# ACTIVE DIRECTORY DEPLOYMENT

In my last project, I explained how I set up a Virtual home lab, including setting up my operating system and Windows server.

In this project, I will be showing a step-by-step guide on how to deploy an Active Directory.

**What is Active Directory?**

**Active Directory (AD):** Active Directory provides a single, unified system for managing users, devices, and policies, making administration more efficient and secure.

**Step-by-Step Deployment Process**

Server preparation and hardening

Windows Server (Windows Server 2022)

AD role installation

Network configuration

Forest and domain creation
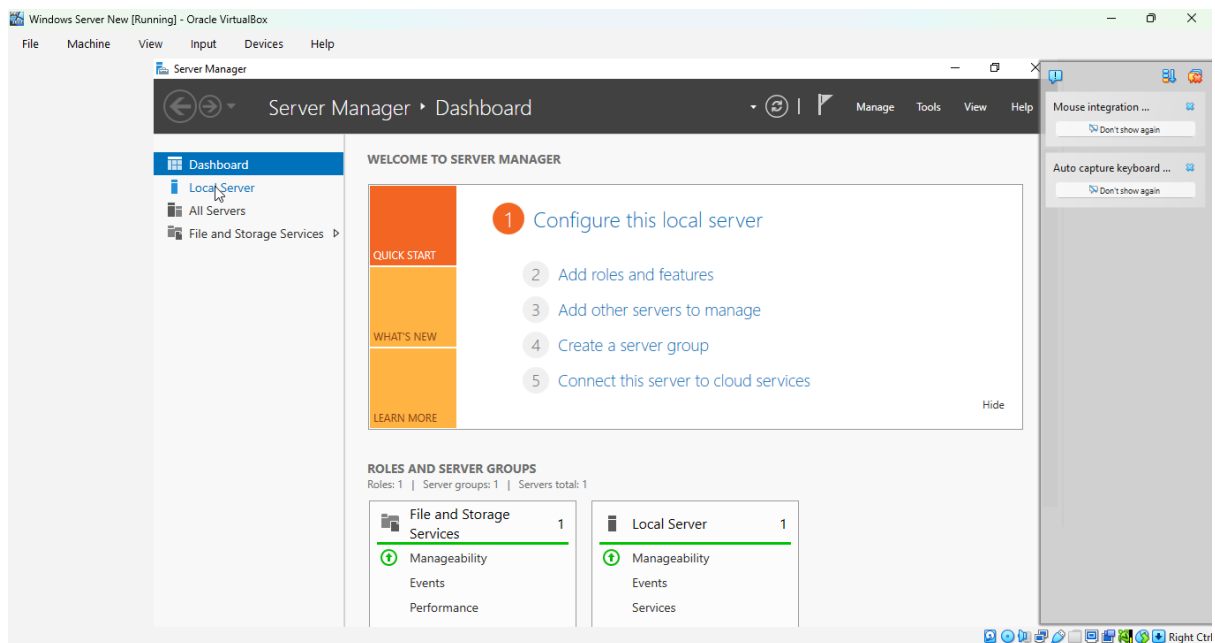
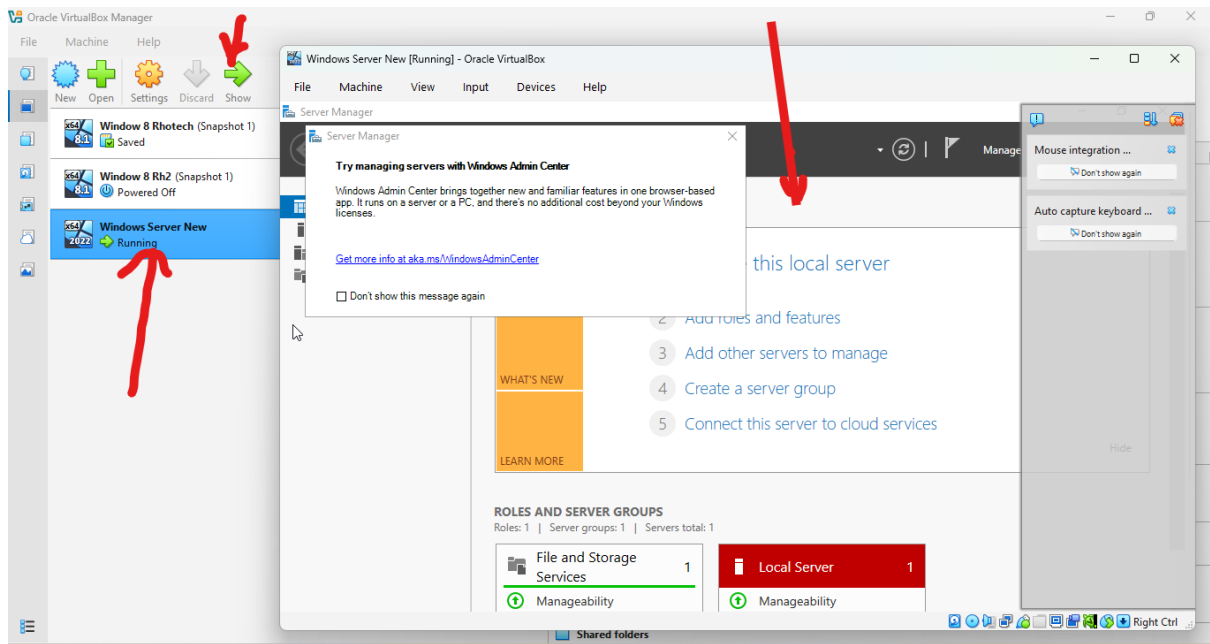Domain controller promotion

Organizational Unit (OU)

Group creation

User creation

IP Address

**STEP 1.**

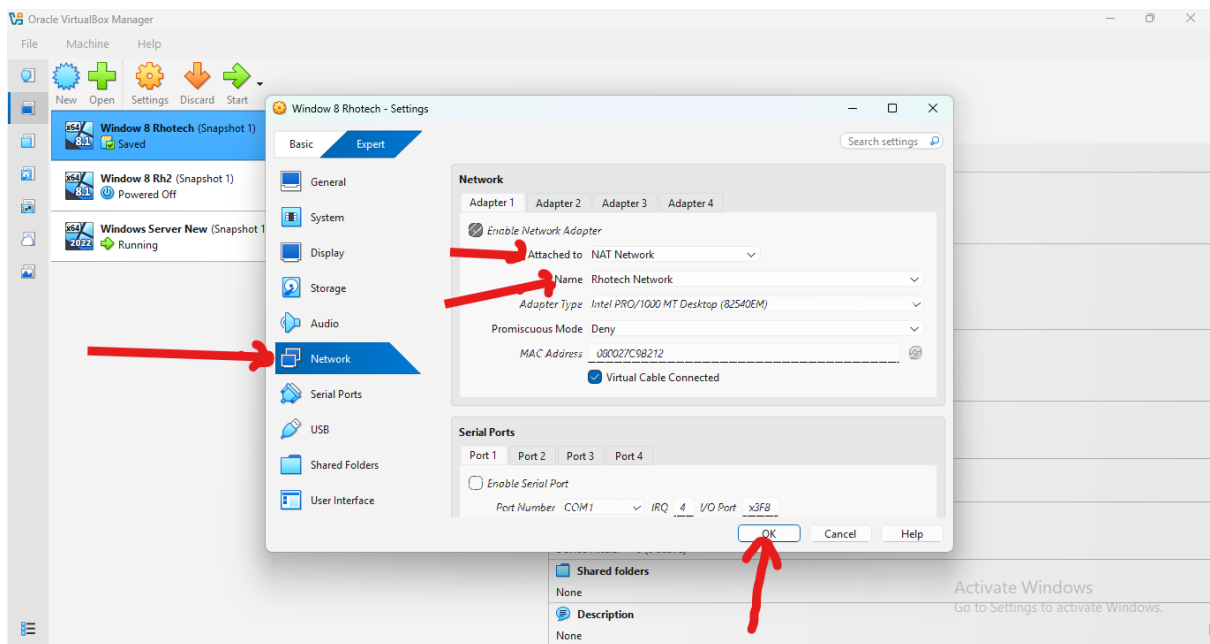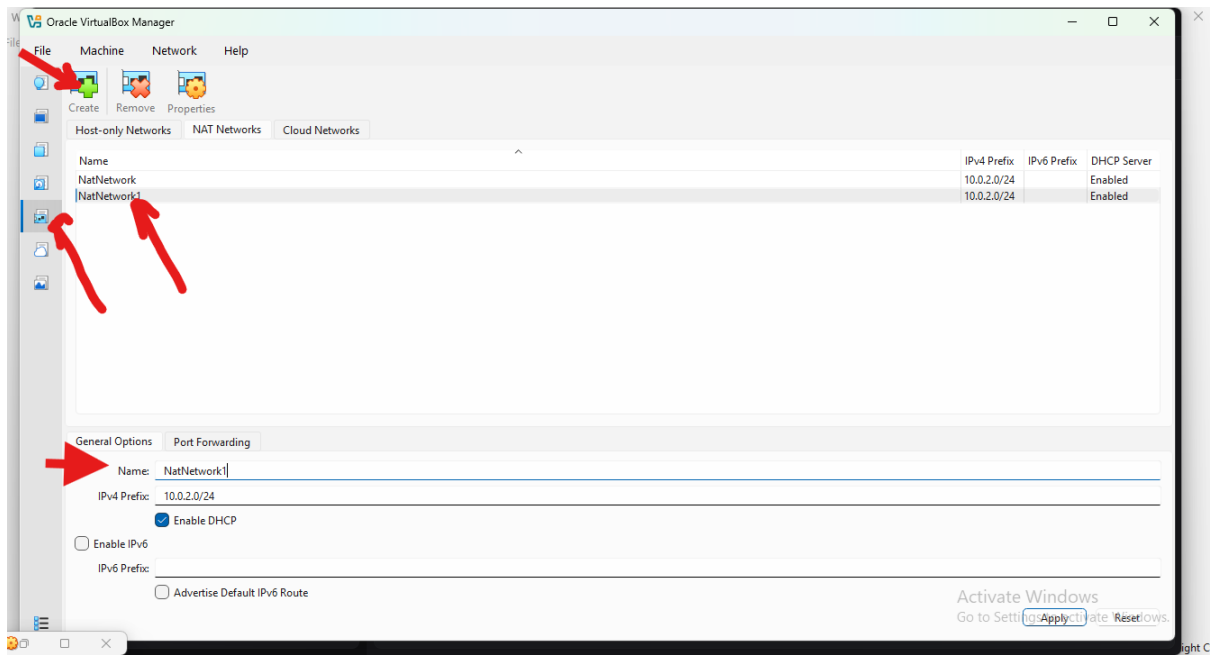Server Preparation: In this step, I will launch my Windows Server from the virtual machine. See diagram below
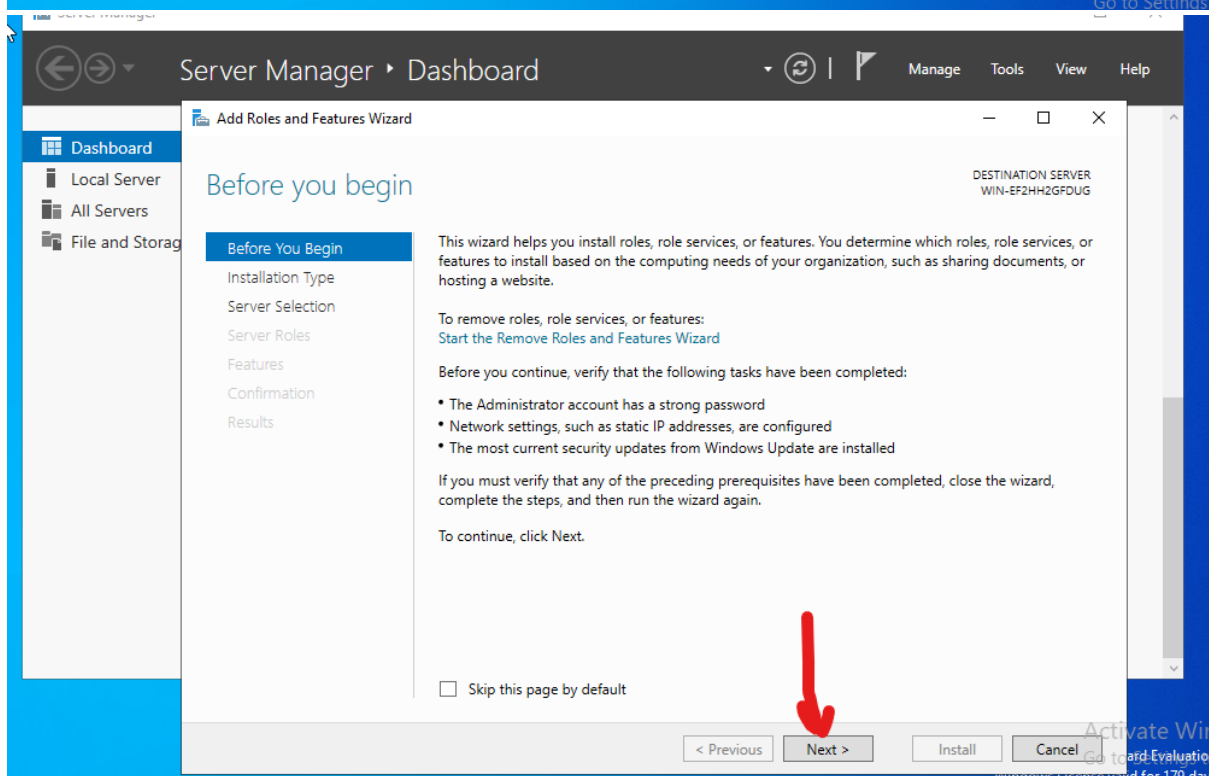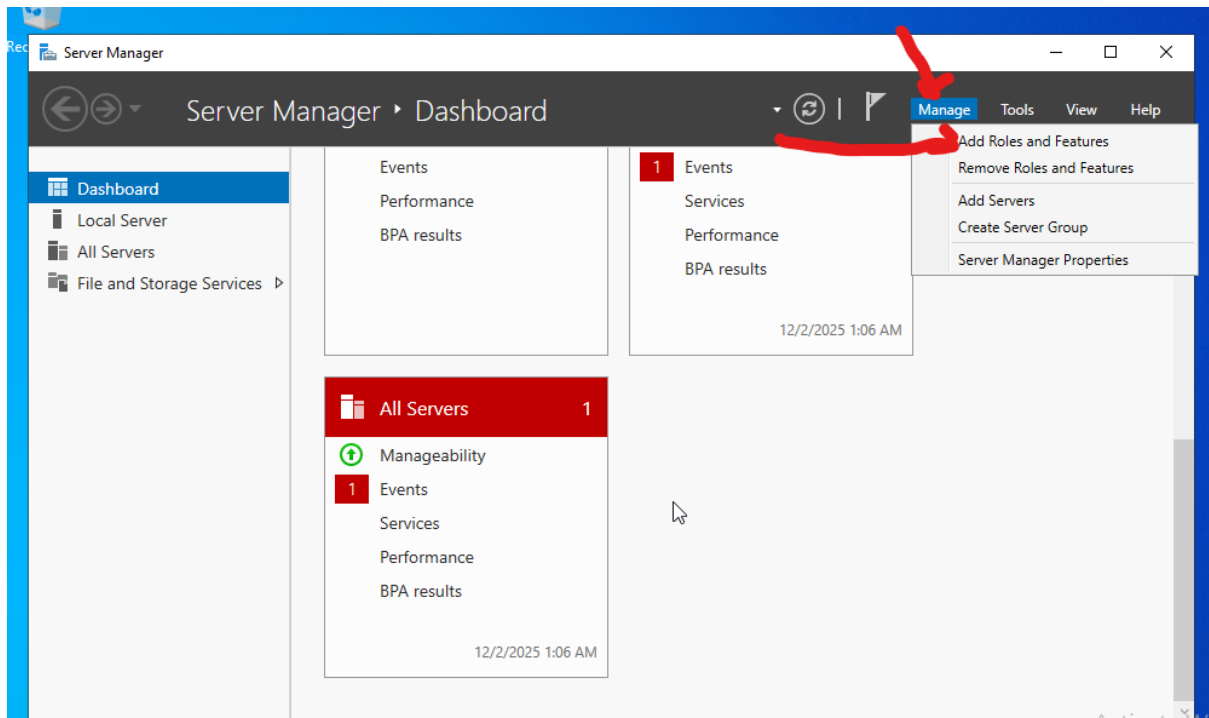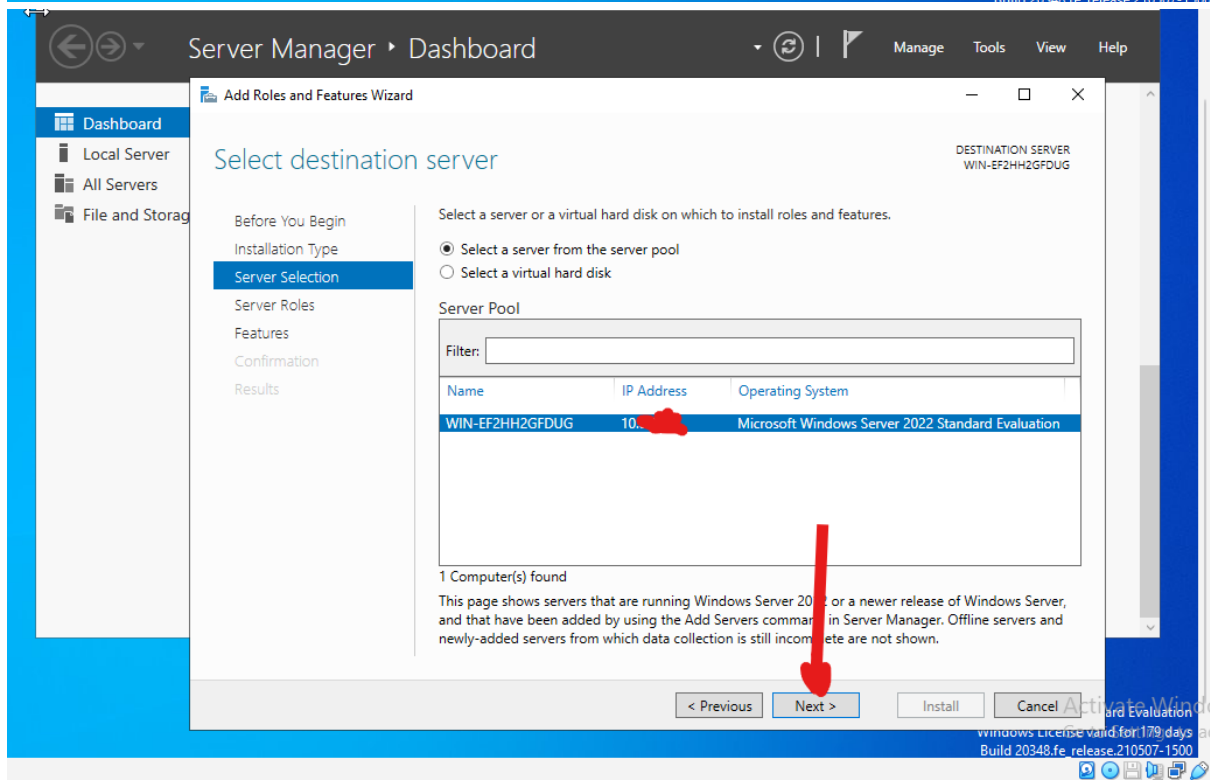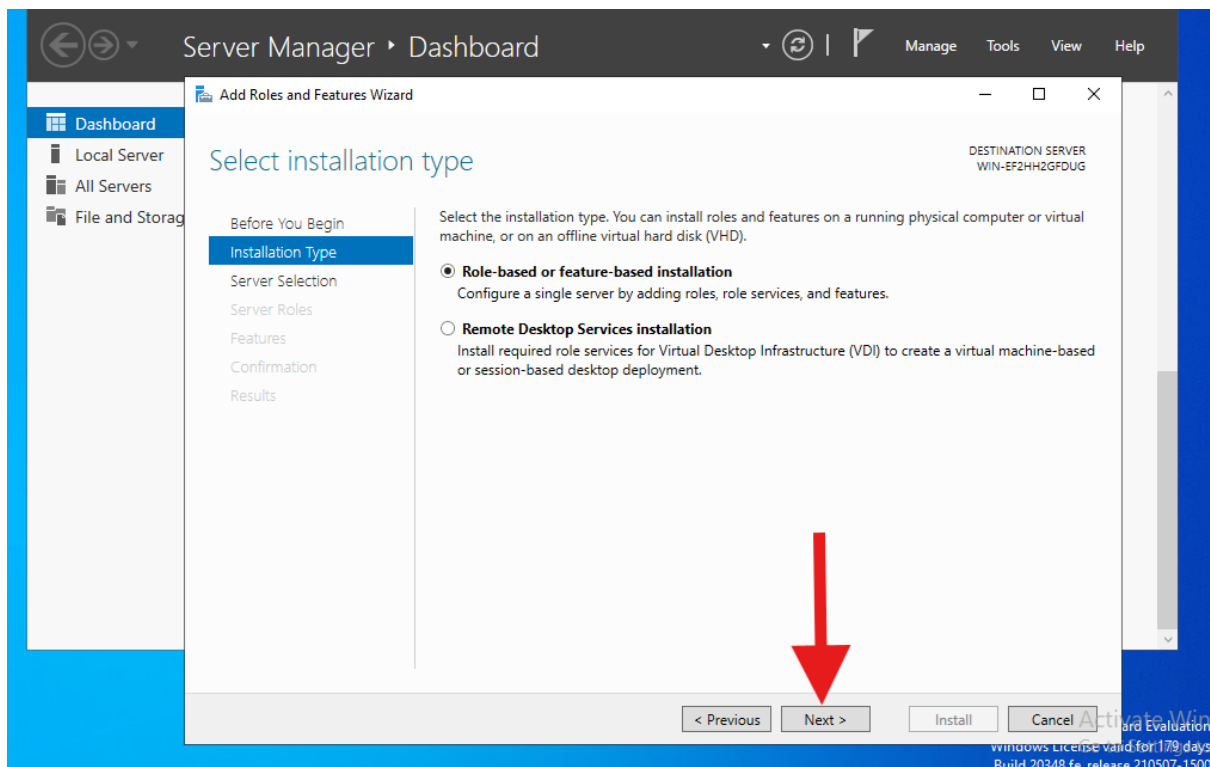
**STEP 2.**

Network Configuration: In this step, I will configure the network so that the server and other operating systems are on the same subnet. See diagram below.
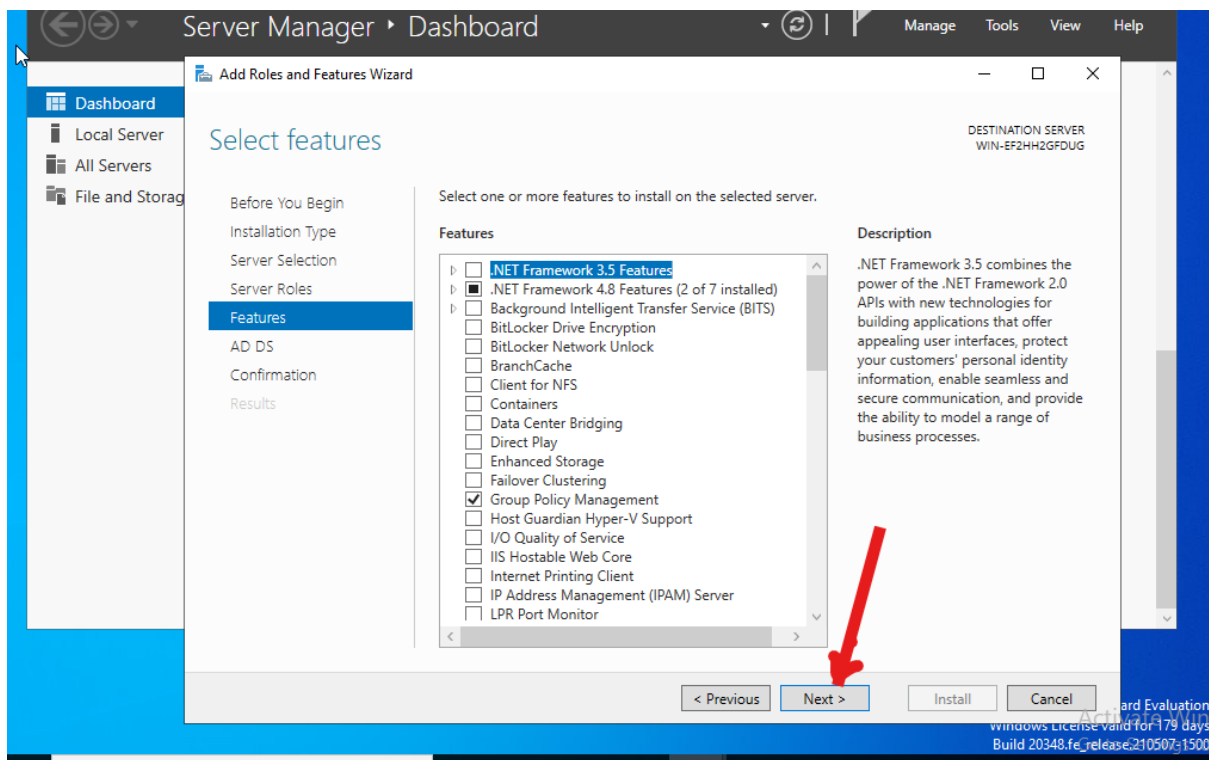
## STEP 3

In this step, I will be installing Active Directory, applying roles and features, Server Selection, and Server Roles.

**Server Manager**

Server Manager • Dashboard

Dashboard
Local Server
All Servers
File and Storage Services ▷

Events
Performance
BPA results

Events
Services
Performance
BPA results

12/2/2025 1:06 AM

**All Servers** 1
Manageability
Events 1
Services
Performance
BPA results

12/2/2025 1:06 AM

Manage | Tools | View | Help

Add Roles and Features
Remove Roles and Features

Add Servers
Create Server Group

Server Manager Properties

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**Server Manager** • Dashboard

Manage | Tools | View | Help

Dashboard
Local Server
All Servers
File and Storag

**Add Roles and Features Wizard**

**Before you begin**

DESTINATION SERVER
WIN-EF2HH2GFDUG

Before You Begin
Installation Type
Server Selection
Server Roles
Features
Confirmation
Results

This wizard helps you install roles, role services, or features. You determine which roles, role services, or features to install based on the computing needs of your organization, such as sharing documents, or hosting a website.

To remove roles, role services, or features:
Start the Remove Roles and Features Wizard

Before you continue, verify that the following tasks have been completed:

• The Administrator account has a strong password
• Network settings, such as static IP addresses, are configured
• The most current security updates from Windows Update are installed

If you must verify that any of the preceding prerequisites have been completed, close the wizard, complete the steps, and then run the wizard again.

To continue, click Next.

☐ Skip this page by default

< Previous | Next > | Install | Cancel

**STEP 4**

Deployment configuration: In these steps, I set up the root domain name, domain controller options, and set DNS options.

Server Manager

Server Manager ‣ Dashboard

Manage   Tools   View   Help

Dashboard
Local Server
All Servers
AD DS
File and Storage Services

WHAT'S NEW

LEARN MORE

Post-deployment Configura...          TASKS   X
Configuration required for Active Directory Domain Services at WIN-EF2HH2GFDUG.
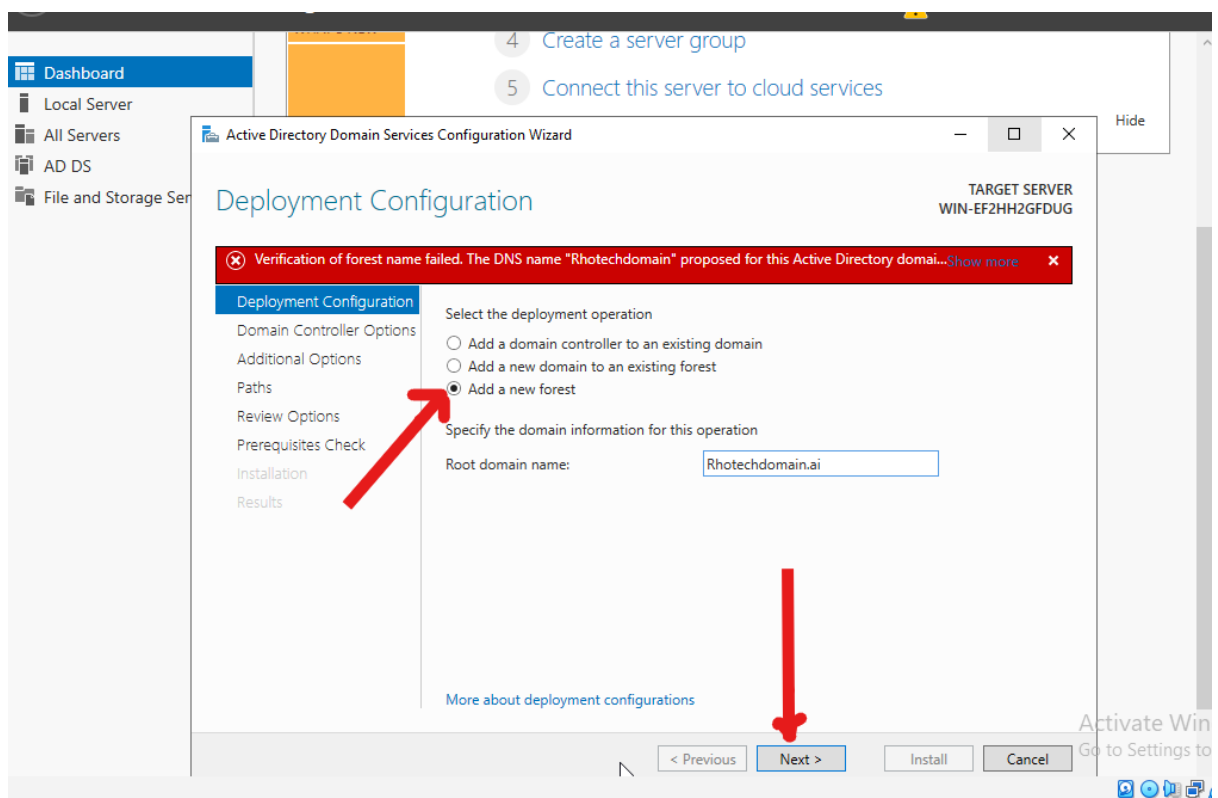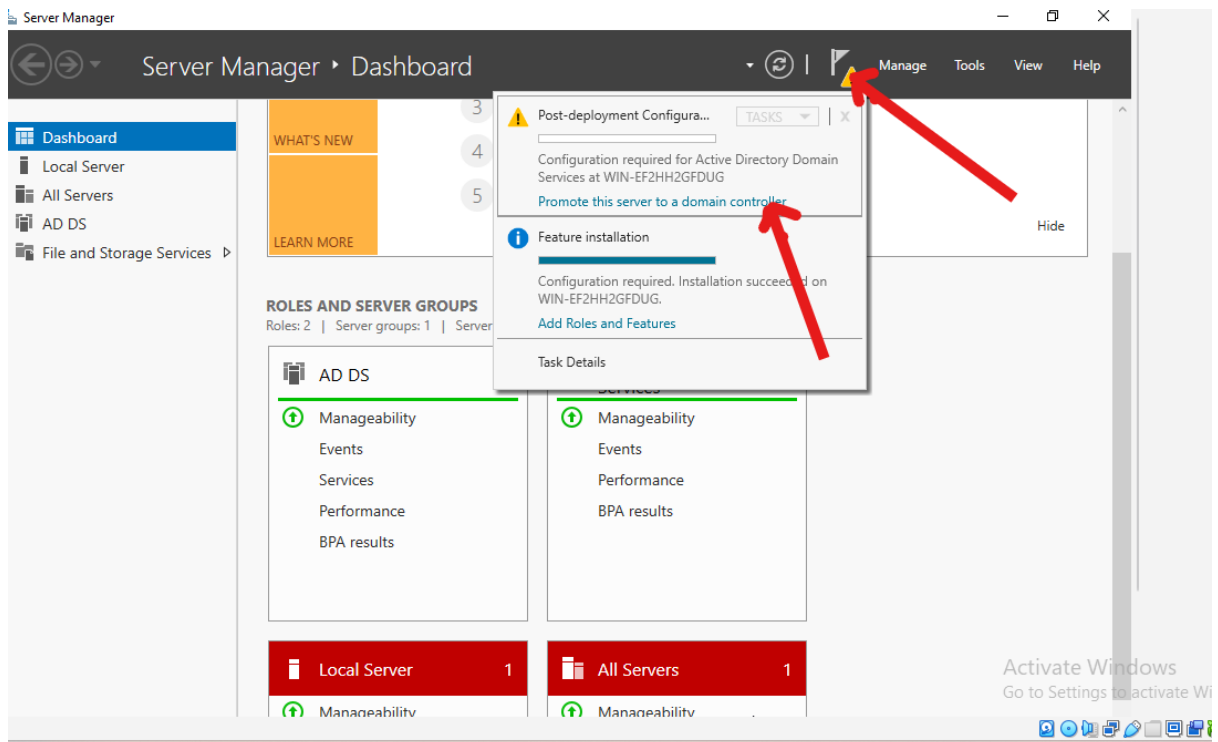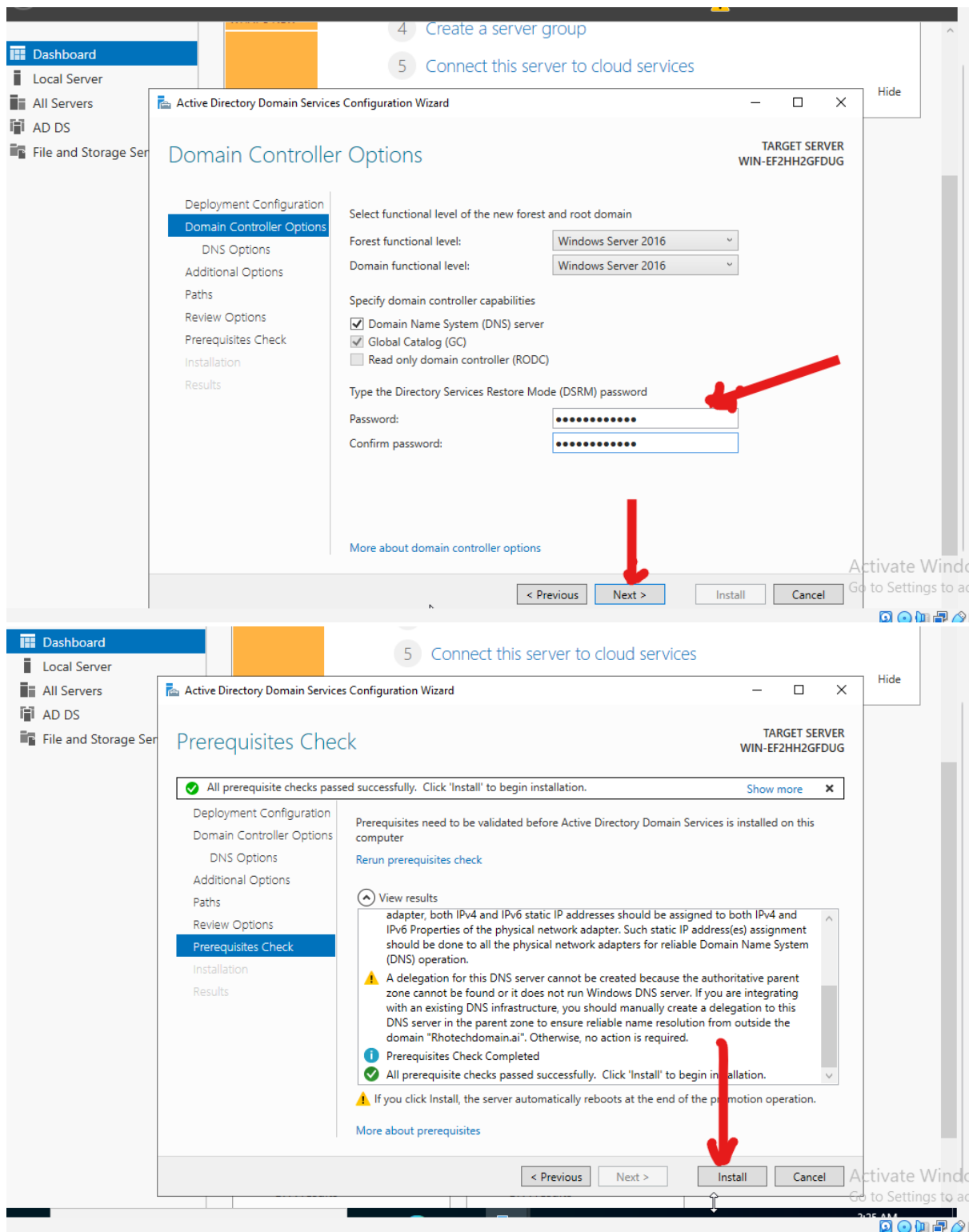Promote this server to a domain controller

Feature installation
Configuration required. Installation succeeded on WIN-EF2HH2GFDUG.
Add Roles and Features

Task Details

Hide

ROLES AND SERVER GROUPS
Roles: 2  |  Server groups: 1  |  Server

AD DS
Manageability
Events
Services
Performance
BPA results

Manageability
Events
Performance
BPA results

Local Server        1
Manageability

All Servers        1
Manageability

Activate Windows
Go to Settings to activate Wi

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Dashboard
Local Server
All Servers
AD DS
File and Storage Ser

4  Create a server group

5  Connect this server to cloud services                Hide

Active Directory Domain Services Configuration Wizard

Deployment Configuration

TARGET SERVER
WIN-EF2HH2GFDUG

⊗ Verification of forest name failed. The DNS name "Rhotechdomain" proposed for this Active Directory domai...Show more   X

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

Select the deployment operation
○ Add a domain controller to an existing domain
○ Add a new domain to an existing forest
● Add a new forest

Specify the domain information for this operation

Root domain name:        Rhotechdomain.ai

More about deployment configurations

< Previous    Next >    Install    Cancel

Activate Win
Go to Settings to

**STEP 5.**

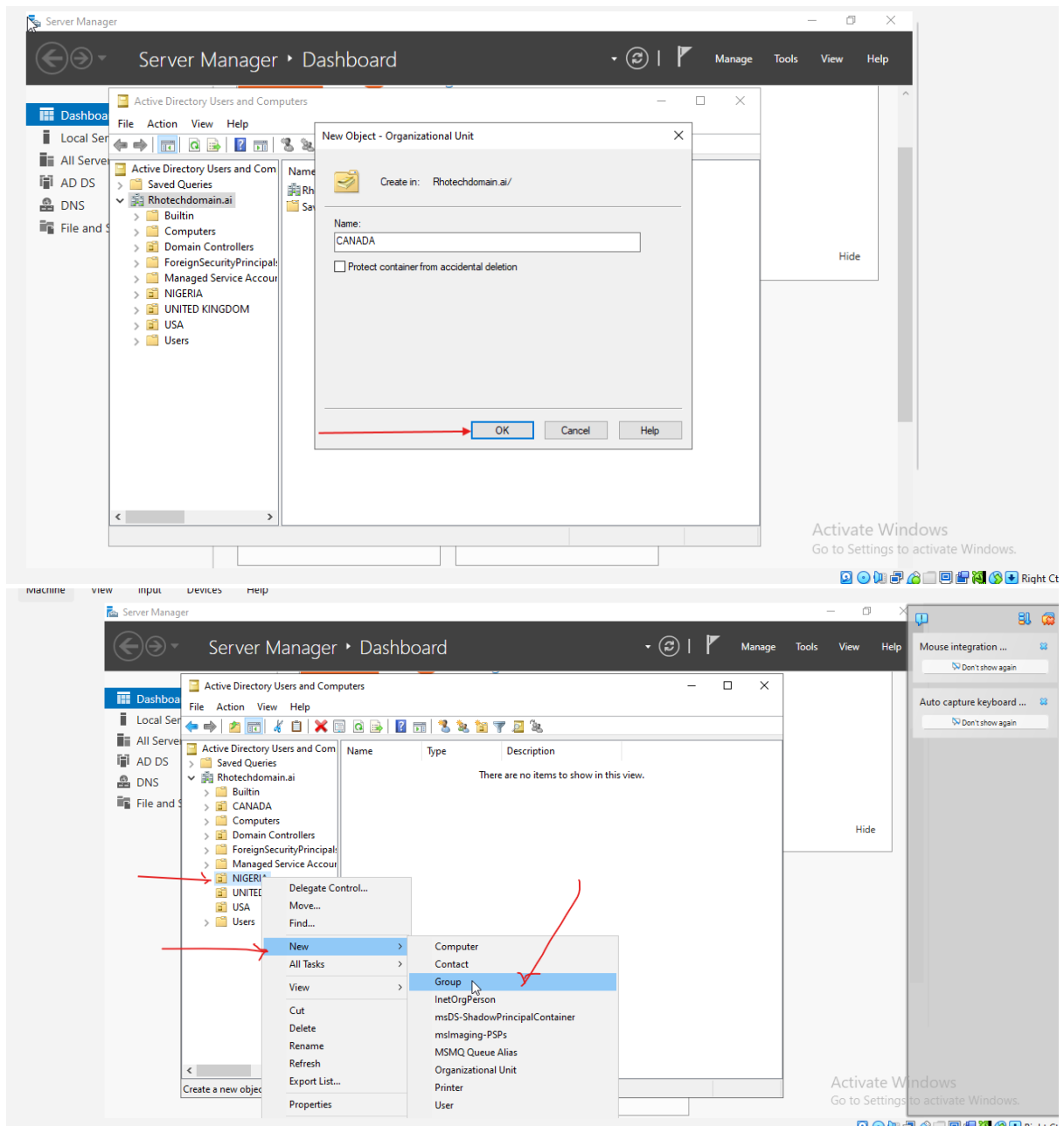**Setting up Active Directive Users and Computers**
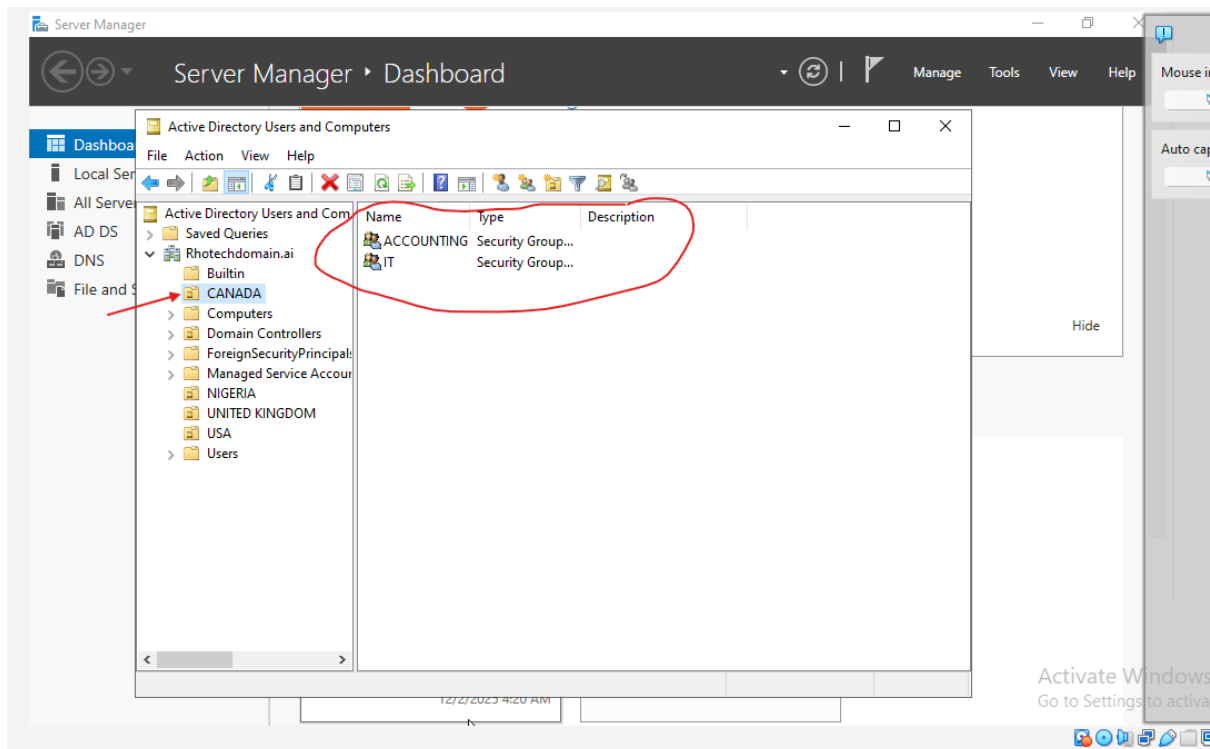
**\*Organizational Unit (OUs)**

**\*Group**

**\*User**

Organizational units are containers within a domain that group users, computers, and other objects. They allow administrators to apply group policies and delegate management tasks.
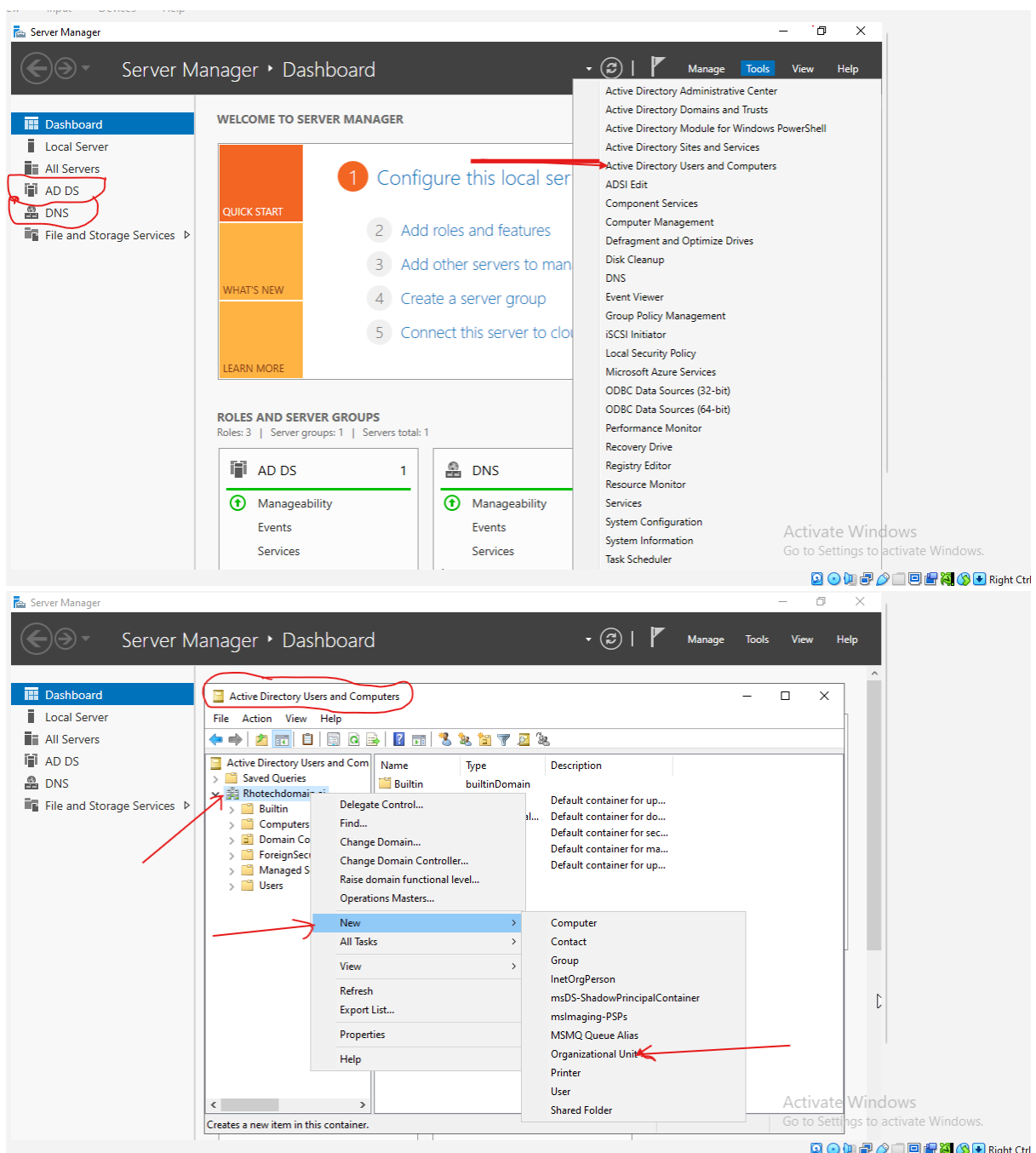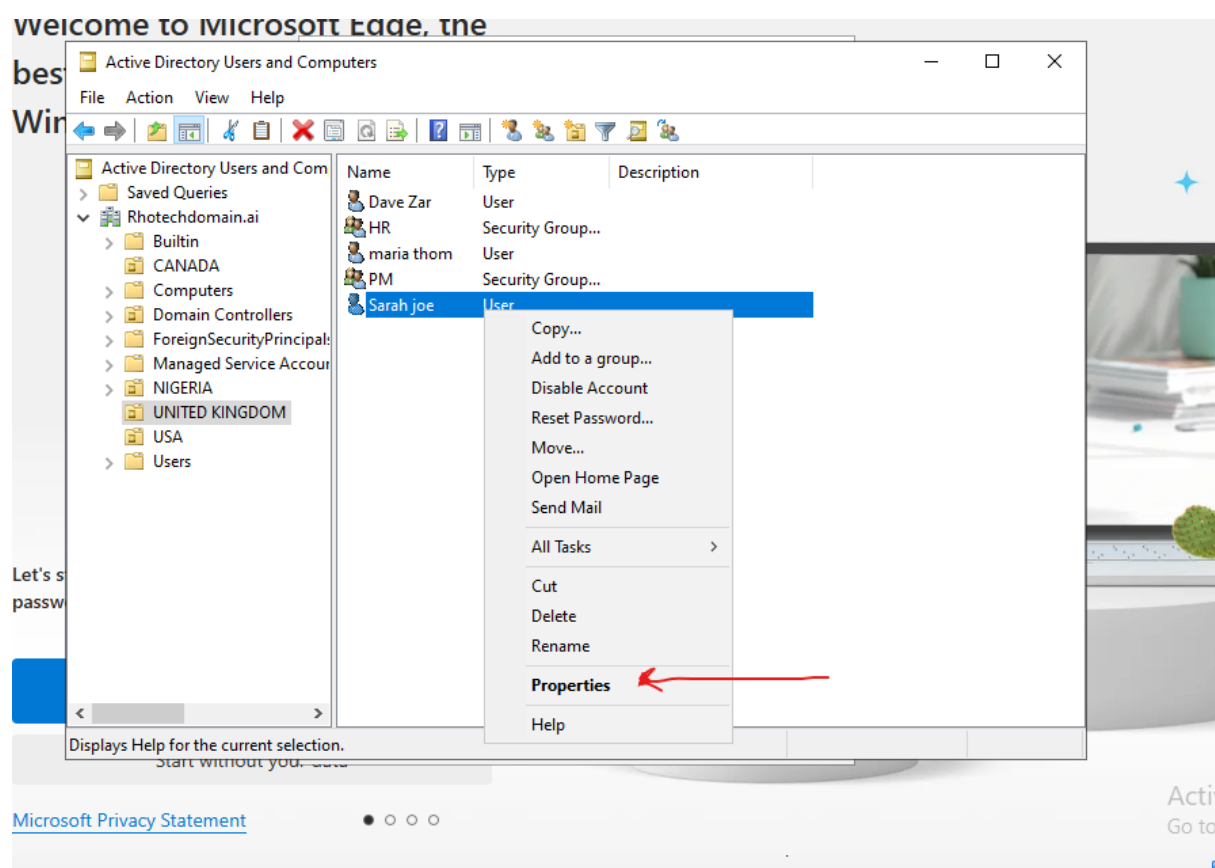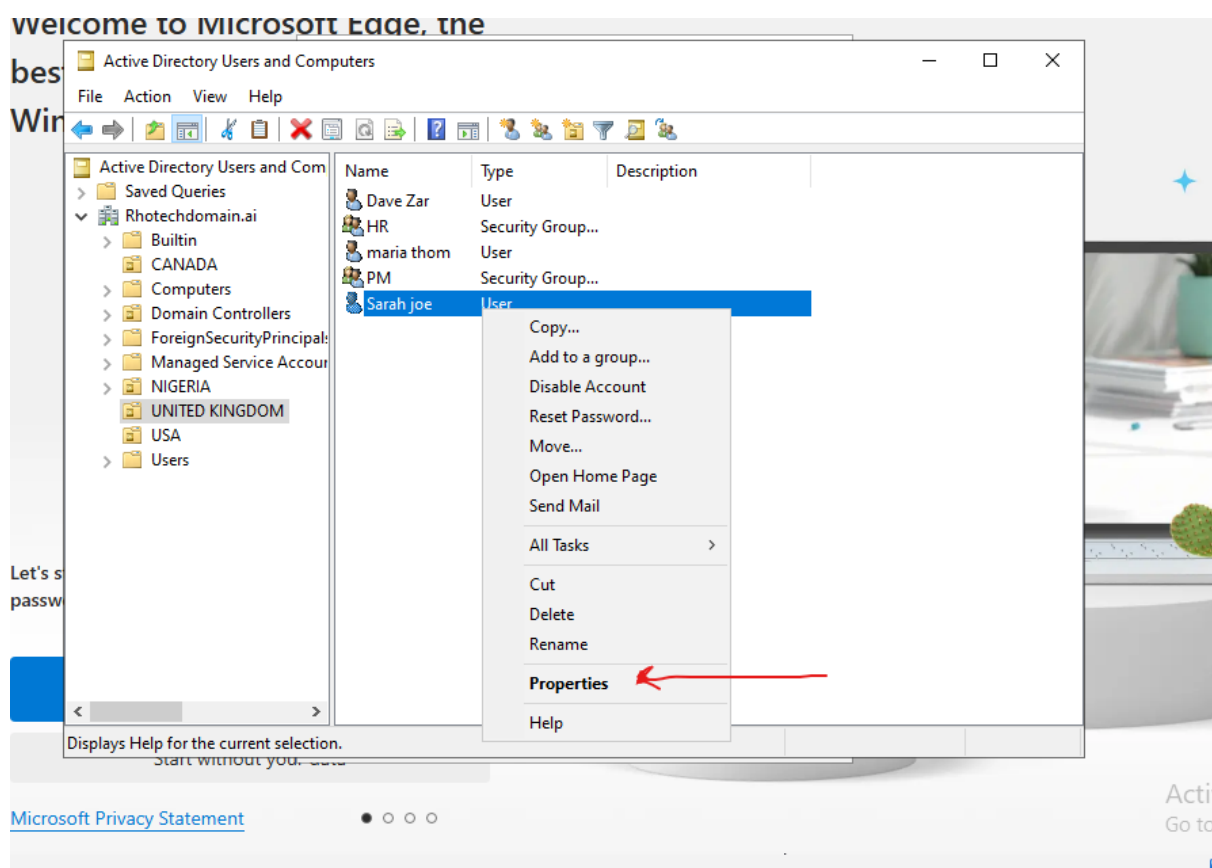
I created four Groups: GROUP: CANADA, UK, USA, and NIGERIA

**STEP 6:** Creating users under a group. In these steps, I will assign users to the group I created. The diagram below shows how I performed this action. I had earlier created four groups under the OU. I created 14 users under the group.

**STEPS 7**

In these steps, I joined Windows 8 to the server and the domain I had earlier set up. The purpose of this is to assign a particular PC to a user in an organizational unit.

After joining the PC to the domain, I checked the IP address and checked if the network settings are correct.

I also configured the PC from the server; this step was done by checking the IP address of the server, and on my PC, I went to the network and sharing centre to link the IP address I fetched from the server.

I also make sure that the IP address of the server is set as the IP address of the domain name server.

Connectivity test: In this process, I test the connection between my machine and the network. This was done by ping; I pinged the Server from the PC, and that was successful.

The diagram below demonstrates step-by-step.

Window 8 Rhotech (Snapshot 1) [Running] - Oracle VirtualBox

File   Machine   View   Input   Devices   Help

Recycle Bin

Network and Sharing Center

C:\Windows\system32\cmd.exe

```
   Connection-specific DNS Suffix  . : cable.virginm.net
   Link-local IPv6 Address . . . . . : fe80::1021:aa14:4dd:bf5x3
   IPv4 Address. . . . . . . . . . . : 10.
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : 10.

Tunnel adapter isatap.cable.virginm.net:

   Media State . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . : cable.virginm.net

C:\Users\Rhotech>ping 10.

Pinging 10.        with 32 bytes of data:
Reply from 10.0.2.15: bytes=32 time=1ms TTL=128
Reply from 10.0.2.15: bytes=32 time<1ms TTL=128
Reply from 10.0.2.15: bytes=32 time<1ms TTL=128
Reply from 10.0.2.15: bytes=32 time=1ms TTL=128

Ping statistics for 10.0.2.15:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\Users\Rhotech>_
```
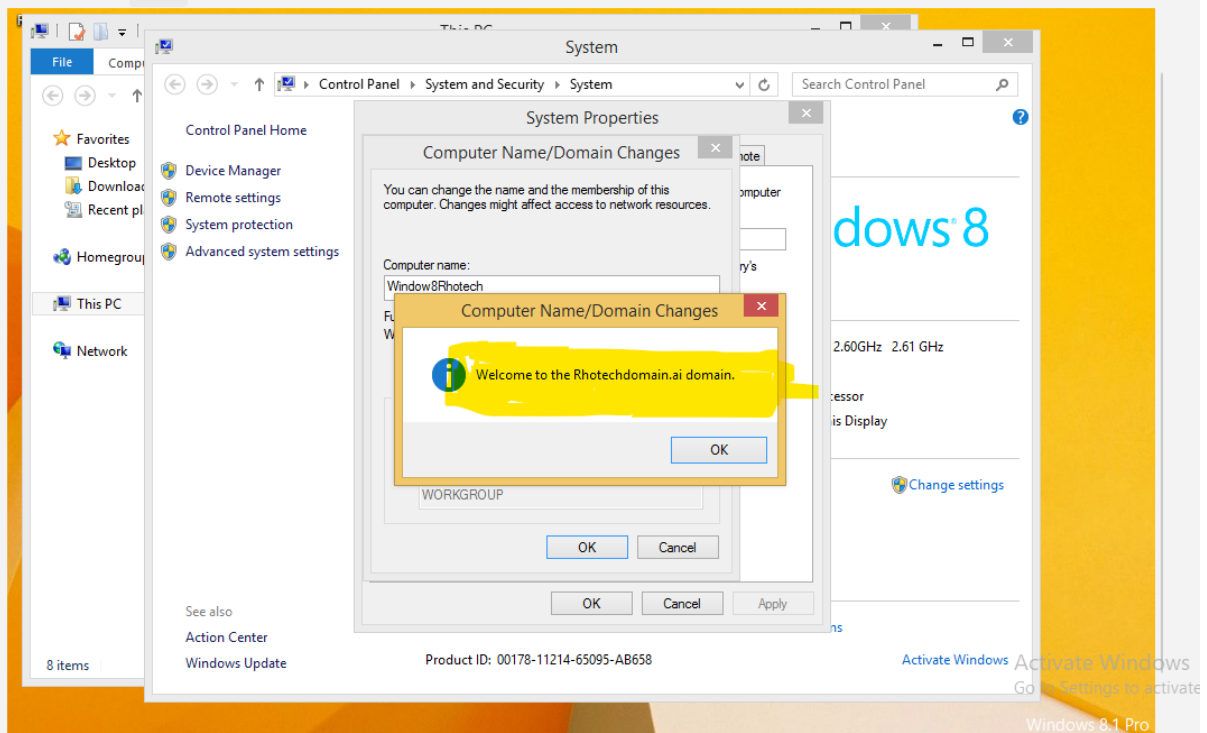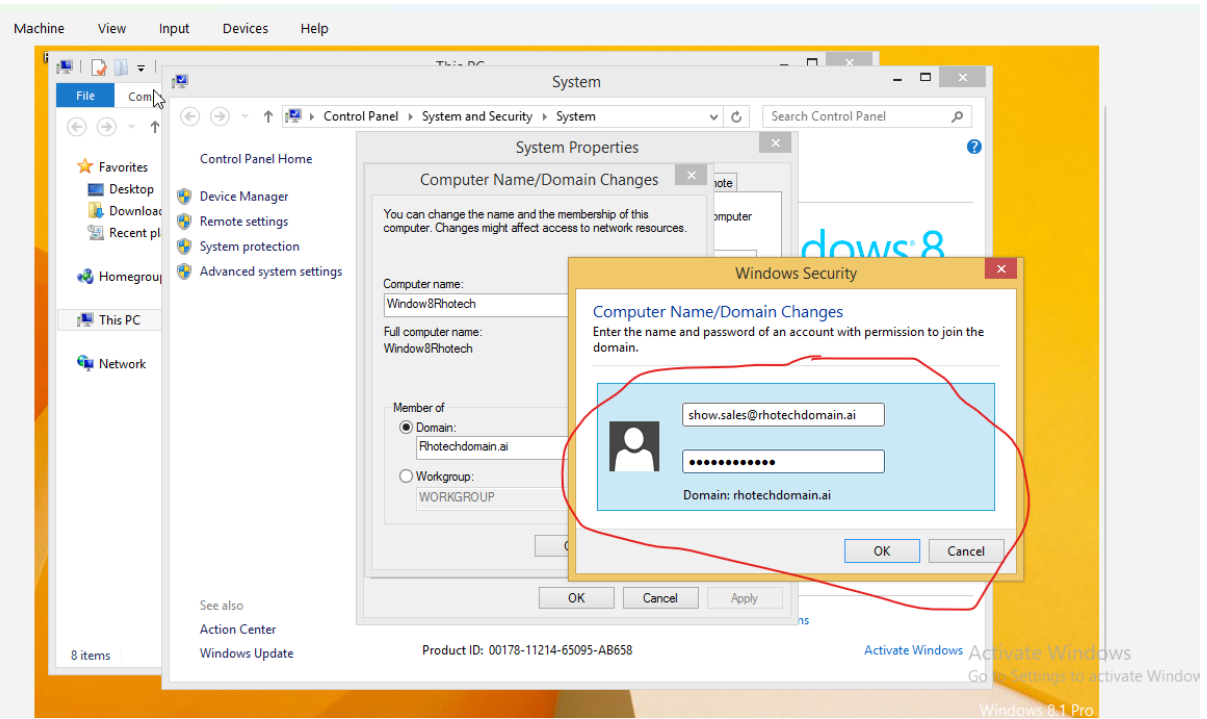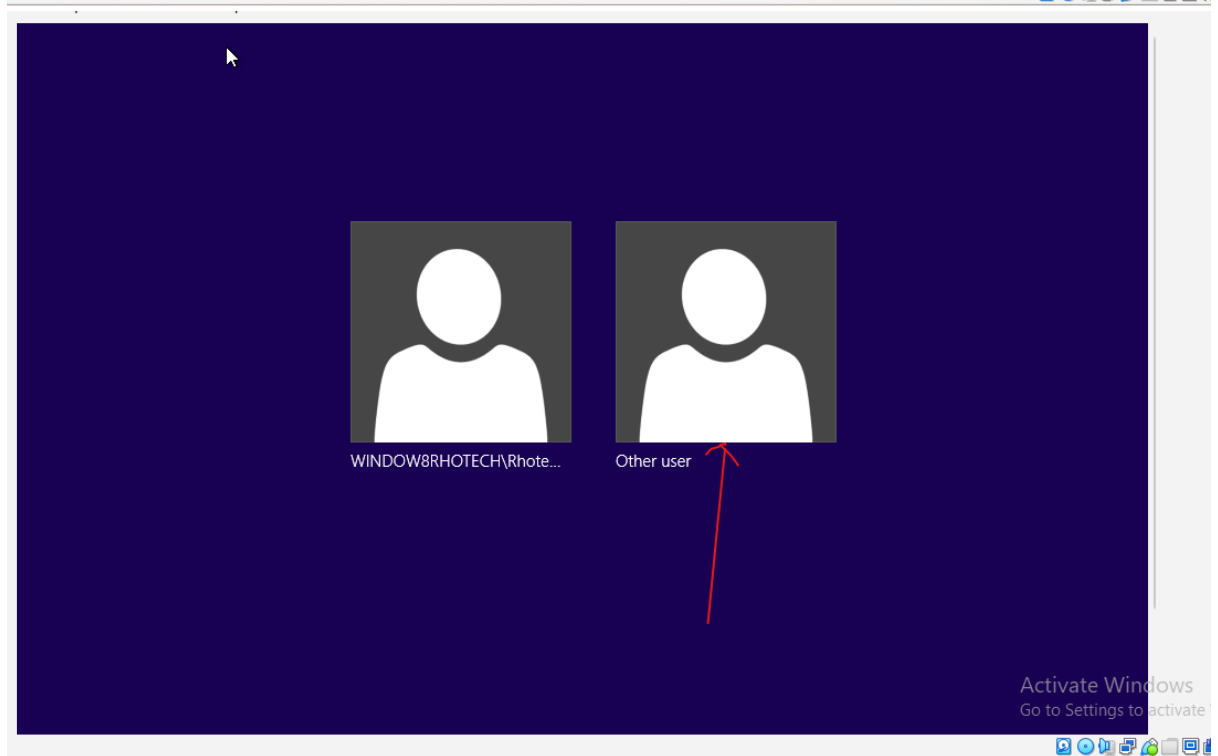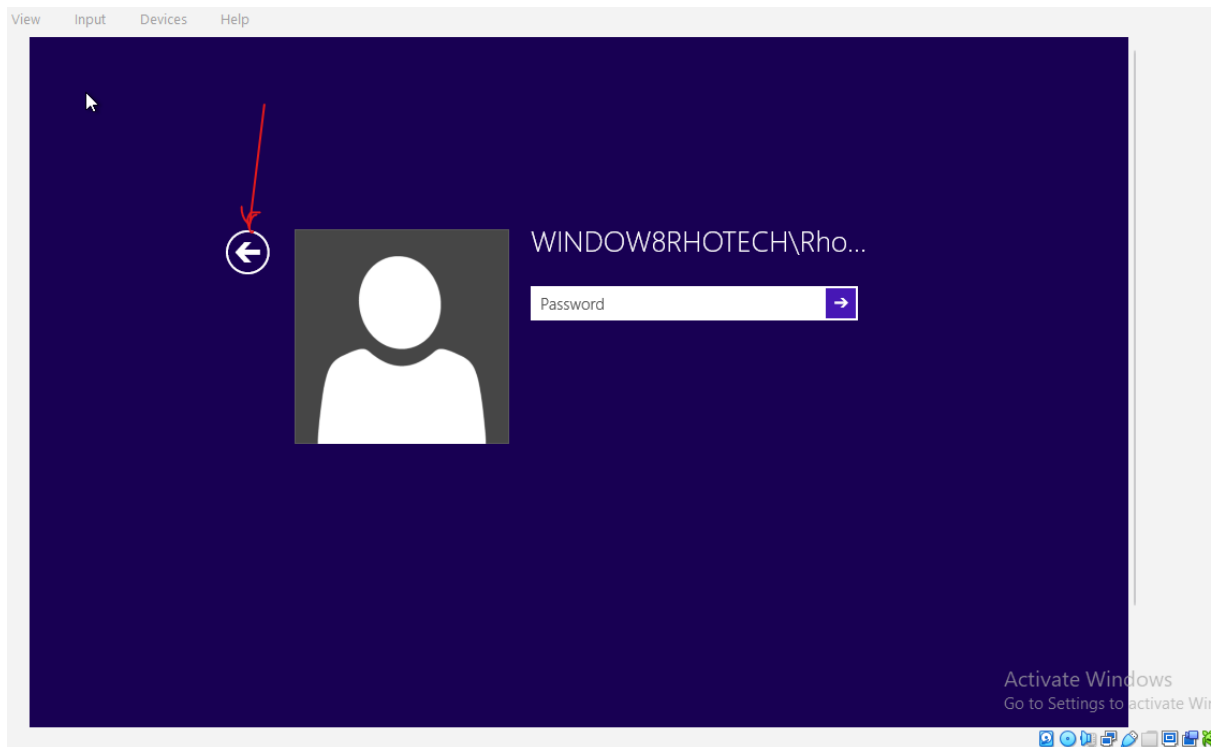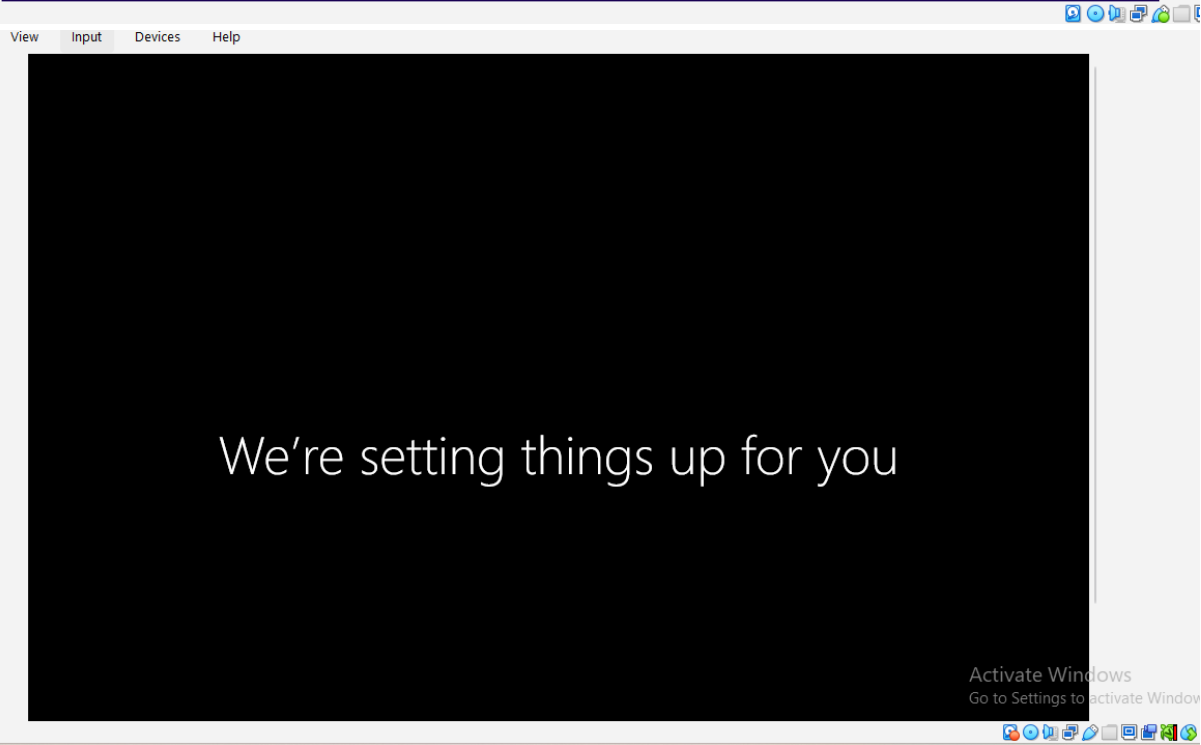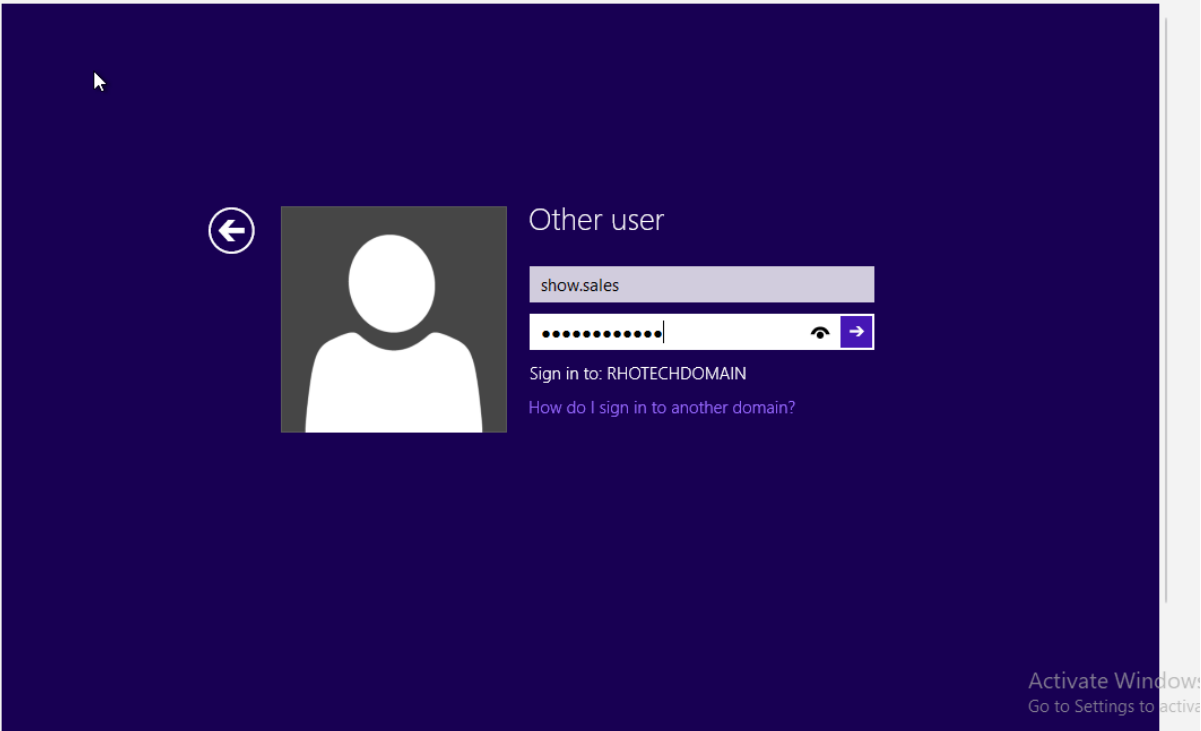
Control Panel

See also

HomeGroup

Internet Options

Windows Firewall

Activate Windows
Go to Settings to activate Windows.

Windows 8.1 Pro

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Window 8 Rhotech (Snapshot 1) [Running] - Oracle VirtualBox

File   Machine   View   Input   Devices   Help

Recycle Bin

Network and Sharing Center

C:\Windows\system32\cmd.exe

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   Connection-specific DNS Suffix  . : cable.virginm.net
   Link-local IPv6 Address . . . . . : fe80::1021:aa14:4dd:bf5x3
   IPv4 Address. . . . . . . . . . . : 10.
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : 10.

Tunnel adapter isatap.cable.virginm.net:

   Media State . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . : cable.virginm.net

C:\Users\Rhotech>ping 10.

Pinging 10.        with 32 bytes of data:
Reply from 10.0.2.15: bytes=32 time=1ms TTL=128
Reply from 10.0.2.15: bytes=32 time<1ms TTL=128
Reply from 10.0.2.15: bytes=32 time<1ms TTL=128
Reply from 10.0.2.15: bytes=32 time=1ms TTL=128

Ping statistics for 10.0.2.15:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\Users\Rhotech>_
```

Control Panel

See also

HomeGroup

Internet Options

Windows Firewall

Activate Windows
Go to Settings to activate Windows.

Windows 8.1 Pro

WINDOW8RHOTECH\Rho...

Password

Activate Windows
Go to Settings to activate Wir

WINDOW8RHOTECH\Rhote...          Other user

Activate Windows
Go to Settings to activate

**Other user**

show.sales

●●●●●●●●●●●

Sign in to: RHOTECHDOMAIN

How do I sign in to another domain?

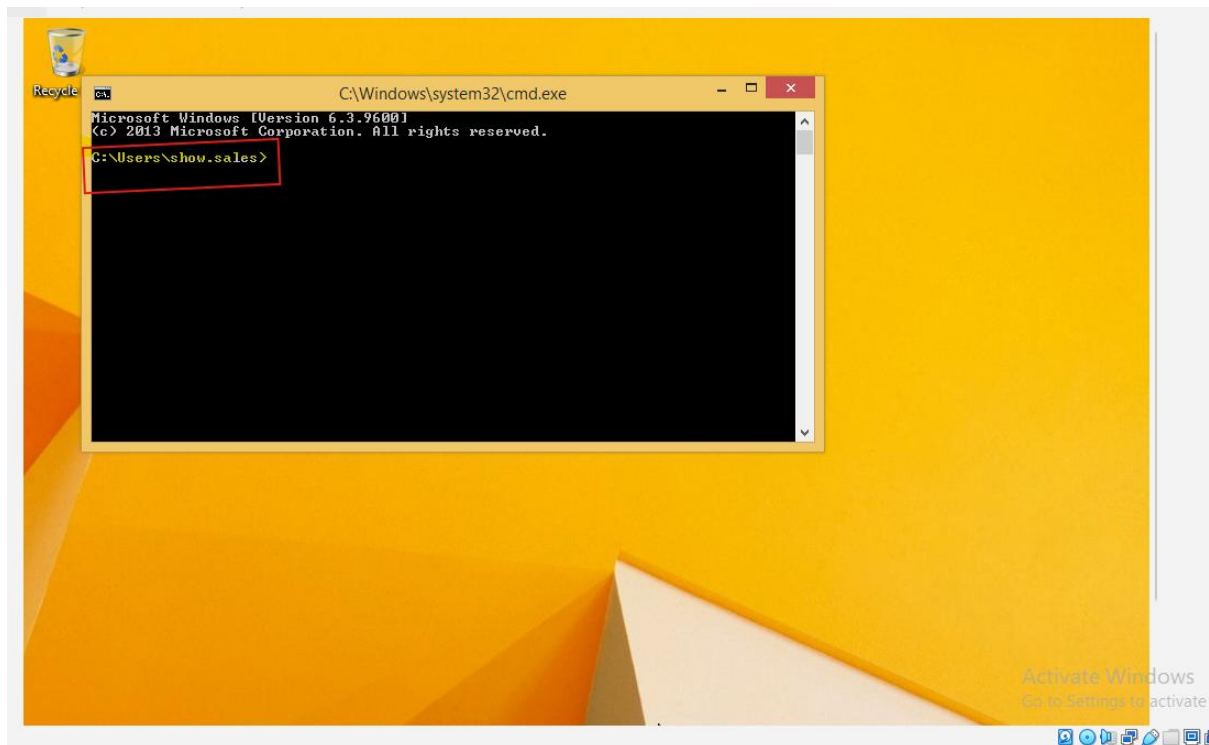View    Input    Devices    Help

We're setting things up for you

**INCONCLUSION**

I successfully set up the server and deployed the Active Directory. I set up the domain name and successfully connected the PC to the server. I set up an Organizational unit, groups, a user, roles and features were also added.