

Server Deployment: TAILWIND-MBR1

1. Setup

To create the TAILWIND-MBR1 server:

1. Navigate to Azure Virtual Machines and select "Create."
2. Select your subscription and resource group (Azure for Students, AD-Project).
3. Enter the VM name: TAILWIND-MBR1.
4. Select the region: Central India.
5. Choose the availability zone and security type.
6. Select the image: Windows Server 2022 Datacenter - x64 Gen2.
7. Set VM size: Standard_D2s_v3 (2 vCPUs, 8 GiB memory).
8. Configure administrator username and password (TAILWIND-ADMIN2).
9. No public inbound ports enabled for security.

Screenshot: Azure VM Basics Configuration

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](#)

i This subscription may not be eligible to deploy VMs of certain sizes in certain regions.

Project details

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

Subscription * ⓘ

Resource group * ⓘ [Create new](#)

Instance details

Virtual machine name * ⓘ ✓

Region * ⓘ [Deploy to an Azure Extended Zone](#)

Availability options ⓘ

Zone options ⓘ

- ☒ Self-selected zone
Choose up to 3 availability zones, one VM per zone
- ☐ Azure-selected zone (Preview)
Let Azure assign the best zone for your needs

i Using an Azure-selected zone is not supported in region 'Central India'.

2. Review of the Setup

After configuring your VM, Azure provides a comprehensive review section prior to deployment. This is essential for confirming the VM's settings and making sure everything is aligned with the design requirements.

Basics


Subscription, resource group, VM name, location, image, security settings, VM size, inbound ports, and admin username.

Screenshot: VM Configuration Details

Create a virtual machine

Availability zone * ⓘ

Zone 1


 You can now select multiple zones. Selecting multiple zones will create one VM per zone. [Learn more](#)

Security type ⓘ

Trusted launch virtual machines

[Configure security features](#)

Image * ⓘ


 Windows Server 2022 Datacenter - x64 Gen2

[See all images](#) | [Configure VM generation](#)

VM architecture ⓘ

☐ Arm64

☒ x64

 Arm64 is not supported with the selected image.


Run with Azure Spot discount ⓘ

☐

Size * ⓘ


Standard_D2s_v3 - 2 vcpus, 8 GiB memory (\$143.81/month)

[See all sizes](#)

 D-series is recommended for general purpose workloads.

Enable Hibernation ⓘ

☐

 Hibernate is not supported by the size that you have selected. Choose a size that is compatible with Hibernation to enable this feature. [Learn more](#)

Continued...

Create a virtual machine ...

 Arm64 is not supported with the selected image.

Run with Azure Spot discount 

☐

Size * 

Standard_D2s_v3 - 2 vcpus, 8 GiB memory (\$143.81/month) 



[See all sizes](#)



D-series is recommended for general purpose workloads.


Enable Hibernation 

☐

 Hibernate is not supported by the size that you have selected. Choose a size that is compatible with Hibernation to enable this feature. [Learn more](#) 

Administrator account

Username * 

TAILWIND-ADMIN2 

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

Select one or more ports 

 All traffic from the internet will be blocked by default. You will be able to change inbound port rules in the VM > Networking page.

[< Previous](#)

[Next : Disks >](#)

[Review + create](#)

Continued...

Create a virtual machine ...

- Basics
- Disks
- Networking
- Management
- Monitoring
- 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](#)

VM disk encryption

Azure disk storage encryption automatically encrypts your data stored on Azure managed disks (OS and data disks) at rest by default when persisting it to the cloud.

Encryption at host ☐

i Encryption at host is not registered for the selected subscription. [Learn more](#)

OS disk

OS disk size

OS disk type *
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.

Delete with VM ☒

Key management

Enable Ultra Disk compatibility ☐

Data disks for TAILWIND-MBR1

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	Delete with VM
<div>Create and attach a new disk</div> <div>Attach an existing disk</div>					

- < Previous
- Next : Networking >
- Review + create

Continued...

Create a virtual machine ...

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

Define network connectivity for your virtual machine by configuring network interface card (NIC) settings. You can control ports, inbound and outbound connectivity with security group rules, or place behind an existing load balancing solution. [Learn more](#)

Network interface

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

Virtual network ⓘ

vnet-tailwind-lab (AD-Project)

[Edit virtual network](#)

Subnet * ⓘ

servers

[Edit subnet](#) 10.10.10.128 - 10.10.10.255 (128 addresses)

Public IP ⓘ

None

[Create new](#)

NIC network security group ⓘ

☐ None

☒ Basic

☐ Advanced

Public inbound ports * ⓘ

☒ None

☐ Allow selected ports

Select inbound ports

Select one or more ports

All traffic from the internet will be blocked by default. You will be able to change inbound port rules in the VM > Networking page.

Delete NIC when VM is deleted ⓘ

☐

Continued...

Screenshot: Management and Monitoring Settings

NIC network security group ⓘ	<input type="radio"/> None <input checked="" type="radio"/> Basic <input type="radio"/> Advanced
Public inbound ports * ⓘ	<input checked="" type="radio"/> None <input type="radio"/> Allow selected ports
Select inbound ports	<div>Select one or more ports ▾</div> <div><i>i</i> All traffic from the internet will be blocked by default. You will be able to change inbound port rules in the VM > Networking page.</div>
Delete NIC when VM is deleted ⓘ	<input type="checkbox"/>
Enable accelerated networking ⓘ	<input checked="" type="checkbox"/>
Load balancing	
You can place this virtual machine in the backend pool of an existing Azure load balancing solution. Learn more ↗	
Load balancing options ⓘ	<input checked="" type="radio"/> None <input type="radio"/> Azure load balancer Supports all TCP/UDP network traffic, port-forwarding, and outbound flows. <input type="radio"/> Application gateway Web traffic load balancer for HTTP/HTTPS with URL-based routing, SSL termination, session persistence, and web application firewall.

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Next : Management >

Review + create

Continued....

Management & Monitoring Review

Microsoft Defender for Cloud tier, managed identity, backup, diagnostics, patching, and alerts.

Screenshot: Management Configuration Review

Create a virtual machine ...

✓ Validation passed

Basics

Subscription	Azure for Students
Resource group	AD-Project
Virtual machine name	TAILWIND-MBR1
Region	Central India
Availability options	Availability zone
Zone options	Self-selected zone
Availability zone	1
Security type	Trusted launch virtual machines
Enable secure boot	Yes
Enable vTPM	Yes
Integrity monitoring	No
Image	Windows Server 2022 Datacenter - Gen2
VM architecture	x64
Size	Standard D2s v3 (2 vcpus, 8 GiB memory)
Enable Hibernation	No
Username	TAILWIND-ADMIN2
Public inbound ports	None
Already have a Windows license?	No
Azure Spot	No

Continued....

Disks & Networking Review

OS disk size/type, managed disk status, ephemeral disk, delete behavior. Networking: VNet name, subnet, public IP assignment, accelerated networking, and NIC behaviors.

Screenshot: Disks and Networking Review

Create a virtual machine ...

✓ Validation passed

Azure Spot	No
Disks	
OS disk size	Image default
OS disk type	Standard SSD LRS
Use managed disks	Yes
Delete OS disk with VM	Enabled
Ephemeral OS disk	No
Networking	
Virtual network	vnet-tailwind-lab
Subnet	servers
Public IP	None
Accelerated networking	On
Place this virtual machine behind an existing load balancing solution?	No
Delete NIC when VM is deleted	Disabled

Continued....

Final Configuration Summary

Complete overview of all VM settings before deployment.

Screenshot: Final VM Settings Summary

Create a virtual machine ...

✓ Validation passed

Management

Microsoft Defender for Cloud	Basic (free)
System assigned managed identity	Off
Login with Microsoft Entra ID	Off
Auto-shutdown	Off
Backup	Disabled
Site Recovery	Disabled
Enable periodic assessment	Off
Enable hotpatch	Off
Patch orchestration options	OS-orchestrated patching: patches will be installed by OS

Monitoring

Alerts	Off
Boot diagnostics	On
Enable OS guest diagnostics	Off
Enable application health monitoring	Off

Advanced

Extensions	None
VM applications	None
Cloud init	No
User data	No
Disk controller type	SCSI
Proximity placement group	None
Capacity reservation group	None

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Next >

Create

3. IP Configuration

Assigning a Static Private IP to TAILWIND-MBR1

1. Open the network interface settings for TAILWIND-MBR1.
2. Choose Static under Private IP address allocation.
3. Set the desired IP (e.g., 10.10.10.150).

Screenshot: Edit IP Configuration

Edit IP configuration

✕

tailwind-mbr1782_z1

i A primary IP configuration already exists. Any additional IP configurations will be secondary. The virtual network this network interface is attached to only supports IPv4. [Learn more](#)

Name *	ipconfig1
IP version	IPv4
Type	Primary

Private IP address settings

Allocation

☐ Dynamic

☒ Static

Private IP address *

10.10.10.150


Public IP address settings

Associate public IP address

☐

Save

Cancel

 Give feedback

Screenshot: IP Settings Overview

IP Settings

Enable IP forwarding ⓘ

☐

Virtual network

vnet-tailwind-lab

Subnet * ⓘ

servers (10.10.10.128/25) 121 free IP addresses



121 free IP addresses

Private and public IP addresses can be assigned to a virtual machine's network interface controller. You can add as many private and public IPv4 addresses as necessary to a network interface, within the limits listed in the [Azure limits article](#). Private IP address prefix types can only be created as a secondary IP configuration. [Learn more](#)

+ Add ⚙ Make primary 🗑 Delete

	Name	IP Version	Type	Private IP Address	Public IP Address
<input type="checkbox"/>	ipconfig1	IPv4	Primary	10.10.10.150 (Static)	-

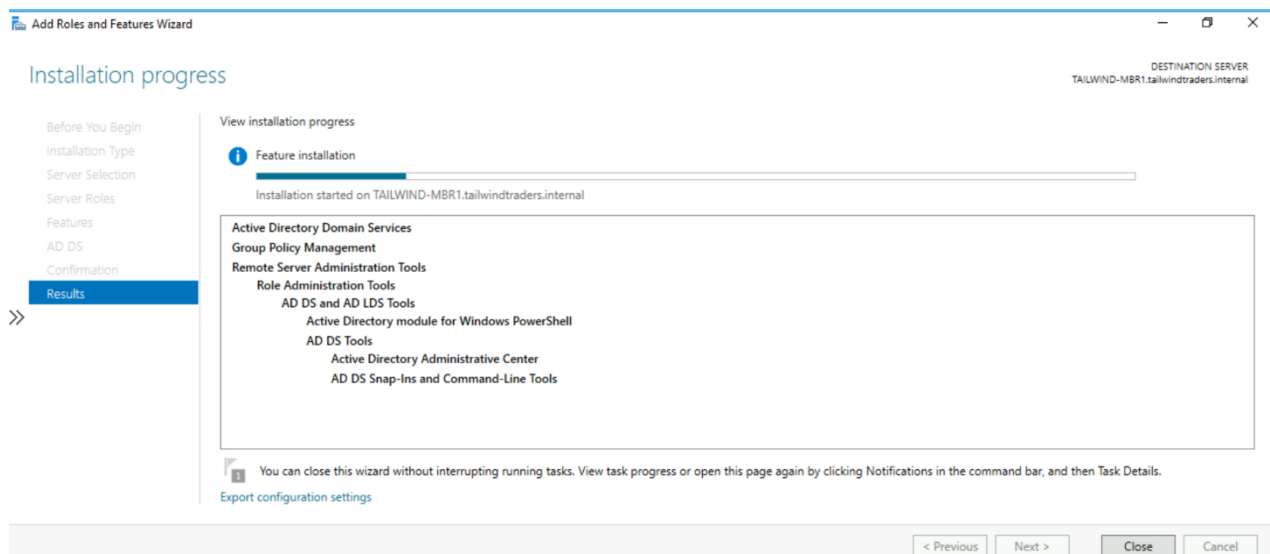
4. Promotion to Active Directory Domain Services

a) Install the AD DS Role and Begin Promotion

Use Server Manager's "Add Roles and Features Wizard."

Install roles: Active Directory Domain Services, Group Policy Management, AD Admin Center, etc.

Screenshot: Installation Progress



b) Deployment Configuration (Add to Existing Domain)

Select: Add a domain controller to an existing domain

Set domain name: tailwindtraders.internal

Supply credentials: TAILWINDTRADERS\TAILWIND-ADMIN1

Screenshot: Deployment Configuration

The screenshot shows the 'Deployment Configuration' window of the Active Directory Domain Services Configuration Wizard. The title bar reads 'ACTIVE DIRECTORY DOMAIN SERVICES CONFIGURATION WIZARD'. The main title is 'Deployment Configuration'. On the right, it says 'TARGET SERVER TAILWIND-MBR1.tailwindtraders.internal'. A left-hand navigation pane lists: 'Deployment Configuration' (selected), 'Domain Controller Options', 'Additional Options', 'Paths', 'Review Options', 'Prerequisites Check', 'Installation', and 'Results'. The main area contains the following sections: 'Select the deployment operation' with three radio buttons (the first is selected: 'Add a domain controller to an existing domain', followed by 'Add a new domain to an existing forest' and 'Add a new forest'); 'Specify the domain information for this operation' with a 'Domain:' label and a text box containing 'tailwindtraders.internal' and a 'Select...' button; and 'Supply the credentials to perform this operation' with a text box containing 'TAILWINDTRADERS\TAILWIND-ADMIN1' and a 'Change...' button. At the bottom right, there are four buttons: '< Previous', 'Next >', 'Install', and 'Cancel'. A link 'More about deployment configurations' is at the bottom left of the main area.

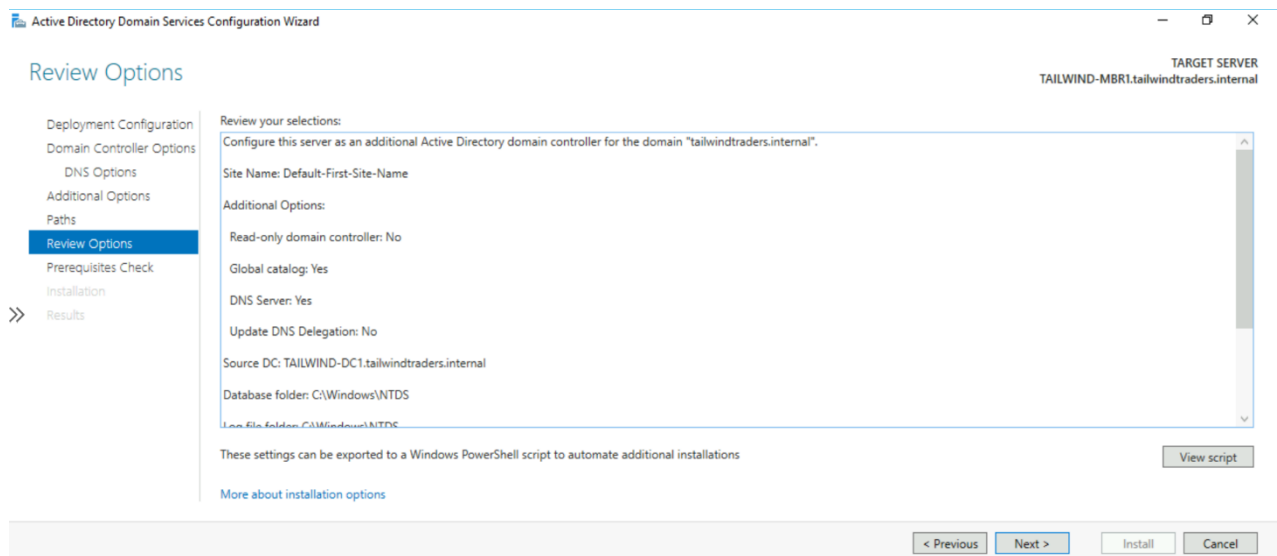
c) Review Options - AD DS Promotion (TAILWIND-MBR1)

Carefully review all selected options before installation.

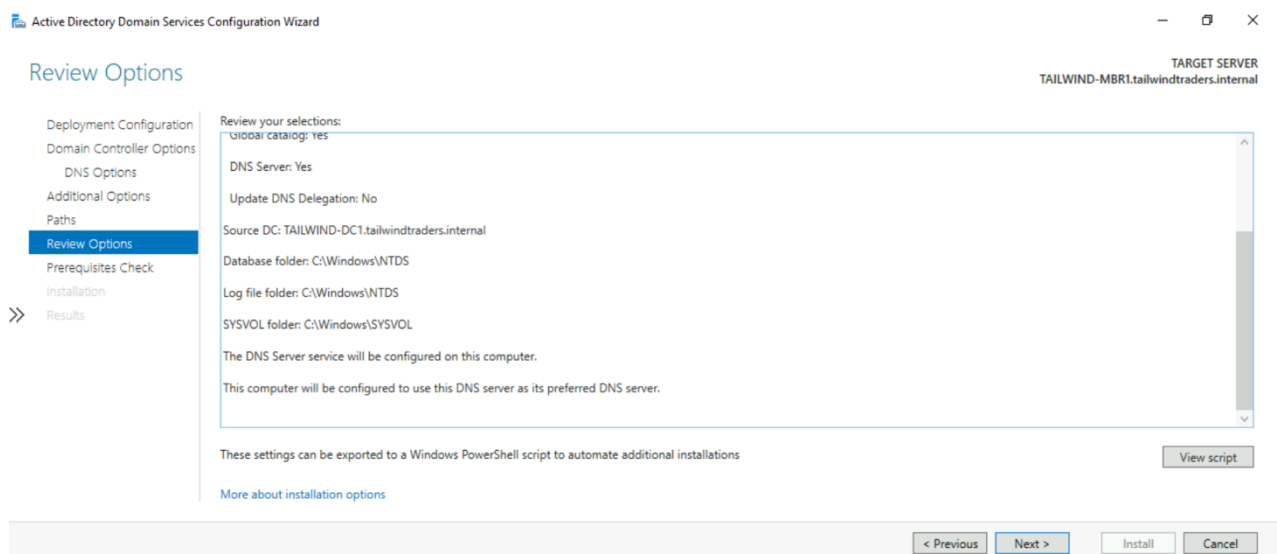
Configuration summary: additional domain controller for existing domain.

- Domain: tailwindtraders.internal
- Site Name: Default-First-Site-Name
- Read-only domain controller: No
- Global Catalog: Yes
- DNS Server: Yes
- Update DNS delegation: No
- Source DC: TAILWIND-DC1.tailwindtraders.internal
- Database folder: C:\Windows\NTDS
- Log file folder: C:\Windows\NTDS
- SYSVOL folder: C:\Windows\SYSVOL

Screenshot: Review Options Configuration Details



Screenshot: Review Options DNS Settings and Paths



d) Confirmation and Verification: Successful Promotion to AD DS

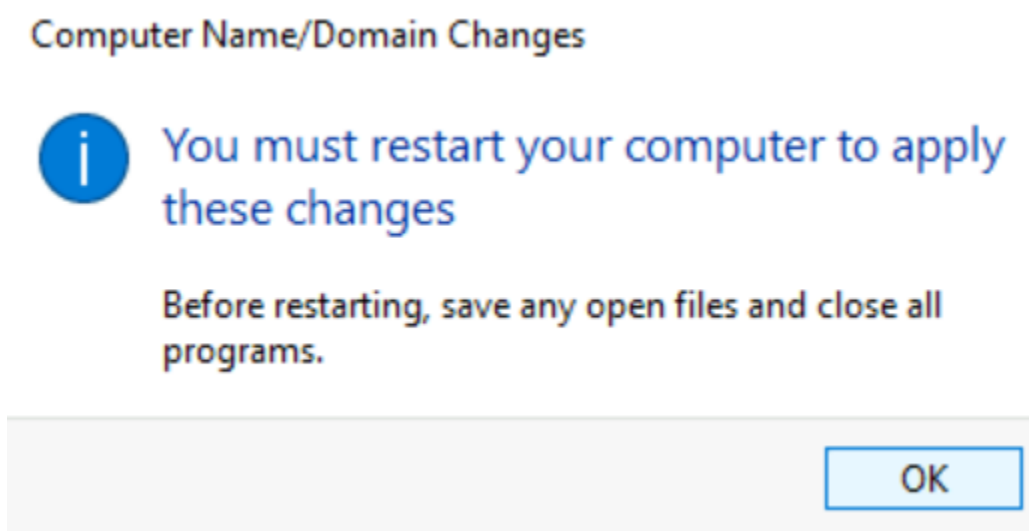
After configuration and review, the server is promoted to domain controller.

Promotion Confirmation:

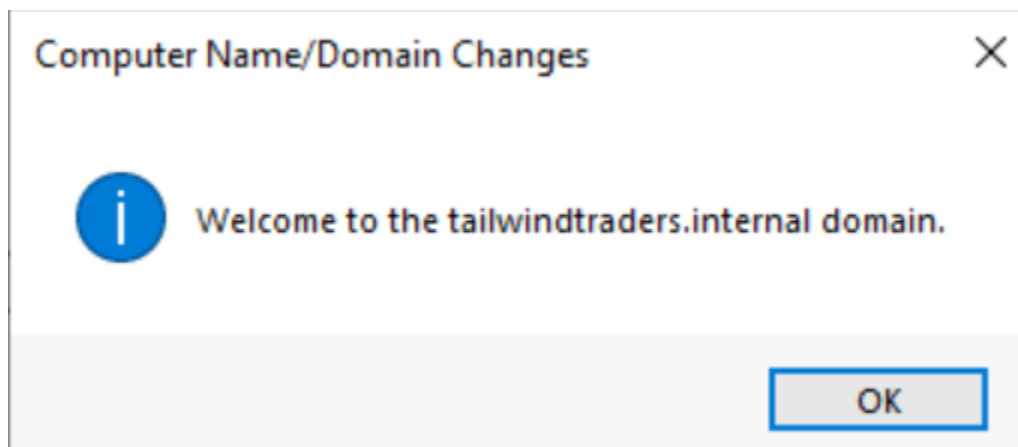
Successful configuration, restart required to finalize.

Continued...

Screenshot: Restart Notification



Screenshot: Welcome to Domain Confirmation



Screenshot: Domain User Context

```
C:\Users\TAILWIND-ADMIN2>whoami /fqdn
CN=TAILWIND-ADMIN1,CN=Users,DC=tailwindtraders,DC=internal
```

Continued....

AD DS Console Verification:

Server appears online, correct static IP, healthy status.

Screenshot: nltest Command Verification

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.20348.4052]
(c) Microsoft Corporation. All rights reserved.

C:\Users\TAILWIND-ADMIN2>nltest /dsgetdc:tailwindtraders.internal
DC: \\TAILWIND-DC1.tailwindtraders.internal
Address: \\10.10.10.140
Dom Guid: 89e9a0b9-052a-4a99-904d-286f2de9820e
Dom Name: tailwindtraders.internal
Forest Name: tailwindtraders.internal
Dc Site Name: Default-First-Site-Name
Our Site Name: Default-First-Site-Name
Flags: PDC GC DS LDAP KDC TIMESERV WRITABLE DNS_DC DNS_DOMAIN DNS_FOREST CLOSE_SITE FULL_SECRET WS_DS_8 DS_9 DS_10 KEYLIST
The command completed successfully
```

5. Post-Deployment Verification

Domain Controller Status

The TAILWIND-MBR1 server has been successfully promoted to domain controller with the following roles:

- PDC (Primary Domain Controller)
- GC (Global Catalog)
- DNS Server
- LDAP Server
- Kerberos Key Distribution Center (KDC)
- Time Server
- Full Active Directory Database

Network Configuration Confirmed

- Static IP: 10.10.10.150
- Subnet: servers (10.10.10.128/25)
- Virtual Network: vnet-tailwind-lab
- DNS Configuration: Integrated with AD DS

Continued....

Security Configuration

- Trusted Launch enabled
- No public IP assigned
- Basic Network Security Group
- All inbound ports blocked from internet
- Platform-managed encryption

The TAILWIND-MBR1 server is now fully operational as an additional domain controller in the tailwindtraders.internal domain.