

Install and Configure AD & DNS on Windows Server

Install and Configure AD and DNS on Windows Server: Complete Guide

Setting up a centralized network infrastructure requires careful planning. One essential task is to install and configure AD and DNS on Windows Server, which allows you to manage users, computers, and domains efficiently.

This guide walks you through every step so that even if you're just starting, you can follow along and get your environment ready.

Why Install AD and DNS Together?

Before we dive into the steps, it's important to understand the relationship between Active Directory (AD) and Domain Name System (DNS). Active Directory relies on DNS to function properly, as it uses DNS to locate domain controllers within the network.

Therefore, whenever you install AD, DNS configuration should not be ignored. In fact, the installation wizard often installs DNS automatically if it's missing.

Step 1: Prepare Your Windows Server

You need to make sure for some points:

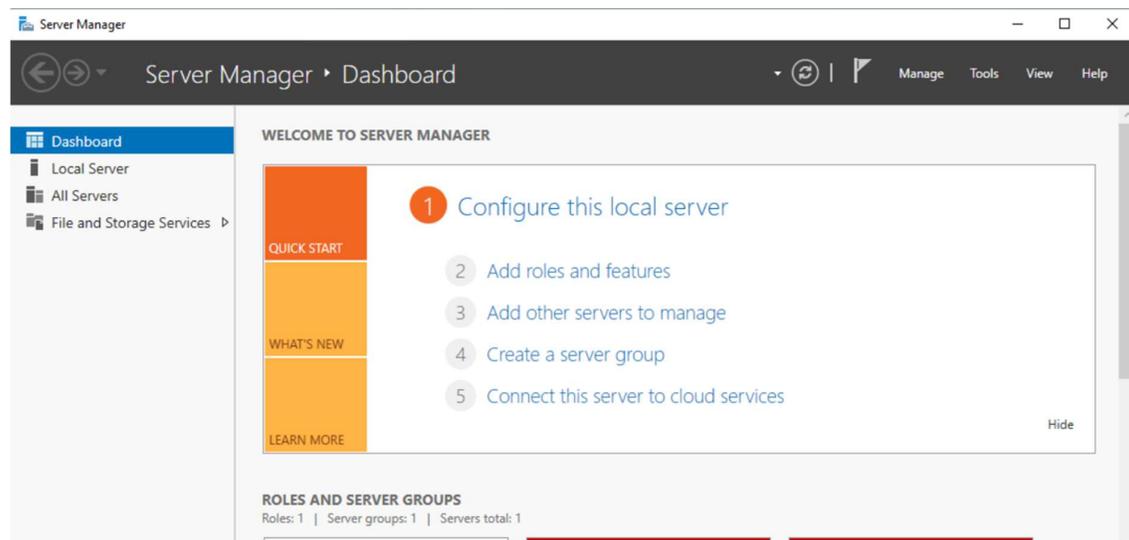
A static IP address configured

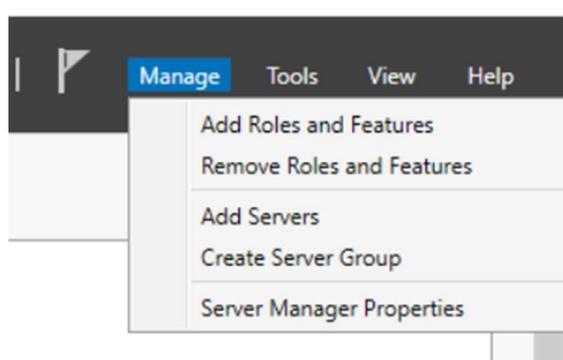
A unique and appropriate computer name

Windows Server roles and features accessible

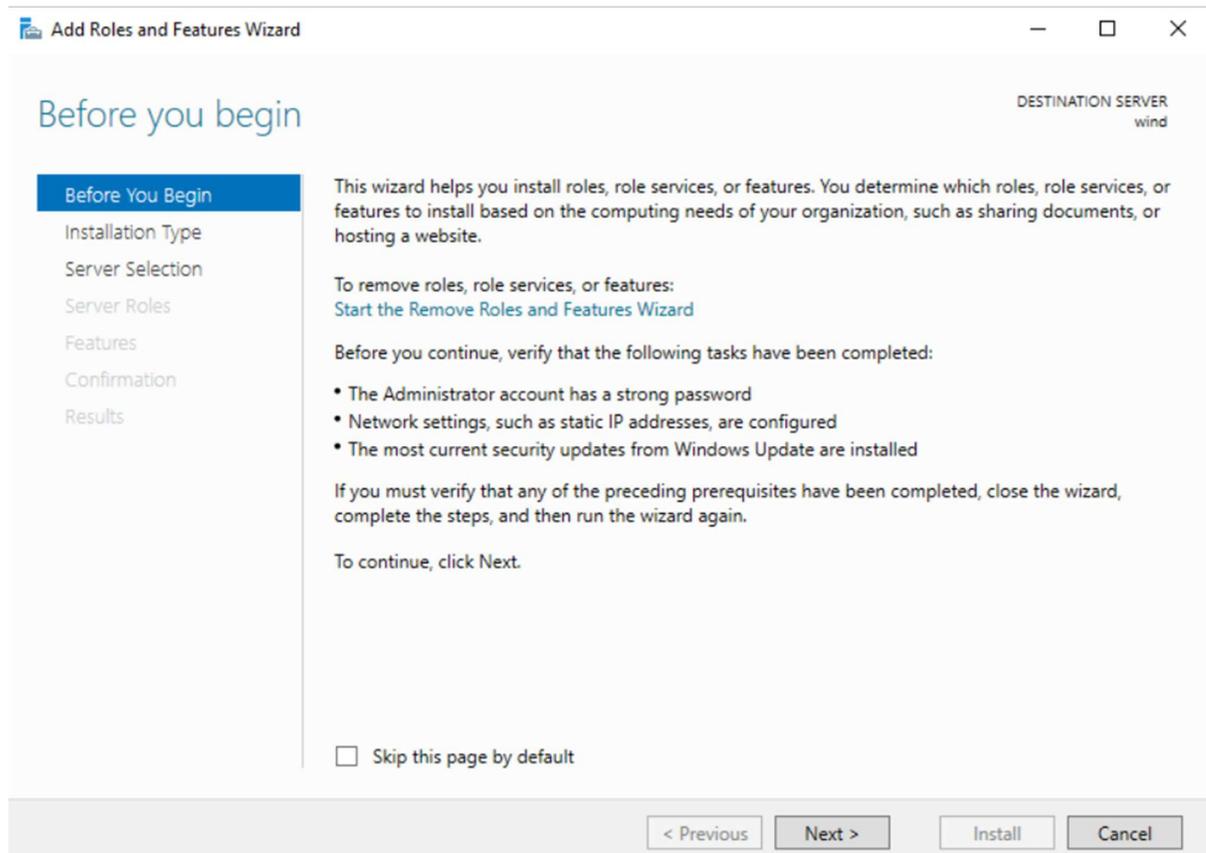
Step 2: Add AD DNS Role

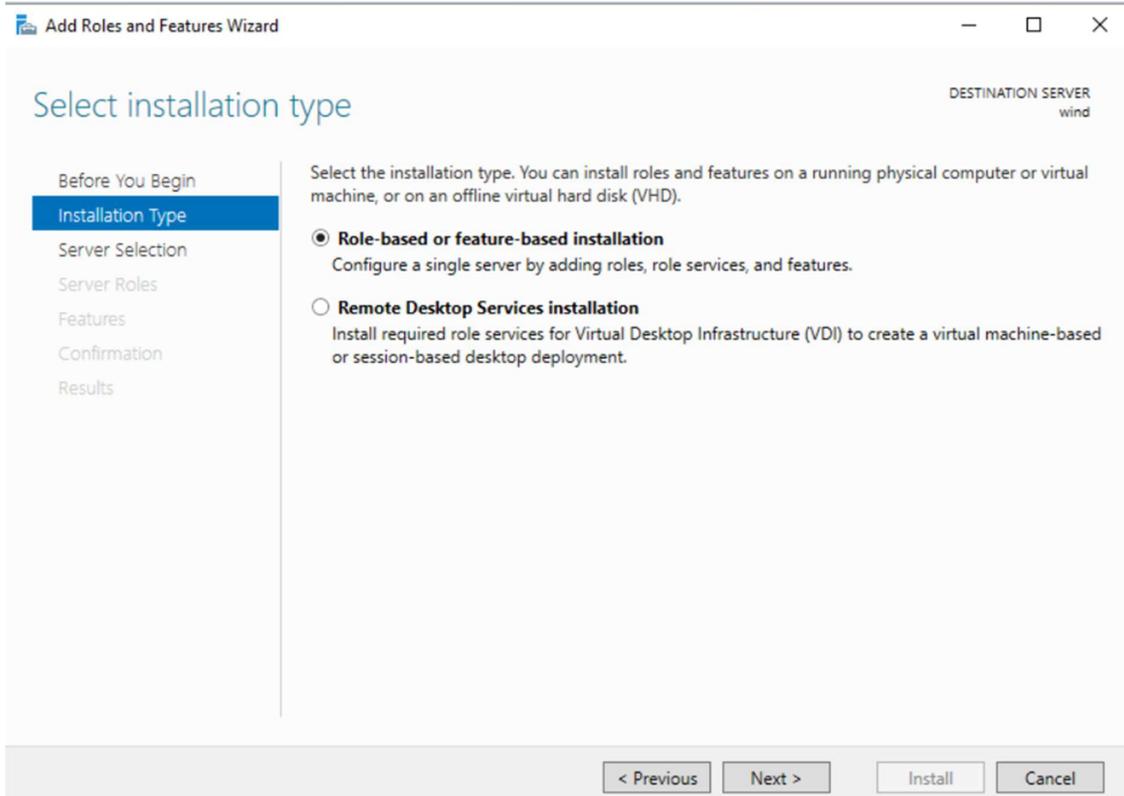
Open **Server Manager** and click "Add Roles and Features". You can see below images for your reference.



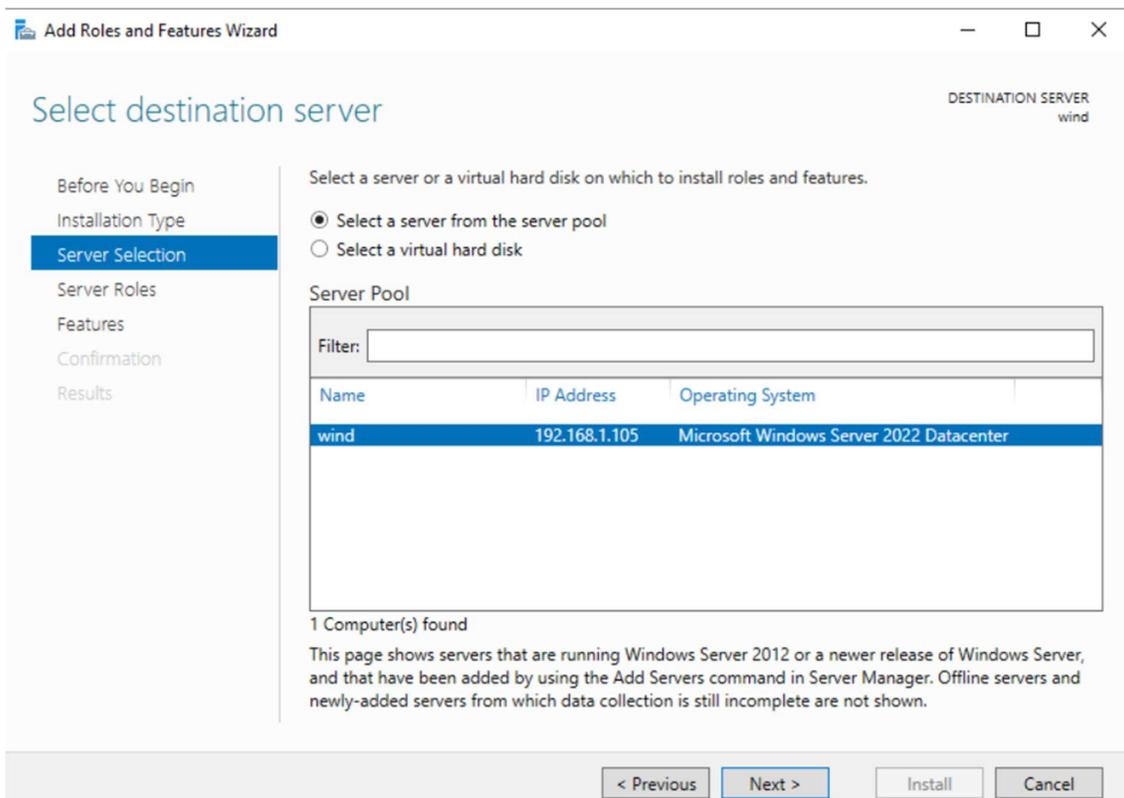


Once you are started, you can go ahead and Choose **“Role-based or feature-based installation”**

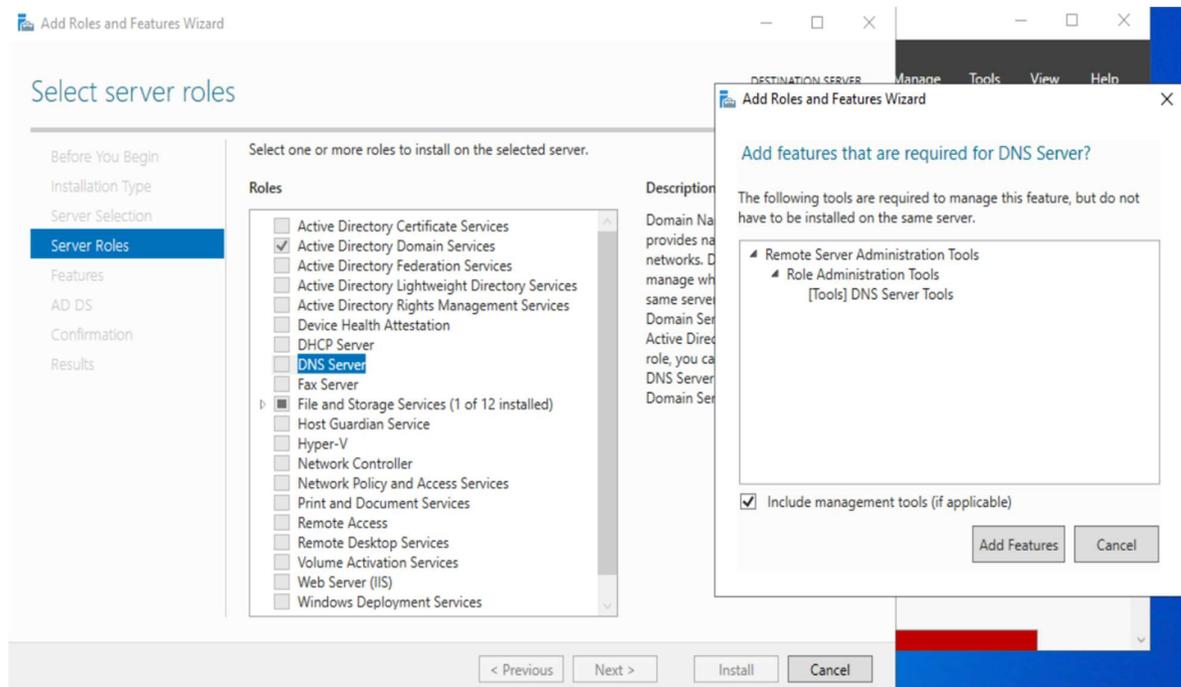
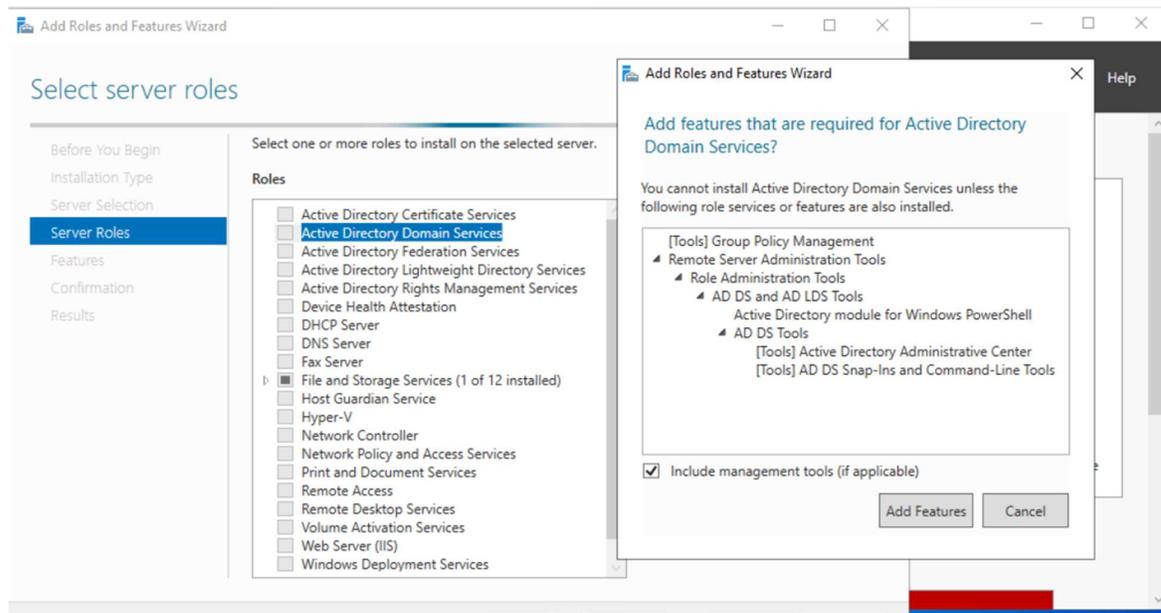




Now select the local server from the checklist.



Once you have selected the server, you can select the Roles “Active Directory Domain Services” and “DNS Role” will be prompted automatically. Select it as well. Follow images:



Follow the images mentioned below:

Add Roles and Features Wizard DESTINATION SERVER wind

Active Directory Domain Services

Before You Begin
Installation Type
Server Selection
Server Roles
Features
AD DS
DNS Server
Confirmation
Results

Active Directory Domain Services (AD DS) stores information about users, computers, and other devices on the network. AD DS helps administrators securely manage this information and facilitates resource sharing and collaboration between users.

Things to note:

- To help ensure that users can still log on to the network in the case of a server outage, install a minimum of two domain controllers for a domain.
- AD DS requires a DNS server to be installed on the network. If you do not have a DNS server installed, you will be prompted to install the DNS Server role on this machine.

 Azure Active Directory, a separate online service, can provide simplified identity and access management, security reporting, single sign-on to cloud and on-premises web apps.
[Learn more about Azure Active Directory](#)
[Configure Office 365 with Azure Active Directory Connect](#)

< Previous Next > Install Cancel

Add Roles and Features Wizard DESTINATION SERVER wind

DNS Server

Before You Begin
Installation Type
Server Selection
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Domain Name System (DNS) provides a standard method for associating names with numeric Internet addresses. This makes it possible for users to refer to network computers by using easy-to-remember names instead of a long series of numbers. In addition, DNS provides a hierarchical namespace, ensuring that each host name will be unique across a local or wide-area network. Windows DNS services can be integrated with Dynamic Host Configuration Protocol (DHCP) services on Windows, eliminating the need to add DNS records as computers are added to the network.

Things to note:

- DNS server integration with Active Directory Domain Services automatically replicates DNS data along with other Directory Service data, making it easier to manage DNS.
- Active Directory Domain Services requires a DNS server to be installed on the network. If you are installing a domain controller, you can also install the DNS Server role using Active Directory Domain Services Installation Wizard by selecting the Active Directory Domain Services role.

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Add Roles and Features Wizard DESTINATION SERVER
wind

Confirm installation selections

Before You Begin
Installation Type
Server Selection
Server Roles
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Results

To install the following roles, role services, or features on selected server, click Install.

Restart the destination server automatically if required

Optional features (such as administration tools) might be displayed on this page because they have been selected automatically. If you do not want to install these optional features, click Previous to clear their check boxes.

- DNS Server
- Group Policy Management
- Remote Server Administration Tools
 - Role Administration Tools
 - AD DS and AD LDS Tools
 - Active Directory module for Windows PowerShell
 - AD DS Tools
 - Active Directory Administrative Center
 - AD DS Snap-Ins and Command-Line Tools
- DNS Server Tools

[Export configuration settings](#)
[Specify an alternate source path](#)

< Previous Next > Install Cancel

Add Roles and Features Wizard DESTINATION SERVER
wind

Installation progress

Before You Begin
Installation Type
Server Selection
Server Roles
Features
AD DS
DNS Server
Confirmation
Results

View installation progress

i Feature installation

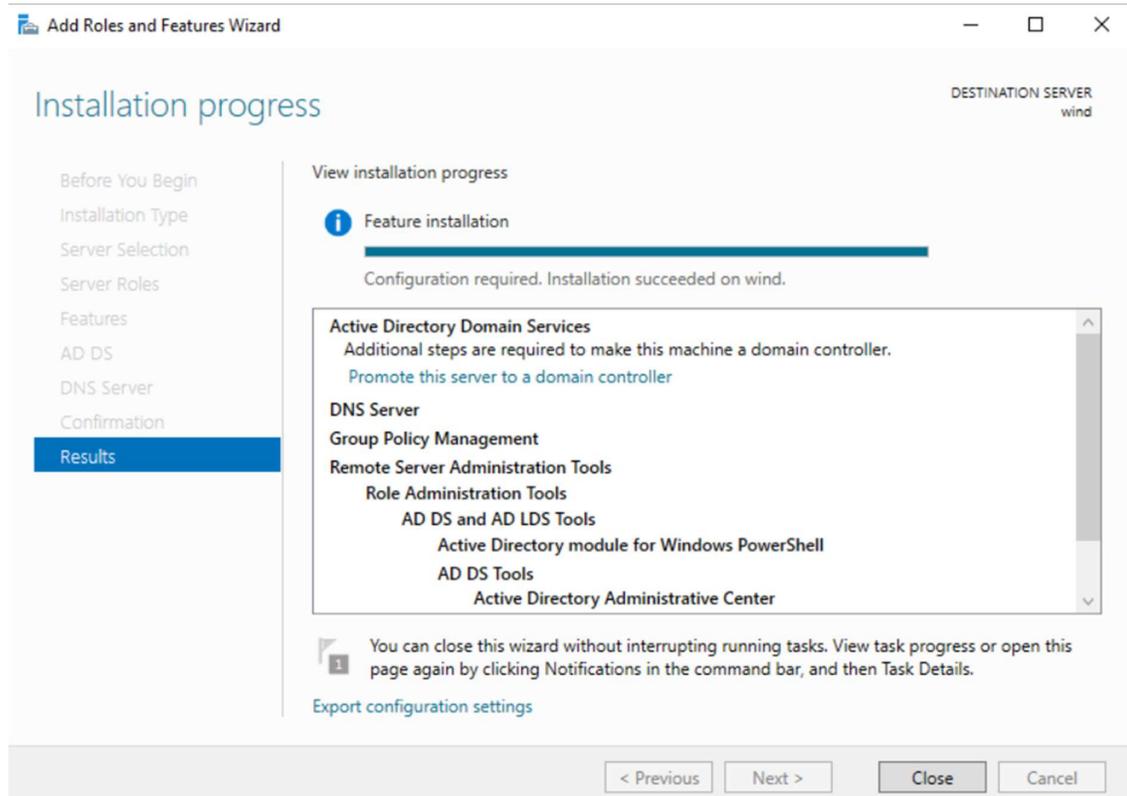
Installation started on wind

- Active Directory Domain Services
- DNS Server
- Group Policy Management
- Remote Server Administration Tools
 - Role Administration Tools
 - AD DS and AD LDS Tools
 - Active Directory module for Windows PowerShell
 - AD DS Tools
 - Active Directory Administrative Center
 - AD DS Snap-Ins and Command-Line Tools
- DNS Server Tools

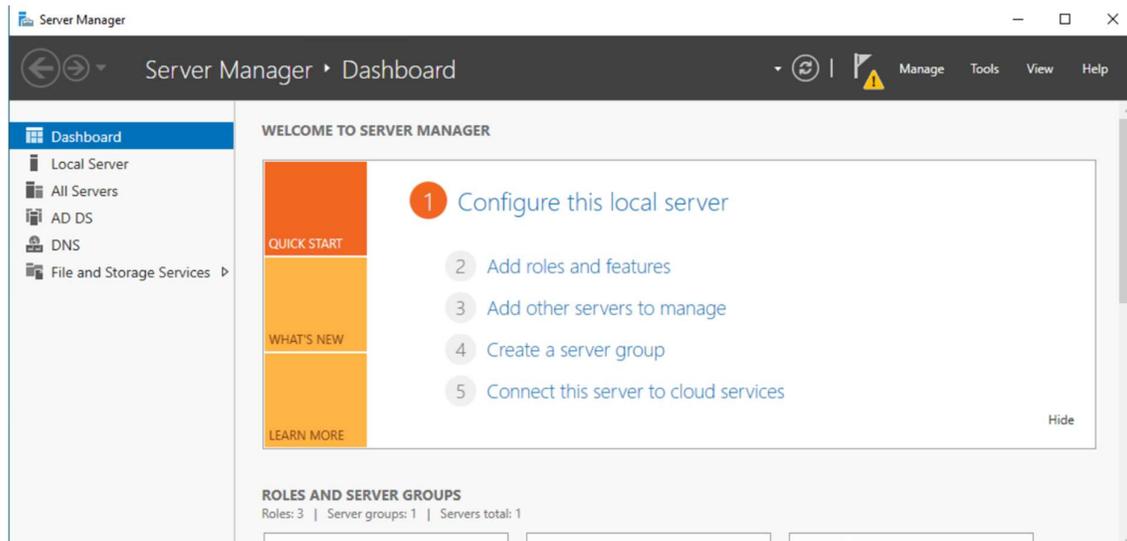
1 You can close this wizard without interrupting running tasks. View task progress or open this page again by clicking Notifications in the command bar, and then Task Details.

[Export configuration settings](#)

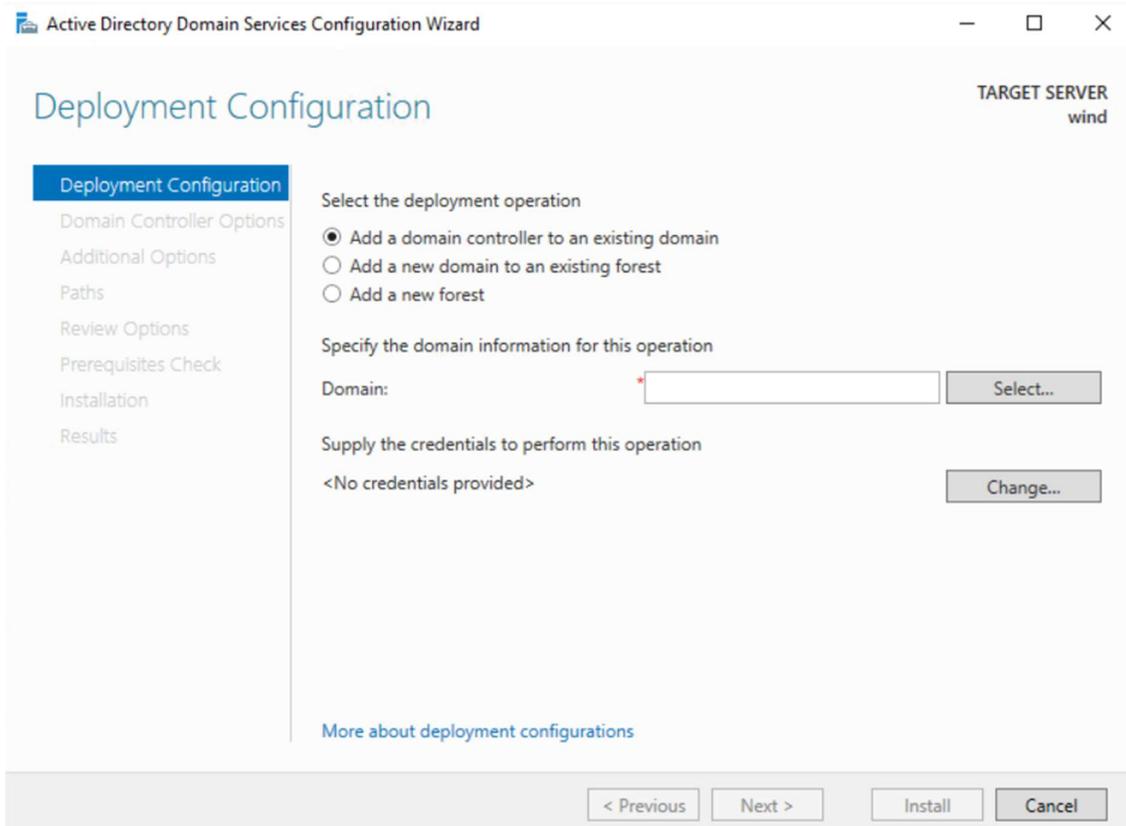
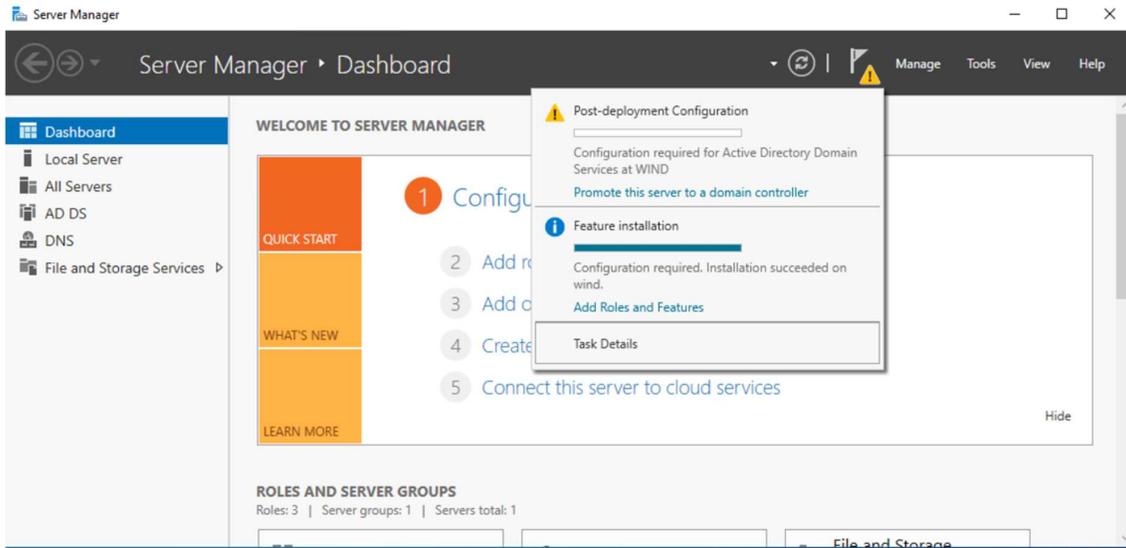
< Previous Next > Install Cancel

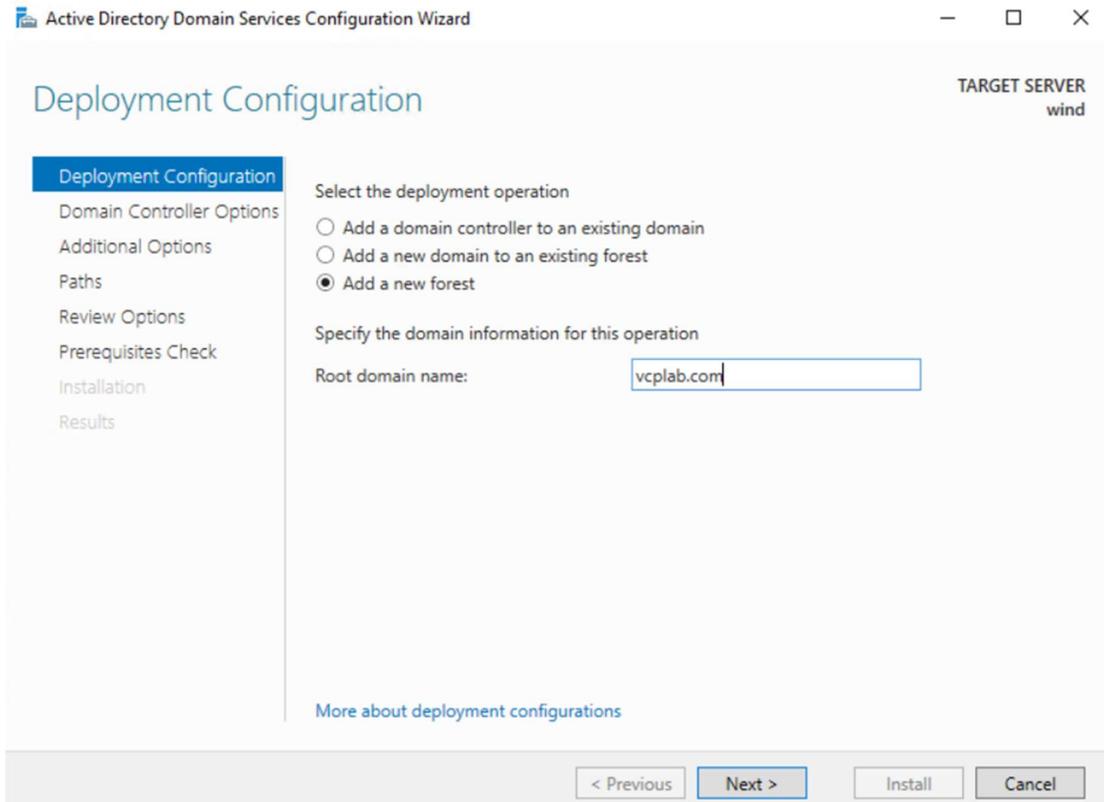


Once done, Click on the yellow sign appears.

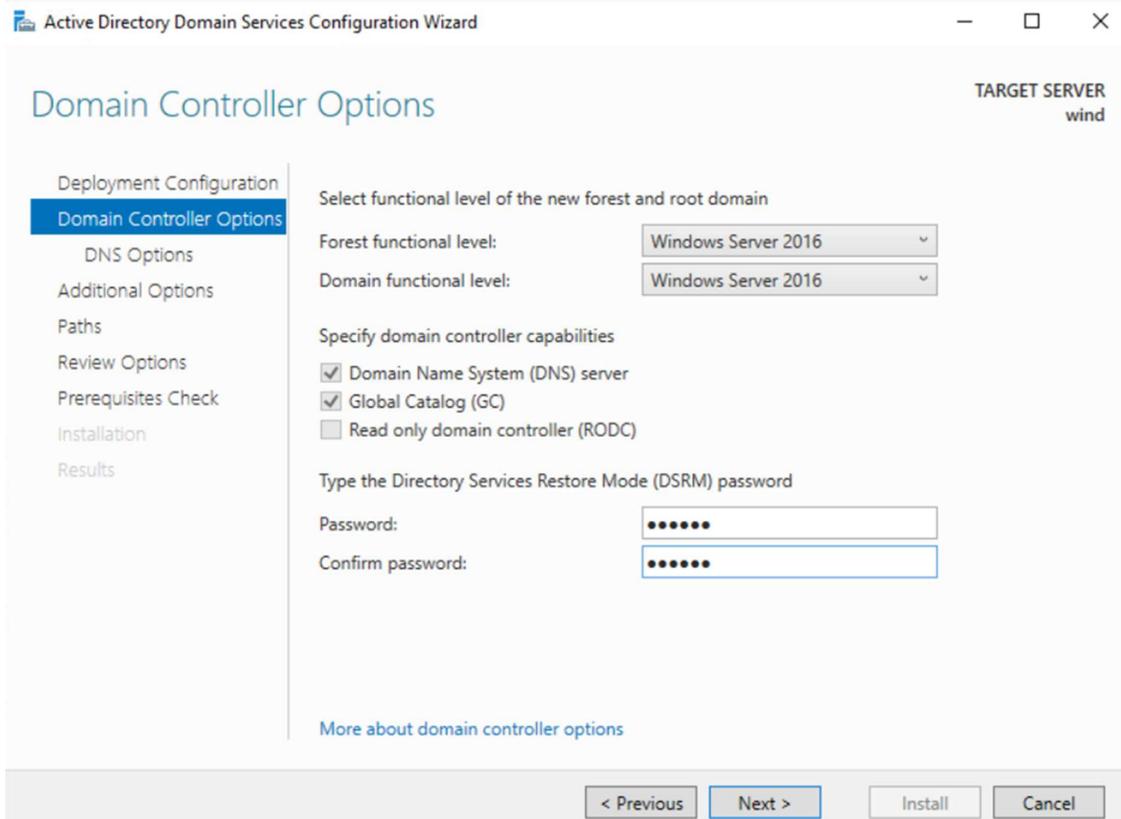


After that you can click on **“Promote this server to a domain controller”**. This will open a prompt for adding a **“New Forest”** and provide **“Root Domain Name”** link I have **“vcplab.com”**.





Enter the DSRM password and move forward.



DNS Options

TARGET SERVER
wind

 A delegation for this DNS server cannot be created because the authoritative parent zone cannot be found... [Show more](#) 

- Deployment Configuration
- Domain Controller Options
- DNS Options**
- Additional Options
- Paths
- Review Options
- Prerequisites Check
- Installation
- Results

Specify DNS delegation options

Create DNS delegation

[More about DNS delegation](#)

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Install

Cancel

Additional Options

TARGET SERVER
wind

- Deployment Configuration
- Domain Controller Options
- DNS Options
- Additional Options**
- Paths
- Review Options
- Prerequisites Check
- Installation
- Results

Verify the NetBIOS name assigned to the domain and change it if necessary

The NetBIOS domain name:

VCPLAB

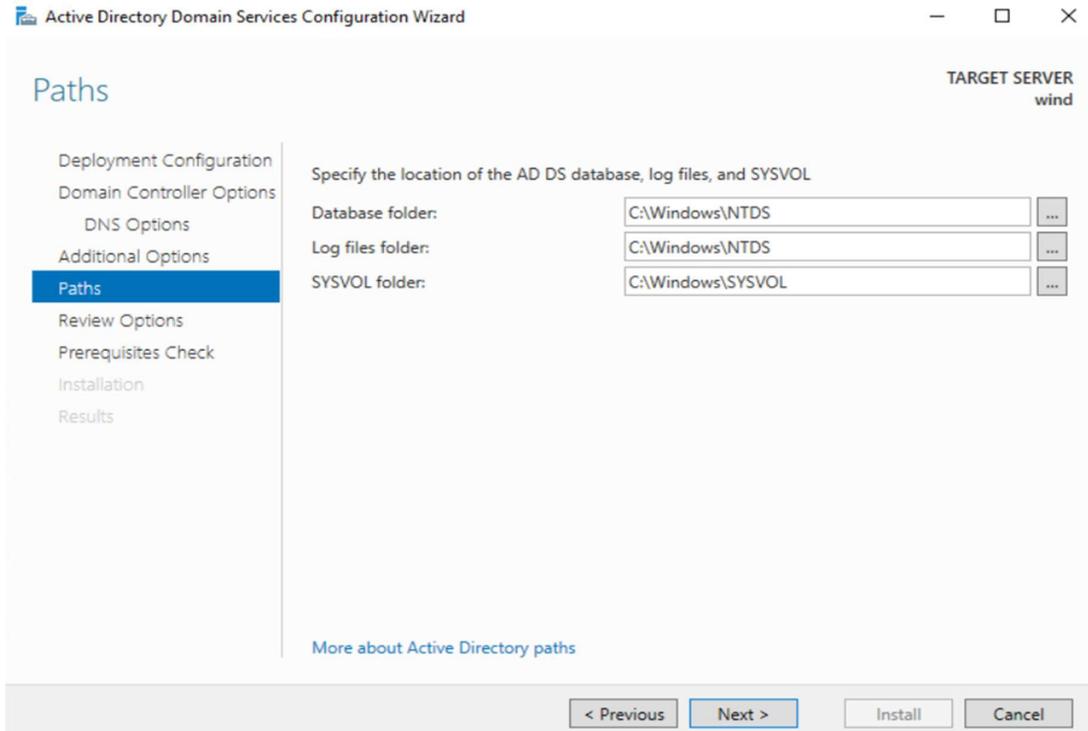
[More about additional options](#)

< Previous

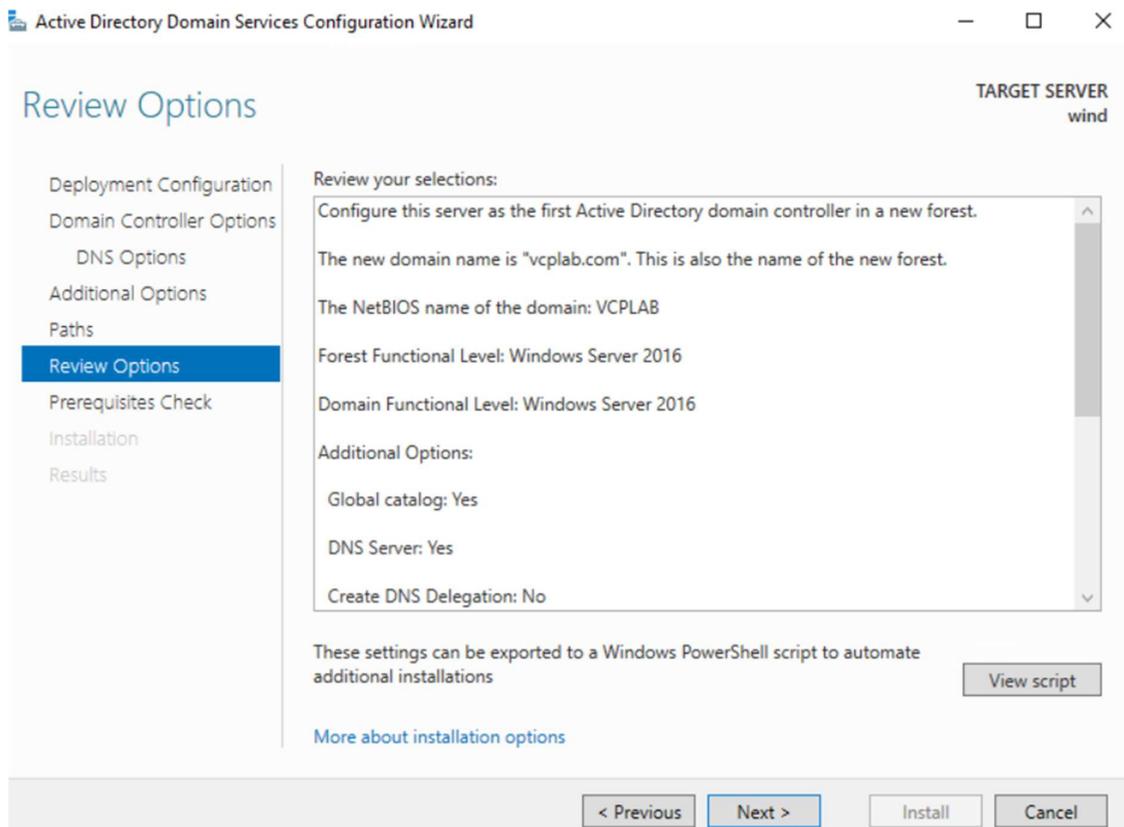
Next >

Install

Cancel



Now Review all **“Configuration”** and follow steps.



Prerequisites Check

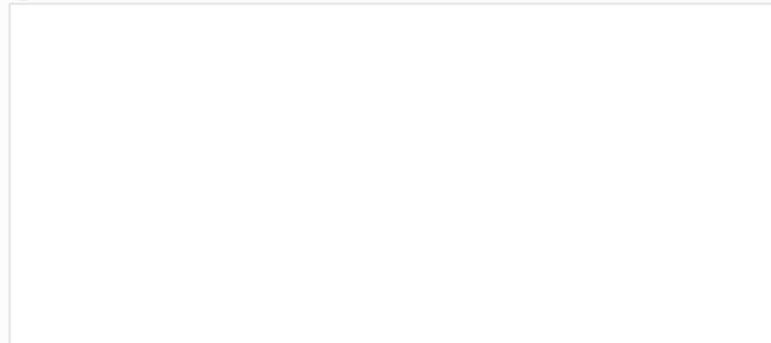
TARGET SERVER
wind

Deployment Configuration
Domain Controller Options
 DNS Options
Additional Options
Paths
Review Options
Prerequisites Check
Installation
Results

Prerequisites need to be validated before Active Directory Domain Services is installed on this computer

Verifying prerequisites for domain controller operation...

View results



⚠ If you click Install, the server automatically reboots at the end of the promotion operation.

[More about prerequisites](#)

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Next >

Install

Cancel

Prerequisites Check

TARGET SERVER
wind

✔ All prerequisite checks passed successfully. Click 'Install' to begin installation.

[Show more](#) ×

Deployment Configuration
Domain Controller Options
 DNS Options
Additional Options
Paths
Review Options
Prerequisites Check
Installation
Results

Prerequisites need to be validated before Active Directory Domain Services is installed on this computer

[Rerun prerequisites check](#)

View results

⚠ Windows Server 2022 domain controllers have a default for the security setting named "Allow cryptography algorithms compatible with Windows NT 4.0" that prevents weaker cryptography algorithms when establishing security channel sessions.

For more information about this setting, see Knowledge Base article 942564 (<http://go.microsoft.com/fwlink/?LinkId=104751>).

⚠ This computer has at least one physical network adapter that does not have static IP address(es) assigned to its IP Properties. If both IPv4 and IPv6 are enabled for a network adapter, both IPv4 and IPv6 static IP addresses should be assigned to both IPv4 and IPv6 Properties of the physical network adapter. Such static IP address(es) assignment should be done to all the physical network adapters for reliable Domain Name System

⚠ If you click Install, the server automatically reboots at the end of the promotion operation.

[More about prerequisites](#)

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Next >

Install

Cancel

Active Directory Domain Services Configuration Wizard

Installation

TARGET SERVER
wind

Progress

Starting

View detailed operation results

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More about installation options

< Previous Next > Install Cancel

Active Directory Domain Services Configuration Wizard

Results

TARGET SERVER
wind

✔ This server was successfully configured as a domain controller [Show more](#) ✕

View detailed operation results

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⚠ A delegation for this DNS server cannot be created because the authoritative parent zone cannot be found or it does not run Windows DNS server. If you are integrating with an existing DNS infrastructure, you should manually create a delegation to this DNS server in the parent zone to ensure reliable name resolution from outside the domain "vcplab.com". Otherwise, no action is required.

More about results

< Previous Next > Close Cancel

Closing the above screen will reboot the server and after reboot:

Step 3: Verify AD and DNS Installation

Log in using the domain administrator credentials

Open Server Manager → Tools → Active Directory Users and Computers

Also check DNS Manager under the same Tools menu

You should see the DNS zone (**vcplab.com**) already created, and your domain controller registered inside.

Step 4: Test the Configuration

To confirm everything is working:

Try joining a client machine to the new domain

Run nslookup from a client to verify DNS resolution

Use ping to test connectivity to the domain controller

Check Event Viewer for any DNS or AD DS related warnings or errors.

Final Thoughts

As shown above, the process to install and configure AD and DNS on Windows Server is straightforward when approached step-by-step. Because DNS is tightly integrated with AD, both need to be configured correctly to avoid authentication or domain resolution issues later.

By following this guide, you'll not only establish a robust domain environment but also ensure smooth user and resource management across your network. Moreover, centralizing security and policies will become far easier with a properly installed Active Directory and DNS setup.