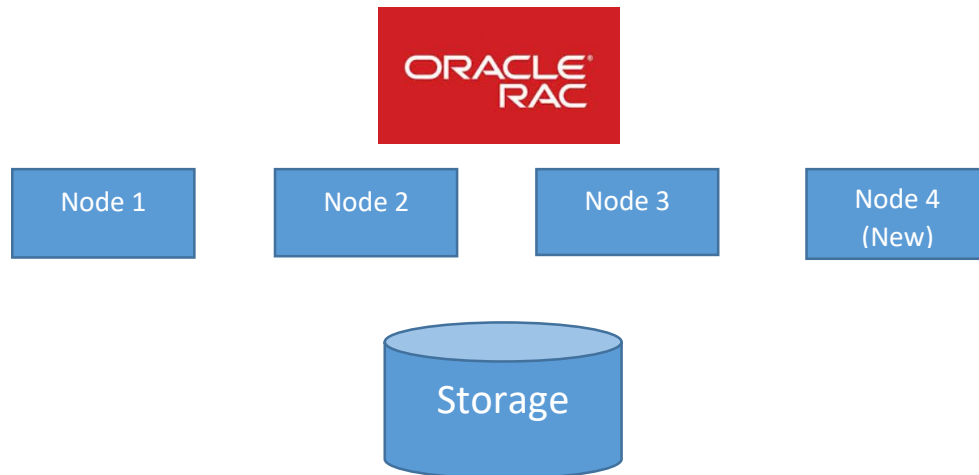




Oracle Cluster New Node Addition is Existing Cluster

Oracle Cluster New Node Addition is Existing Cluster



High Level Steps

1. Install Windows 2012 Server.
2. Check and Apply Pre-Requisites.
3. Add Node from GRID Home from Existing Node and it will copy Grid Home to New Node.
4. Execute Grid Config on New Node
5. Add Node from Oracle Database Home from Existing Node and it will copy Oracle Database Home to New Node.
6. Add Instance of Existing Database to New Node.

Steps for Node Addition

- | | |
|--|-------------|
| 1. Turn off and Disable Windows Firewall | (New Node) |
| 2. Add Network Adapters Public and Private | (New Node) |
| 3. Change Adapter Type to Bridge | (New Node) |
| 4. Change Name of Adapter According for Existing Nodes | (New Node) |
| 5. Define IP Address on Both Adapters | (New Node) |
| 6. Change Host Name According to Existing Nodes | (New Node) |
| 7. Define New Node Public Id, Private IP and VIP IP Name in Host File or DNS | (All Nodes) |
| 8. Ping New IP Host from All Nodes | (All Nodes) |
| 9. Start NFTP Service and Set Auto Start. | (New Node) |
| 10. Disable Windows Media Sensing (DisableDHCPMediaSense) | (New Node) |



Oracle Cluster New Node Addition in Existing Cluster

- | | |
|--|------------|
| 11. Connect with Database Storage. | (New Node) |
| 12. Online ASM Disks. | (New Node) |
| 13. Set Attribute of Read only Clear for All ASM Disk. | (New Node) |
| 14. Adding a Node to a Grid Home | (Node 1) |
| 15. Execute Grid Config. | (New Node) |
| 16. Post Verify Grid | (Node 1) |
| 17. Adding a Node to an Oracle Home | (Node 1) |
| 18. Register New Node Virtual IP | (Node 1) |
| 19. Create Instance on New Node of Existing Database | (Node 1) |

Existing Database Nodes Configuration

Operating System: Windows 2012

Database Cluster Nodes	= 3
Scan Name	= nodescan
192.168.18.151	Node1
192.168.18.152	node2
192.168.18.147	node3
192.168.10.151	node1priv
192.168.10.152	node2priv
192.168.10.155	node3priv
192.168.18.153	asmstorage
192.168.10.153	asmstoragepriv
192.168.18.145	node1vip
192.168.18.146	node2vip
192.168.18.148	node3vip
192.168.18.241	nodescan
192.168.18.242	nodescan
192.168.18.243	nodescan



Oracle Cluster New Node Addition in Existing Cluster

NEW NODE Configuration

Two Network Adapters for Public and Private

Public Interface Name = Public

Private Interface Name = Private

Host Name = Node4

192.168.18.149 node4

192.168.18.150 node4vip

192.168.10.156 node3priv

Current Oracle Cluster Status

```
Administrator: Command Prompt
c:\>olsnodes -n
node1 1
node2 2
node3 3

c:\>hostname
node1

c:\>crsctl check crs
CRS-4638: Oracle High Availability Services is online
CRS-4537: Cluster Ready Services is online
CRS-4529: Cluster Synchronization Services is online
CRS-4533: Event Manager is online

c:\>
```

```
Administrator: Command Prompt
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>olsnodes -n
node1 1
node2 2
node3 3

C:\Users\Administrator>hostname
node2

C:\Users\Administrator>crsctl check crs
CRS-4638: Oracle High Availability Services is online
CRS-4537: Cluster Ready Services is online
CRS-4529: Cluster Synchronization Services is online
CRS-4533: Event Manager is online

C:\Users\Administrator>
```



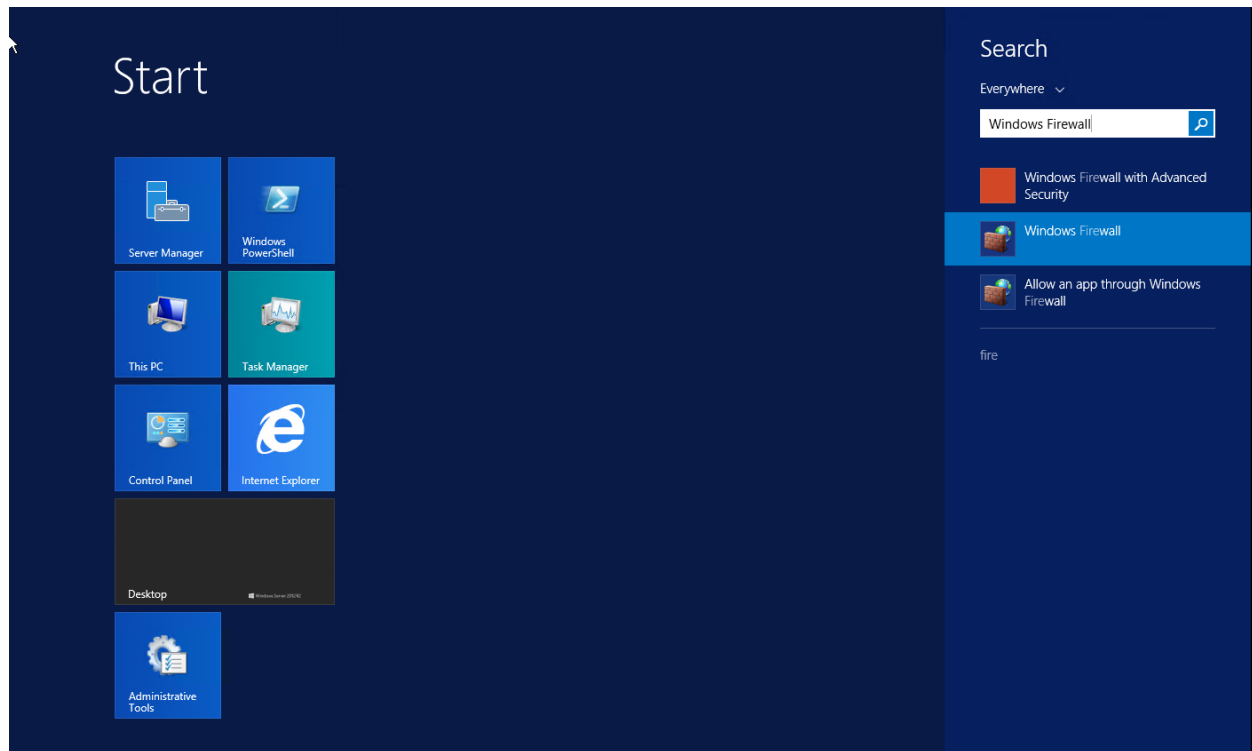
Oracle Cluster New Node Addition is Existing Cluster

```
Administrator: Command Prompt
C:\Users\Administrator>olsnodes -n
node1 1
node2 2
node3 3
C:\Users\Administrator>hostname
Node3
C:\Users\Administrator>crsctl check crs
CRS-4638: Oracle High Availability Services is online
CRS-4537: Cluster Ready Services is online
CRS-4529: Cluster Synchronization Services is online
CRS-4533: Event Manager is online
C:\Users\Administrator>_
```



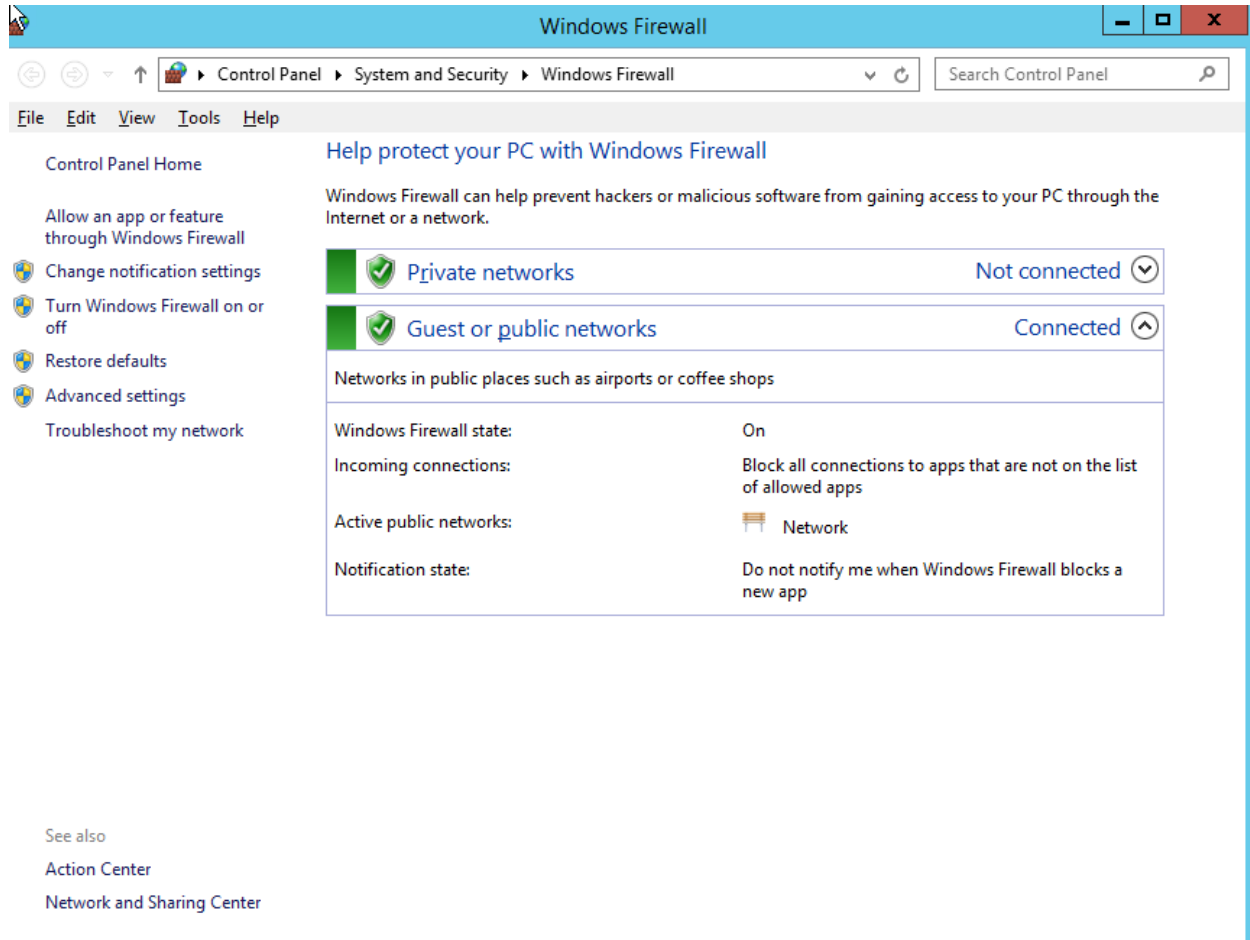
Oracle Cluster New Node Addition in Existing Cluster

1. Turn off and Disable Windows Firewall (New Node)



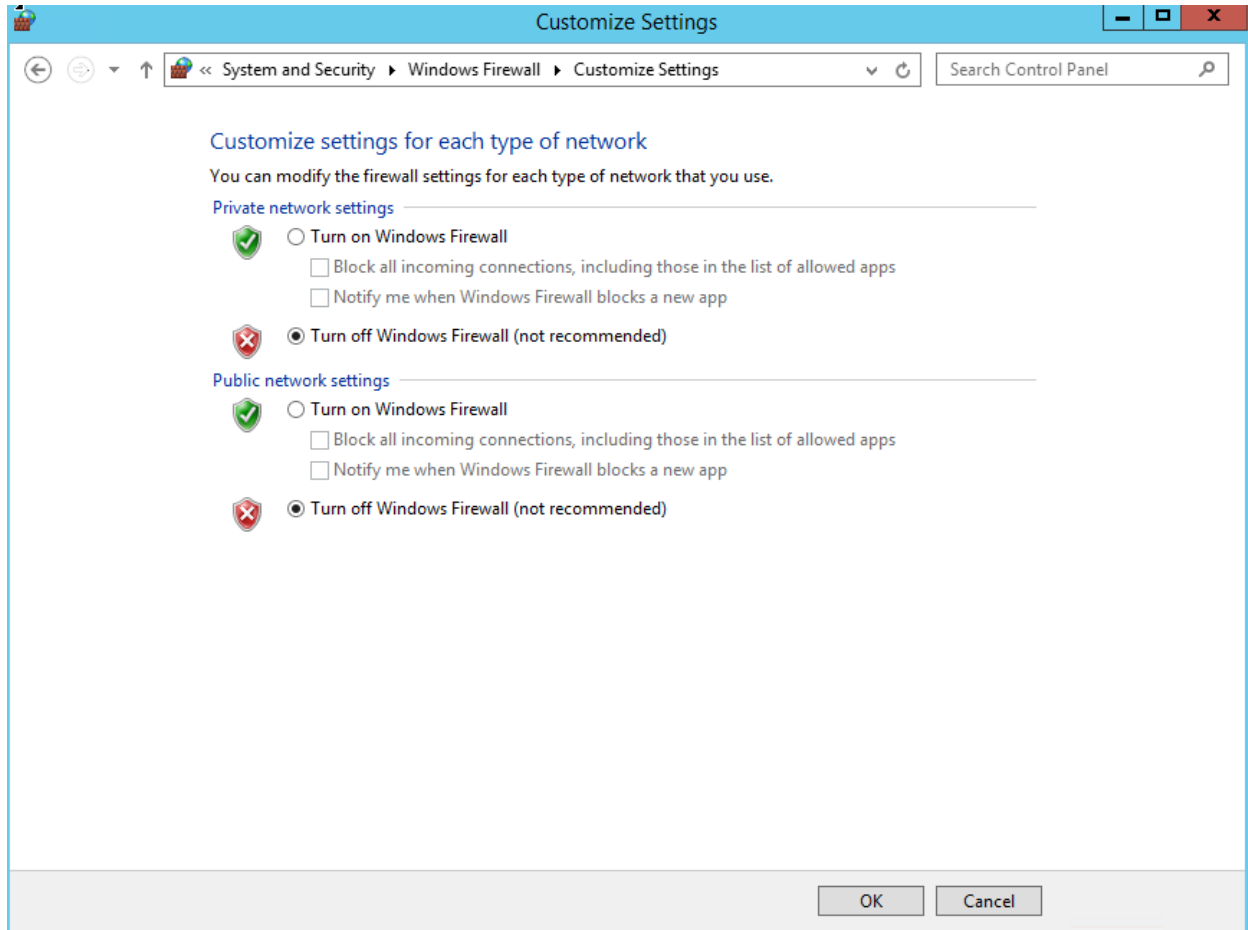


Oracle Cluster New Node Addition is Existing Cluster



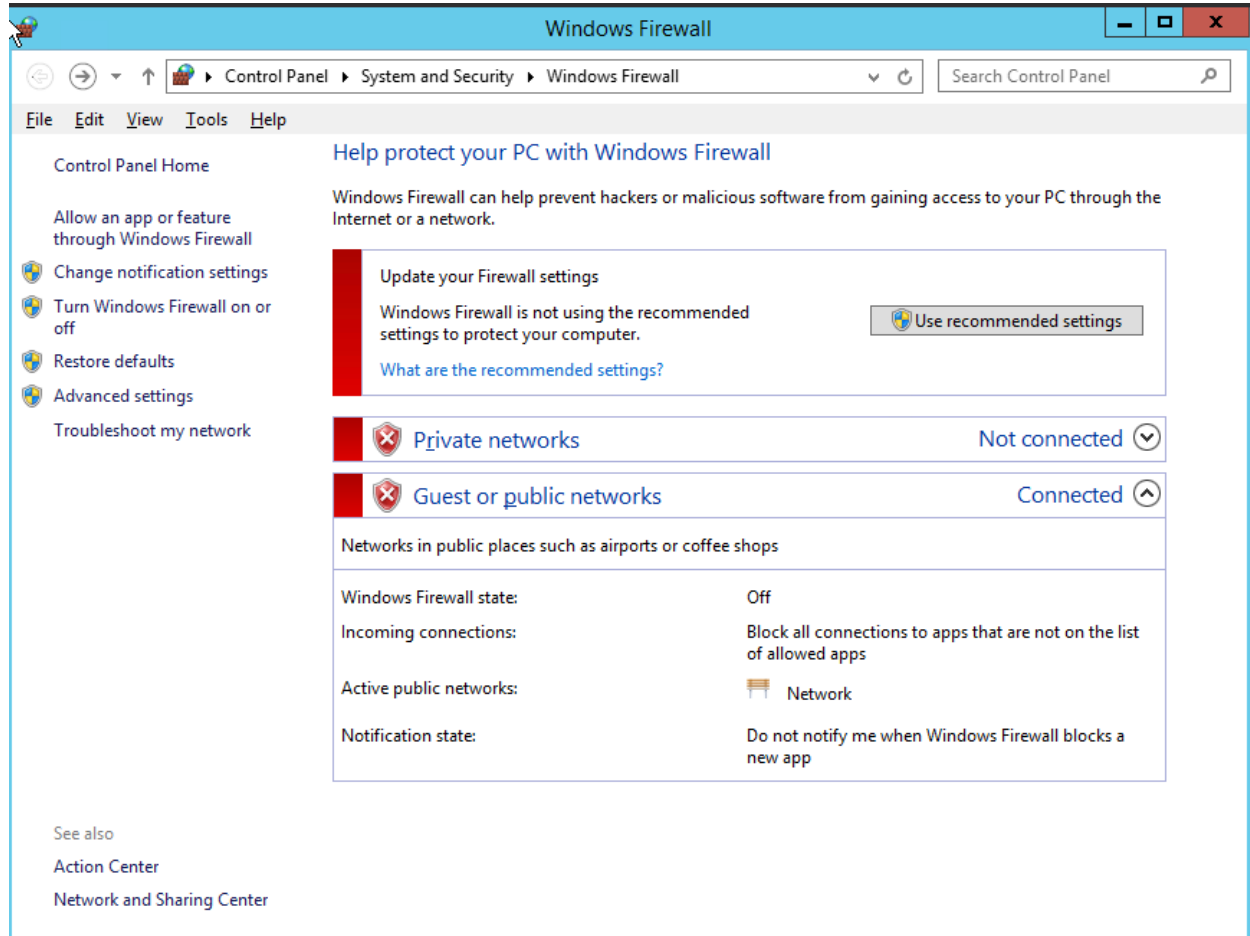


Oracle Cluster New Node Addition is Existing Cluster





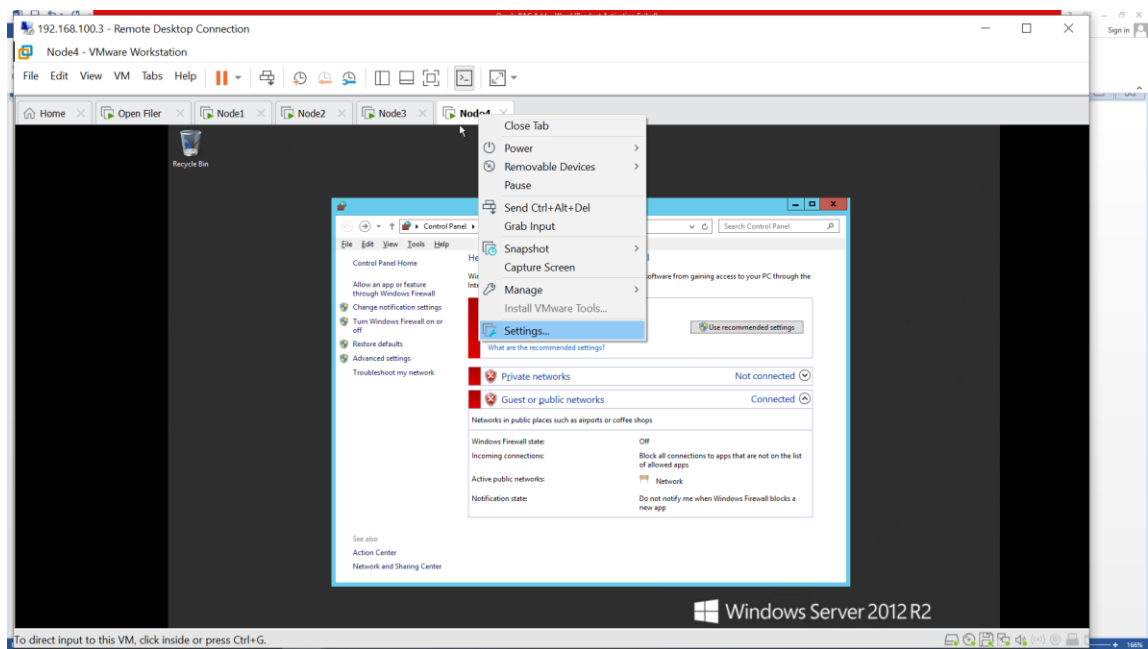
Oracle Cluster New Node Addition is Existing Cluster





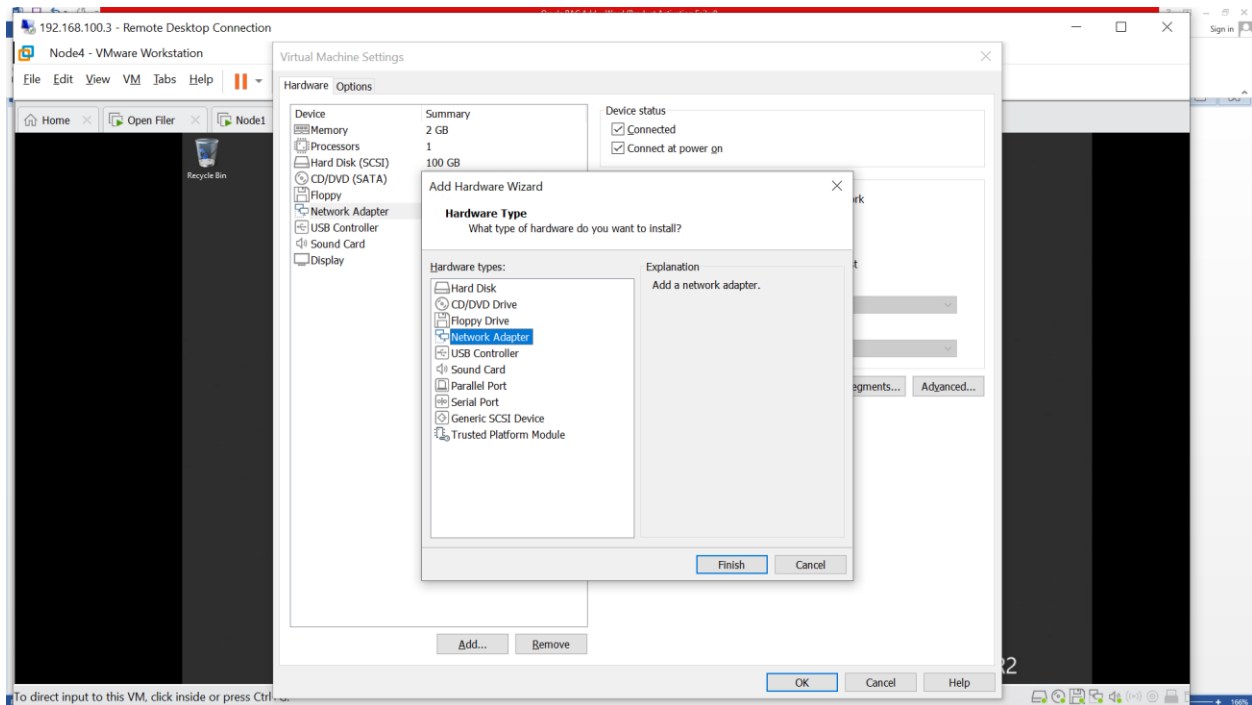
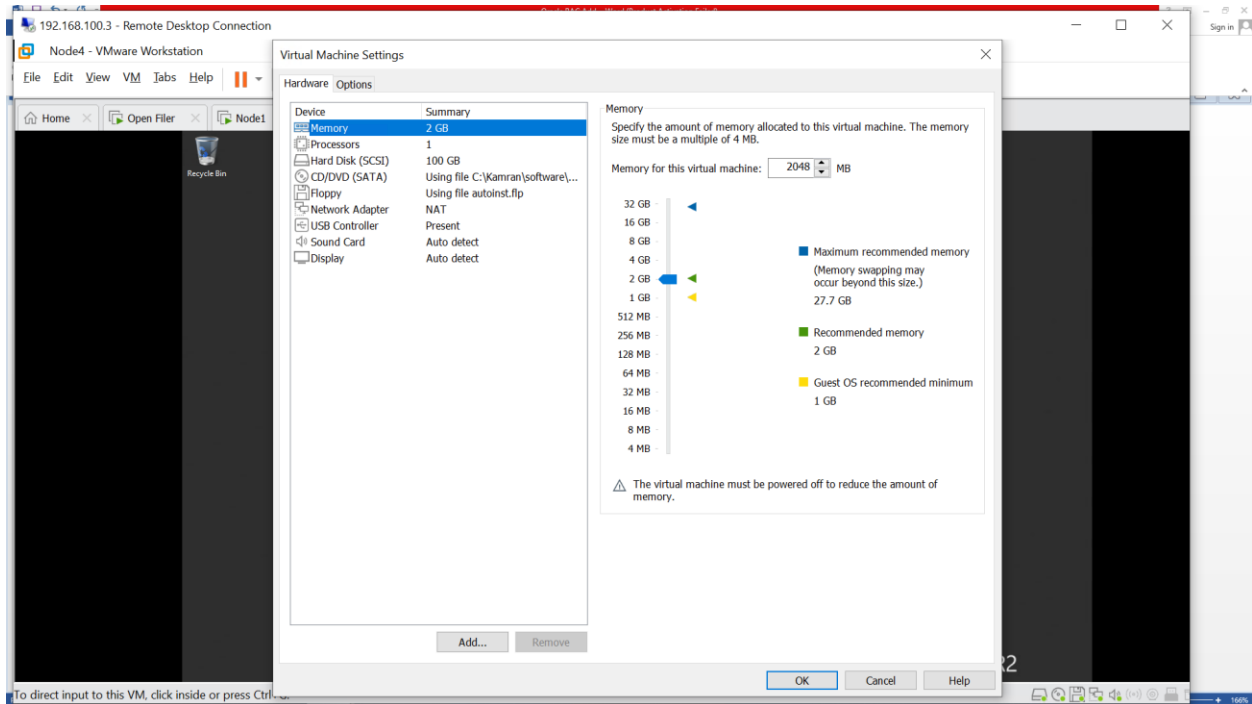
Oracle Cluster New Node Addition is Existing Cluster

2. Add Network Adapters Public and Private (New Node)



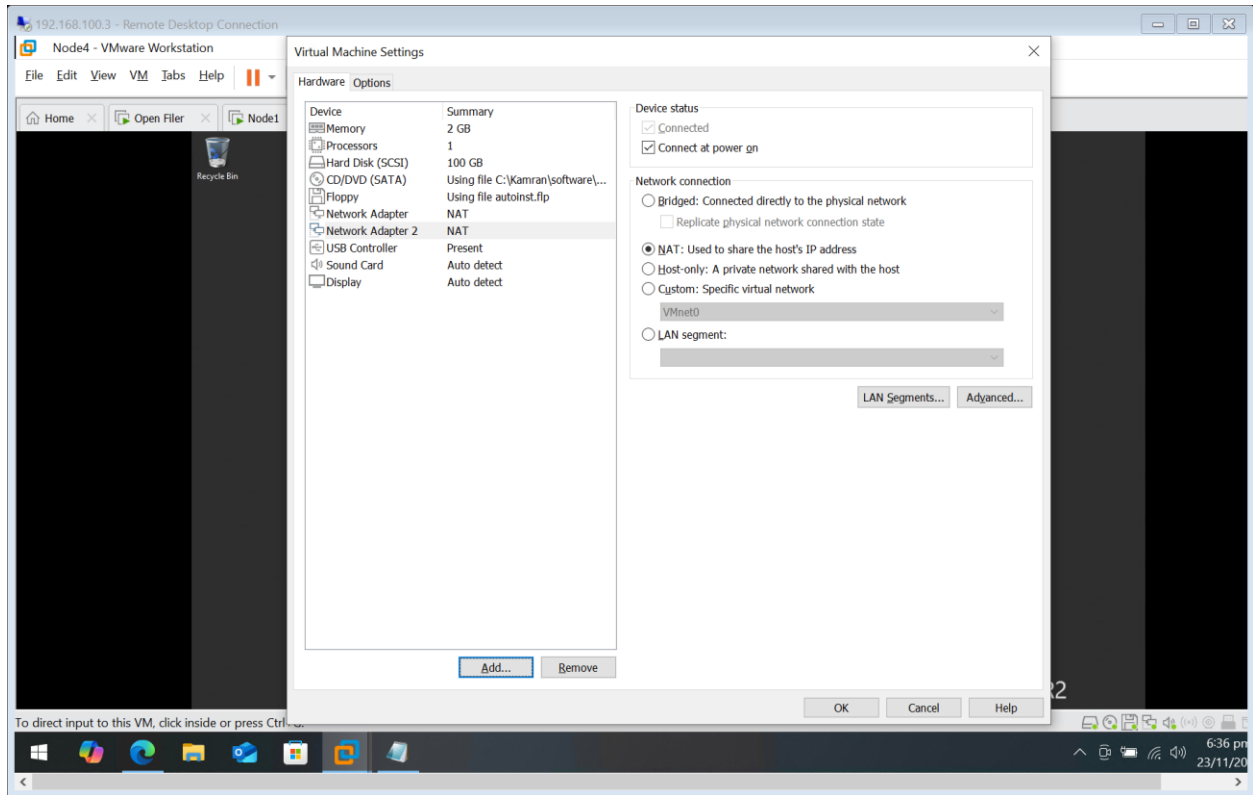


Oracle Cluster New Node Addition is Existing Cluster





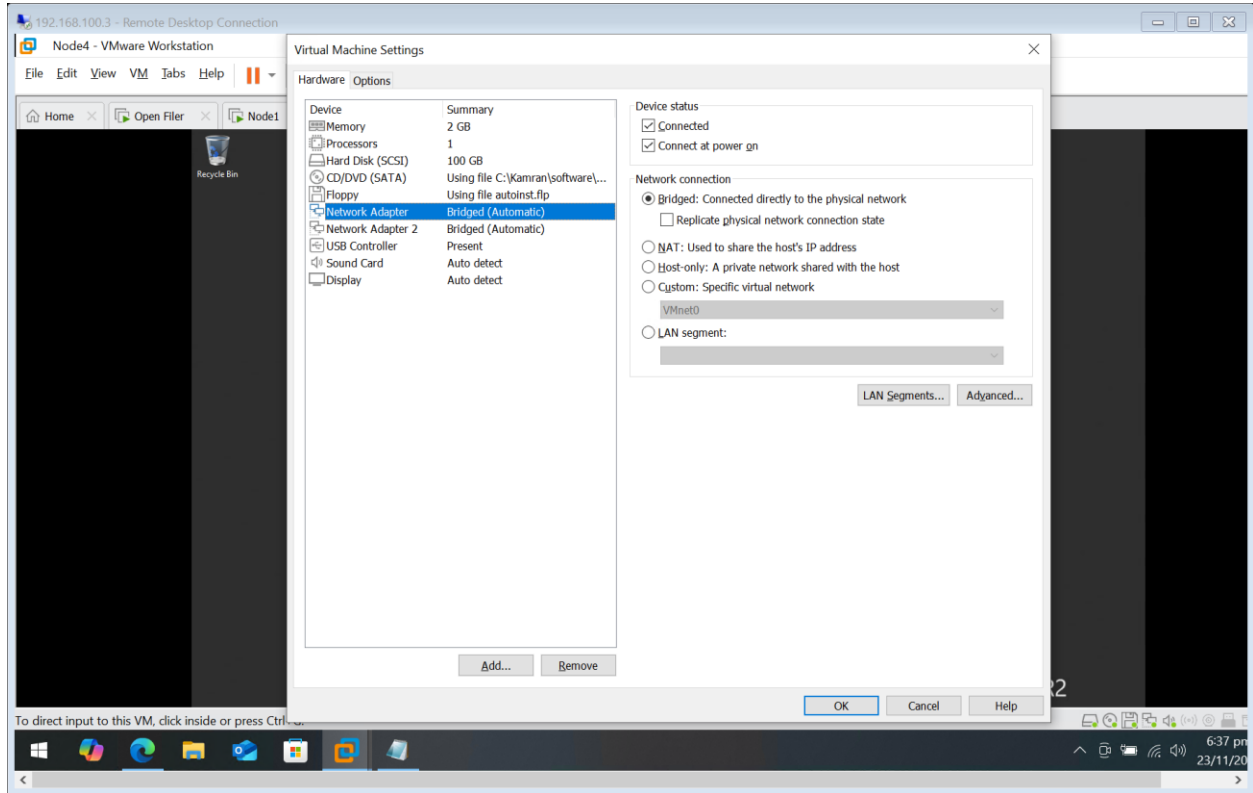
Oracle Cluster New Node Addition is Existing Cluster



3. Change Adapter Type to Bridge (New Node)

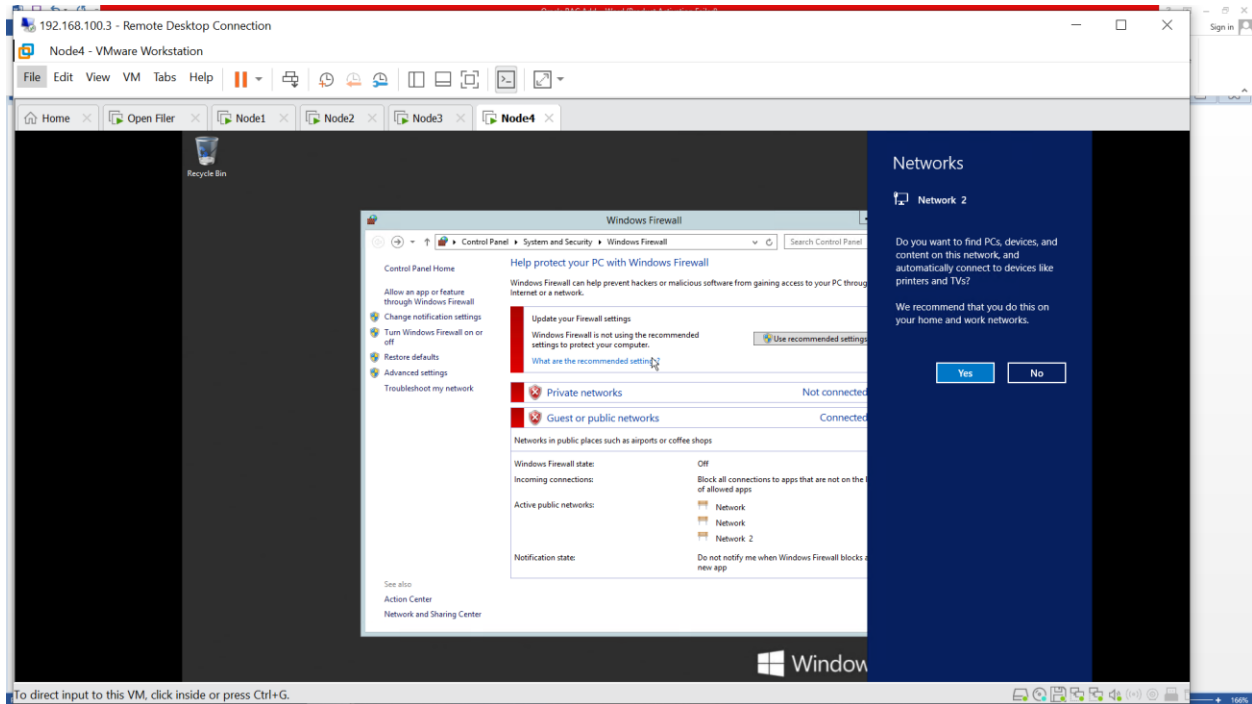


Oracle Cluster New Node Addition is Existing Cluster





Oracle Cluster New Node Addition is Existing Cluster



4. Change Name of Adapter According for Existing Nodes (New Node)

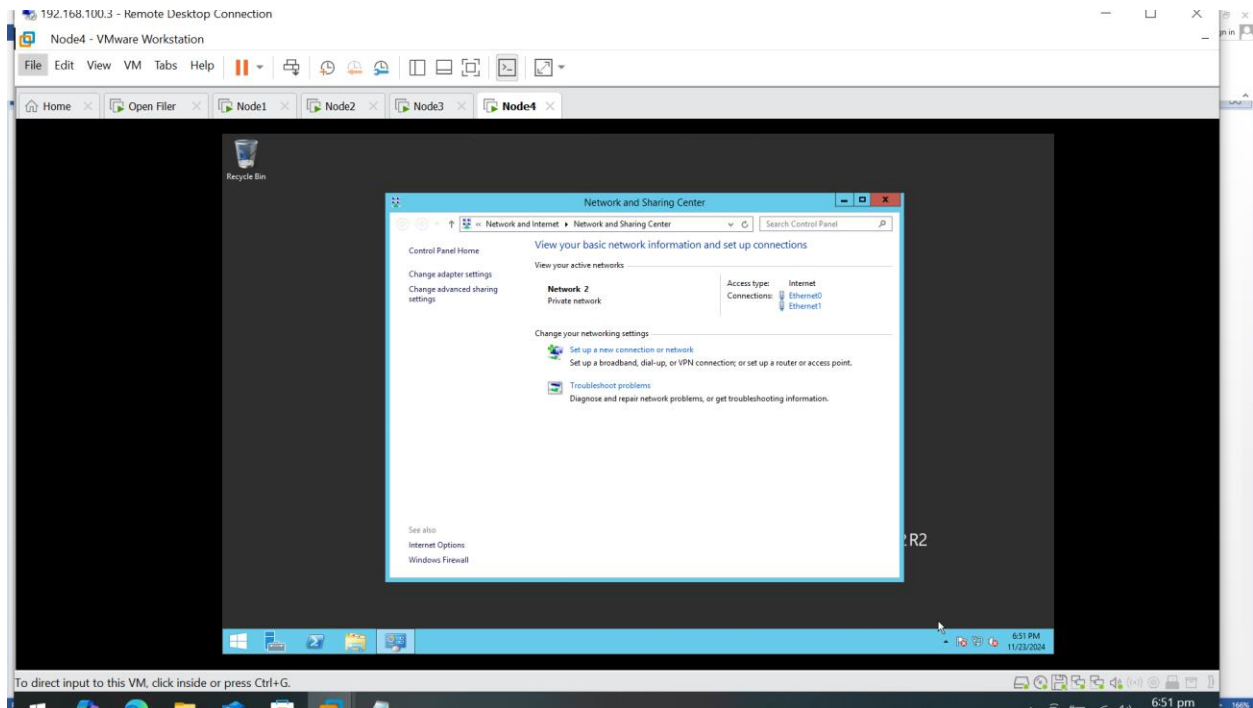
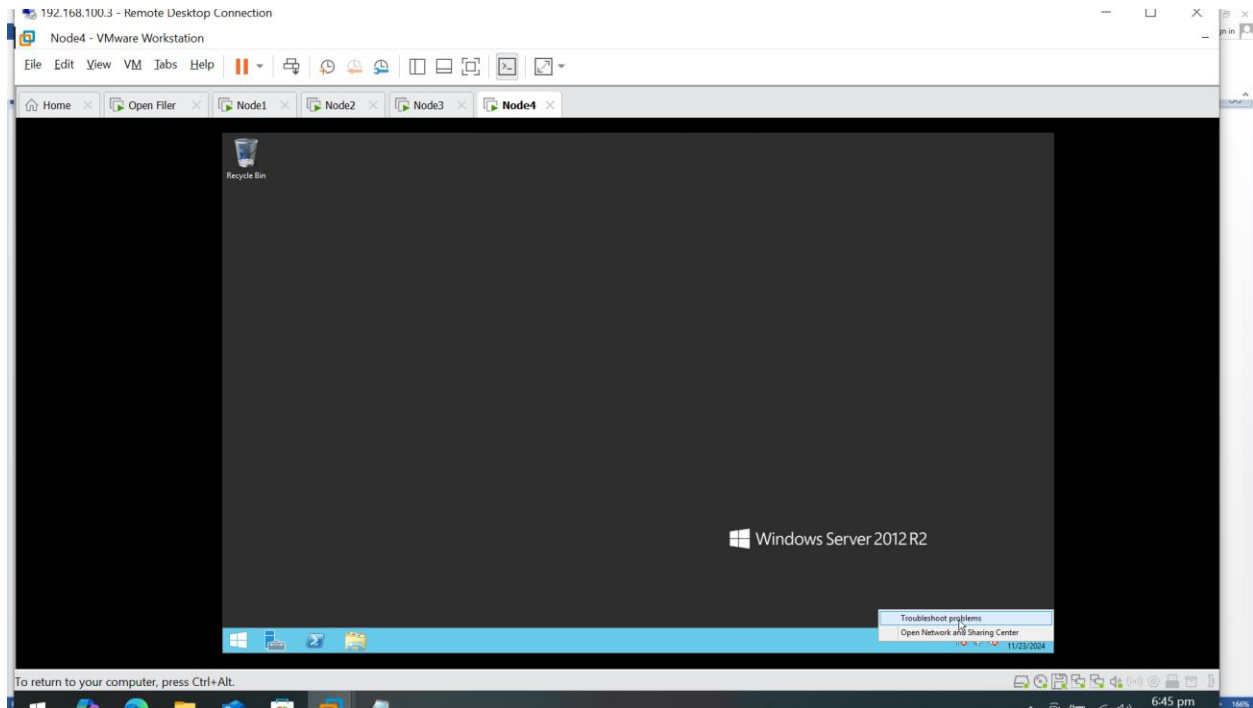
Public – For Public Interface

Private – For Private Interface

Interface Names should be same as Existing Nodes

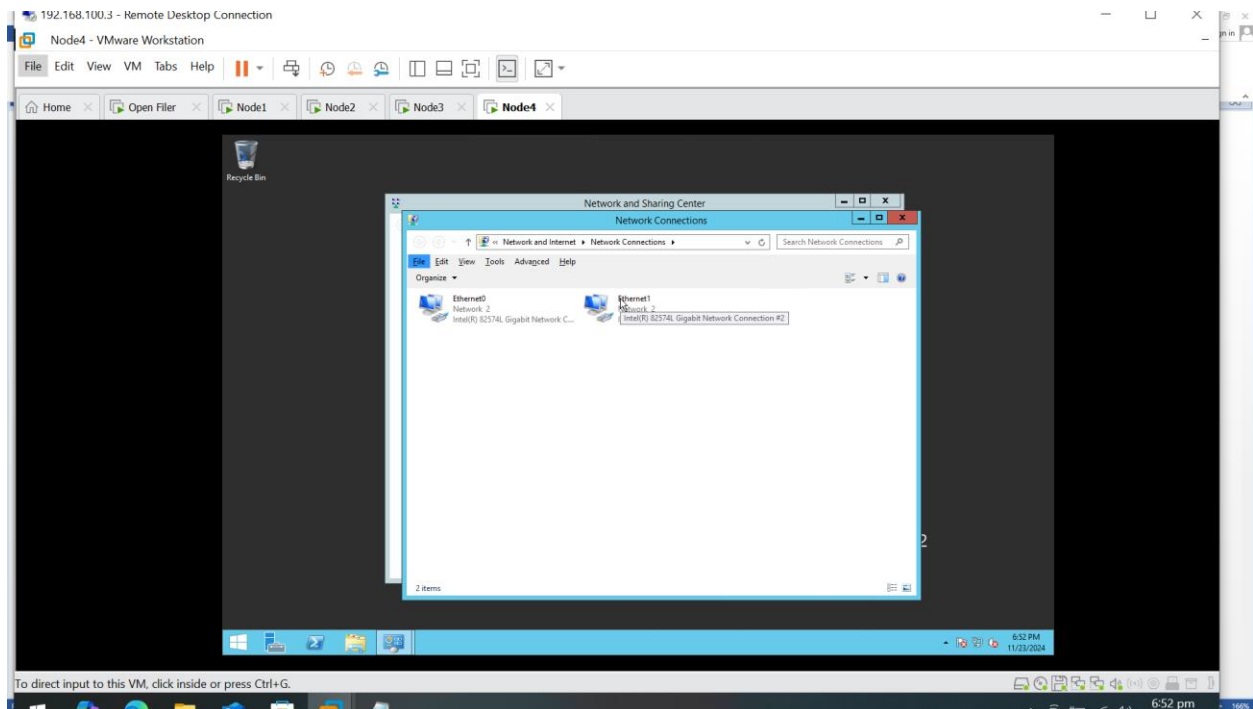
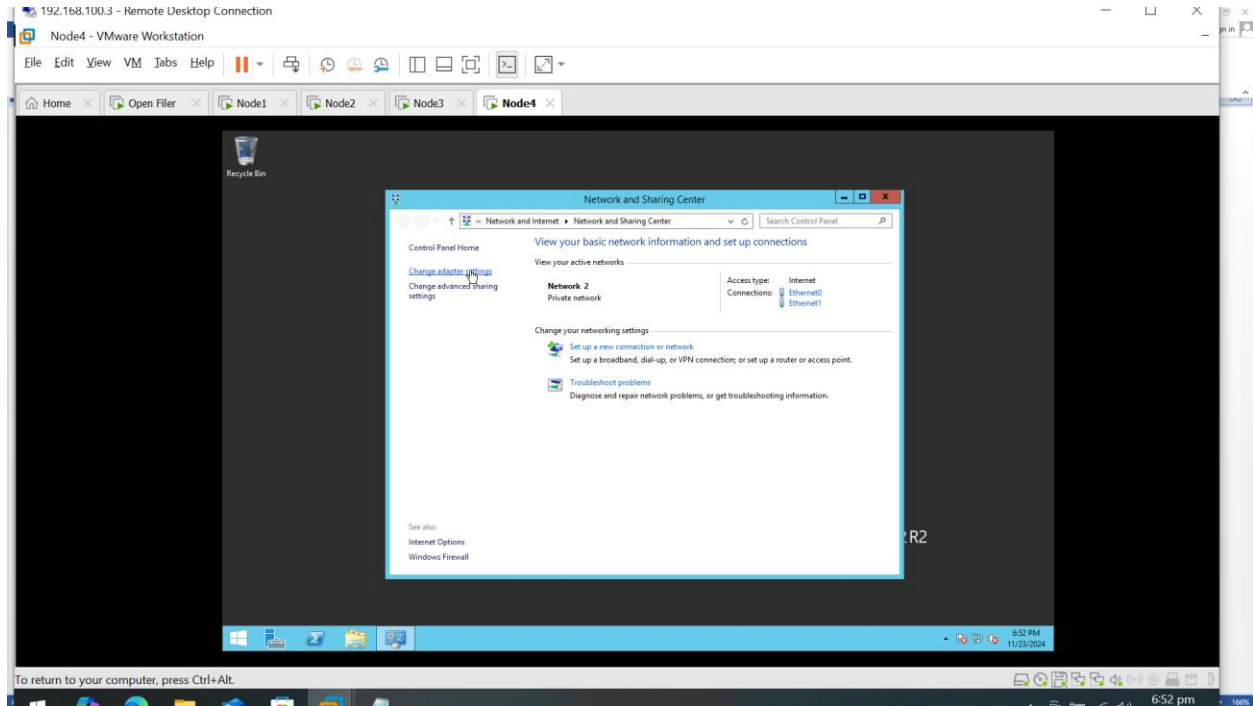


Oracle Cluster New Node Addition is Existing Cluster



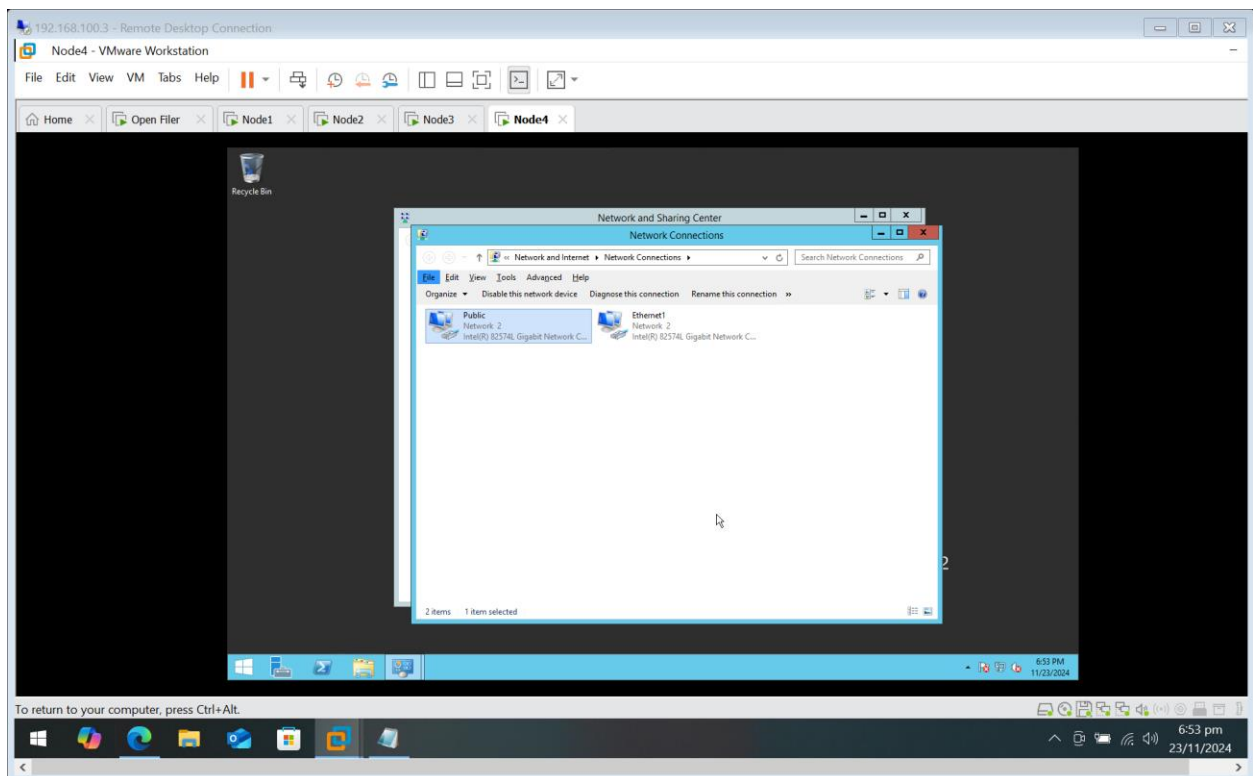
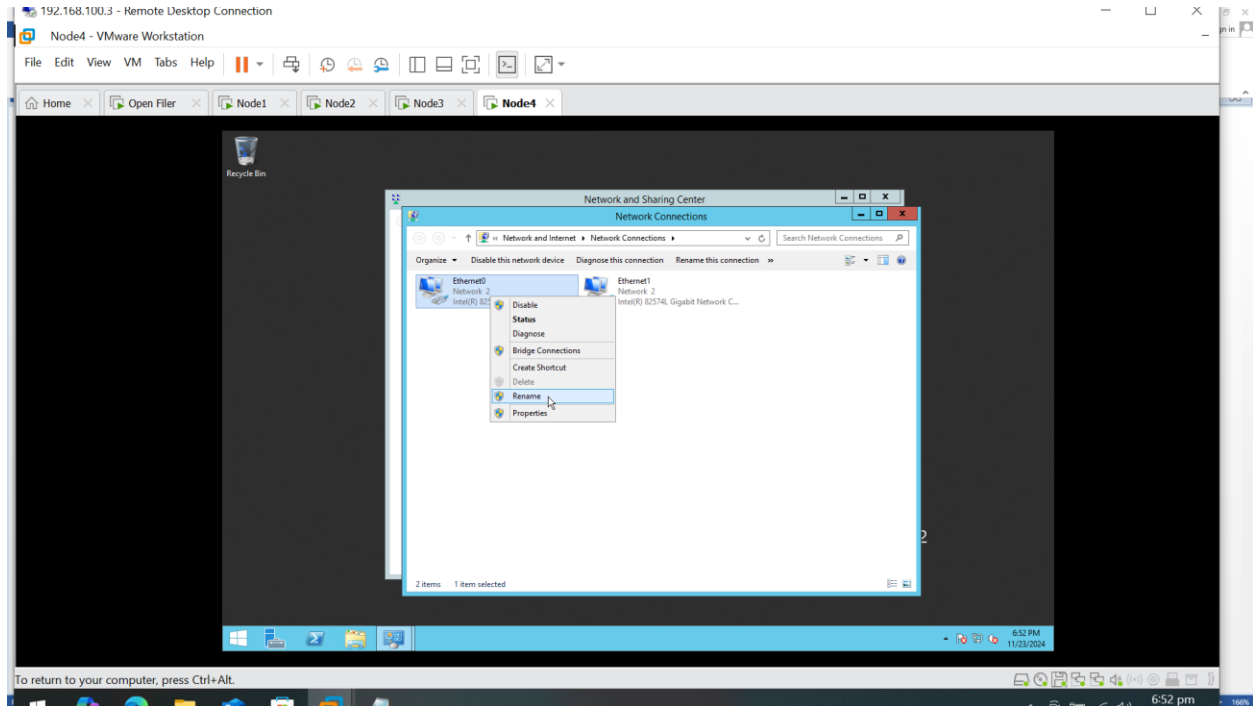


Oracle Cluster New Node Addition is Existing Cluster



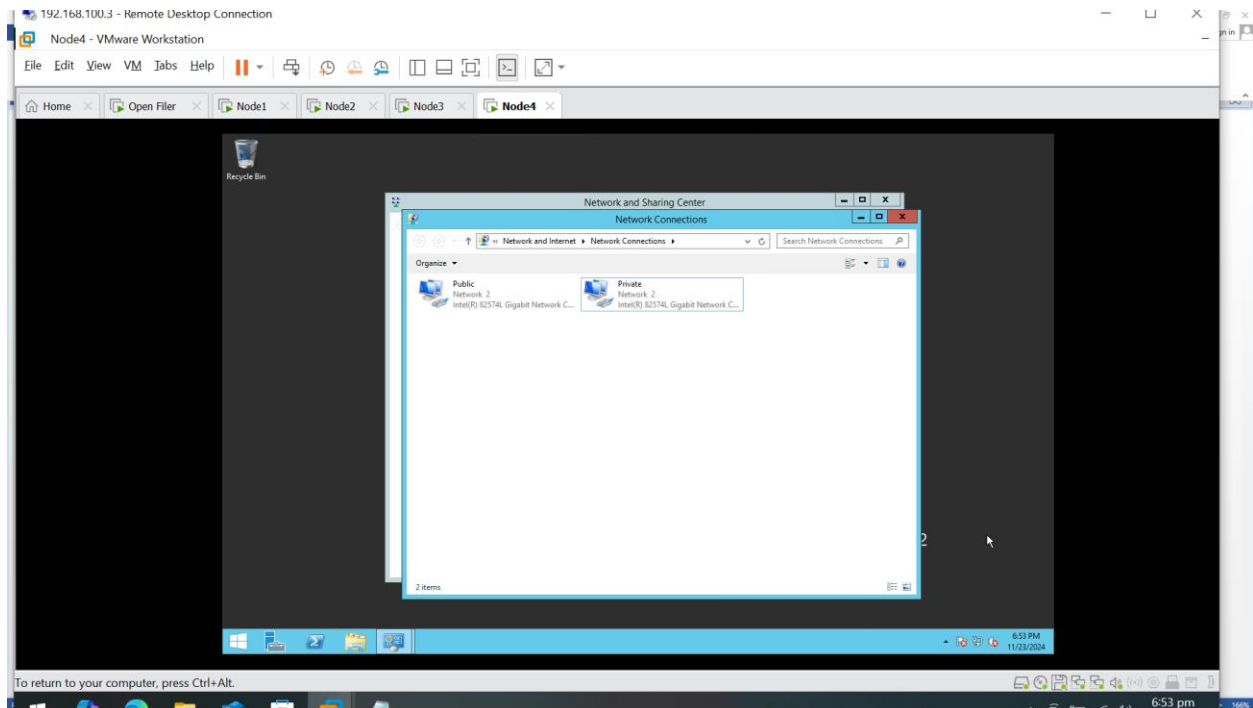
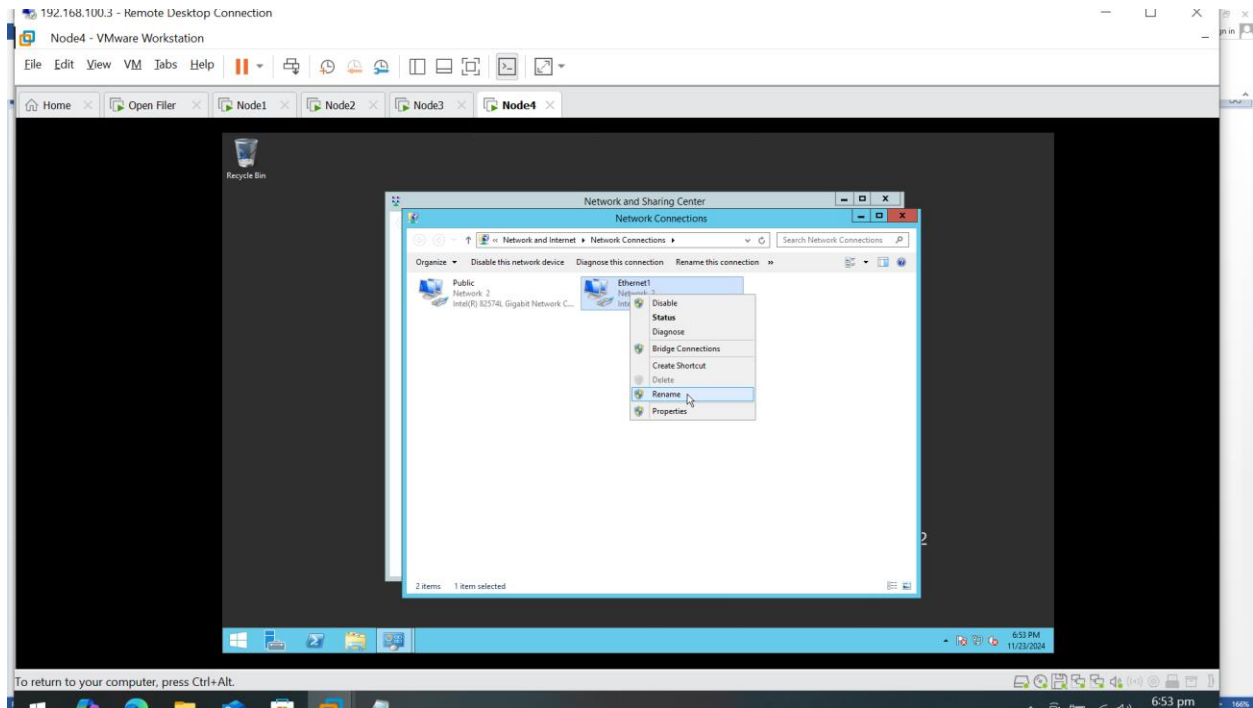


Oracle Cluster New Node Addition is Existing Cluster





Oracle Cluster New Node Addition is Existing Cluster





Oracle Cluster New Node Addition is Existing Cluster

5. Define IP Address on Both Network Adapters (New Node)

Public Interface Name = Public

Private Interface Name = Private

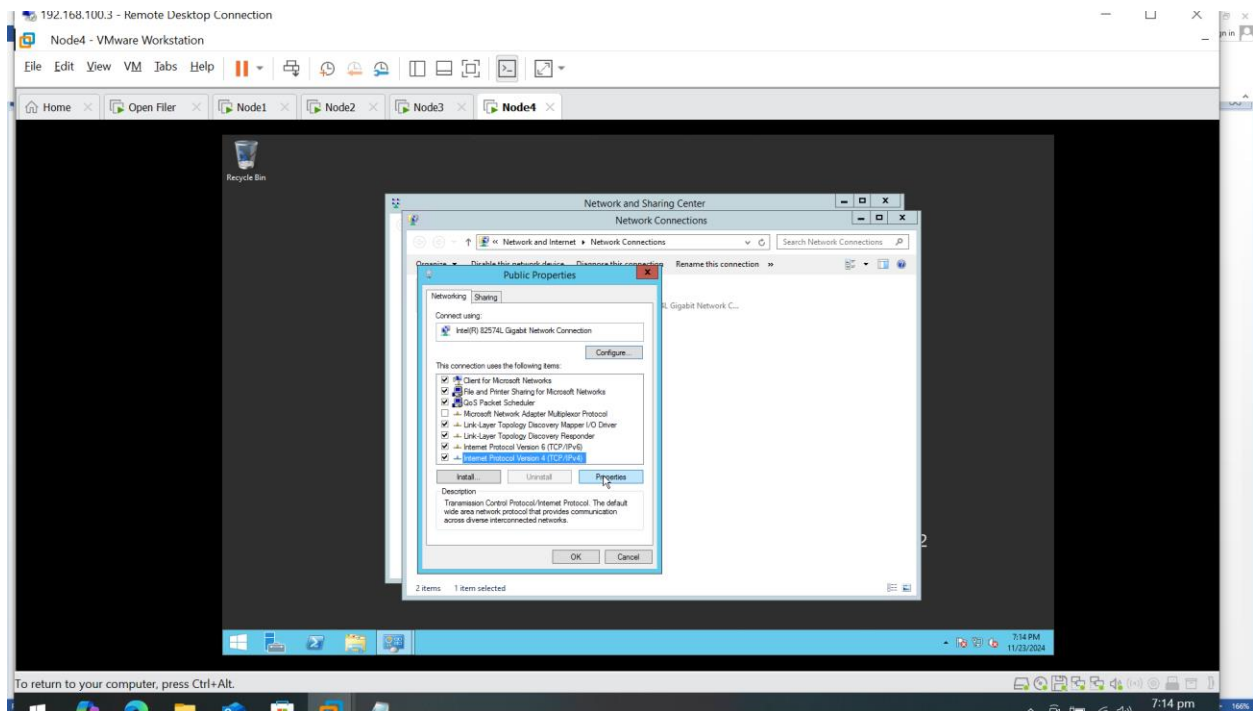
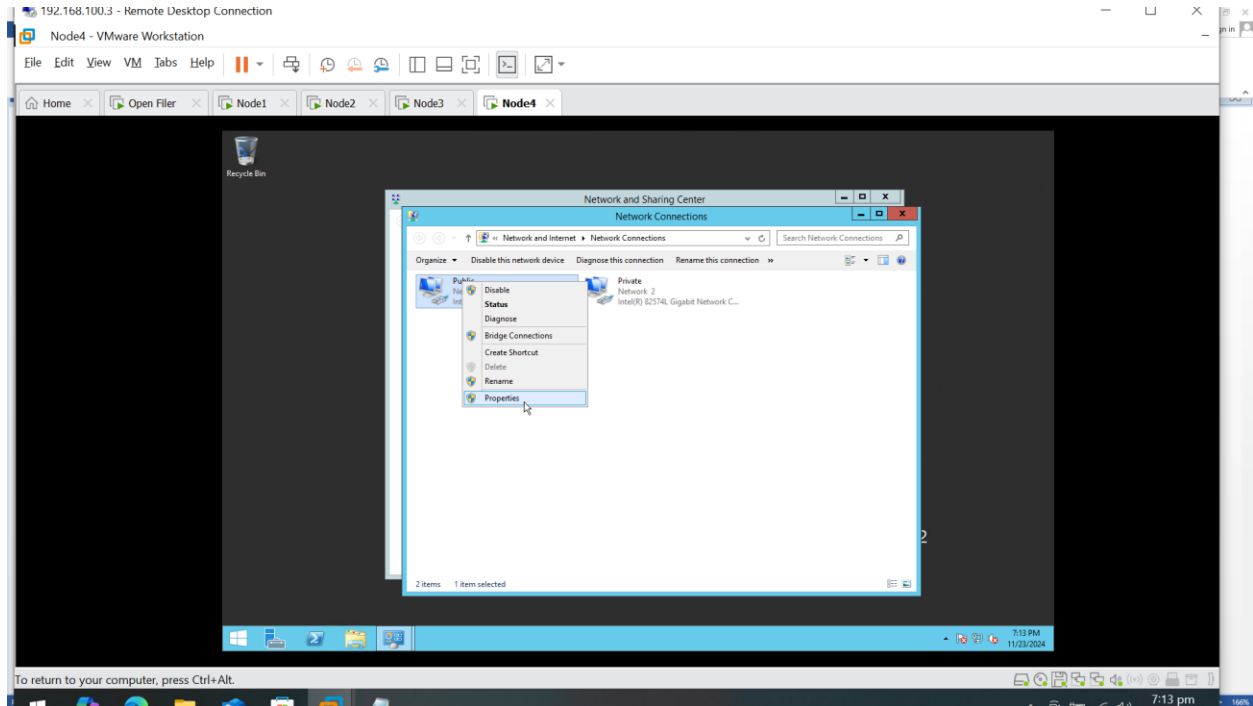
192.168.18.149 node4

192.168.10.156 node3priv

For Public Interface

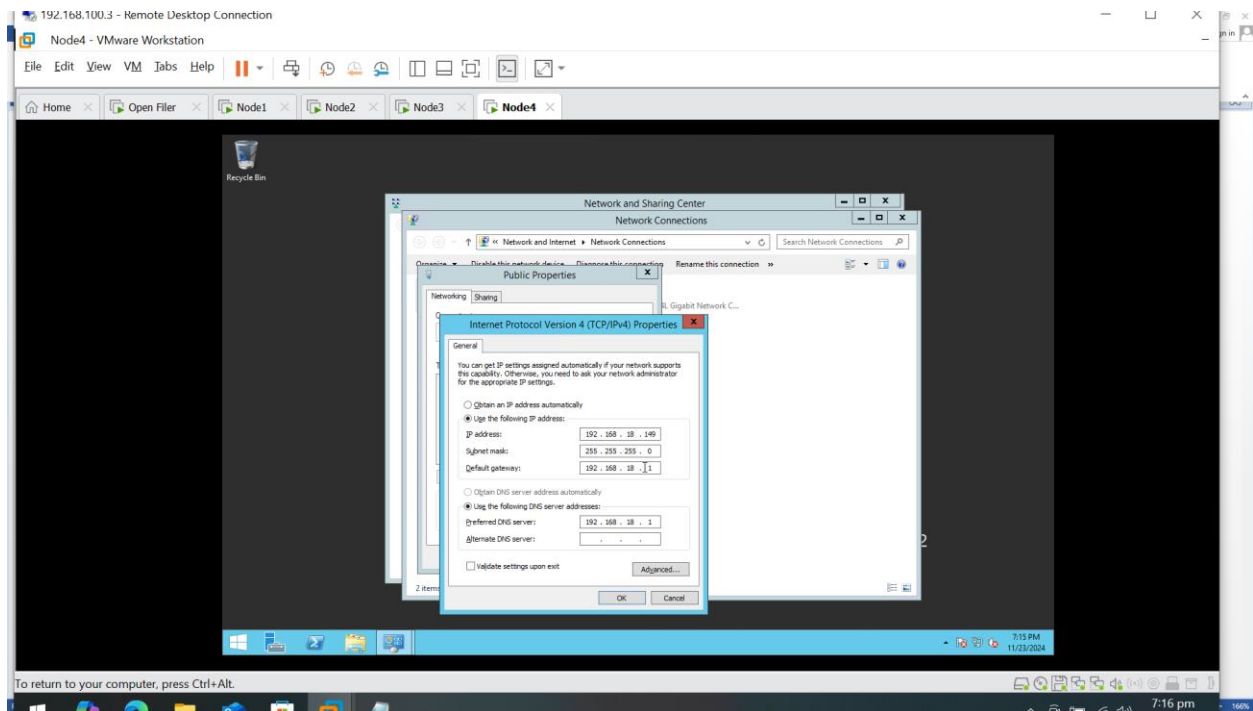
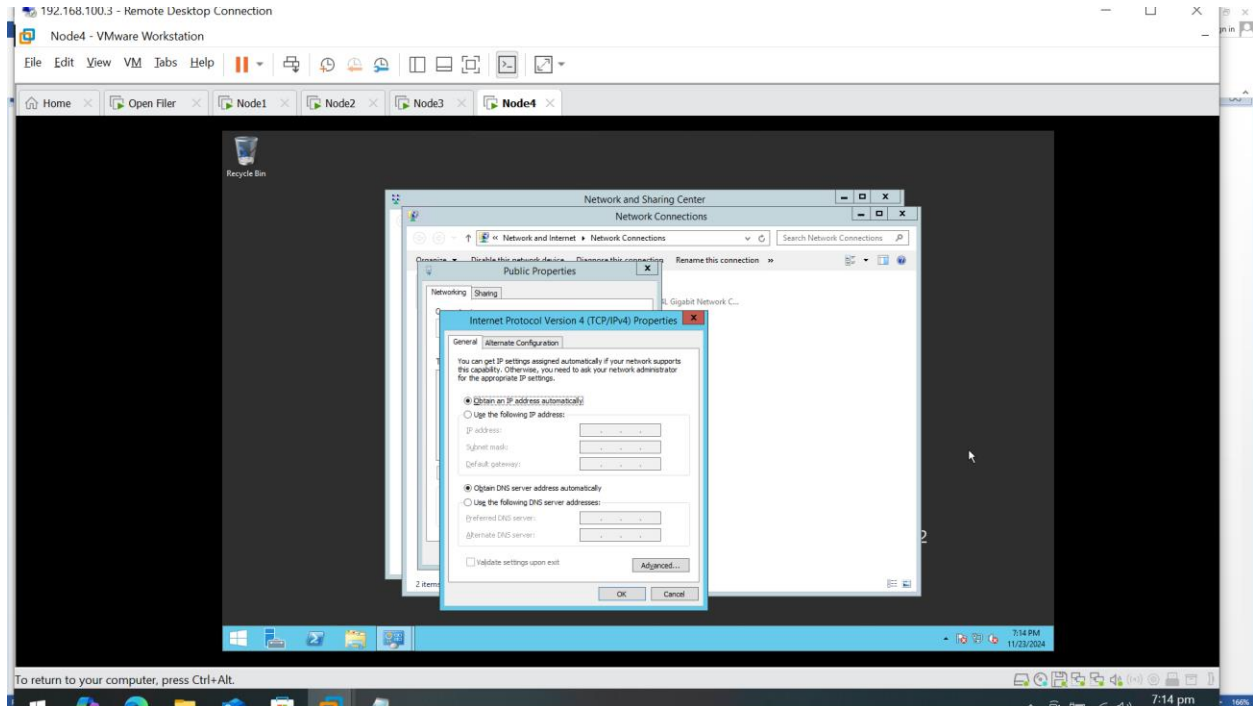


Oracle Cluster New Node Addition is Existing Cluster



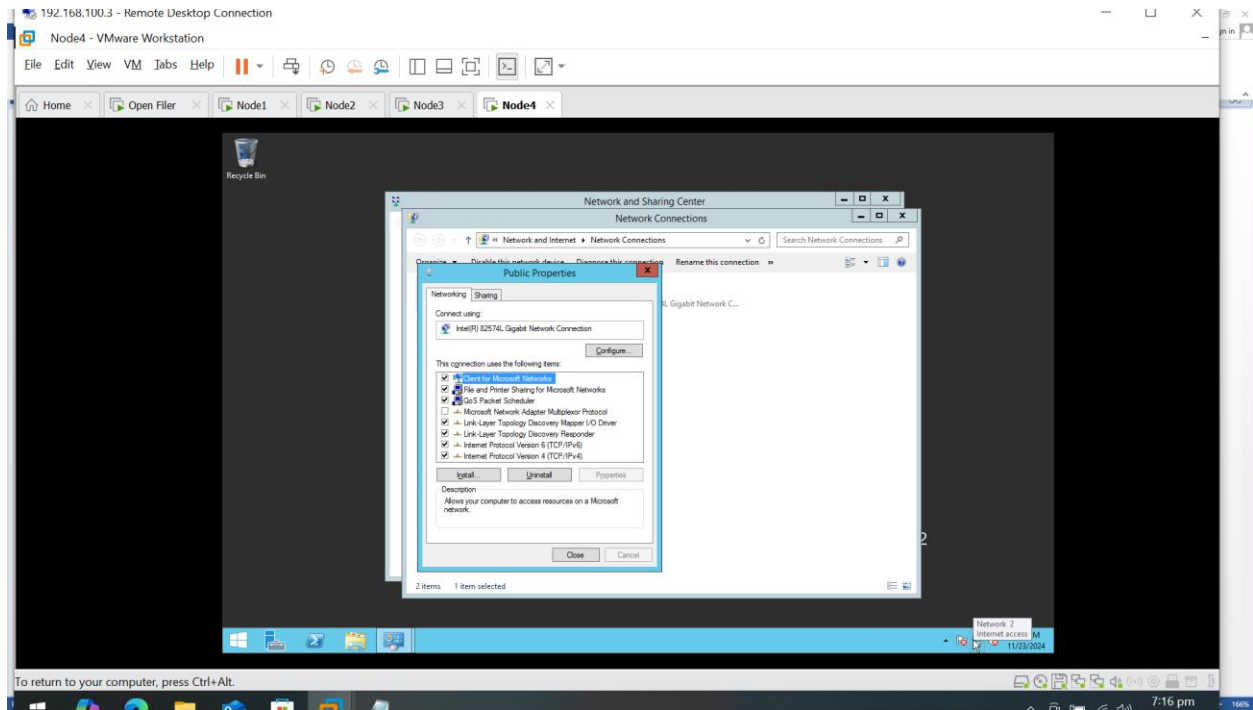


Oracle Cluster New Node Addition is Existing Cluster





Oracle Cluster New Node Addition is Existing Cluster



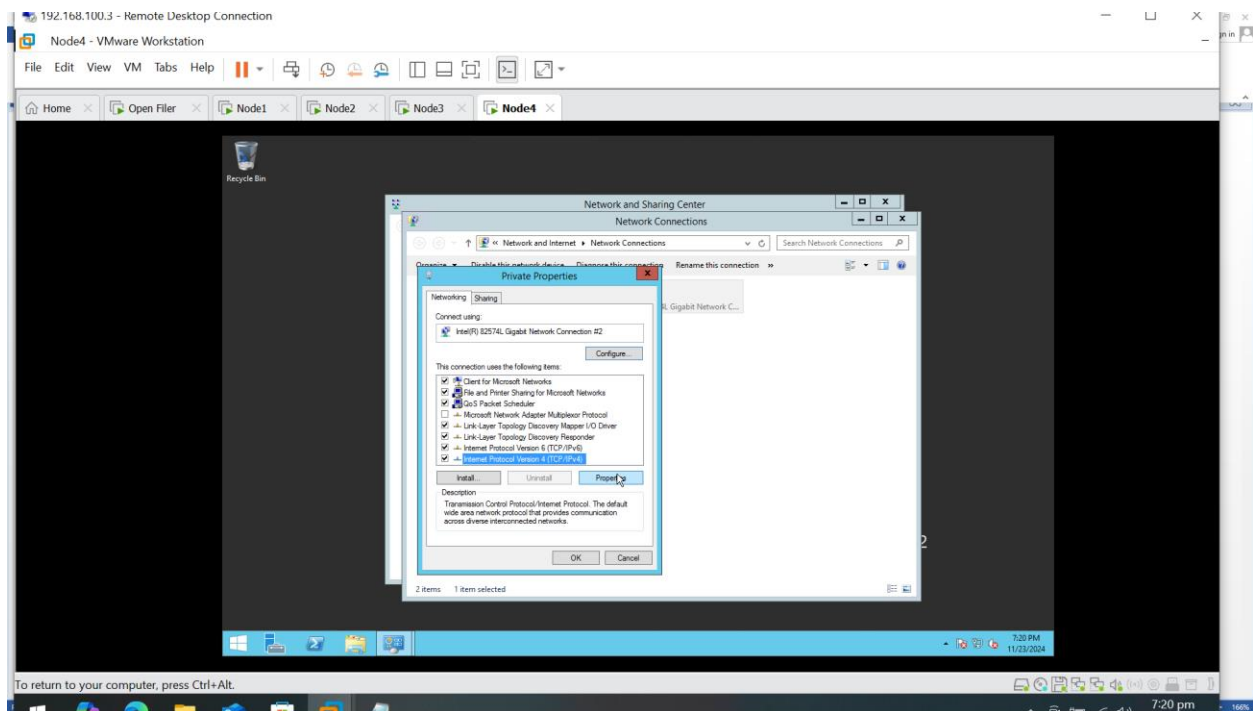
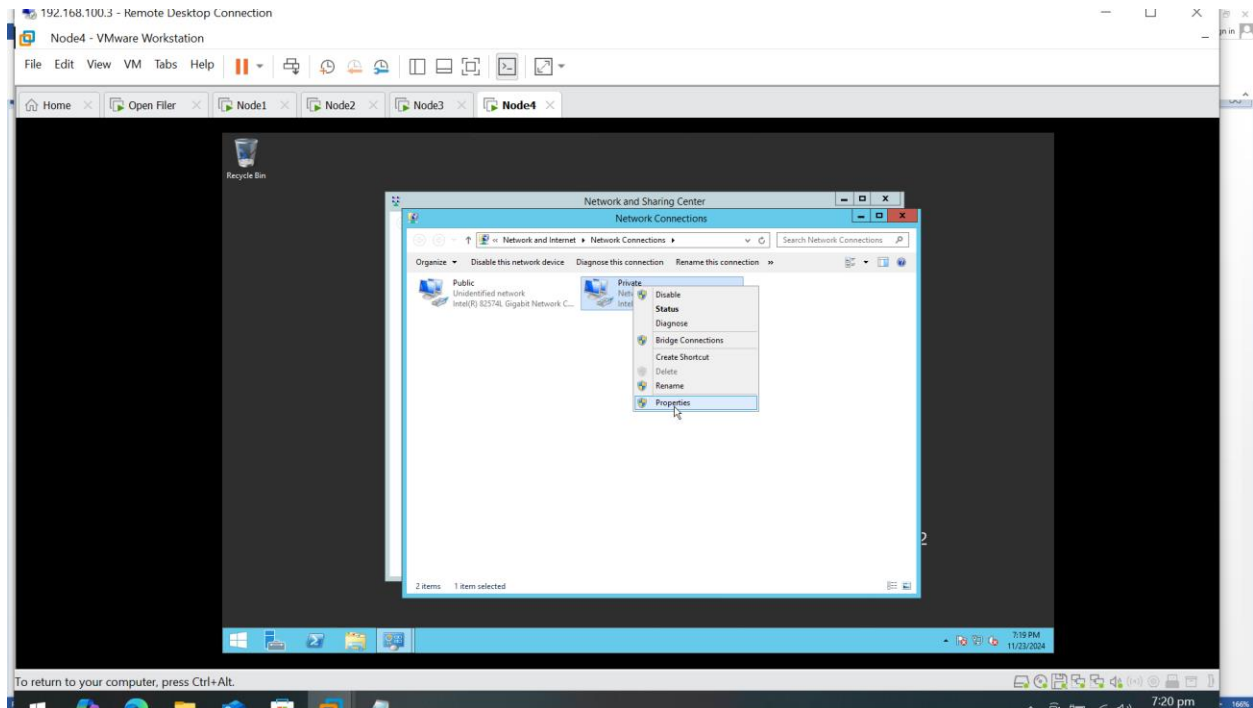
For Private Interface

192.168.10.156

node3priv

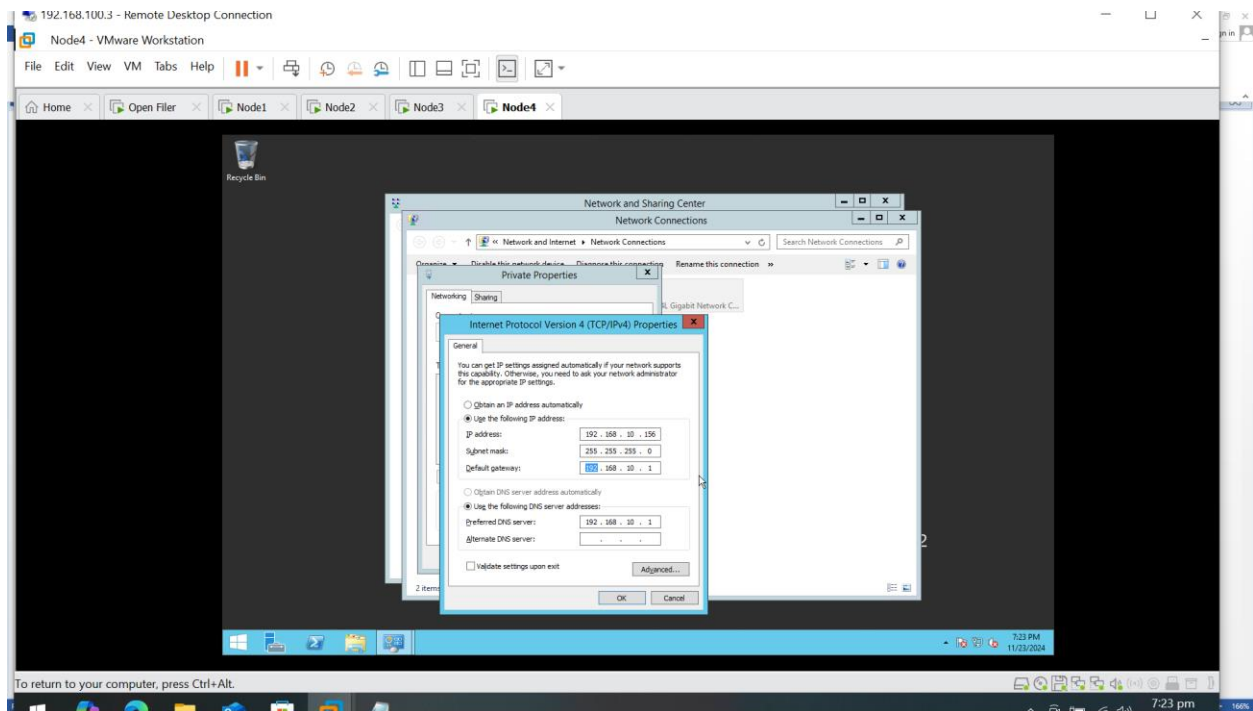
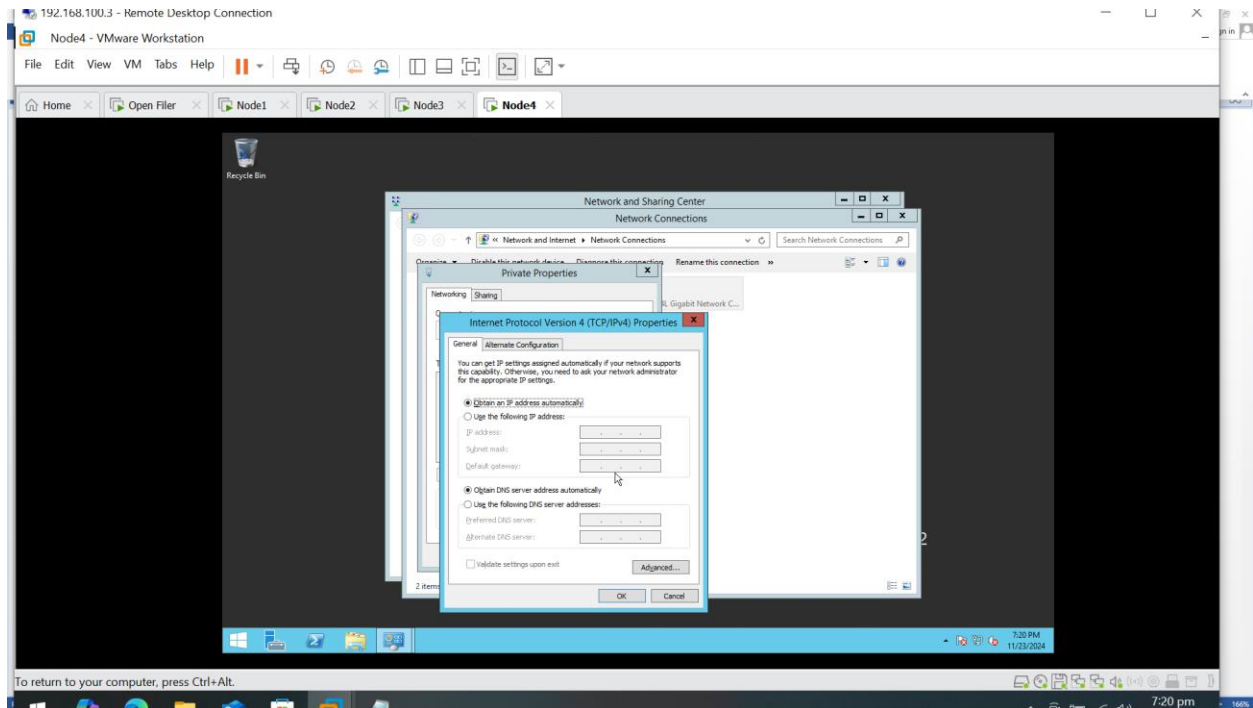


Oracle Cluster New Node Addition is Existing Cluster



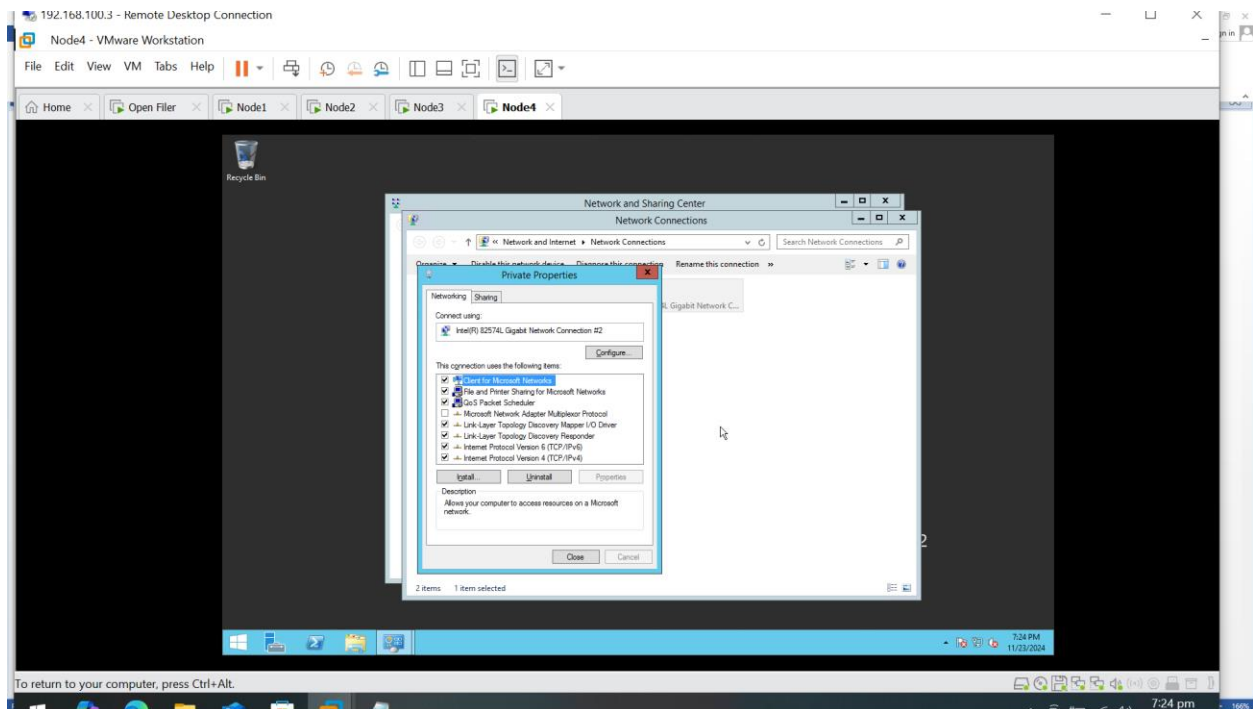
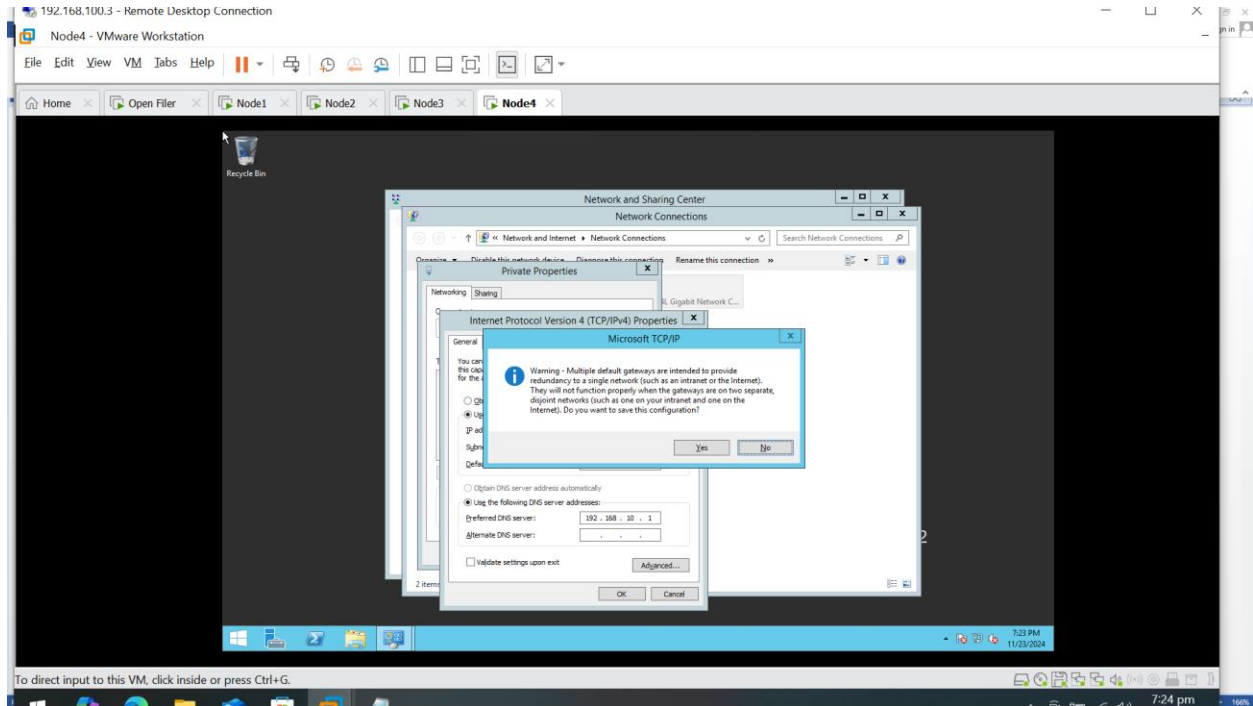


Oracle Cluster New Node Addition is Existing Cluster



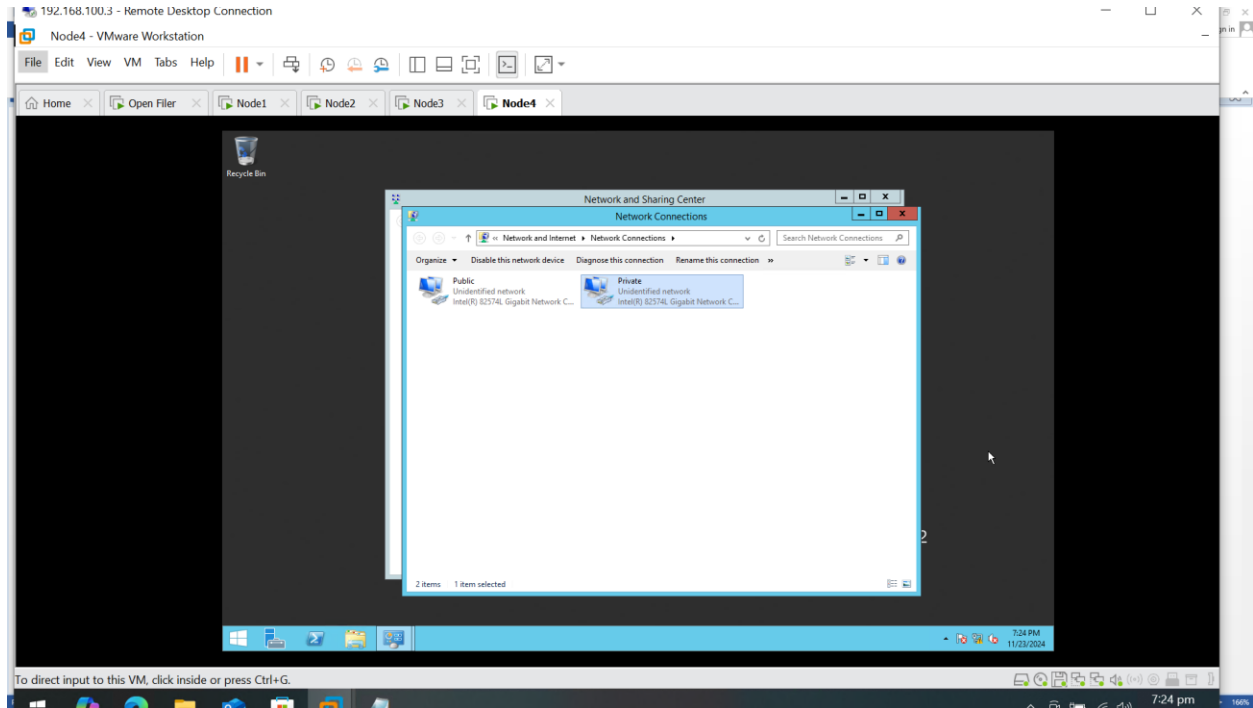


Oracle Cluster New Node Addition is Existing Cluster





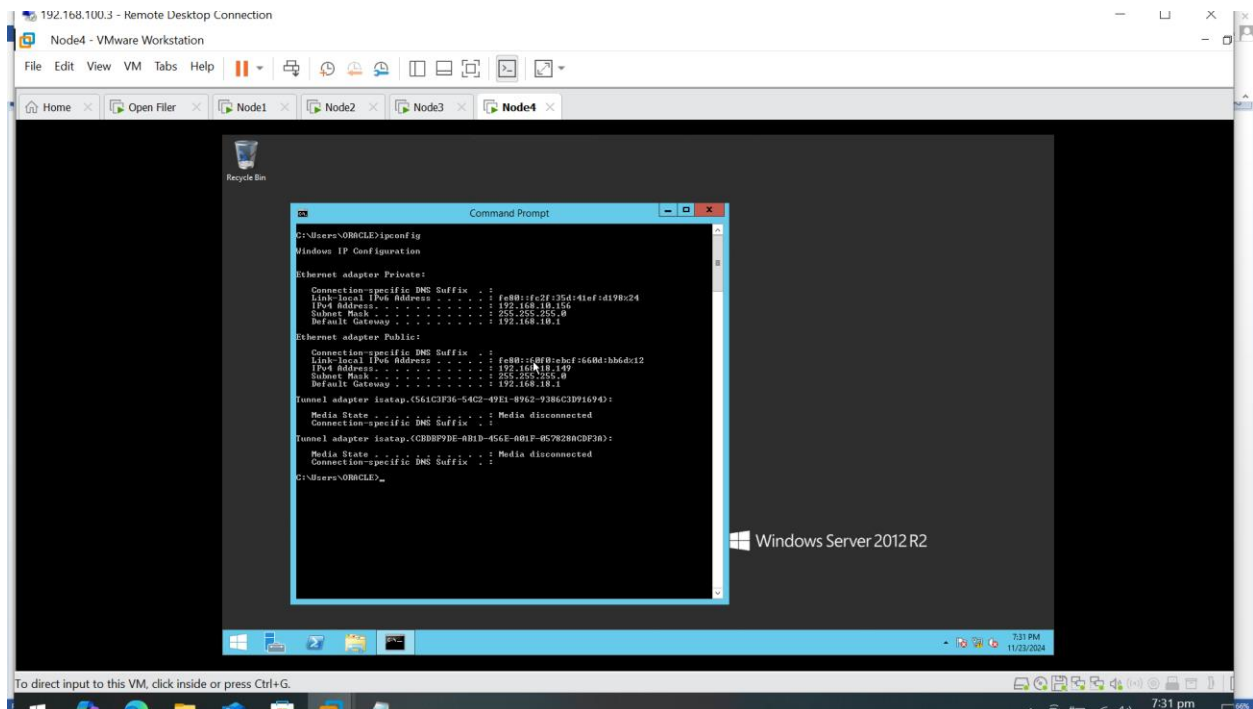
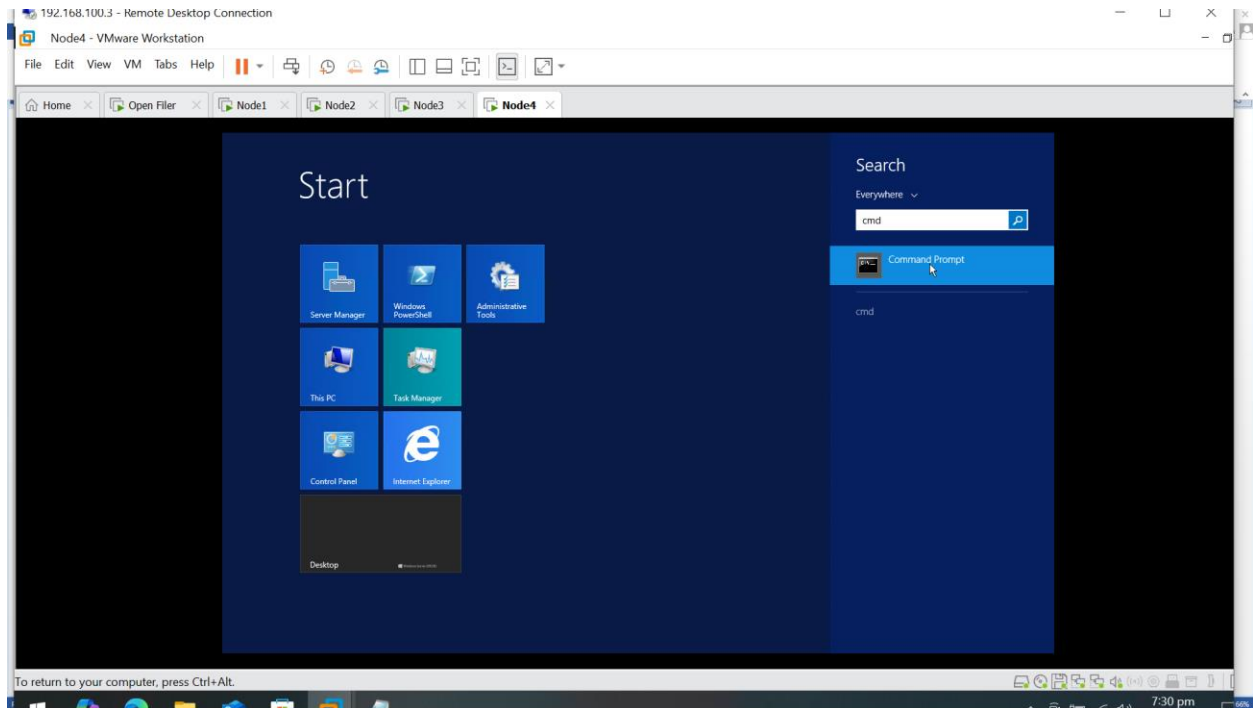
Oracle Cluster New Node Addition is Existing Cluster



Verify IP Address



Oracle Cluster New Node Addition is Existing Cluster





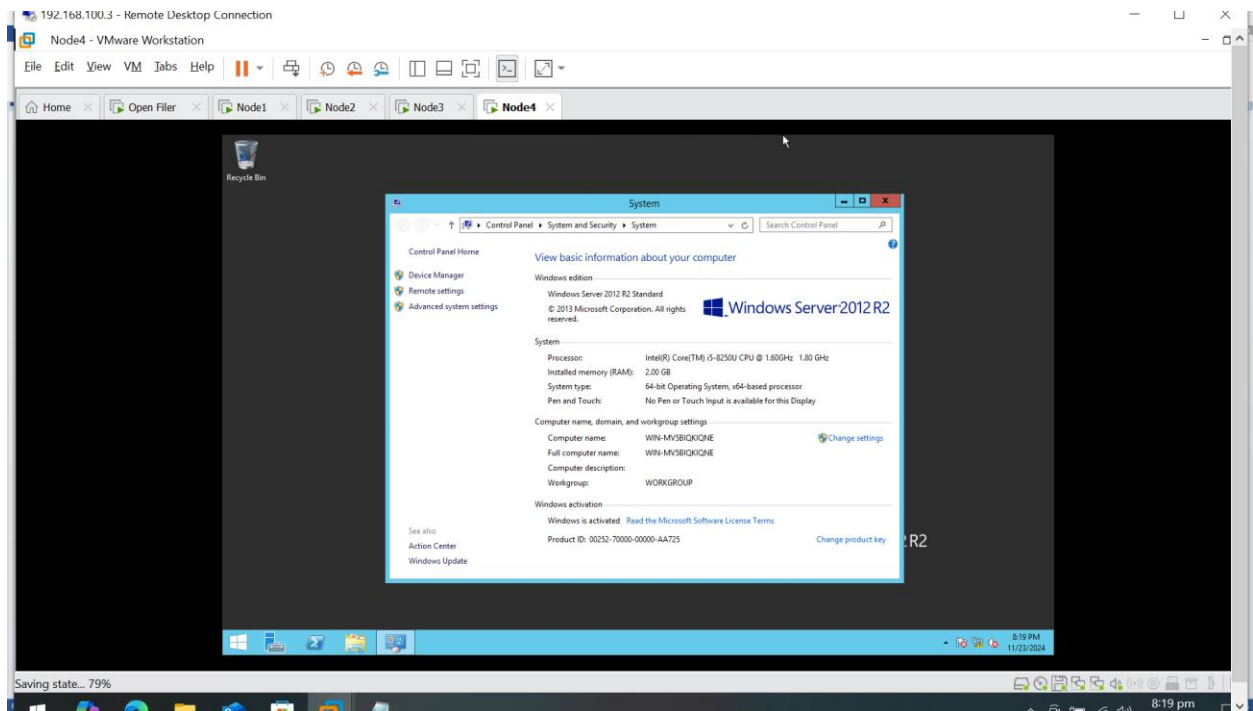
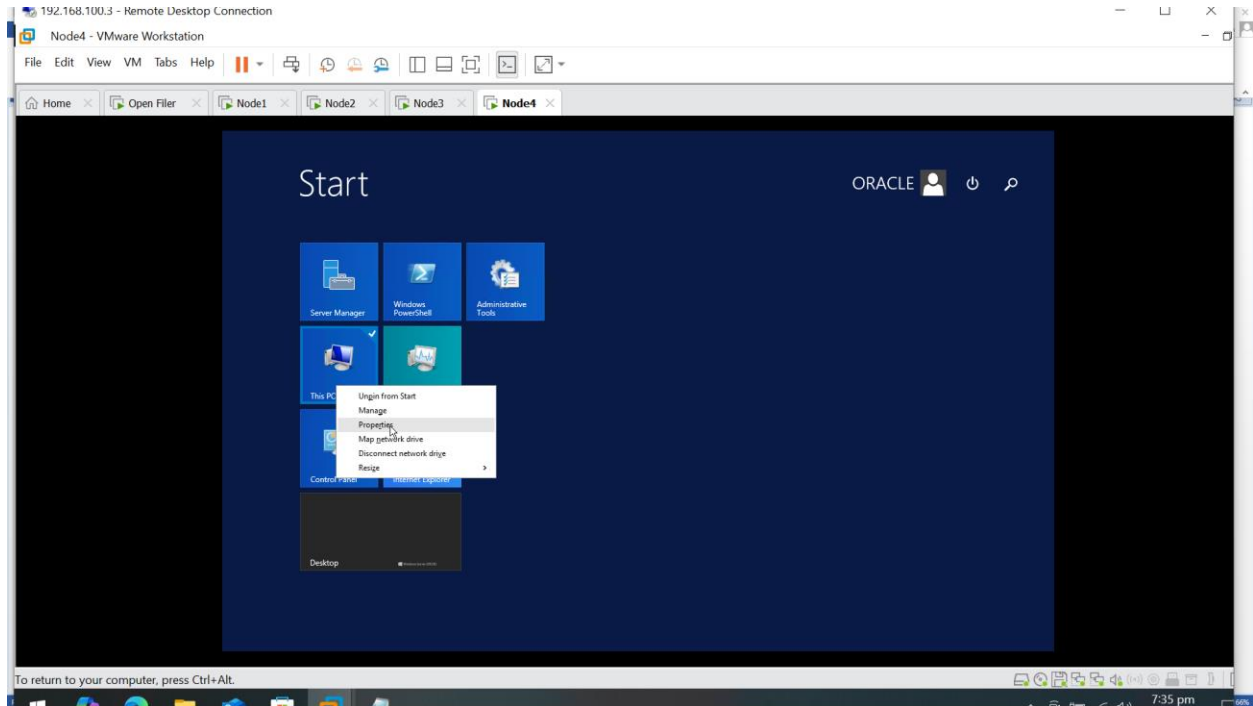
Oracle Cluster New Node Addition is Existing Cluster

6. Change Host Name According to Existing Nodes (New Node)

Right Click in “This PC” or “My Computer”



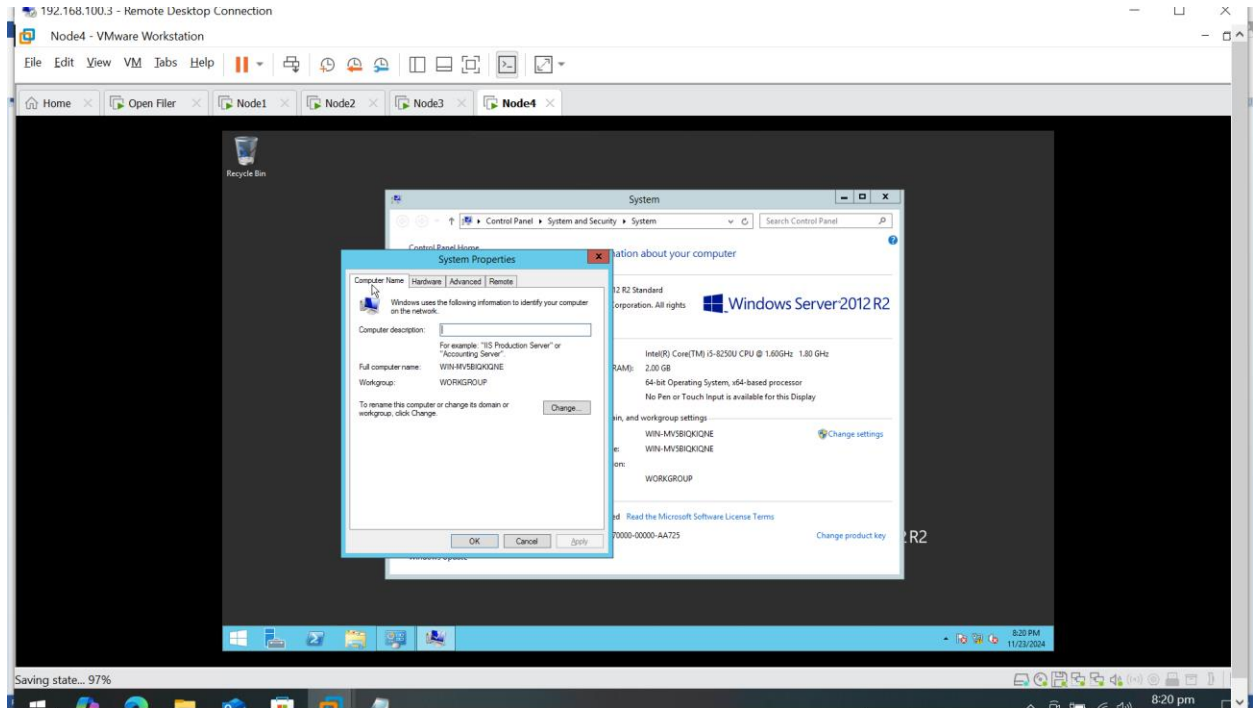
Oracle Cluster New Node Addition is Existing Cluster



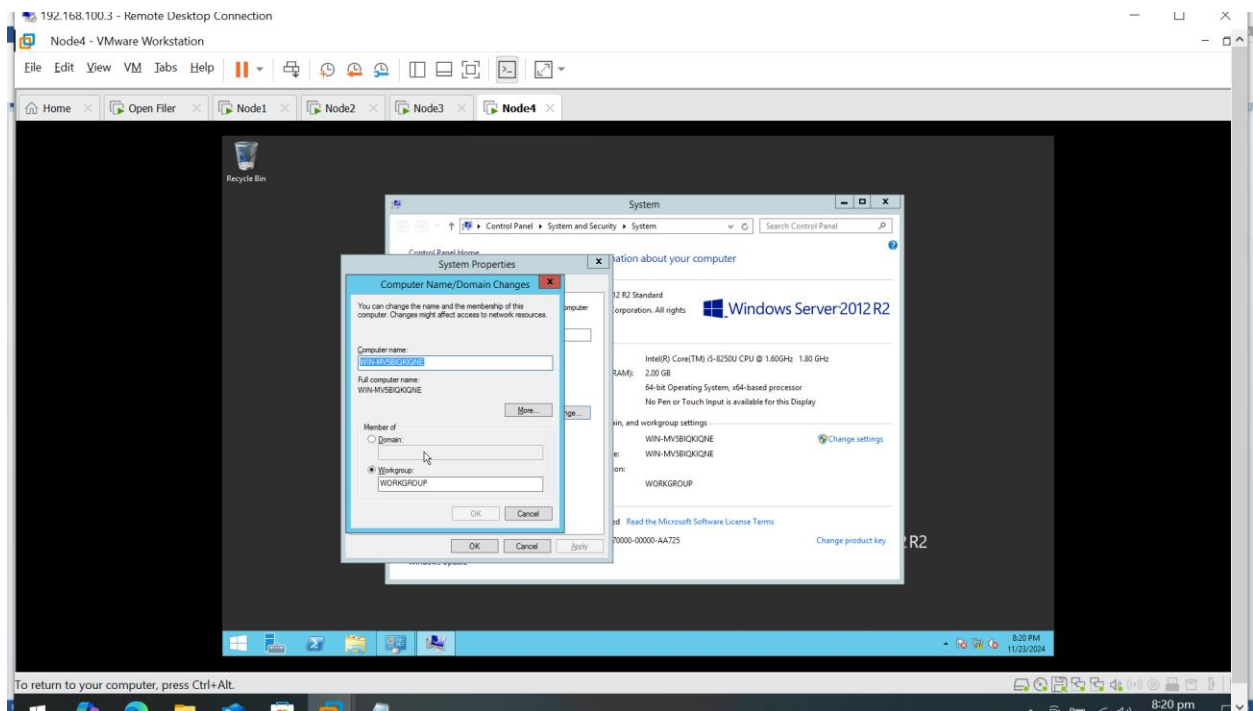
Advanced System Settings > Computer Name



Oracle Cluster New Node Addition is Existing Cluster



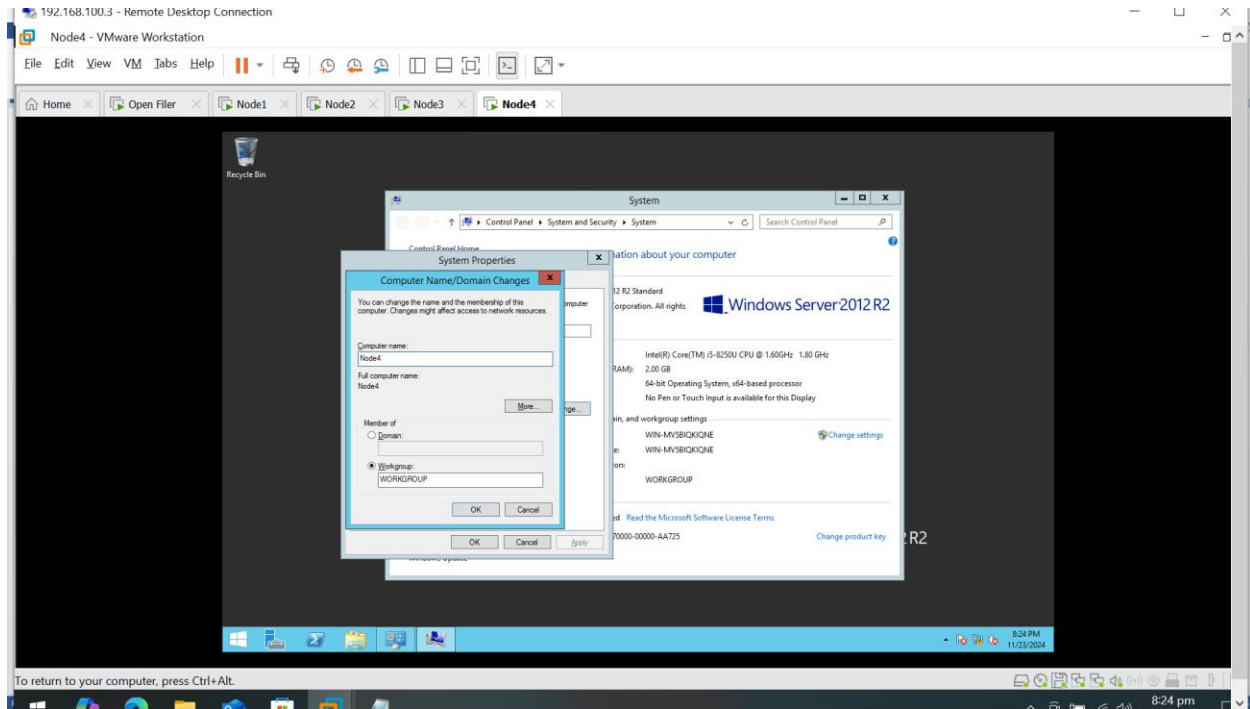
Advanced System Settings > Computer Name > Change





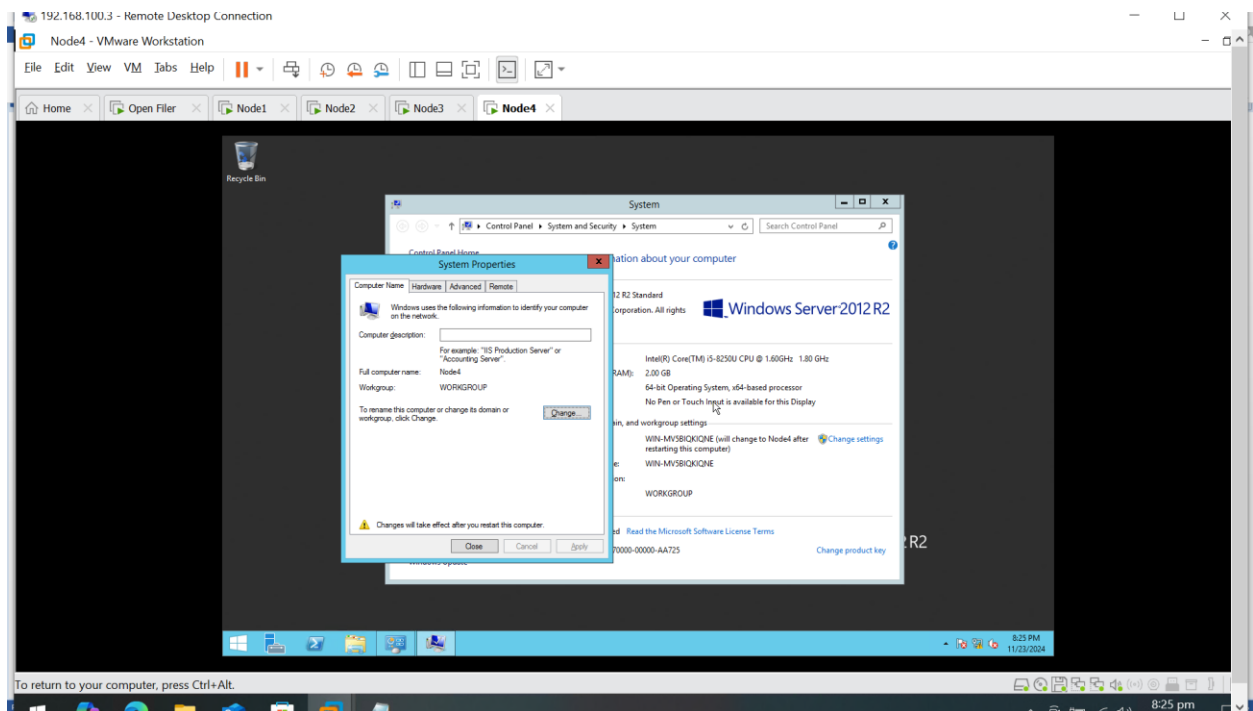
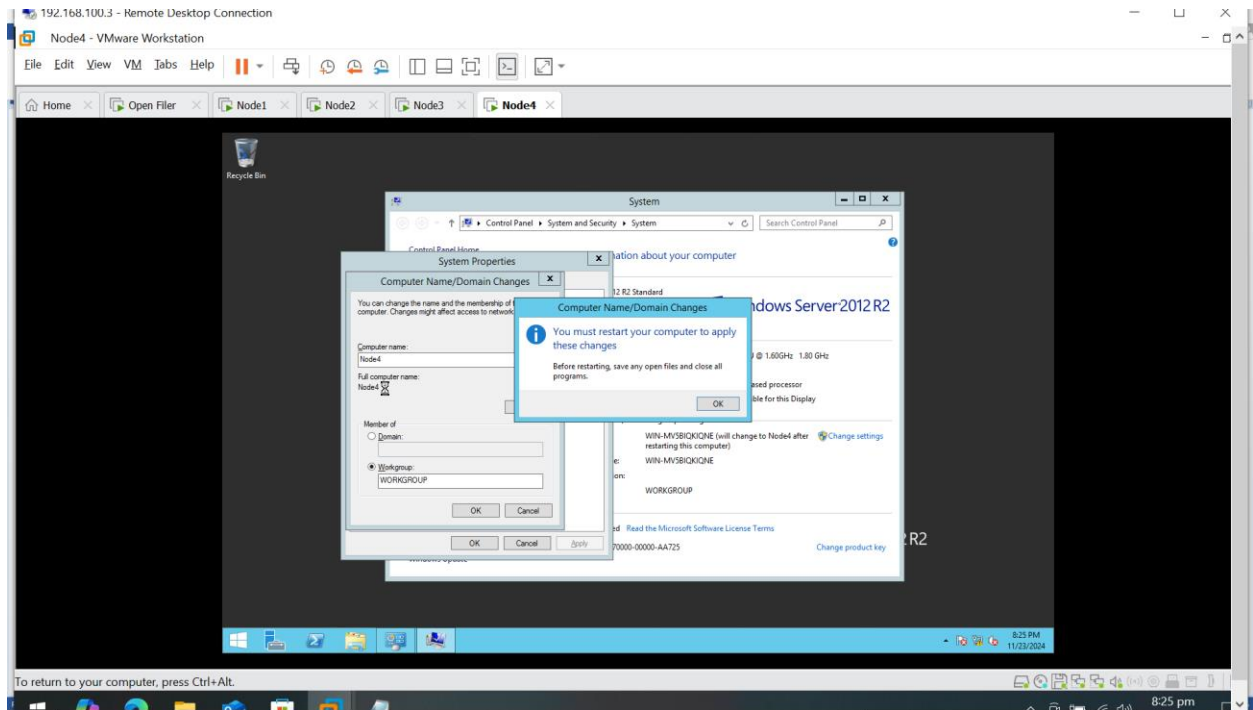
Oracle Cluster New Node Addition is Existing Cluster

Host Name = Node4 > Click “ok”





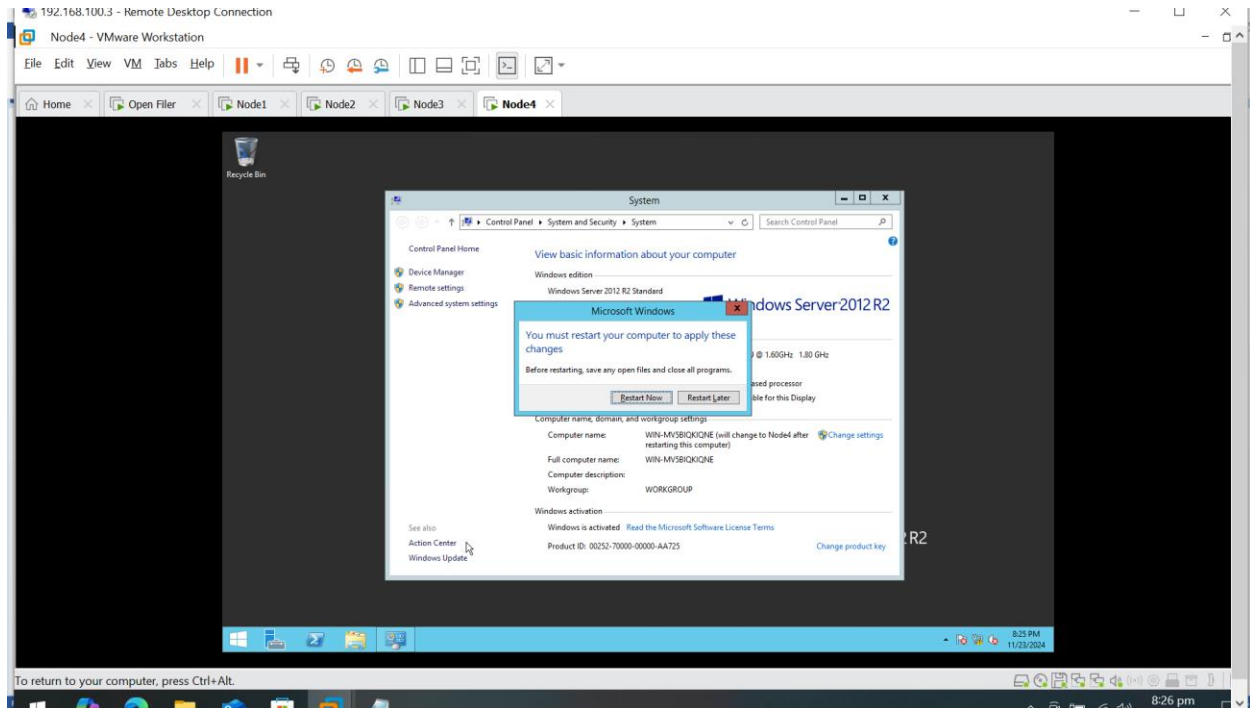
Oracle Cluster New Node Addition is Existing Cluster





Oracle Cluster New Node Addition is Existing Cluster

Click “Close”



Click “Restart Now”

7. Define New Node Public Id, Private IP and VIP IP Name in Host File or DNS (All Nodes)

192.168.18.151	Node1
192.168.18.152	node2
192.168.18.147	node3
192.168.18.149	node4
192.168.10.151	node1priv



Oracle Cluster New Node Addition in Existing Cluster

192.168.10.152	node2priv
192.168.10.155	node3priv
192.168.10.156	node4priv
192.168.18.153	asmstorage
192.168.10.153	asmstoragepriv
192.168.18.145	node1vip
192.168.18.146	node2vip
192.168.18.148	node3vip
192.168.18.150	node4vip
192.168.18.241	nodescan
192.168.18.242	nodescan
192.168.18.243	nodescan

Open command prompt "Cmd"

Notepad [\\192.168.18.151\c:\windows\system32\drivers\etc\hosts](#)

Notepad [\\192.168.18.152\c:\windows\system32\drivers\etc\hosts](#)

Notepad [\\192.168.18.147\c:\windows\system32\drivers\etc\hosts](#)

Notepad [\\192.168.18.149\c:\windows\system32\drivers\etc\hosts](#)

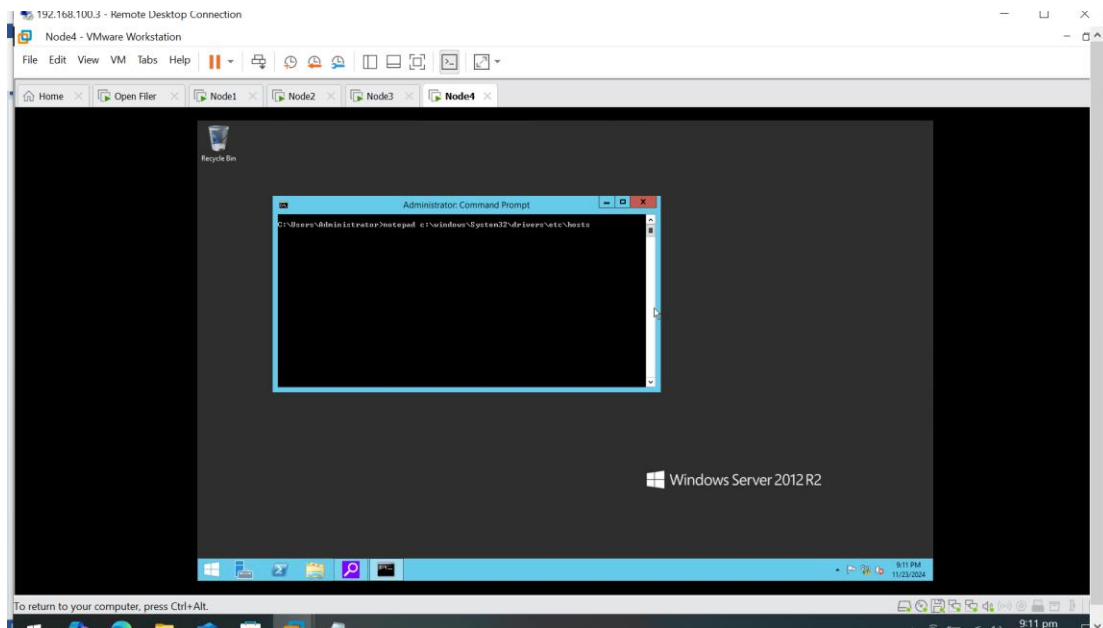
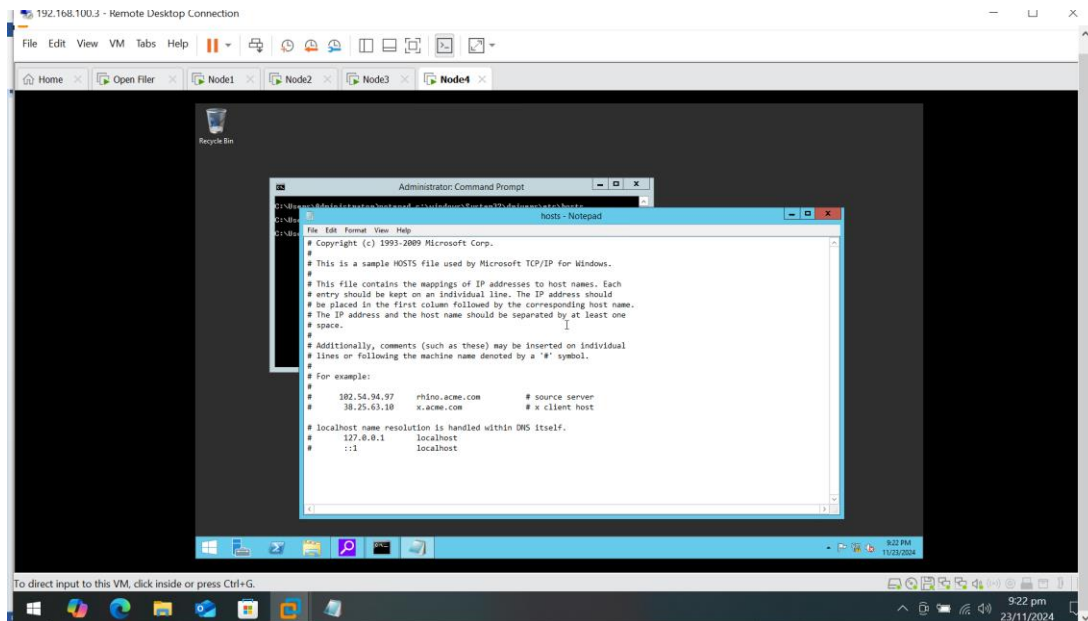
Notepad C:\windows\system32\driver\etc\hosts

Add Below in All Node "C:\windows\system32\driver\etc\hosts"

192.168.18.149	node4
192.168.10.156	node4priv
192.168.18.150	node4vip

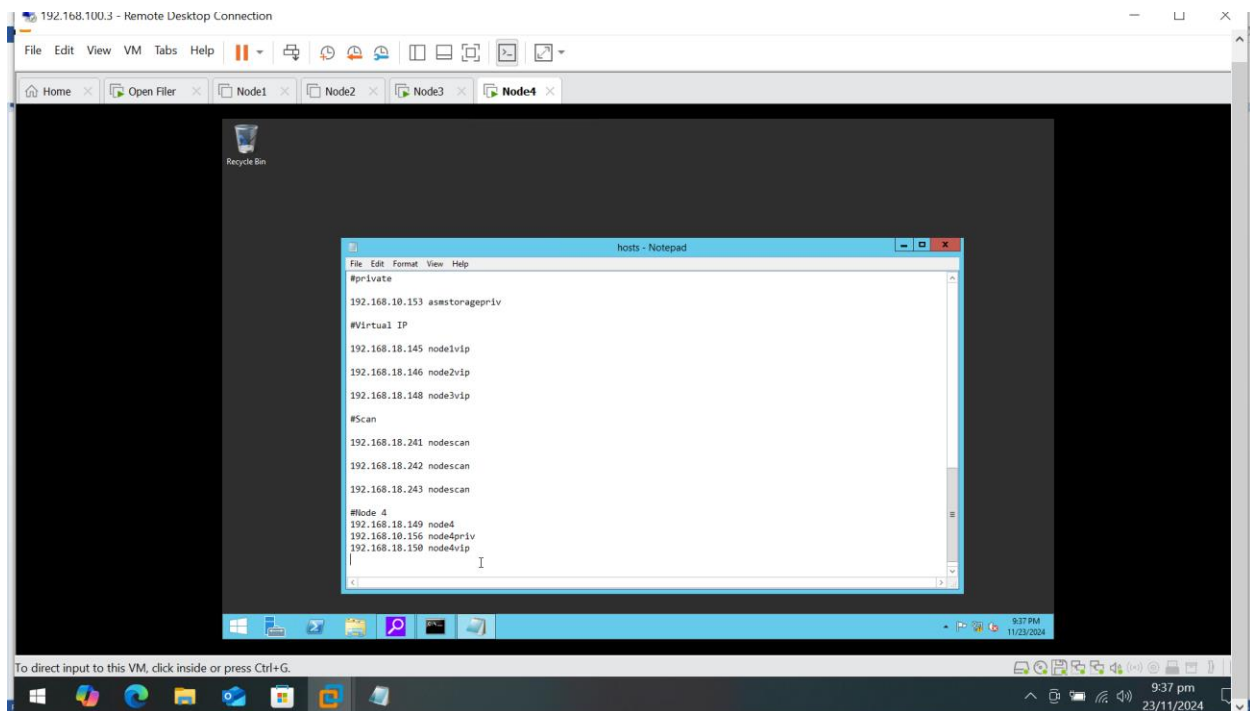
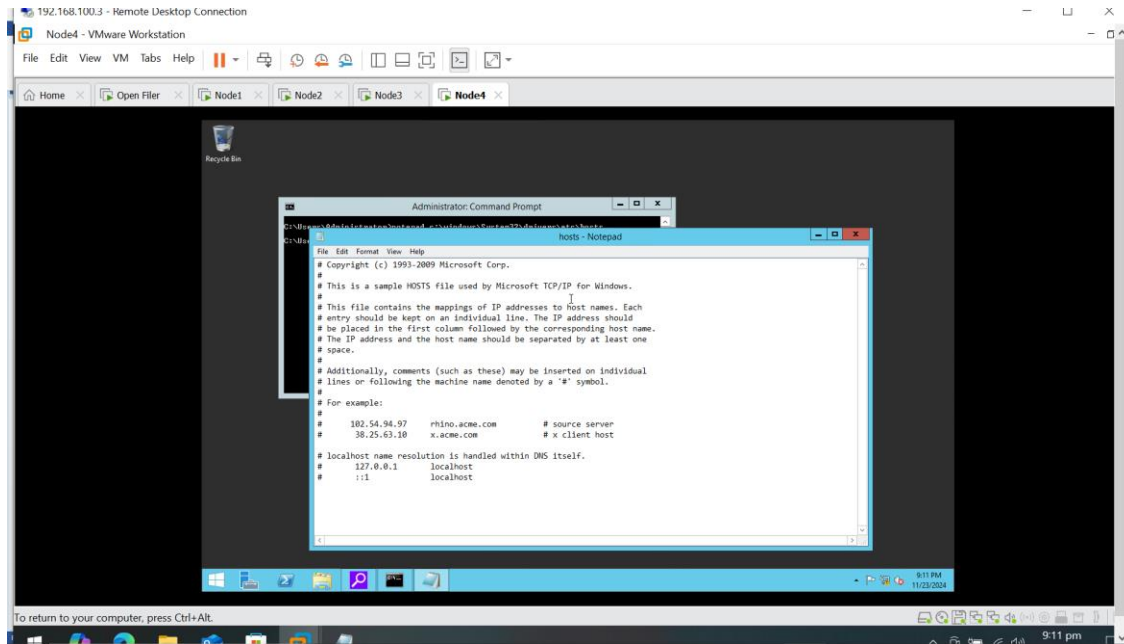


Oracle Cluster New Node Addition is Existing Cluster





Oracle Cluster New Node Addition is Existing Cluster





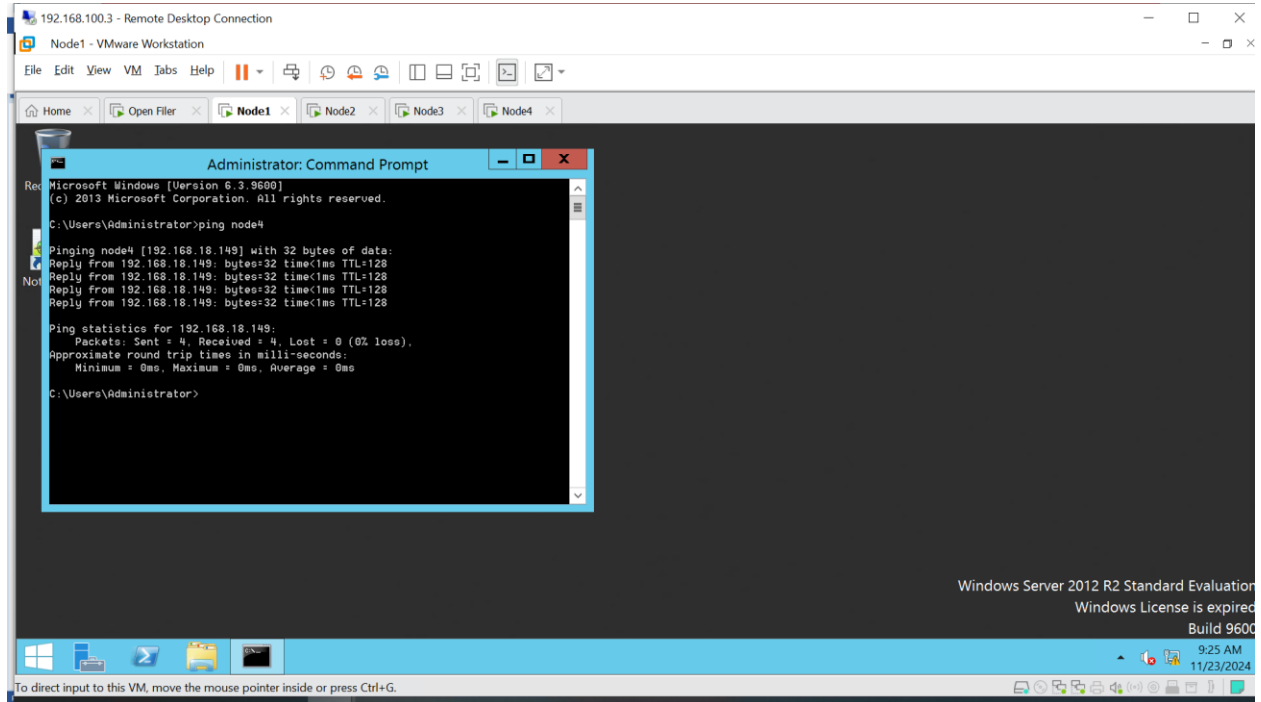
Oracle Cluster New Node Addition is Existing Cluster

8. Ping New IP Host from All Nodes (All Nodes)

192.168.18.149	node4
192.168.10.156	node4priv
192.168.18.150	node4vip (Should not Pingable)



Oracle Cluster New Node Addition is Existing Cluster





Oracle Cluster New Node Addition is Existing Cluster

192.168.100.3 - Remote Desktop Connection

Node1 - VMware Workstation

File Edit View VM Tabs Help

Home Open File Node1 Node2 Node3 Node4

```
Administrator: Command Prompt
C:\Users\Administrator>ping node4
Pinging node4 [192.168.18.149] with 32 bytes of data:
Reply from 192.168.18.149: bytes=32 time<1ms TTL=128
Reply from 192.168.18.149: bytes=32 time<1ms TTL=128
Reply from 192.168.18.149: bytes=32 time<1ms TTL=128
Reply from 192.168.18.149: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.18.149:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Administrator>ping node4priv
Pinging node4priv [192.168.10.156] with 32 bytes of data:
Reply from 192.168.10.156: bytes=32 time<1ms TTL=128
Reply from 192.168.10.156: bytes=32 time<1ms TTL=128
Reply from 192.168.10.156: bytes=32 time<1ms TTL=128
Reply from 192.168.10.156: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.10.156:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Administrator>
```

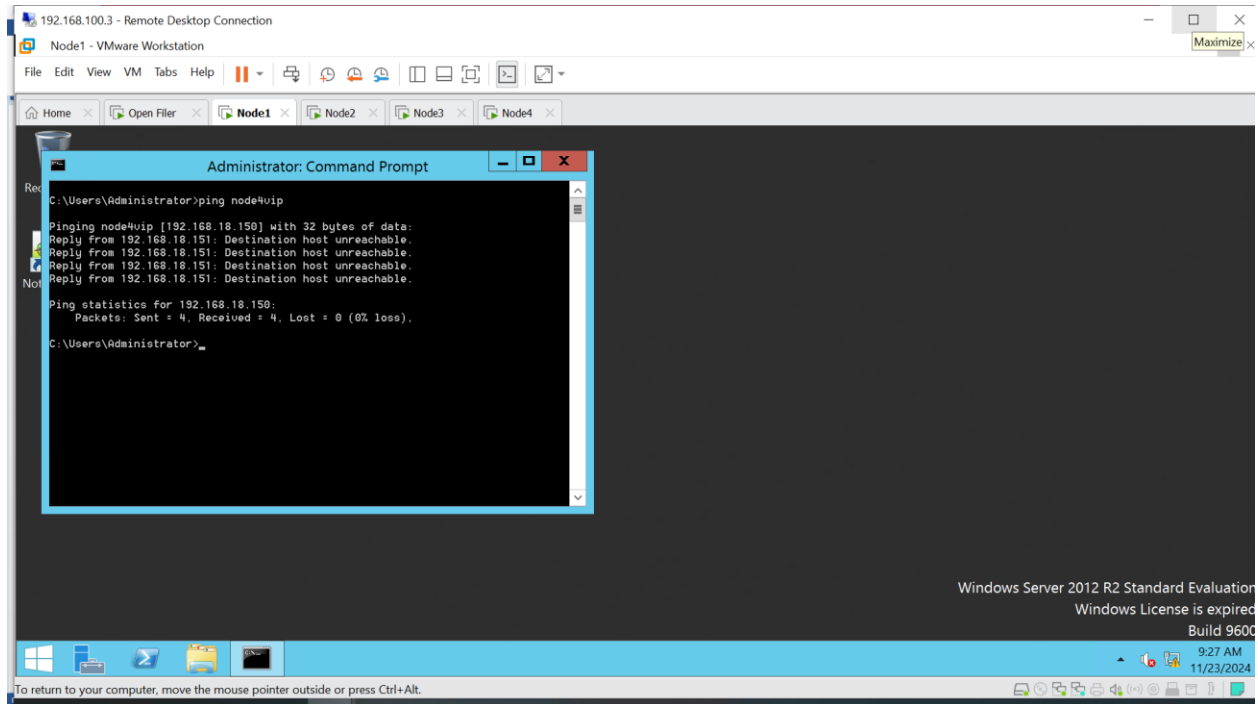
Windows Server 2012 R2 Standard Evaluation
Windows License is expired
Build 9600

9:25 AM
11/23/2024

To return to your computer, move the mouse pointer outside or press Ctrl+Alt.



Oracle Cluster New Node Addition is Existing Cluster



9. Start NFTP Service and Set Auto Start (New Node)

Open cmd

sc query W32Time

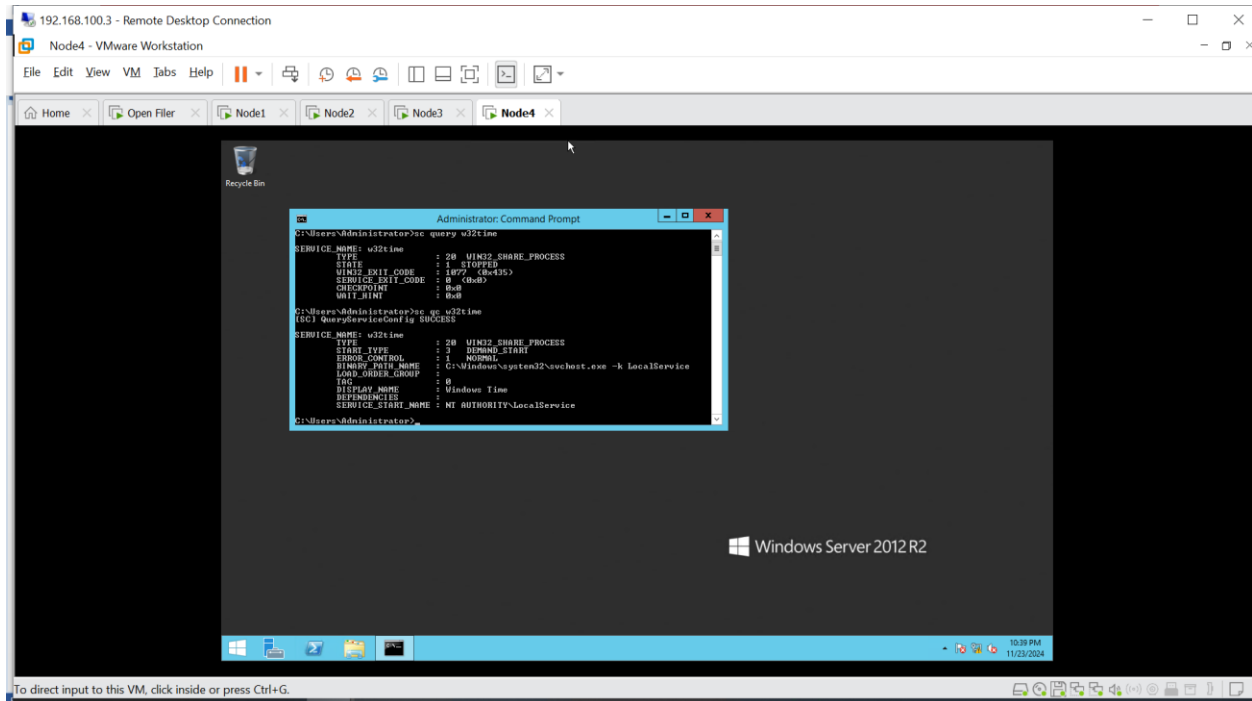
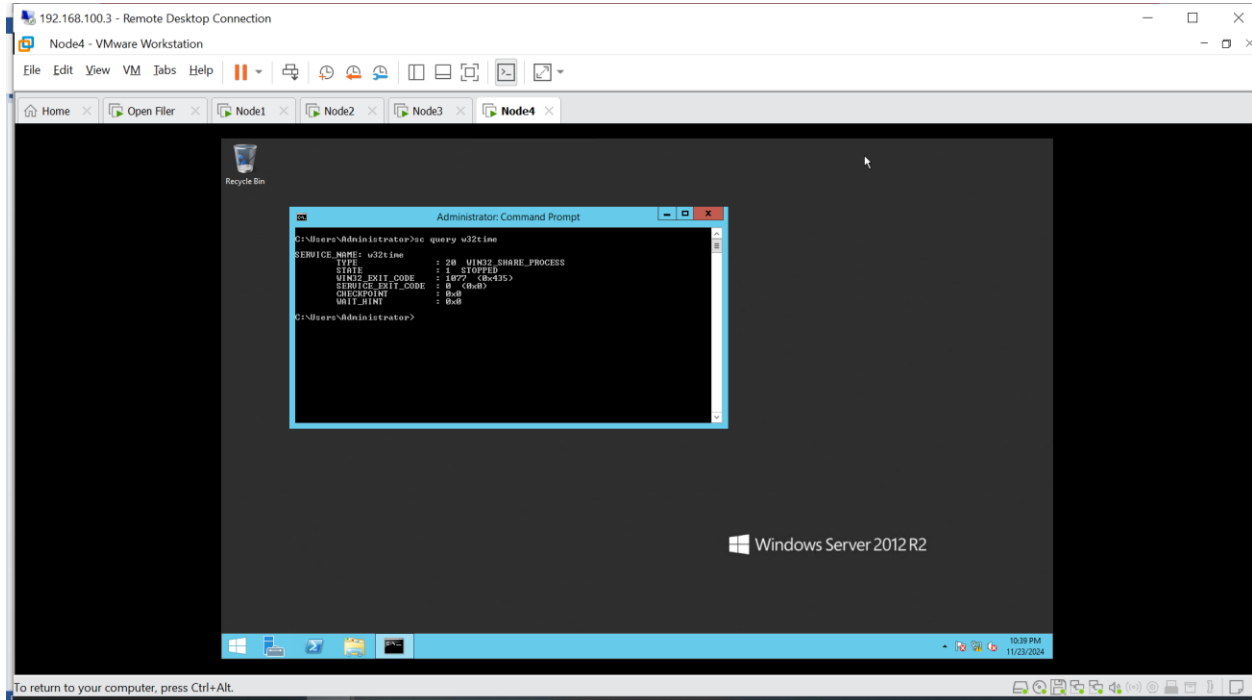
sc qc W32Time

net start W32Time

services.msc > windows time > double Click>Startup Type>Automatic>ok



Oracle Cluster New Node Addition is Existing Cluster





Oracle Cluster New Node Addition is Existing Cluster

192.168.100.3 - Remote Desktop Connection

Node4 - VMware Workstation

File Edit View VM Tabs Help

Home Open Filer Node1 Node2 Node3 Node4

Recycle Bin

```
Administrator: Command Prompt
WIN12_EXIT_CODE : 1977 (0x7b5)
SERVICE_EXIT_CODE : 0 (0x0)
CHECKPOINT : 0x0
WAIT_HINT : 0x0
C:\Users\Administrator>sc qc w32time
[SC] QueryServiceConfig SUCCESS
SERVICE_NAME: w32time
        TYPE               : 20  WIN12_SHARE_PROCESS
        START_NAME           : 3    DEMAND_START
        ERROR_CONTROL        : 1    NORMAL
        BINARY_PATH_NAME     : C:\Windows\system32\svchost.exe -k LocalService
        LOAD_ORDER_GROUP     : 0
        TAG                  : 0
        DISPLAY_NAME         : Windows Time
        DEPENDENCIES         :
        SERVICE_START_NAME  : NT AUTHORITY\LocalService
C:\Users\Administrator>net start w32time
The Windows Time service is starting.
The Windows Time service was started successfully.
C:\Users\Administrator>
```

Windows Server 2012 R2

To return to your computer, press Ctrl+Alt.

192.168.100.3 - Remote Desktop Connection

Node4 - VMware Workstation

File Edit View VM Tabs Help

Home Open Filer Node1 Node2 Node3 Node4

Recycle Bin

```
Administrator: Command Prompt
ERROR_CONTROL : 1    NORMAL
BINARY_PATH_NAME : C:\Windows\system32\svchost.exe -k LocalService
LOAD_ORDER_GROUP : 0
TAG            : 0
DISPLAY_NAME   : Windows Time
DEPENDENCIES   :
SERVICE_START_NAME : NT AUTHORITY\LocalService
C:\Users\Administrator>net start w32time
The Windows Time service is starting.
The Windows Time service was started successfully.
C:\Users\Administrator>sc query w32time
SERVICE_NAME: w32time
        TYPE               : 20  WIN12_SHARE_PROCESS
        STATE                : 4    RUNNING
        WIN12_EXIT_CODE       : 0    (0x0)
        SERVICE_EXIT_CODE   : 0    (0x0)
        CHECKPOINT           : 0x0
        WAIT_HINT            : 0x0
C:\Users\Administrator>
```

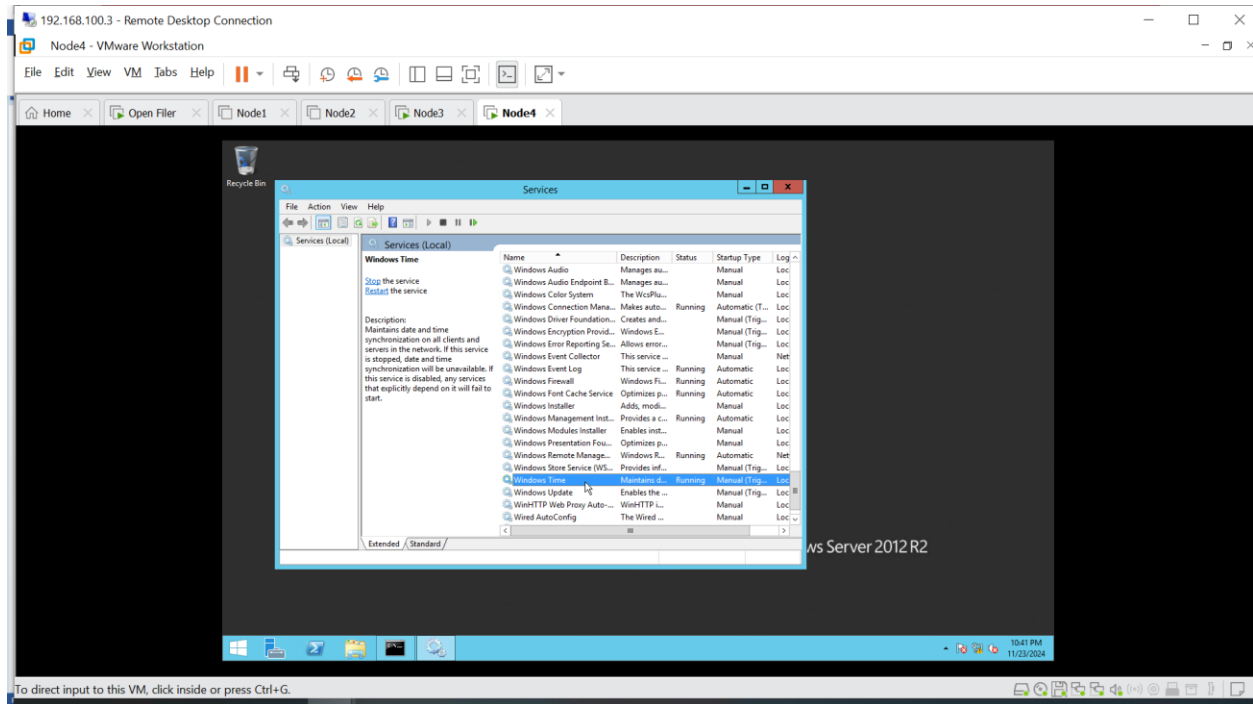
Windows Server 2012 R2

To return to your computer, press Ctrl+Alt.

Execute Services.msc



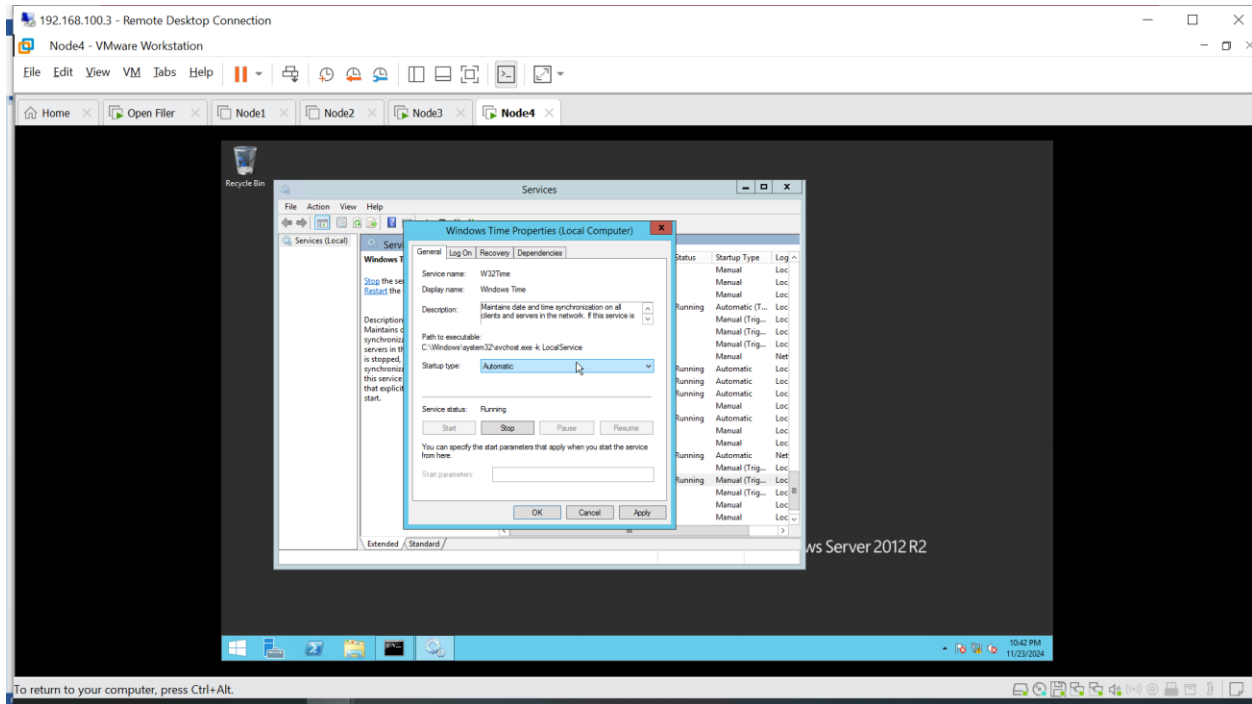
Oracle Cluster New Node Addition is Existing Cluster



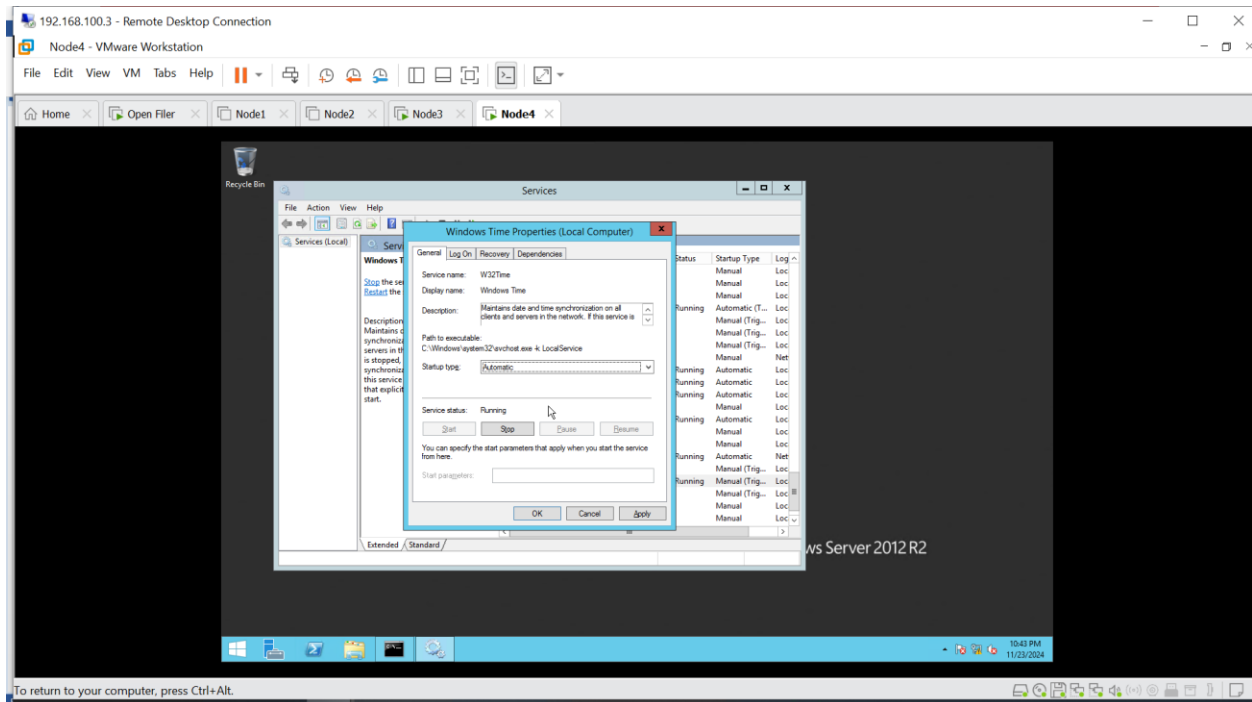
Execute Services.msc > windows Time > Double Click



Oracle Cluster New Node Addition is Existing Cluster



Execute Services.msc > windows Time > Double Click >Startup Type > Automatic >ok

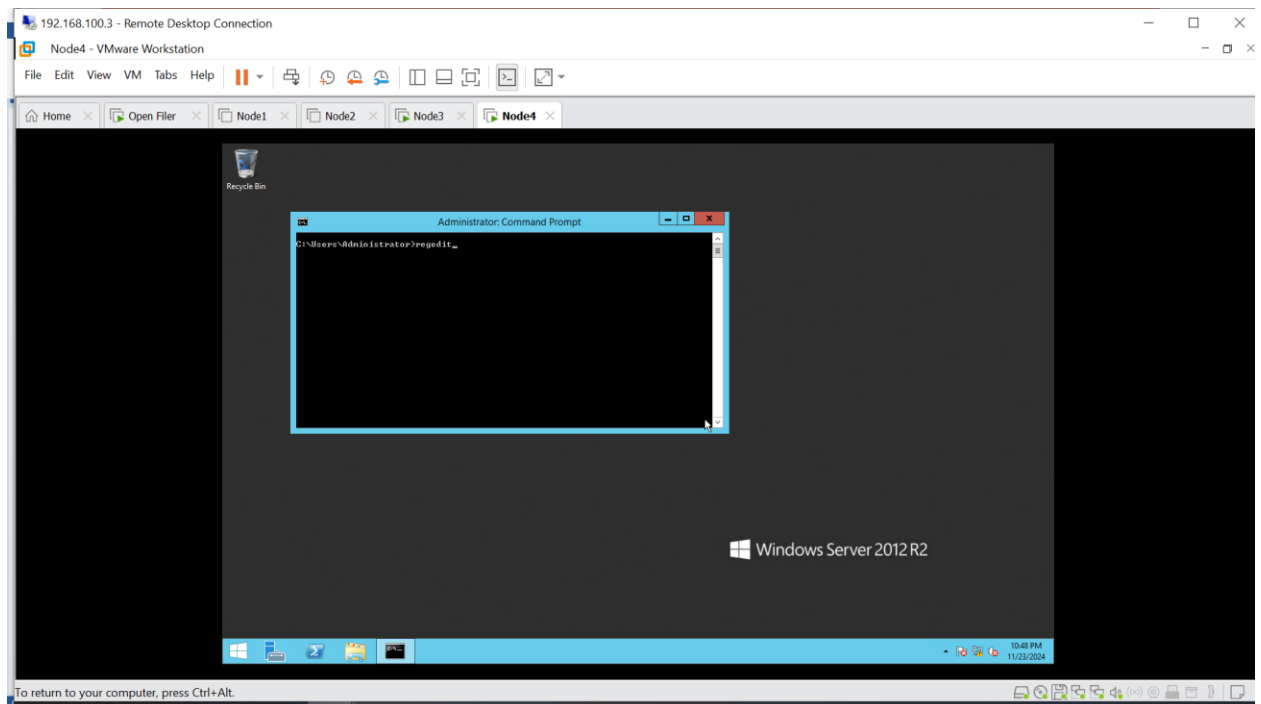




Oracle Cluster New Node Addition is Existing Cluster

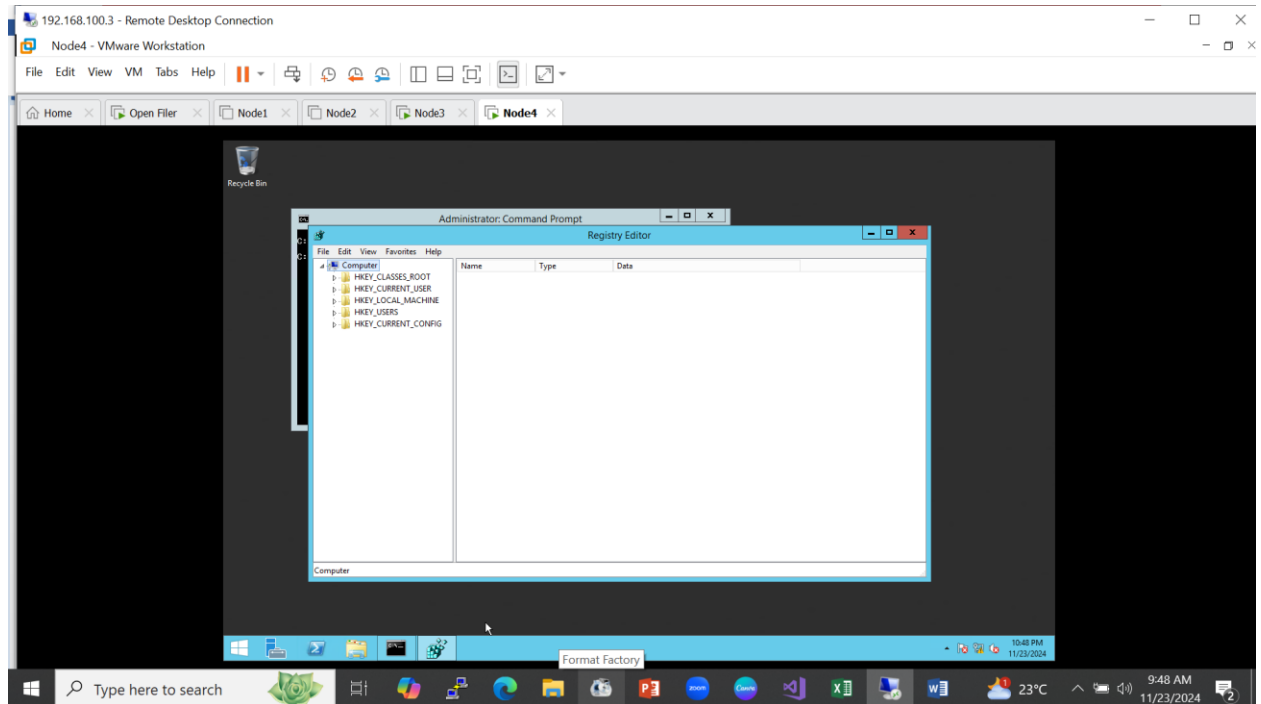
10.Disable Windows Media Sensing (DisableDHCPMediaSense) (New Node)

Open cmd
Regedit





Oracle Cluster New Node Addition is Existing Cluster



Search in Registry

HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\Tcpip\Parameters

Add New – DWORD (32 Bit) Value

Value Name: DisableDHCPMediaSense

Value: 1



Oracle Cluster New Node Addition is Existing Cluster

192.168.100.3 - Remote Desktop Connection

Node4 - VMware Workstation

File Edit View VM Tabs Help

Home Open Filer Node1 Node2 Node3 Node4

Registry Editor

Name	Type	Data
[Default]	REG_SZ	(value not set)
DataBasePath	REG_EXPAND_SZ	%SystemRoot%\System32\drivers\etc
DeadGWDetect...	REG_DWORD	0x00000001 (1)
Domain	REG_SZ	
DomainAddDefaul...	REG_DWORD	0x00000000 (0)
EnableCMPRed...	REG_DWORD	0x00000001 (1)
ForwardBroadca...	REG_DWORD	0x00000000 (0)
Hostname	REG_SZ	Node4
ICSDomain	REG_SZ	mshuma.net
IPEnableRouter	REG_DWORD	0x00000000 (0)
NameServer	REG_SZ	
NV Hostname	REG_SZ	Node4
SearchList	REG_SZ	
SyncDomainWit...	REG_DWORD	0x00000001 (1)
UseDomainNam...	REG_DWORD	0x00000001 (1)

Computer\HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters

10:30 PM 11/23/2024

To direct input to this VM, click inside or press Ctrl+G.

192.168.100.3 - Remote Desktop Connection

Node4 - VMware Workstation

File Edit View VM Tabs Help

Home Open Filer Node1 Node2 Node3 Node4

Registry Editor

Name	Type	Data
[Default]	REG_SZ	(value not set)
DataBasePath	REG_EXPAND_SZ	%SystemRoot%\System32\drivers\etc
DeadGWDetect...	REG_DWORD	0x00000001 (1)
Domain	REG_SZ	
DomainAddDefaul...	REG_DWORD	0x00000000 (0)
EnableCMPRed...	REG_DWORD	0x00000001 (1)
ForwardBroadca...	REG_DWORD	0x00000000 (0)
Hostname	REG_SZ	Node4
ICSDomain	REG_SZ	mshuma.net
IPEnableRouter	REG_DWORD	0x00000000 (0)
NameServer	REG_SZ	
NV Hostname	REG_SZ	Node4
SearchList	REG_SZ	
SyncDomainWit...	REG_DWORD	0x00000001 (1)
UseDomainNam...	REG_DWORD	0x00000001 (1)

Computer\HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters

10:33 PM 11/23/2024

To return to your computer, press Ctrl+Alt.



Oracle Cluster New Node Addition is Existing Cluster

192.168.100.3 - Remote Desktop Connection

Node4 - VMware Workstation

File Edit View VM Tabs Help

Home Open File Node1 Node2 Node3 Node4

Registry Editor

Name	Type	Data
(Default)	REG_SZ	(value not set)
DataBasePath	REG_EXPAND_SZ	%SystemRoot%\System32\drivers\etc
DeadGWDetect...	REG_DWORD	0x00000001 (1)
Domain	REG_SZ	
DomainAddDefaul...	REG_DWORD	0x00000000 (0)
EnableCMPRedi...	REG_DWORD	0x00000001 (1)
ForwardBroadca...	REG_DWORD	0x00000000 (0)
Hostname	REG_SZ	Node4
ICSDomain	REG_SZ	mohama.net
IPEnableRouter	REG_DWORD	0x00000000 (0)
NameServer	REG_SZ	
NV Hostname	REG_SZ	Node4
SearchList	REG_SZ	
SyncDomainWit...	REG_DWORD	0x00000001 (1)
UseDomainName...	REG_DWORD	0x00000001 (1)
DisableDHCPMediaSense	REG_DWORD	0x00000000 (0)

Computer\HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters

10:54 PM 11/23/2024

Type here to search

9:54 AM 11/23/2024

192.168.100.3 - Remote Desktop Connection

Node4 - VMware Workstation

File Edit View VM Tabs Help

Home Open File Node1 Node2 Node3 Node4

Registry Editor

Name	Type	Data
(Default)	REG_SZ	(value not set)
DataBasePath	REG_EXPAND_SZ	%SystemRoot%\System32\drivers\etc
DeadGWDetectDefault	REG_DWORD	0x00000001 (1)
Domain	REG_SZ	
DomainAddDefaultGatewayDefault	REG_DWORD	0x00000000 (0)
EnableCMPRedirect	REG_DWORD	0x00000001 (1)
ForwardBroadcasts	REG_DWORD	0x00000000 (0)
Hostname	REG_SZ	Node4
ICSDomain	REG_SZ	mohama.net
IPEnableRouter	REG_DWORD	0x00000000 (0)
NameServer	REG_SZ	
NV Hostname	REG_SZ	Node4
SearchList	REG_SZ	
SyncDomainWithMembership	REG_DWORD	0x00000001 (1)
UseDomainNameEvolution	REG_DWORD	0x00000001 (1)
DisableDHCPMediaSense	REG_DWORD	0x00000000 (0)

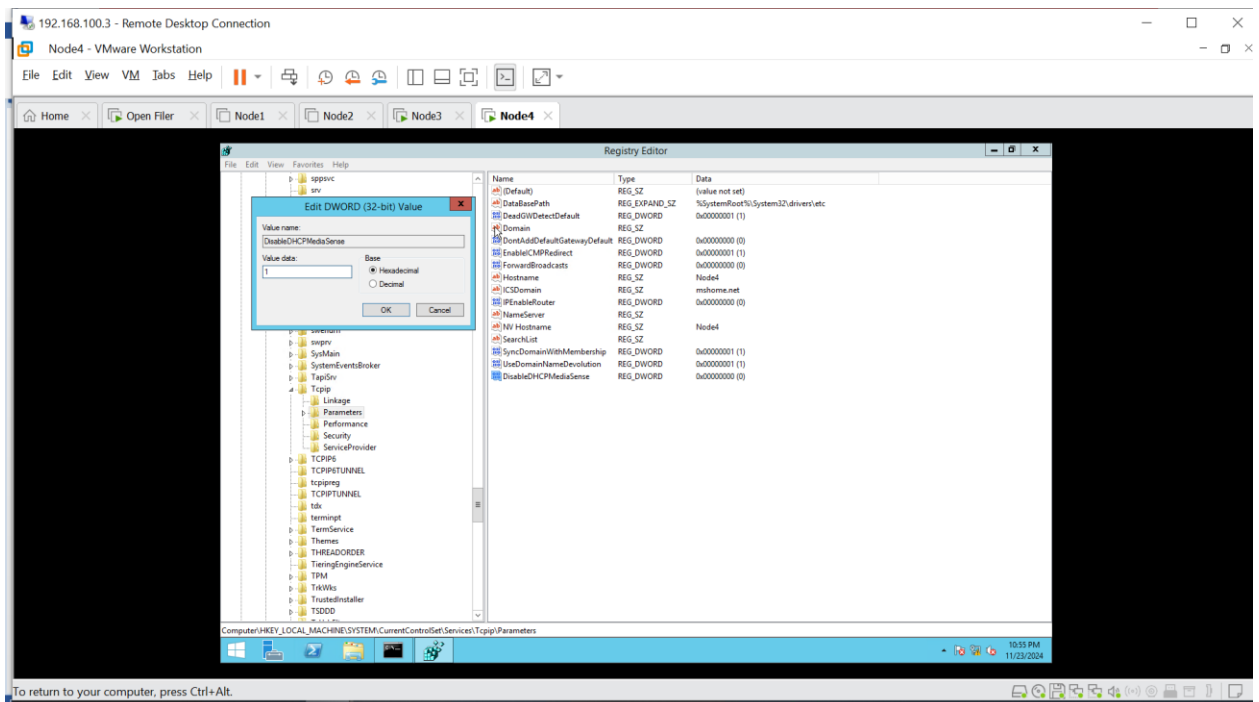
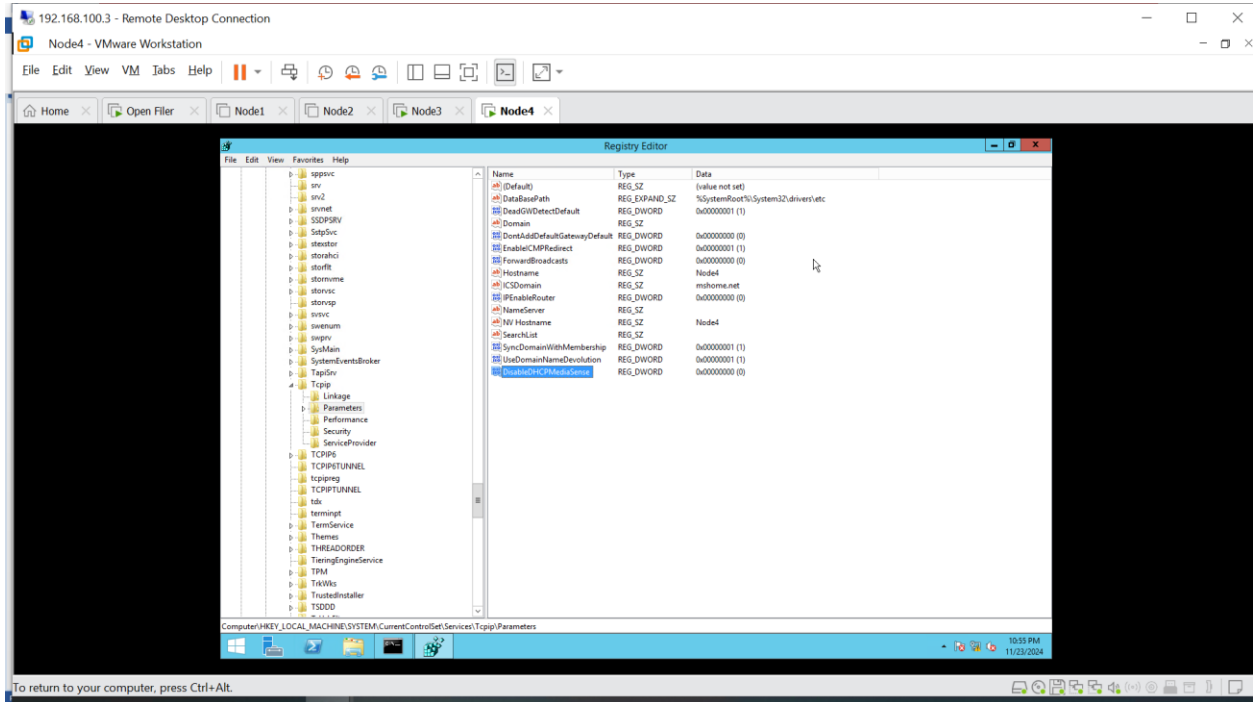
Computer\HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters

10:55 PM 11/23/2024

To return to your computer, press Ctrl+Alt.



Oracle Cluster New Node Addition is Existing Cluster





Oracle Cluster New Node Addition is Existing Cluster

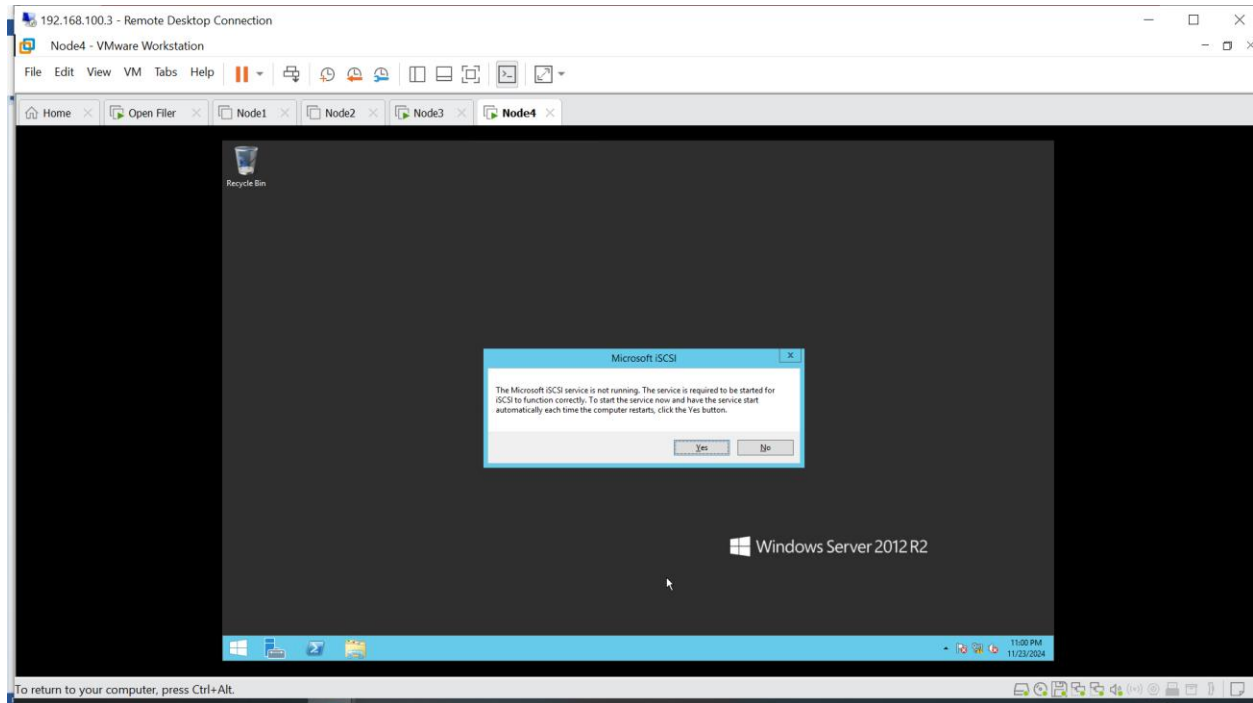
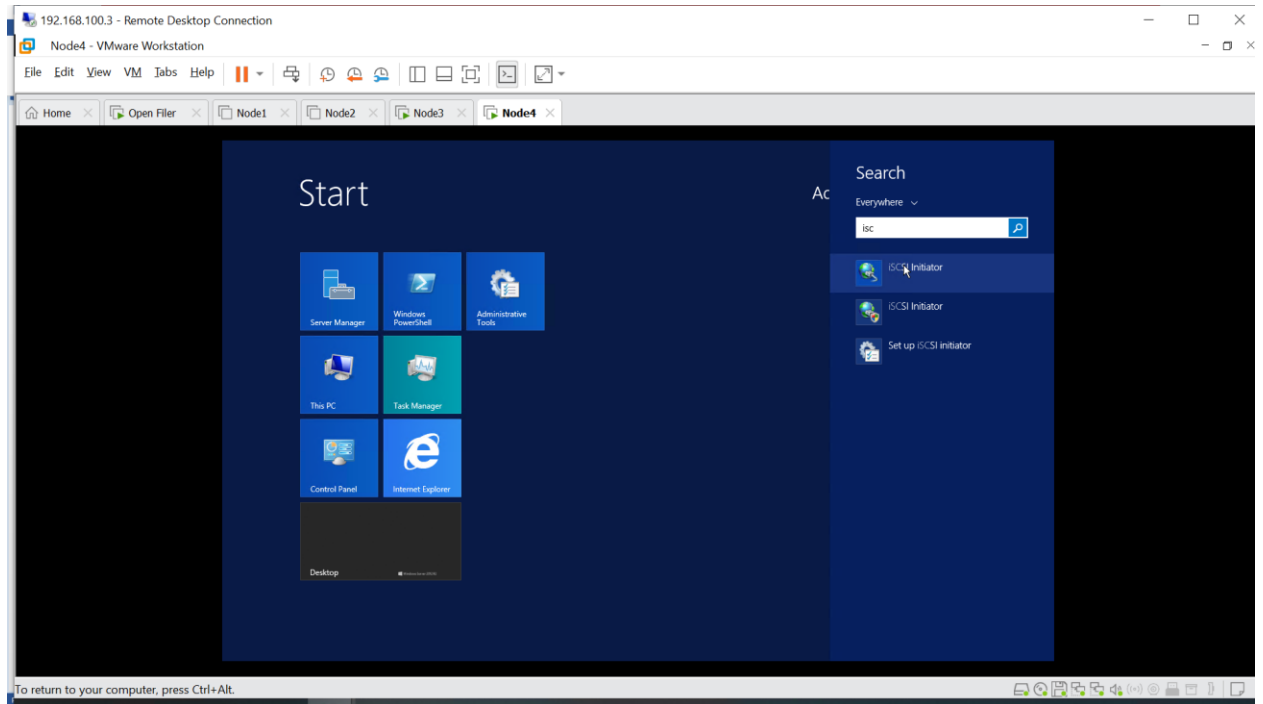
11.Connect with Database Storage

(New Node)

Iscsi initiator > click > “yes”

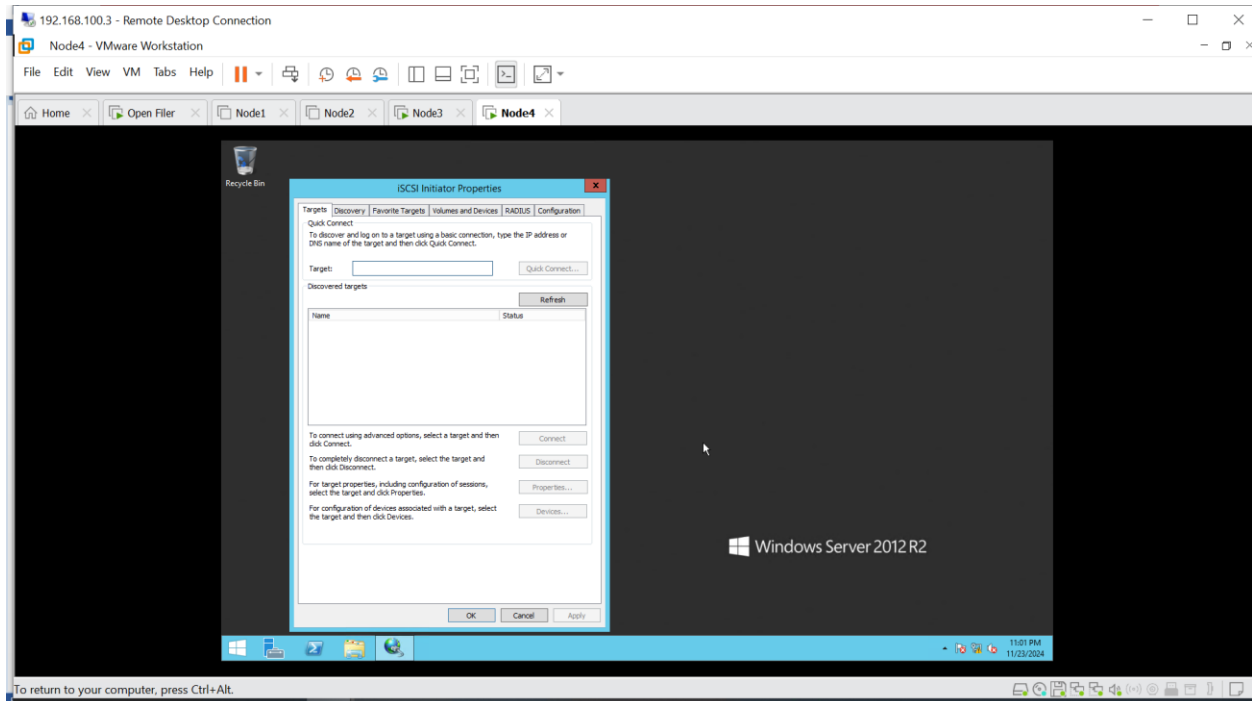
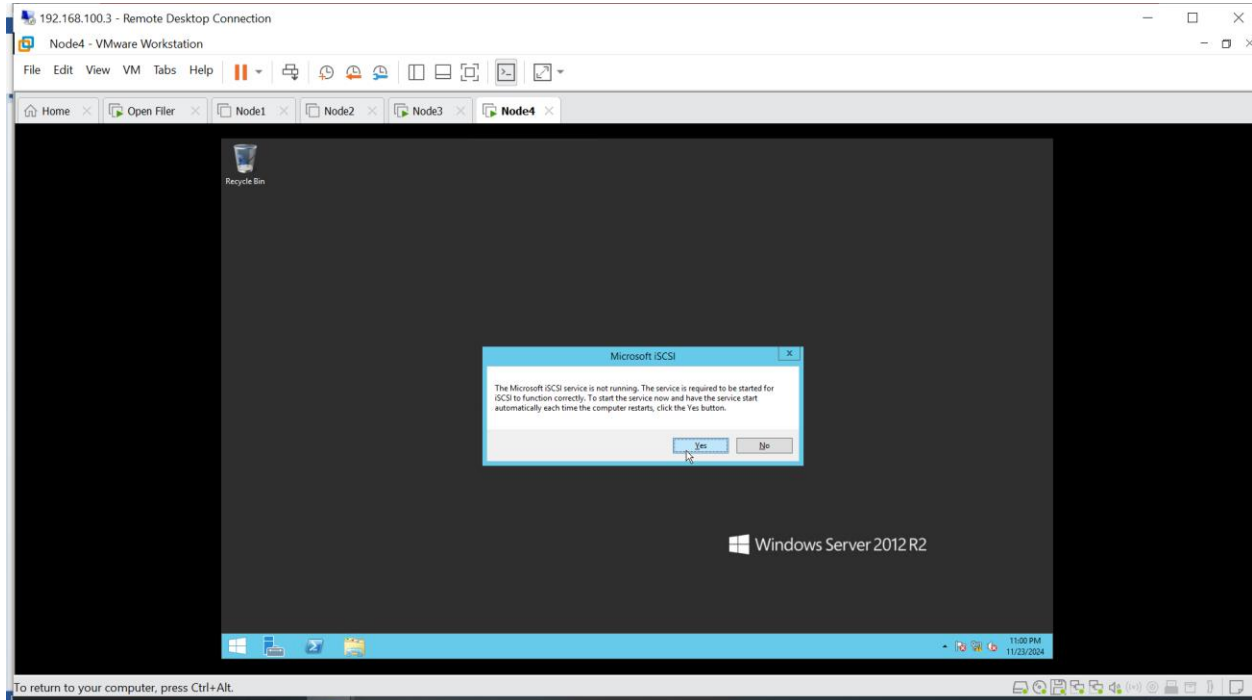


Oracle Cluster New Node Addition is Existing Cluster





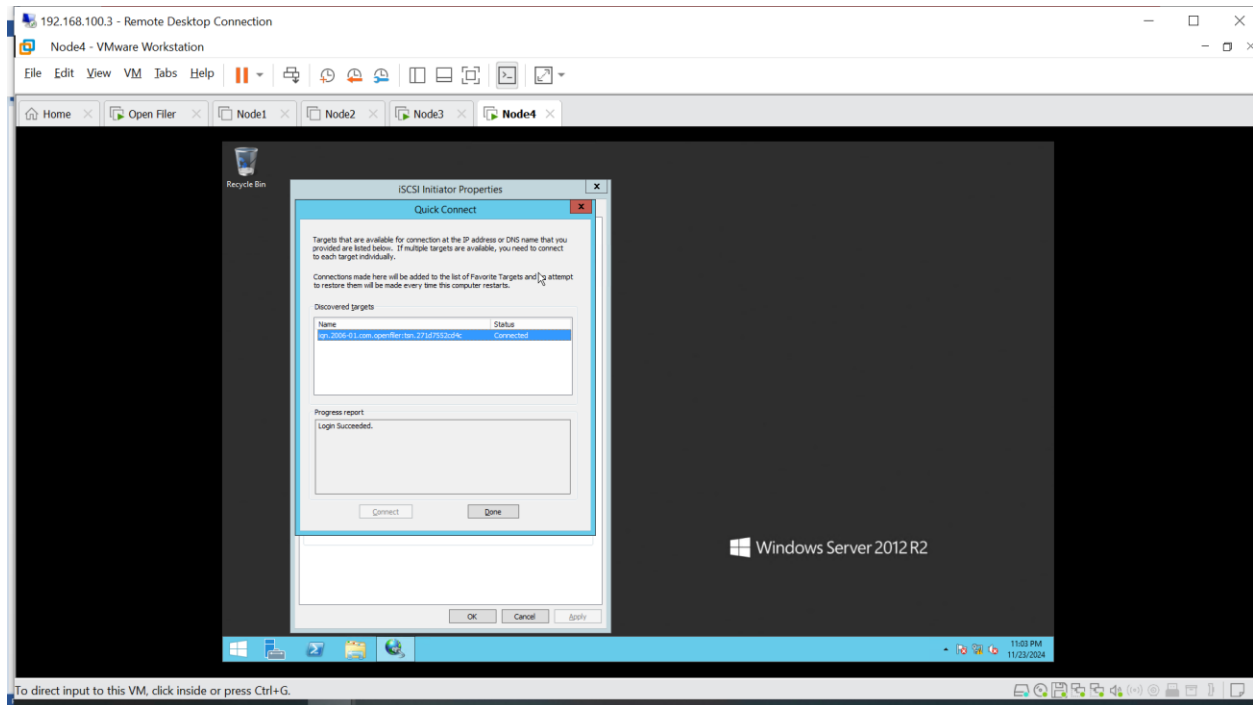
Oracle Cluster New Node Addition is Existing Cluster





Oracle Cluster New Node Addition is Existing Cluster

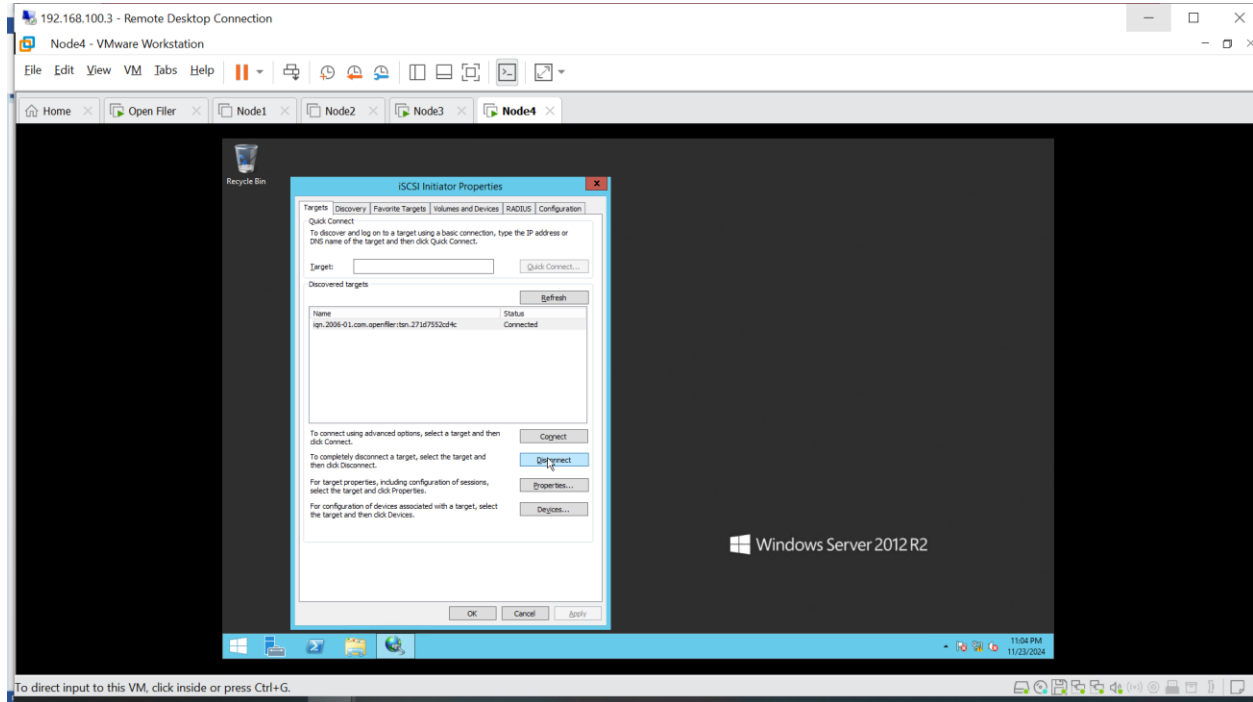
Target = 192.168.18.153 > Click “Quick Connect”



Target = 192.168.18.153 > Click “Quick Connect” > done



Oracle Cluster New Node Addition is Existing Cluster



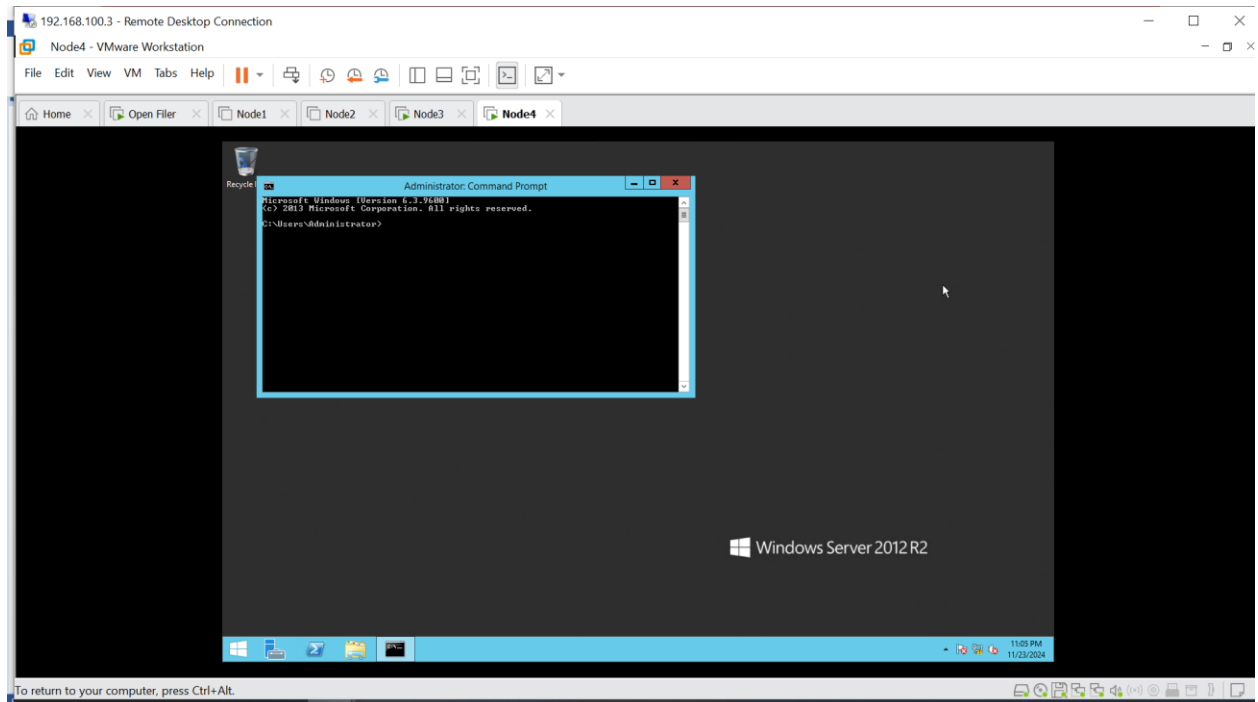
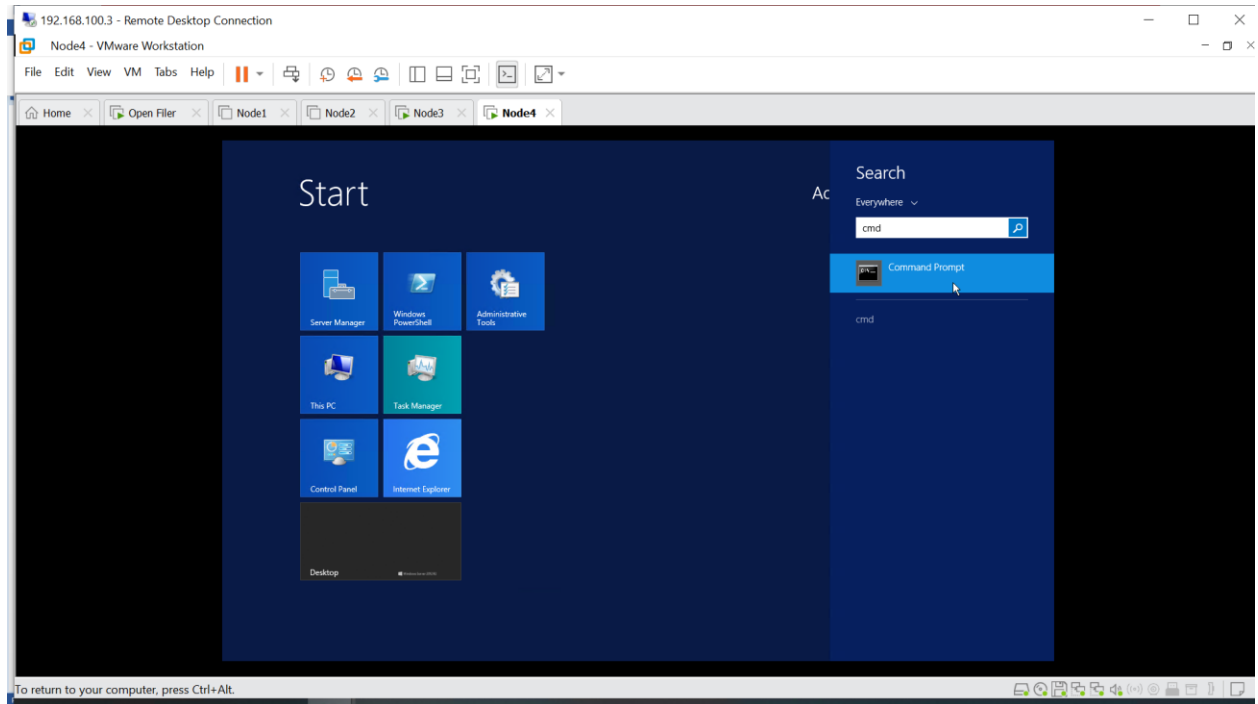
Target = 192.168.18.153 > Click “Quick Connect” > done>ok

12. Online ASM Disks (New Node)

Open command Prompt “cmd”



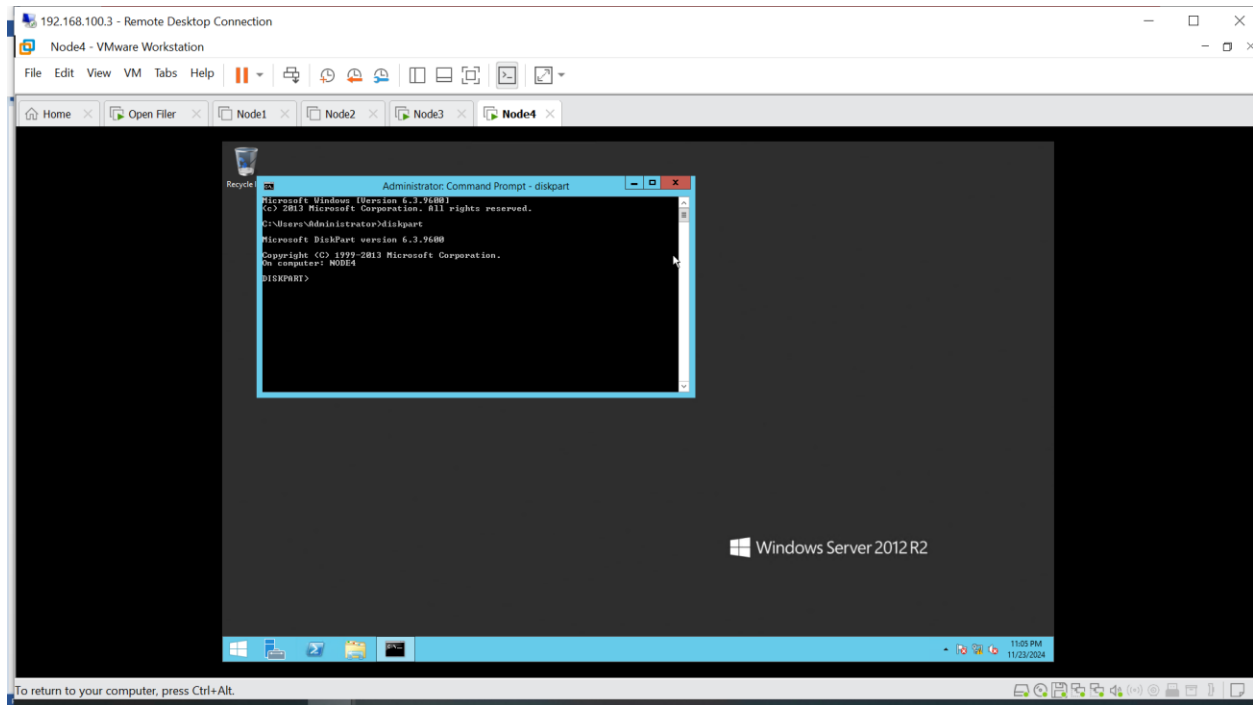
Oracle Cluster New Node Addition is Existing Cluster





Oracle Cluster New Node Addition is Existing Cluster

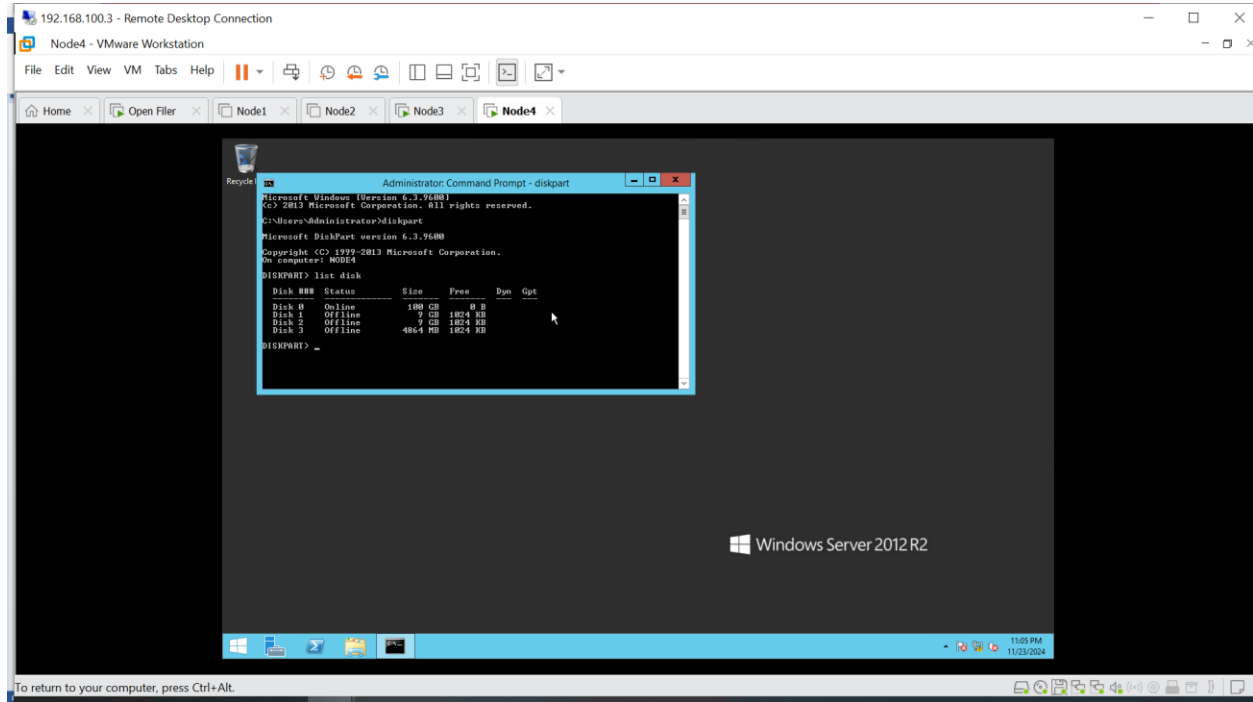
Diskpart



List disk



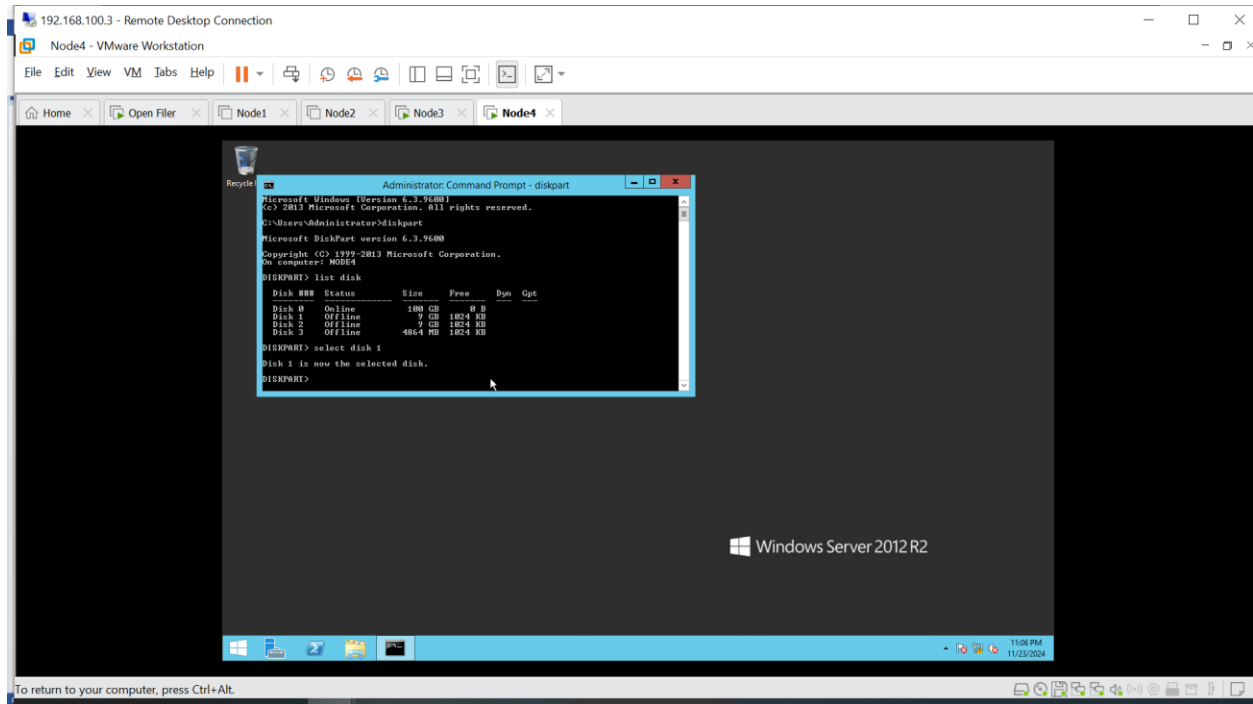
Oracle Cluster New Node Addition is Existing Cluster



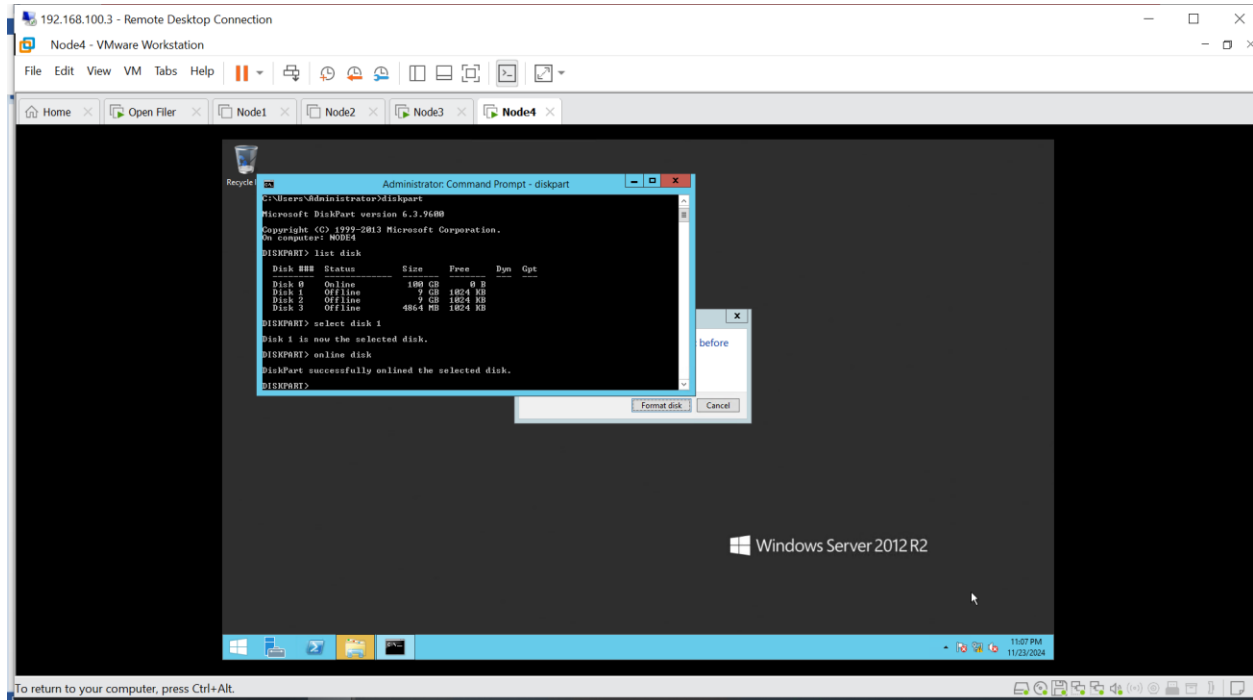
Select disk 1



Oracle Cluster New Node Addition is Existing Cluster



Online disk

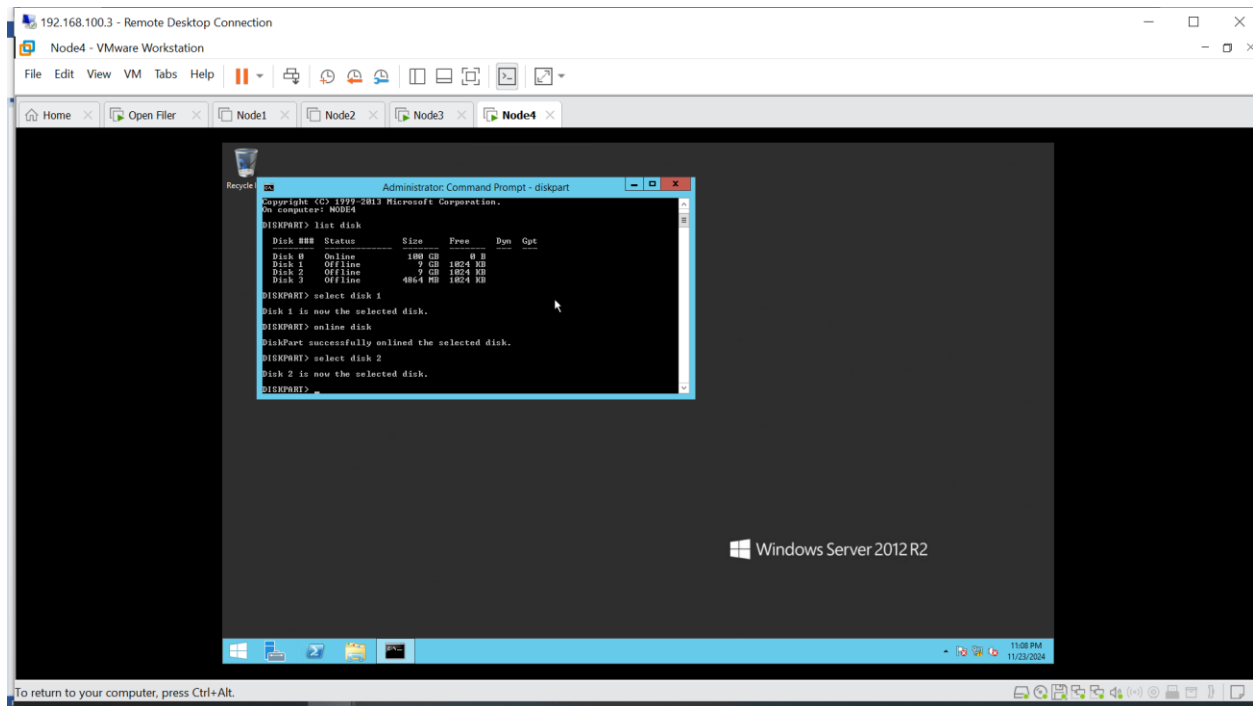




Oracle Cluster New Node Addition is Existing Cluster

Note : don't format this disk

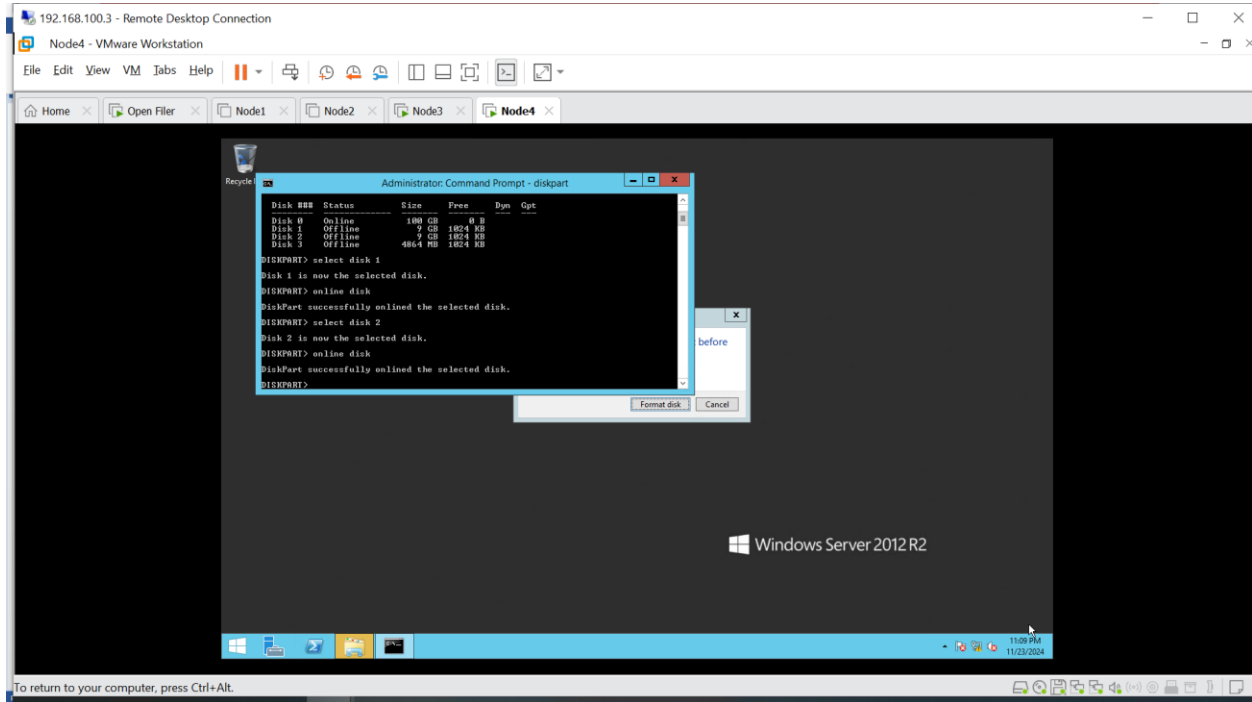
Select disk 2



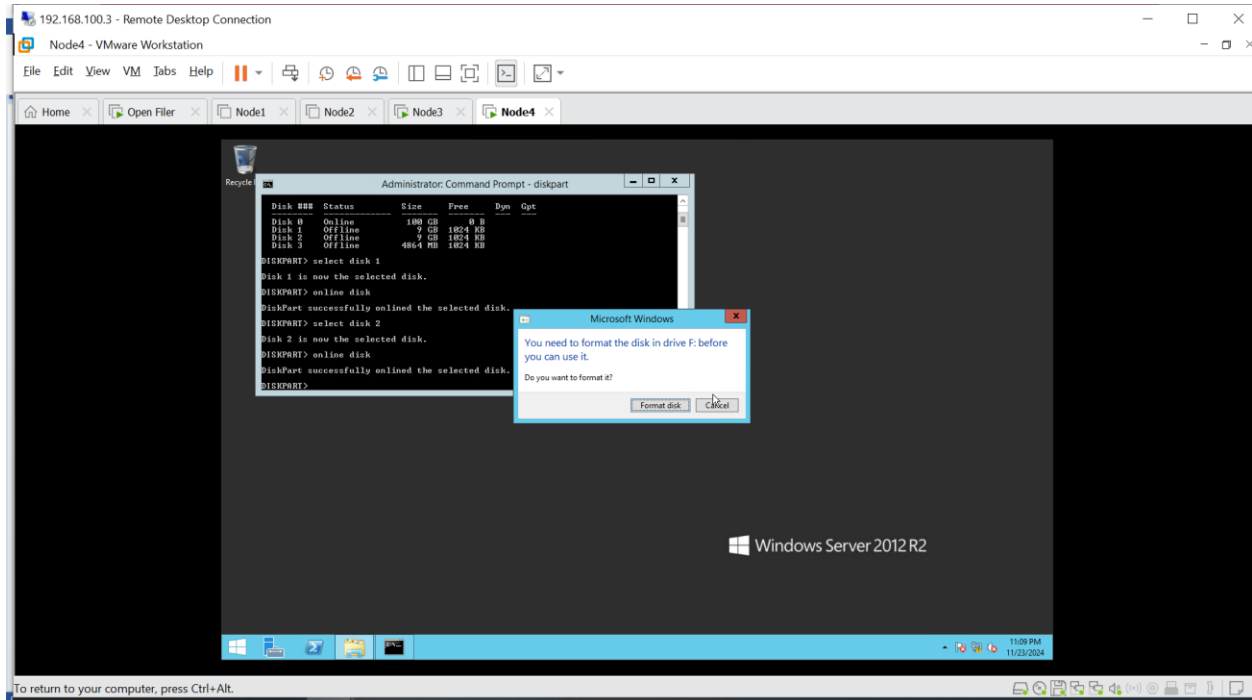
Online disk



Oracle Cluster New Node Addition is Existing Cluster



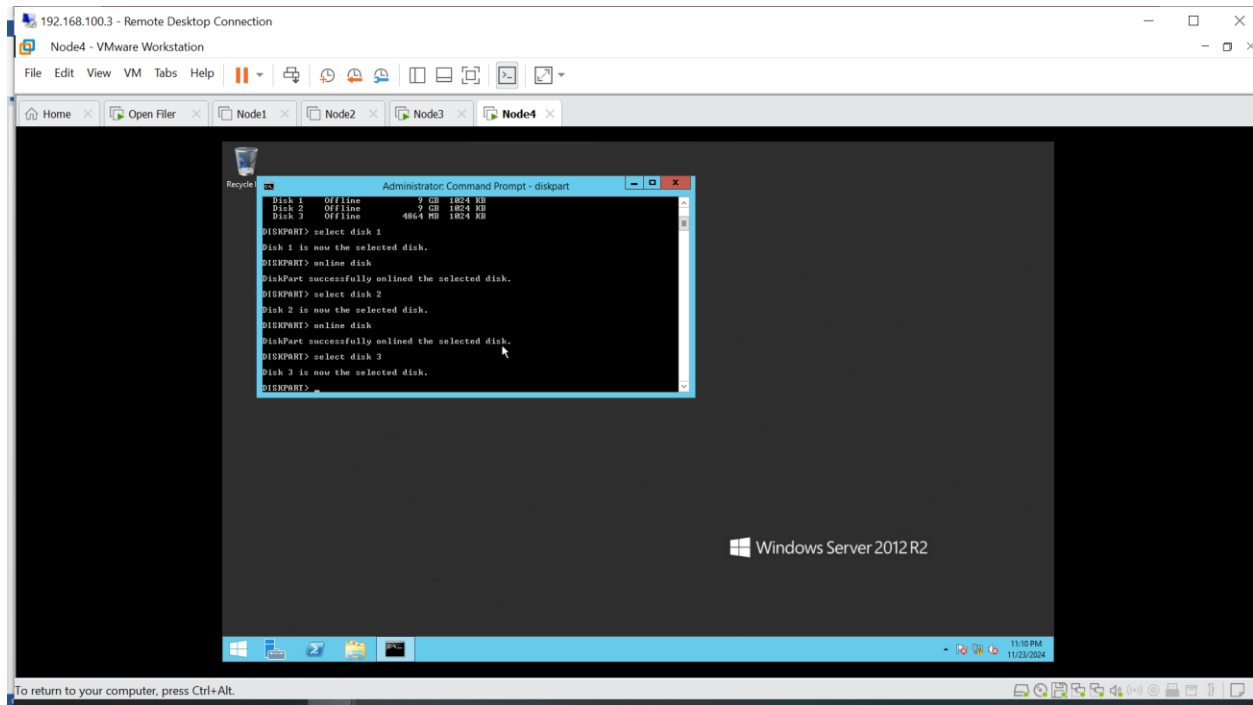
Note : don't format this disk > Cancel





Oracle Cluster New Node Addition is Existing Cluster

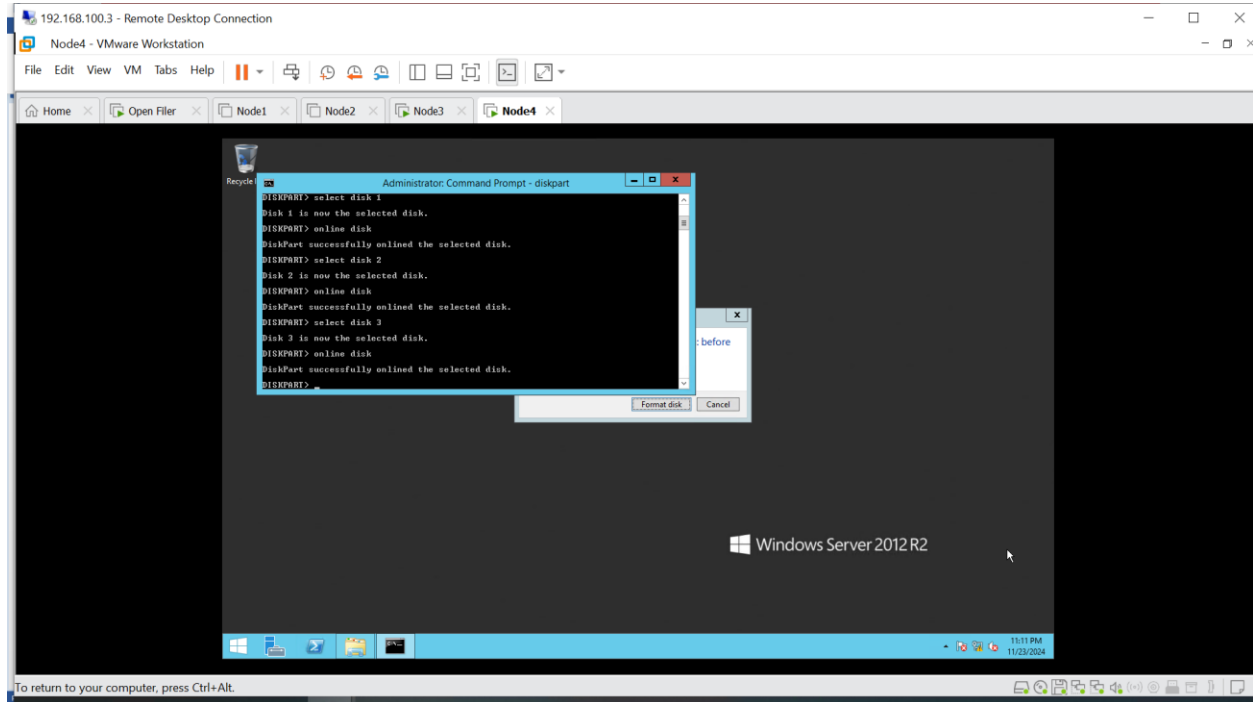
Select disk 3



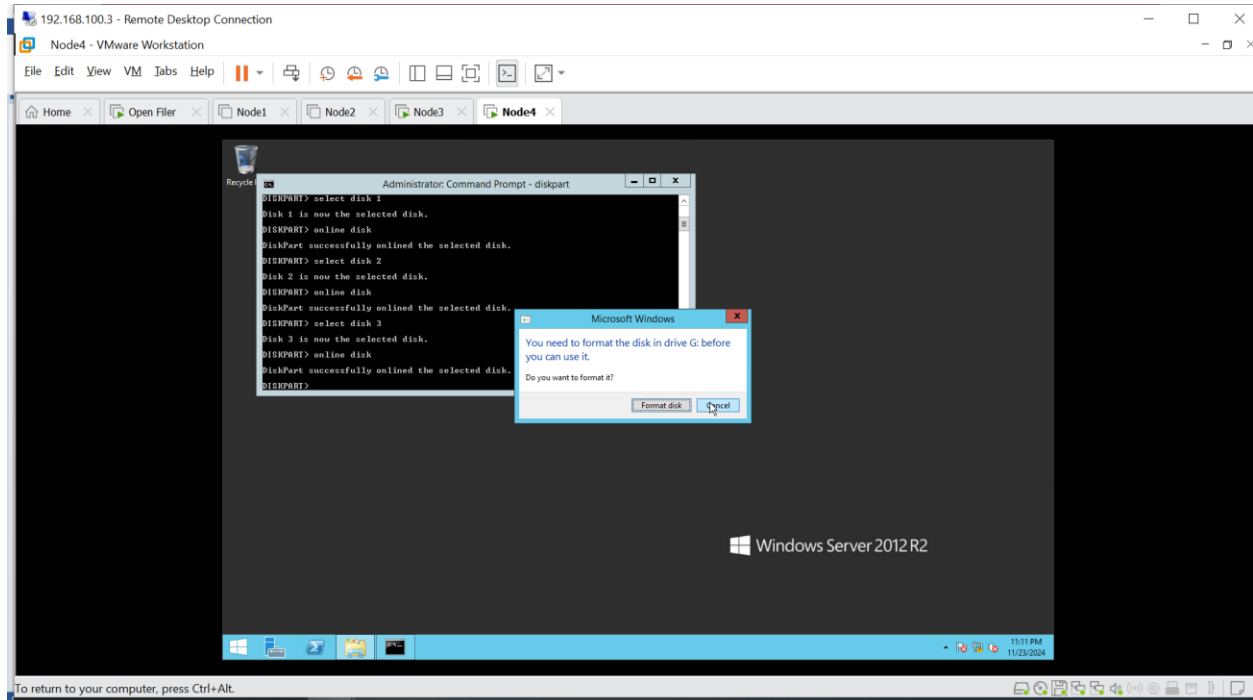
Online disk



Oracle Cluster New Node Addition is Existing Cluster



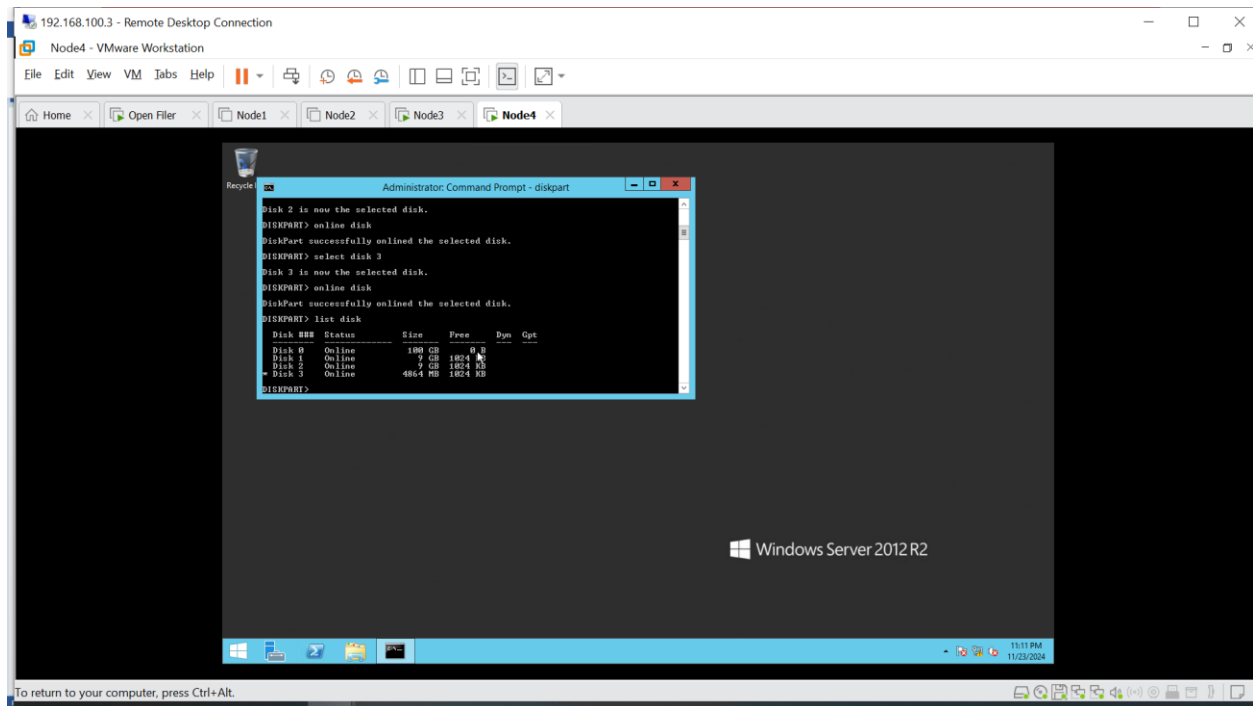
Note : don't format this disk > Cancel





Oracle Cluster New Node Addition is Existing Cluster

List disk





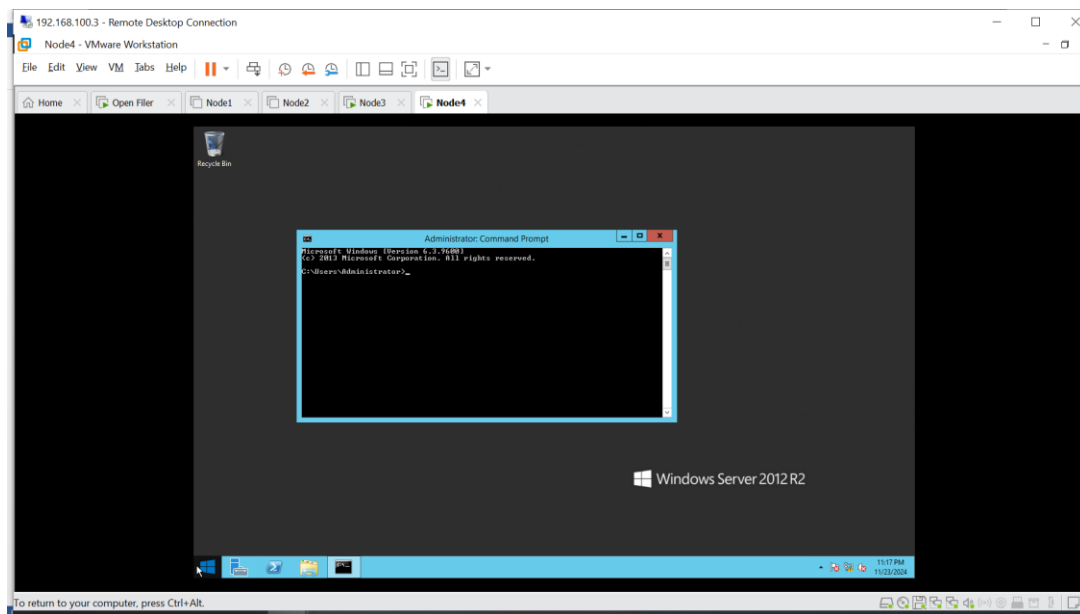
Oracle Cluster New Node Addition is Existing Cluster

13.Set Attribute of Read only Clear for All ASM Disk (New Node)

Open command prompt “cmd”

Diskpart

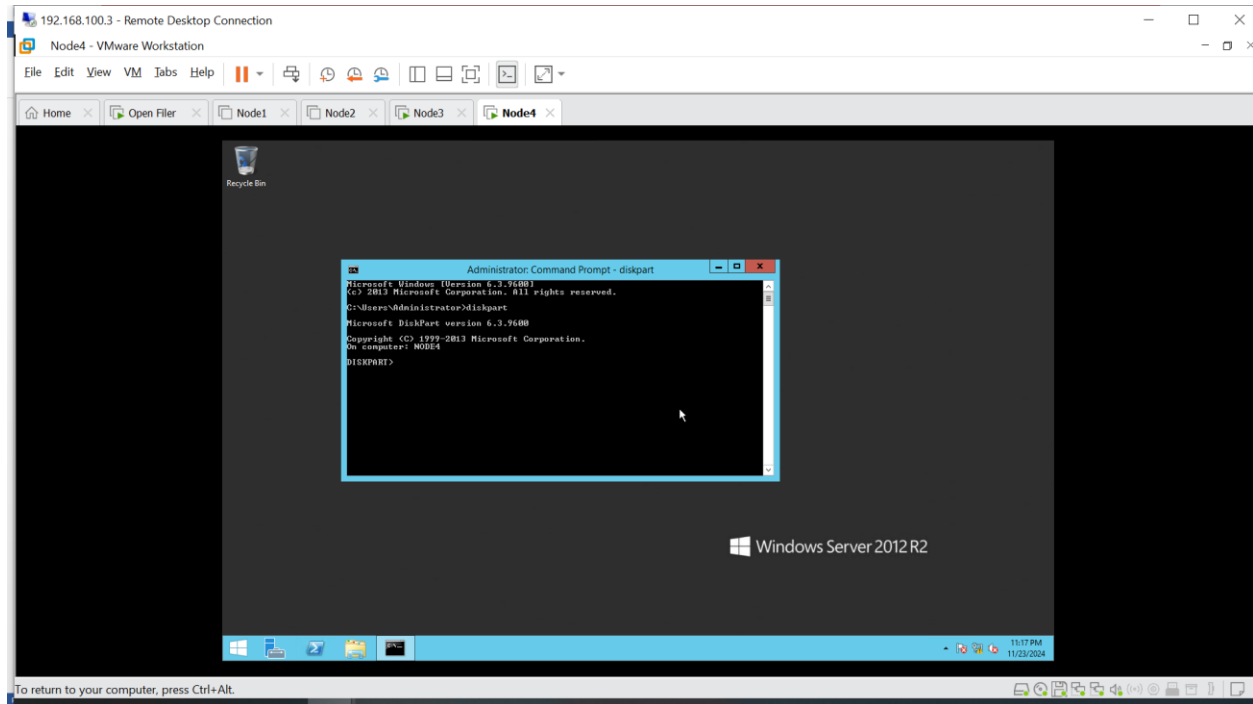
List disk



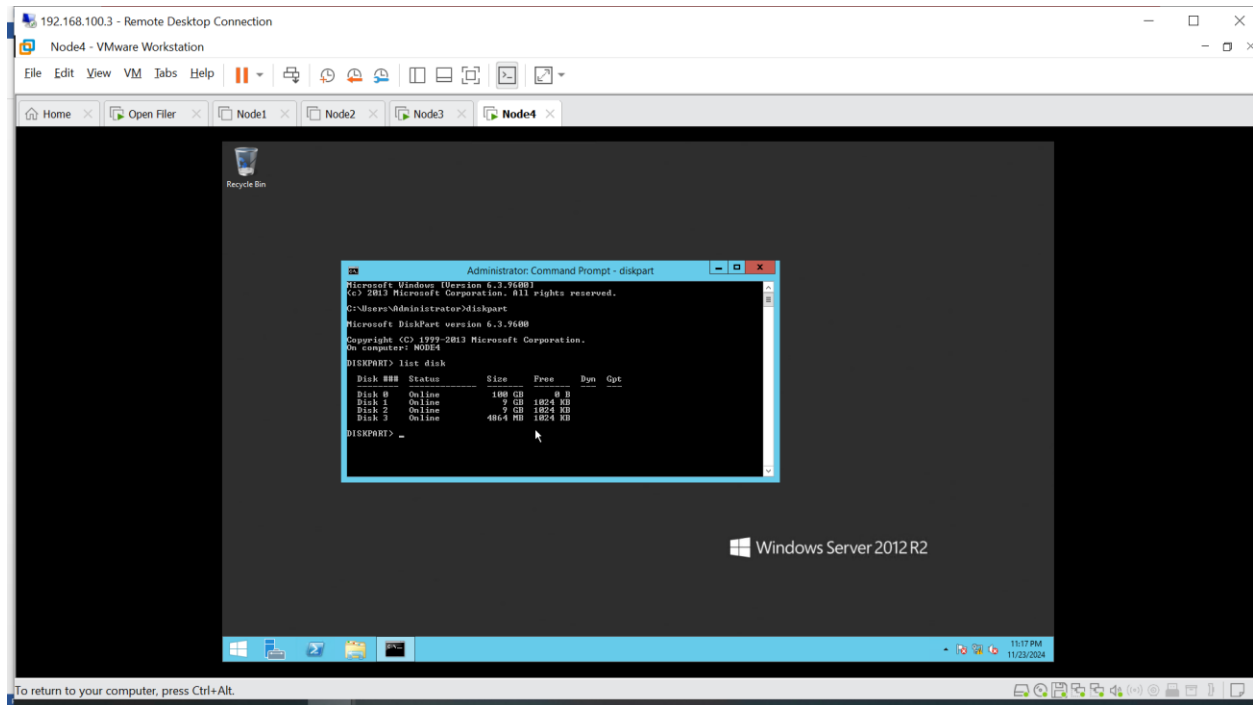
diskpart



Oracle Cluster New Node Addition is Existing Cluster



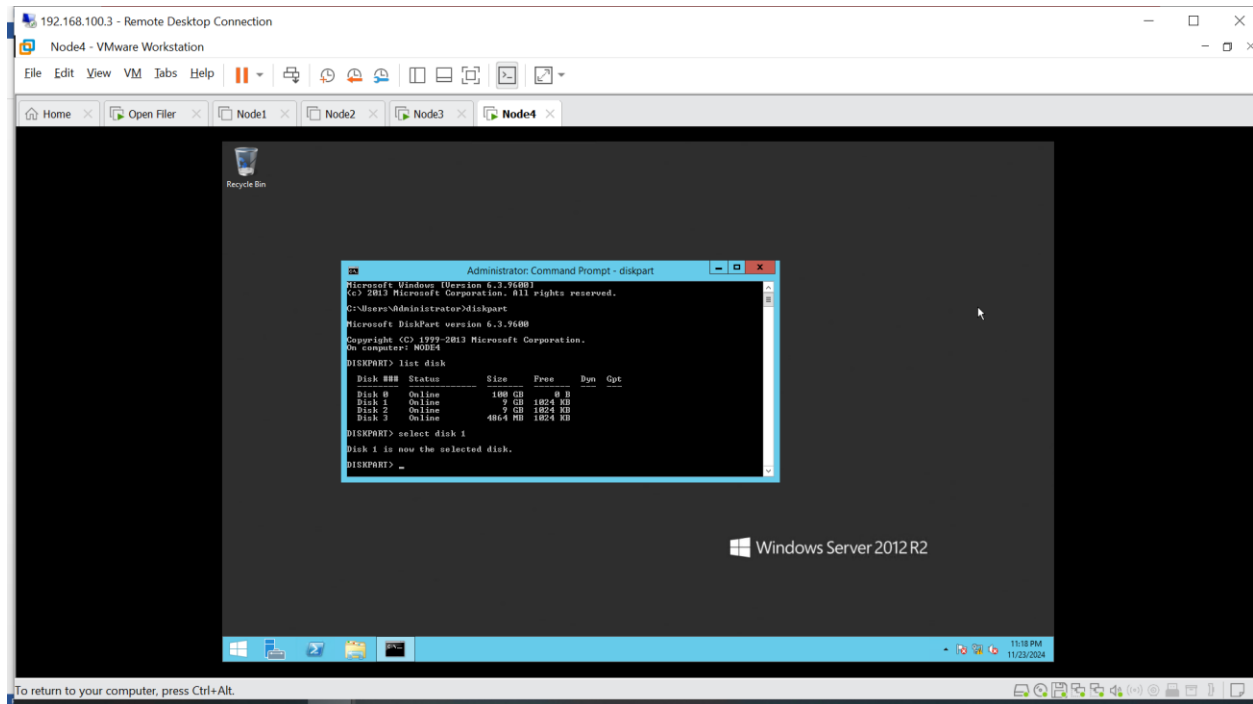
List disk





Oracle Cluster New Node Addition is Existing Cluster

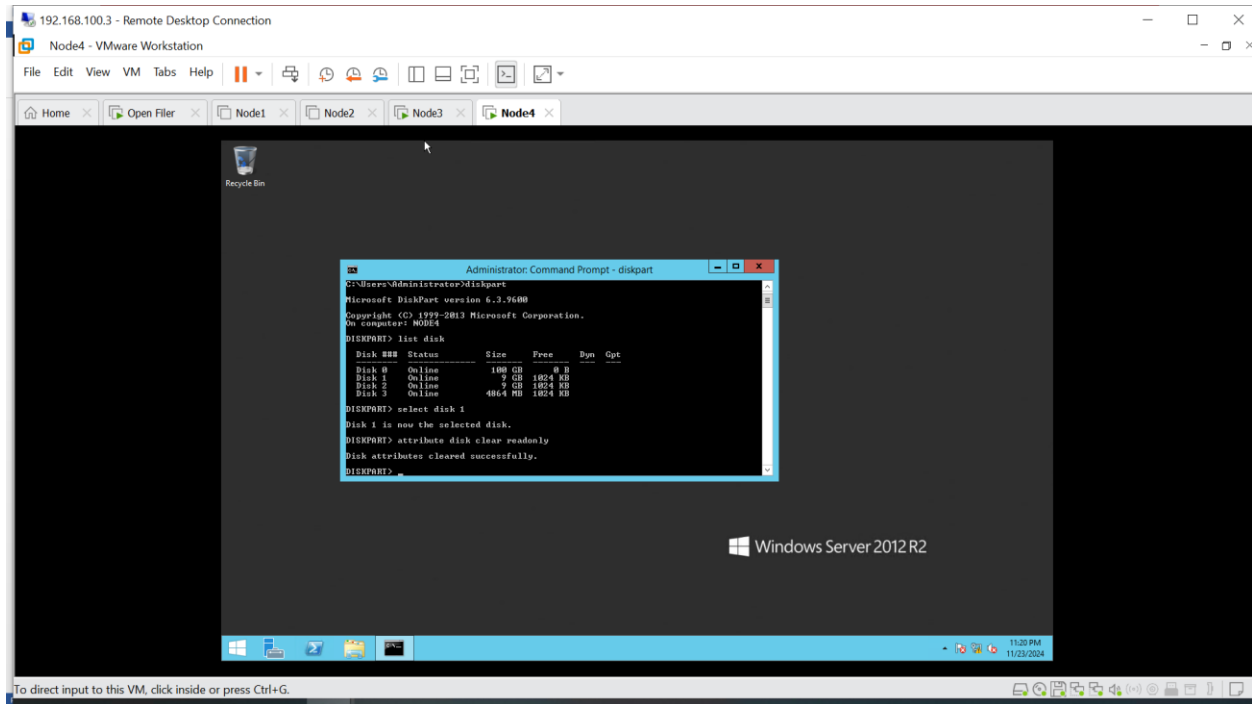
Select disk 1



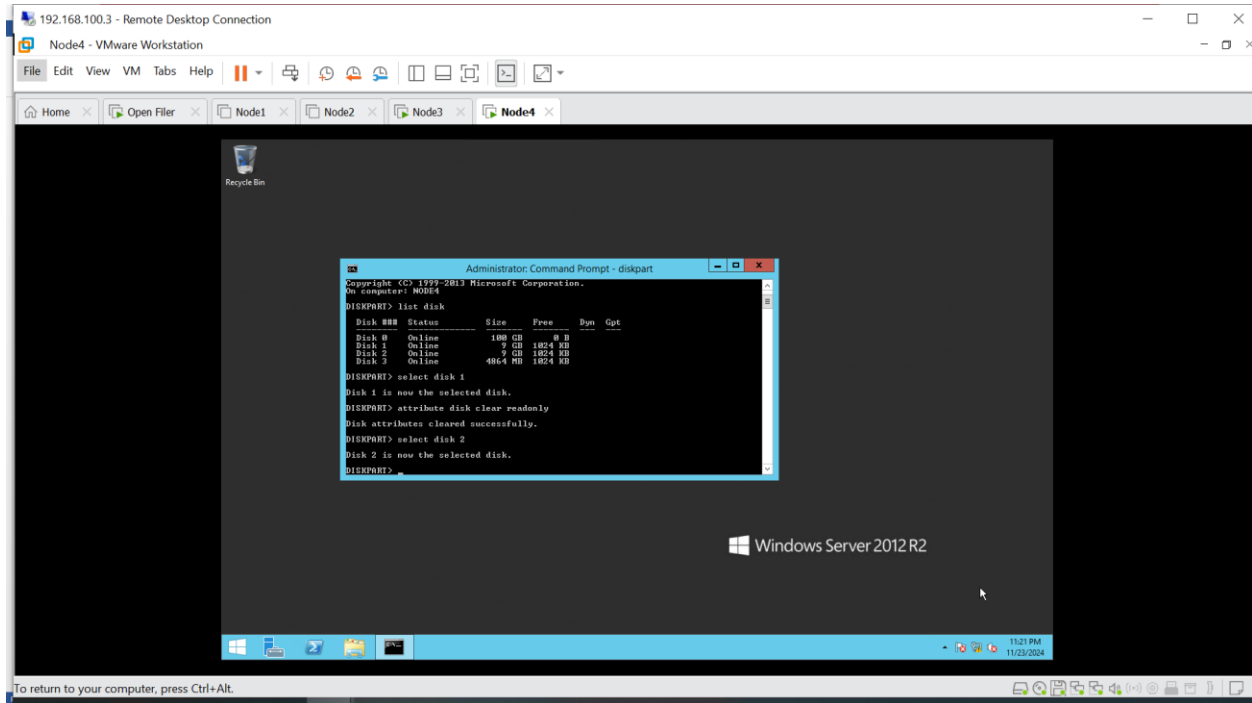
Attribute disk clear readonly



Oracle Cluster New Node Addition is Existing Cluster



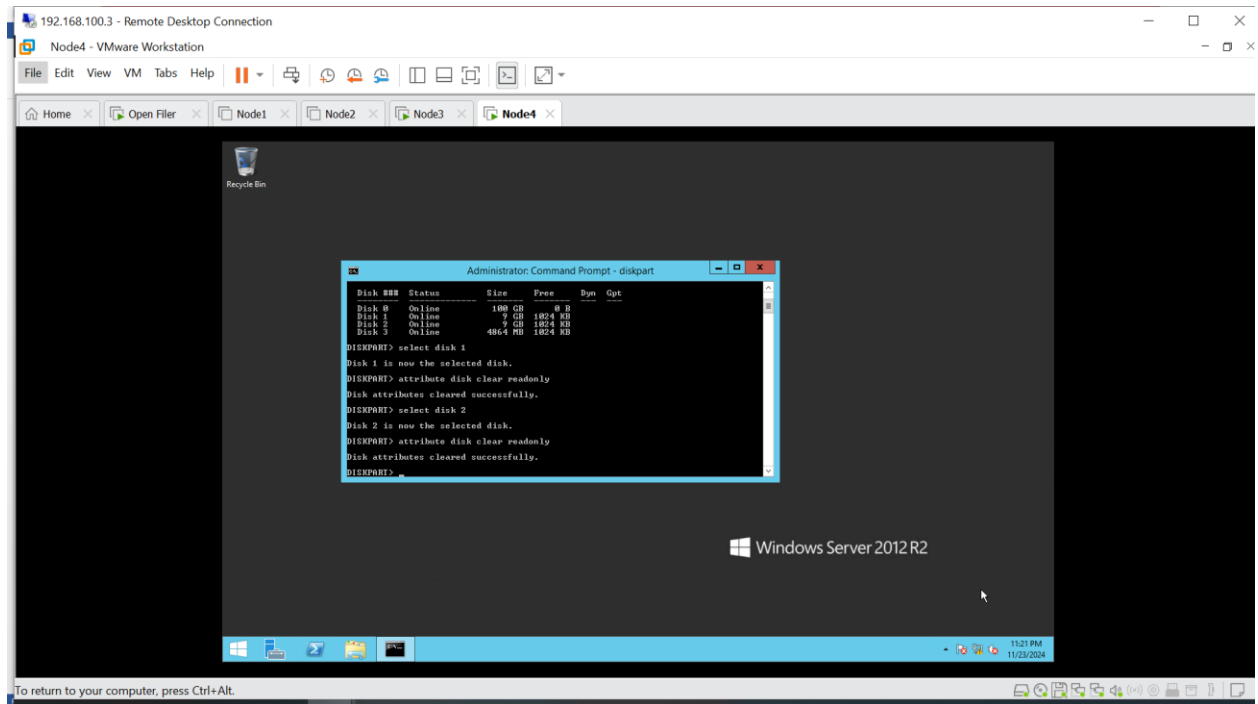
Select disk 2





Oracle Cluster New Node Addition is Existing Cluster

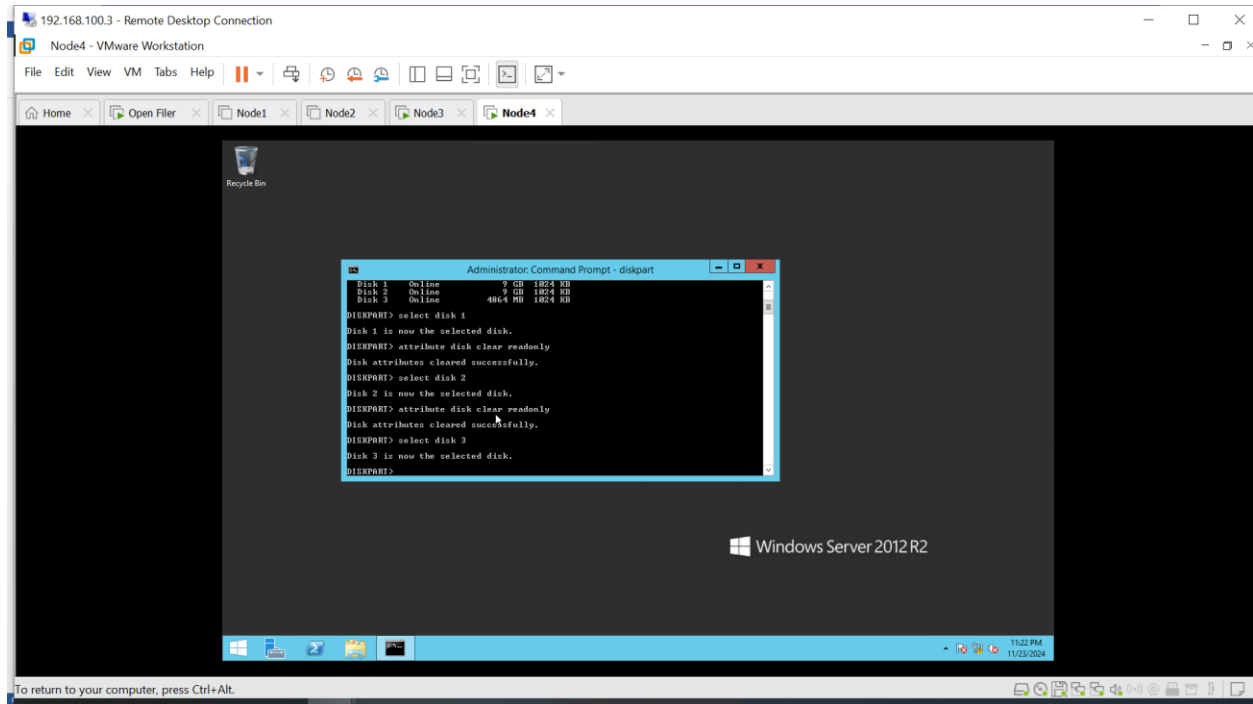
Attribute disk clear readonly



Select disk 3



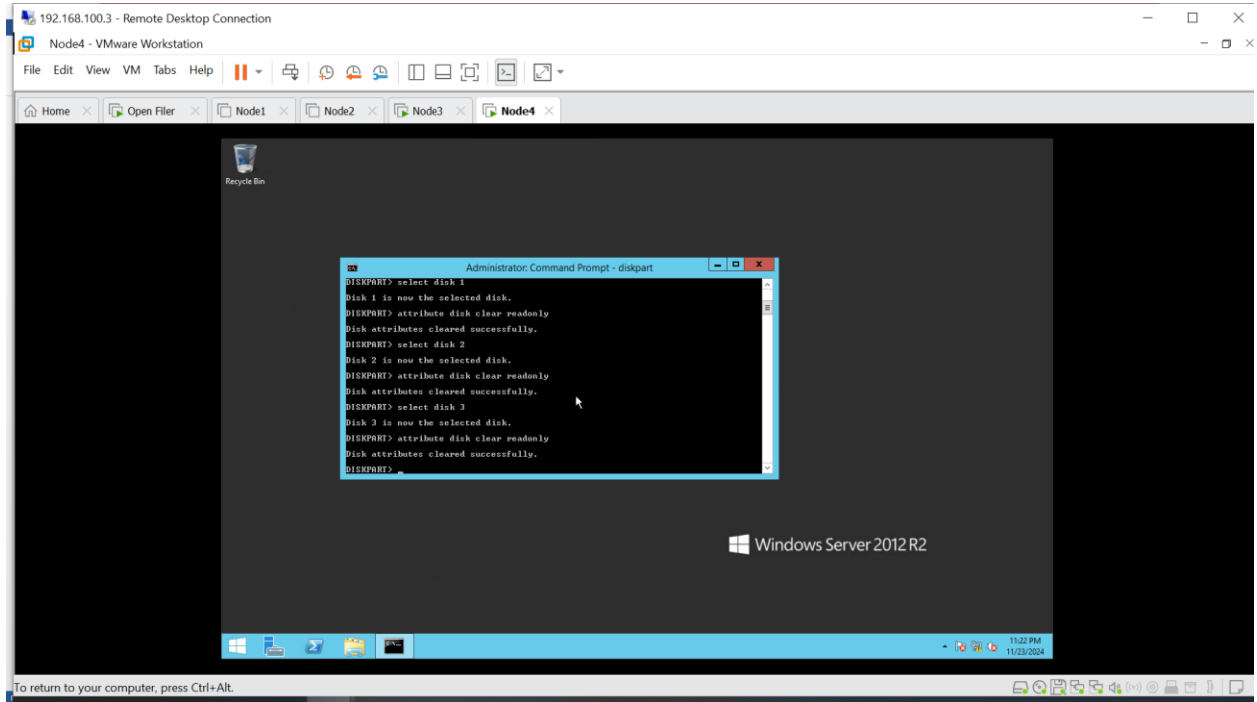
Oracle Cluster New Node Addition is Existing Cluster



Attribute disk clear readonly



Oracle Cluster New Node Addition is Existing Cluster



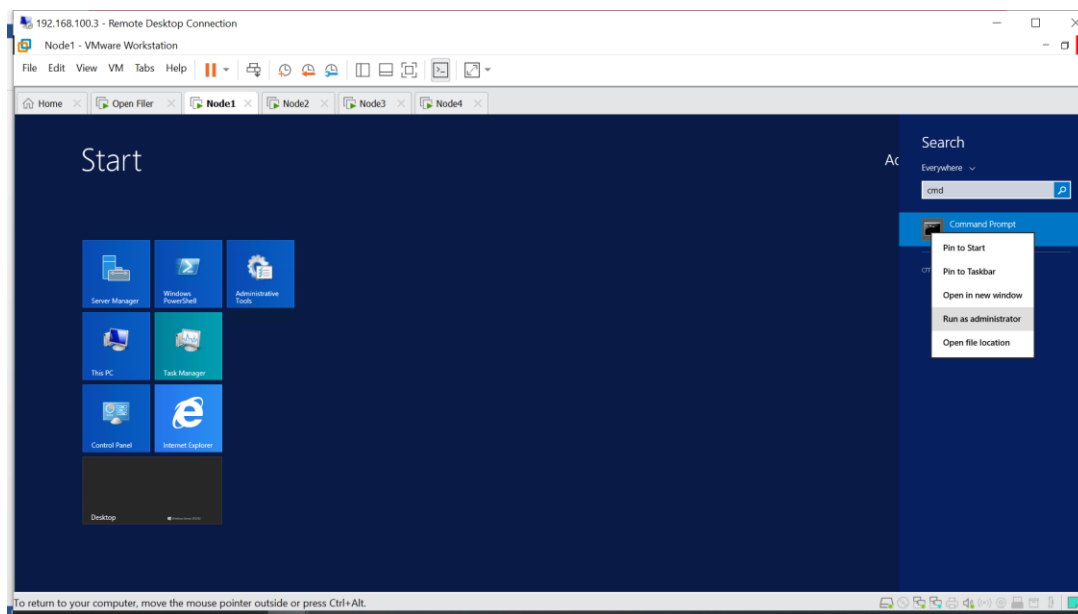


Oracle Cluster New Node Addition is Existing Cluster

14.Adding a Node to a Grid Home (Node 1)

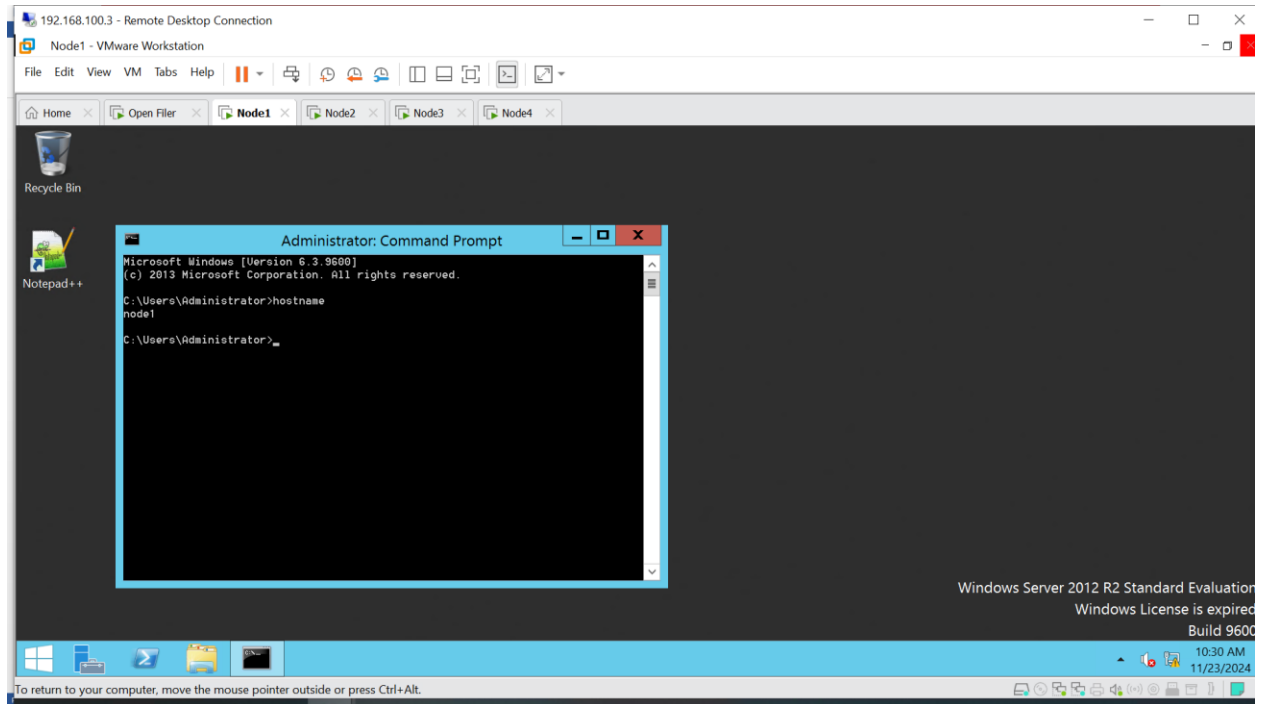
Login on Node 1

Open command as administrator

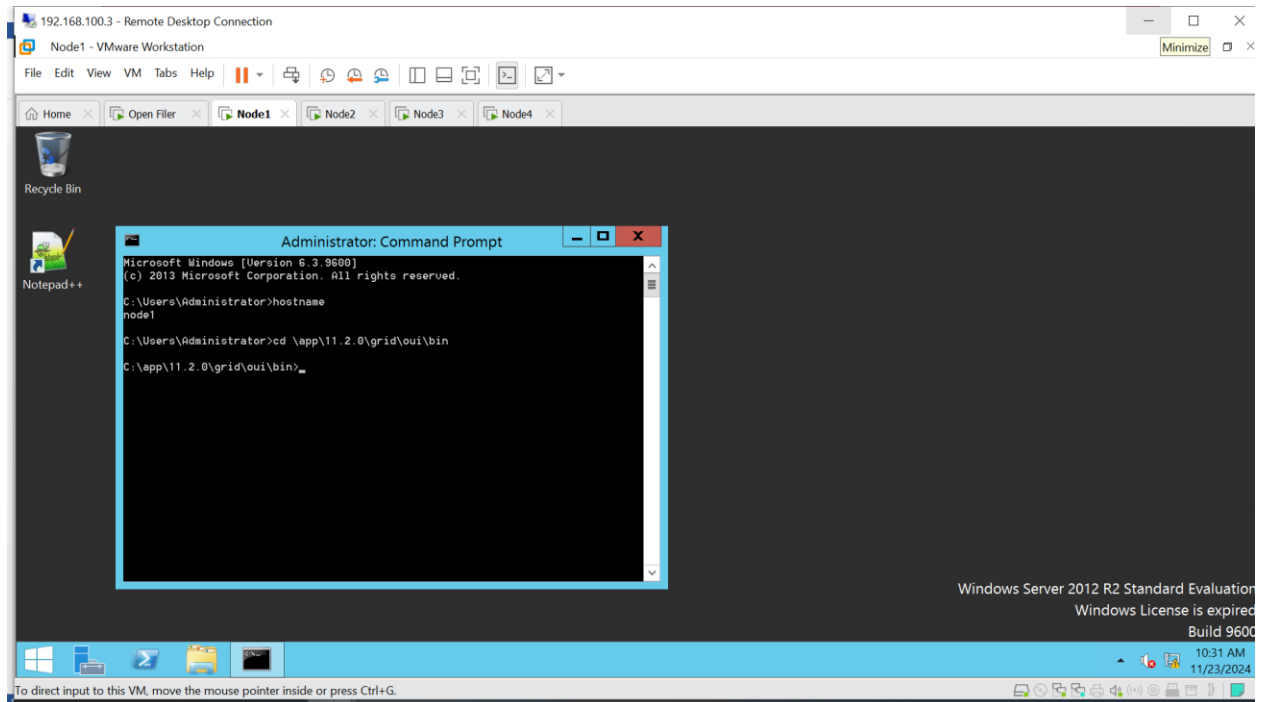




Oracle Cluster New Node Addition is Existing Cluster



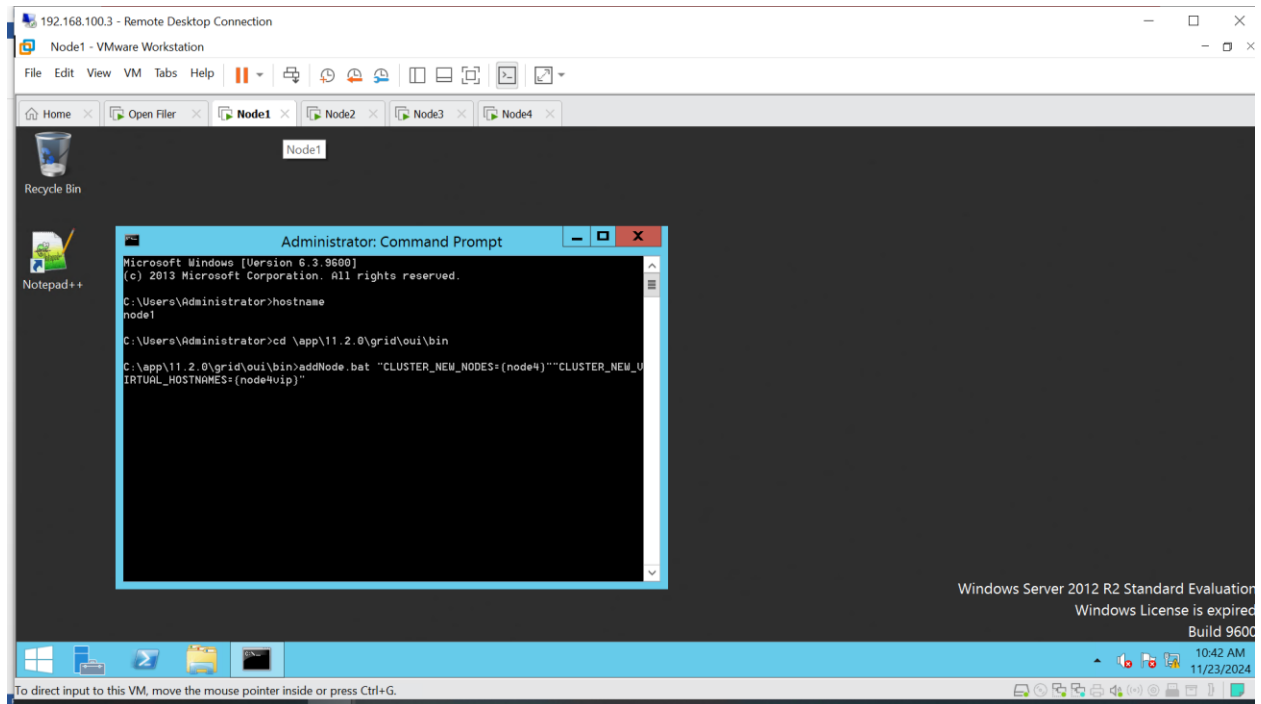
Cd \app\11.2.0\grid\oui\bin





Oracle Cluster New Node Addition in Existing Cluster

`addNode.bat "CLUSTER_NEW_NODES={node4}" "CLUSTER_NEW_VIRTUAL_HOSTNAMES={node4vip}"`





Oracle Cluster New Node Addition is Existing Cluster

192.168.100.3 - Remote Desktop Connection

Node1 - VMware Workstation

File Edit View VM Tabs Help

Home Open File Node1 Node2 Node3 Node4

Recycle Bin

Notepad++

```
Administrator: Command Prompt - addNode.bat "CLUSTER_...
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>hostname
node1

C:\Users\Administrator>cd \app\11.2.0\grid\oui\bin

C:\app\11.2.0\grid\oui\bin>addNode.bat "CLUSTER_NEW_NODES=(node%)" "CLUSTER_NEW_VIRTUAL_HOSTNAMES=(node%uip)"

Performing pre-checks for node addition
```

Windows Server 2012 R2 Standard Evaluation
Windows License is expired
Build 9600

10:43 AM
11/23/2024

To return to your computer, move the mouse pointer outside or press Ctrl+Alt.

192.168.100.3 - Remote Desktop Connection

Node1 - VMware Workstation

File Edit View VM Tabs Help

Home Open File Node1 Node2 Node3 Node4

Recycle Bin

Notepad++

```
Administrator: Command Prompt - addNode.bat "CLUSTER_...
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>hostname
node1

C:\Users\Administrator>cd \app\11.2.0\grid\oui\bin

C:\app\11.2.0\grid\oui\bin>addNode.bat "CLUSTER_NEW_NODES=(node%)" "CLUSTER_NEW_VIRTUAL_HOSTNAMES=(node%uip)"

Performing pre-checks for node addition
Checking node reachability...
Node reachability check passed from node "node1"

Checking user equivalence...
User equivalence check passed for user "Administrator"
```

Windows Server 2012 R2 Standard Evaluation
Windows License is expired
Build 9600

10:43 AM
11/23/2024

To return to your computer, move the mouse pointer outside or press Ctrl+Alt.



Oracle Cluster New Node Addition is Existing Cluster

192.168.100.3 - Remote Desktop Connection

Node1 - VMware Workstation

File Edit View VM Tabs Help

Home Open File Node1 Node2 Node3 Node4

Recycle Bin

Notepad++

```
Administrator: Command Prompt - addNode.bat "CLUSTER_...  
C:\Users\Administrator>cd \app\11.2.0\grid\oui\bin  
C:\app\11.2.0\grid\oui\bin>addNode.bat "CLUSTER_NEW_NODES=(node%)" "CLUSTER_NEW_U  
RTUAL_HOSTNAMES=(node%uip)"  
  
Performing pre-checks for node addition  
Checking node reachability...  
Node reachability check passed from node "node1"  
  
Checking user equivalence...  
User equivalence check passed for user "Administrator"  
Checking CRS integrity...  
Clusterware version consistency passed  
CRS integrity check passed  
Checking shared resources...  
Checking CRS home location...
```

Windows Server 2012 R2 Standard Evaluation
Windows License is expired
Build 9600
10:43 AM
11/23/2024

To return to your computer, move the mouse pointer outside or press Ctrl+Alt.

192.168.100.3 - Remote Desktop Connection

Node1 - VMware Workstation

File Edit View VM Tabs Help

Home Open File Node1 Node2 Node3 Node4

Recycle Bin

Notepad++

```
Administrator: Command Prompt - addNode.bat "CLUSTER_...  
Performing pre-checks for node addition  
Checking node reachability...  
Node reachability check passed from node "node1"  
  
Checking user equivalence...  
User equivalence check passed for user "Administrator"  
Checking CRS integrity...  
Clusterware version consistency passed  
CRS integrity check passed  
Checking shared resources...  
Checking CRS home location...  
"C:\app\11.2.0\grid" is shared  
Shared resources check for node addition passed  
Checking node connectivity...
```

Windows Server 2012 R2 Standard Evaluation
Windows License is expired
Build 9600
10:44 AM
11/23/2024

To return to your computer, move the mouse pointer outside or press Ctrl+Alt.



Oracle Cluster New Node Addition is Existing Cluster

```
Administrator: Command Prompt - addNode.bat "CLUSTER_...
Checking node connectivity...

Check: Node connectivity for interface "Public"
Node connectivity passed for interface "Public"
TCP connectivity check passed for subnet "192.168.18.0"

Check: Node connectivity for interface "Private"
Node connectivity passed for interface "Private"
TCP connectivity check passed for subnet "192.168.10.0"

Checking subnet mask consistency...
Subnet mask consistency check passed for subnet "192.168.18.0".
Subnet mask consistency check passed for subnet "192.168.10.0".
Subnet mask consistency check passed.

Node connectivity check passed

Checking multicast communication...

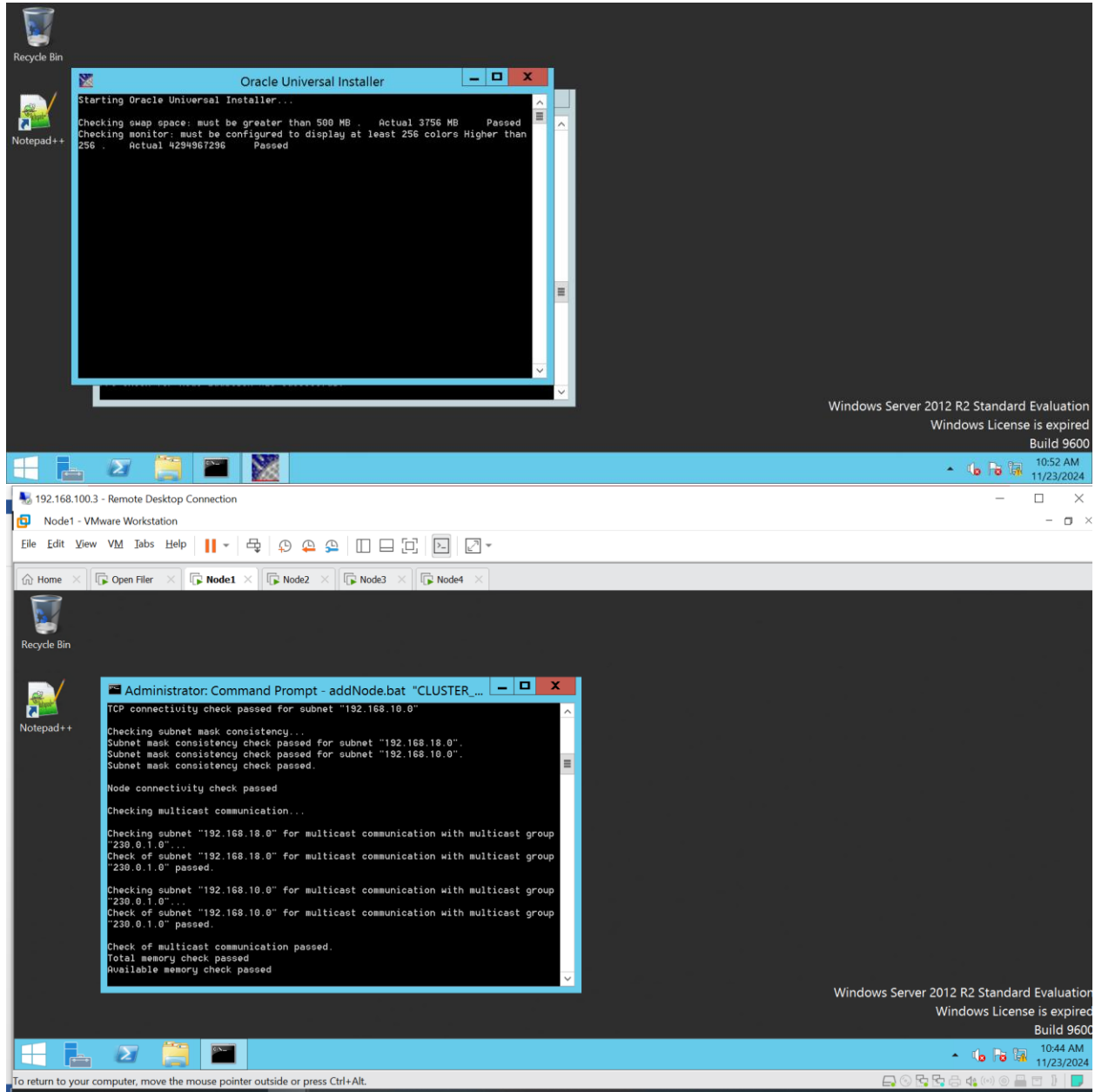
Checking subnet "192.168.18.0" for multicast communication with multicast group
"230.0.1.0"...
```

Windows Server 2012 R2 Standard Evaluation
Windows License is expired
Build 9600
10:44 AM
11/23/2024

To return to your computer, move the mouse pointer outside or press Ctrl+Alt.



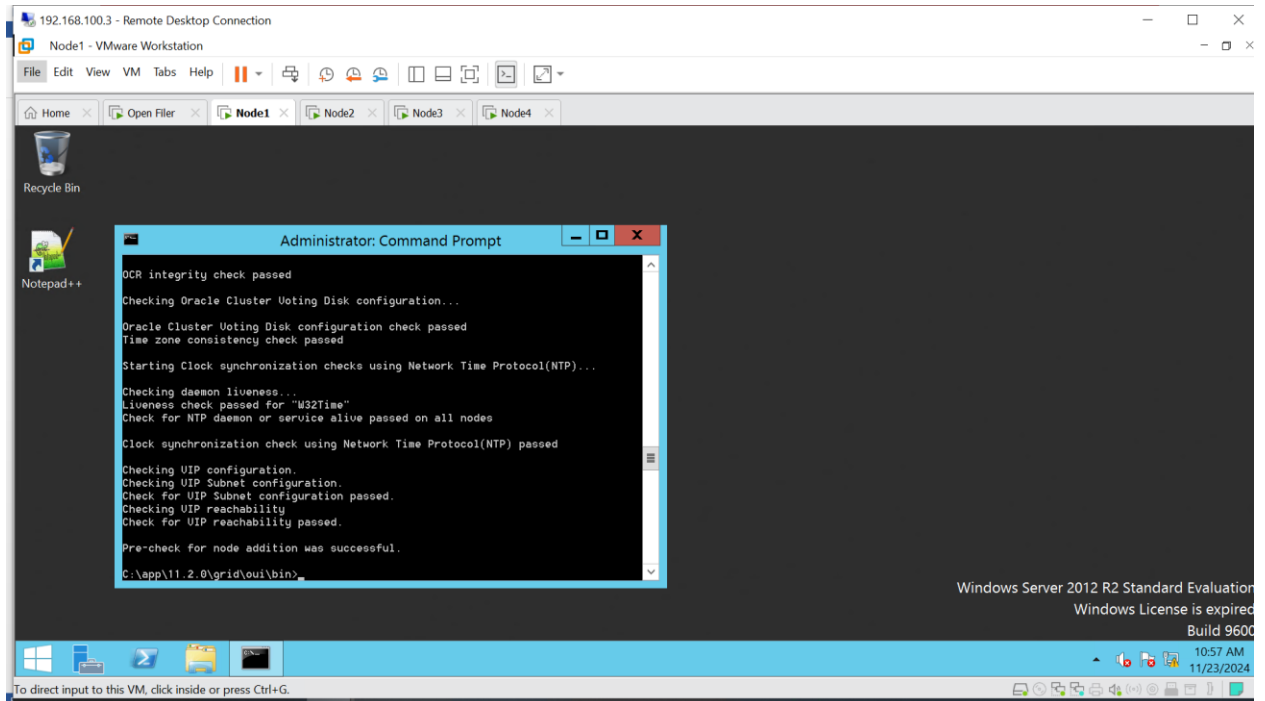
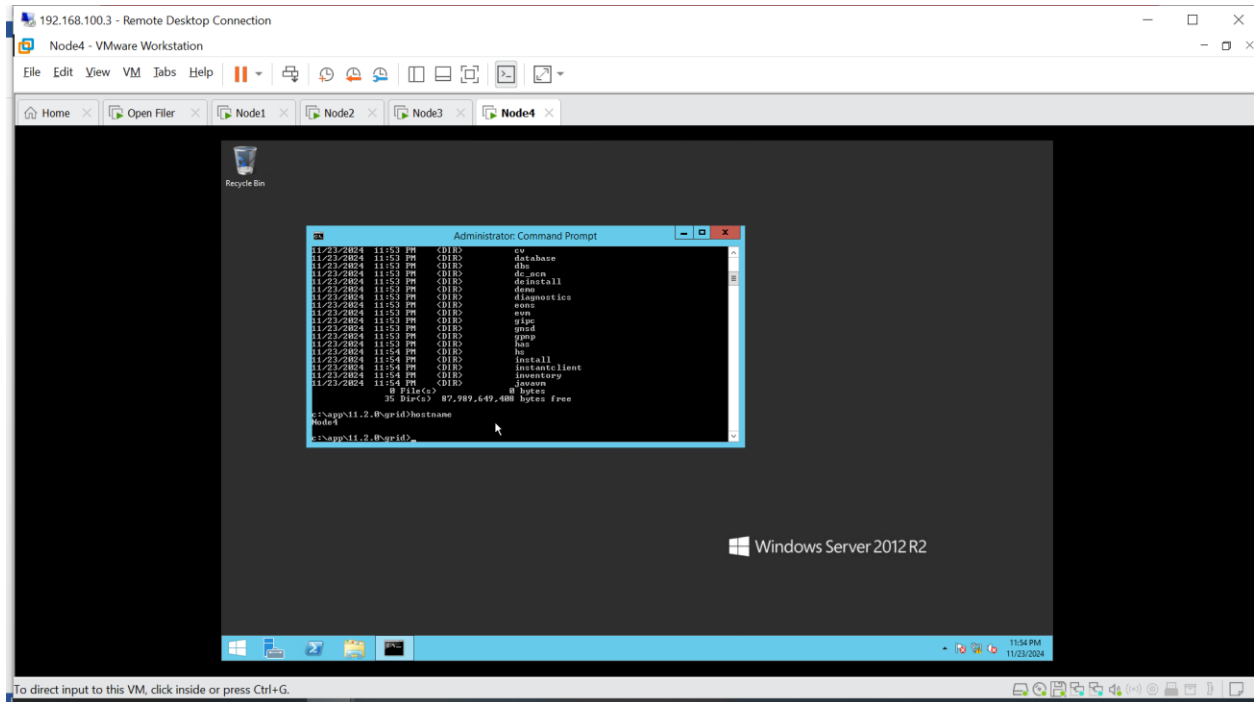
Oracle Cluster New Node Addition is Existing Cluster



It will copy CRS home to New Node



Oracle Cluster New Node Addition is Existing Cluster





Oracle Cluster New Node Addition in Existing Cluster

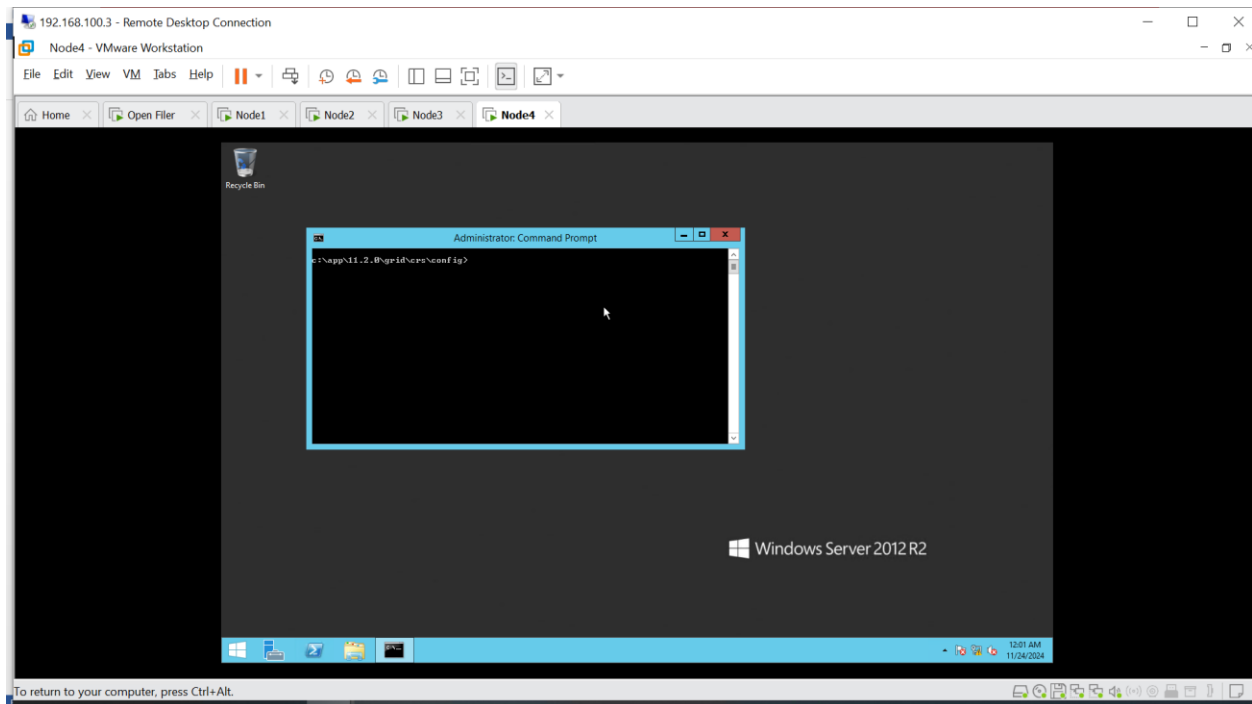
15. Execute Grid Config (New Node)

Login on Node 4 - New Node

Open command as administrator "cmd"

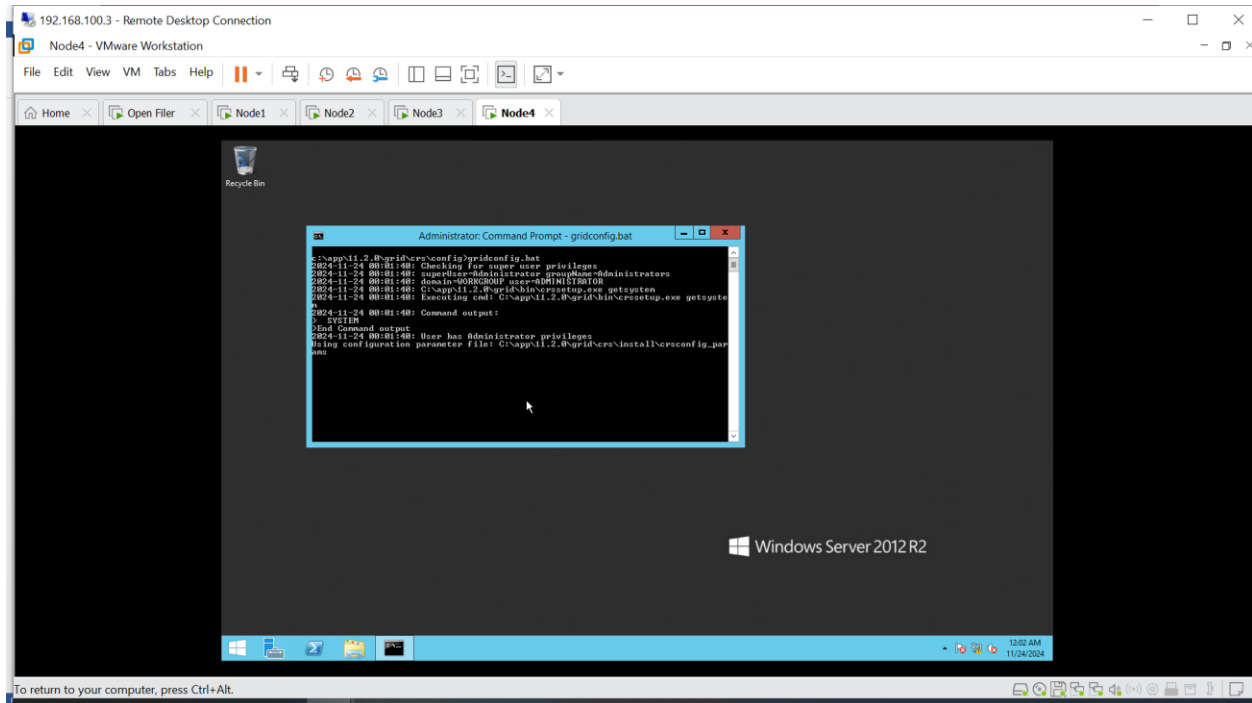
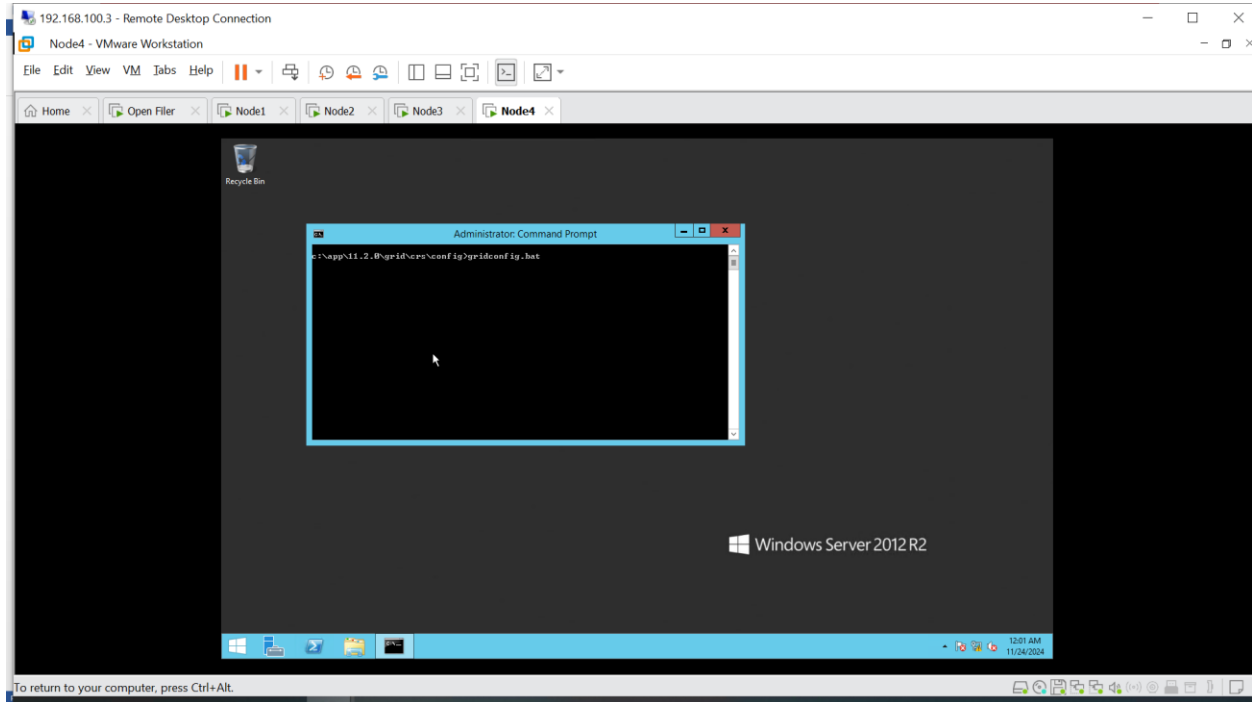
Cd \app\11.2.0\grid\crs\config\

gridconfig.bat



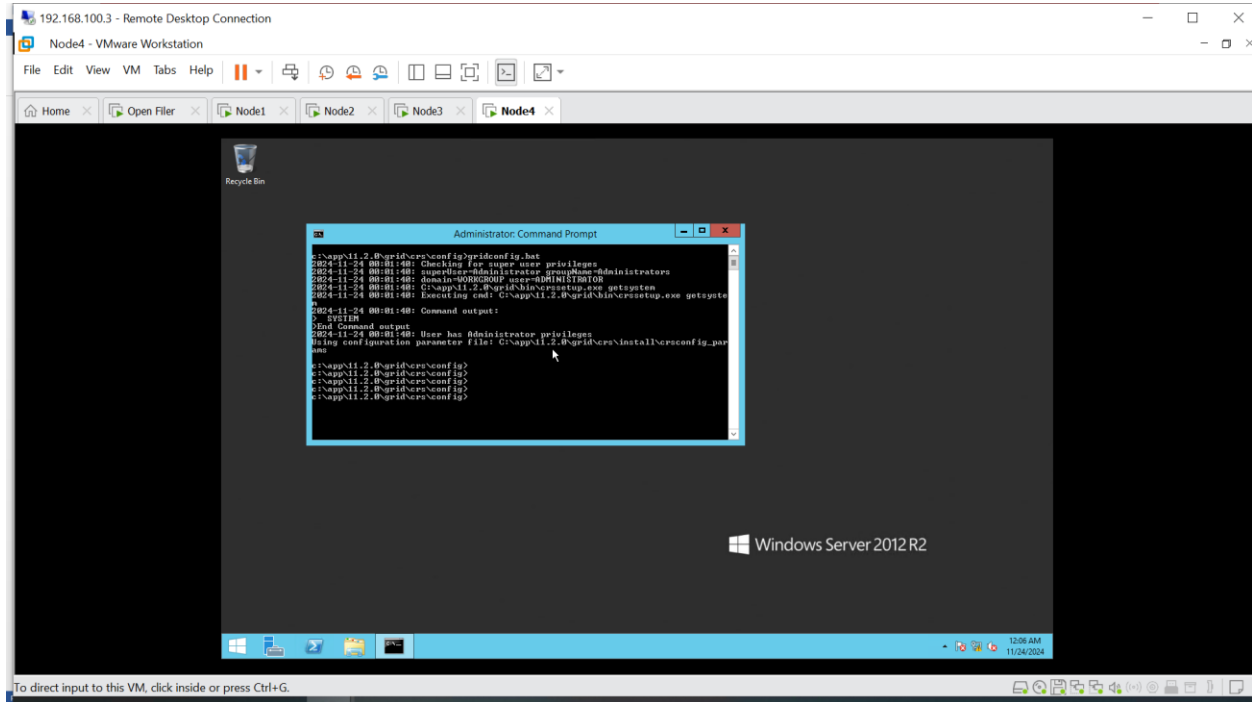


Oracle Cluster New Node Addition is Existing Cluster





Oracle Cluster New Node Addition is Existing Cluster

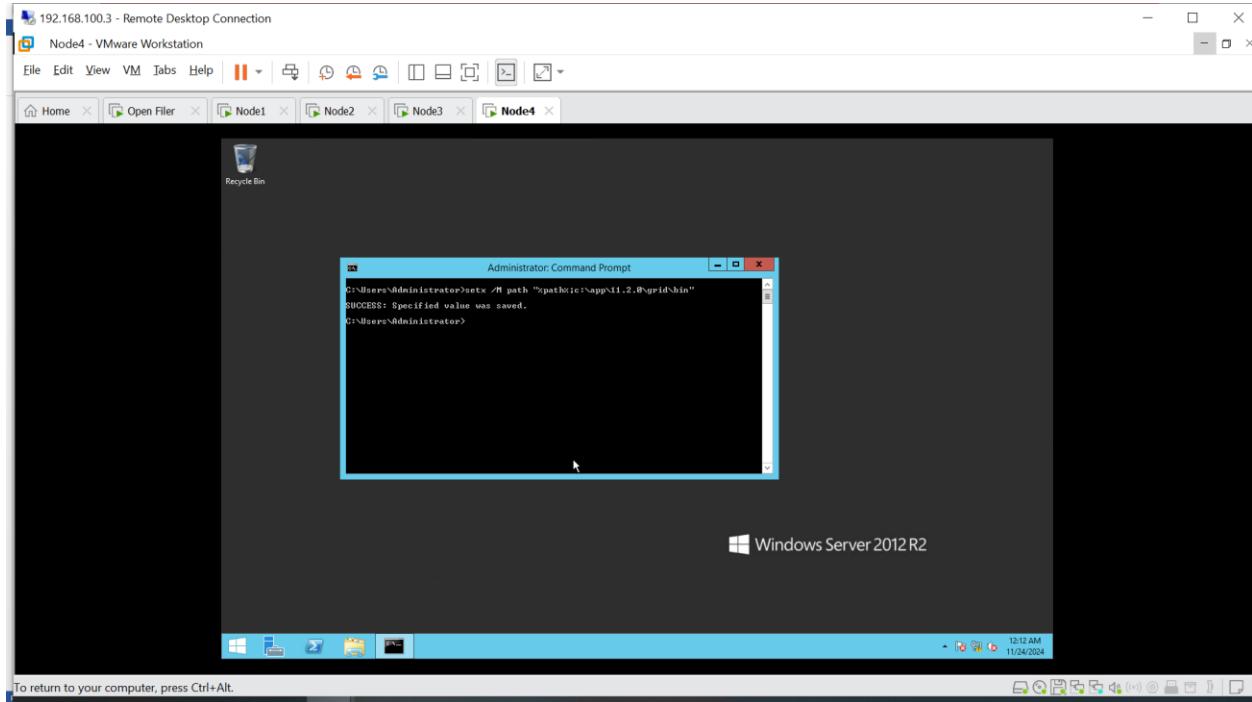


Add Cluster Home in Windows Path

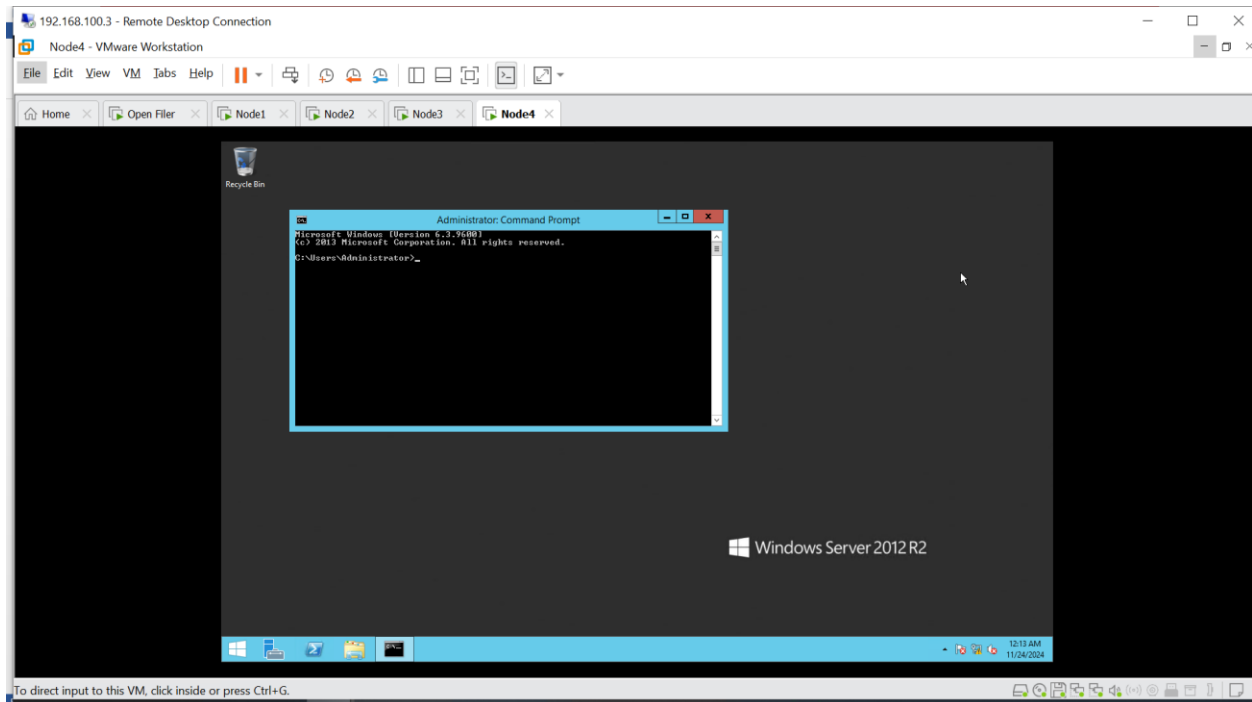
```
setx /M path "%path%;C:\app\11.2.0\grid\bin"
```



Oracle Cluster New Node Addition is Existing Cluster



Re-Open Command Prompt "cmd"





Oracle Cluster New Node Addition is Existing Cluster

Check crs status

Crsctl check crs

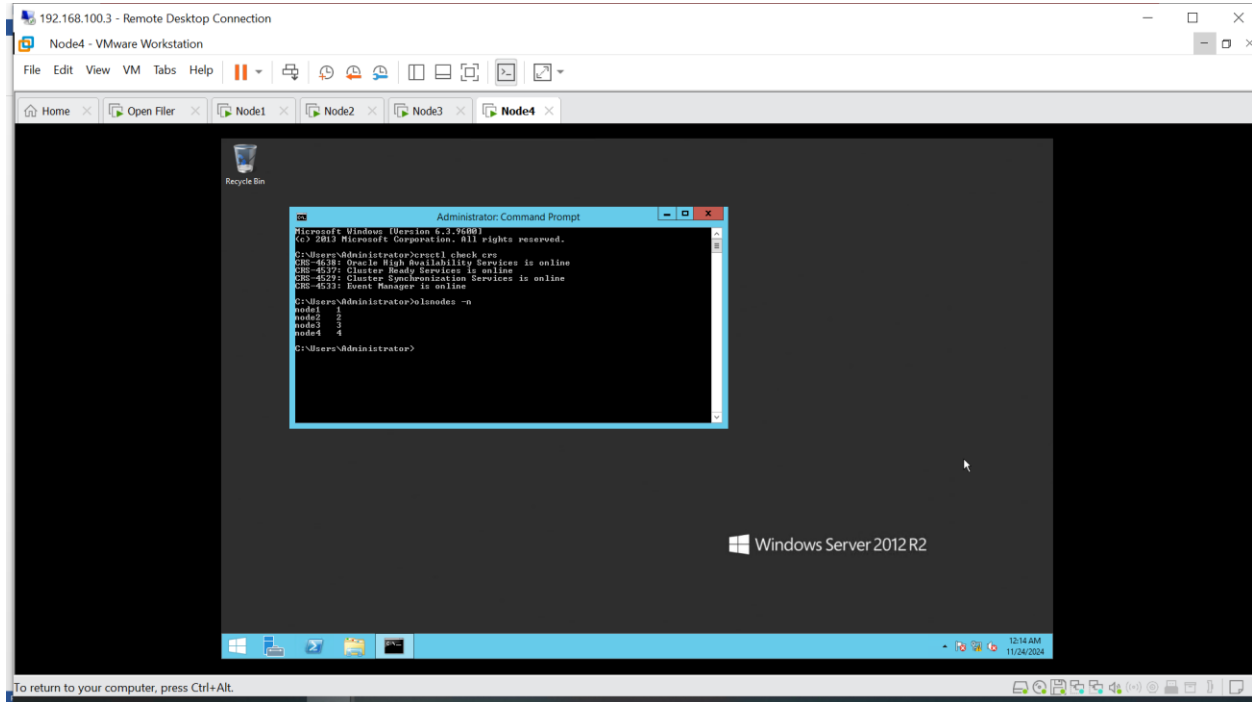
A screenshot of a Remote Desktop Connection window titled '192.168.100.3 - Remote Desktop Connection'. The window shows a Windows Server 2012 R2 desktop environment. A 'Node4 - VMware Workstation' tab is active. On the desktop, there is a 'Recycle Bin' icon and a 'Windows Server 2012 R2' logo. A 'Command Prompt' window is open, displaying the output of the 'crsctl check crs' command. The output shows that the Oracle Cluster Ready Services, Cluster Ready Services, Cluster Synchronization Services, and Event Manager are all online. The system clock in the bottom right corner shows 10:13 AM on 11/24/2024.

```
Administrator: Command Prompt
Microsoft Windows [Version 6.0.6002]
(c) 2013 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>crsctl check crs
CRS-4538: Oracle High Availability Services is online
CRS-4537: Cluster Ready Services is online
CRS-4539: Cluster Synchronization Services is online
CRS-4533: Event Manager is online
C:\Users\Administrator>
```



Oracle Cluster New Node Addition in Existing Cluster



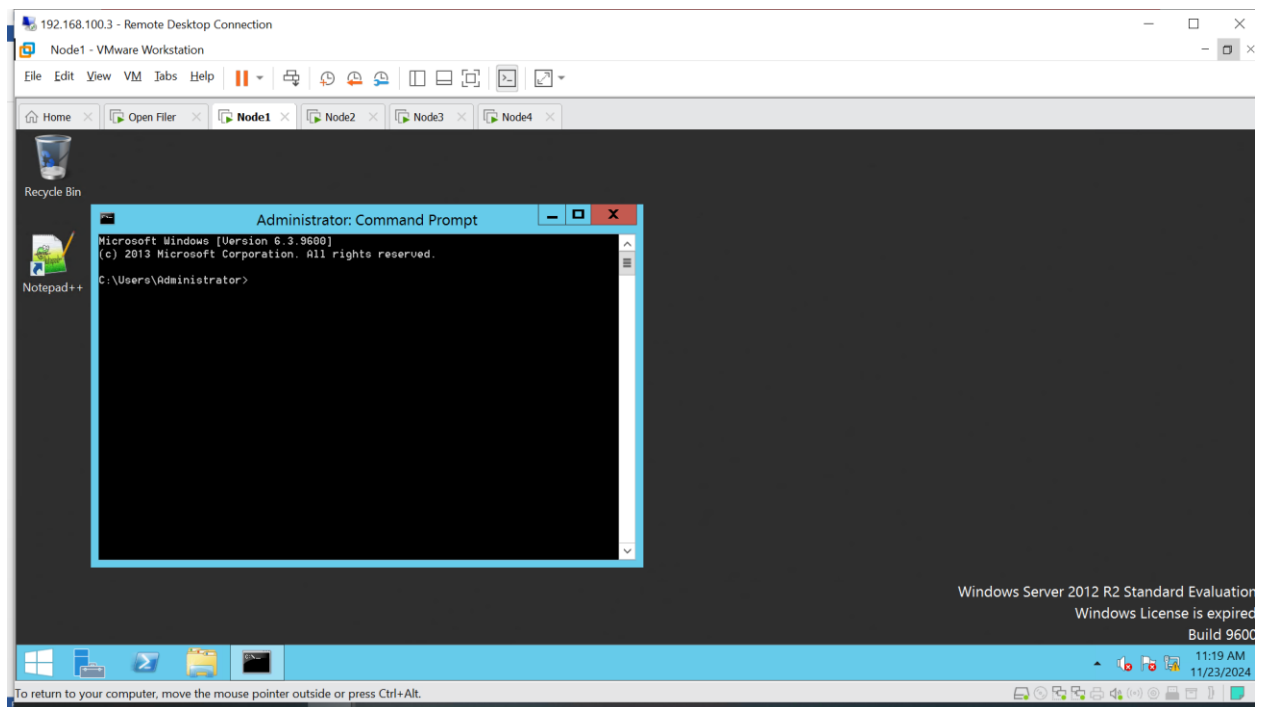


Oracle Cluster New Node Addition is Existing Cluster

16.Post Verify Grid (Node 1)

Login on Node 1

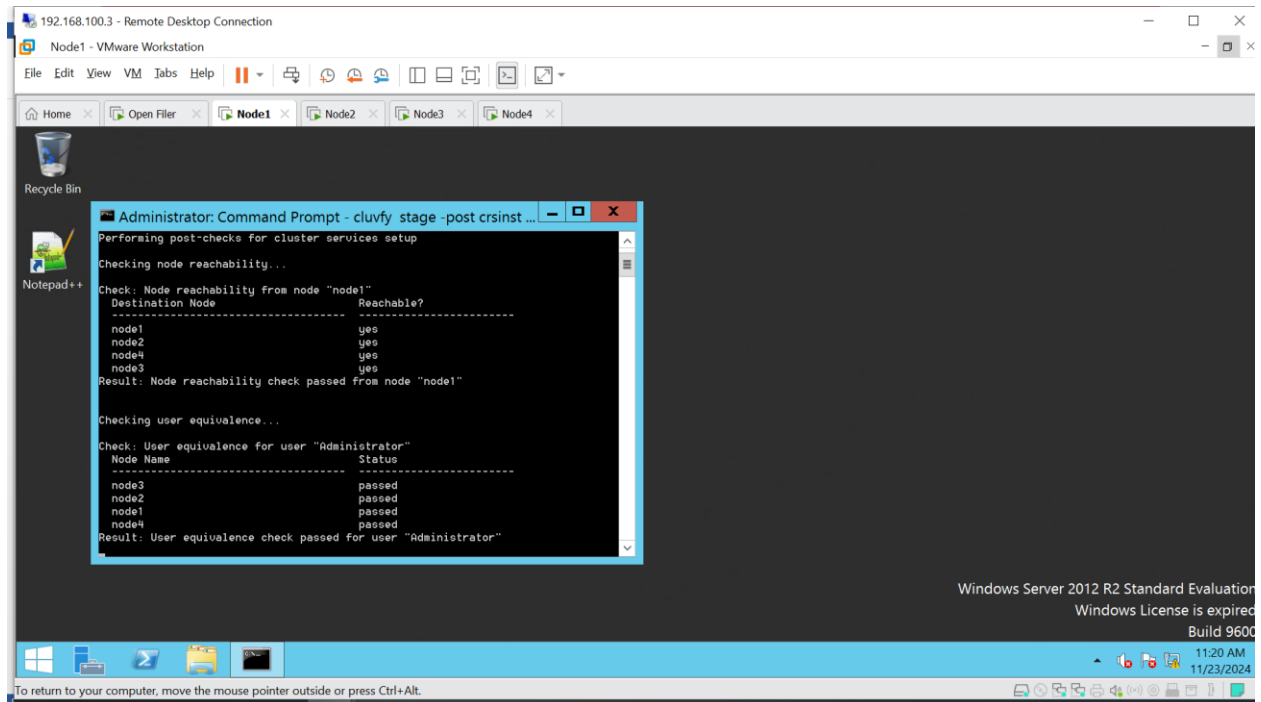
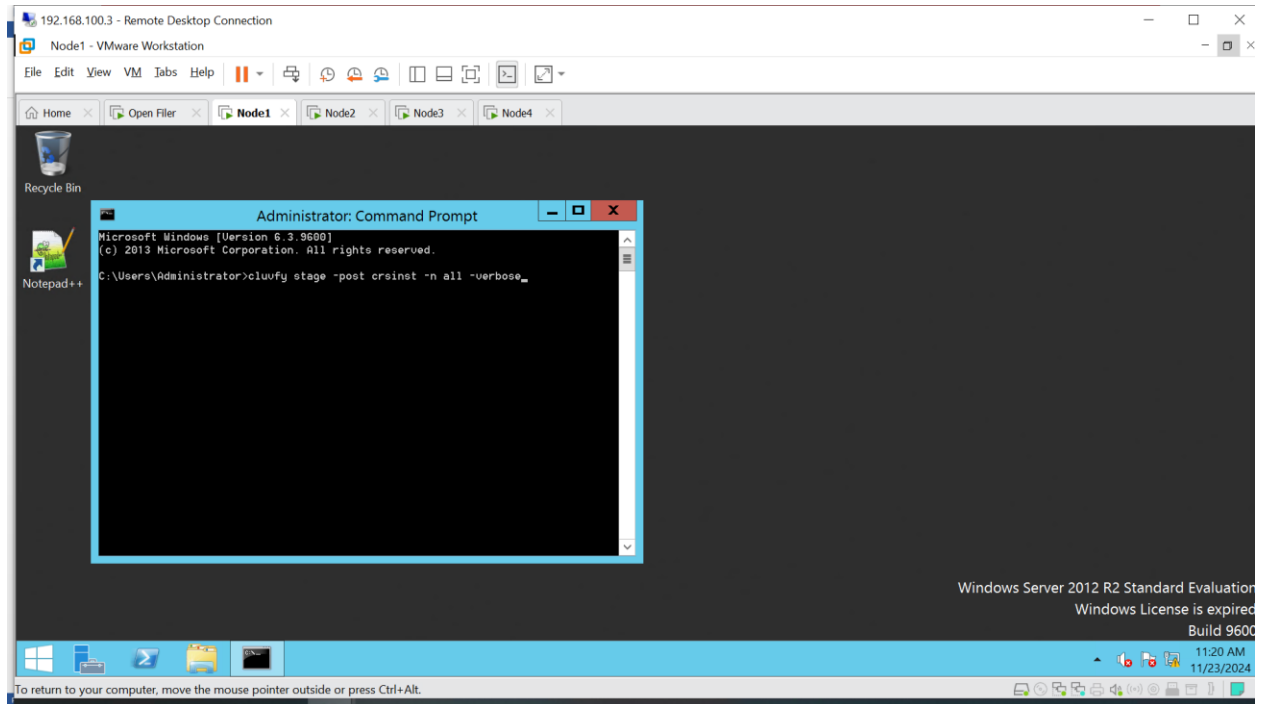
Open Command Prompt “cmd”



```
cluvfy stage -post crsinst -n all -verbose
```



Oracle Cluster New Node Addition is Existing Cluster





Oracle Cluster New Node Addition is Existing Cluster

192.168.100.3 - Remote Desktop Connection

Node1 - VMware Workstation

File Edit View VM Tabs Help

Home Open File Node1 Node2 Node3 Node4

Recycle Bin

Notepad++

Administrator: Command Prompt - cluvfy stage -post crsinst ...

```
node1 yes yes passed
node4 yes yes passed
NETWORK node application check passed

Checking existence of GSD node application (optional)
Node Name Required Running? Comment
-----
node3 no no exists
node2 no no exists
node1 no no exists
node4 no no exists
GSD node application is offline on nodes "node3,node2,node1,node4"

Checking existence of ONS node application (optional)
Node Name Required Running? Comment
-----
node3 no yes passed
node2 no yes passed
node1 no yes passed
node4 no yes passed
ONS node application check passed

Checking Single Client Access Name (SCAN)...
```

Windows Server 2012 R2 Standard Evaluation
Windows License is expired
Build 9600
11:22 AM
11/23/2024

To return to your computer, move the mouse pointer outside or press Ctrl+Alt.

192.168.100.3 - Remote Desktop Connection

Node1 - VMware Workstation

File Edit View VM Tabs Help

Home Open File Node1 Node2 Node3 Node4

Administrator: Command Prompt

```
Checking daemon liveness...
Check: Liveness for "W32Time"
Node Name Running?
-----
node3 yes
node2 yes
node1 yes
node4 yes
Result: Liveness check passed for "W32Time"
Check for NTP daemon or service alive passed on all nodes
Result: Clock synchronization check using Network Time Protocol(NTP) passed

Oracle Cluster Time Synchronization Services check passed
Checking VIP configuration.
Checking VIP Subnet configuration.
Check for VIP Subnet configuration passed.
Checking VIP reachability
Check for VIP reachability passed.
Post-check for cluster services setup was successFul.
C:\Users\Administrator>
```

Windows Server 2012 R2 Standard Evaluation
Windows License is expired
Build 9600
12:50 AM
11/24/2024

To return to your computer, move the mouse pointer outside or press Ctrl+Alt.



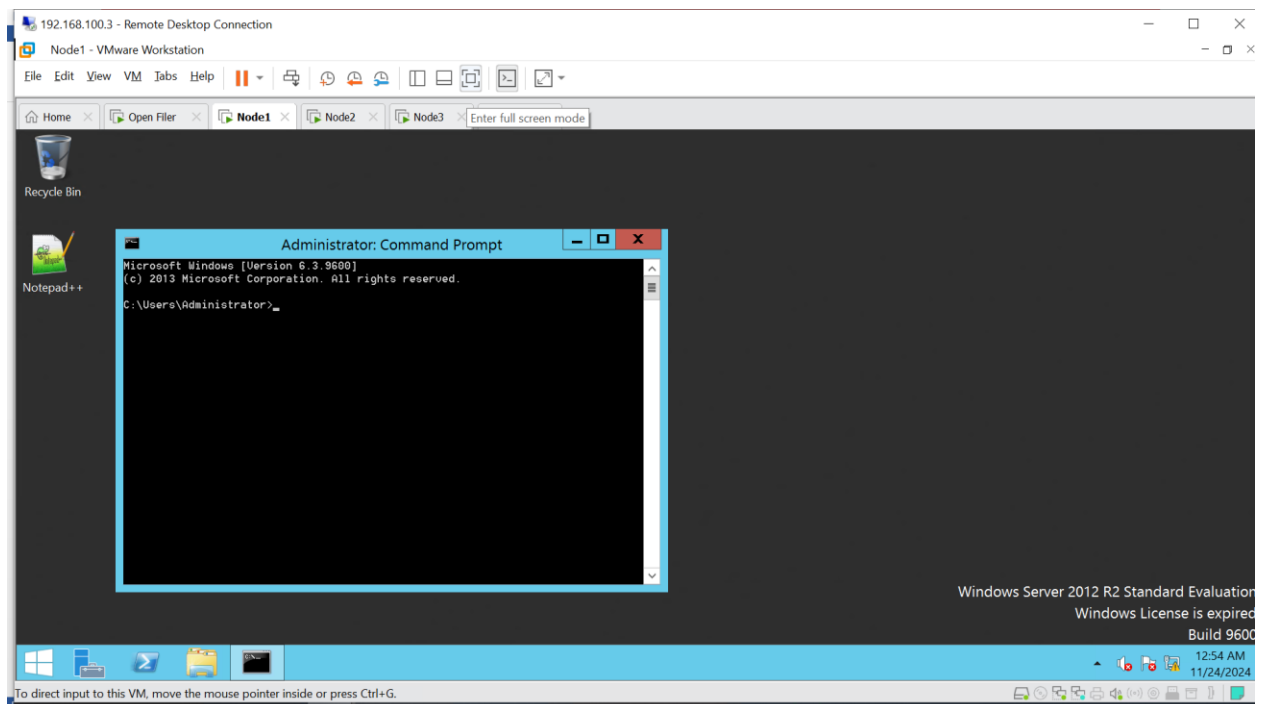
Oracle Cluster New Node Addition in Existing Cluster

Till Now Node has been added in Cluster

17. Adding a Node to an Oracle Home (Node 1)

Login on Node 1

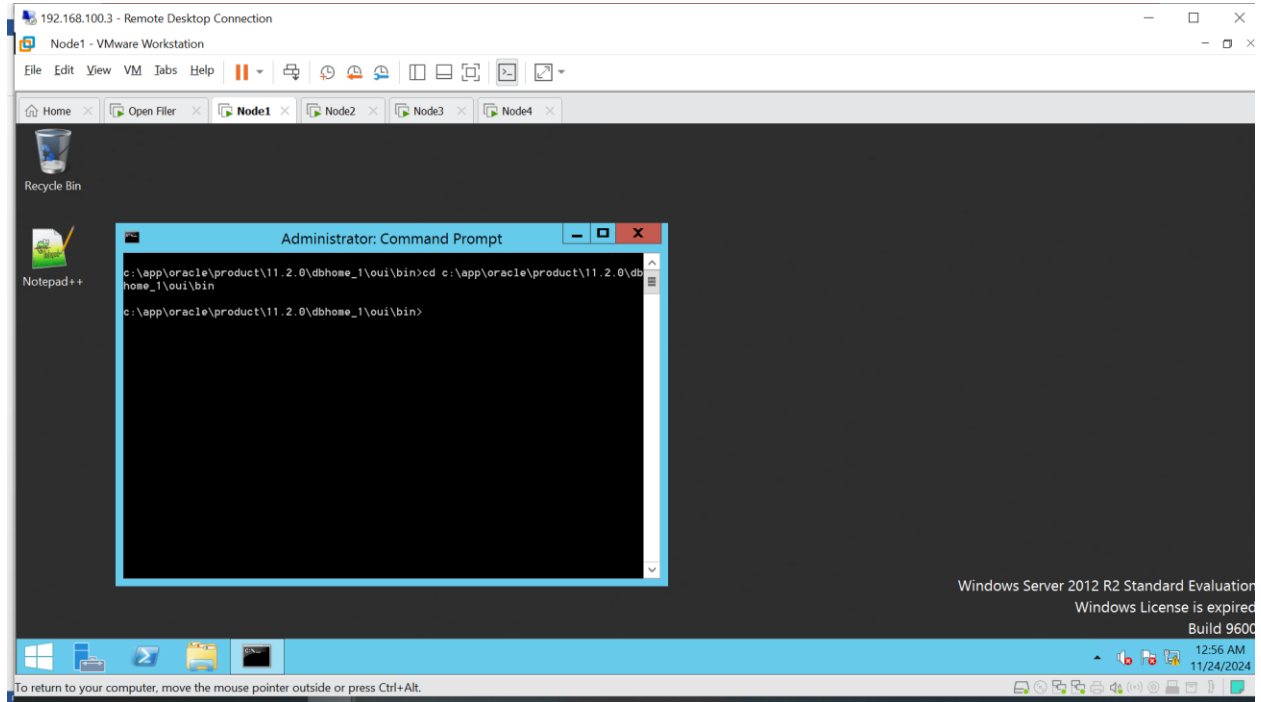
Open Command Prompt “cmd”



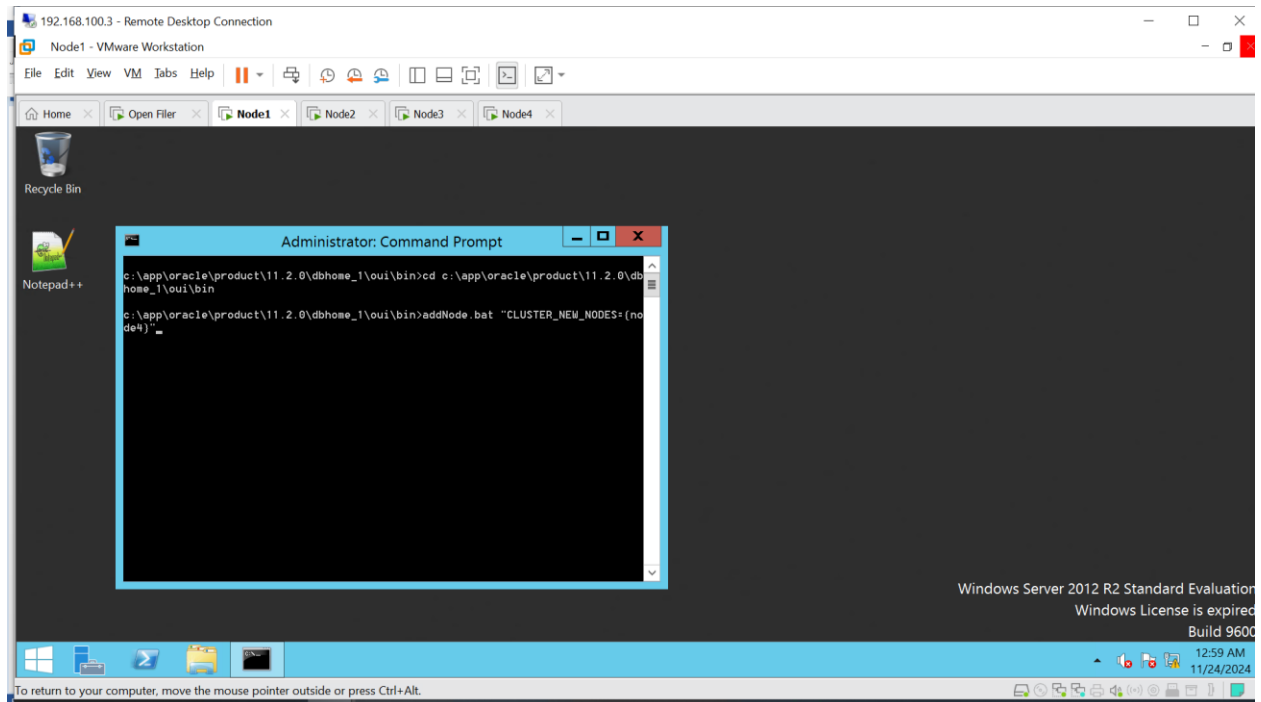
Cd c:\app\oracle\product\11.2.0\dbhome_1\oui\bin



Oracle Cluster New Node Addition is Existing Cluster



addNode.bat "CLUSTER_NEW_NODES={node4}"

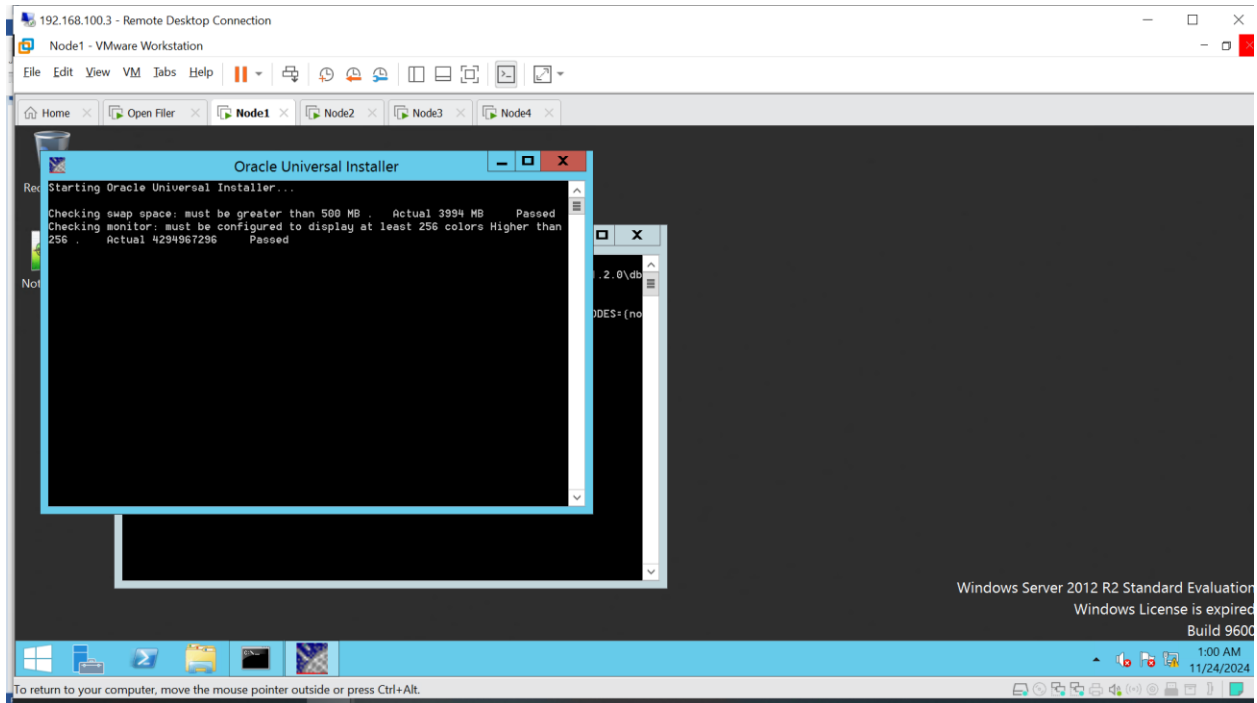
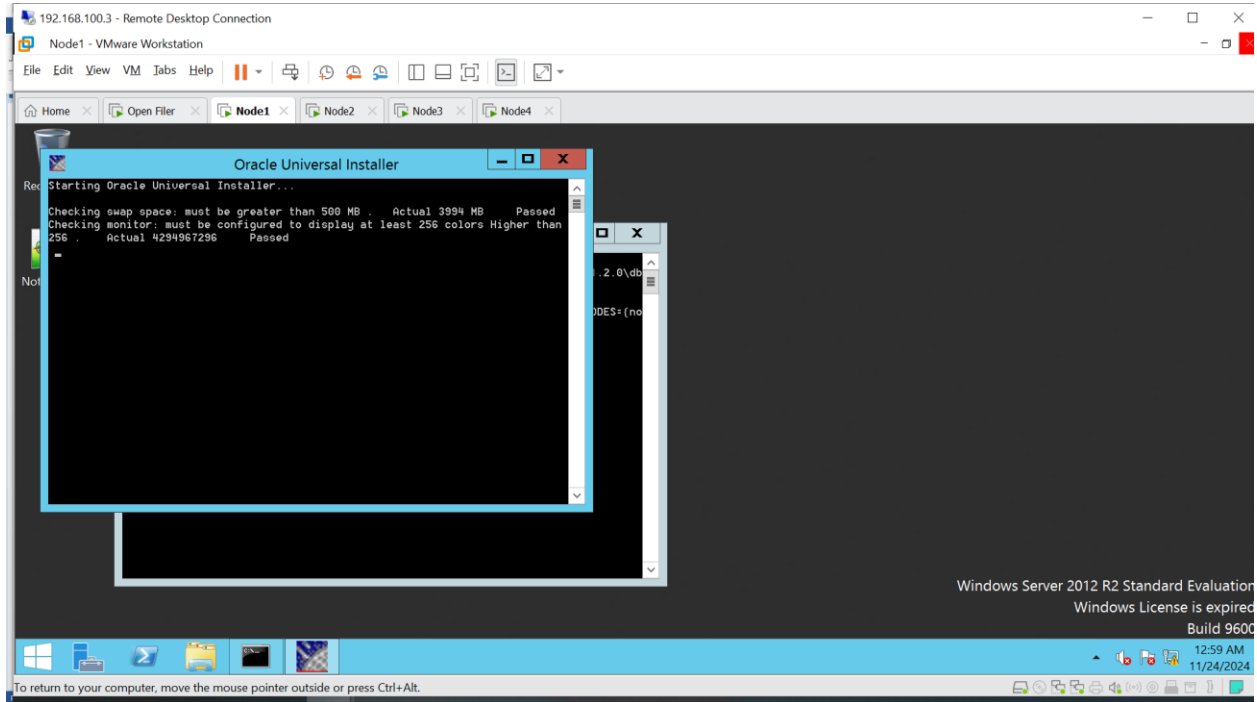




Oracle Cluster New Node Addition is Existing Cluster



Oracle Cluster New Node Addition is Existing Cluster





Oracle Cluster New Node Addition is Existing Cluster



Oracle Cluster New Node Addition in Existing Cluster

18. Register New Node Virtual IP

(Node 1)

Note: If VIP of New not add in previous Steps then run and verify by

Verify by

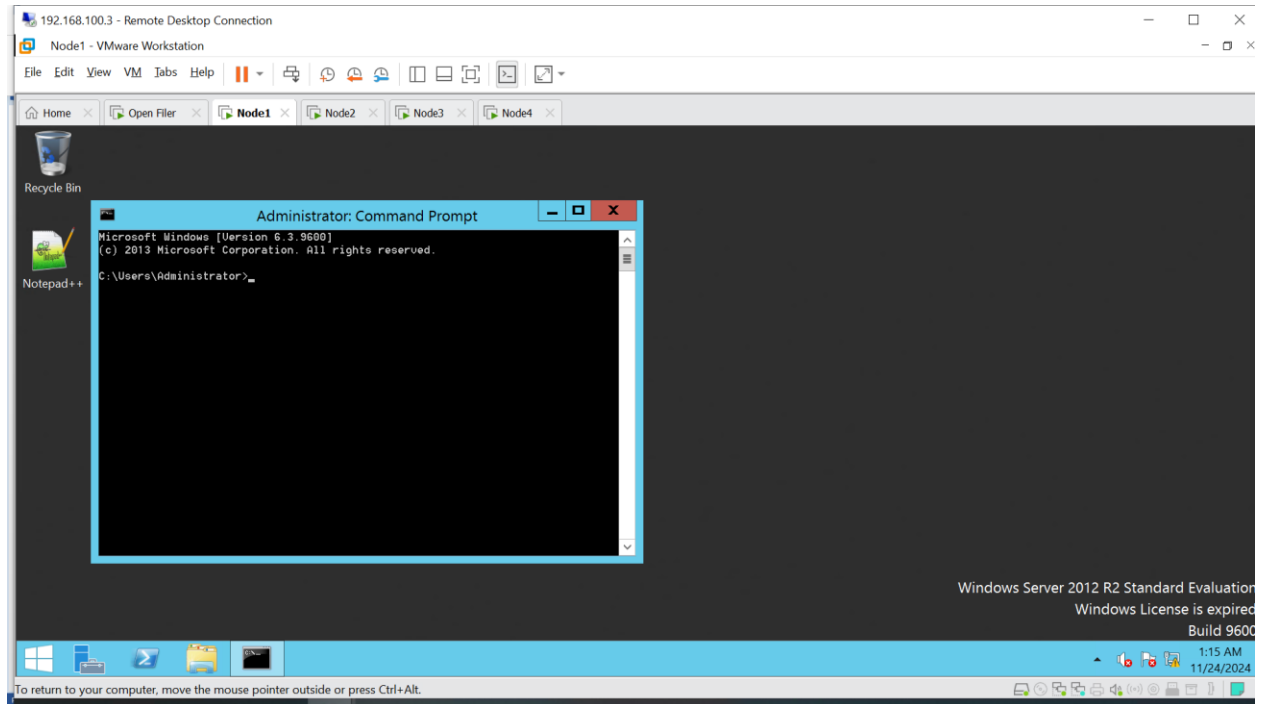
Srvctl config nodeapps

Login Node 1

Open Command Prompt “cmd”



Oracle Cluster New Node Addition is Existing Cluster



```
C:\Users\Administrator>srvctl add vip -n node4 -k 1 -A  
192.168.18.150/255.255.255.0
```



Oracle Cluster New Node Addition is Existing Cluster

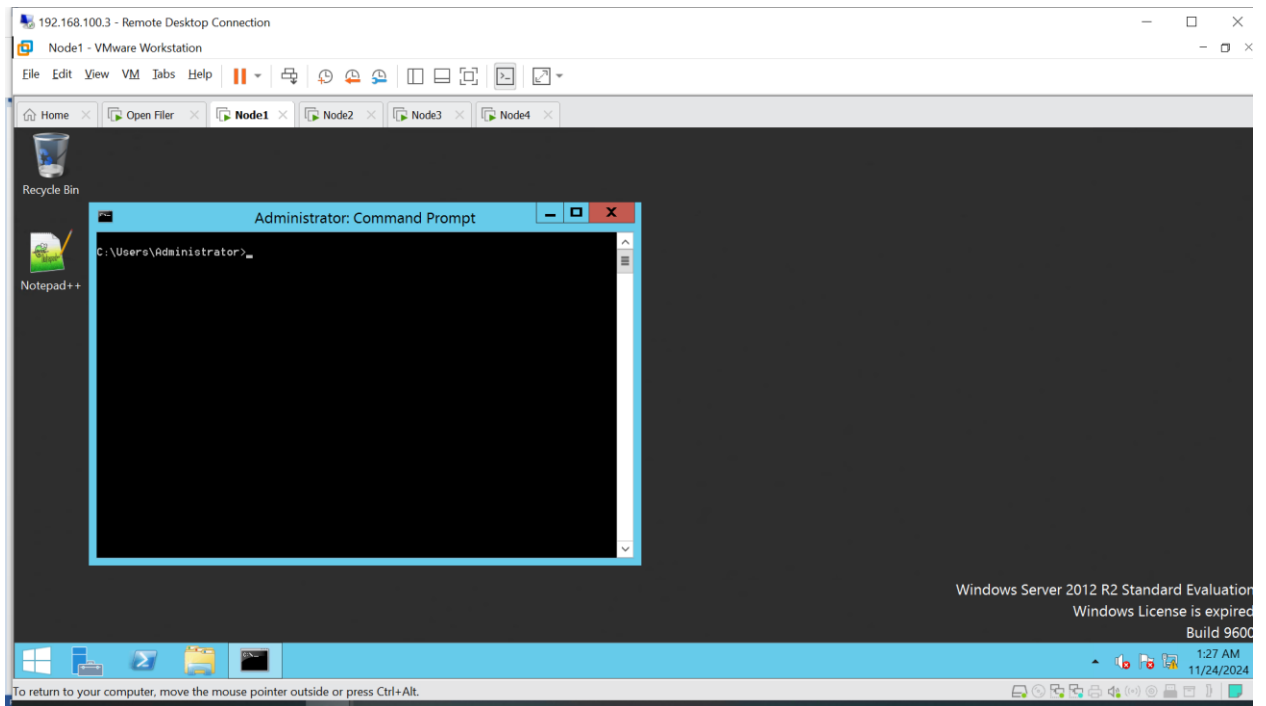
19.Create Instance on New Node of Existing Database

(Node 1)

Login on Node 1

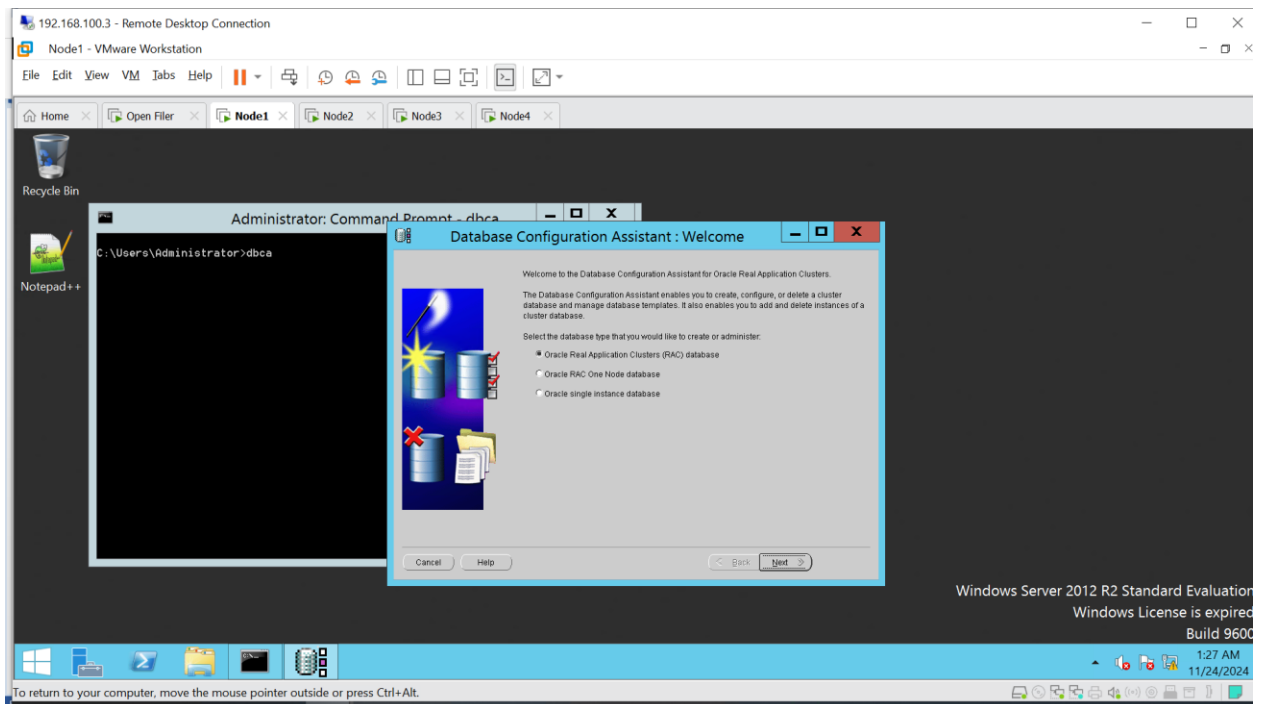
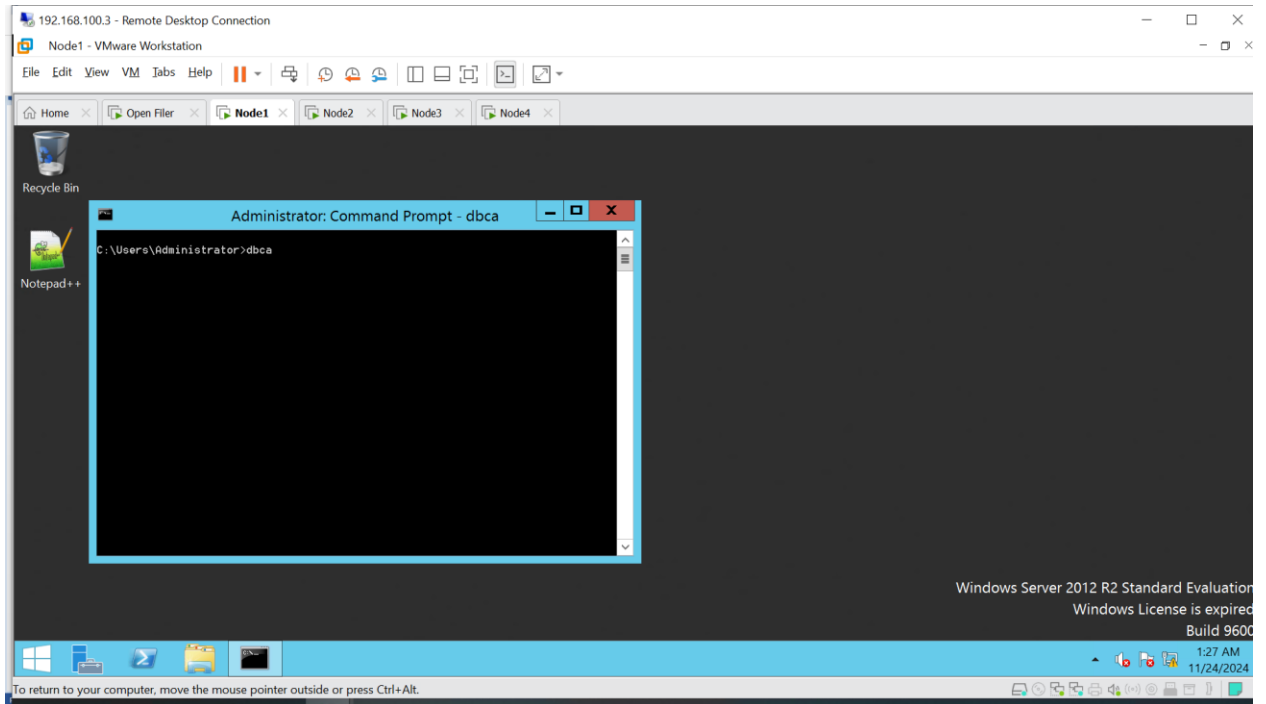
Open Command Prompt “cmd”

Run “dbca”



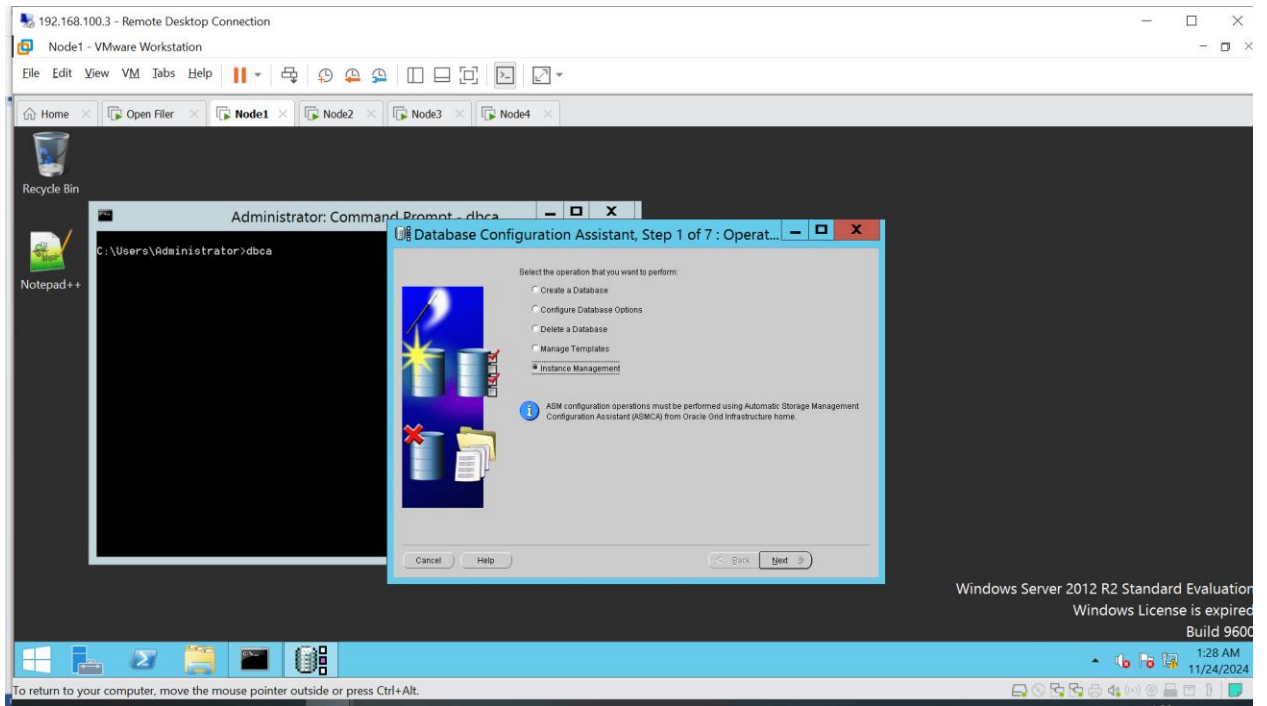


Oracle Cluster New Node Addition is Existing Cluster



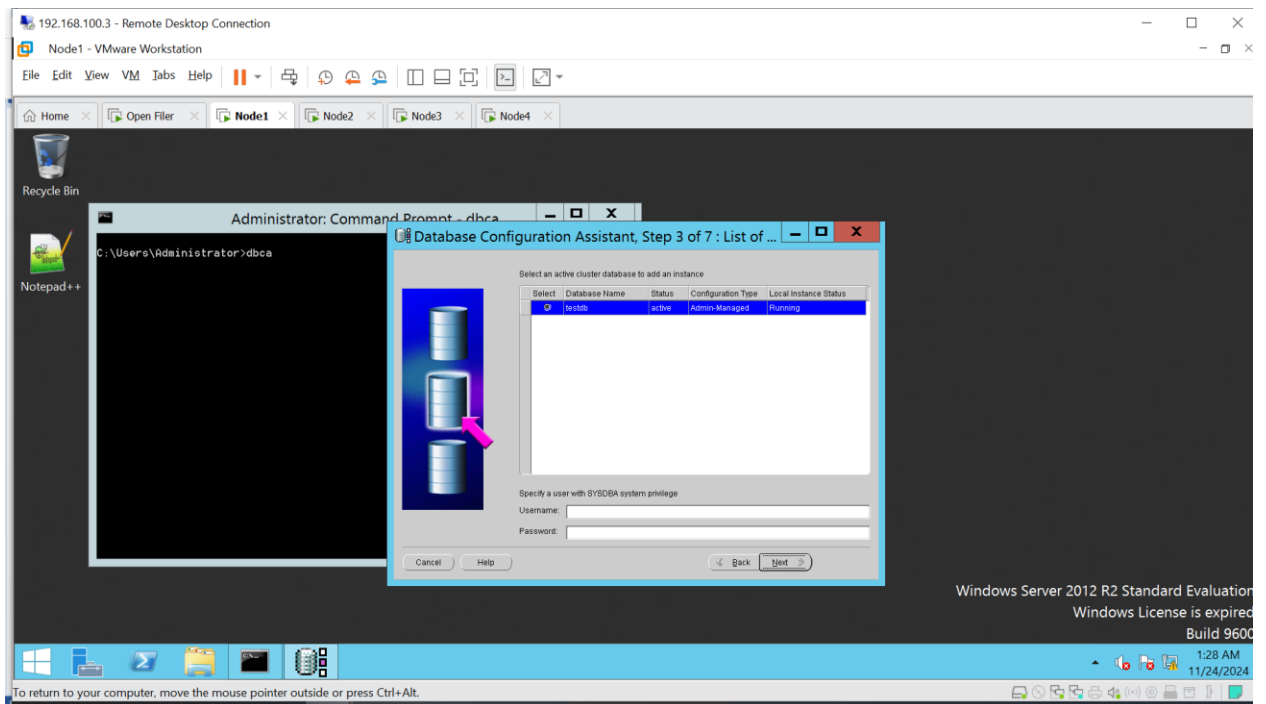
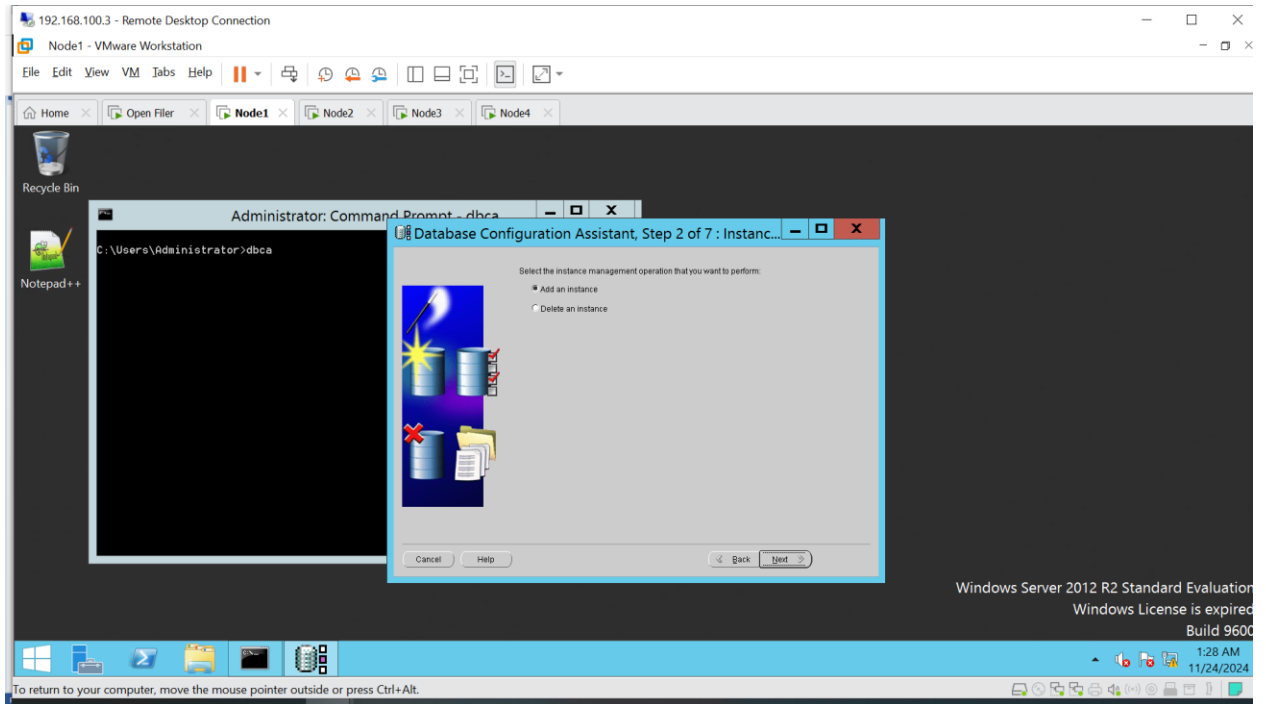


Oracle Cluster New Node Addition is Existing Cluster



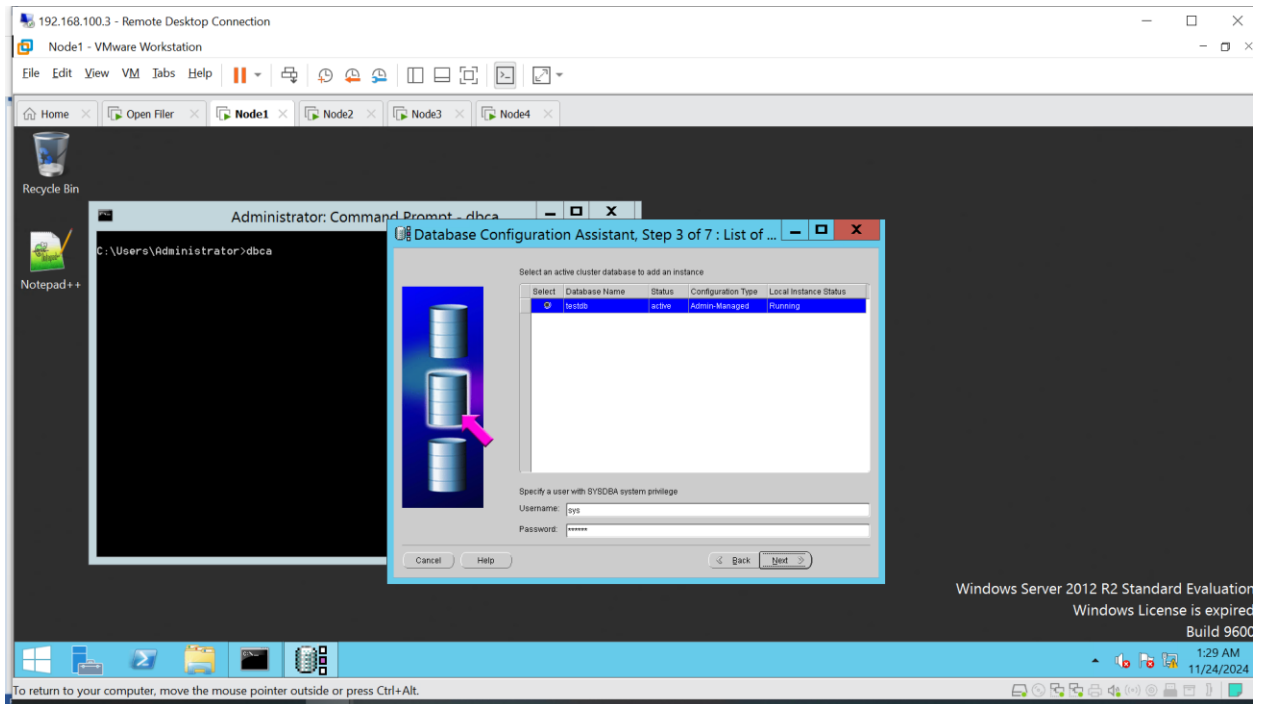


Oracle Cluster New Node Addition is Existing Cluster



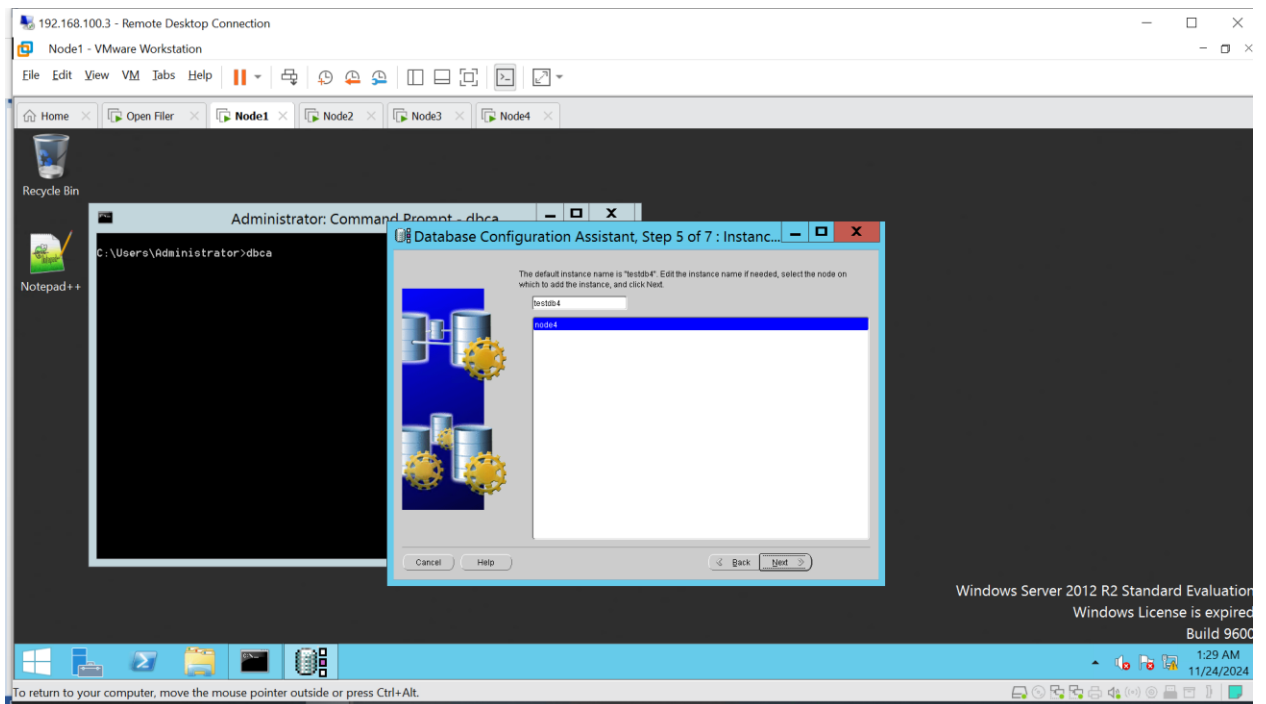
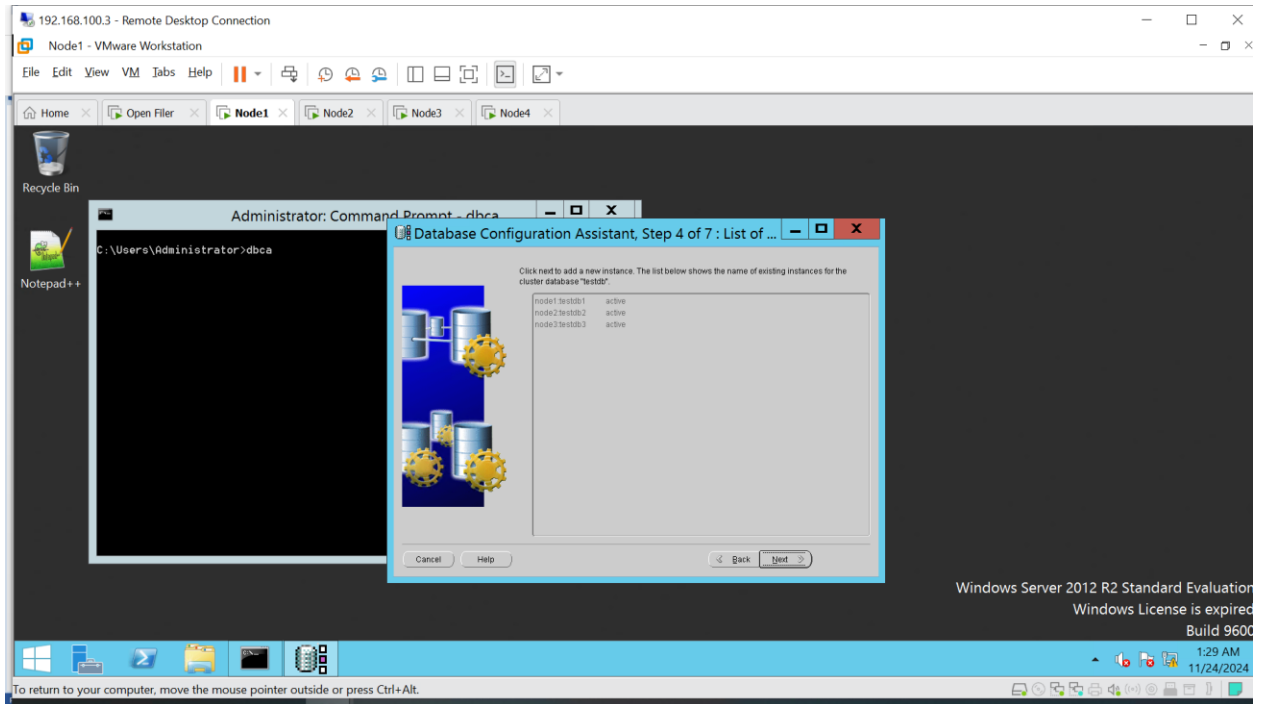


Oracle Cluster New Node Addition is Existing Cluster



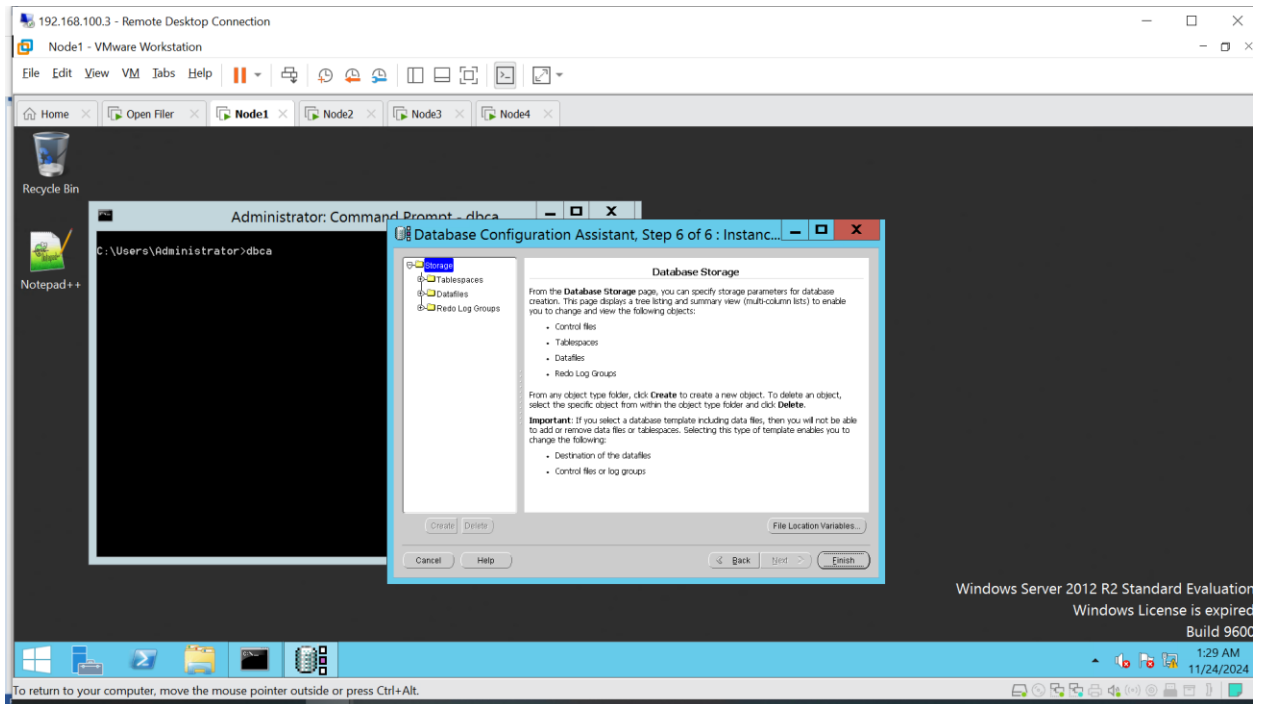


Oracle Cluster New Node Addition is Existing Cluster



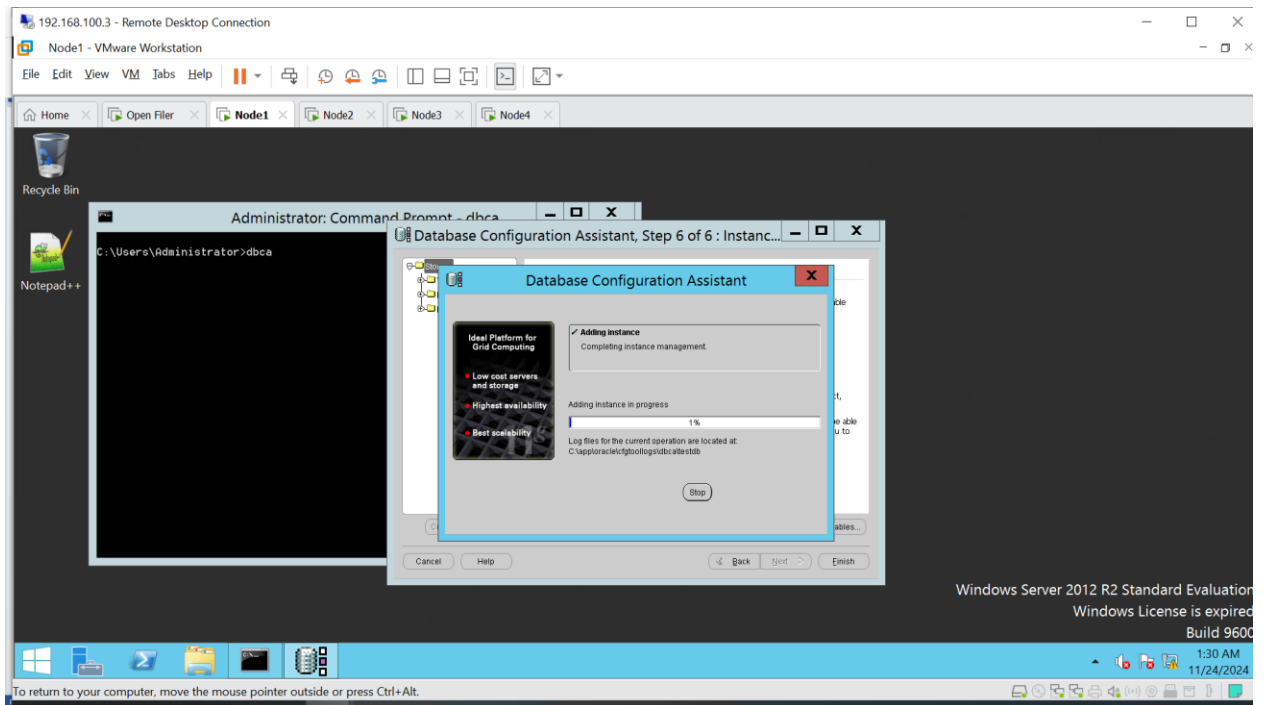
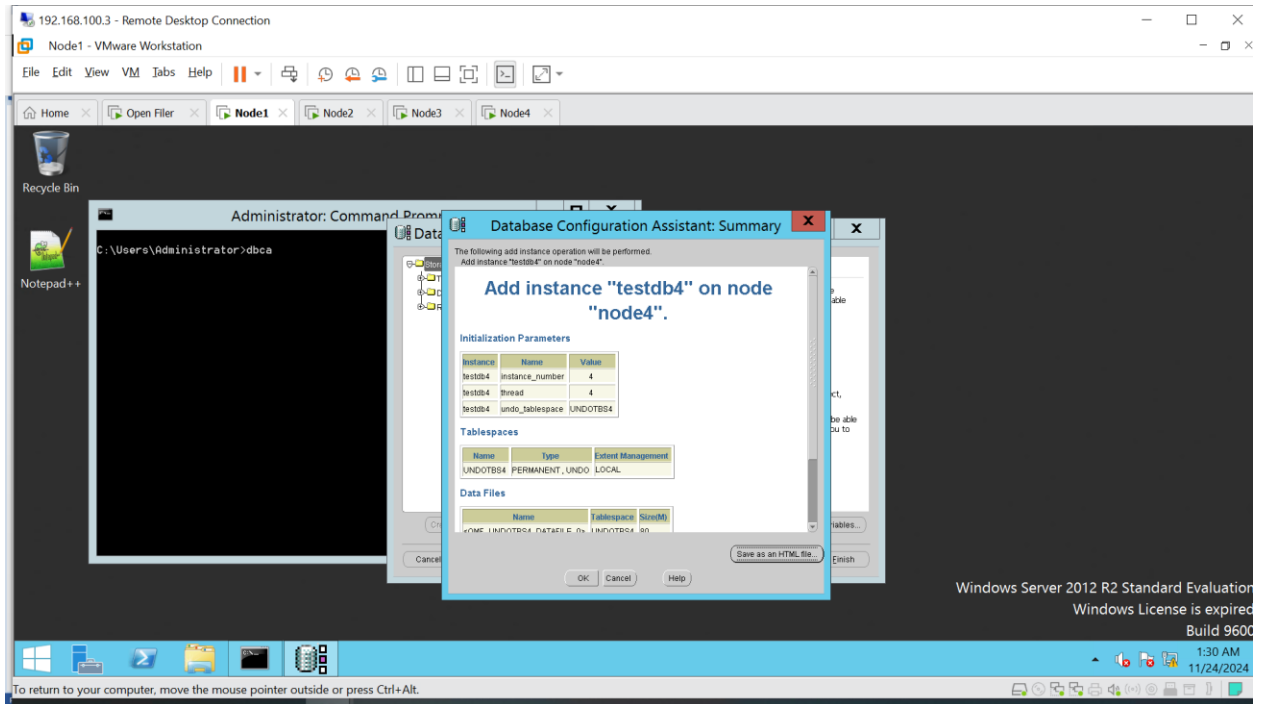


Oracle Cluster New Node Addition is Existing Cluster



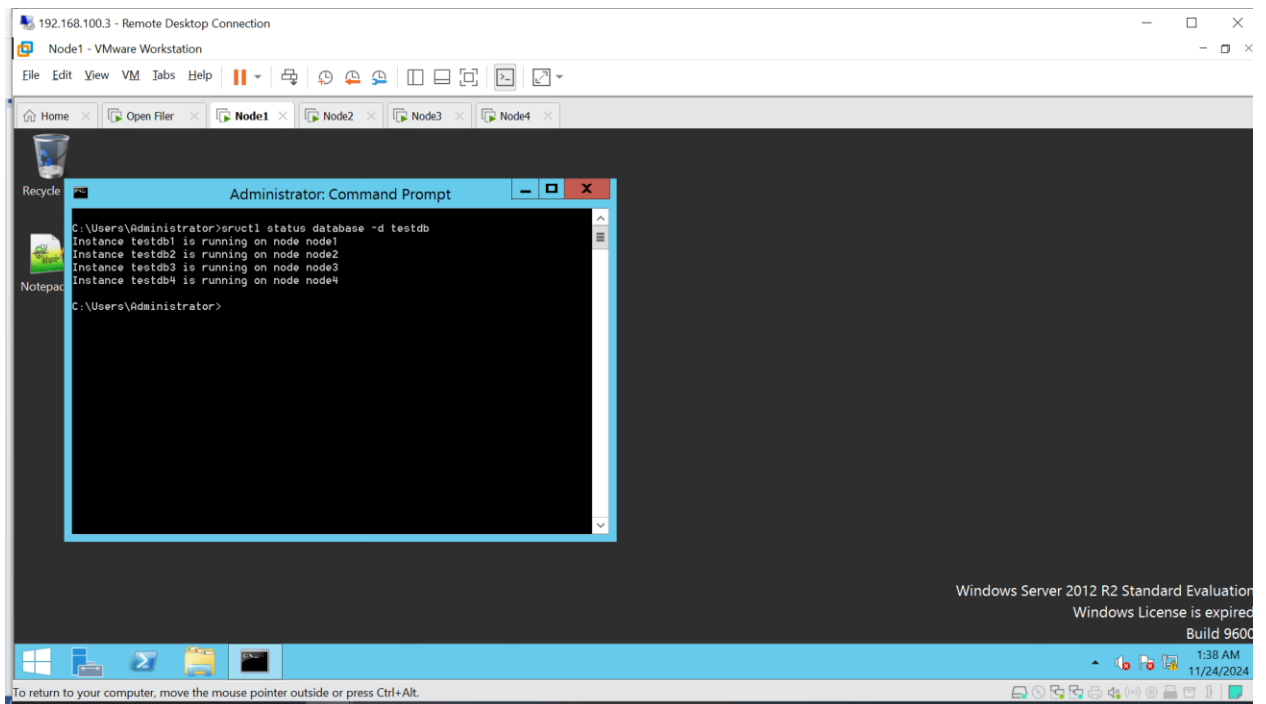
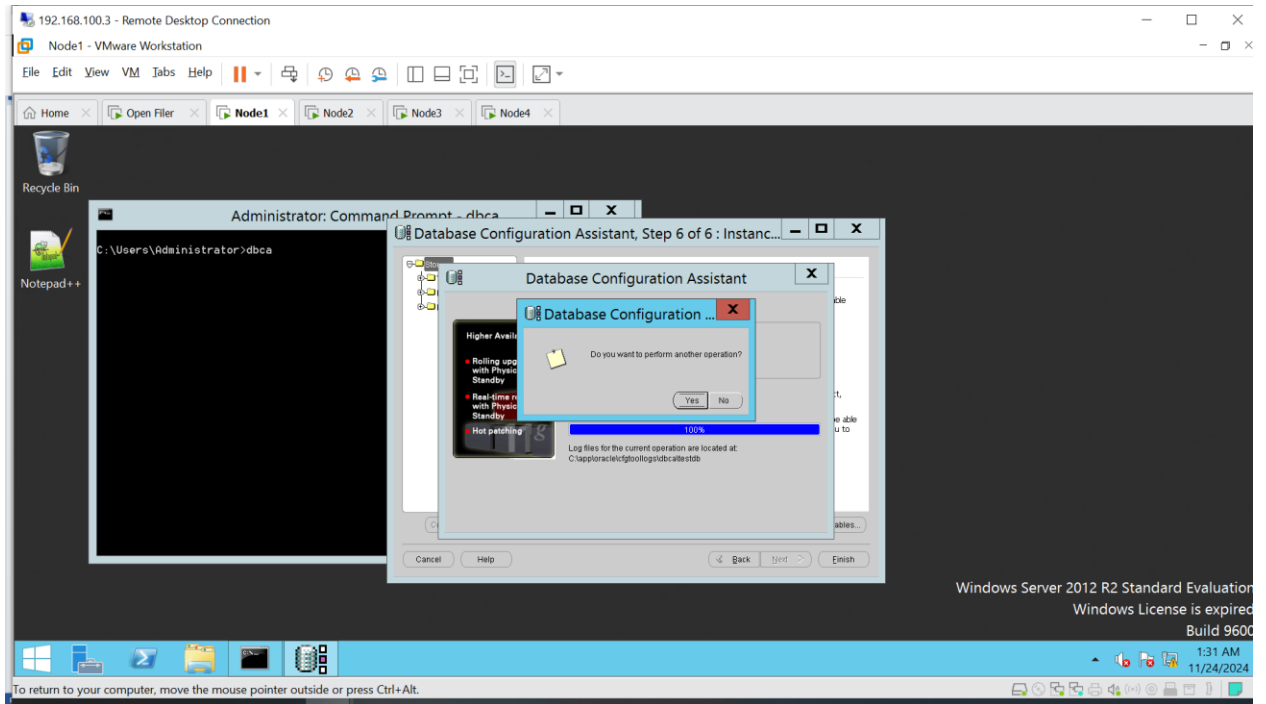


Oracle Cluster New Node Addition is Existing Cluster





Oracle Cluster New Node Addition is Existing Cluster





Oracle Cluster New Node Addition in Existing Cluster

Now Successfully Add New Node in Oracle Cluster

The screenshot shows a remote desktop connection to a Windows Server 2012 R2 Standard Evaluation machine. The desktop has a taskbar with icons for Recycle Bin, Notepad, and a command prompt. The command prompt is open, showing the following commands and output:

```
C:\Users\Administrator>svctl status database -d testdb
Instance testdb1 is running on node node1
Instance testdb2 is running on node node2
Instance testdb3 is running on node node3
Instance testdb4 is running on node node4

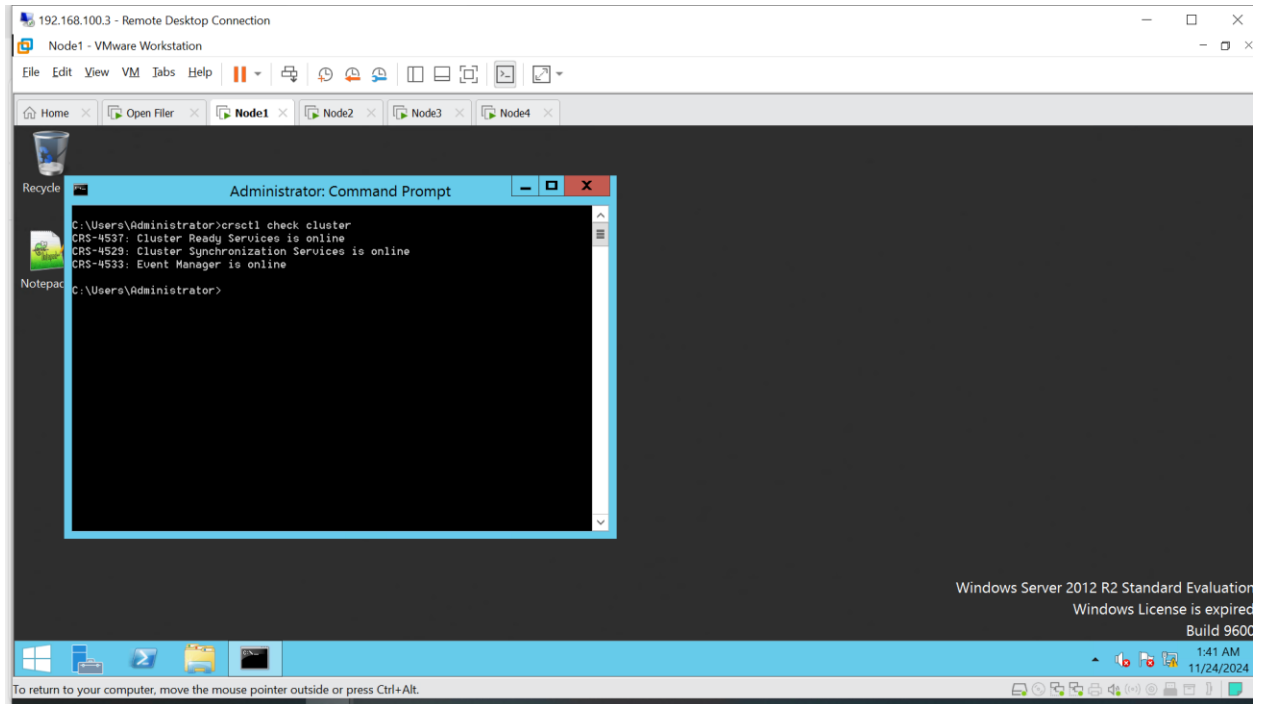
C:\Users\Administrator>olsnodes -s
node1 Active
node2 Active
node3 Active
node4 Active

C:\Users\Administrator>
```

The output of the `olsnodes -s` command shows that all four nodes (node1, node2, node3, and node4) are active. The taskbar at the bottom shows the time as 1:39 AM on 11/24/2024. The system is running Windows Server 2012 R2 Standard Evaluation, and the Windows License is expired. The build number is 9600.



Oracle Cluster New Node Addition is Existing Cluster



End of Document