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Active Directory Installation Guide (Windows Server 2019)

1. Introduction

This documentation provides a structured, beginner-friendly guide to installing **Active Directory Domain Services (AD DS)** on a Windows Server 2019 virtual machine. It is suitable for IT support, system administrators, and anyone building a home lab environment.

2. Requirements

2.1 System Requirements

Component Minimum

OS	Windows Server 2019 (Desktop Experience recommended)
RAM	4–8 GB
CPU	2 cores
Disk	60 GB or more

2.2 Software Requirements

- Windows Server 2019 installed on VMware
 - VMware Tools installed
 - Administrator access
-

3. Installing Active Directory Domain Services (AD DS)

3.1 Open Server Manager

- AD installation begins in **Server Manager**, which opens automatically on login.
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3.2 Add Roles and Features

1. Click **Manage** (top right)

2. Select Add Roles and Features

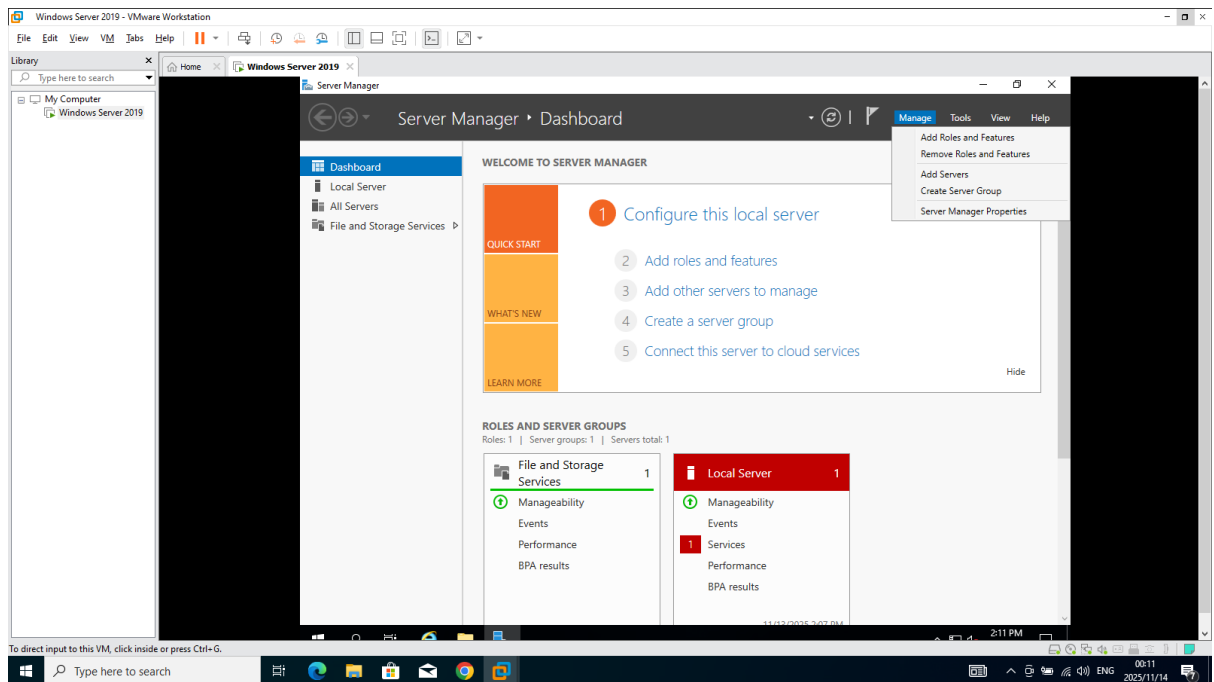


Figure 6: Server Dashboard showing Manager at the top-right corner.

3.3 Select Installation Type

- Choose **Role-based or feature-based installation**
- Click **Next**

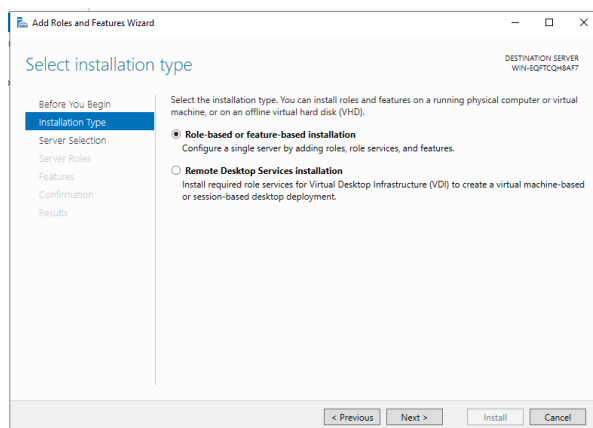


Figure 7: Screen showing Select Installation Type.

3.4 Select Destination Server

- Choose **Select a server from the server pool**

- Verify your server name is selected
- Click **Next**

3.5 Select Server Roles

1. Check **Active Directory Domain Services**
2. A pop-up will appear → Click **Add Features**
3. Check **Group Policy Management**

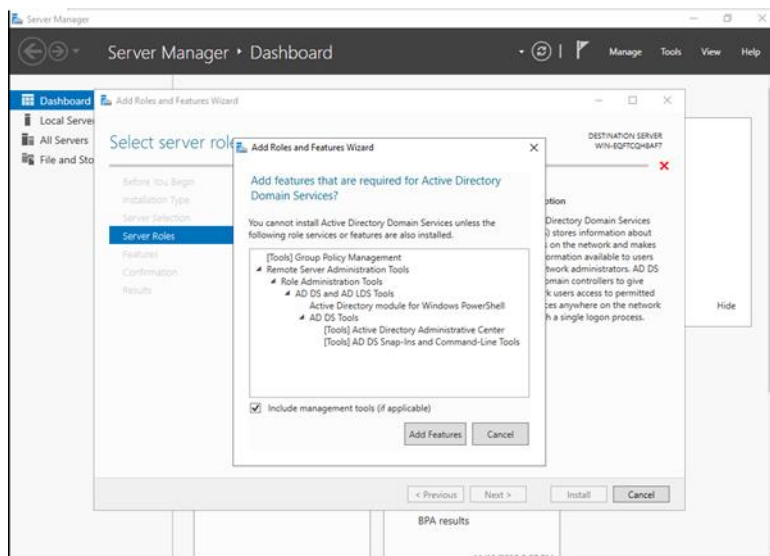


Figure 8: Screen showing Group Policy Management and Add Features

4. A pop-up will appear → Click **Add Features**
5. Check **Remote Server Administration Tool**

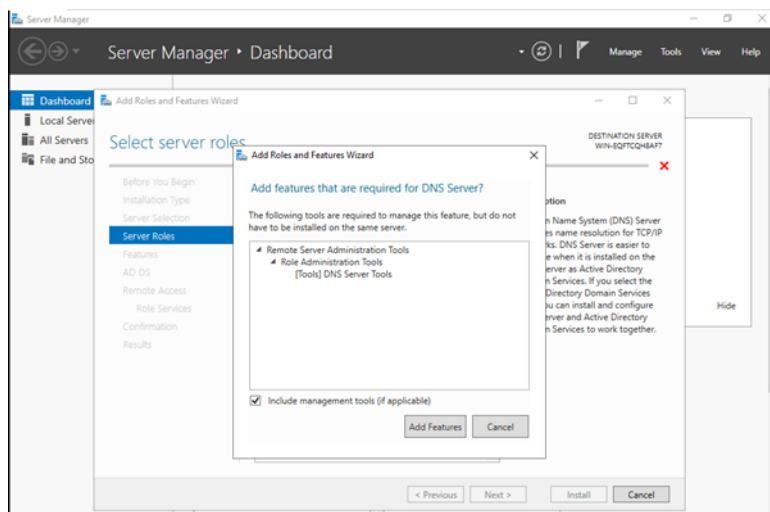


Figure 9: Screen showing Remote Server Administration Tool and Add Features

6. A pop-up will appear → Click **Add Features**

7. Click **Next**

3.6 Confirm Features

- Keep default settings
 - Click **Next**
-

3.7 AD DS Overview

- Read summary if needed
 - Click **Next**
-

3.8 Install AD DS

- Click **Install**
 - Wait for the installation to finish (do not restart yet)
-

4. Configuring Active Directory Domain Services

4.1 Promote Server to a Domain Controller

After installation, a yellow notification appears in Server Manager.

1. Click **Promote this server to a domain controller**
-

4.2 Deployment Configuration Options

Choose one:

Option A: Add a New Forest

(If building a new domain)

- Select **Add a new forest**

- Enter Root domain name (e.g., **mylab.local**). You have to put **“.local”** otherwise an error message will pop-up.

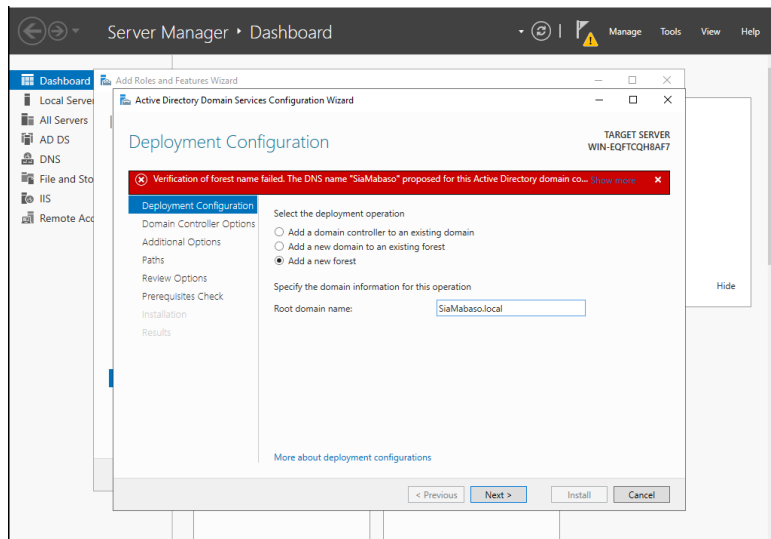


Figure 10: Screen showing Deployment Configuration with deployment operation option and root domain name box (**SiaMabaso.local**).

- Click **Next**

4.3 Domain Controller Options

1. Choose Forest and Domain functional level: **Windows Server 2016**
2. Leave DNS and GC (Global Catalog) checked
3. Enter a **DSRM password** (Directory Services Restore Mode)

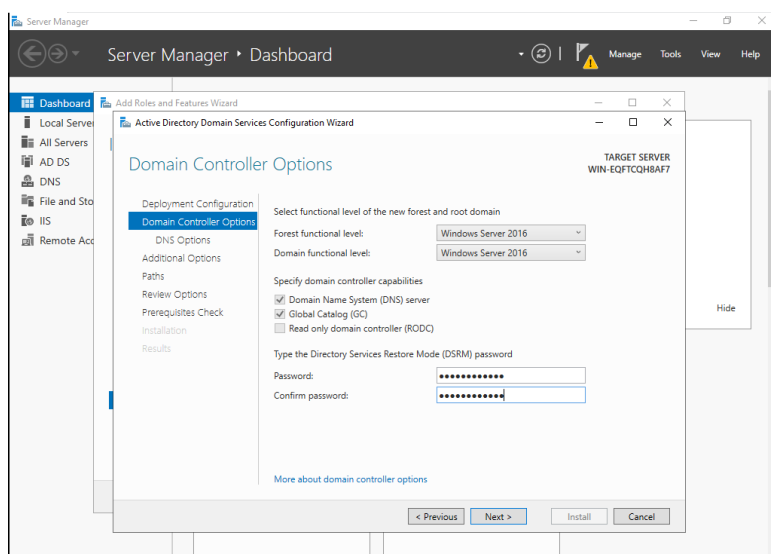


Figure 11: Screen showing Domain Controller Option with Forest and Domain functional level, DNS and GC and DSRM password.

4. Click **Next**
-

4.4 DNS Options

- Ignore DNS delegation warning
 - Click **Next**
-

4.5 Additional Options

- Confirm **NetBIOS domain name**
 - Click **Next**
-

4.6 Paths

- Leave default paths:
 - Database: C:\Windows\NTDS
 - Log files: C:\Windows\NTDS
 - SYSVOL: C:\Windows\SYSVOL
 - Click **Next**
-

4.7 Review Options

- Review all settings
 - Click **Next**
-

4.8 Prerequisites Check

- Ensure all checks pass
- Click **Install**

The server will automatically restart once installation completes.

6. Post-Installation Verification

6.1 Log In with Domain Credentials

- After reboot, log in using: **DOMAIN\Administrator** Example:
MYLAB\Administrator

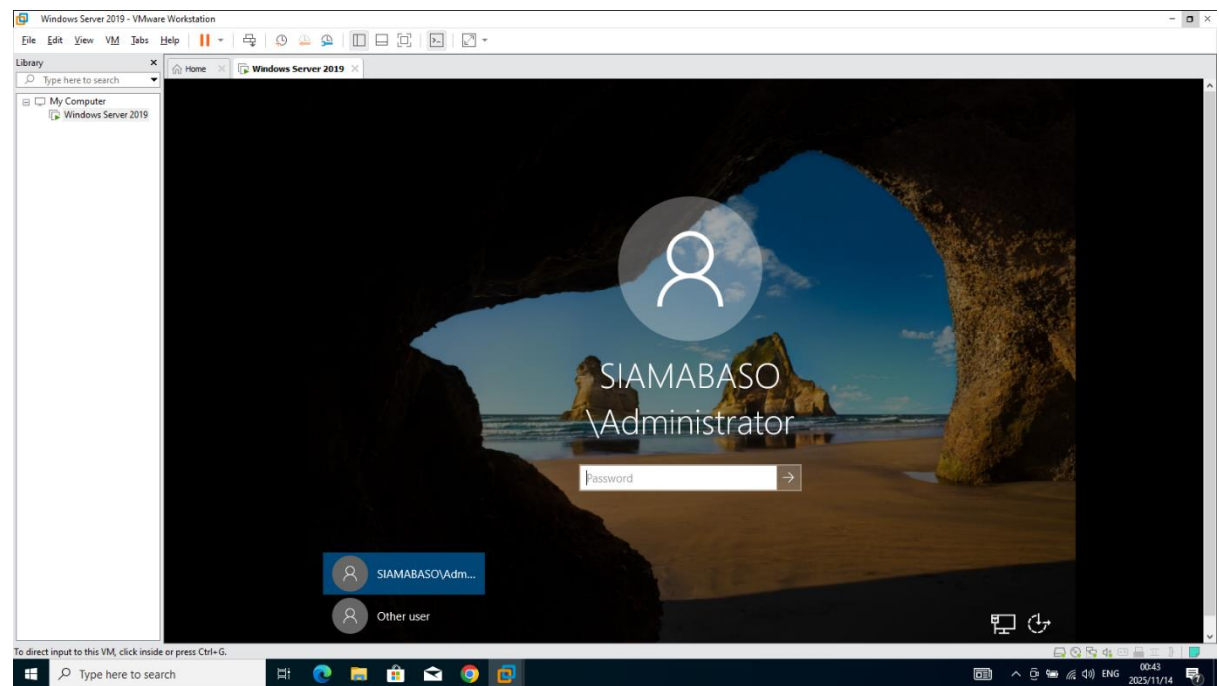


Figure 12: Screen showing user domain credentials\ administrator (SIAMABASO\Administration)

6.2 Open Active Directory Tools

1. Click **Start**
2. Open **Windows Administrative Tools**
3. Confirm tools such as:
 - Active Directory Users and Computers
 - Active Directory Domains and Trusts
 - DNS Manager
 - Group Policy Management

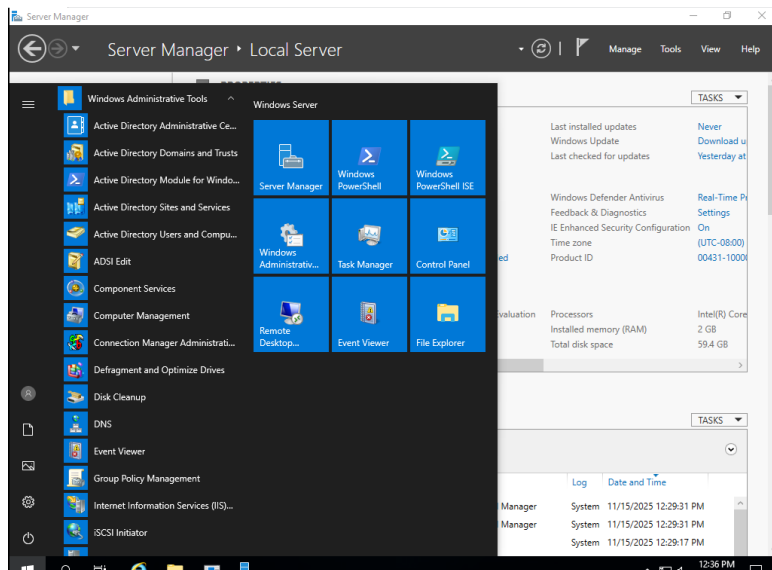


Figure 13: Screen showing Windows Administrative Tools such as Active Directory Users and Computers, Active Directory Domains and Trusts, DNS Manager, and Group Policy Management.

7. Conclusion

You have successfully:

- Installed **Active Directory Domain Services**
- Promoted your server to a **Domain Controller**
- Created your own **Active Directory domain**

This environment is now ready for:

- Adding users & computers
- Creating Organizational Units (OUs)
- Managing Group Policies
- Practicing IT admin tasks for real-world role