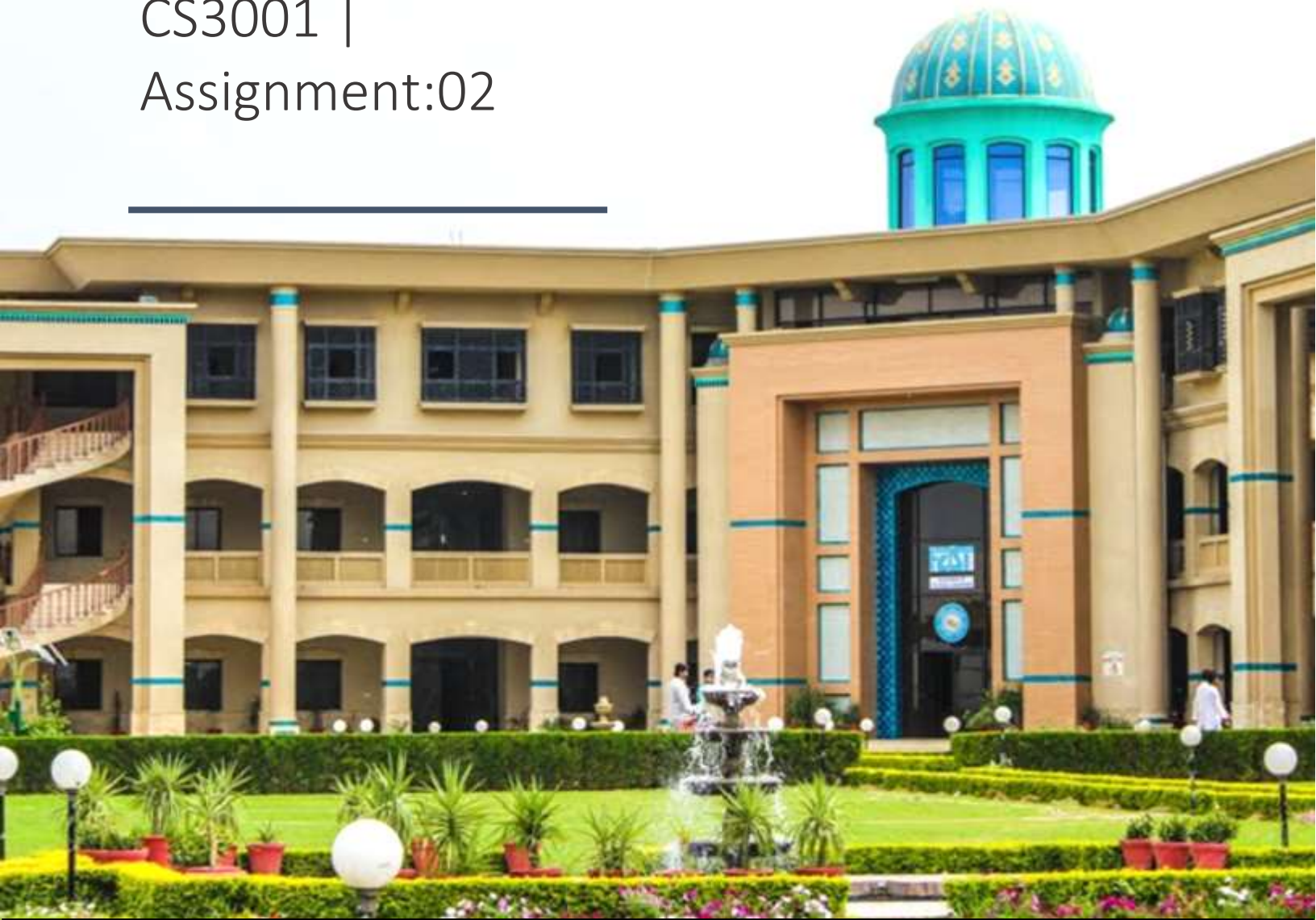


# Computer Networks | CS3001 | Assignment:02

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APRIL 7, 2023

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Daniyal Khan : Mahad Rahat



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# Assignment | CNET

CISCO

20i-1847 Daniyal Khan

20i-1808 Mahad Rahat

## Contents

Active Directory Domain Services: .....	3
Directory:.....	3
Tasks:.....	4
Solution: .....	4
Installing Windows Server:.....	5
Configuration:.....	6
Signing in: .....	7
Just Starting Out: .....	8
Adding roles and features:.....	9
Configuring DNS:.....	14
DNS Installation: .....	15
Configuring Domain & computer Name:.....	17
Then you can access DNS server using server manager > tools > DNS .....	18
Adding ADDS.....	20
ADDS Deployment Config: .....	30
Part C: Create two users (first names of group members), Login on the server using the created. ....	37

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## Active Directory Domain Services:

### Directory:

A directory is a hierarchical structure that stores information about objects on the network. A directory service, such as Active Directory Domain Services (AD DS), provides the methods for storing directory data and making this data available to network users and administrators. For example, AD DS stores information about user accounts, such as names, passwords, phone numbers, and so on, and enables other authorized users on the same network to access this information.

Active Directory stores information about objects on the network and makes this information easy for administrators and users to find and use. Active Directory uses a structured data store as the basis for a logical, hierarchical organization of directory information.

This data store, also known as the directory, contains information about Active Directory objects. These objects typically include shared resources such as servers, volumes, printers, and the network user and computer accounts. For more information about the Active Directory data store Security is integrated with Active Directory through logon authentication and access control to objects in the directory. With a single network logon, administrators can manage directory data and organization throughout their network, and authorized network users can access resources anywhere on the network. Policy-based administration eases the management of even the most complex network.

Active Directory also includes:

- A set of rules, the schema, that defines the classes of objects and attributes contained in the directory, the constraints and limits on instances of these objects, and the format of their names.
- A global catalog that contains information about every object in the directory. This allows users and administrators to find directory information regardless of which domain in the directory actually contains the data.
- A query and index mechanism, so that objects and their properties can be published and found by network users or applications.

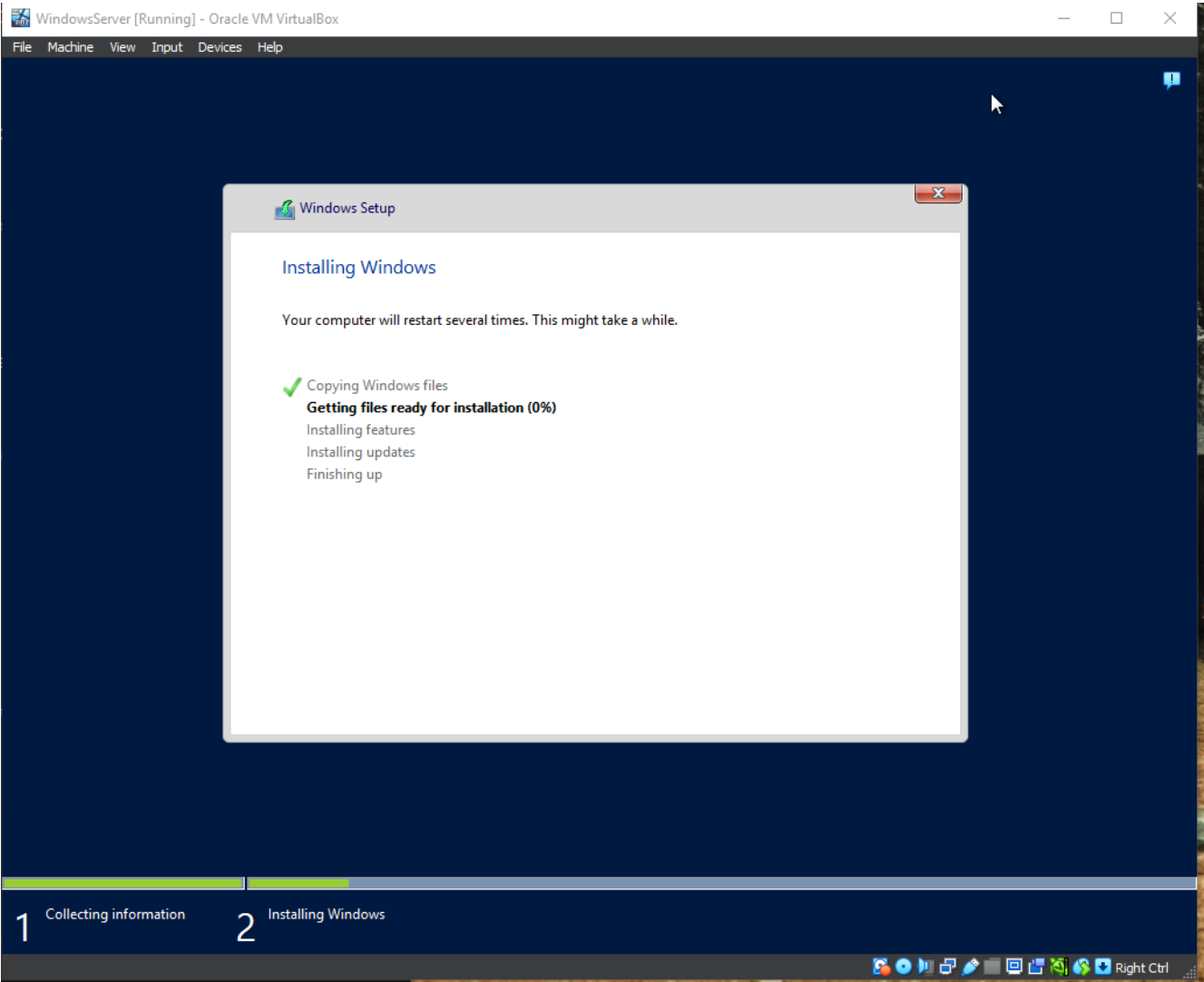
- 
- A replication service that distributes directory data across a network. All domain controllers in a domain participate in replication and contain a complete copy of all directory information for their domain. Any change to directory data is replicated to all domain controllers in the domain.

#### Tasks:

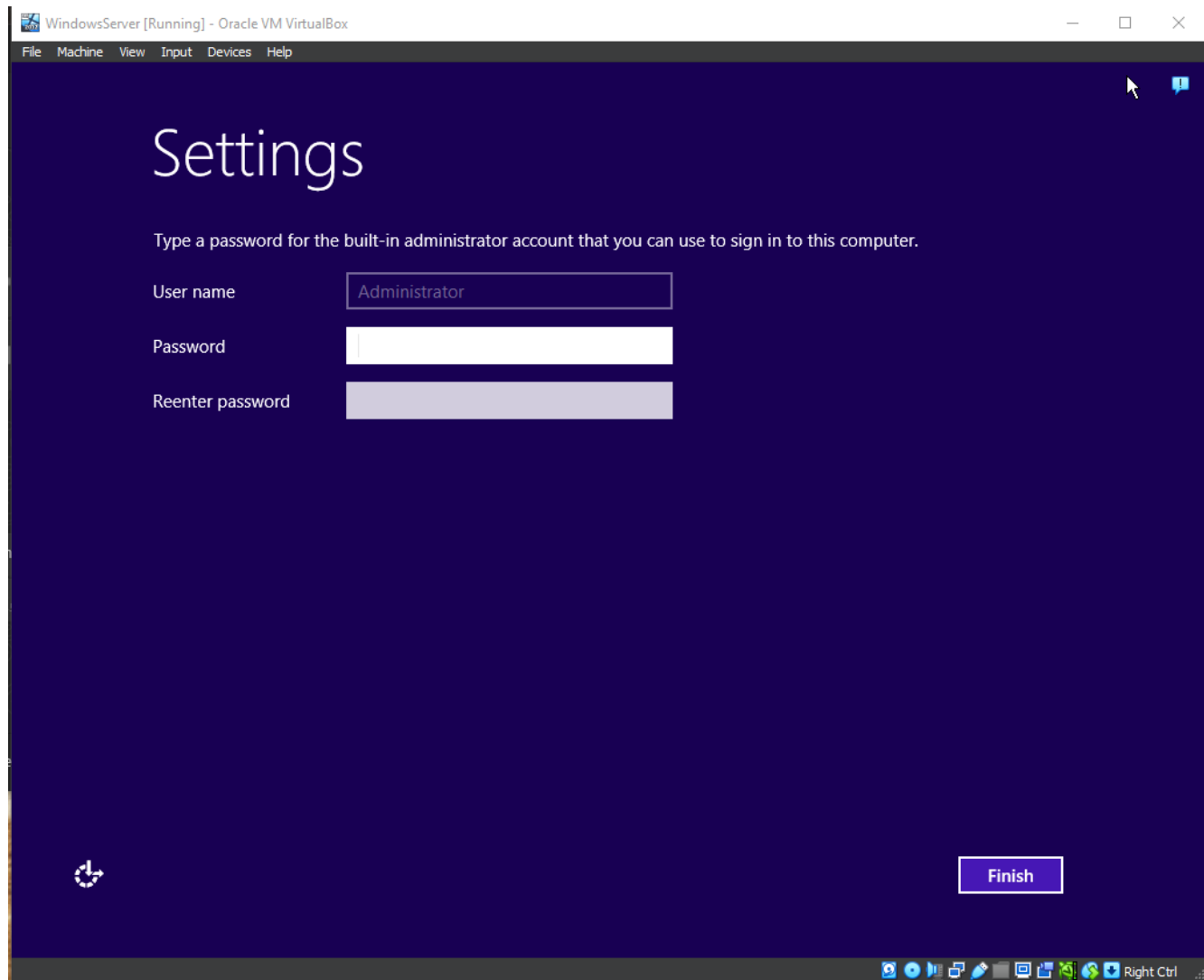
- Install Windows Server 2008/2012 in Virtual Box or VMWare
- Configure Active directory domain services on it. Use your first name as the domain name (Abdullah.com)
- Create two users (first names of group members), Login on the server using the created user
- Configure DHCP service on the installed server

#### Solution:

Installing Windows Server:



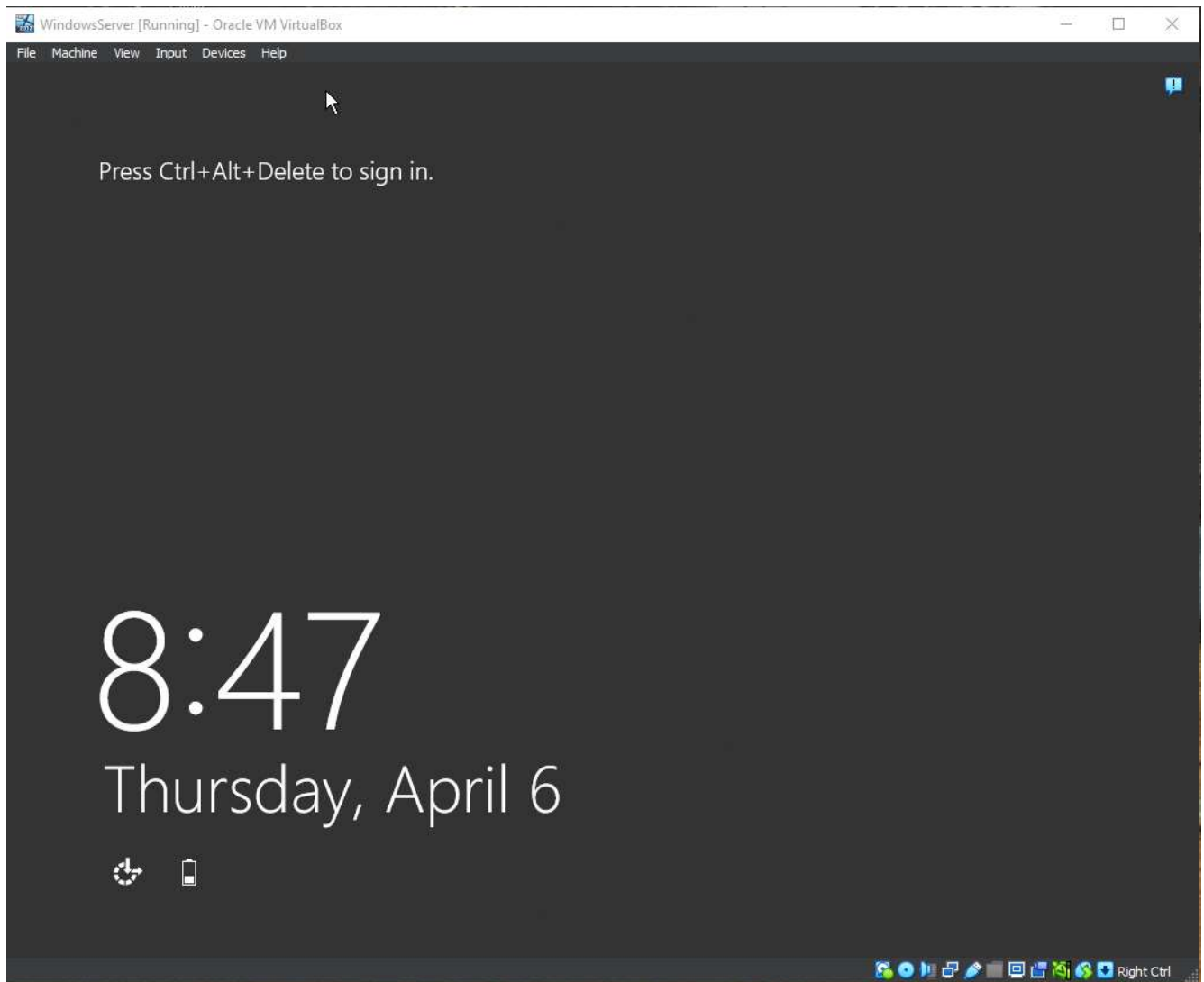
## Configuration:



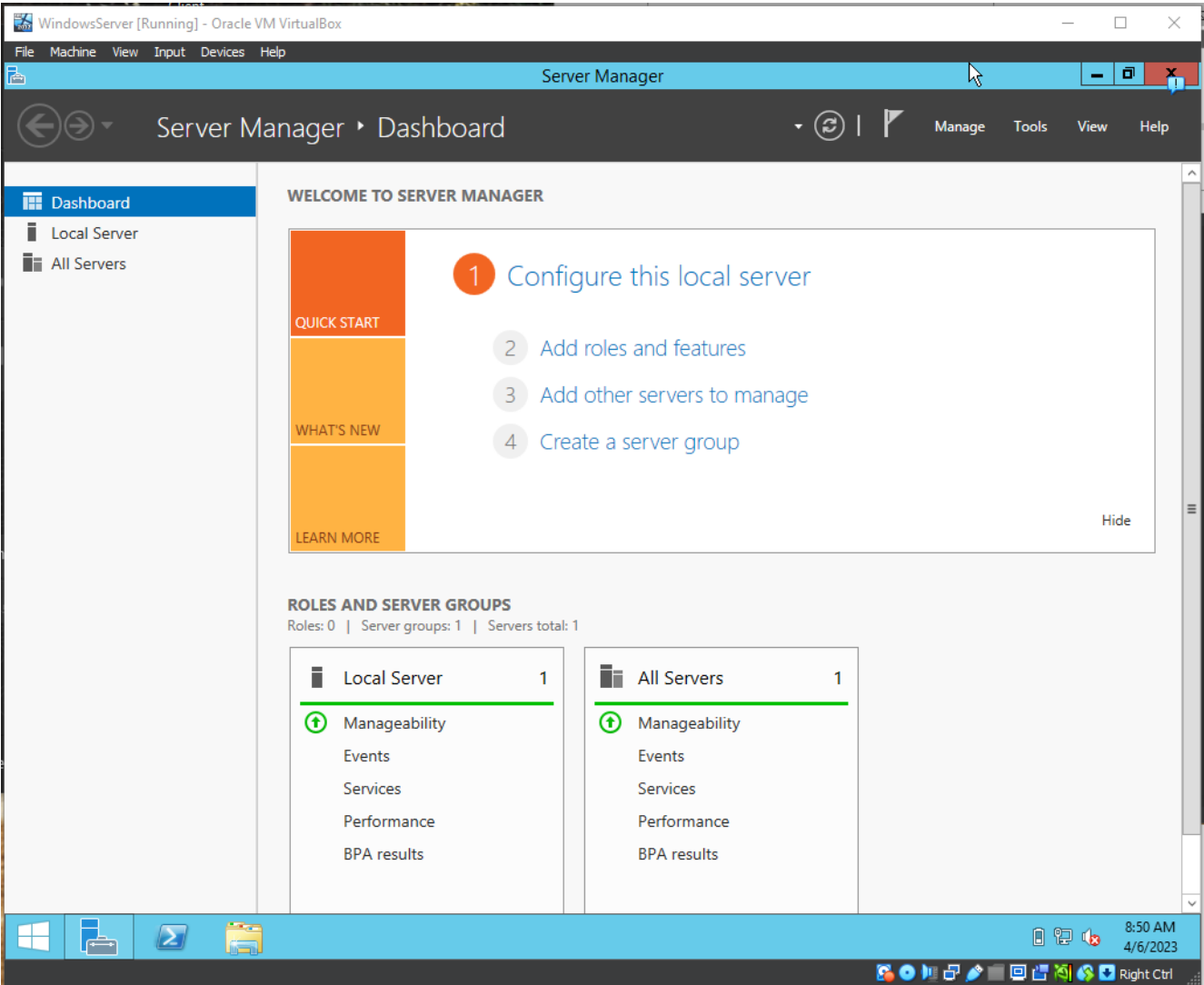
Username: Admin

Password: Daniyal@1234

Signing in:

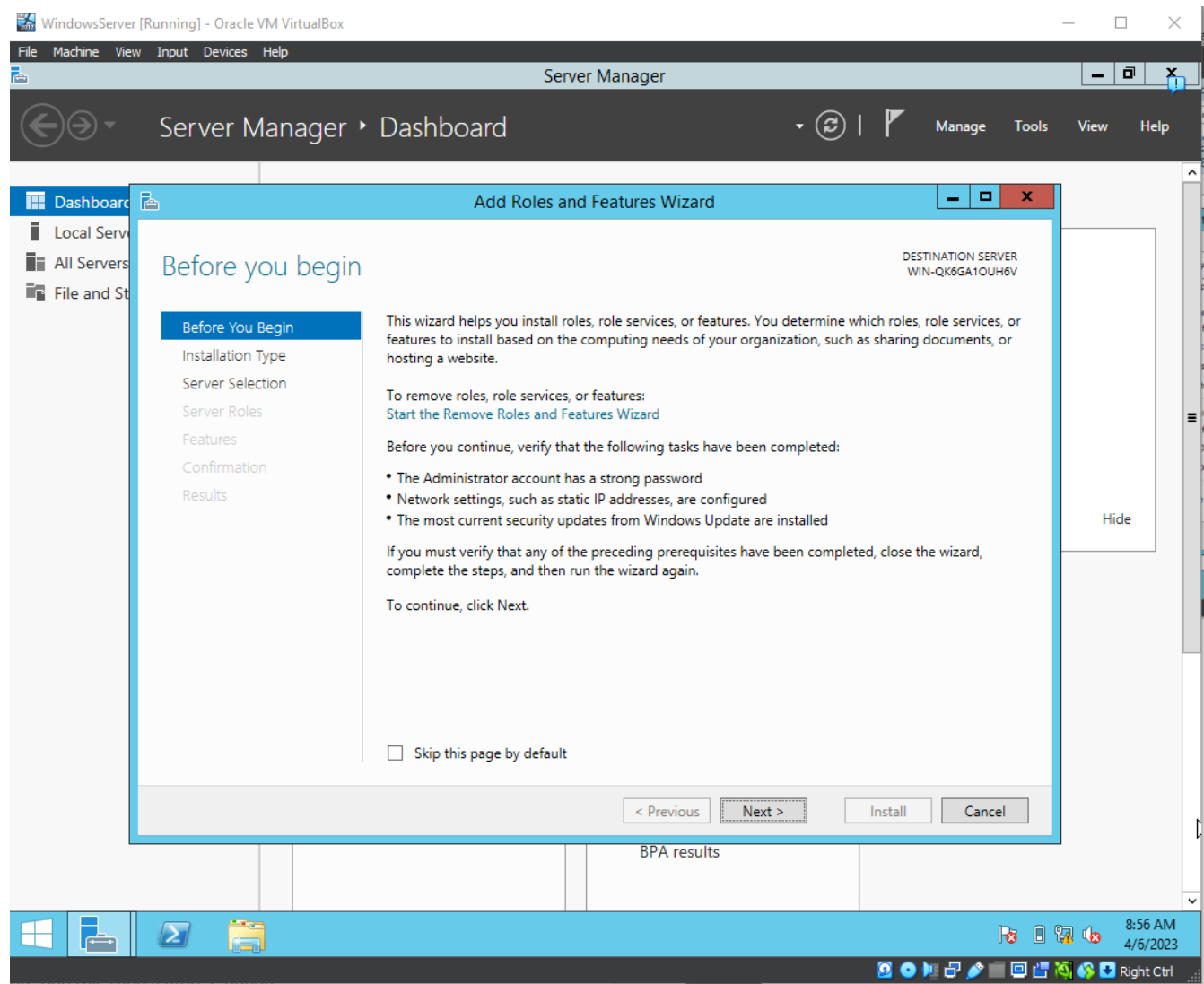


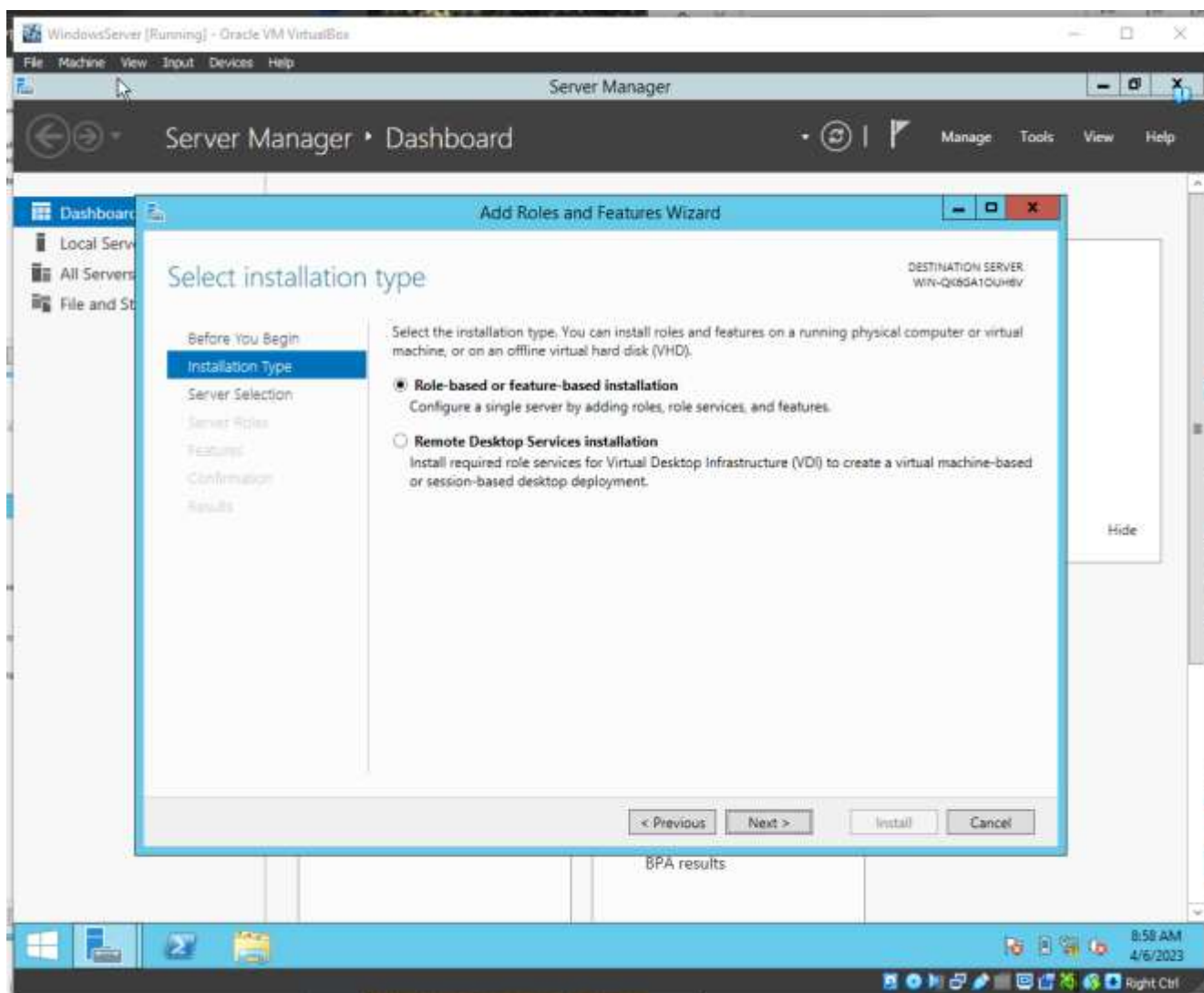
Just Starting Out:

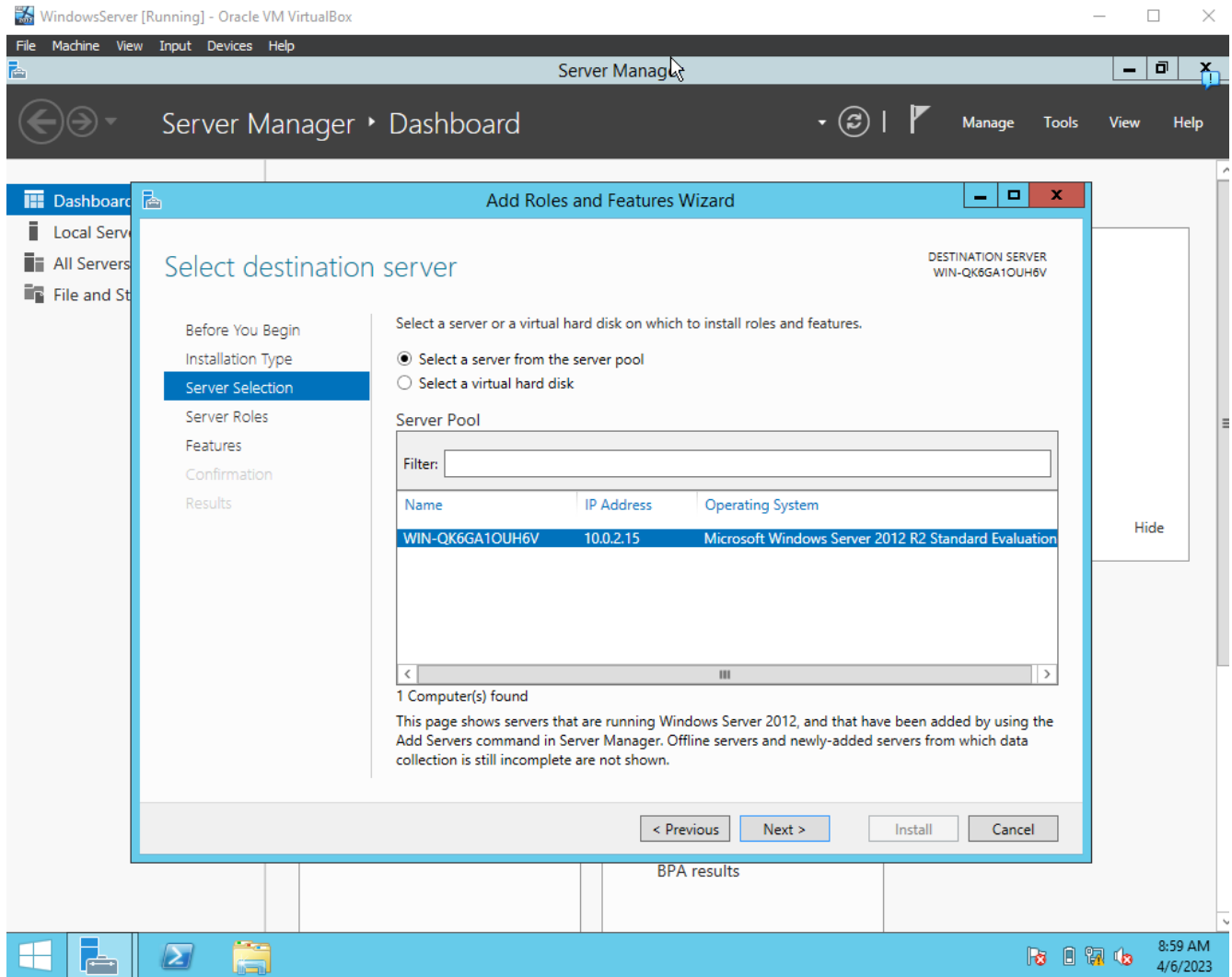


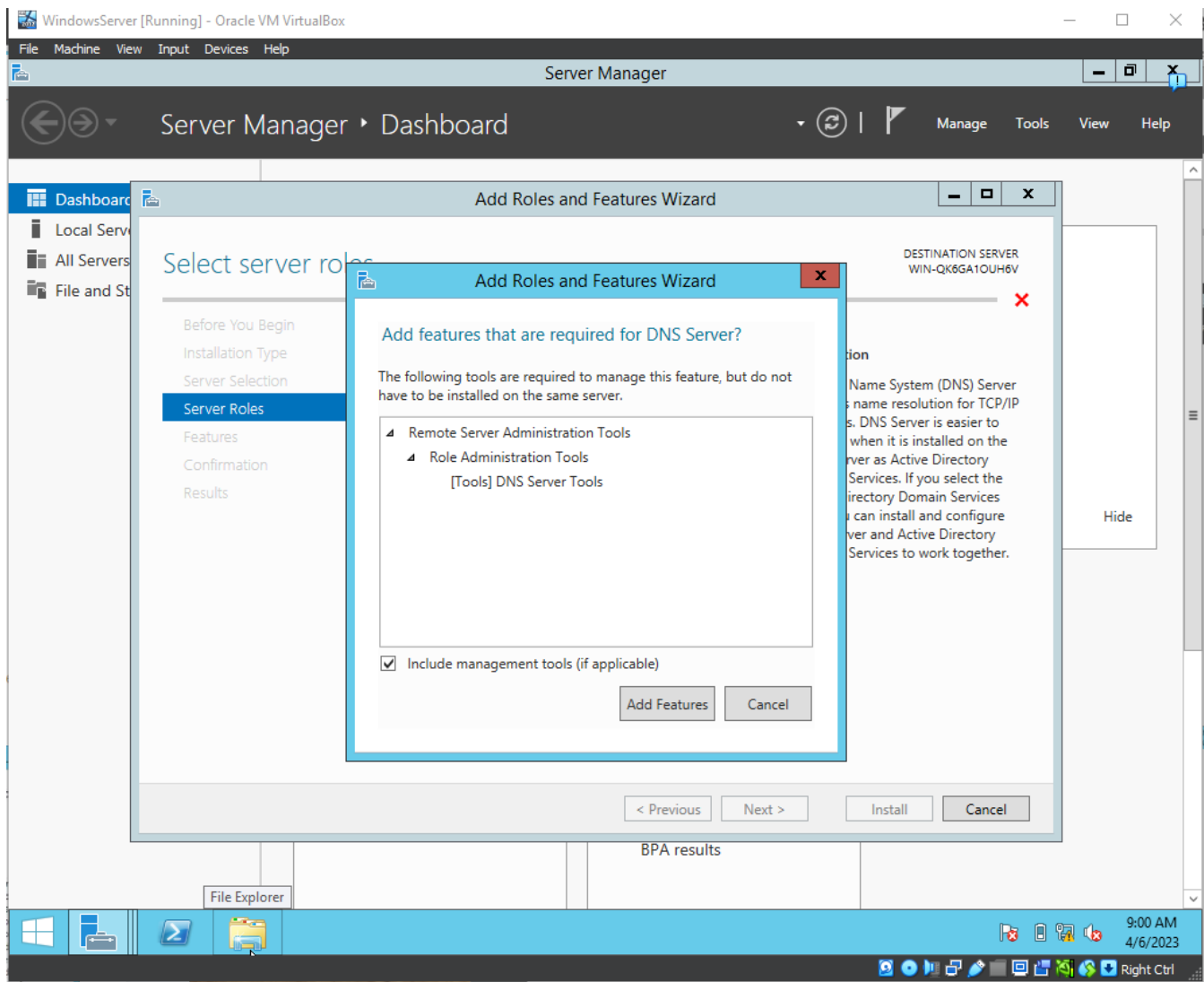


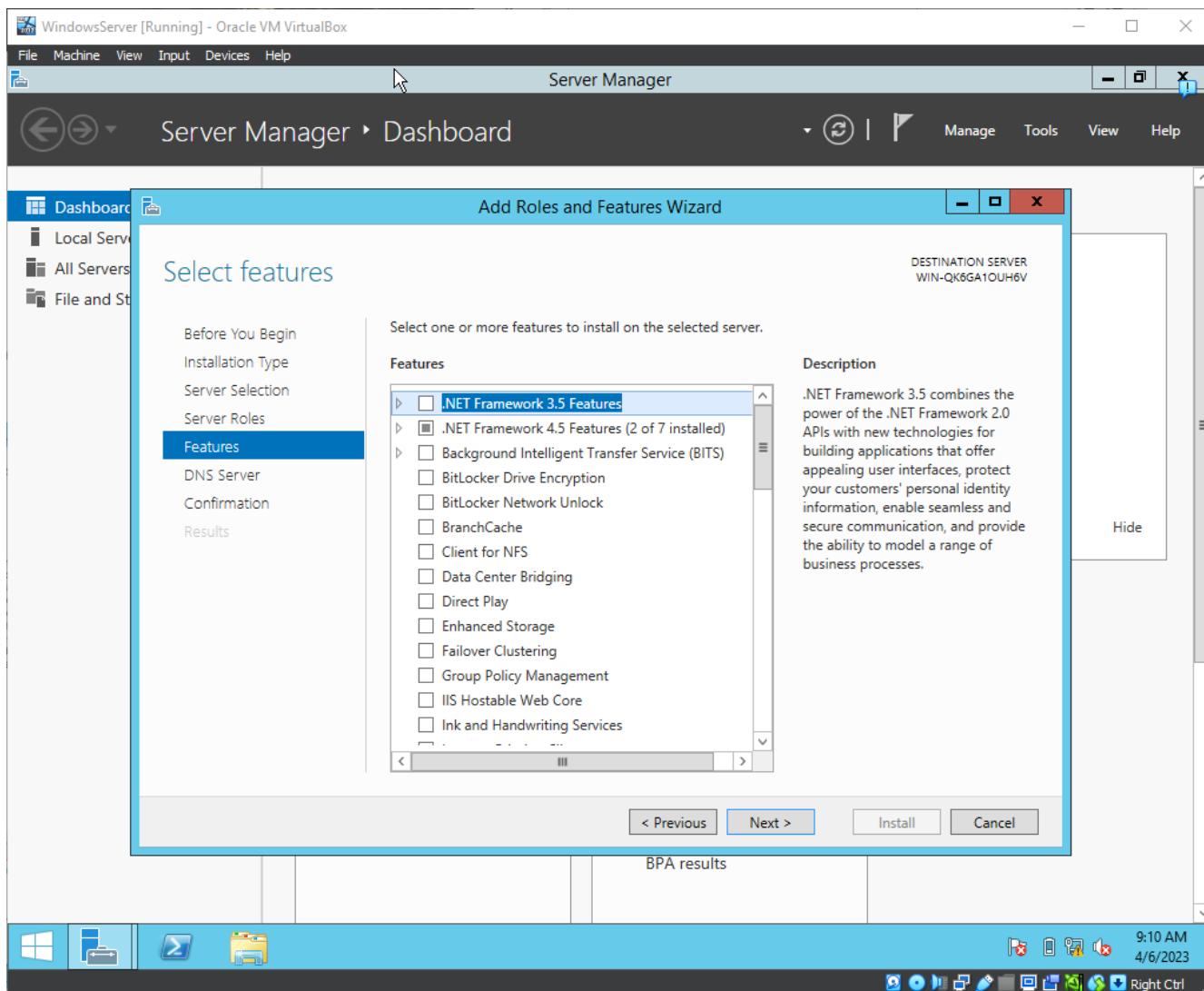
## Adding roles and features:



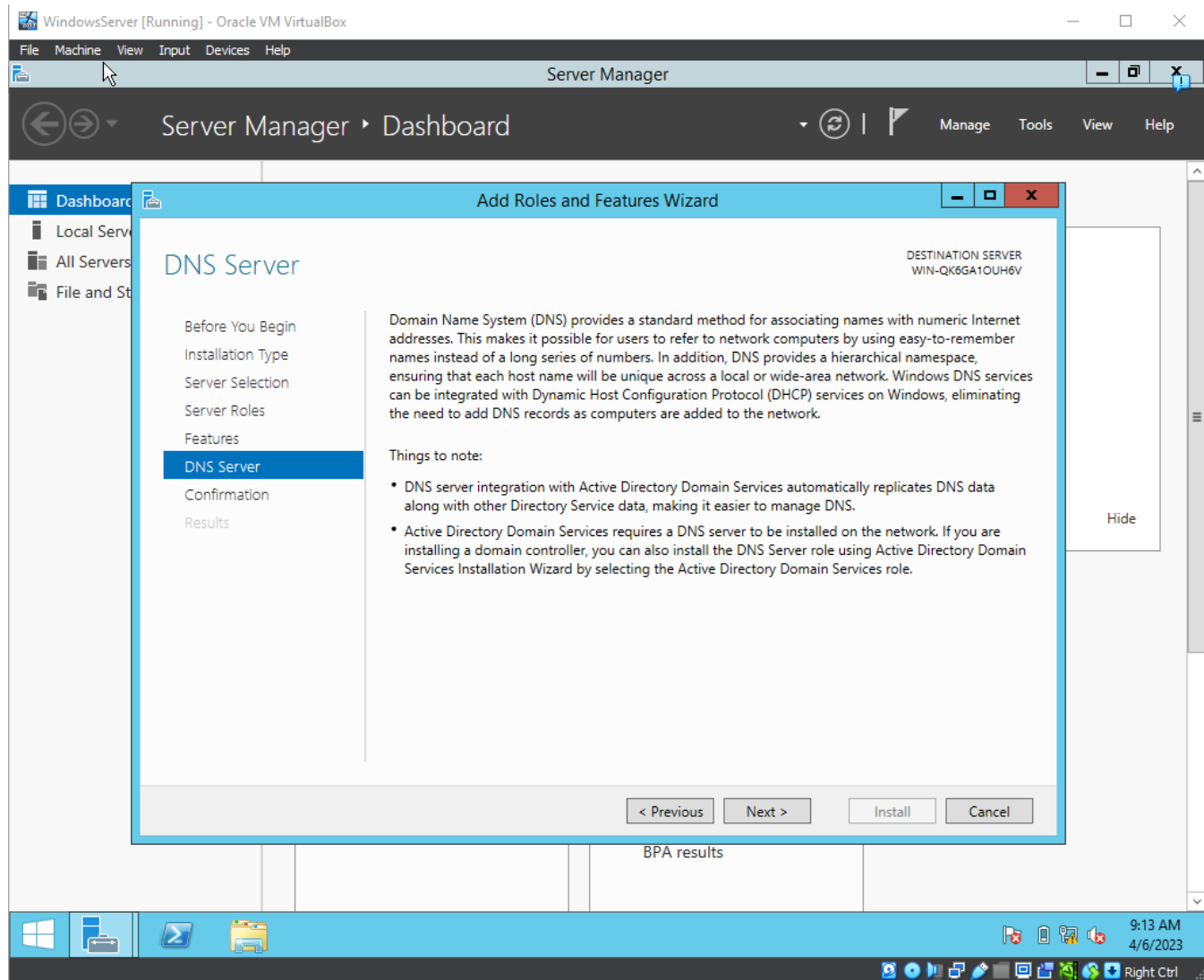




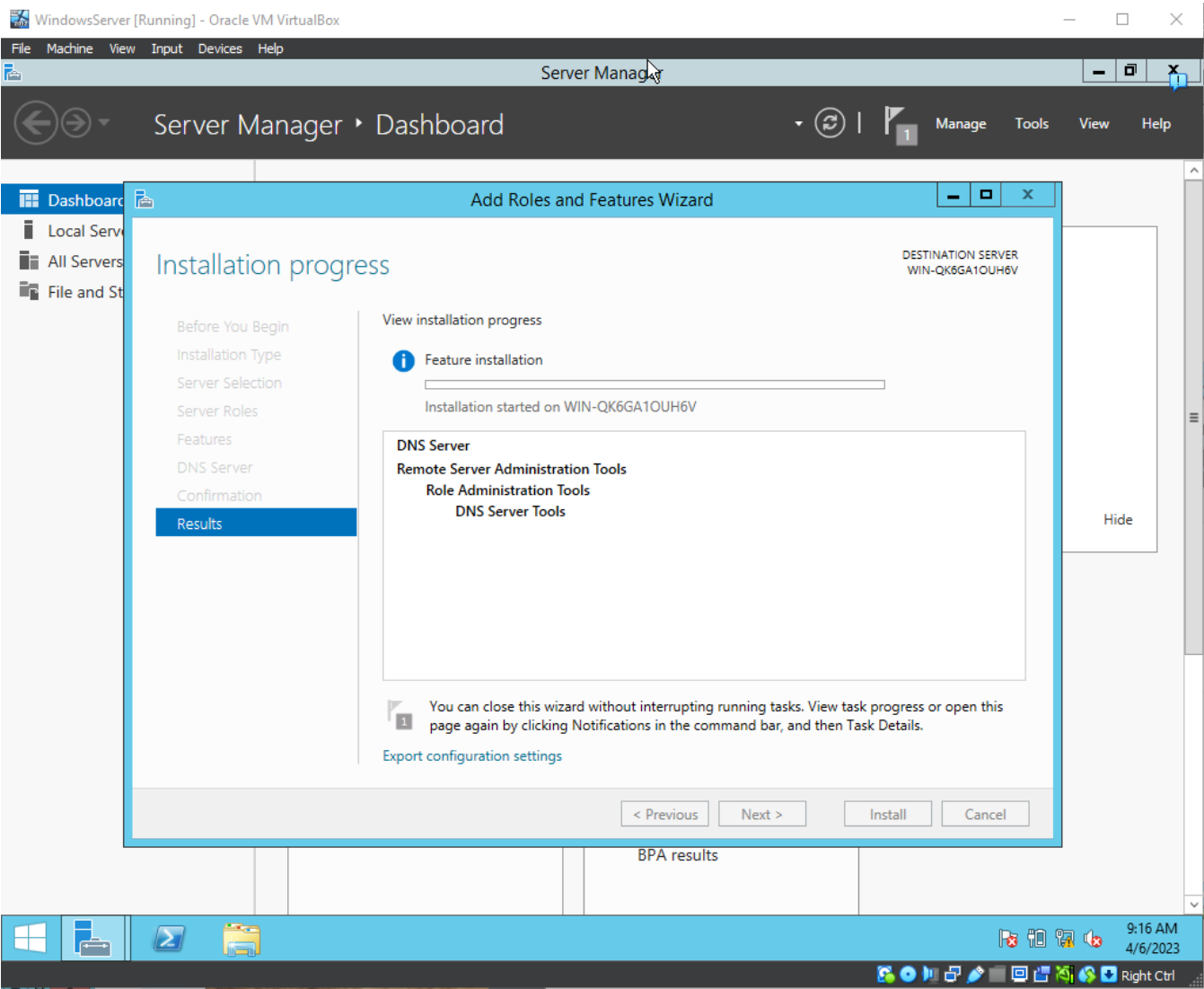


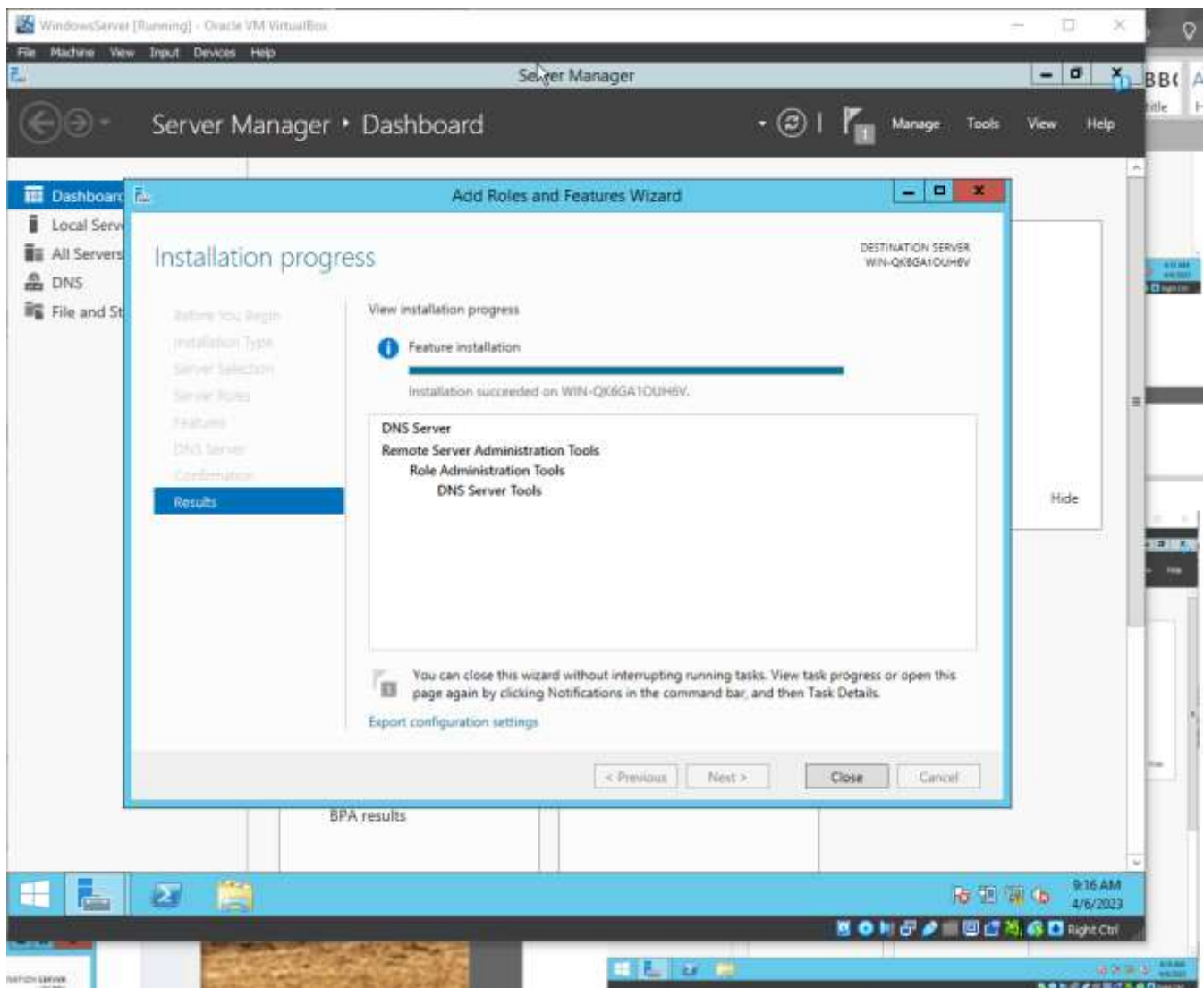


## Configuring DNS:



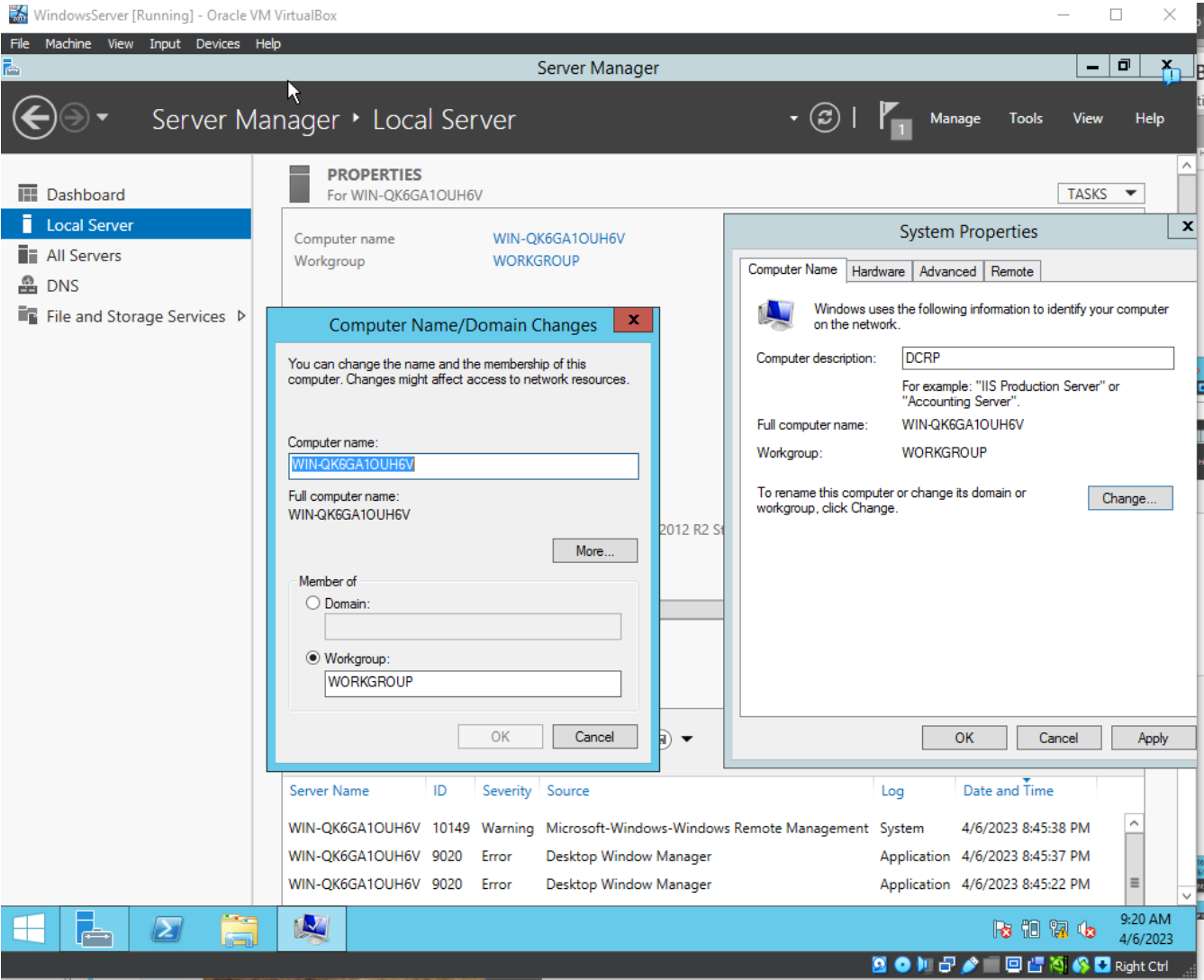
DNS Installation:



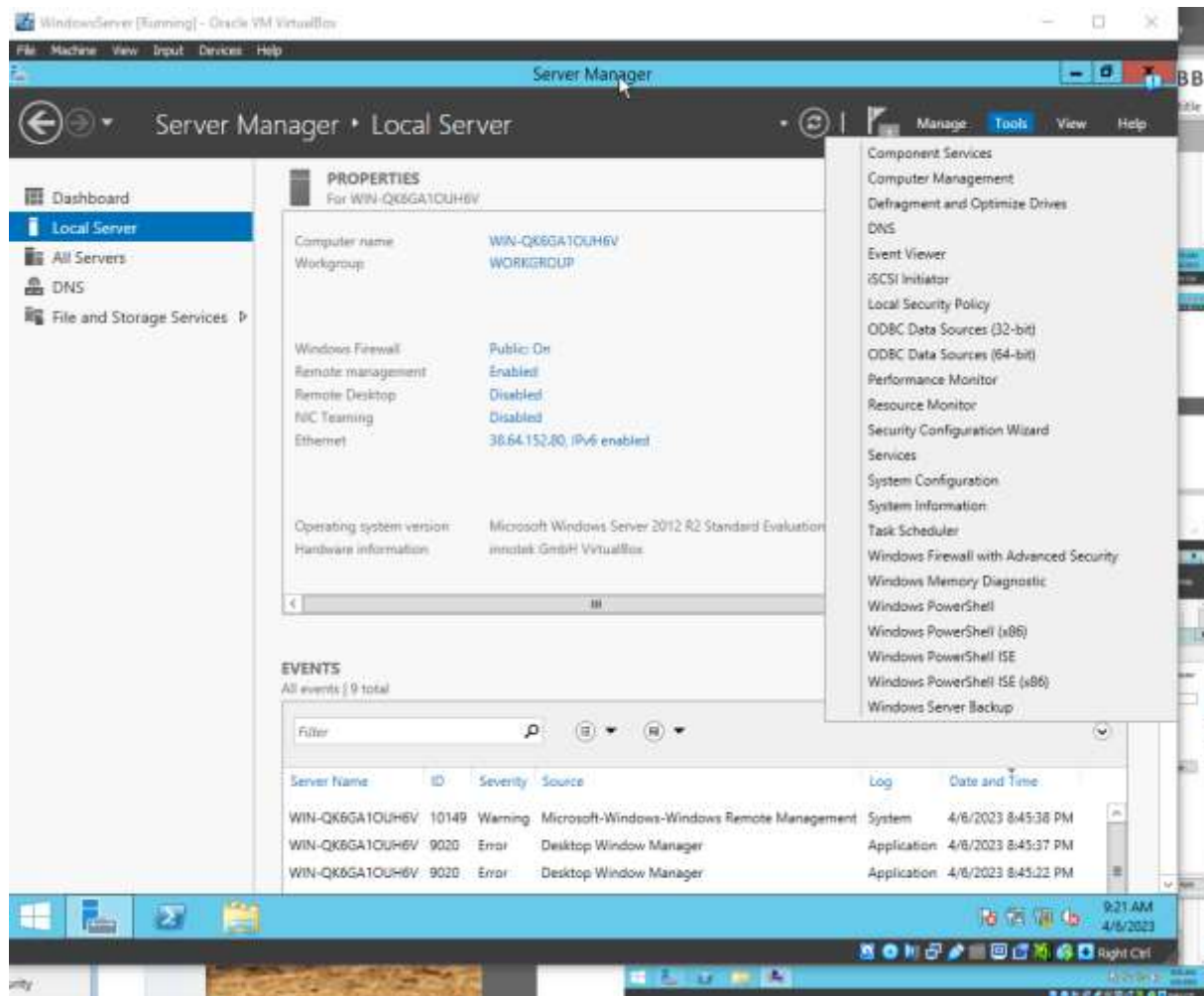


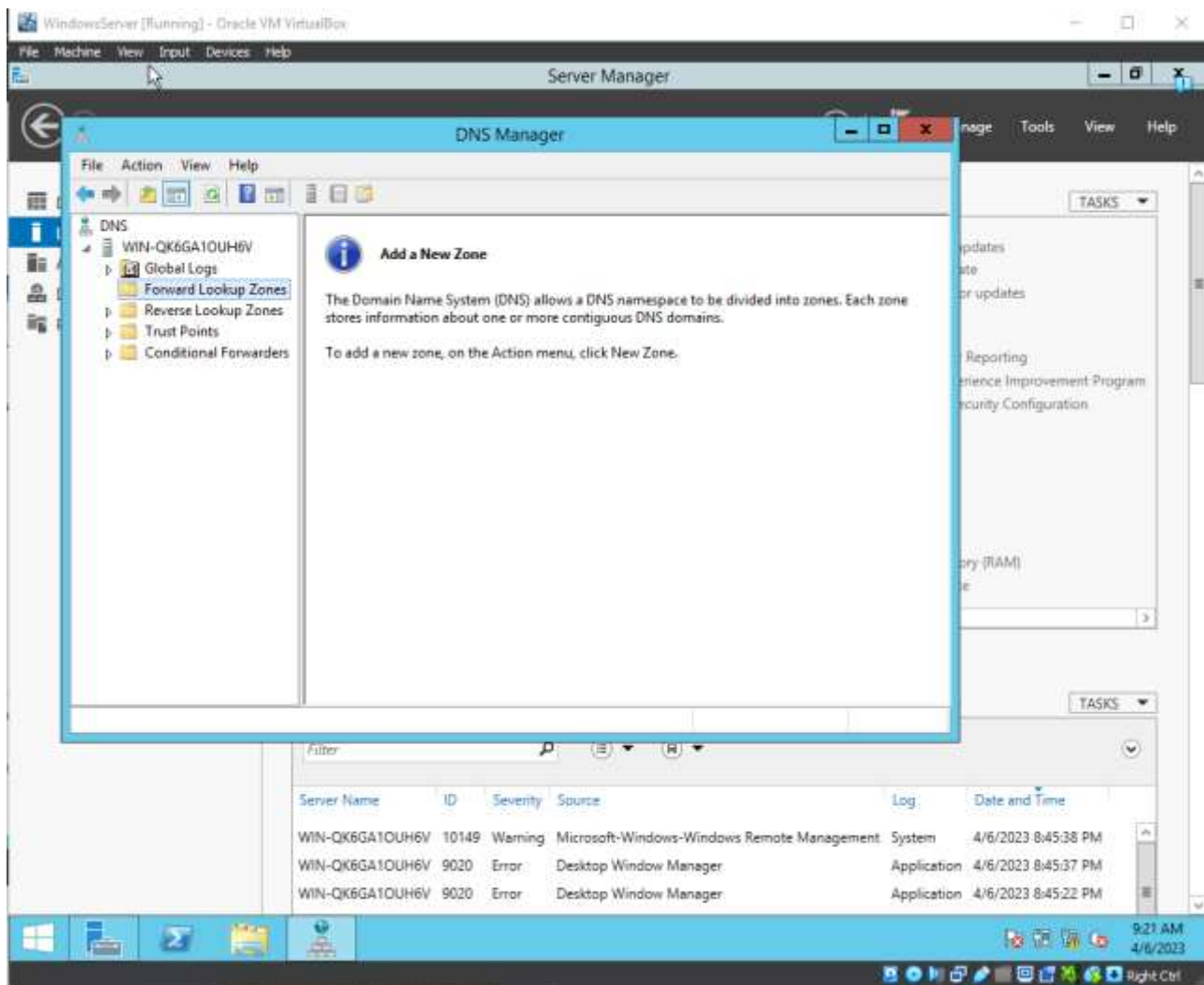


Configuring Domain & computer Name:

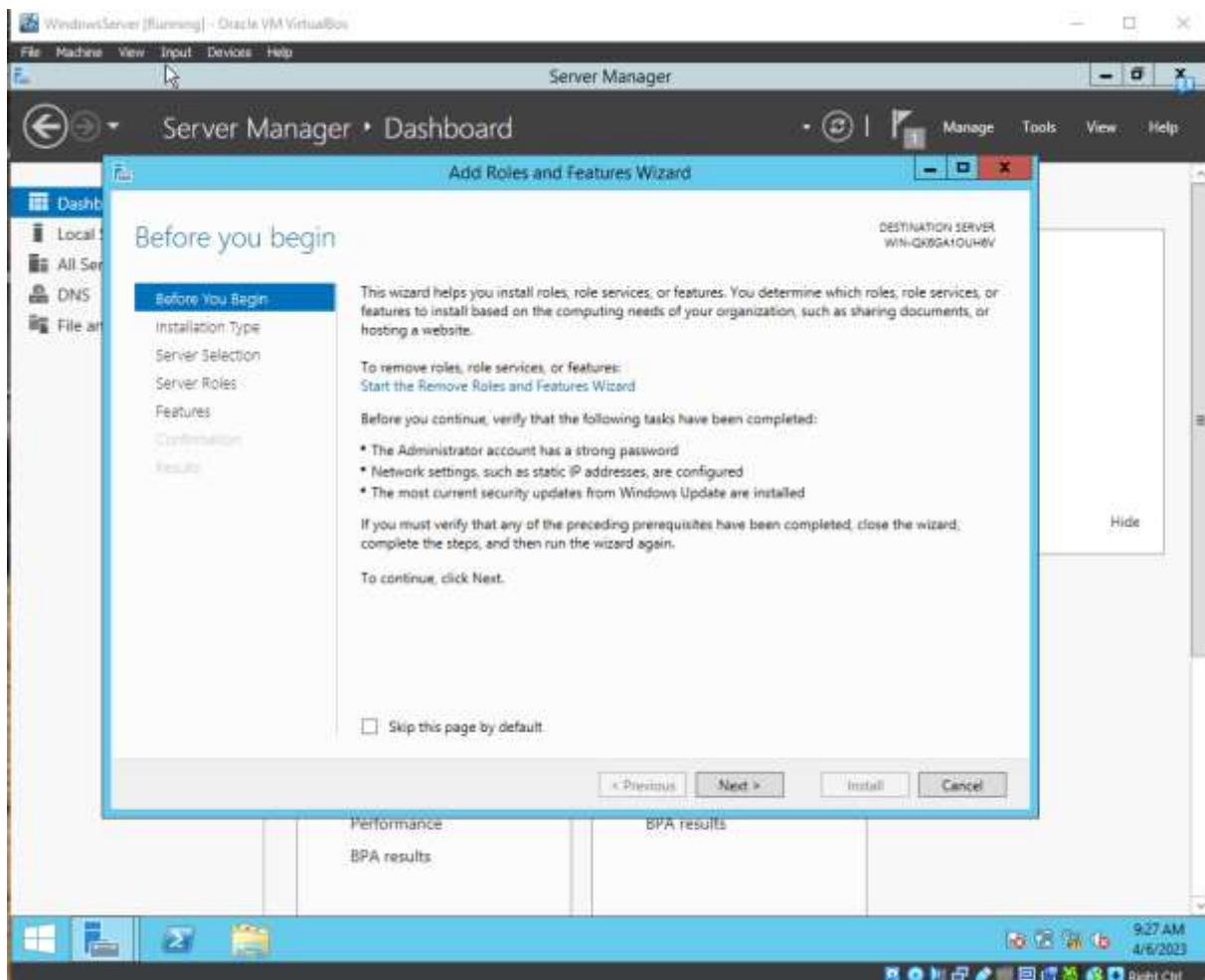


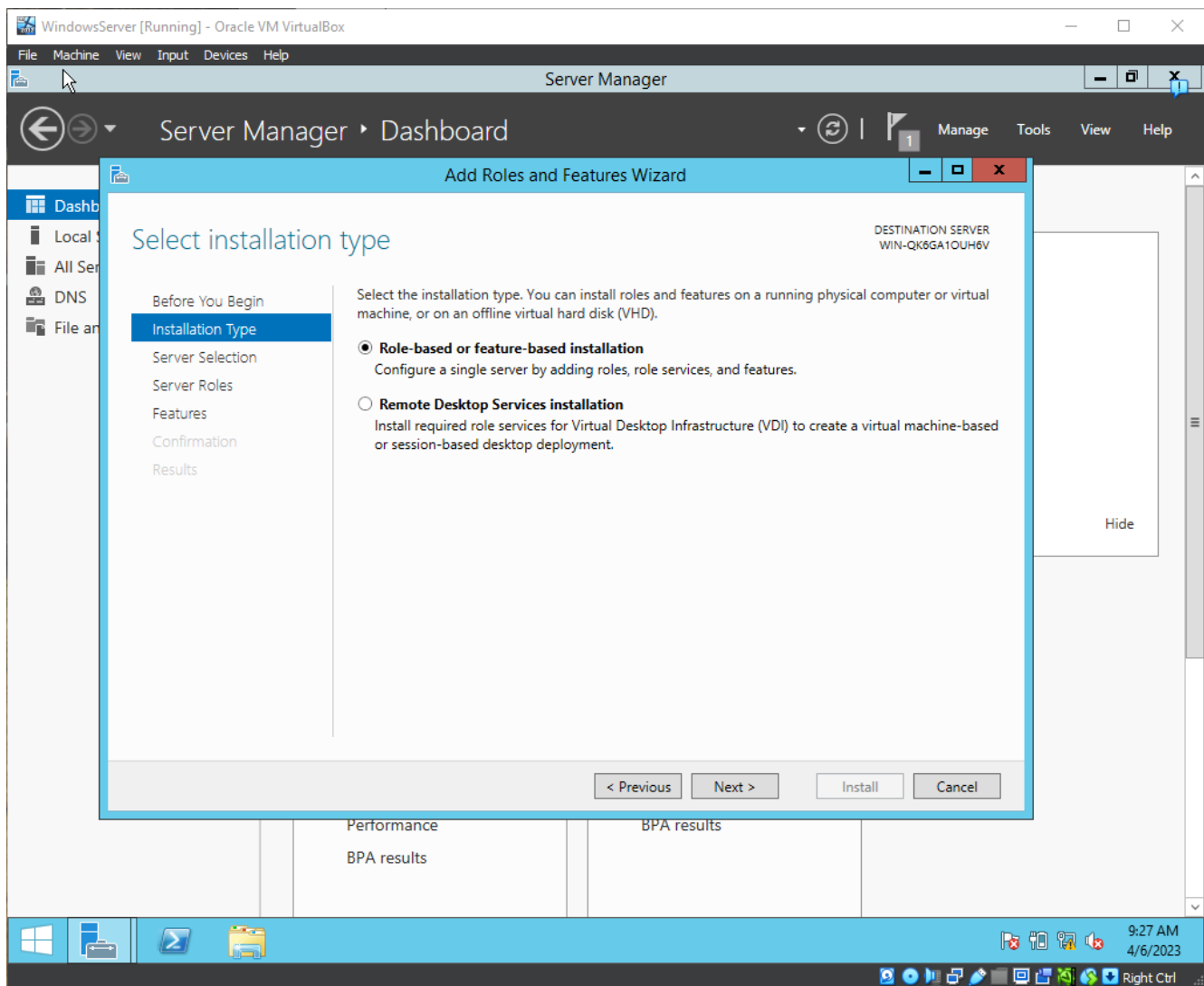
Then you can access DNS server using server manager > tools > DNS

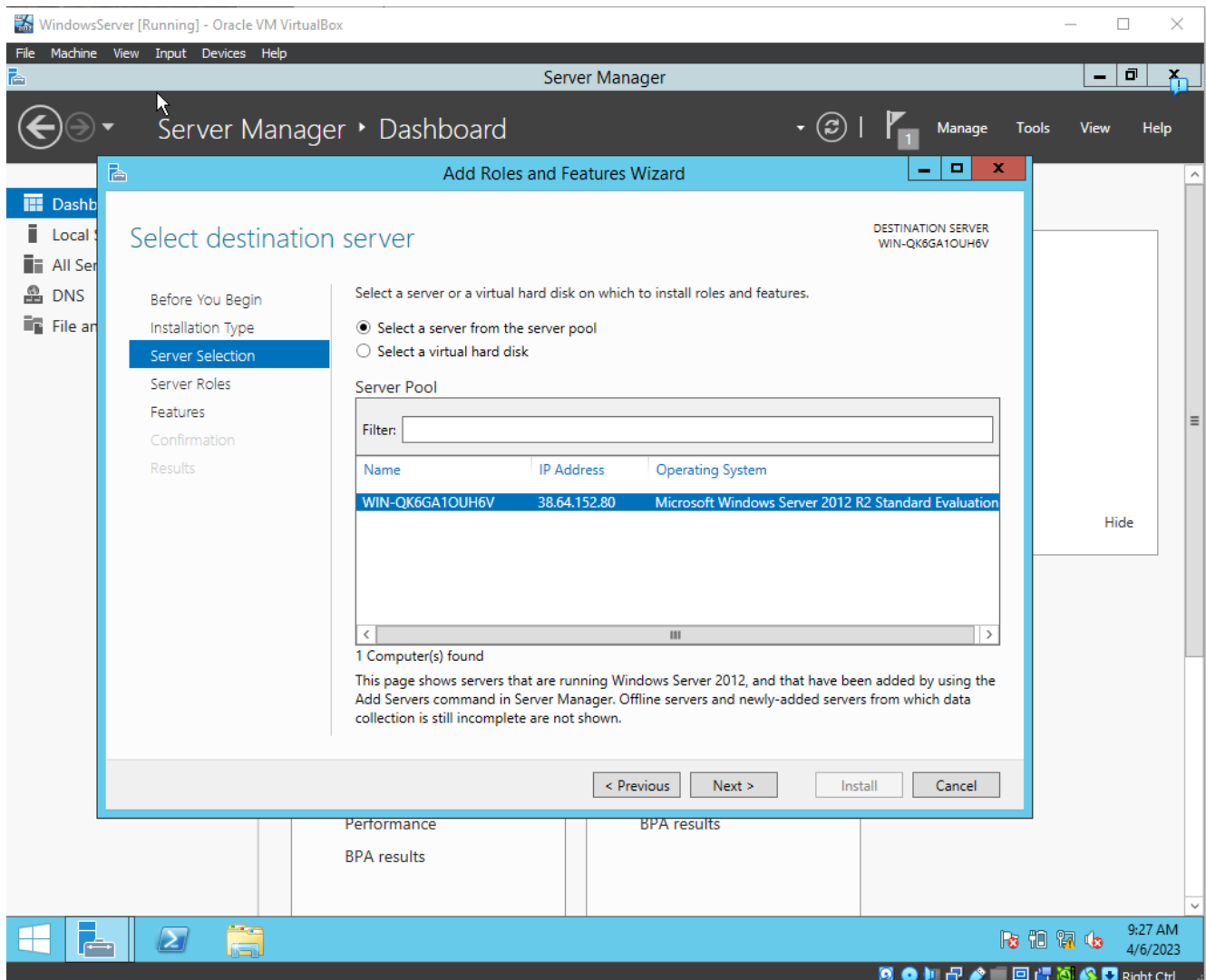


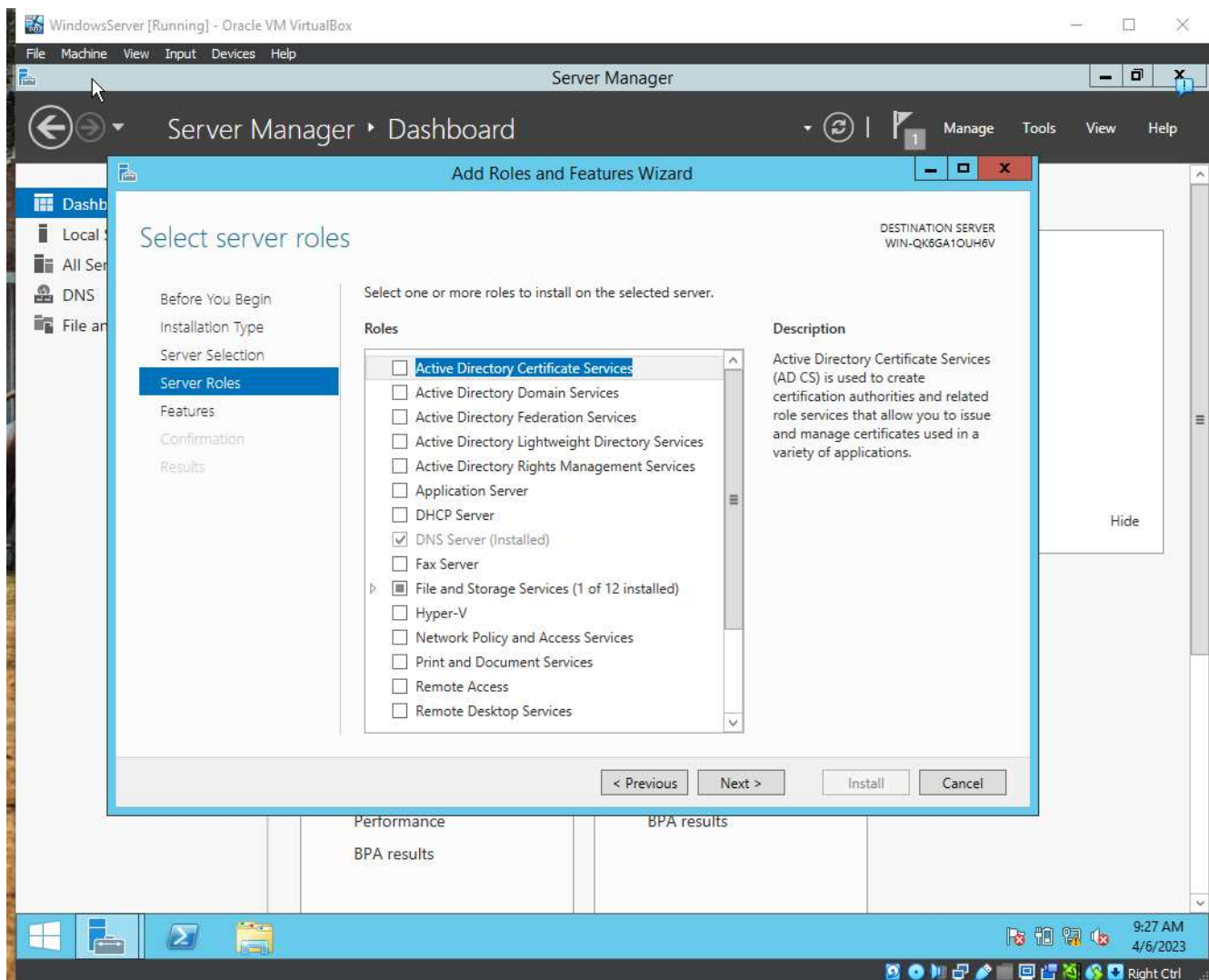


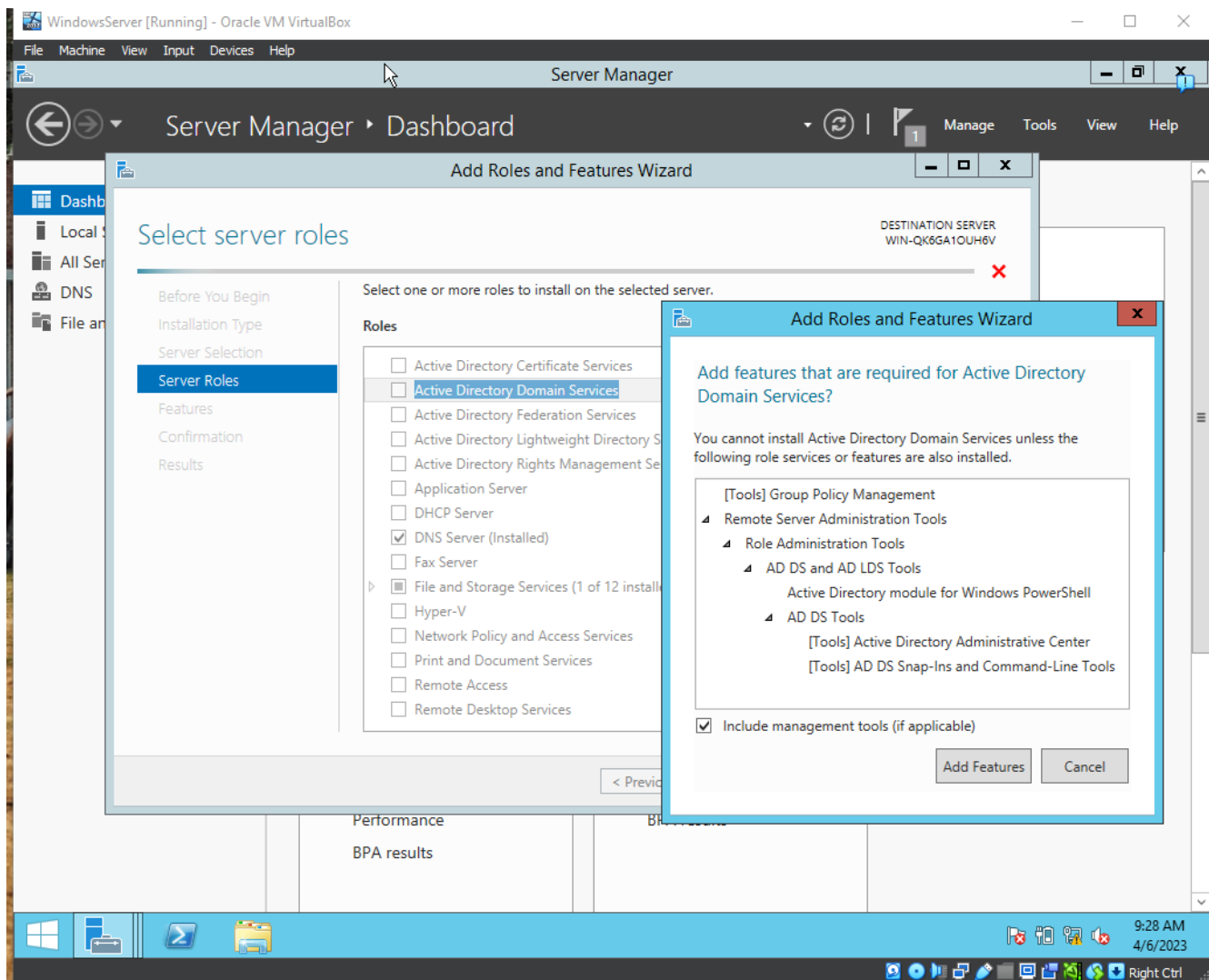
## Adding ADDS



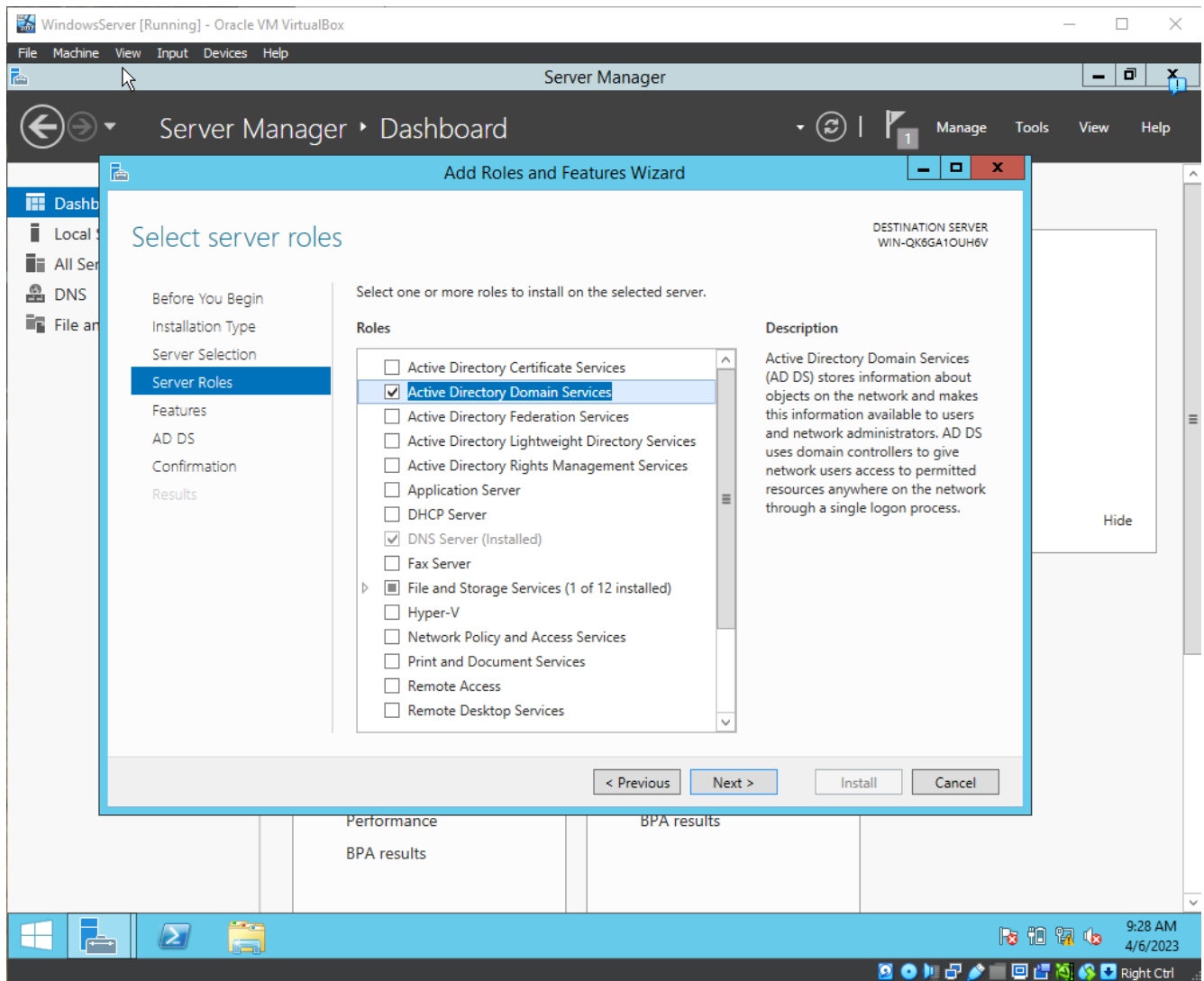


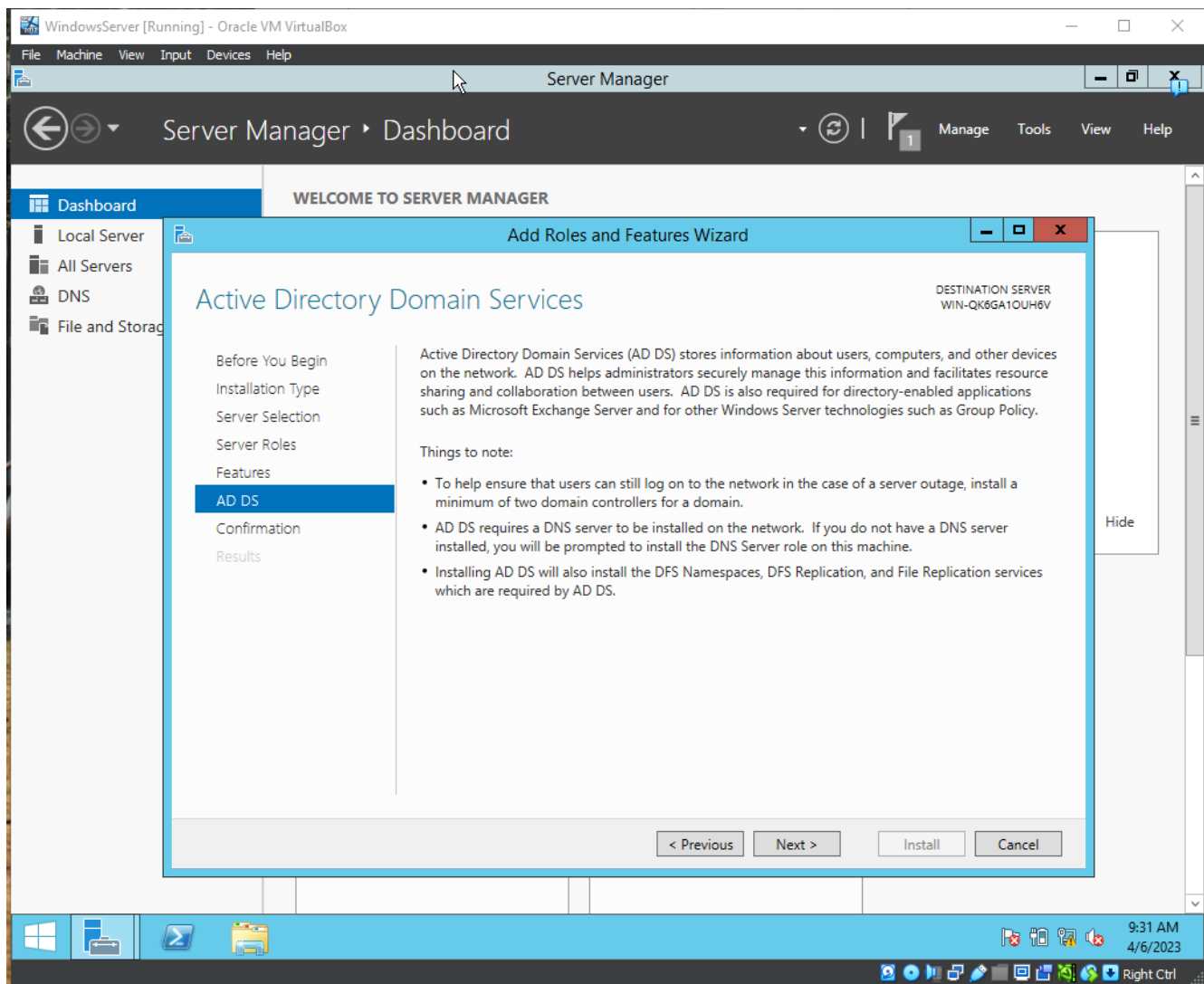


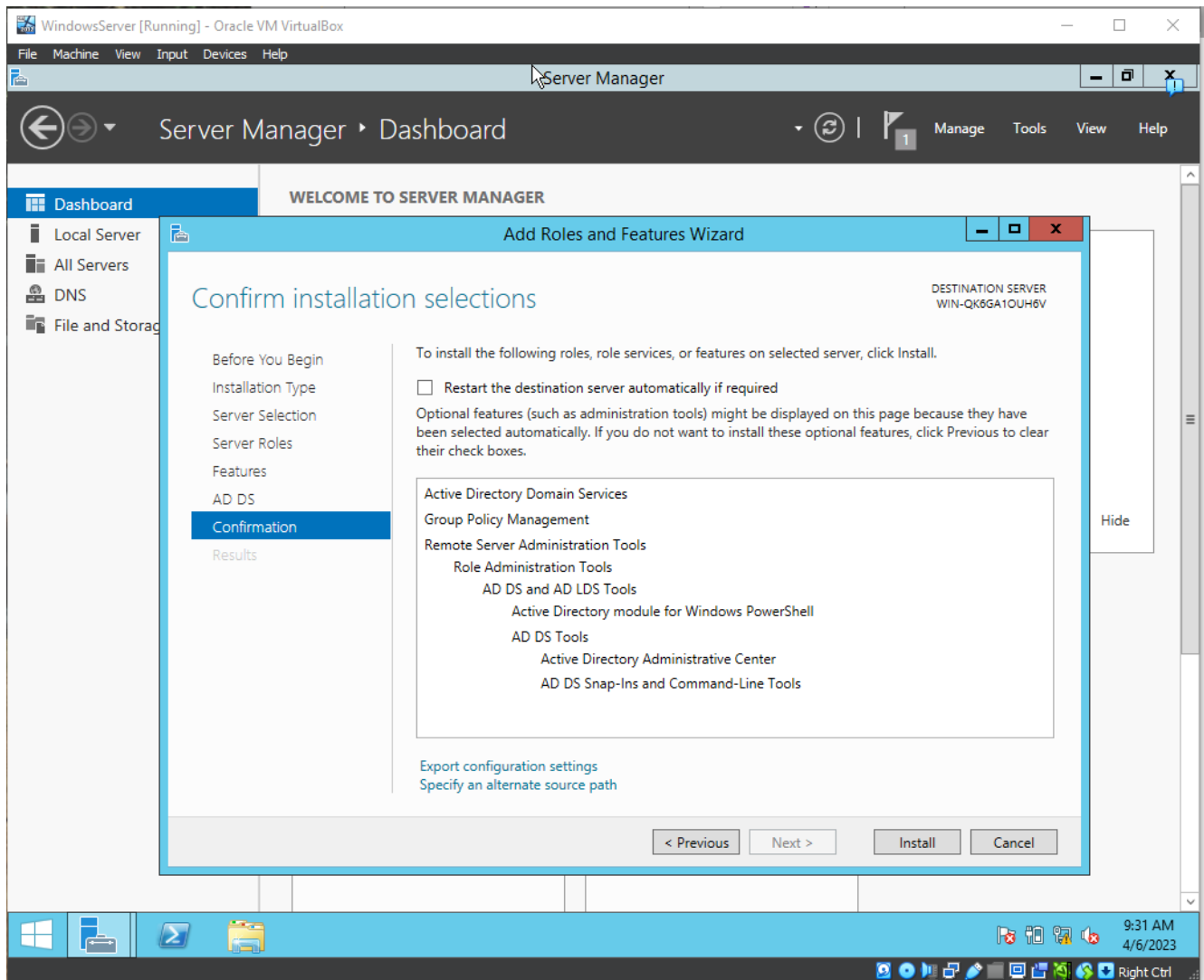


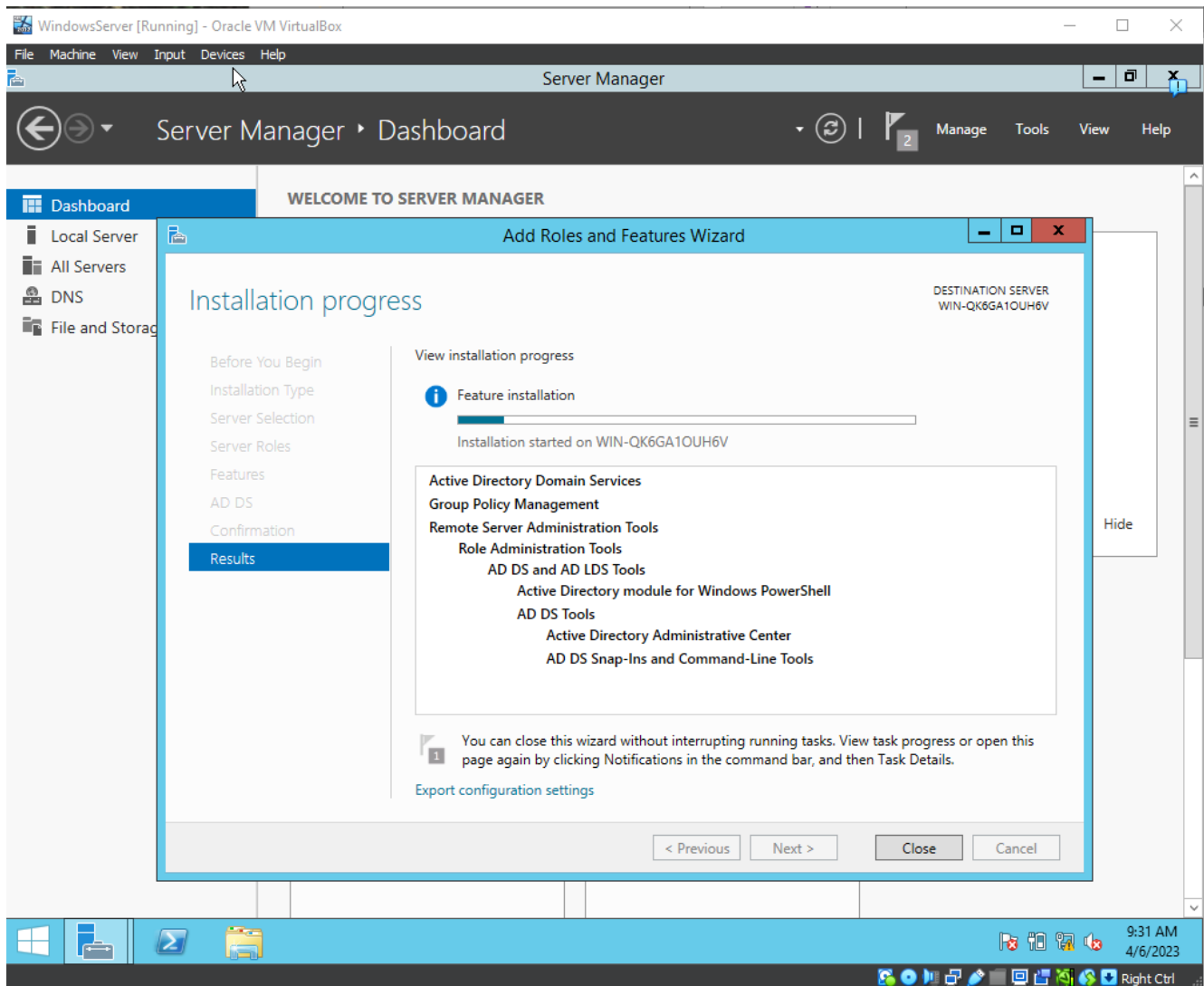


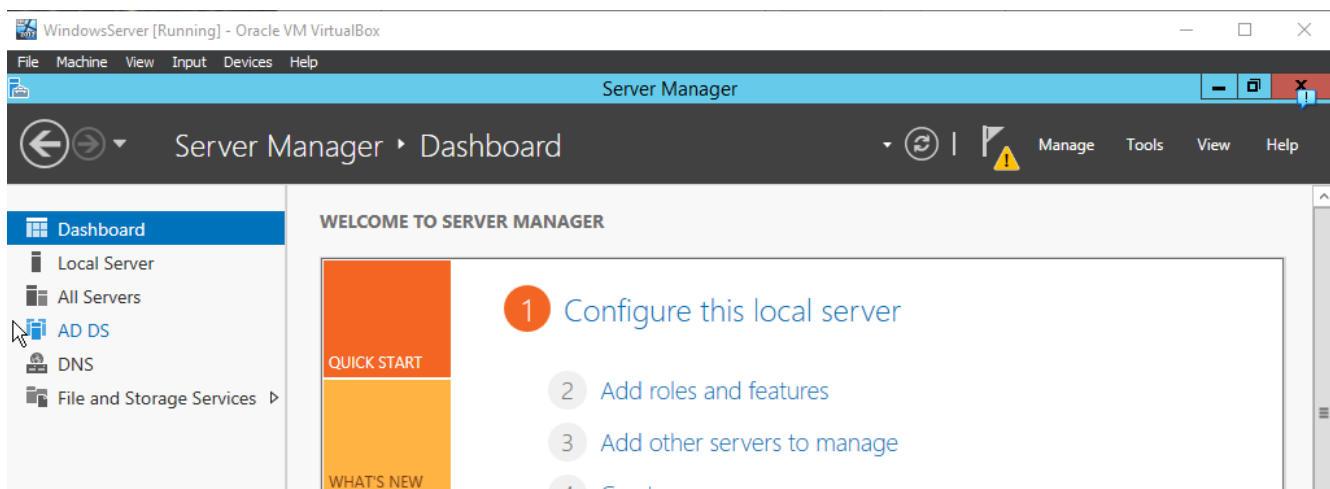
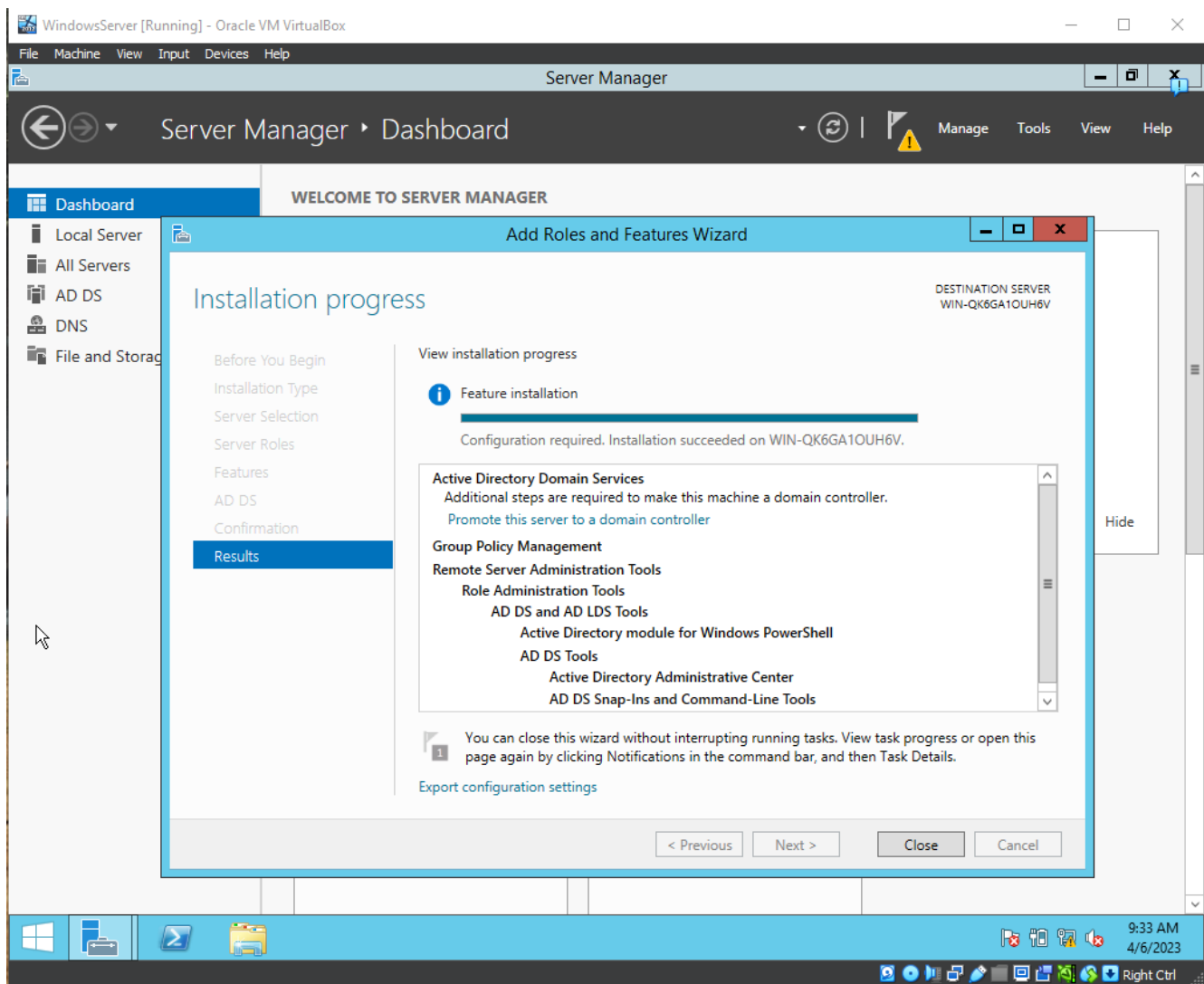




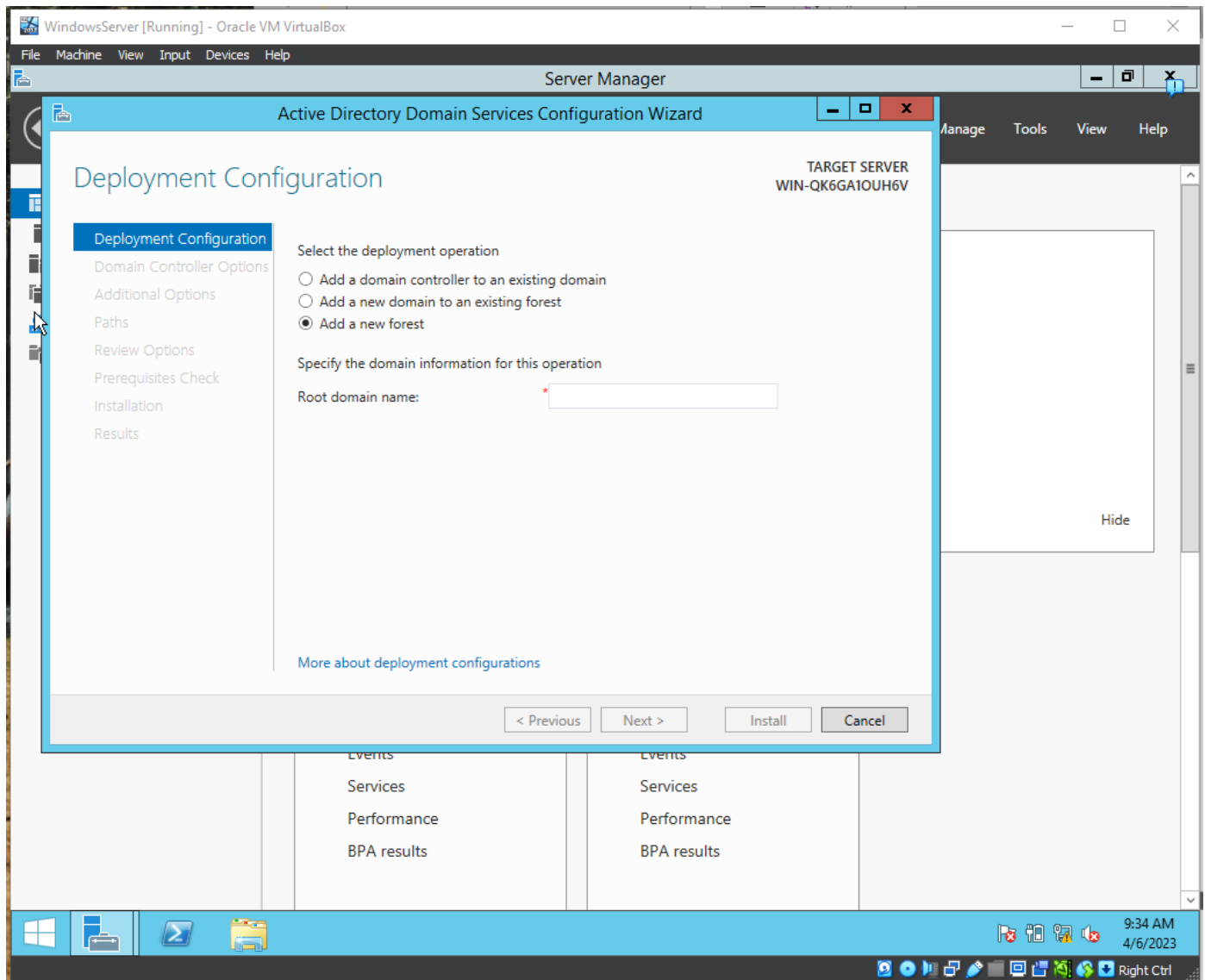








## ADDS Deployment Config:



Active Directory Domain Services Configuration Wizard

Domain Controller Options

TARGET SERVER  
DCRP

Deployment Configuration

**Domain Controller Options**

DNS Options

Additional Options

Paths

Review Options

Prerequisites Check

Installation

Results

Select functional level of the new forest and root domain

Forest functional level:Windows Server 2012 R2

Domain functional level:Windows Server 2012 R2

Specify domain controller capabilities

☒ Domain Name System (DNS) server

☒ Global Catalog (GC)

☐ Read only domain controller (RODC)

Type the Directory Services Restore Mode (DSRM) password

Password:.....

Confirm password:.....

[More about domain controller options](#)

< Previous

Next >

Install

Cancel

Active Directory Domain Services Configuration Wizard

Additional Options

TARGET SERVER  
DCRP

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: MAHADDANI

[More about additional options](#)

< Previous

Next >

Install

Cancel



Active Directory Domain Services Configuration Wizard

Paths

TARGET SERVER  
DCRP

Deployment Configuration

Domain Controller Options

DNS Options

Additional Options

Paths

Review Options

Prerequisites Check

Installation

Results

Specify the location of the AD DS database, log files, and SYSVOL

Database folder:

C:\Windows\NTDS

...

Log files folder:

C:\Windows\NTDS

...

SYSVOL folder:

C:\Windows\SYSVOL

...

[More about Active Directory paths](#)

< Previous

Next >

Install

Cancel

Active Directory Domain Services Configuration Wizard

TARGET SERVER  
DCRP

Review Options

Deployment Configuration

Domain Controller Options

DNS Options

Additional Options

Paths

Review Options

Prerequisites Check

Installation

Results

Review your selections:

Configure this server as the first Active Directory domain controller in a new forest.

The new domain name is "mahadDani.com". This is also the name of the new forest.

The NetBIOS name of the domain: MAHADDANI

Forest Functional Level: Windows Server 2012 R2

Domain Functional Level: Windows Server 2012 R2

Additional Options:

Global catalog: Yes

DNS Server: Yes

Create DNS Delegation: No

These settings can be exported to a Windows PowerShell script to automate additional installations

View script

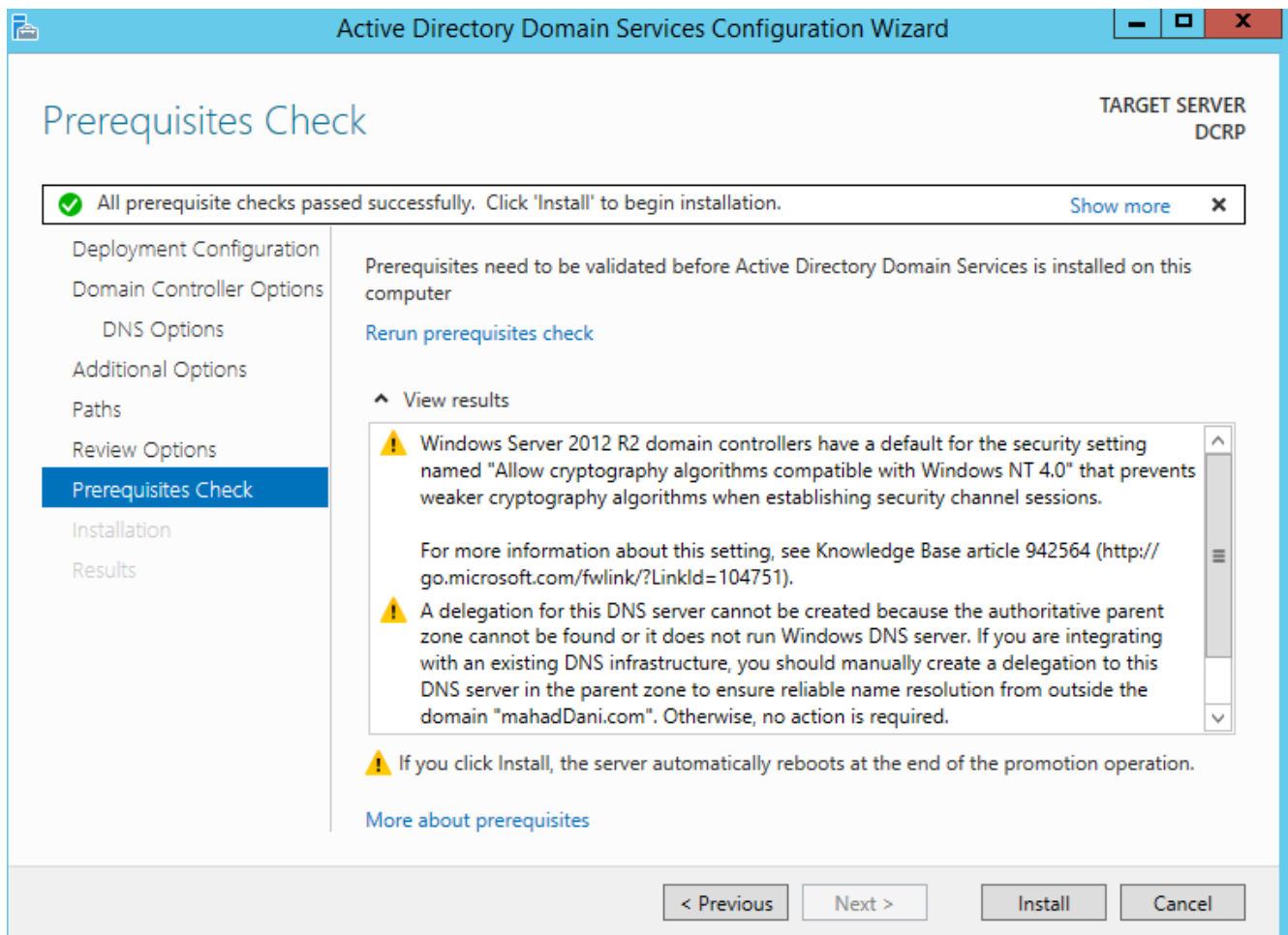
[More about installation options](#)

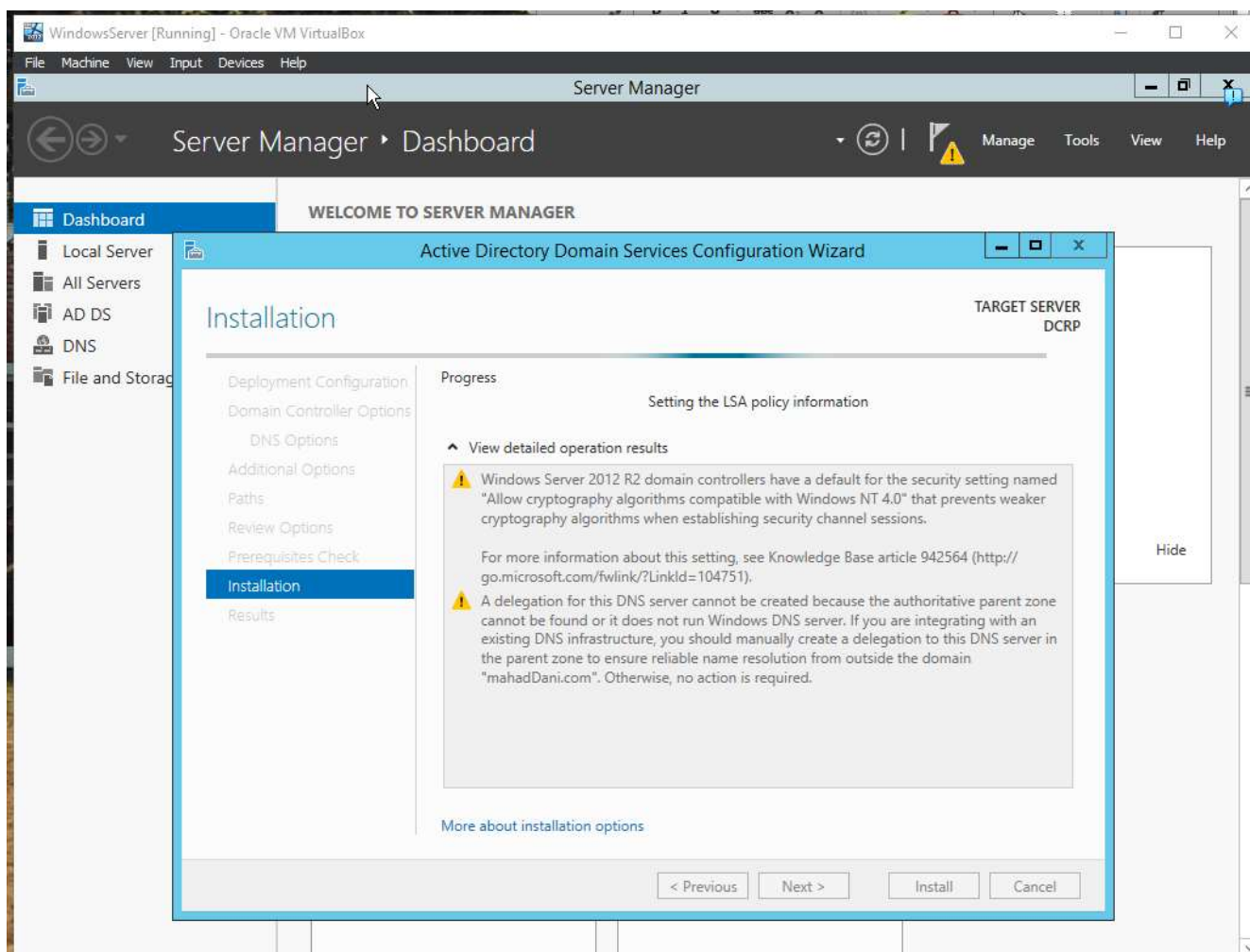
< Previous

Next >

Install

Cancel





Once its complete the install it will automatically reboot the server.

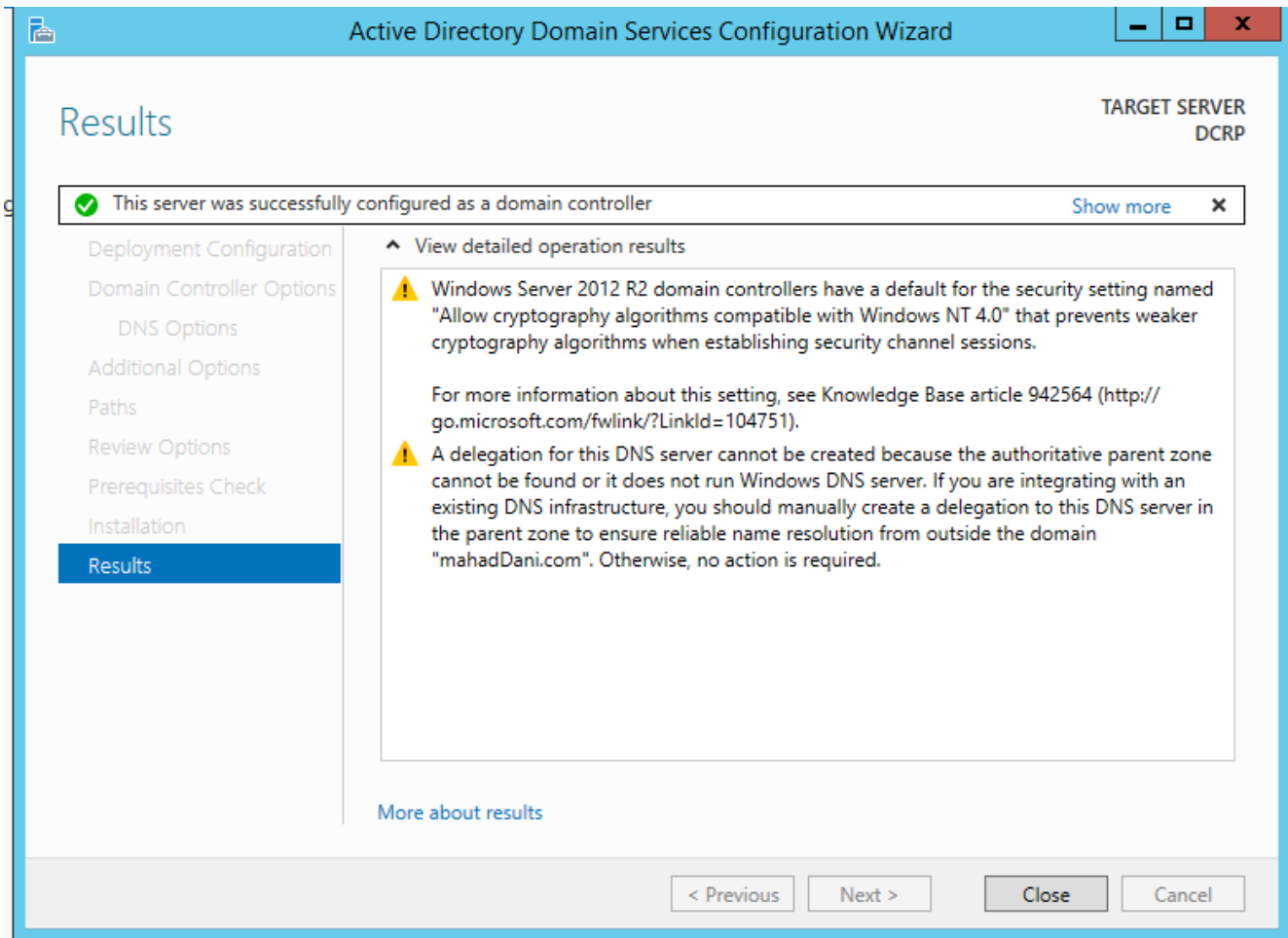
Once server is rebooted log in to server using domain admin credentials.

In our demo it will be in format of

user : mahadDani\Administrator

password : Daniyal@1234

Once login, load the "Server manager" and click on "AD DS" option in right hand list. then select and right click as showed in screenshot to start with AD configuration.

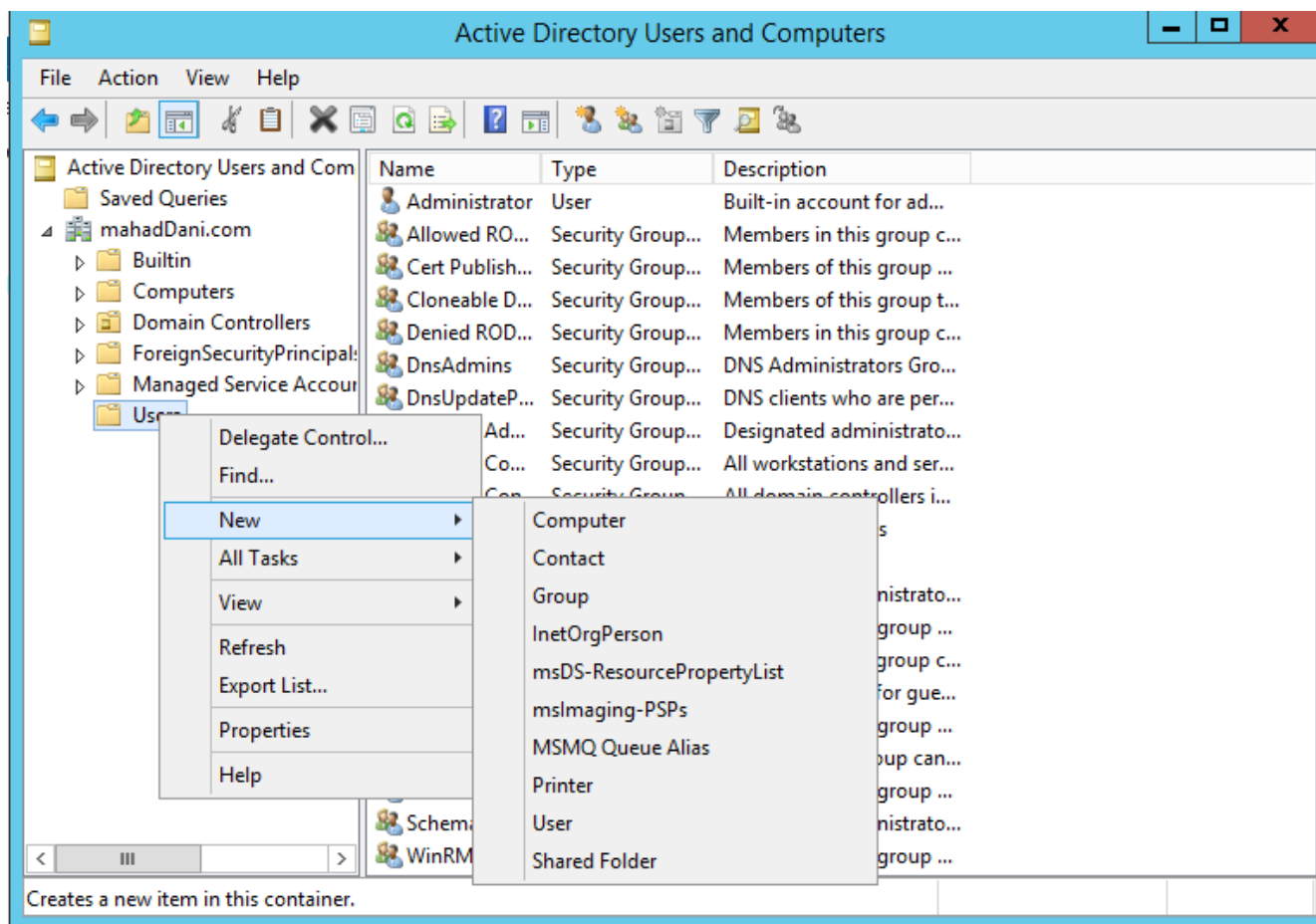


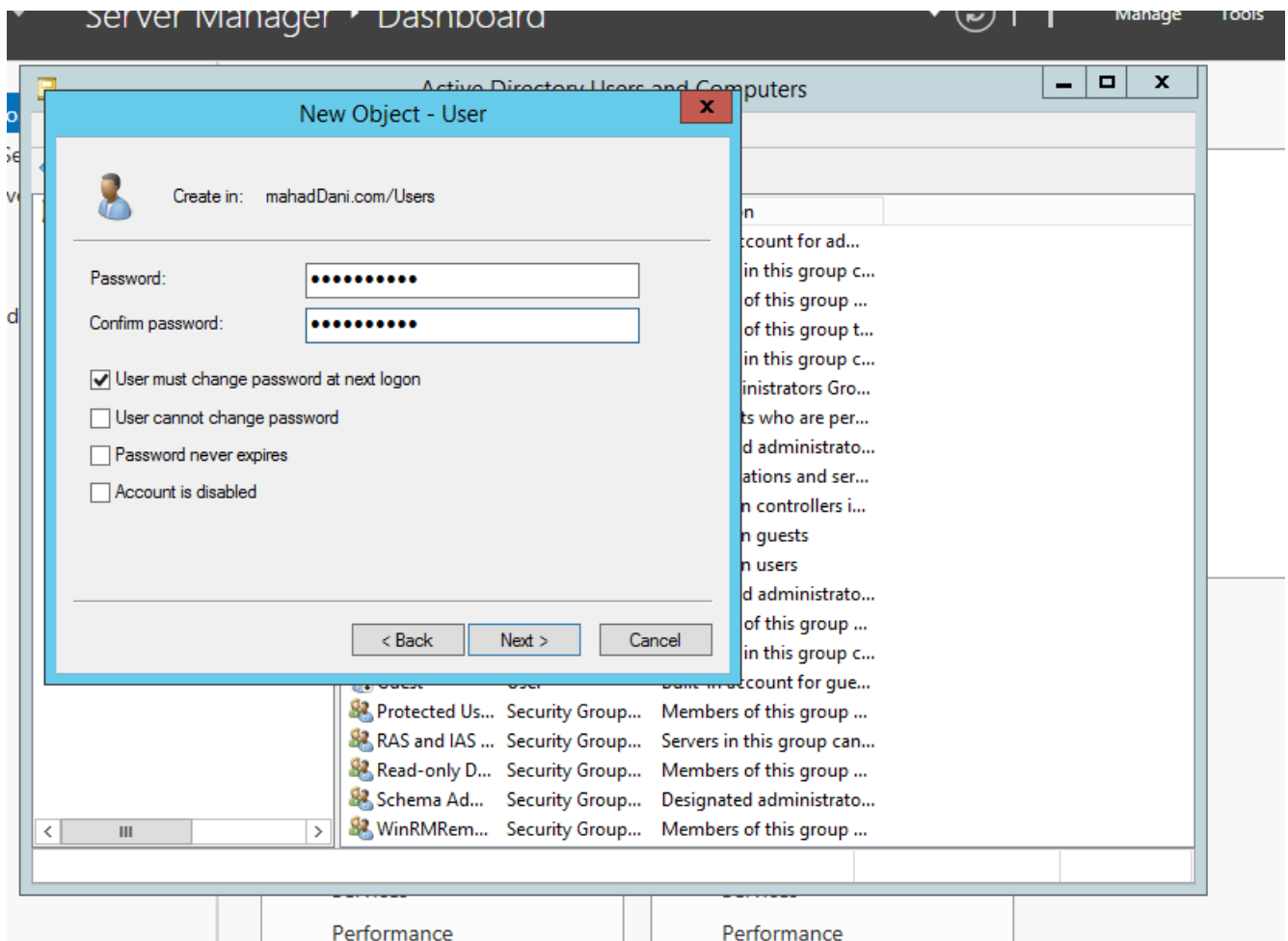
Part C: Create two users (first names of group members), Login on the server using the created.

user.

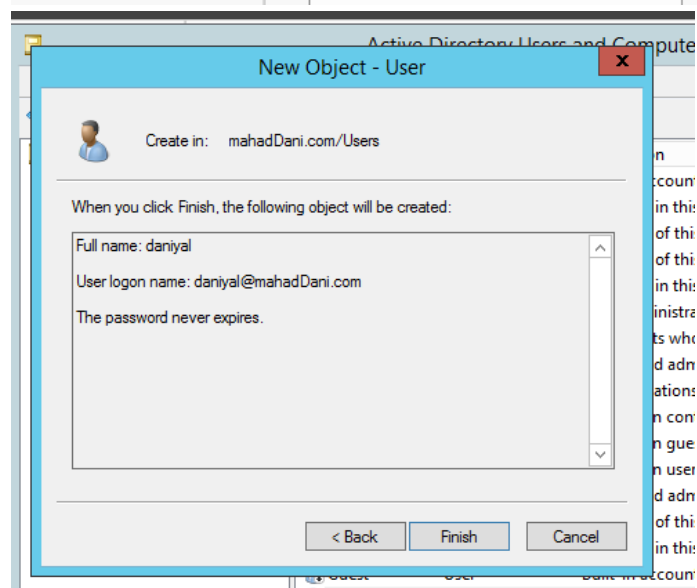
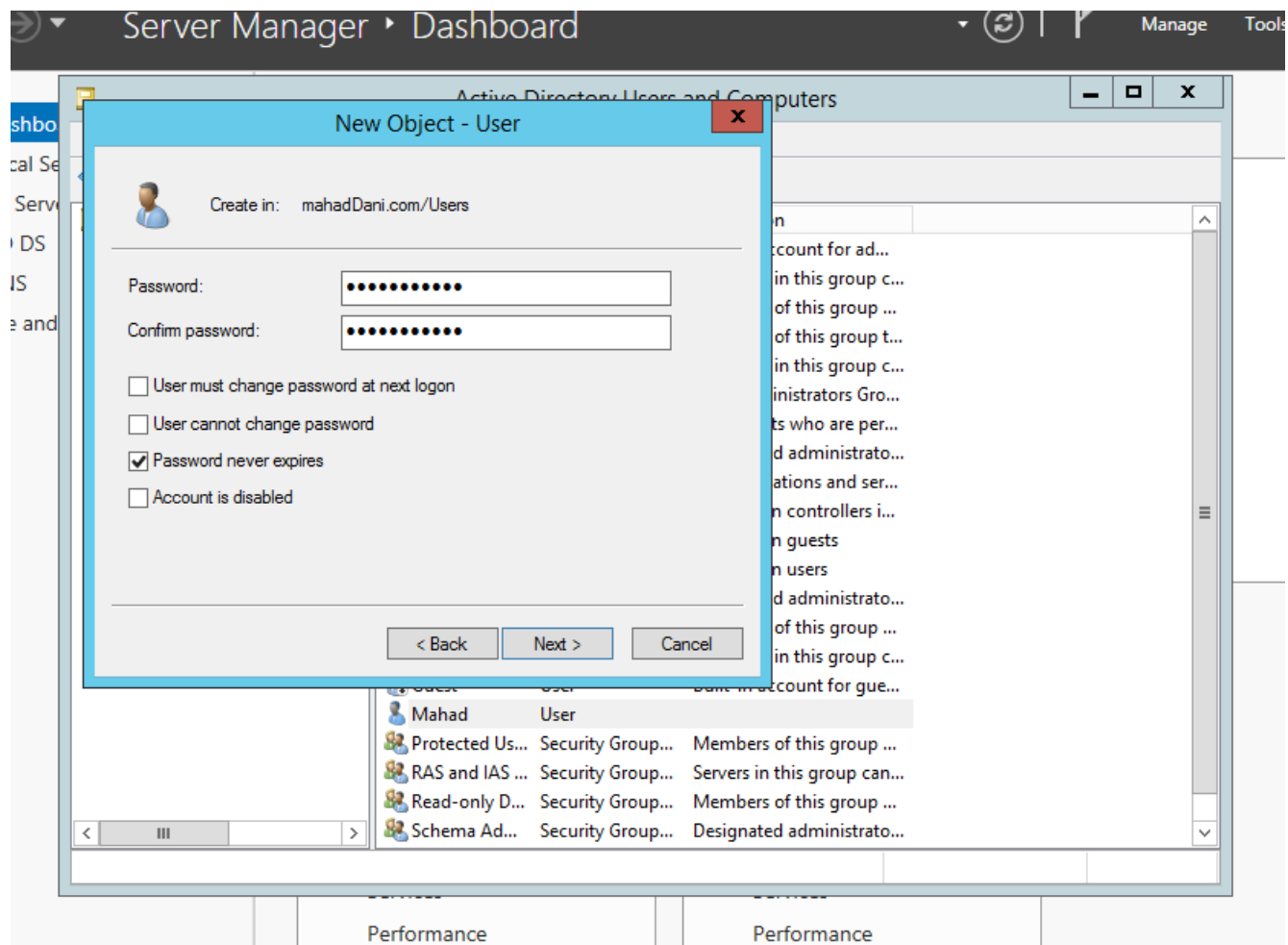
This step has been broken into various steps.

1. Open the Active Directory Users and Computer.
2. Click on your server and then on Users. Right click on it and click on new and. Add the username. Assign the username to it and then password.

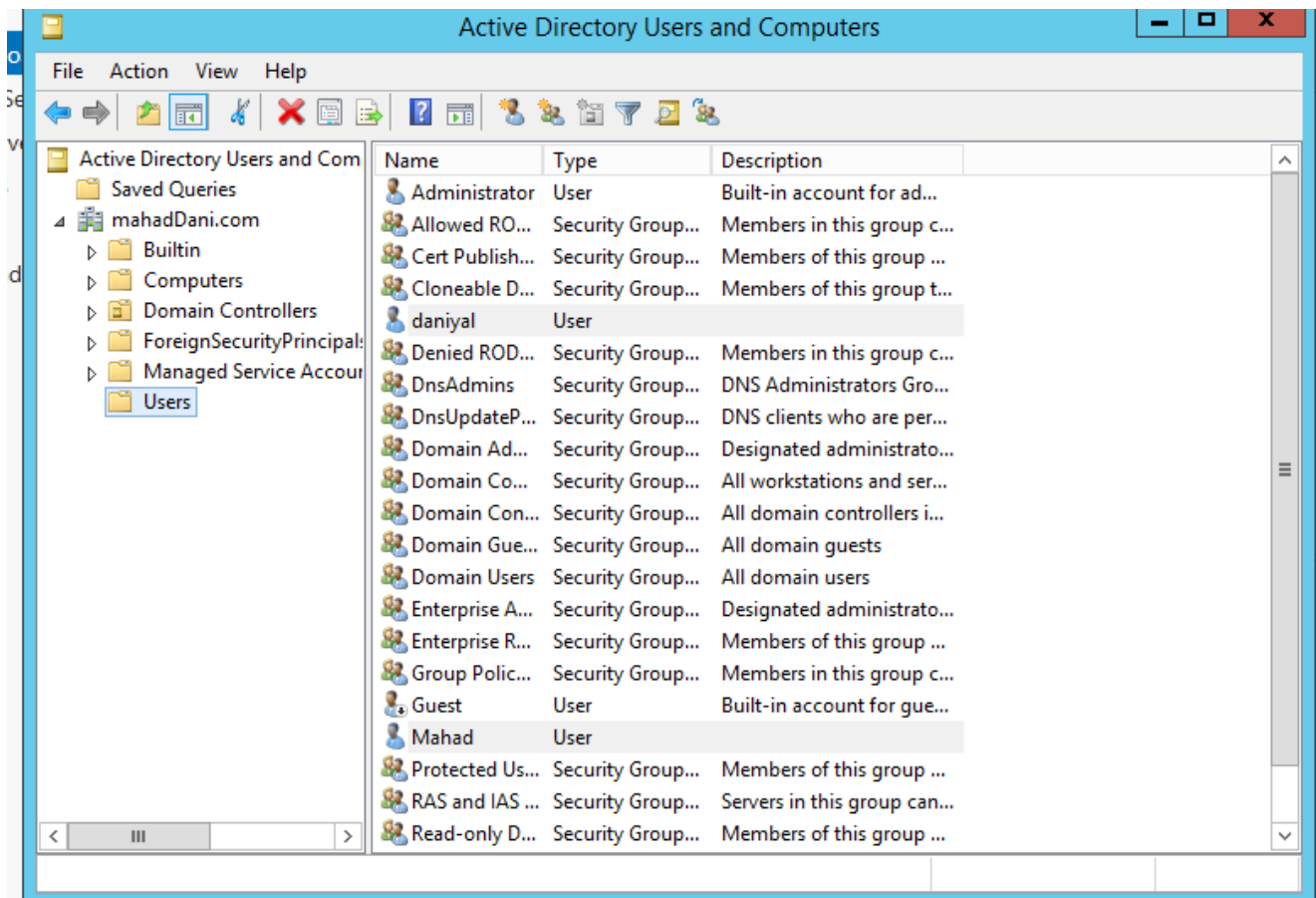


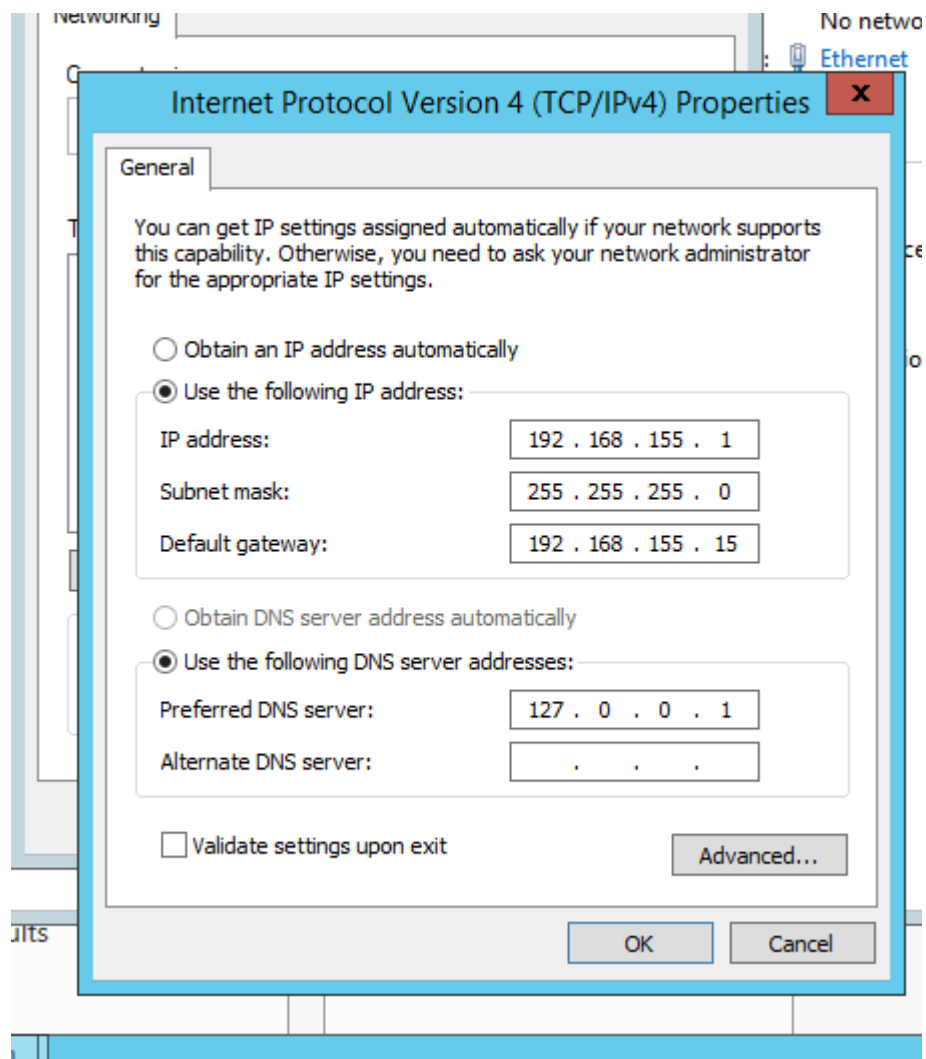


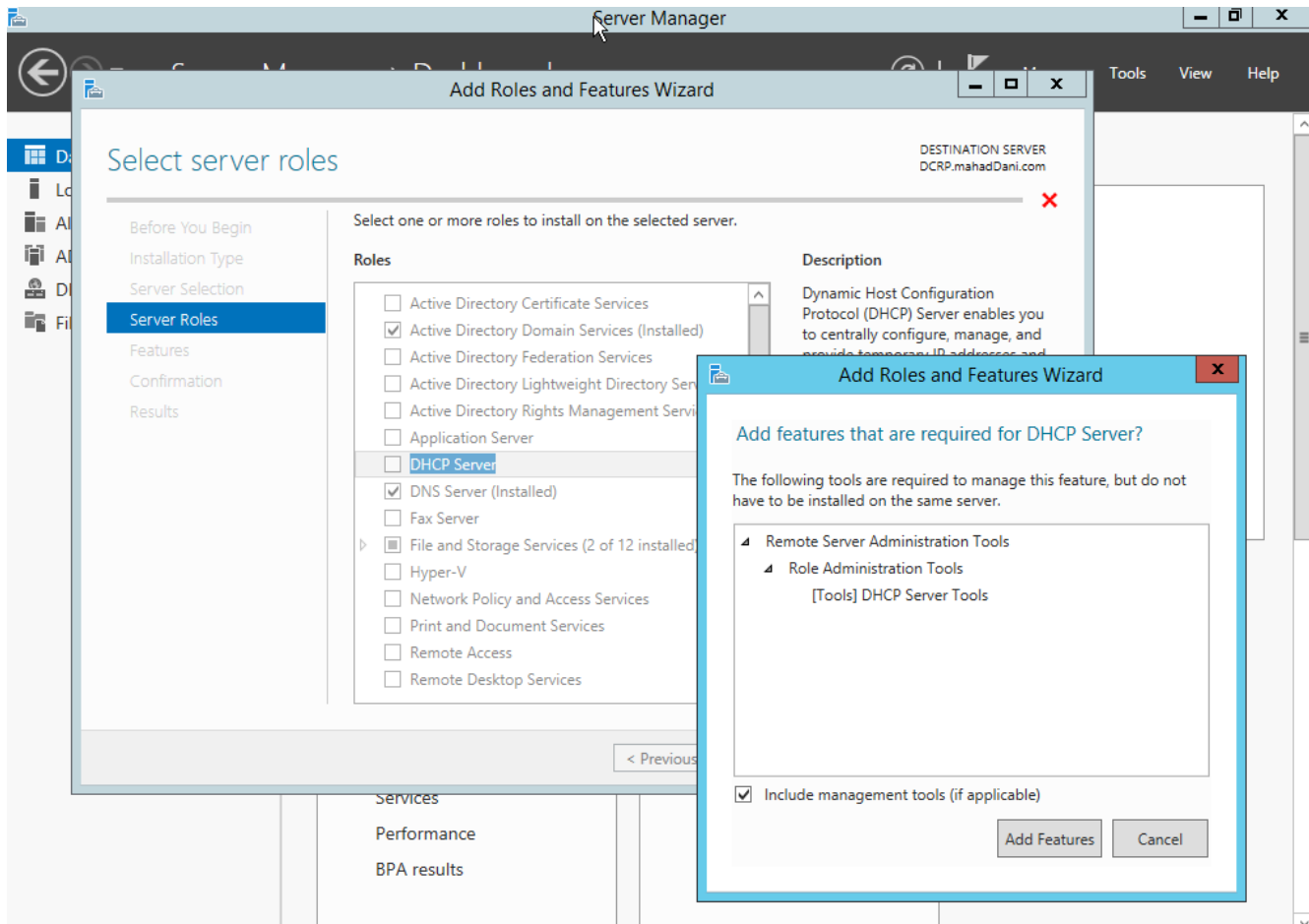
M@H@D#123  
D@niy@l#123

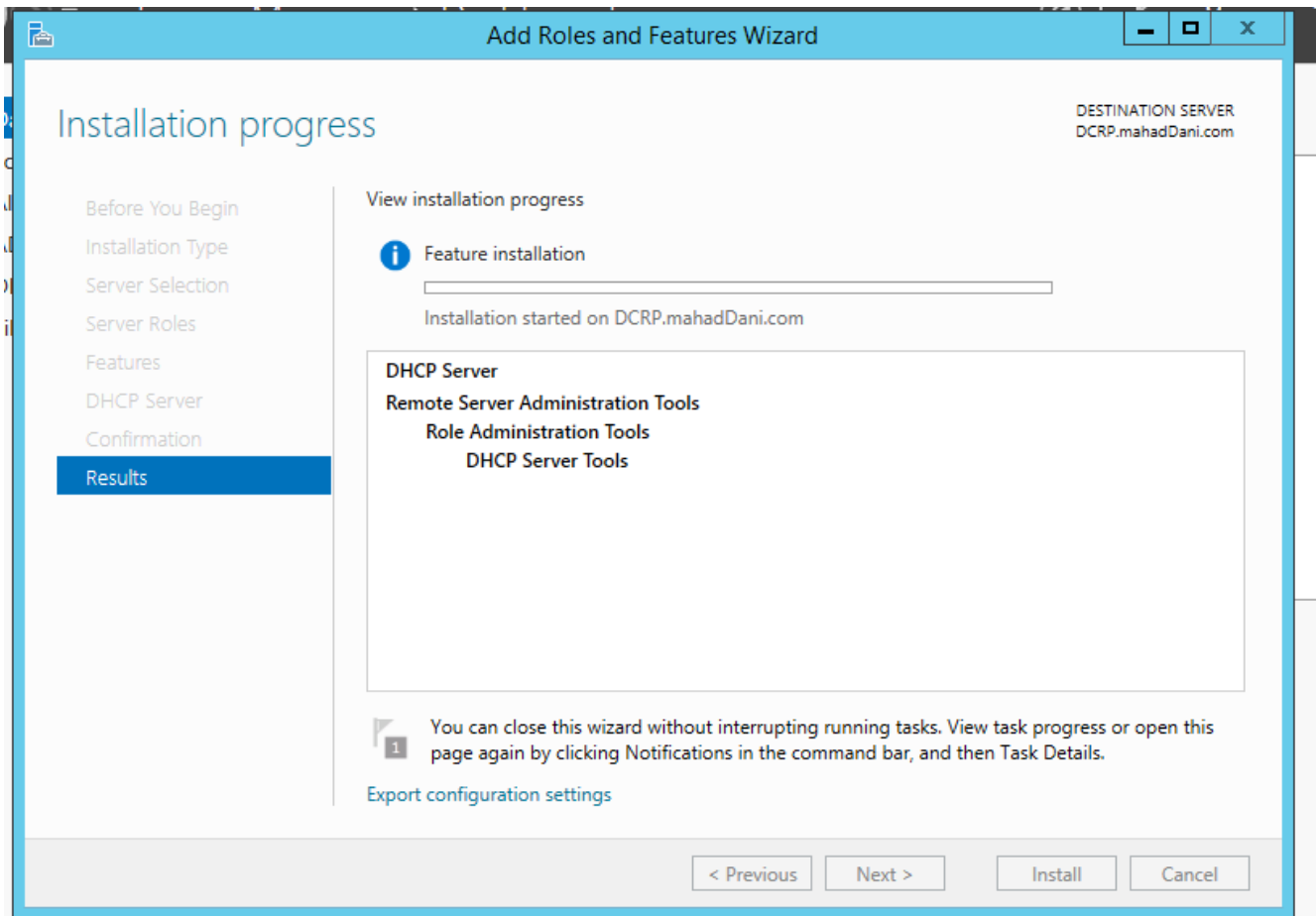


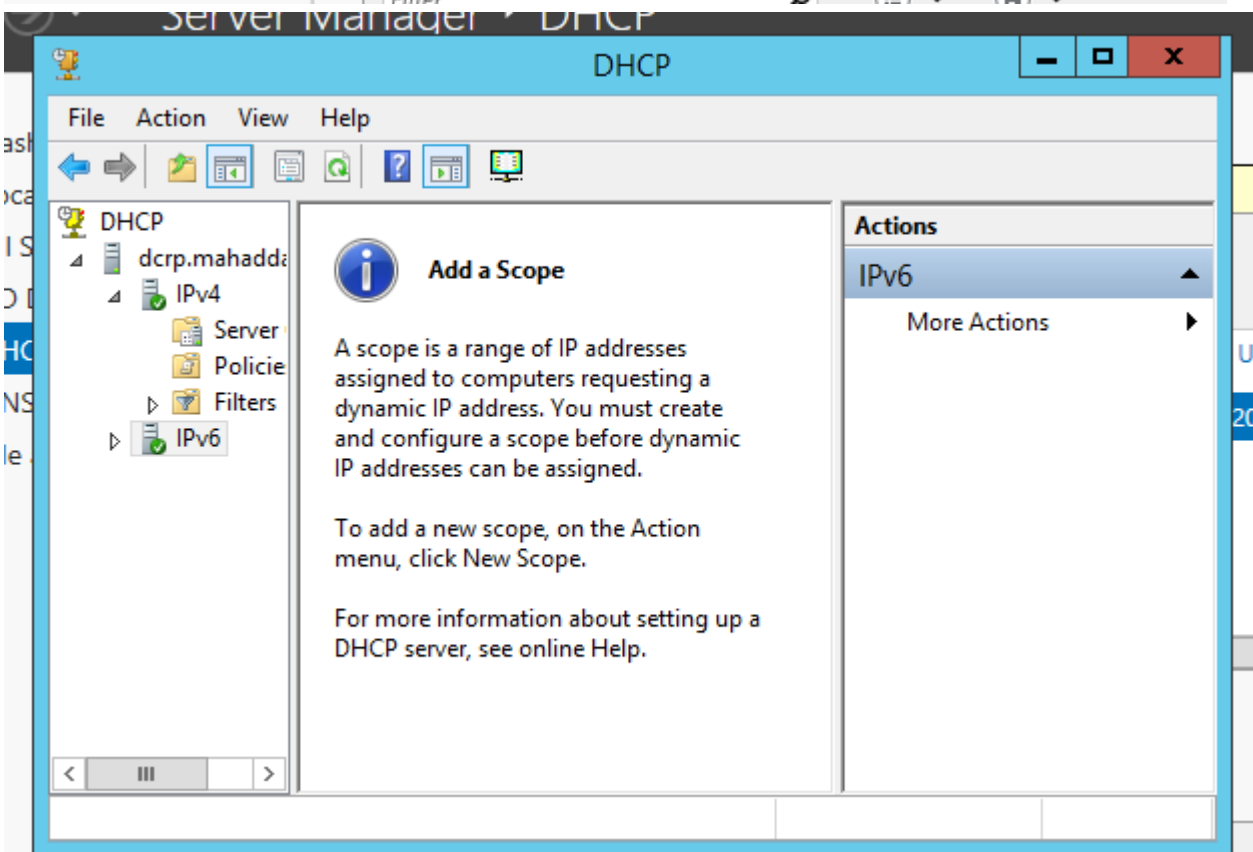
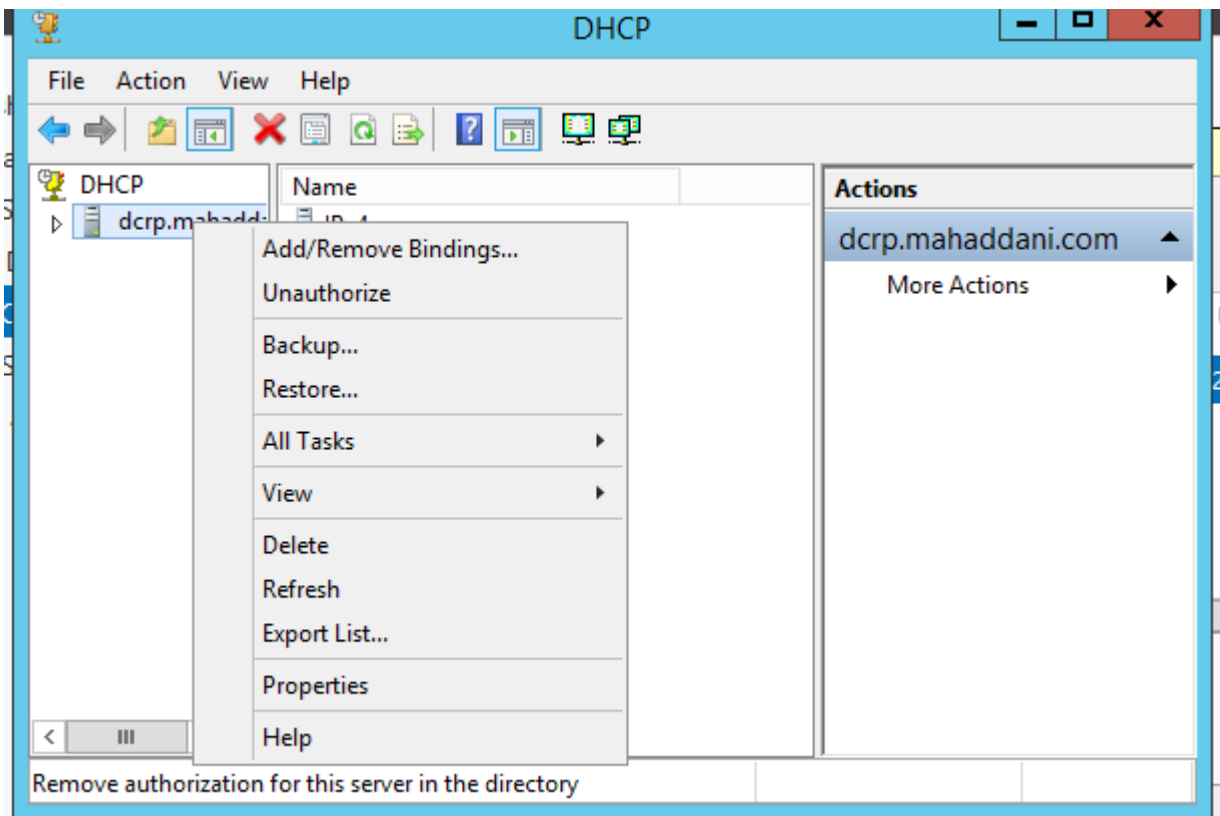












Server Manager

Server Manager ▸ DHCP

SERVERS

Dashboard

Lo

All

AD

DHCP

DN

File


Tasks

All Servers Task Details


### All Servers Task Details and Notifications

All Tasks | 1 total

Filter

Status	Task Name	Stage	Message	Action	Notifications
	Post-deployment Configuration	Not Sta...	Configuration required for DHCP Server at DCRP	<a href="#">Complete DHCP configuration</a>	1

< ||| >

Status	Notification	Time Stamp
	Launch the DHCP post-install wizard	4/7/2023 11:57:53 AM

DHCP Post-Install configuration wizard

# Authorization

Description

Authorization

Summary

Specify the credentials to be used to authorize this DHCP server in AD DS.

☒ Use the following user's credentials

User Name:

☐ Use alternate credentials

UserName:

☐ Skip AD authorization

< Previous

Next >

Commit

Cancel