

PRACTICAL 1

Aim: - Implementing Failover Cluster on Windows

File used: - Windows Server 2022.iso file

Steps: -

Step1: - Create a new VM

Step2: - Browse the iso file-

New Virtual Machine Wizard

Easy Install Information
This is used to install Windows Server 2022.

Windows product key
WX4NM-KYWYW-QJJR4-XV3QB-6VM33

Version of Windows to install
Windows Server 2022 Datacenter

Personalize Windows
Full name: admin
Password: (optional)
Confirm: (optional)

☐ Log on automatically (requires a password)

Help < Back Next > Cancel

New Virtual Machine Wizard

Guest Operating System Installation
A virtual machine is like a physical computer; it needs an operating system. How will you install the guest operating system?

Install from:

☐ Installer disc:
No drives available

☒ Installer disc image file (iso):
S:\CC softwares\WindowsServer2022English64-bitX2 Browse...

☐ Windows Server 2022 detected.
This operating system will use Easy Install. [What's this?](#)

☐ I will install the operating system later.
The virtual machine will be created with a blank hard disk.

Help < Back Next > Cancel

“windowserver2022....”

New Virtual Machine Wizard

Name the Virtual Machine
What name would you like to use for this virtual machine?

Virtual machine name:
Windows Server 2022

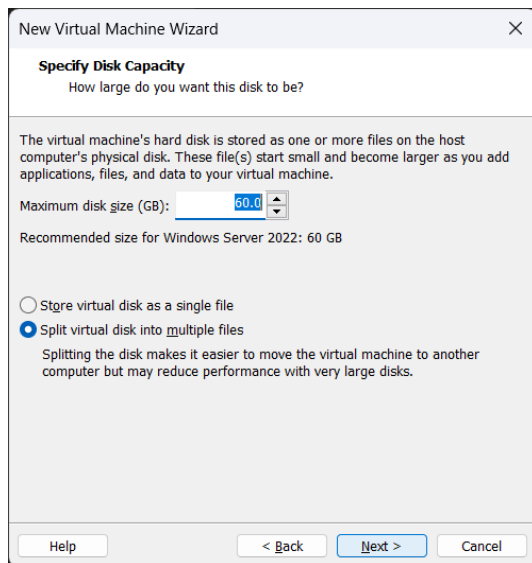
Location:
S:\CC softwares Browse...

The default location can be changed at Edit > Preferences.

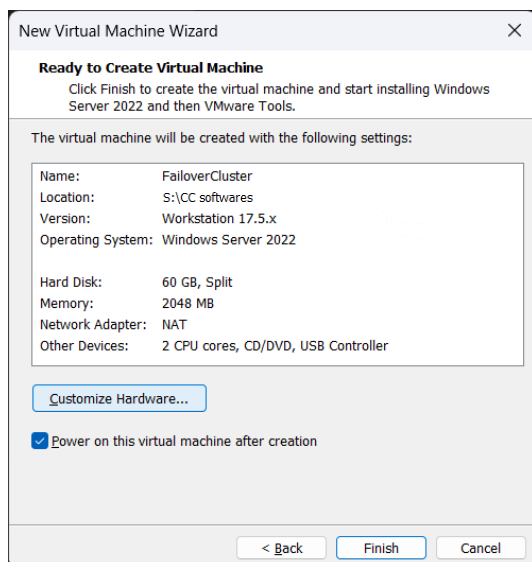
< Back Next > Cancel

Step3: - Give a Name → Next.

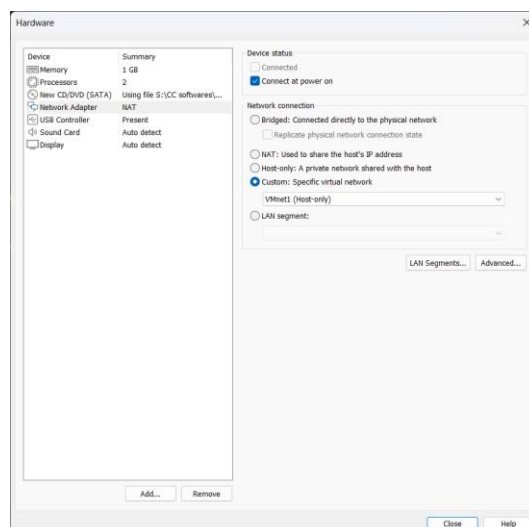
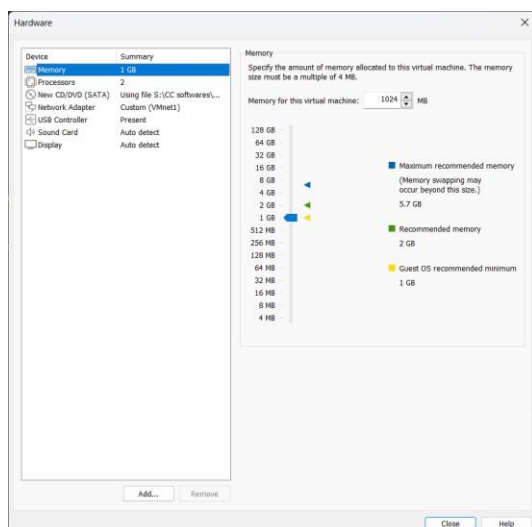
Step4: - Keep default storage capacity → split virtual disk into multiple files.



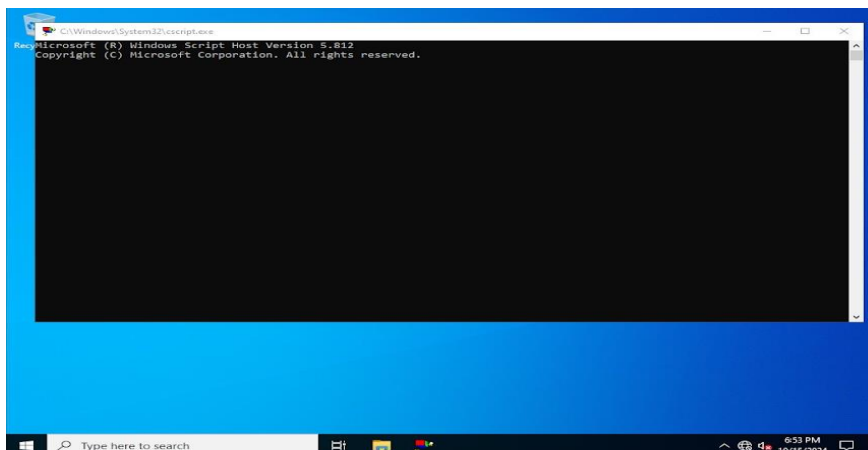
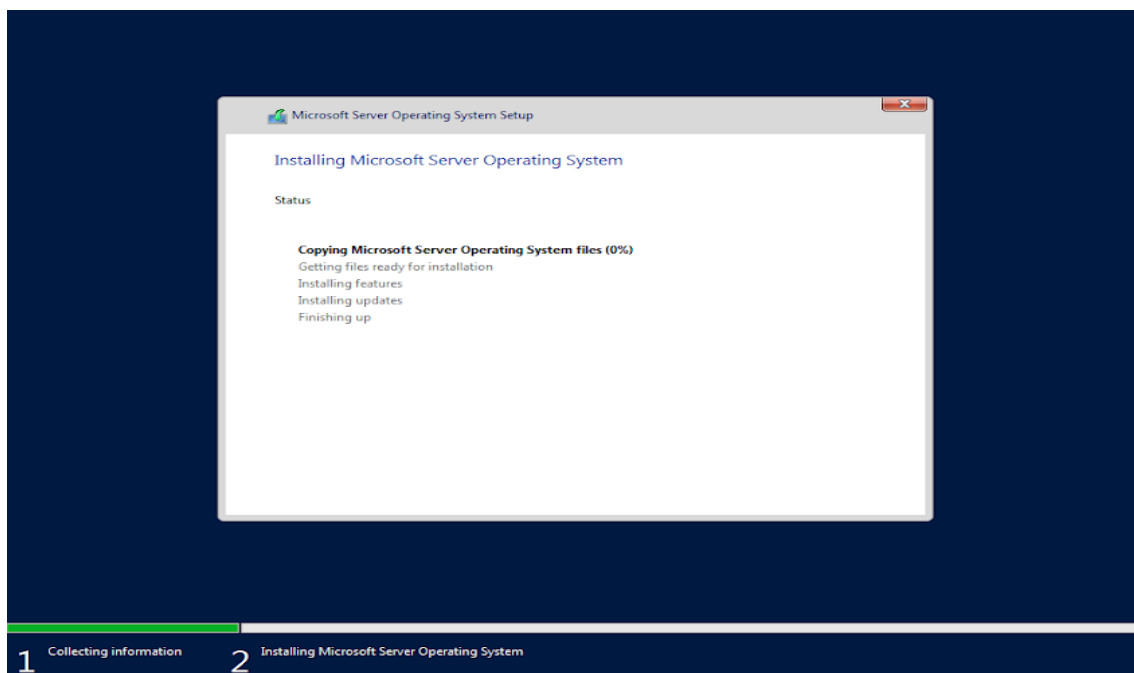
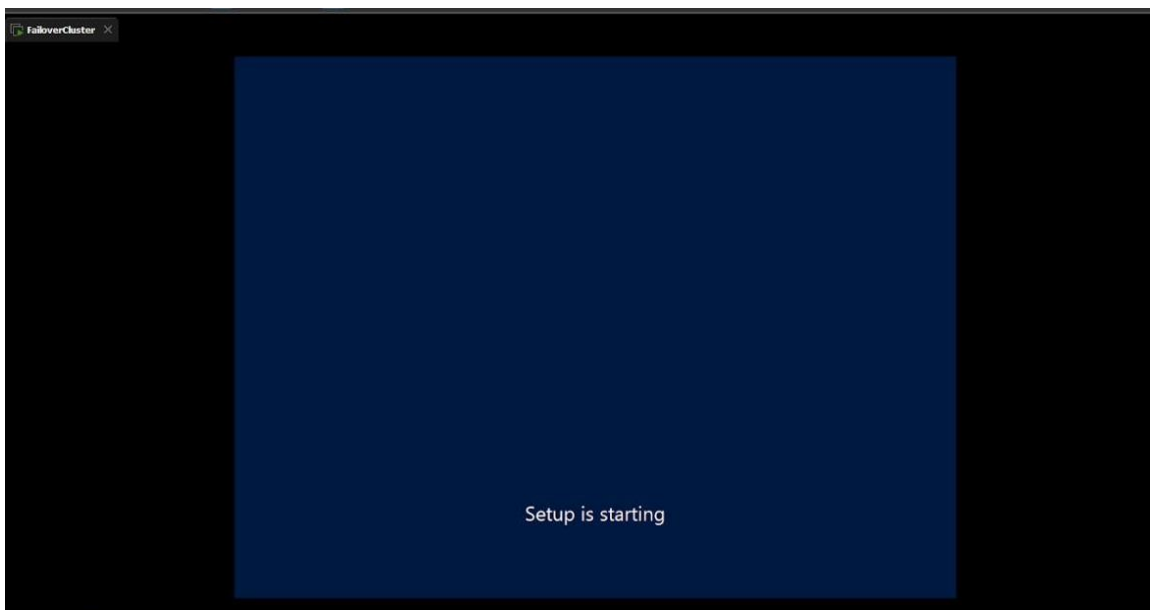
Step5: - Click on Customize Hardware



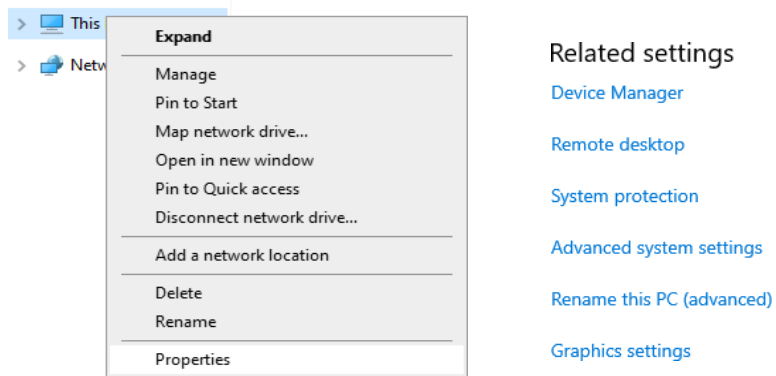
Step6: - Set Memory to 1GB → Network Adapter → Custom specific Virtual network.



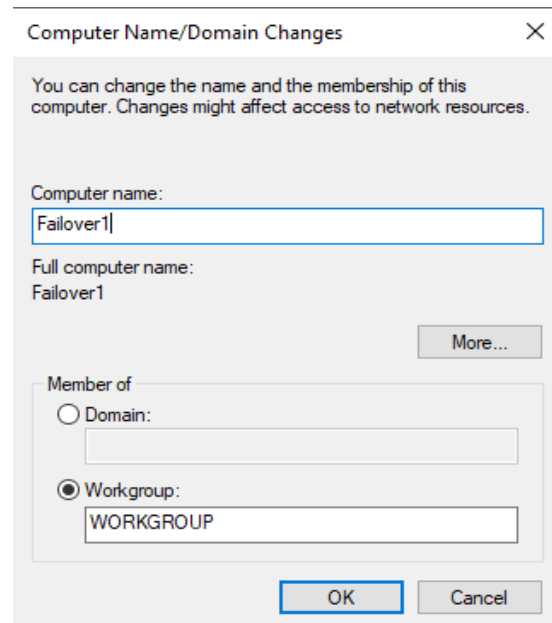
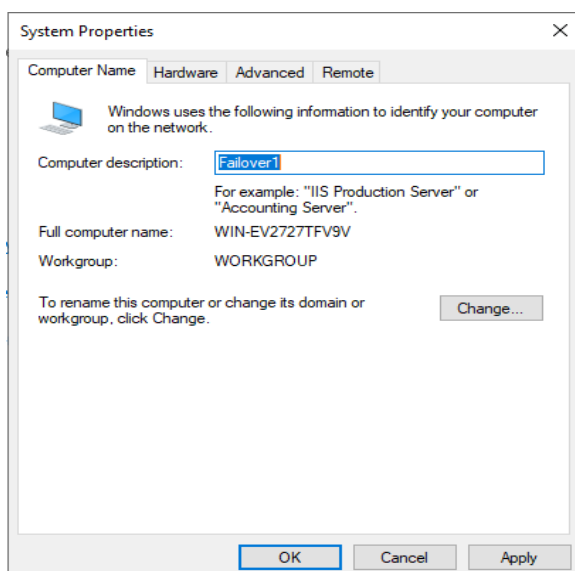
Step7: - Now Power on the virtual machine



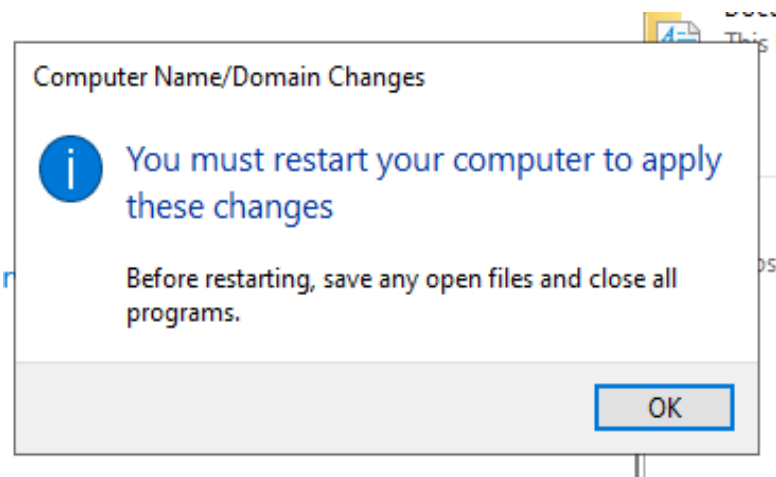
Step8: - Ctrl + E → This Pc → Right Click → Properties.



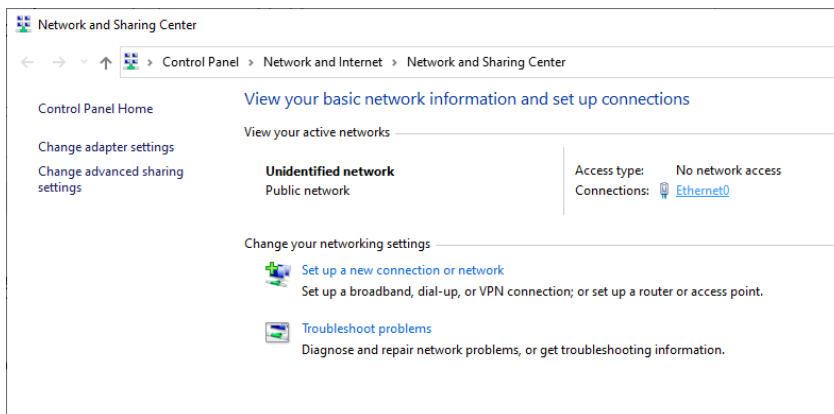
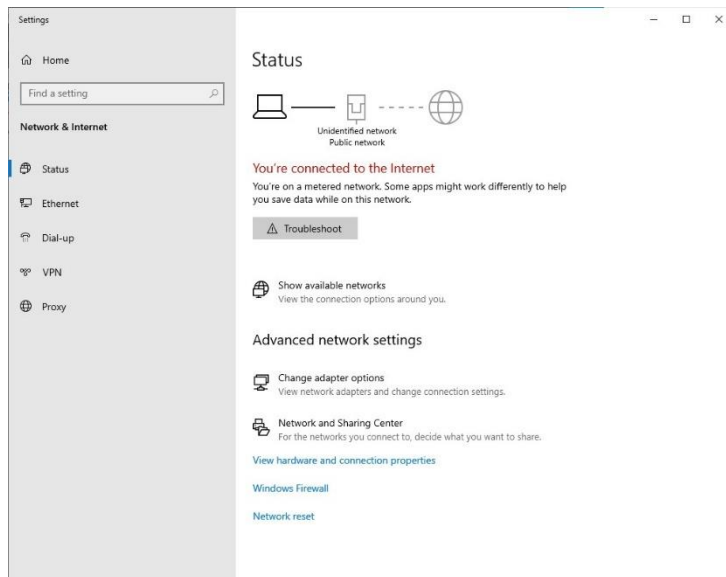
Step9: - Click on Rename this Pc (advanced) → give a name → Click on change → Ok.



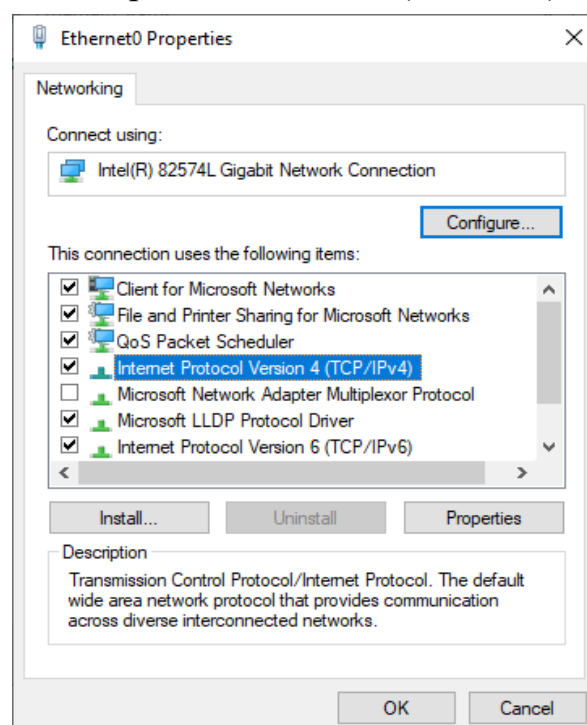
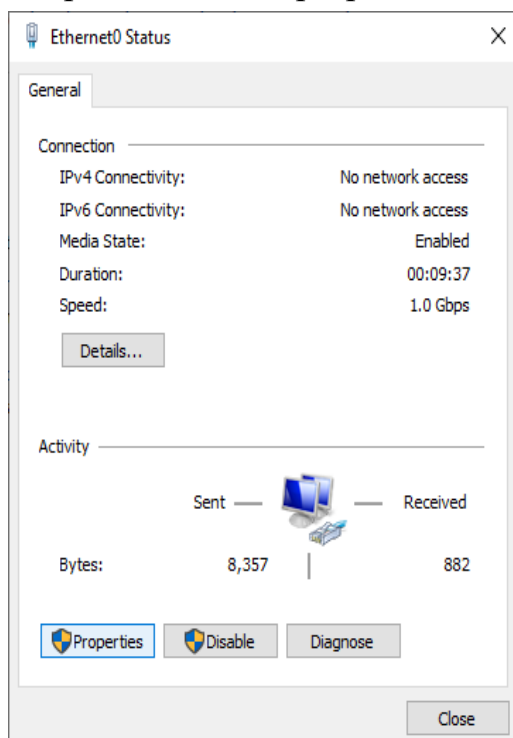
Step10: - After restart



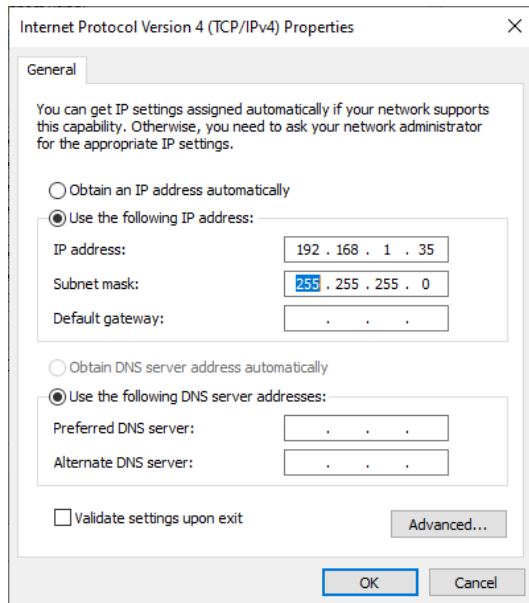
Step12: - Go to setting → network and sharing center → Click on Ethernet ()



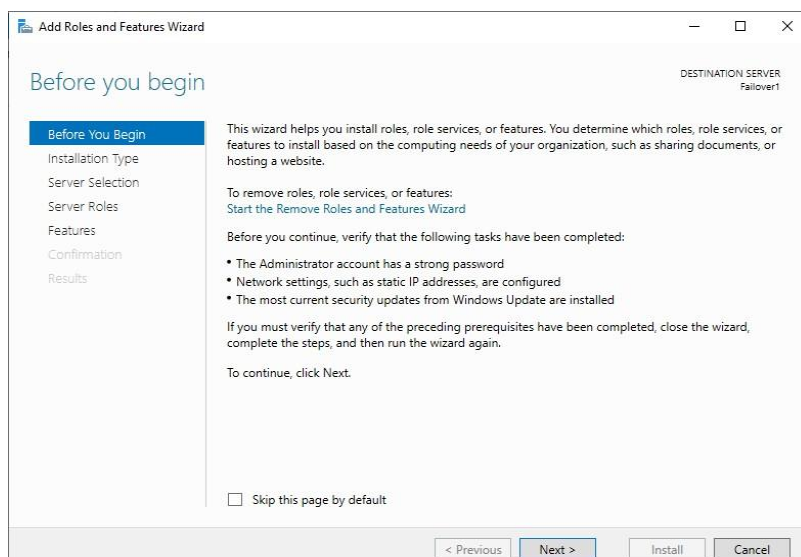
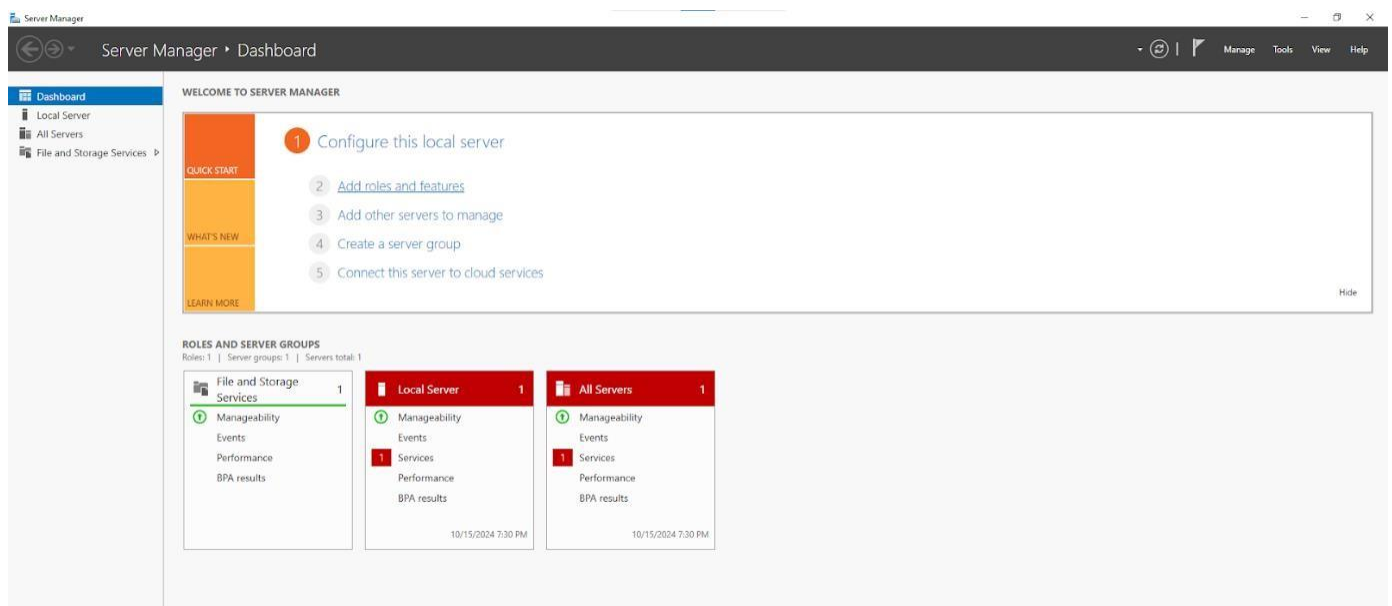
Step13: - Click on properties → Click internet protocol version 4(TCP/IPv4)

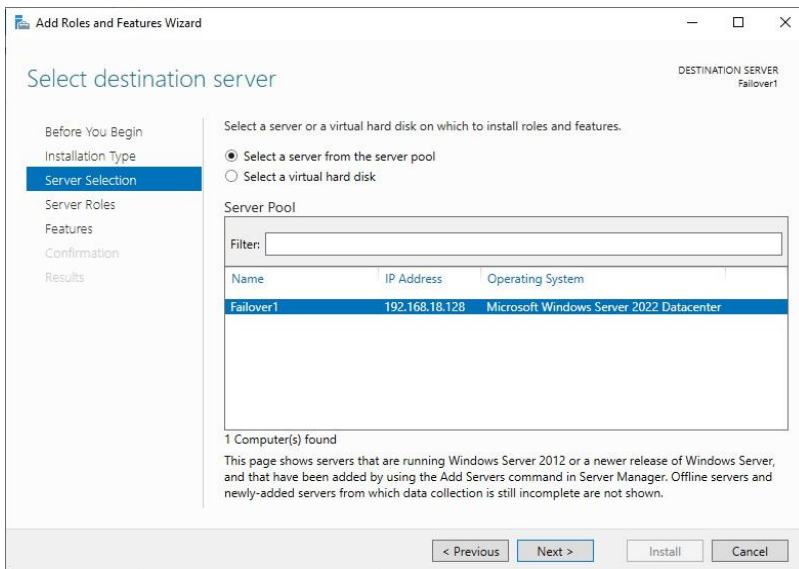


Step14: - Now add Ip address 192.168.1.35, subnet mask.

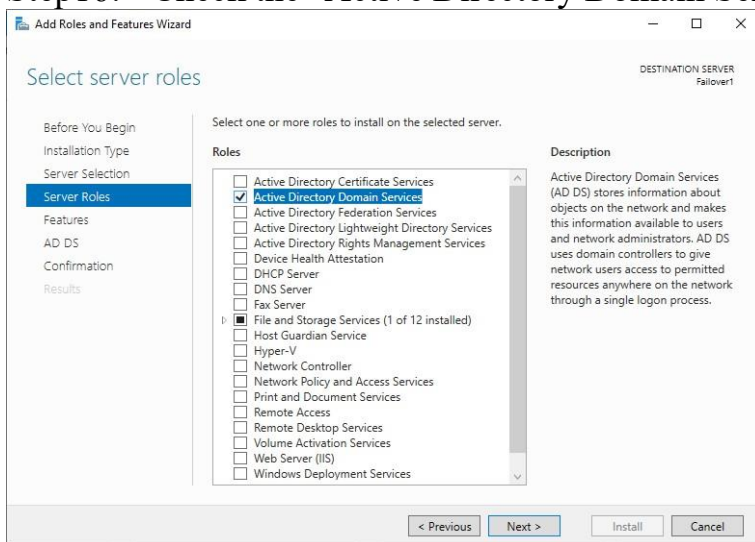


Step15: - Now click on server manager → Add roles and features.

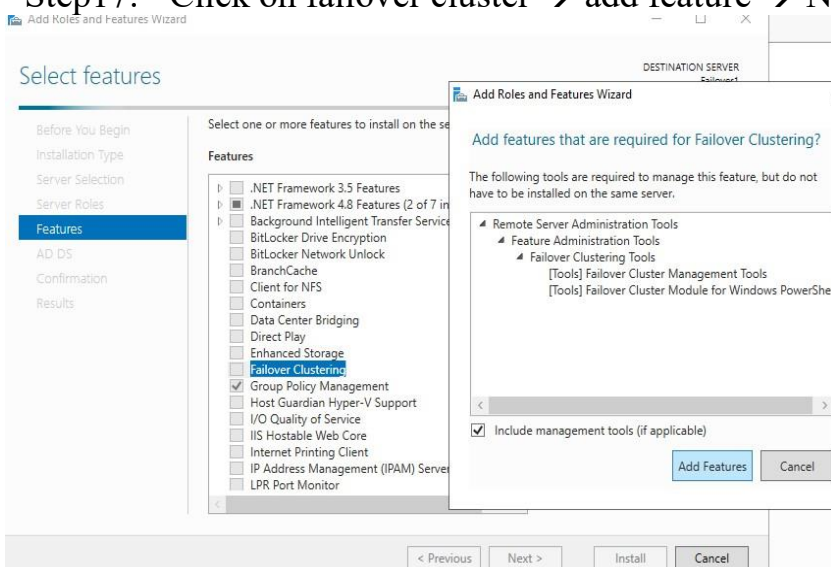




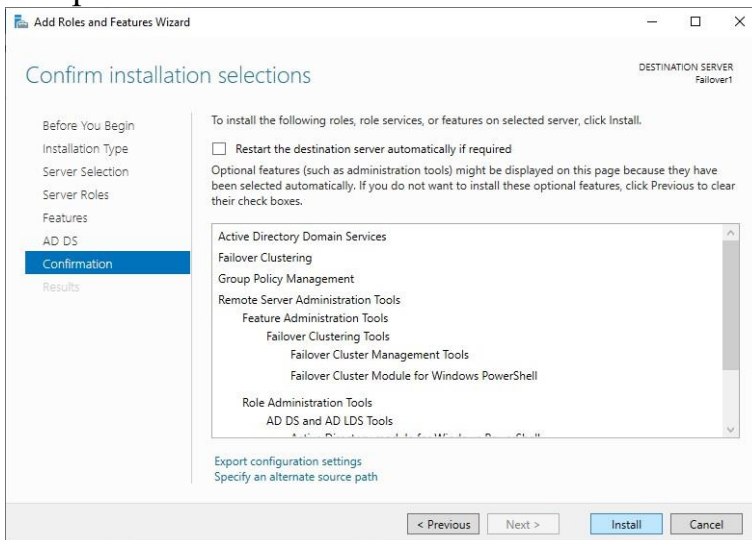
Step16: - Check the “Active Directory Domain Services” → Add feature → next.



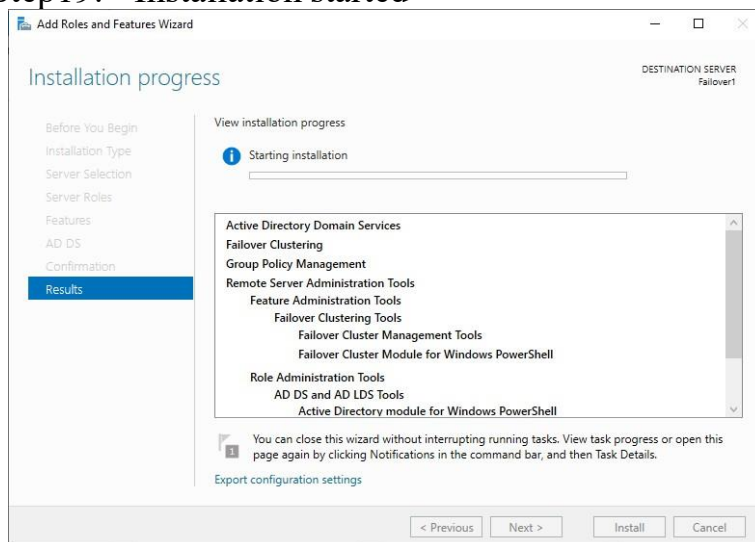
Step17: - Click on failover cluster → add feature → Next.



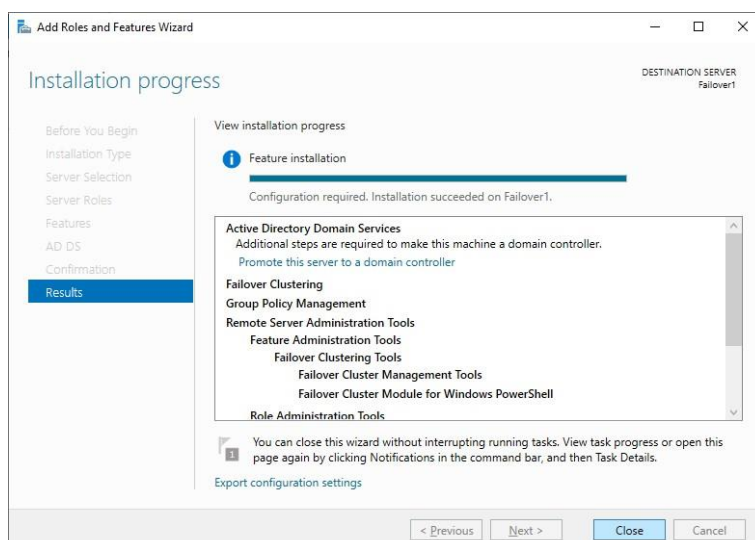
Step18: - Click on installation.



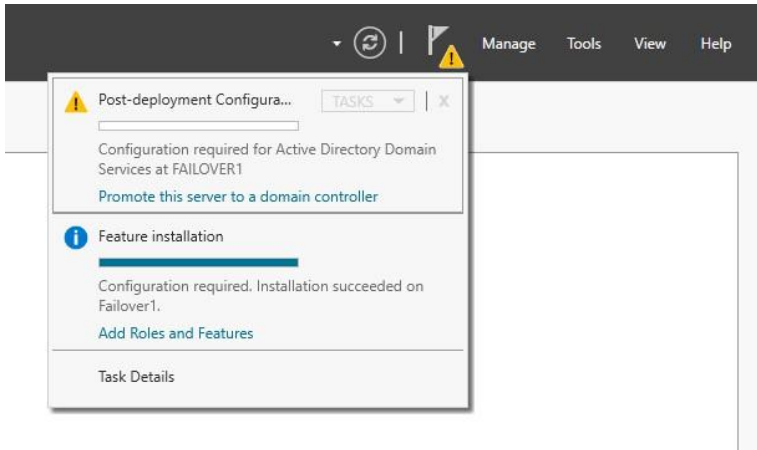
Step19: - Installation started



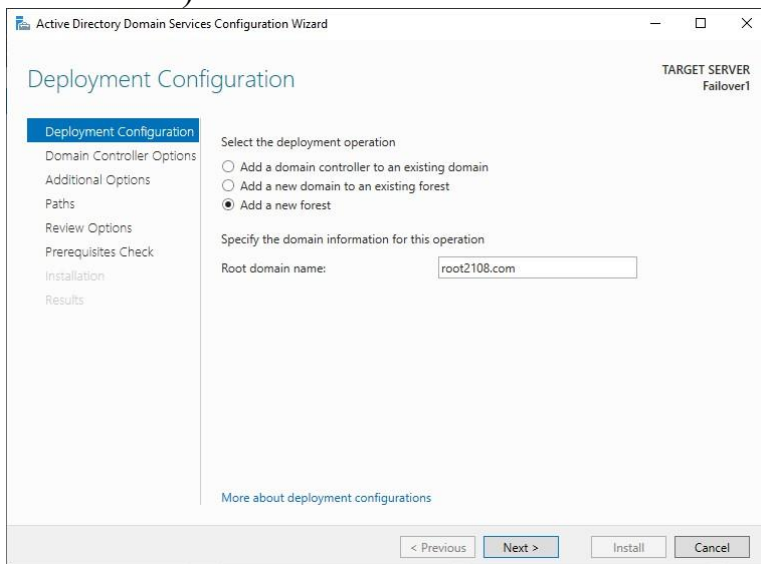
Step20: - After installation click on close.



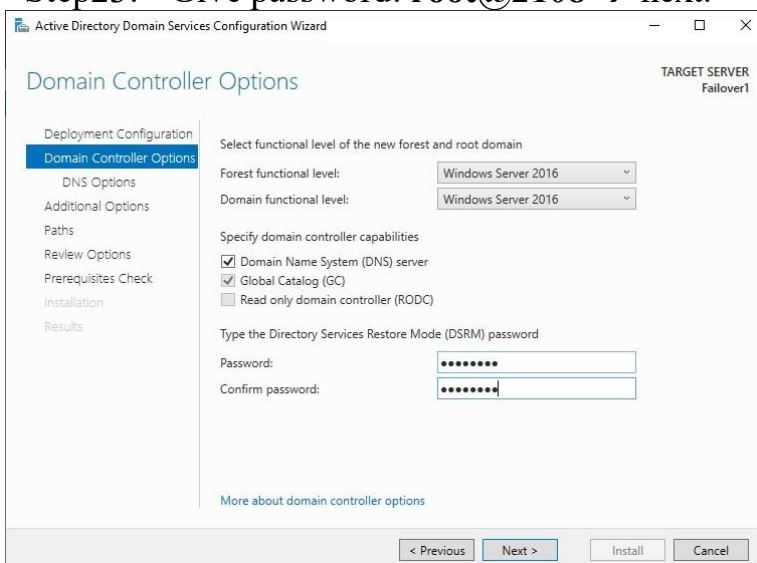
Step21: - Now click on flag (notification) icon → promote this to server to a domain controller.



Step22: - Click on Add a new forest → give root domain name (.com is necessary at the end of the name)



Step23: - Give password: root@2108 → next.



Step24: - Click on next.

Active Directory Domain Services Configuration Wizard

TARGET SERVER
Failover1

DNS Options

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

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](#)

< Previous Next > Install Cancel

Step25: - Don't do anything ... it comes automatically → next.

Active Directory Domain Services Configuration Wizard

TARGET SERVER
Failover1

Additional Options

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:

[More about additional options](#)

< Previous Next > Install Cancel

Step26: - Click Next

Active Directory Domain Services Configuration Wizard

TARGET SERVER
Failover1

Paths

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: ...

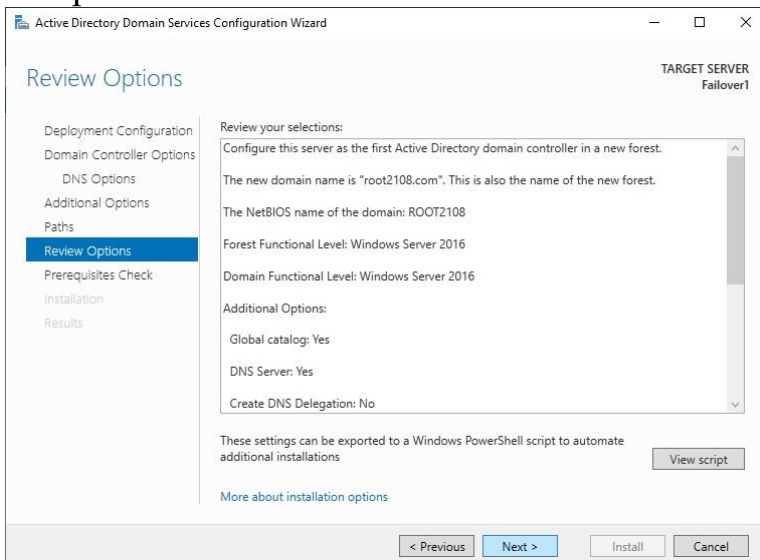
Log files folder: ...

SYSVOL folder: ...

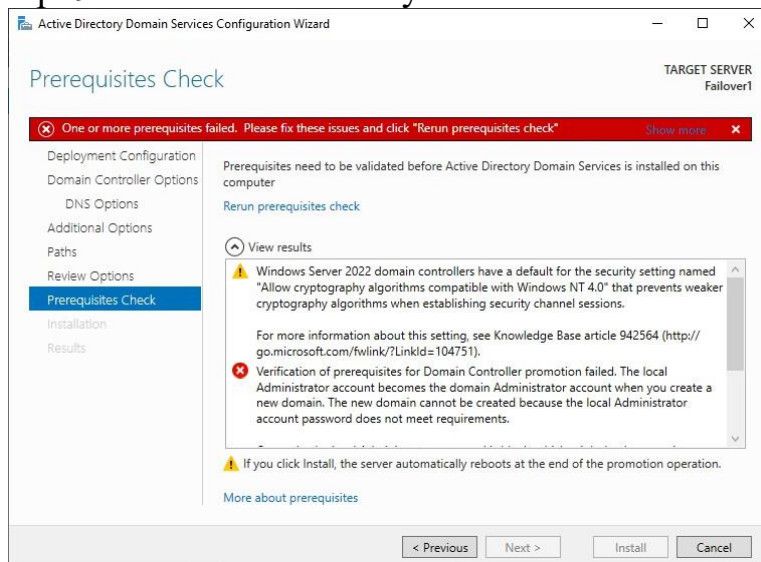
[More about Active Directory paths](#)

< Previous Next > Install Cancel

Step27: - Click on next.



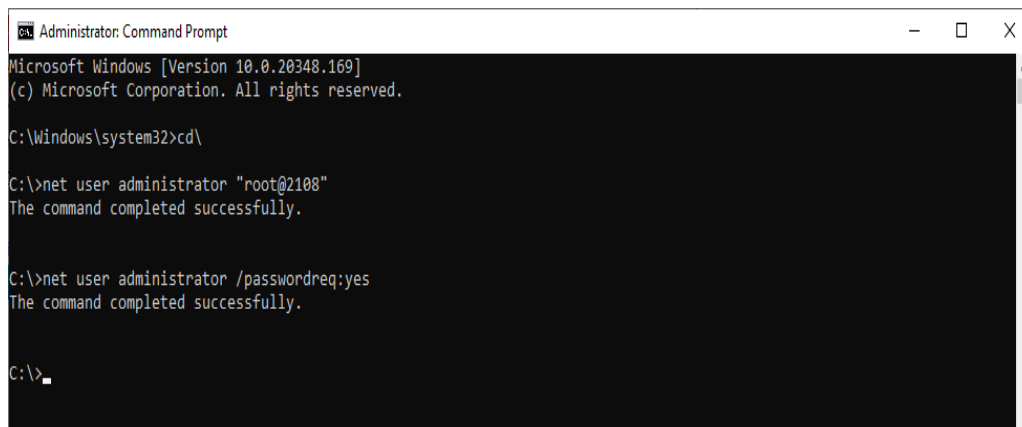
Step29: - Now it will make you an error.



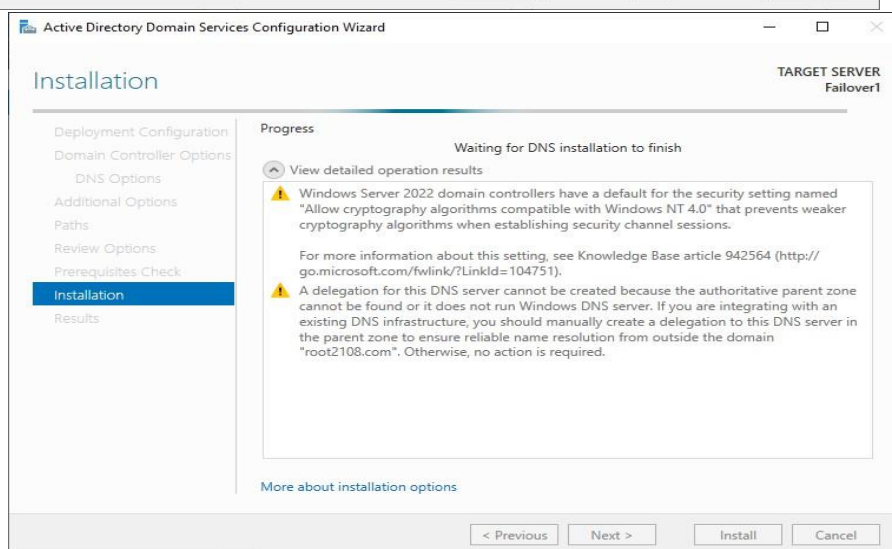
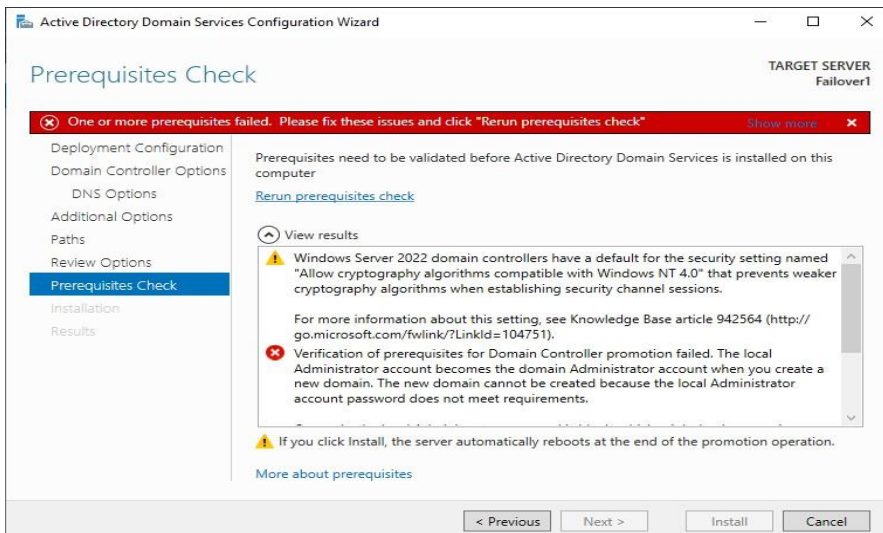
Step30: - Open cmd → run as administrator → Now type the following commands: -

- `cd\`
- `net user administrator "root@2108"`
- `net user administrator /passwordreq:yes`

root@2108 – this is the password u set before

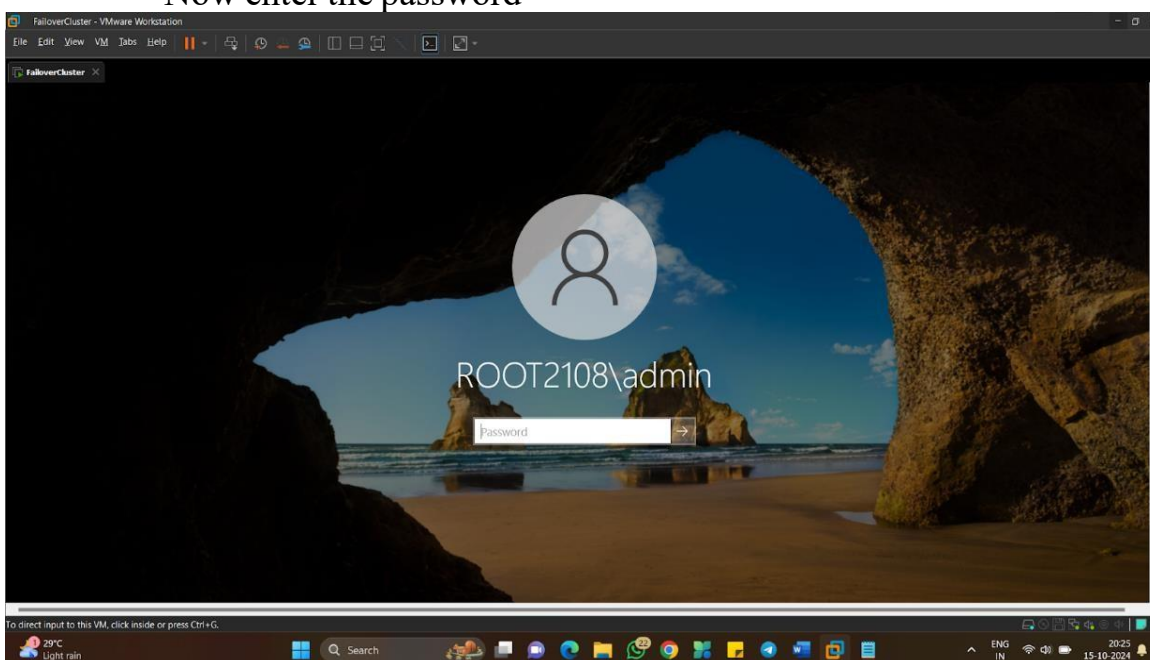


Step31: - Now click on rerun prerequisites check → install.

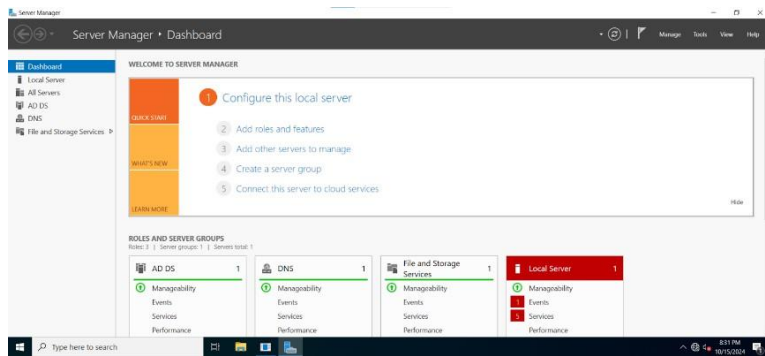


Step32: - After this the PC will restart.

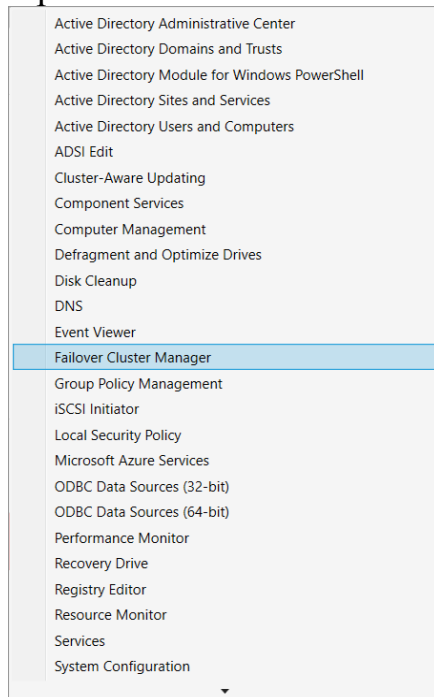
Now enter the password



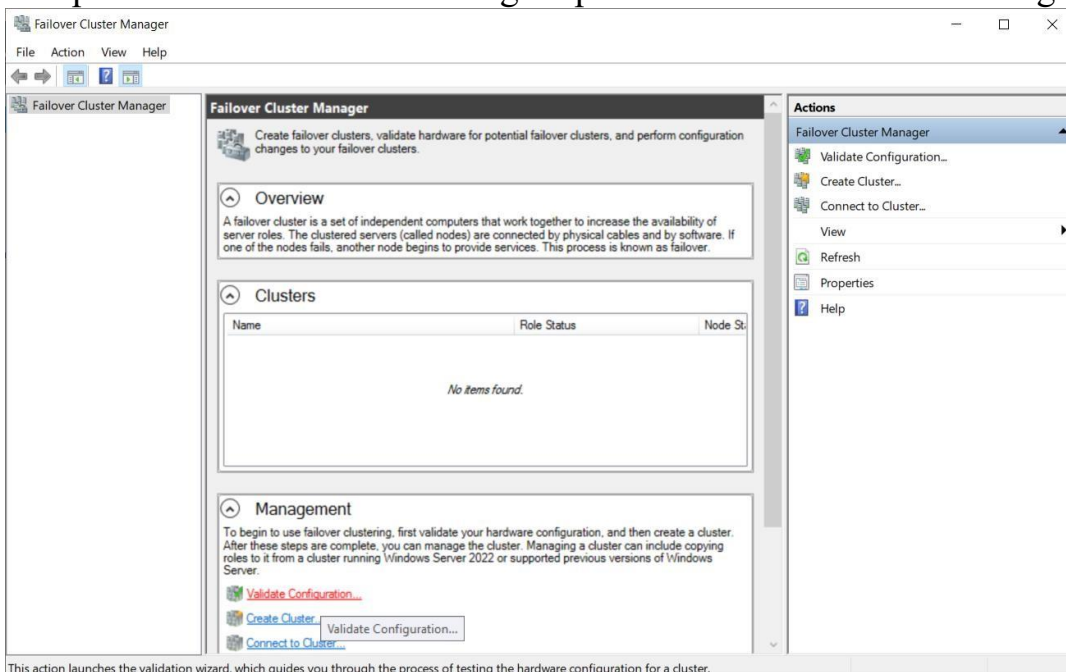
Step33: - Click on tools.



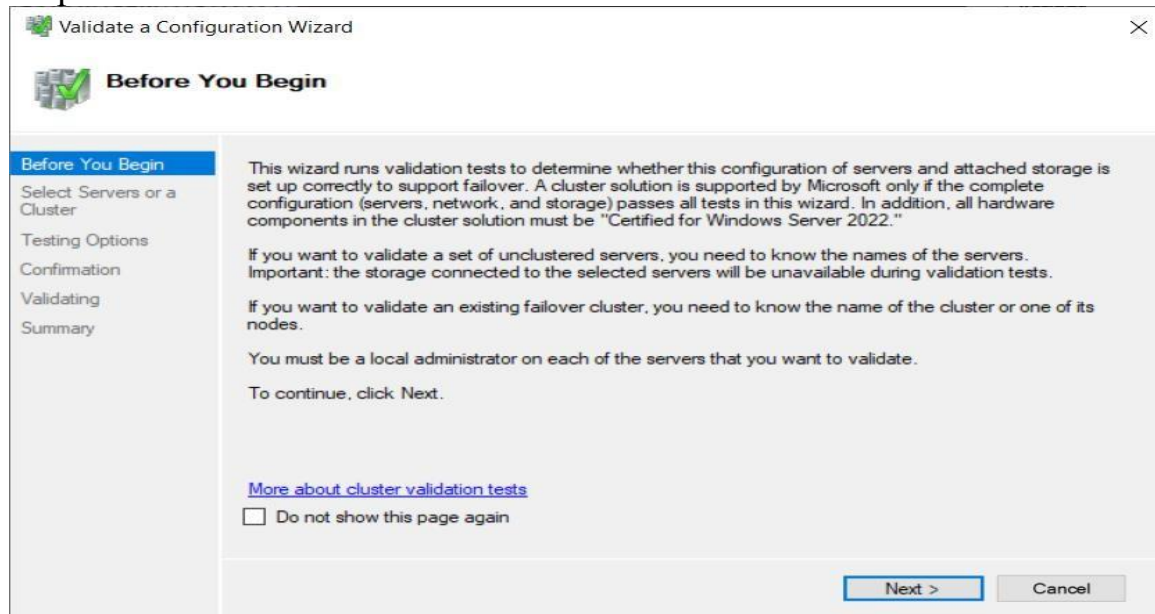
Step34: - Now click on tools → failover cluster manager.



Step35: - Failover Cluster manager opens → Click on validate configuration.



Step36: - Now click on next.



Validate a Configuration Wizard

Before You Begin

This wizard runs validation tests to determine whether this configuration of servers and attached storage is set up correctly to support failover. A cluster solution is supported by Microsoft only if the complete configuration (servers, network, and storage) passes all tests in this wizard. In addition, all hardware components in the cluster solution must be "Certified for Windows Server 2022."

If you want to validate a set of unclustered servers, you need to know the names of the servers. Important: the storage connected to the selected servers will be unavailable during validation tests.

If you want to validate an existing failover cluster, you need to know the name of the cluster or one of its nodes.

You must be a local administrator on each of the servers that you want to validate.

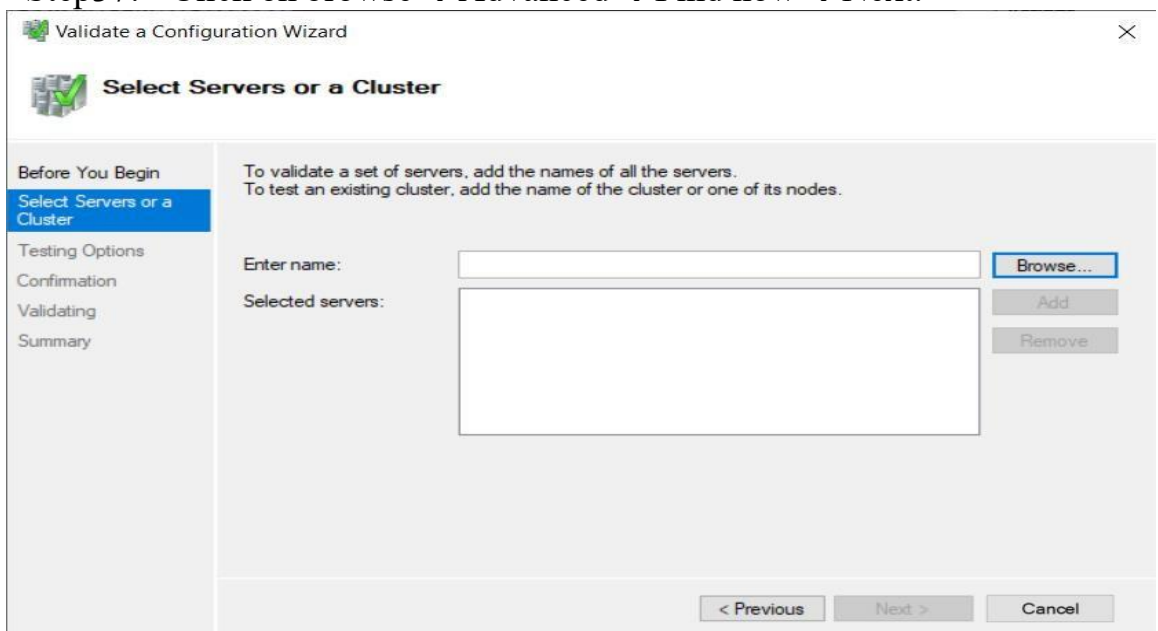
To continue, click Next.

[More about cluster validation tests](#)

☐ Do not show this page again

Next > **Cancel**

Step37: - Click on browse →Advanced →Find now →Next.



Validate a Configuration Wizard

Select Servers or a Cluster

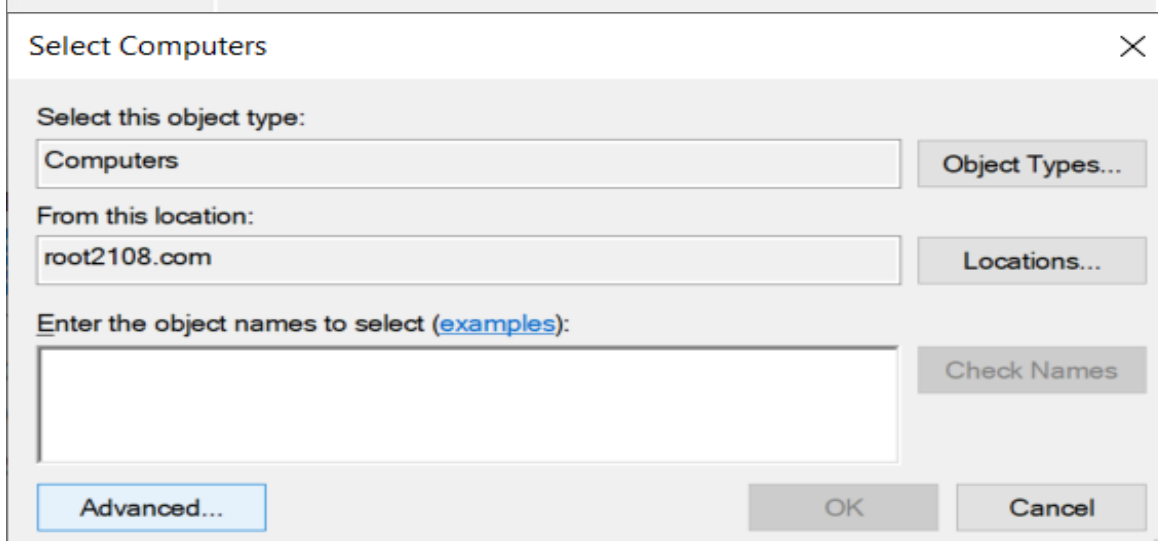
To validate a set of servers, add the names of all the servers.
To test an existing cluster, add the name of the cluster or one of its nodes.

Enter name: **Browse...**

Selected servers:

Add **Remove**

< Previous **Next >** **Cancel**



Select Computers

Select this object type:
 Object Types...

From this location:
 Locations...

Enter the object names to select (examples):

Check Names

Advanced... **OK** **Cancel**

Select Computers

Select this object type:
Computers Object Types...

From this location:
root2108.com Locations...

Common Queries

Name: Starts with

Description: Starts with

☐ Disabled accounts

☐ Non expiring password

Days since last logon:

Columns... Find Now Stop

Search results: OK Cancel

Name	In Folder
------	-----------

Validate a Configuration Wizard

Select Servers or a Cluster

Before You Begin

Select Servers or a Cluster

Testing Options

Confirmation

Validating

Summary

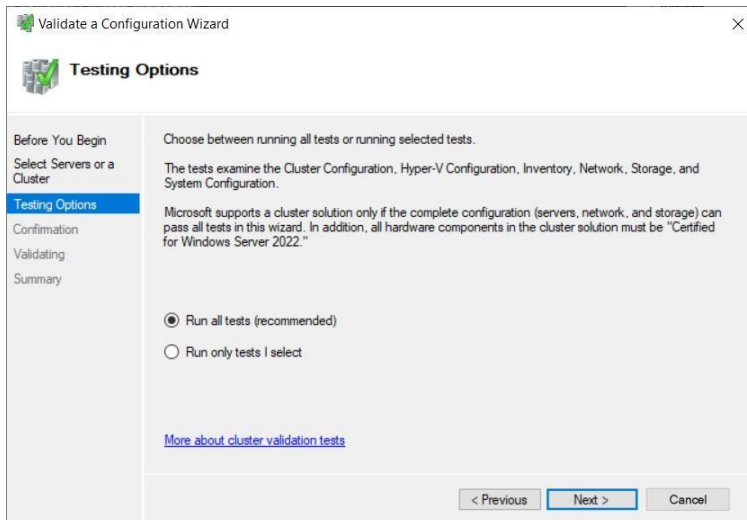
To validate a set of servers, add the names of all the servers.
To test an existing cluster, add the name of the cluster or one of its nodes.

Enter name: Browse...

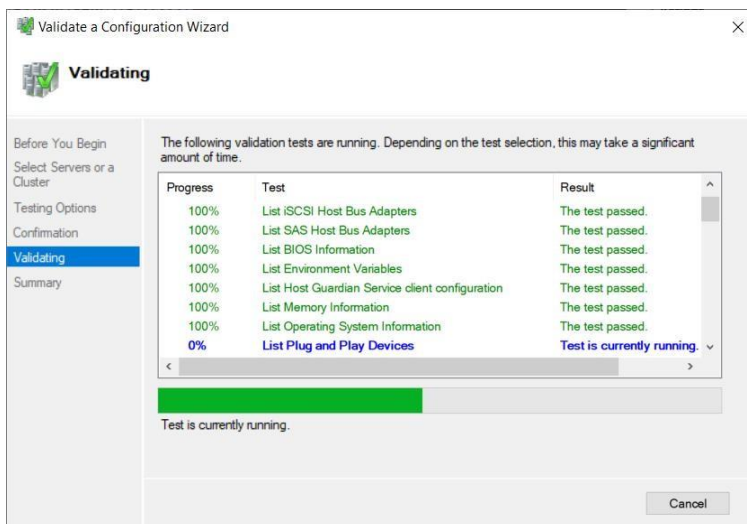
Selected servers: Failover1.root2108.com Add Remove

< Previous Next > Cancel

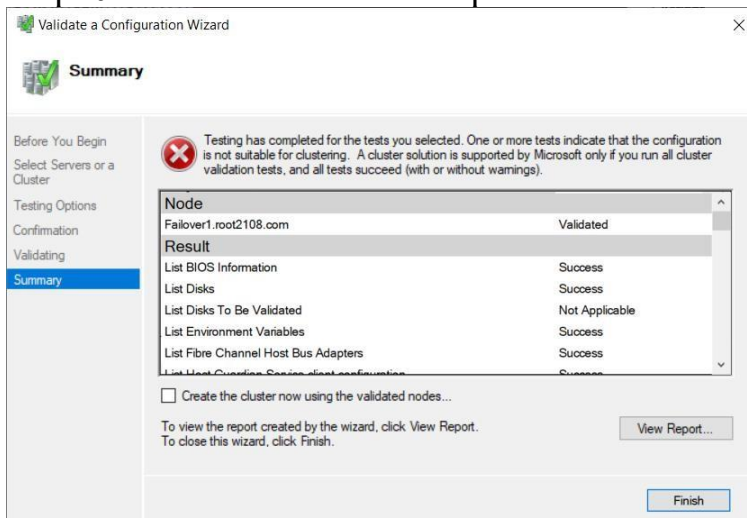
Step38: - Now run all tests.



Step39: - Now click on next.

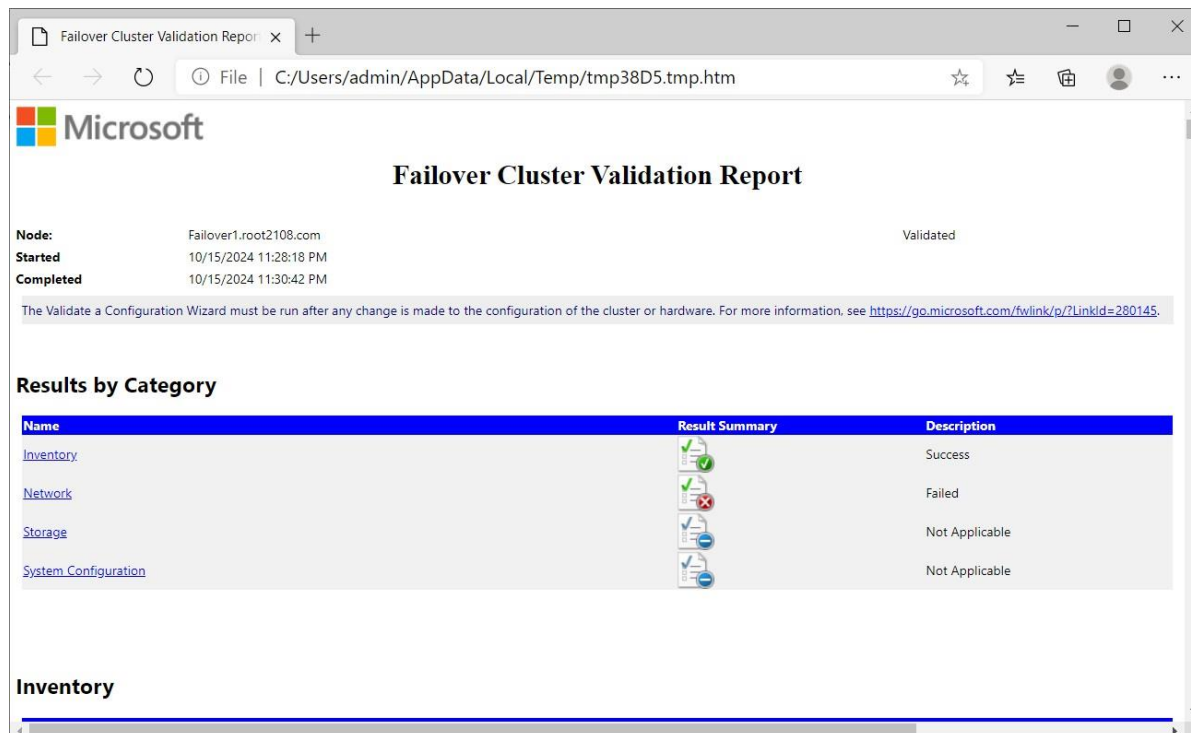


Step40: - Now click on view report.



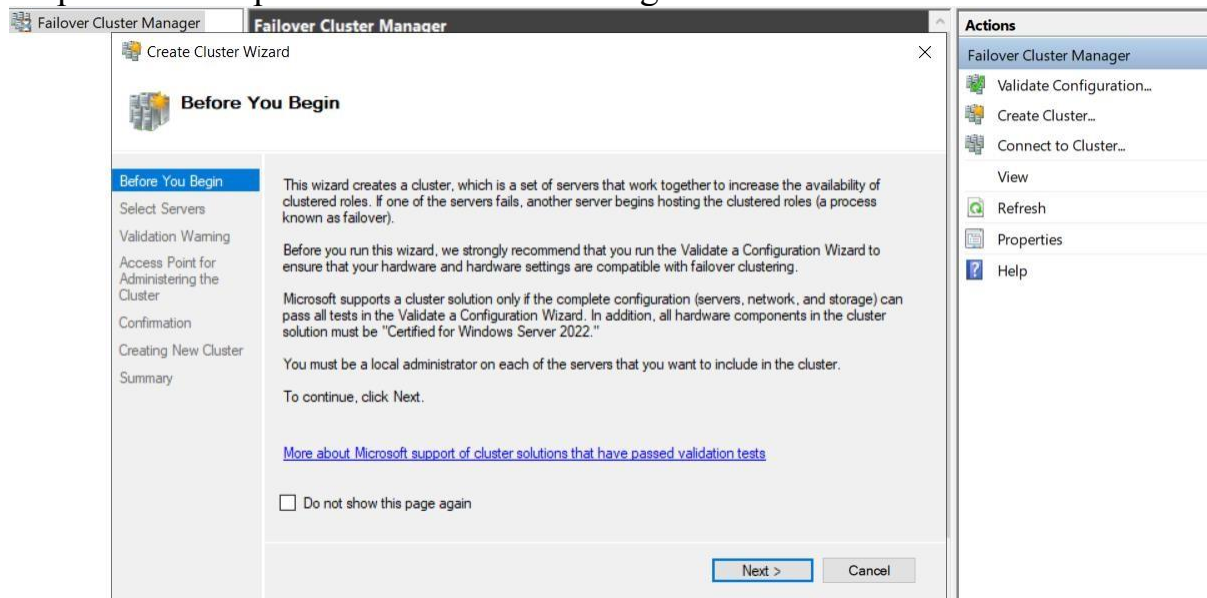
Then it will display the following page

Step41: - After viewing the report click on finish.

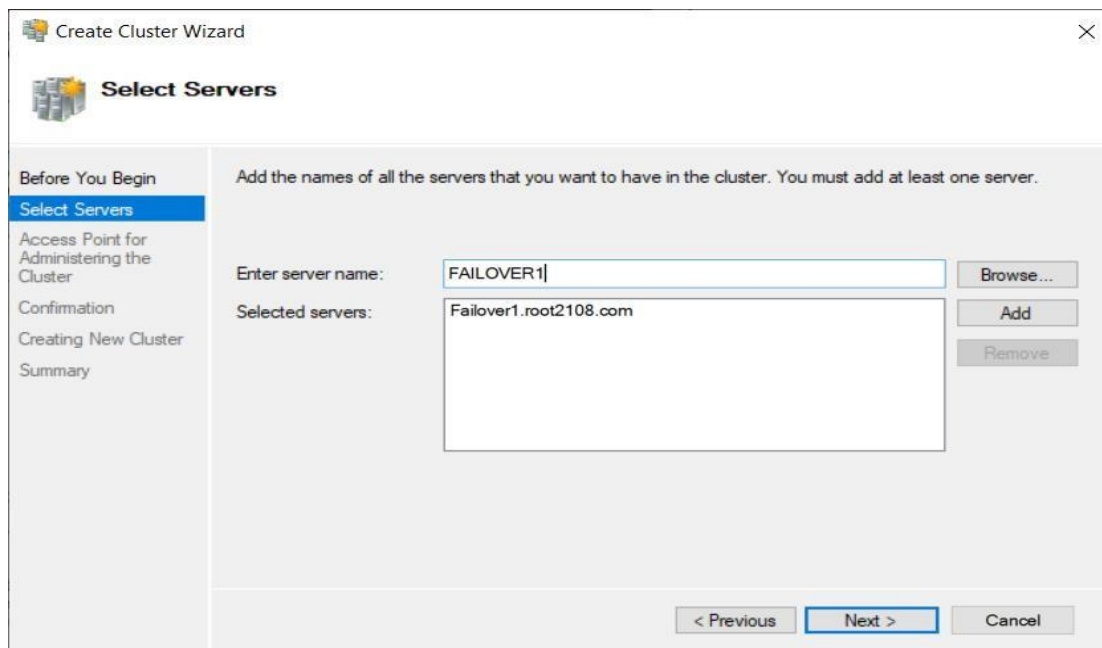


Creating Cluster

Step42: - Now open failover cluster manager → Create Cluster → next.



Step43: - Click on browse → Advanced → Find now → Next.



Create Cluster Wizard

Select Servers

Before You Begin
Select Servers
 Access Point for Administering the Cluster
 Confirmation
 Creating New Cluster
 Summary

Add the names of all the servers that you want to have in the cluster. You must add at least one server.

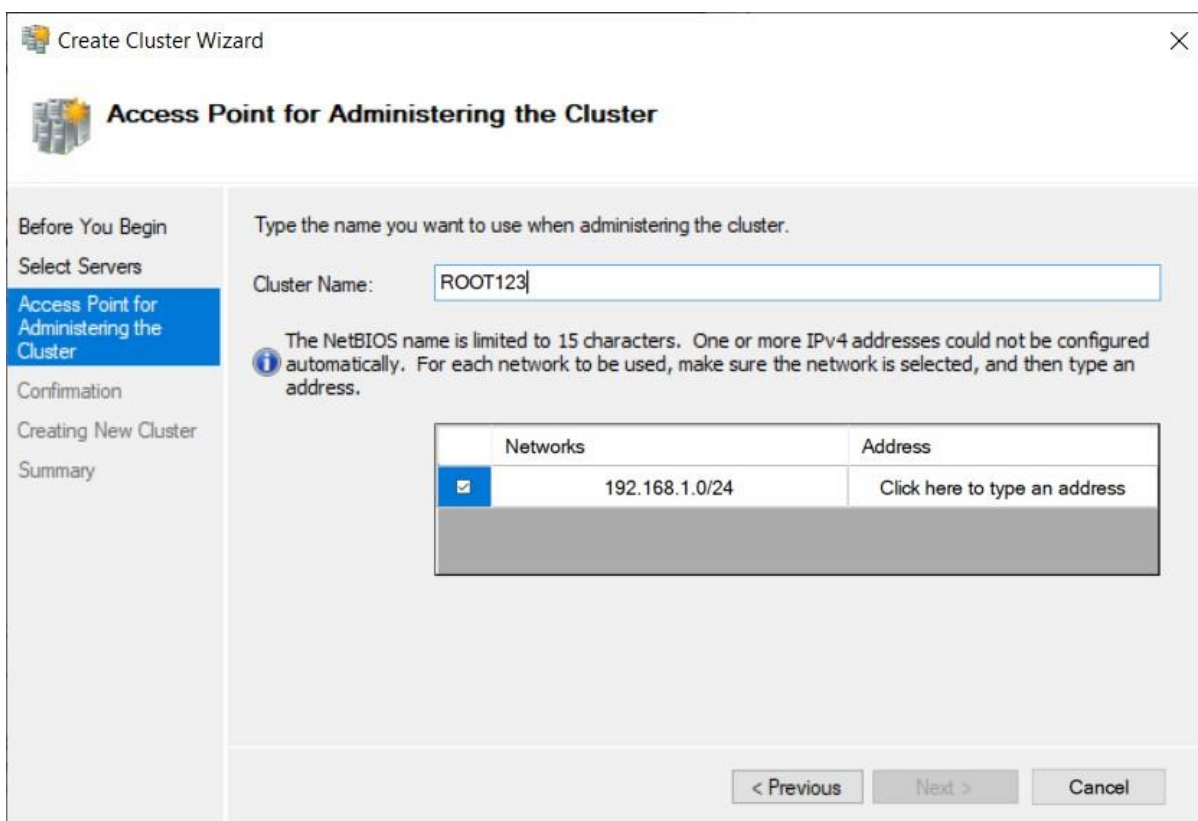
Enter server name:

Selected servers:

Failover1.root2108.com

< Previous **Next >** Cancel

Step44: - Name the Cluster As “ROOT_123”



Create Cluster Wizard

Access Point for Administering the Cluster

Before You Begin
 Select Servers
Access Point for Administering the Cluster
 Confirmation
 Creating New Cluster
 Summary

Type the name you want to use when administering the cluster.

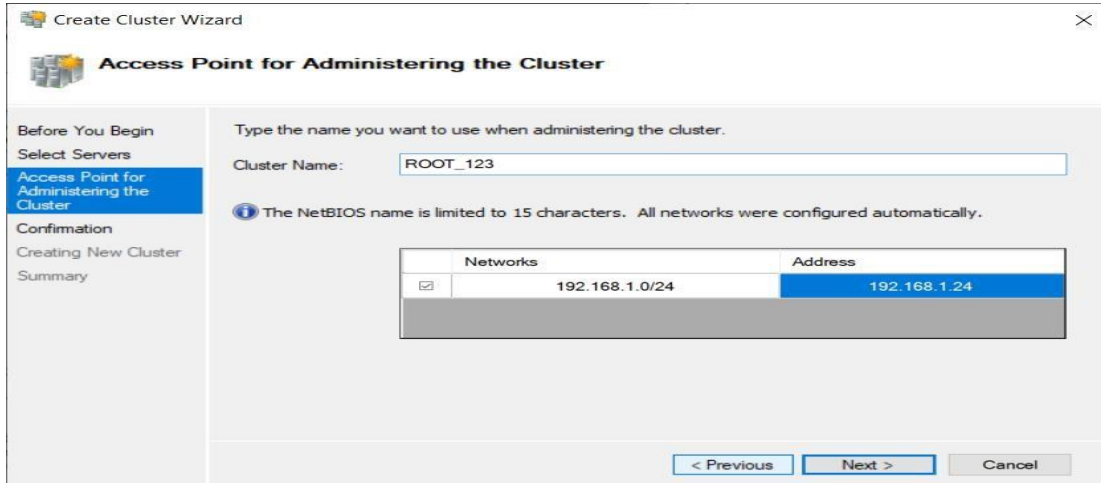
Cluster Name:

i The NetBIOS name is limited to 15 characters. One or more IPv4 addresses could not be configured automatically. For each network to be used, make sure the network is selected, and then type an address.

	Networks	Address
<input checked="" type="checkbox"/>	192.168.1.0/24	Click here to type an address

< Previous **Next >** Cancel

Step45: - Click on NEXT



Create Cluster Wizard

Access Point for Administering the Cluster

Before You Begin
Select Servers
Access Point for Administering the Cluster
Confirmation
Creating New Cluster
Summary

Type the name you want to use when administering the cluster.

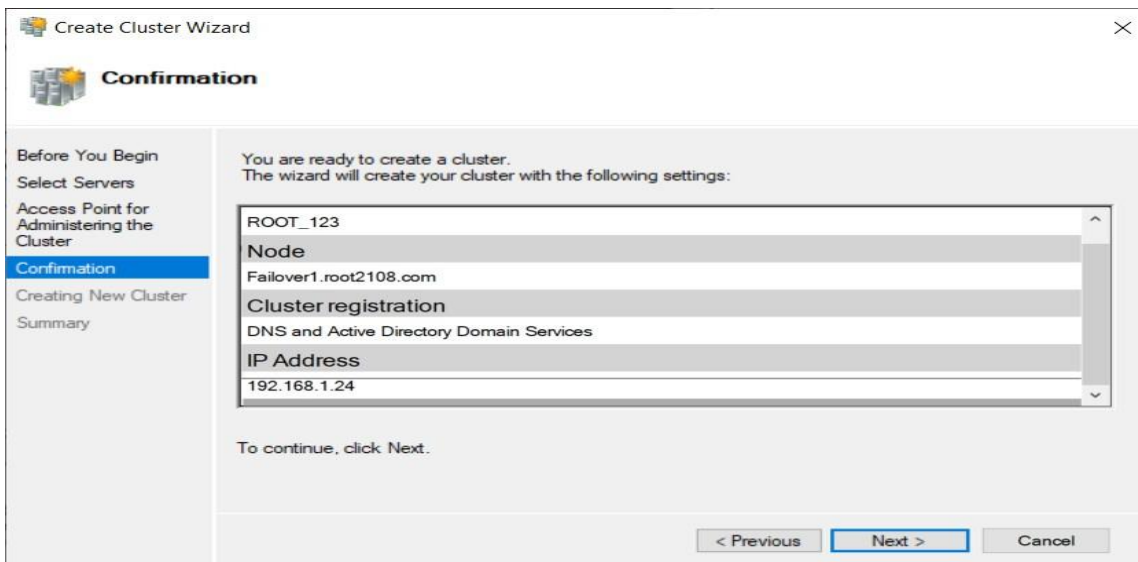
Cluster Name:

The NetBIOS name is limited to 15 characters. All networks were configured automatically.

	Networks	Address
<input checked="" type="checkbox"/>	192.168.1.0/24	192.168.1.24

< Previous Next > Cancel

Step46: - Click on NEXT



Create Cluster Wizard

Confirmation

Before You Begin
Select Servers
Access Point for Administering the Cluster
Confirmation
Creating New Cluster
Summary

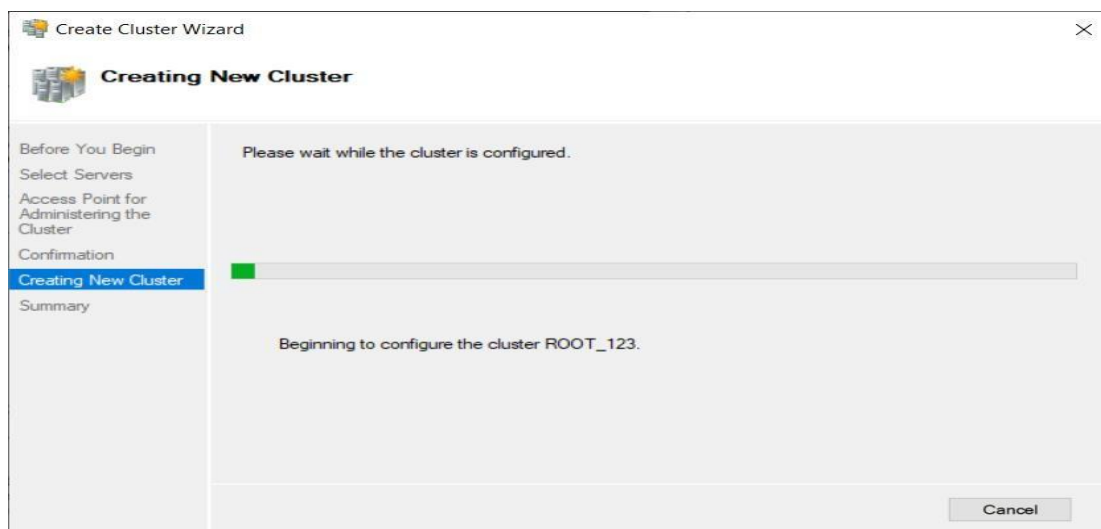
You are ready to create a cluster.
The wizard will create your cluster with the following settings:

ROOT_123
Node
Failover1.root2108.com
Cluster registration
DNS and Active Directory Domain Services
IP Address
192.168.1.24

To continue, click Next.

< Previous Next > Cancel

Step47: -Click on NEXT



Create Cluster Wizard

Creating New Cluster

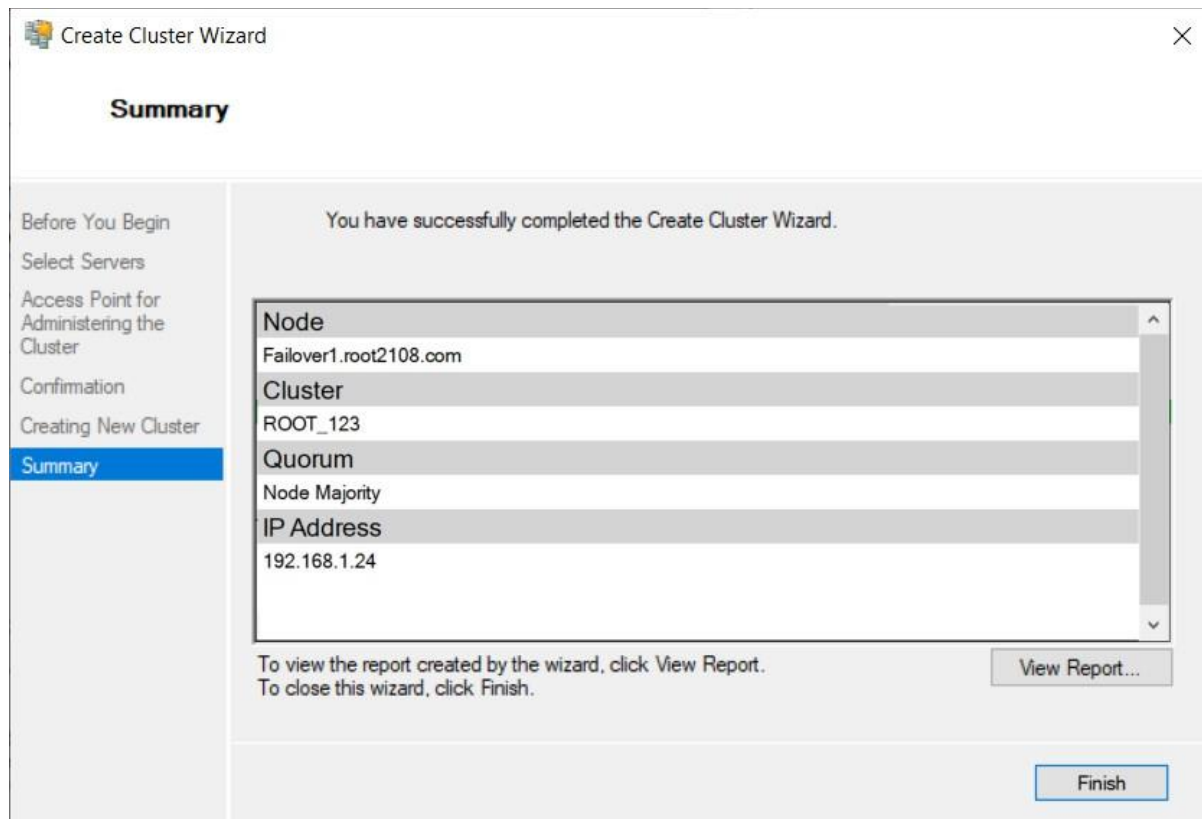
Before You Begin
Select Servers
Access Point for Administering the Cluster
Confirmation
Creating New Cluster
Summary

Please wait while the cluster is configured.

Beginning to configure the cluster ROOT_123.

Cancel

Step48: -Click on VIEW REORT... → Click on FINISH



Created Cluster Report View

