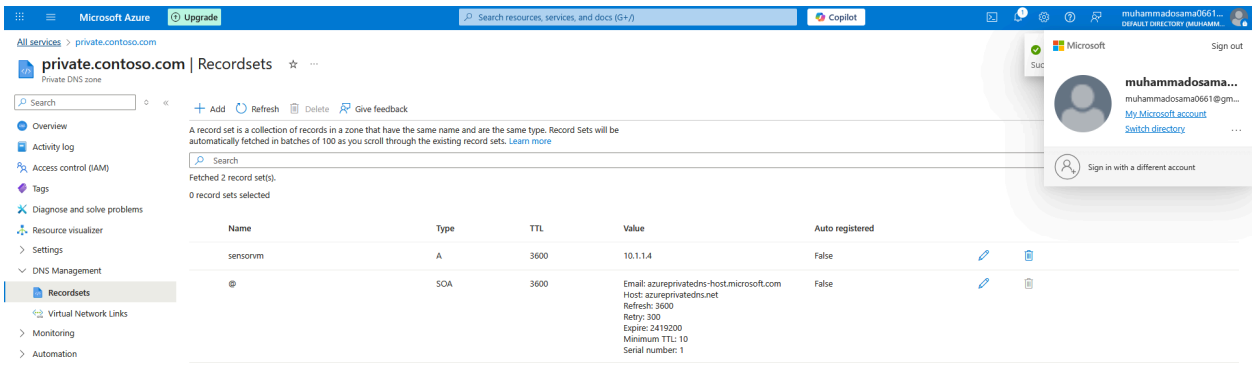
Copilot
All services > private.contoso.com
private.contoso.com | Virtual Network Links
Private DNS zone
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Resource visualizer
Settings
DNS Management
Recordsets
Virtual Network Links
Add
Refresh
Delete
Give feedback
Search virtual network links
Fetched 1 virtual Network link(s).
0 Virtual Network links selected
Link Name
Link Status
Virtual Network
Auto-Registratio
Fallback to Interr
manufacturing-link
Completed
ManufacturingVnet
Disabled
Disabled
Notifications
More events in the activi
Creating virtual
Successfully created vi
Microsoft
Sign out
muhammadosama...
muhammadosama0661@gm...
My Microsoft account
Switch directory
Sign in with a different account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Monitoring
Automation
Add
Refresh
Delete
Give feedback
A record set is a collection of records in a zone that have the same name and are the same type. Record Sets will be automatically fetched in batches of 100 as you scroll through the existing record sets. Learn more
Search
Fetched 2 record set(s).
0 record sets selected
Name
Type
TTL
Value
Auto registered
sensorvm
A
3600
10.1.1.4
False
@
SOA
3600
Email: azureprivatedns-host.microsoft.com
Host: azureprivatedns.net
Refresh: 3600
Retry: 300
Expire: 2419200
Minimum TTL: 10
Serial number: 1
Microsoft
Sign out
muhammadosama...
muhammadosama0661@gm...
My Microsoft account
Switch directory
Sign in with a different account