# On-Premise Active Directory Installation (Client-Server)

Objective:

Set up an on-premise Active Directory (AD) environment to manage a client-server network. This includes installing AD on a server, configuring domain settings, and joining a client machine to the domain.

Prepare Your Environment:

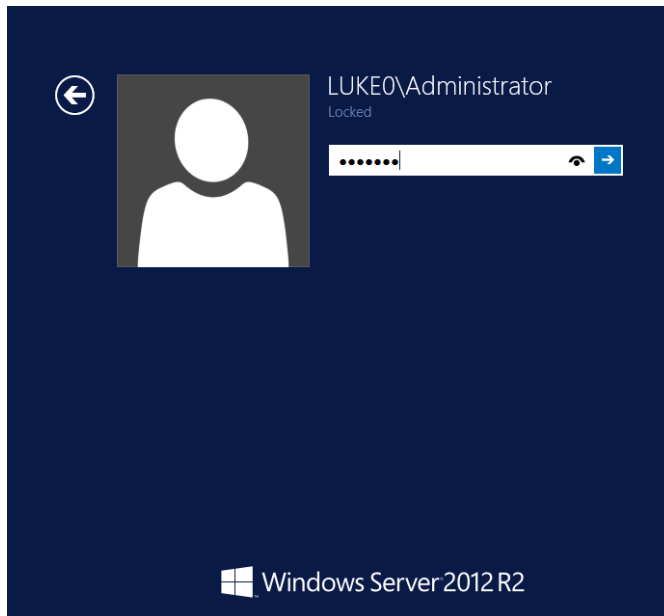1. Ensure you have a server with a supported Windows Server OS (e.g., Windows Server 2019 or 2022).
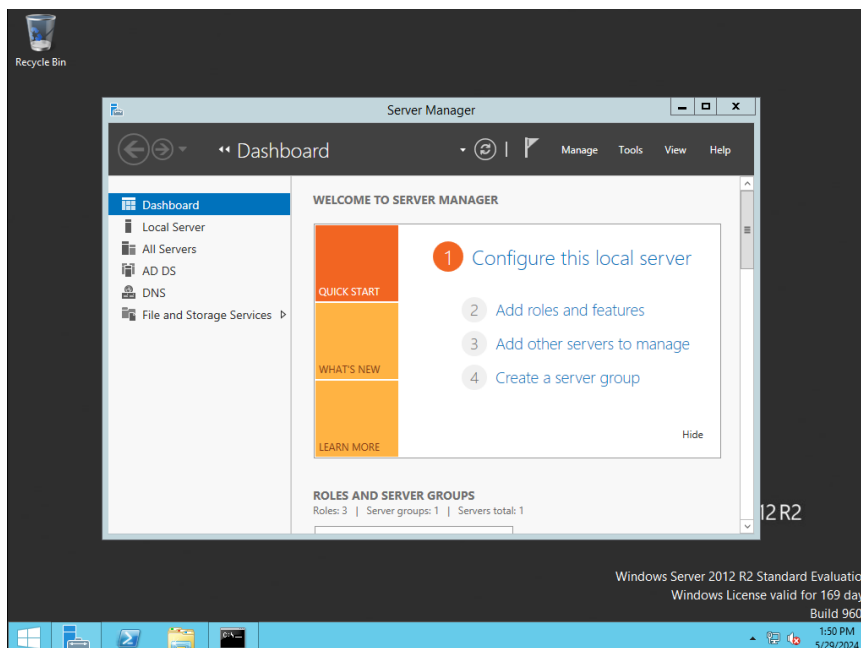
2. Prepare a client machine with a supported Windows OS (e.g., Windows 10 or 11).
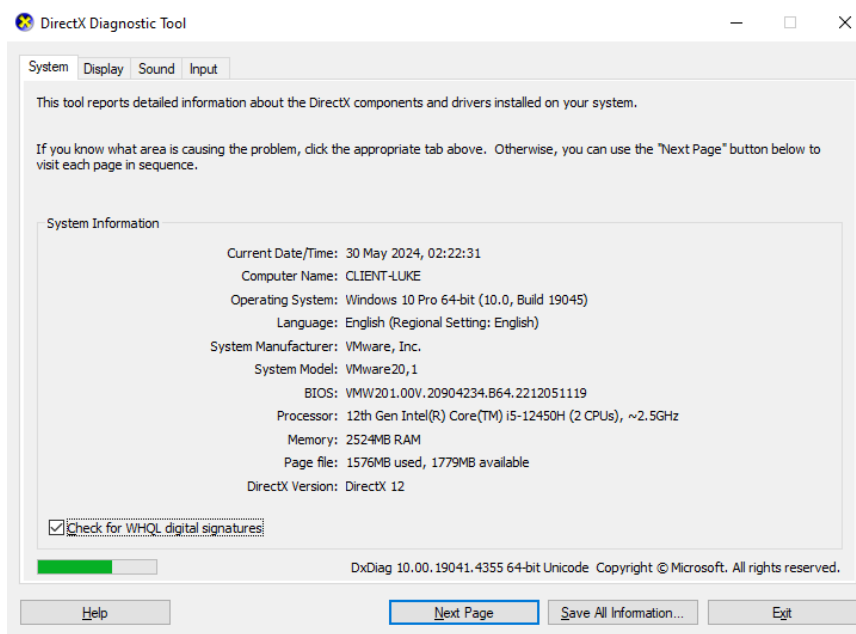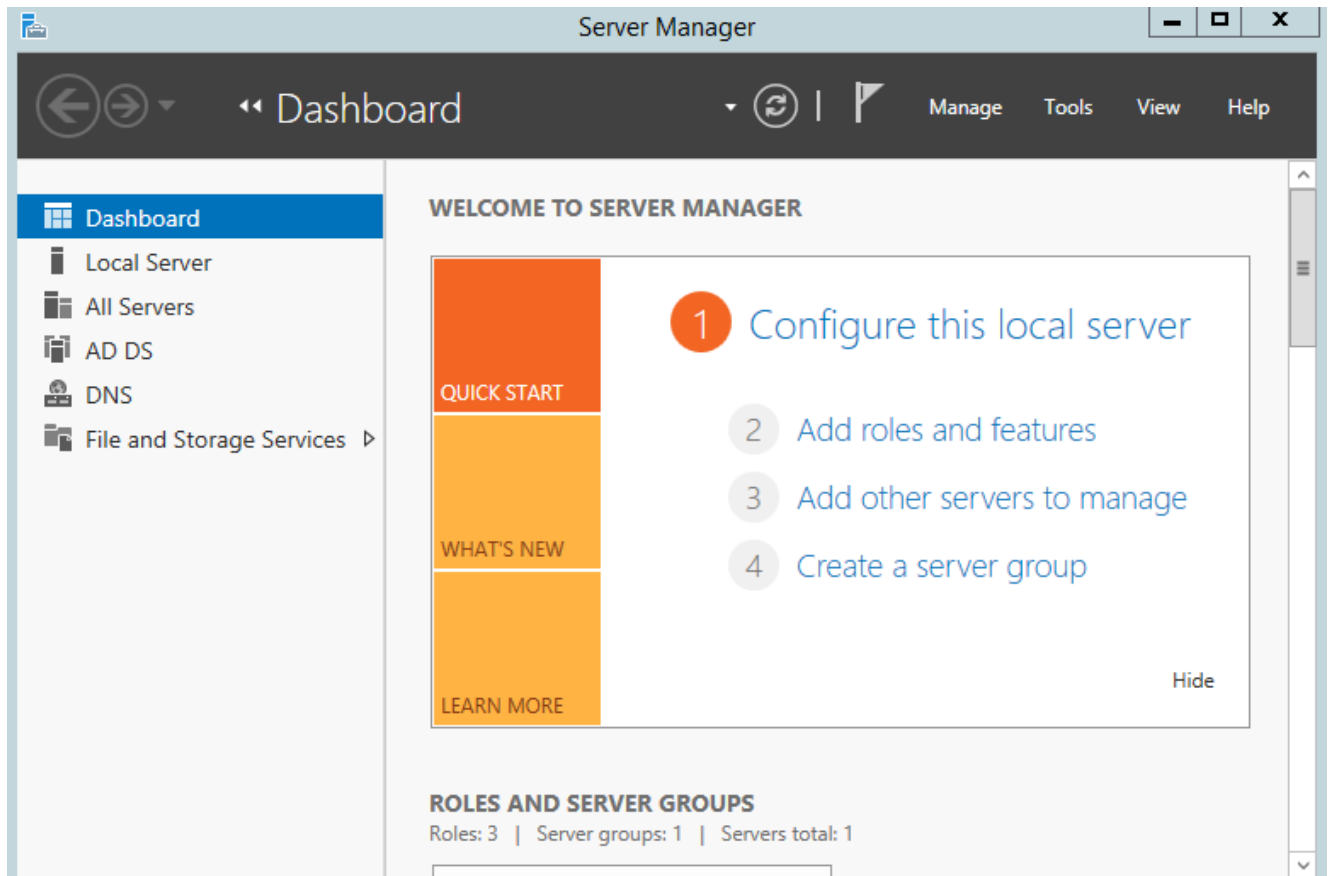
3. Ensure both machines are connected to the same network.

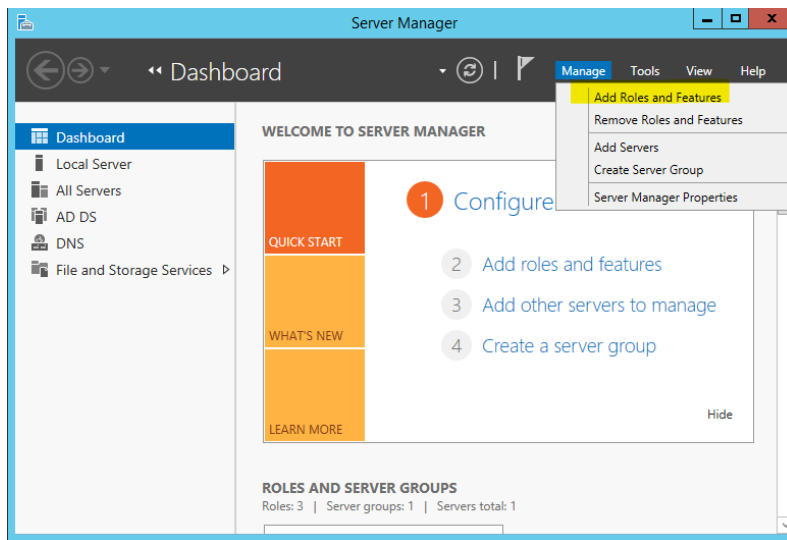**Install Active Directory Domain Services (AD DS) on the Server:**

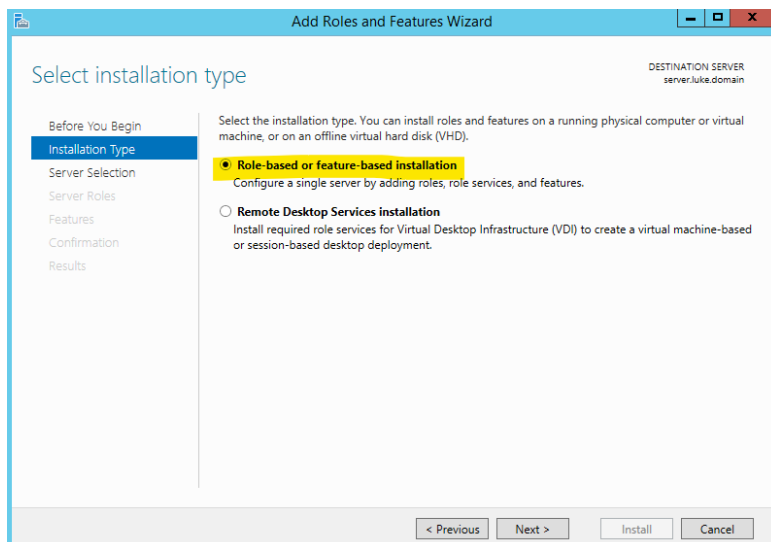1. Log in to your server with administrative privileges.
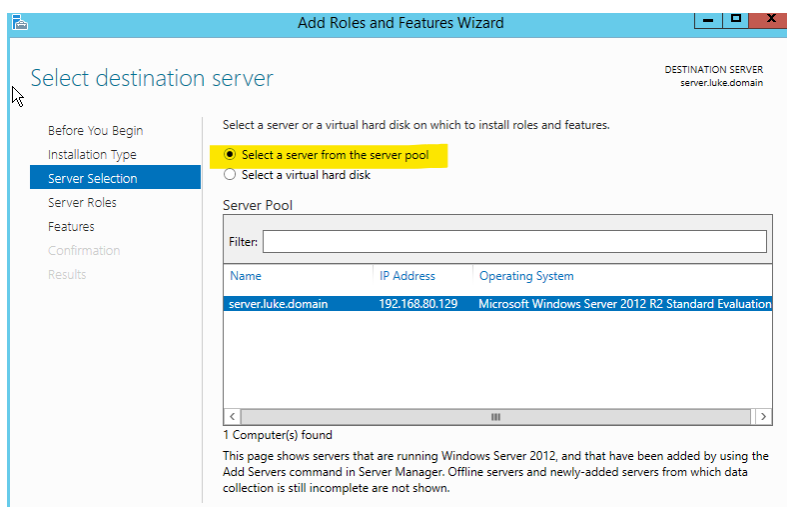

2. Open Server Manager.

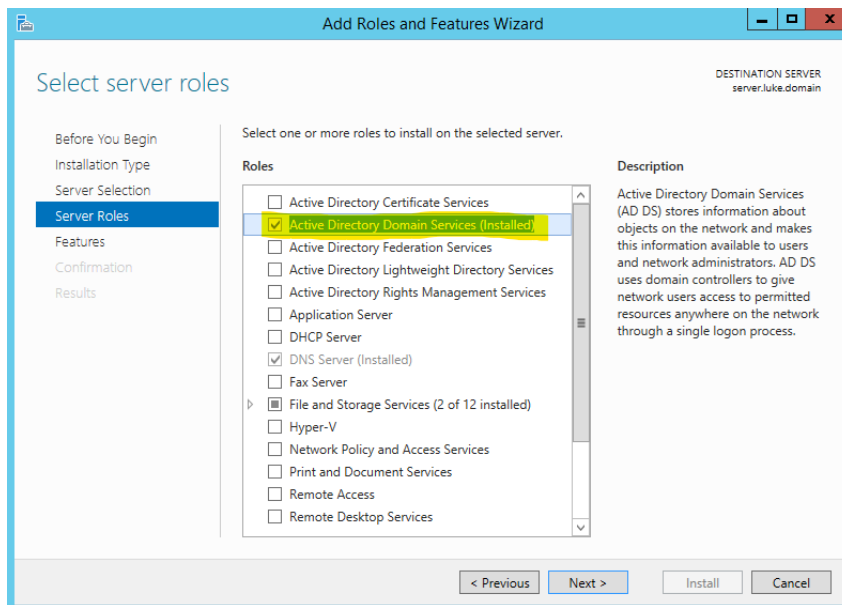3. Click on Manage > Add Roles and Features.

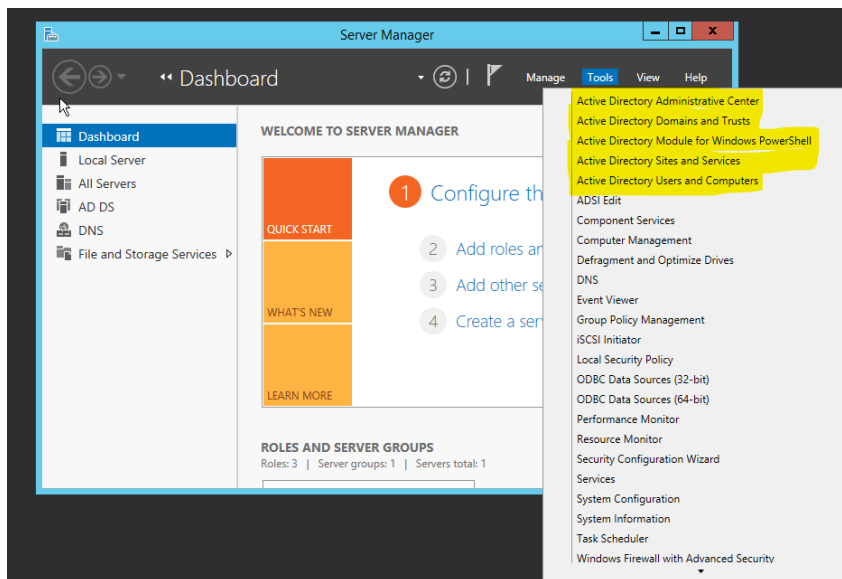4. Select 'Role-based or feature-based installation and click Next

5. Select the server from the server pool and click 'Next'.

6. Select 'Active Directory Domain Services' and add required features.

7. Click 'Next' through the features screen and install the role.


Promote the Server to a Domain Controller:

1. After installation, in Server Manager, click on the notification flag and select 'Promote this server to a domain controller'.

2. Select 'Add a new forest' and enter your Root domain name (e.g., example.local).

3. Click 'Next' and configure the Domain Controller options .

4. Proceed with the default settings and click 'Next' through the DNS and NetBIOS name screens.

5. Specify the paths for the AD DS database, log files, and SYSVOL (default paths are usually fine).

6. Review your selections and click 'Install'.

7. The server will restart after the installation.
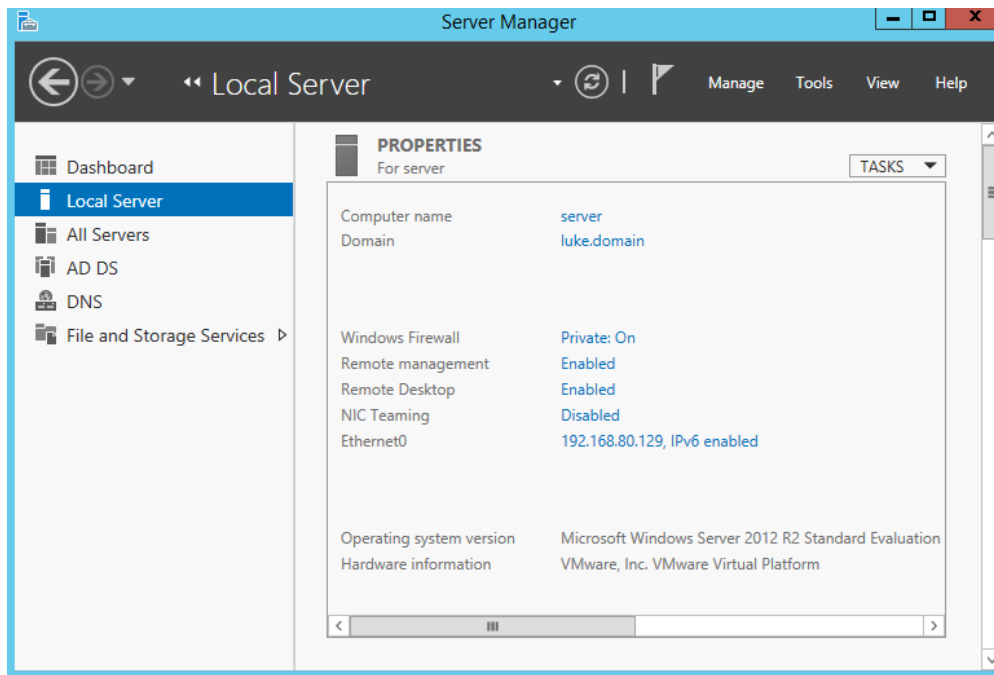
Configure DNS:

1. Once the server is back online, log in with the domain administrator account.

2. Open DNS Manager from the Server Manager dashboard.

3. Ensure the Forward Lookup Zones and Reverse Lookup Zones are correctly configured for your domain.
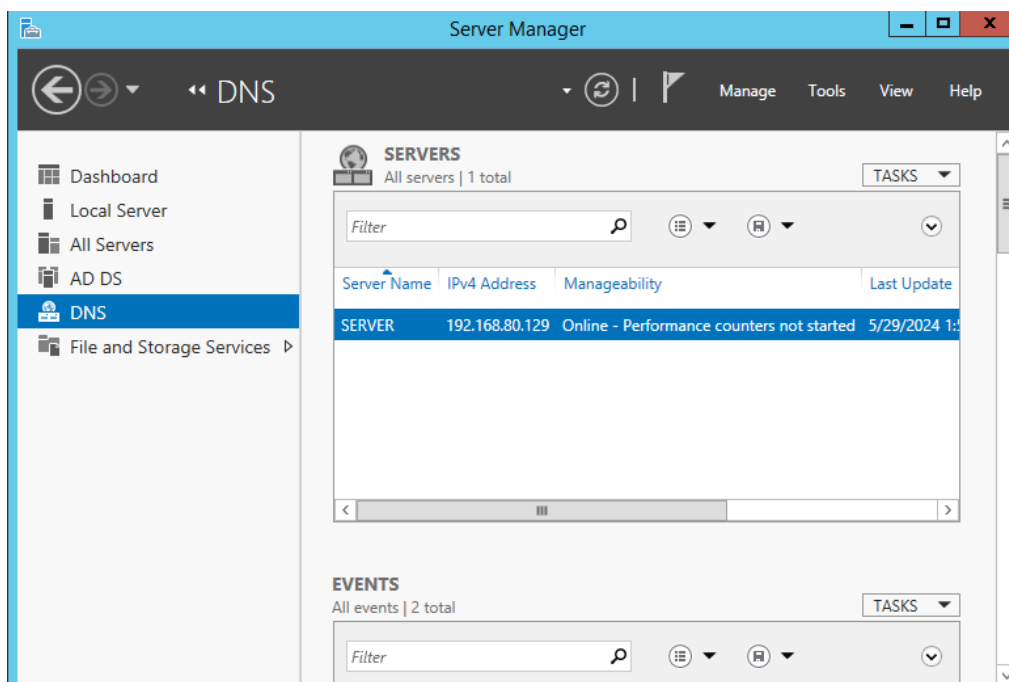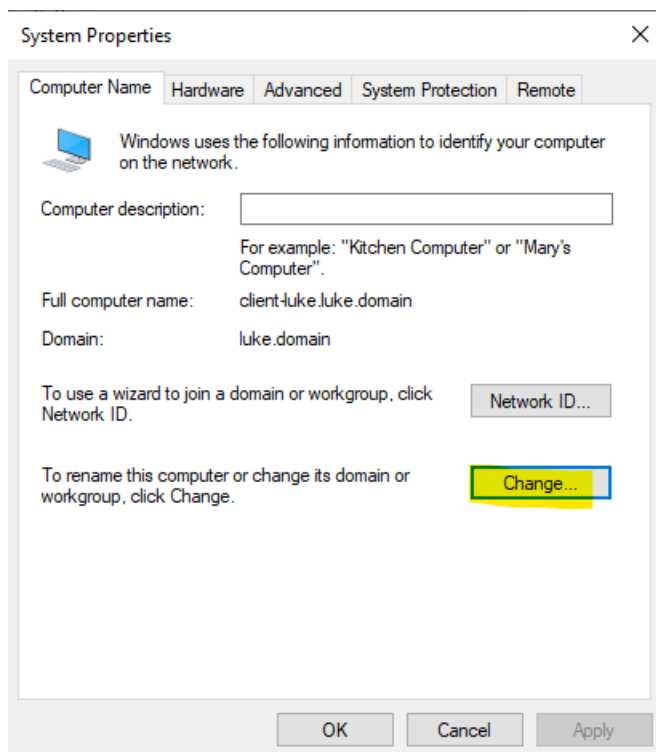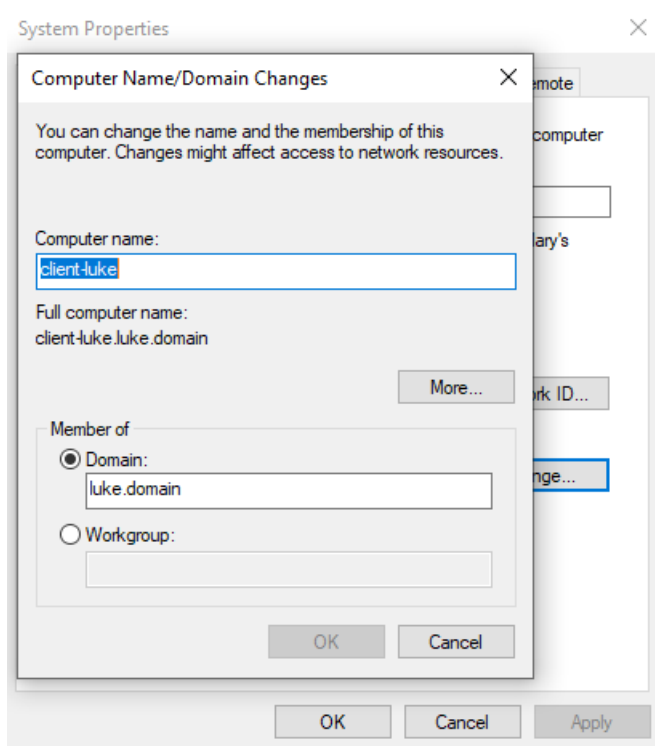
Join a Client Machine to the Domain:

1. On the client machine, open System Properties (right-click 'This PC' > 'Properties' > 'Change settings').
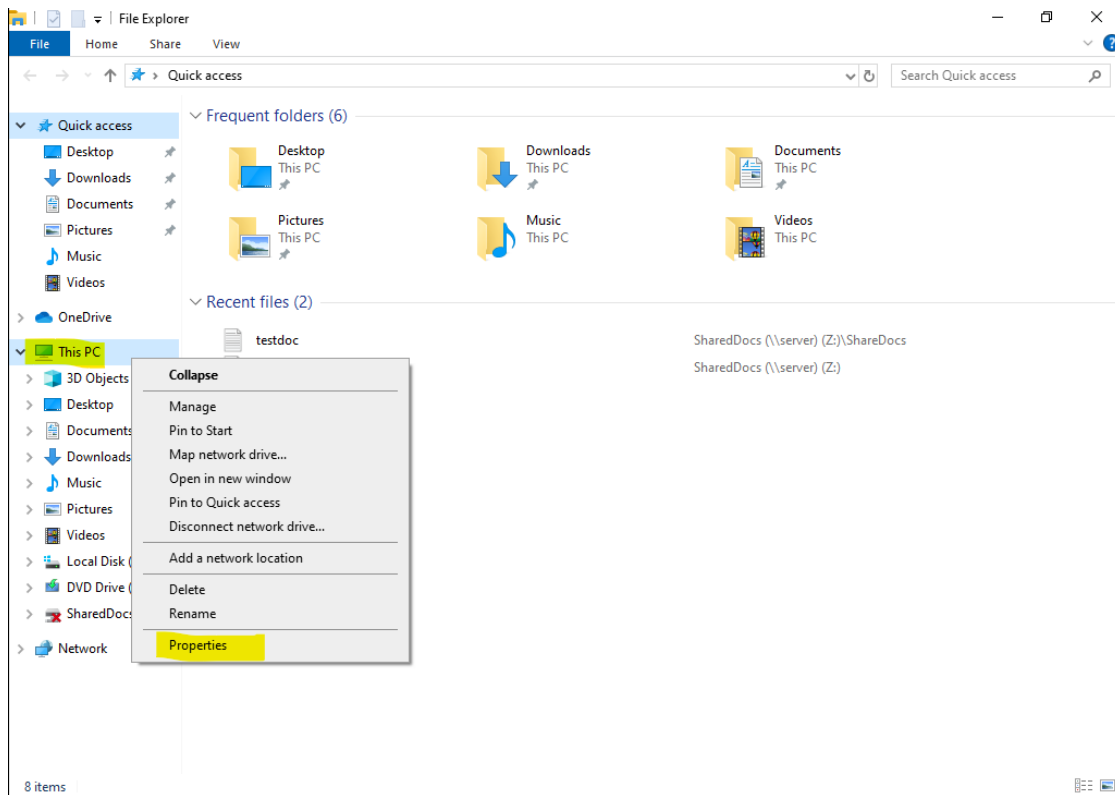
2. Click on the 'Change' button in the Computer Name tab.

3. Select 'Domain' and enter the domain name (e.g., example.local).

4. When prompted, enter the domain administrator credentials.

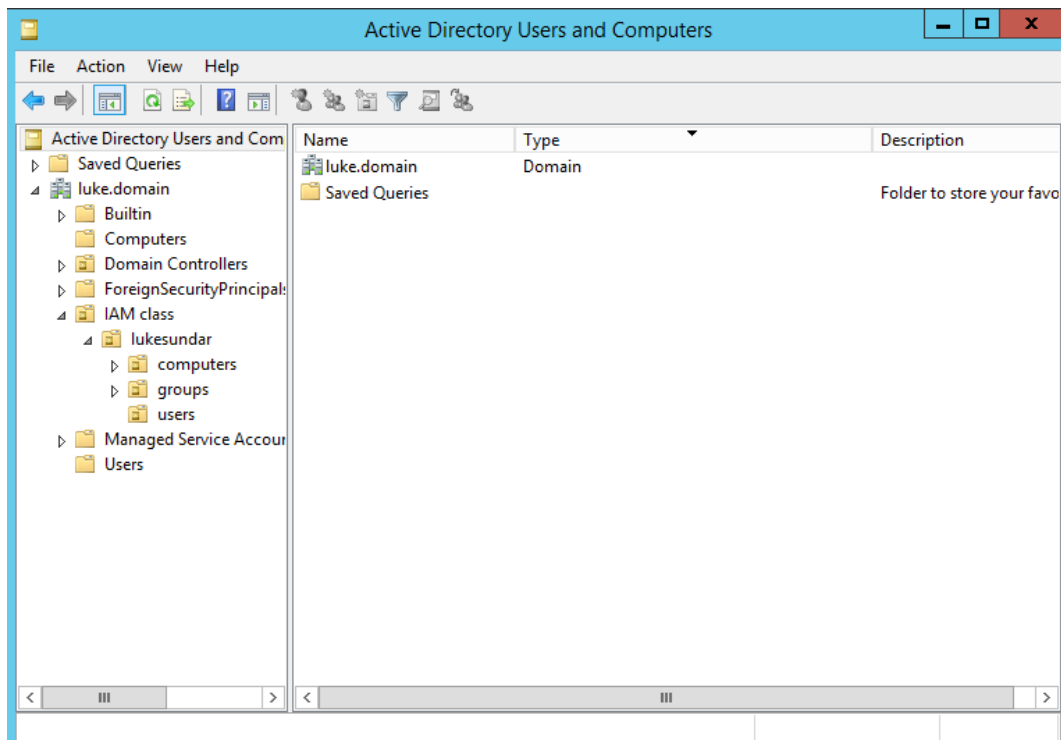5. Restart the client machine to apply the changes.

Verify the Configuration:

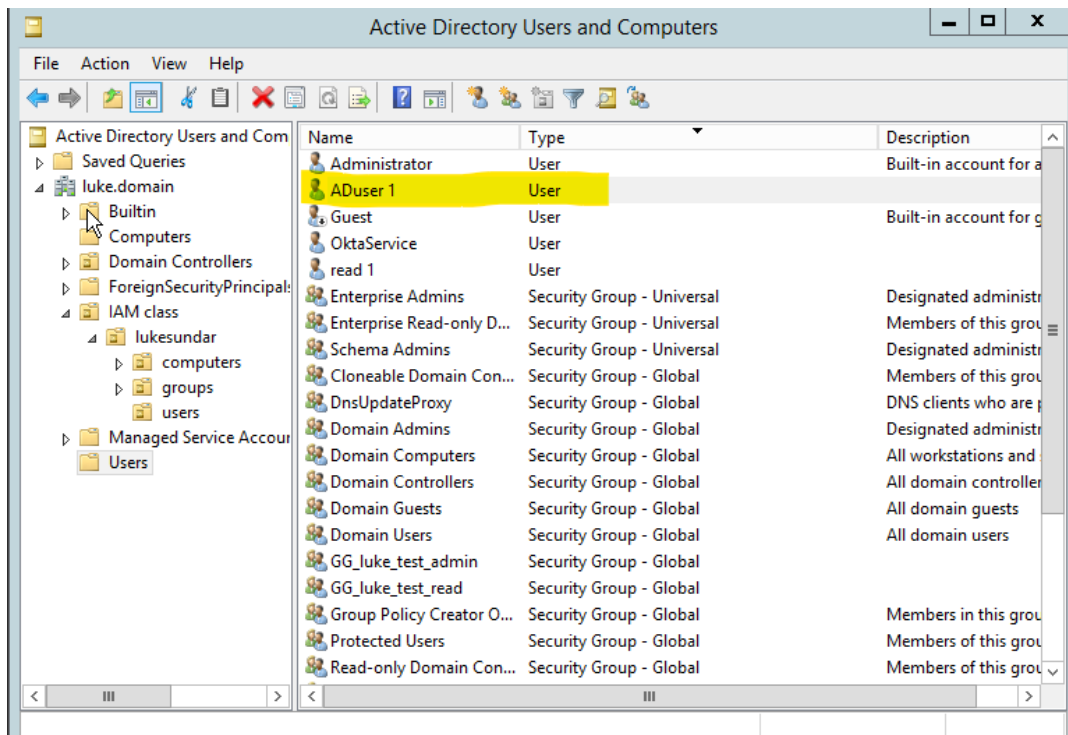1. Log in to the client machine using a domain user account.

2. On the server, open Active Directory Users and Computers.

3. Ensure the client machine appears in the Computers container.

4. Verify that group policies are being applied to the client machine.

Conclusion:

Completing this assignment will provide hands-on experience with setting up an on-premise Active Directory environment, managing domain settings, and integrating client machines into the network. This foundational knowledge is crucial for IT administrators and network managers.