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Student Name: Dikshya Sharma

London Met ID: 22067520

College ID: NP01CP4A220029

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I confirm that I understand my coursework needs to be submitted online via Google Classroom under the relevant module page before the deadline in order for my assignment to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a mark of zero will be awarded.

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To Install Active Directory Domain Services

1. Aim

The Aim of this logbook is to document the process of installation of Active Directory Domain Services on Windows Server.

2. Objectives

The objectives of this logbook are:

- To setup active directory domain controller.
- To install an active directory domain service role on windows server.
- To configure installed active directory service role as domain controller.

3. Steps

The following steps took place during the installation.

3.1. Step 1

The system was logged in to Windows Server 2022 as an administrator and Server Manager was opened.

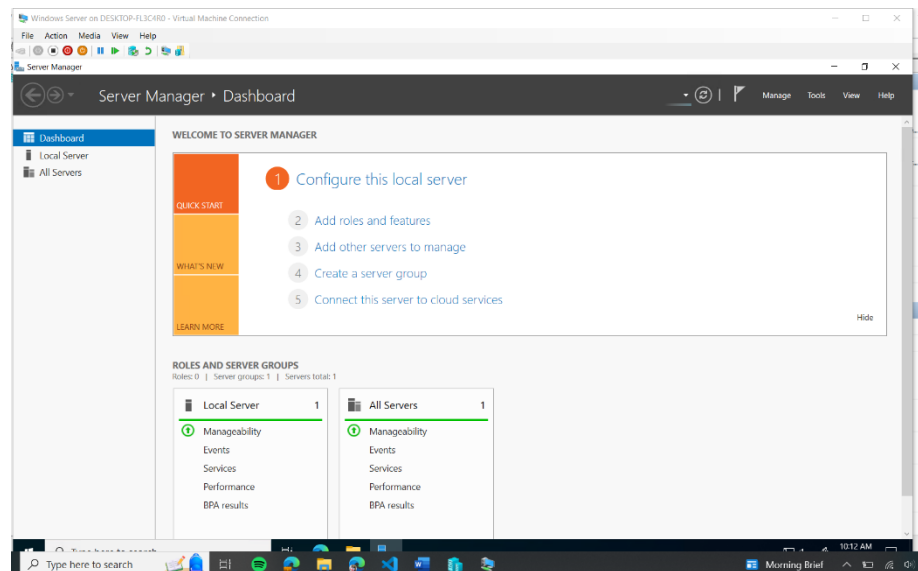


Figure 1: Server Manager Dashboard.

3.2. Step 2

“Add Roles and Features” option was clicked from the Server Manager which opened the Add Roles and Features Wizard.

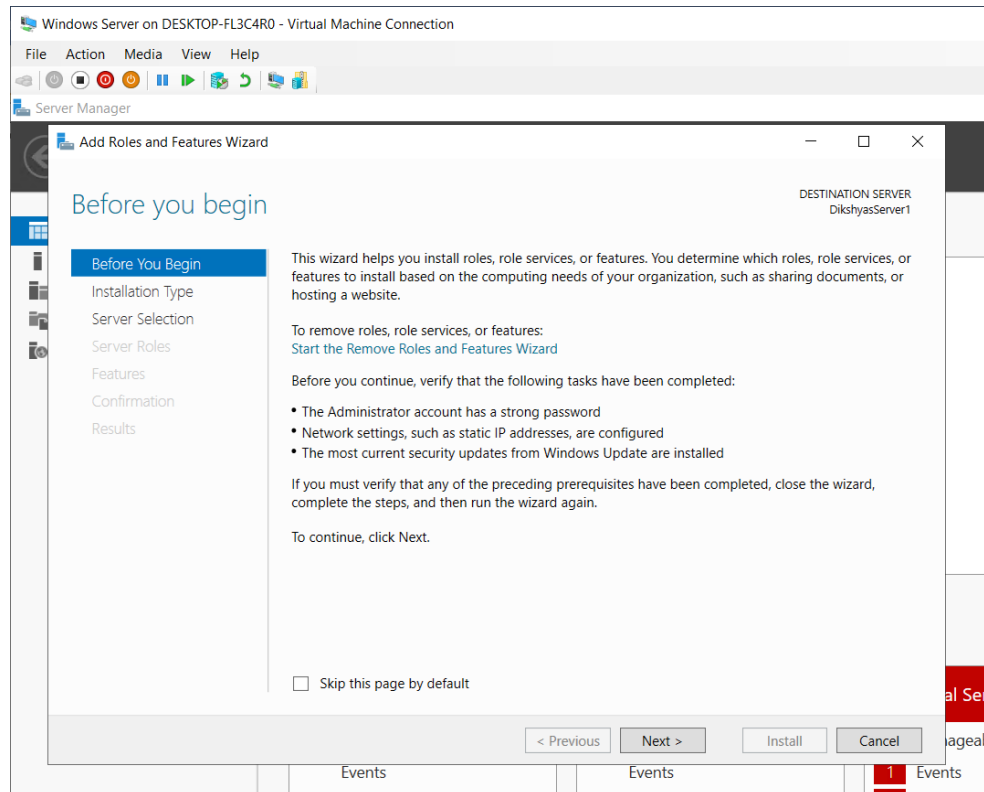


Figure 2: Roles and Features Window

3.3. Step 3

After next button was clicked, Installation type was selected to “Role based or feature based installation”.

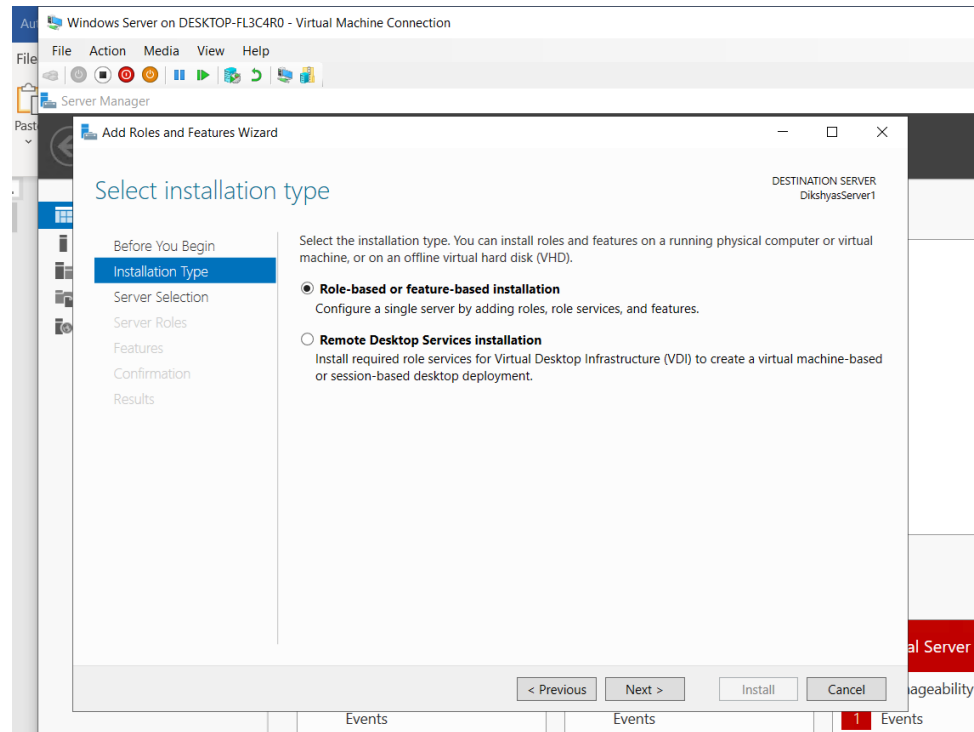


Figure 3: Installation Type

3.4. Step 4

Following that, destination server wizard was opened to select the destination which selected as “Select a server from the server pool”.

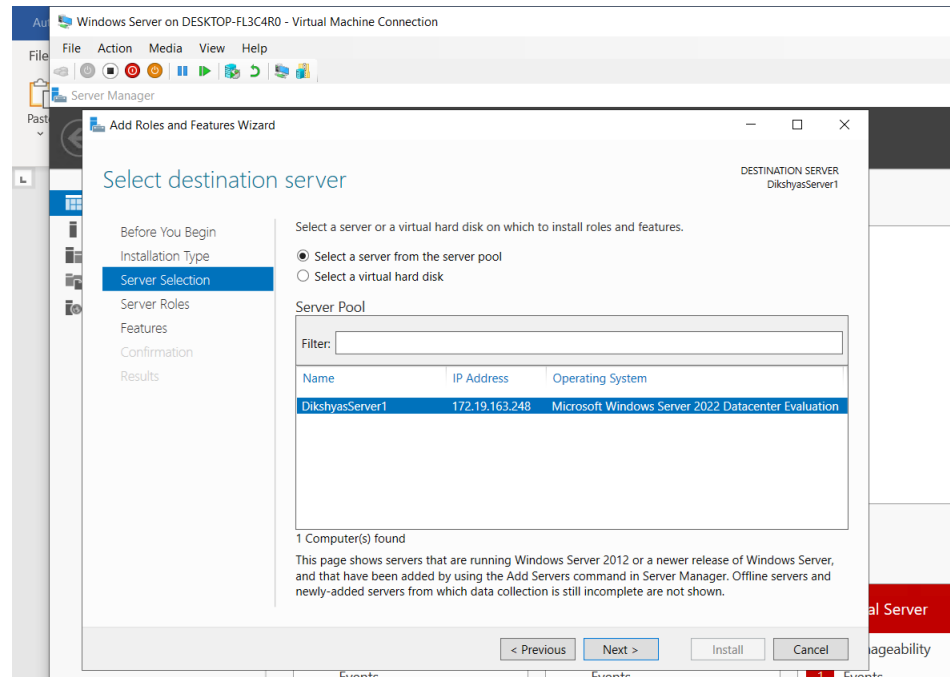


Figure 4: Destination Server

3.5. Step 5

From Select server roles menu, “Active Directory Domain Services” was selected.

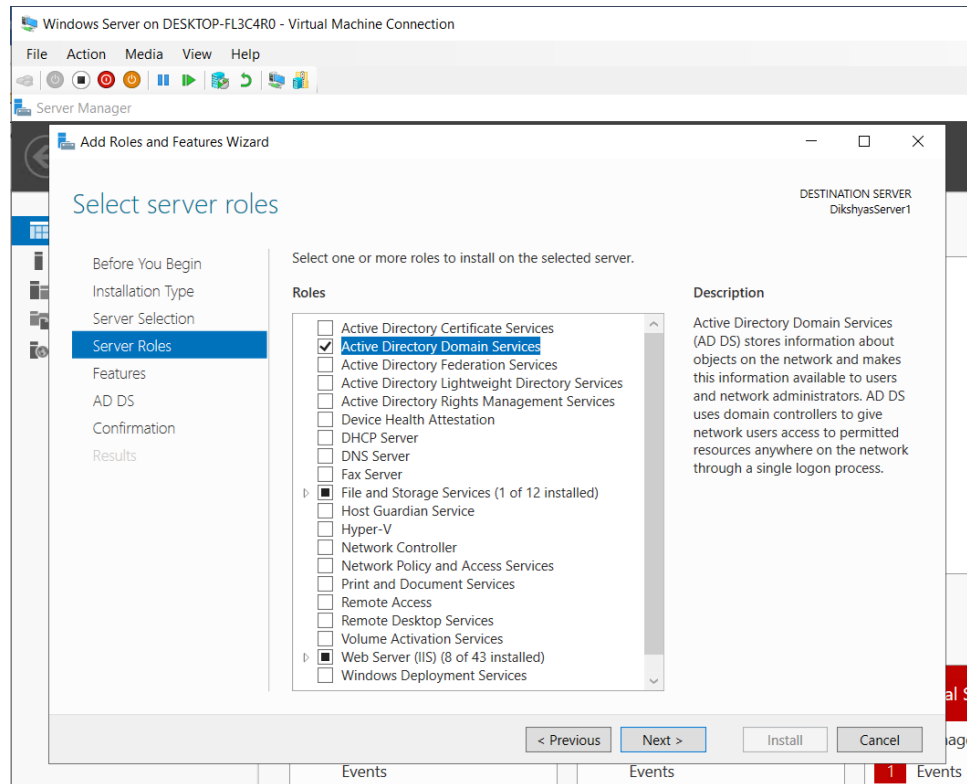


Figure 5: Server Roles

3.6. Step 6

Following that, Features was selected to “.NET Framework 3.5 Features”.

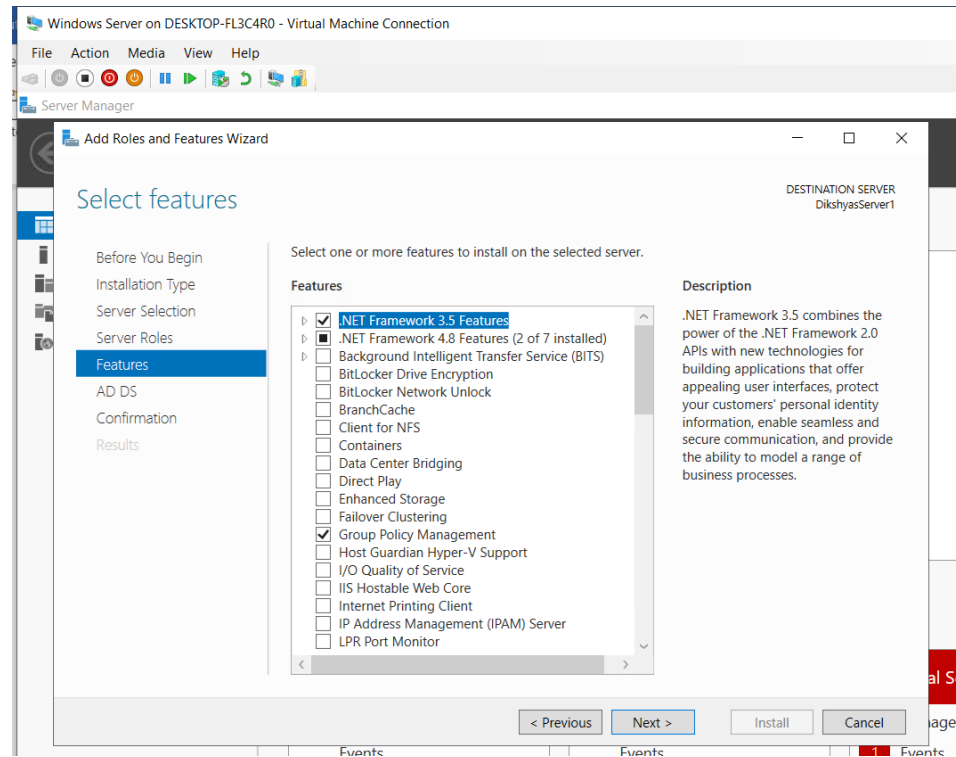


Figure 6: Features

3.7. Step 7

Following that, the other options was set to default and next button was clicked.

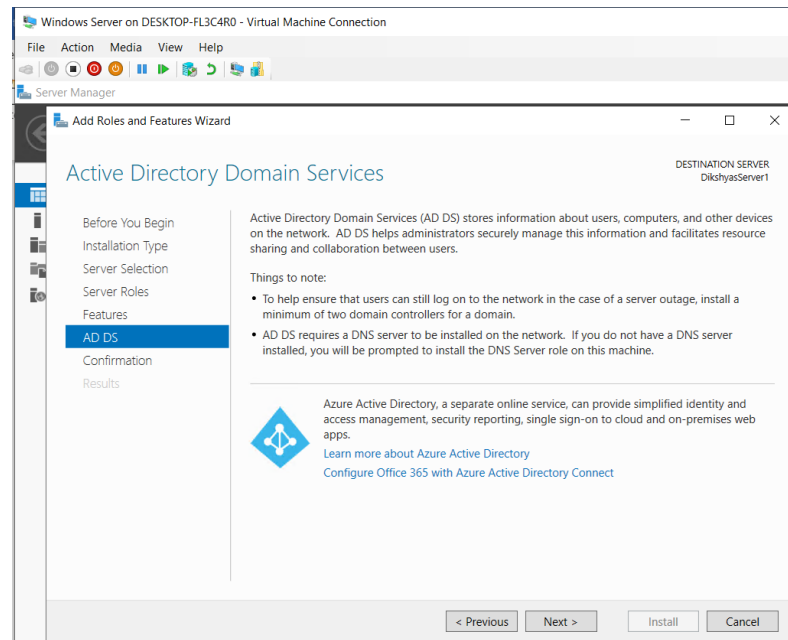


Figure 7: Active Directory Domain Service Window

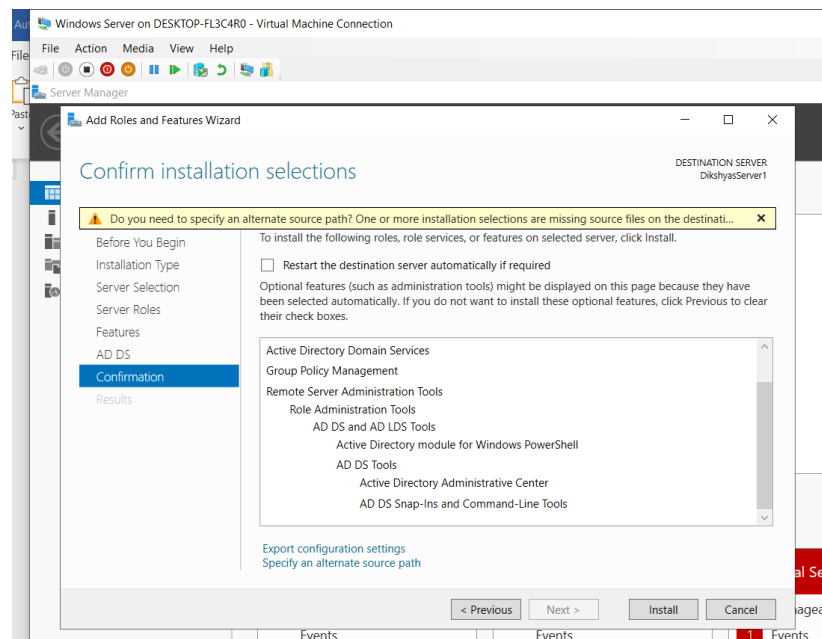


Figure 8: Installation Confirmation

3.8. Step 8

Then, “Install” button was selected to start the installation.

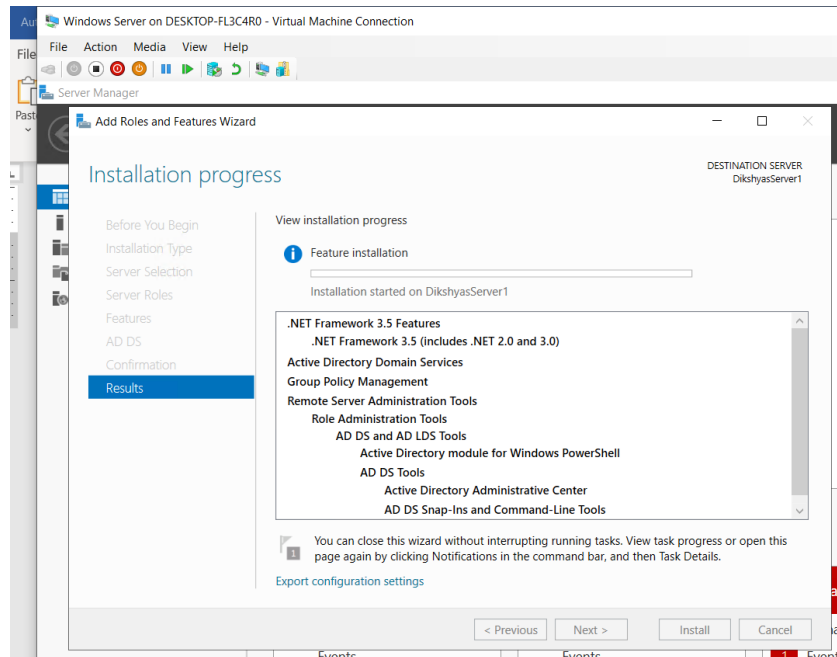


Figure 9: Installation

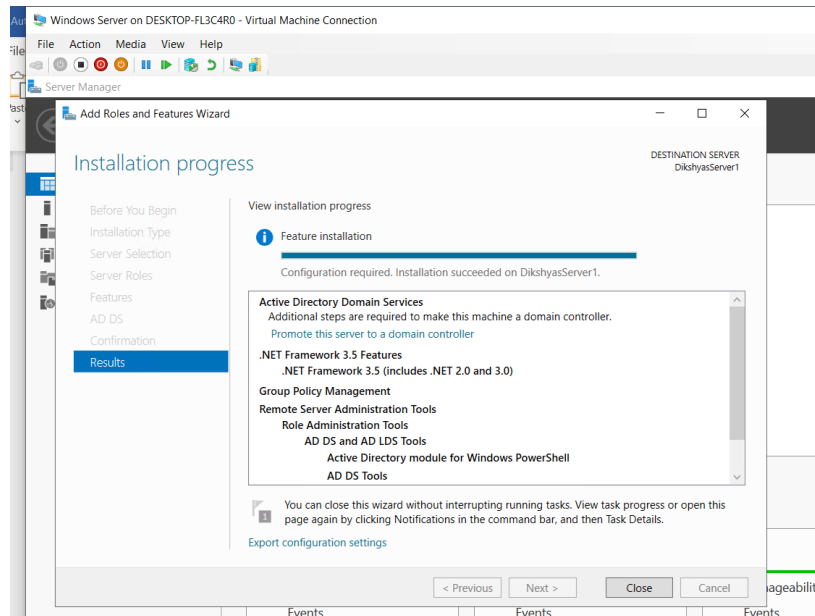


Figure 10: Successful installation

3.9. Step 9

After successful installation, close button was selected, and server manager dashboard was opened.

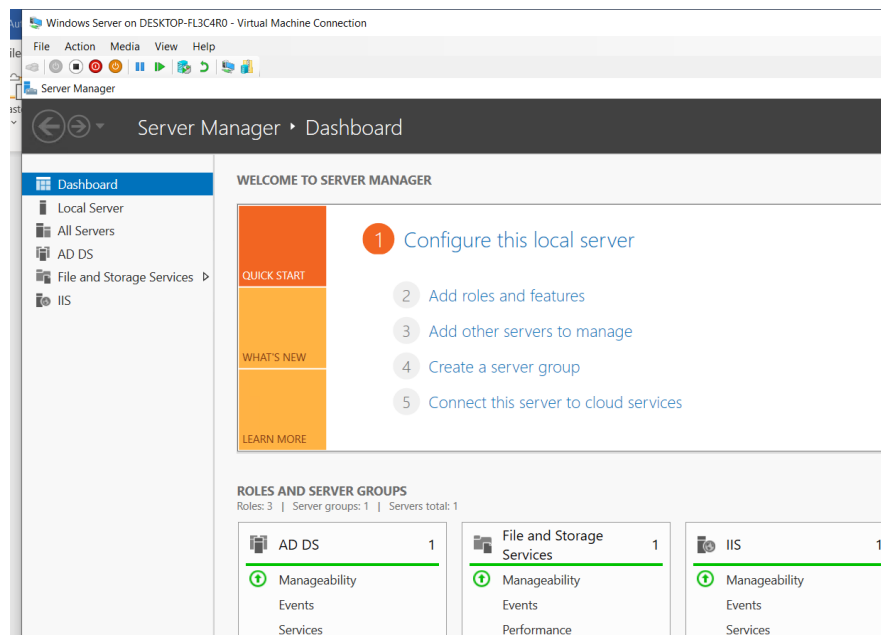


Figure 11: Server Manager Dashboard

3.10. Step 10

Following that, yellow notification icon that was seen on the right side of server manager dashboard was clicked and again “promote this server to the domain controller” option was selected.

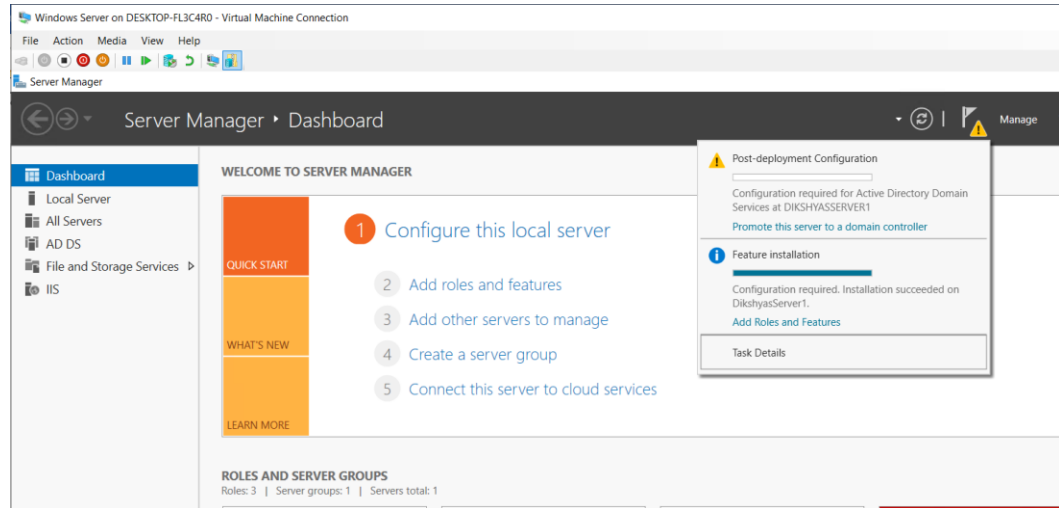


Figure 12: Notification Icon

3.11. Step 11

Following that, Deployment Configuration Page was opened. Then, deployment operation was selected to “Add a new forest” and root domain name was given as “dikshya.com”.

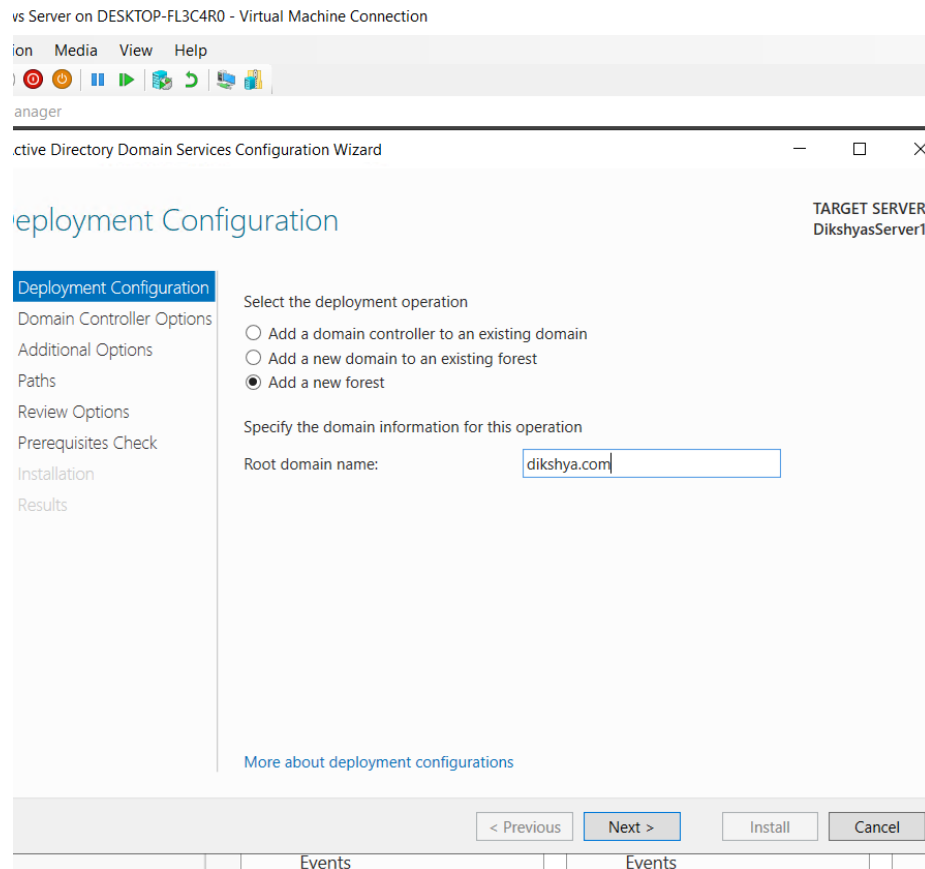


Figure 13: Deployment Confirmation.

3.12. Step 12

Then, Domain Controller Options page was opened where password was confirmed.

The screenshot shows the 'Active Directory Domain Services Configuration Wizard' window. The title bar reads 'Active Directory Domain Services Configuration Wizard'. The main heading is 'Domain Controller Options'. In the top right corner, it says 'TARGET SERVER CLOUD-7H24HNKQS'. On the left, a navigation pane lists the steps: 'Deployment Configuration', 'Domain Controller Options' (highlighted), 'DNS Options', 'Additional Options', 'Paths', 'Review Options', 'Prerequisites Check', 'Installation', and 'Results'. The main content area is titled 'Select functional level of the new forest and root domain'. It contains two dropdown menus: 'Forest functional level:' and 'Domain functional level:', both set to 'Windows Server 2016'. Below these, under 'Specify domain controller capabilities', there are three checkboxes: 'Domain Name System (DNS) server' (checked), 'Global Catalog (GC)' (checked), and 'Read only domain controller (RODC)' (unchecked). Further down, it says 'Type the Directory Services Restore Mode (DSRM) password'. There are two password fields: 'Password:' and 'Confirm password:', both filled with dots. At the bottom right, there are four buttons: '< Previous', 'Next >', 'Install', and 'Cancel'. A link 'More about domain controller options' is located at the bottom left of the main content area.

Figure 14: Domain Controller Options.

3.13. Step 13

After successfully defining the directory service mode password next button was clicked which opened the DNS options page which was set to default.

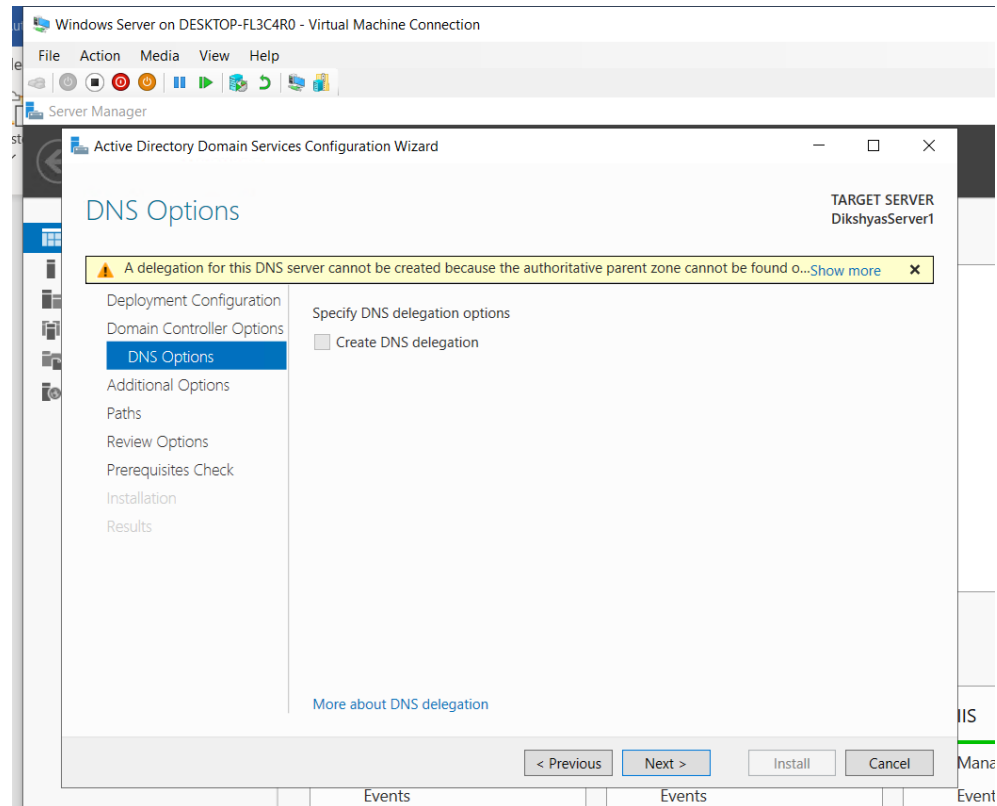


Figure 15: DNS Options.

3.14. Step 14

Then, NetBIOS name was shown by default.

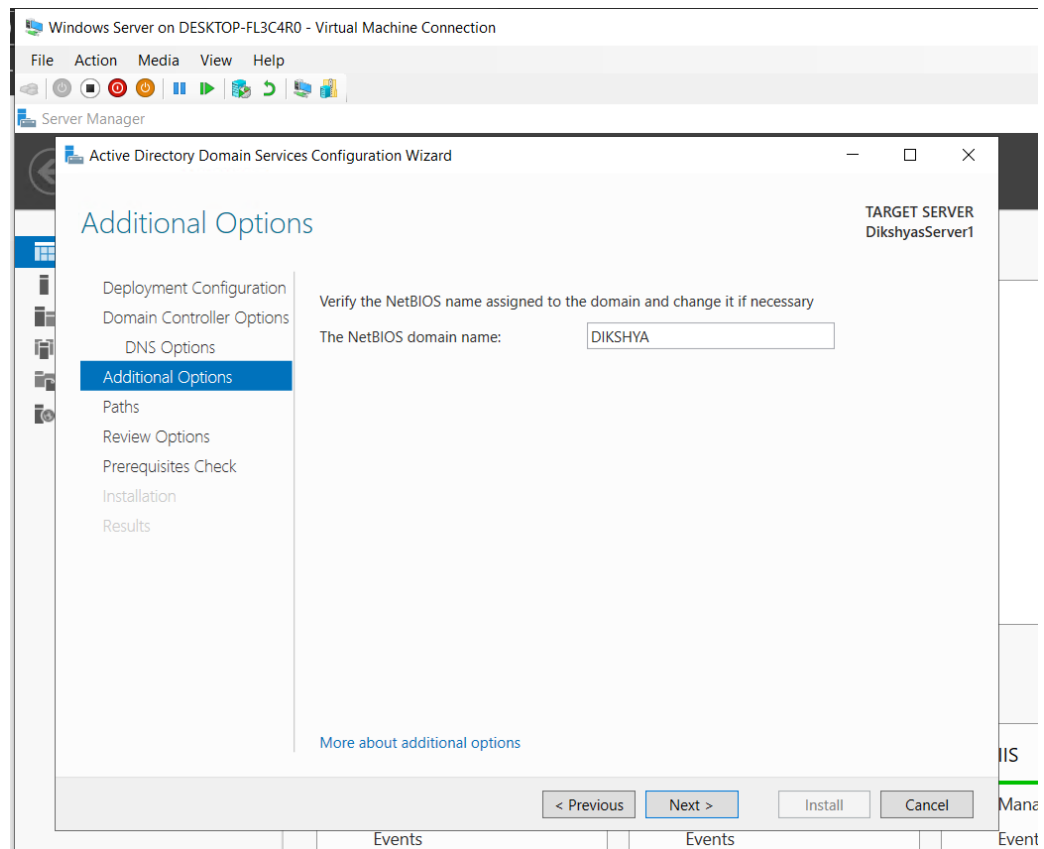


Figure 16: NETBIOS domain name.

3.15. Step 15

After that, AD DS database path location was set to default.

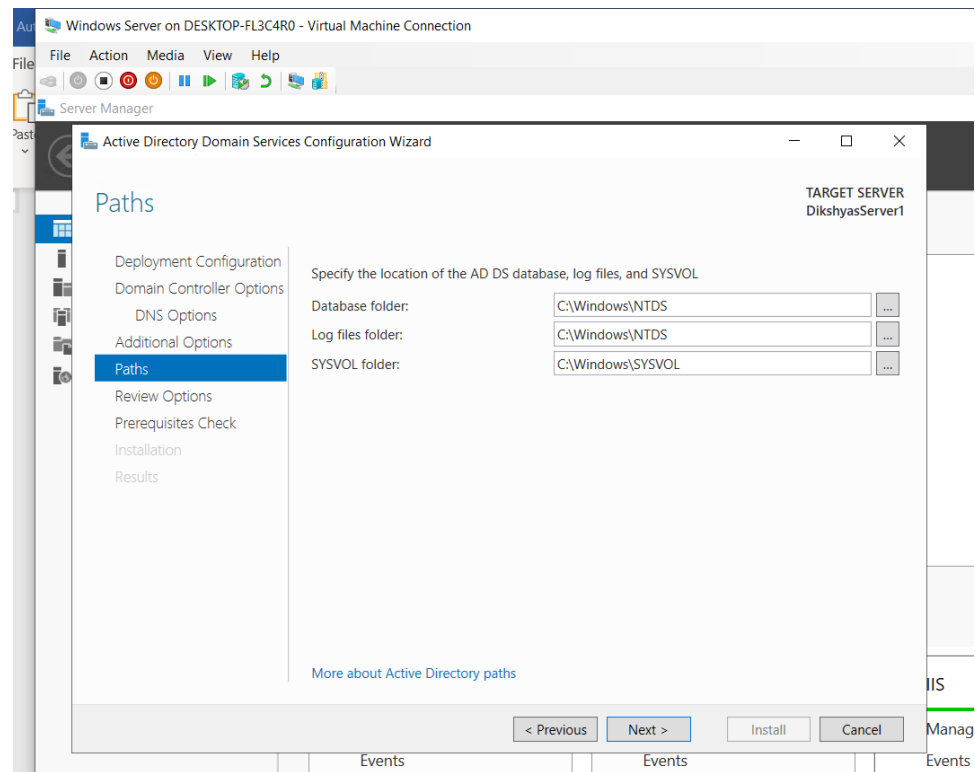


Figure 17: AD DS Path

3.16. Step 16

Then, Review options page was opened to review the options selected.

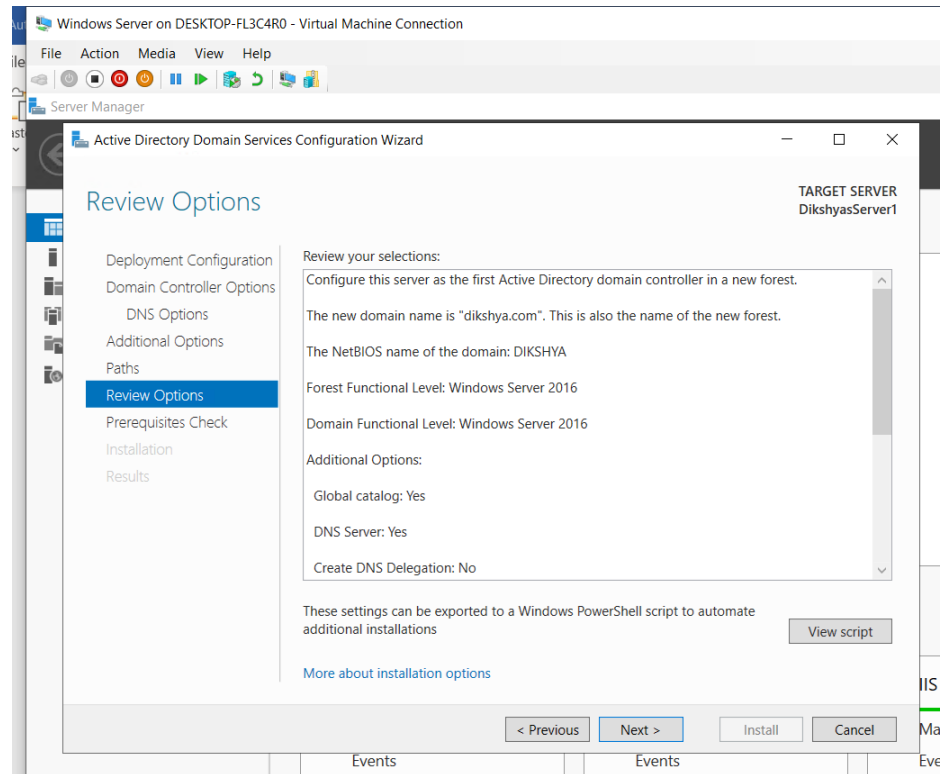


Figure 18: Review Options.

3.17. Step 17

After it was reviewed, the prerequisites check page was opened and then checked which was then followed by installation.

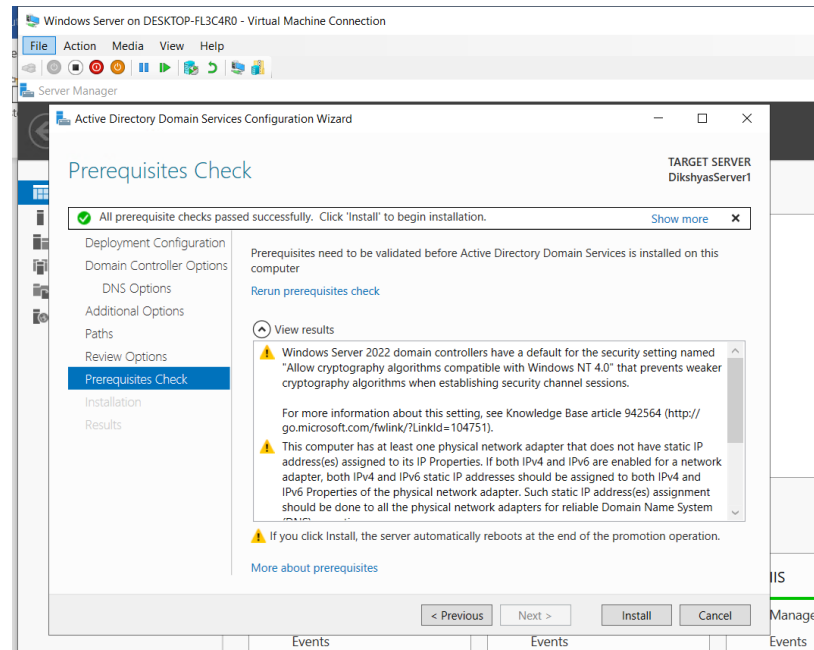


Figure 19: Prerequisites checking.

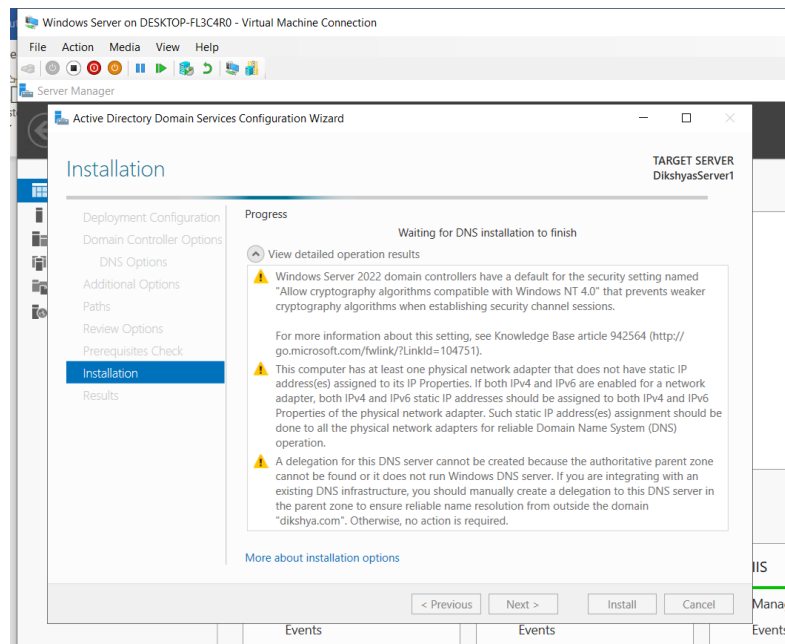


Figure 20: Installation.

3.18. Step 18

After installation, the server was restarted.

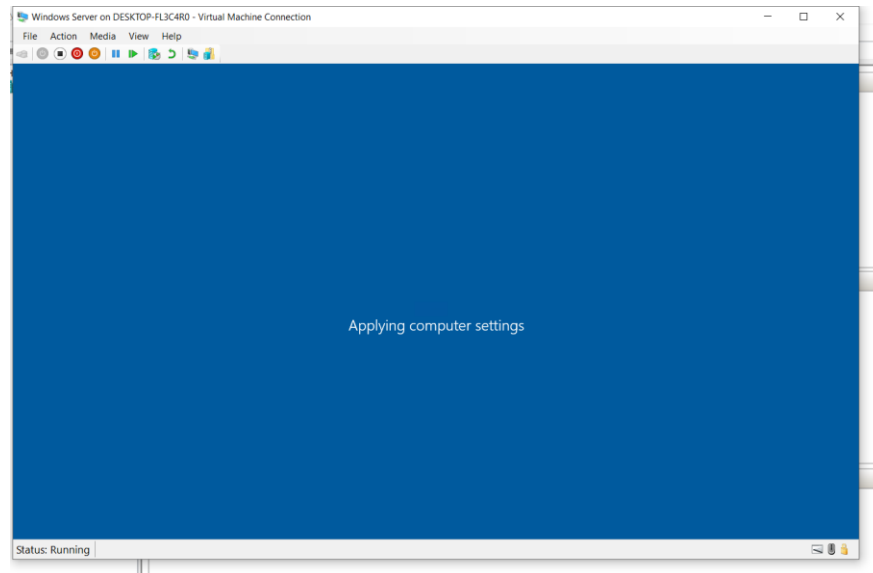


Figure 21: Server Restarted.

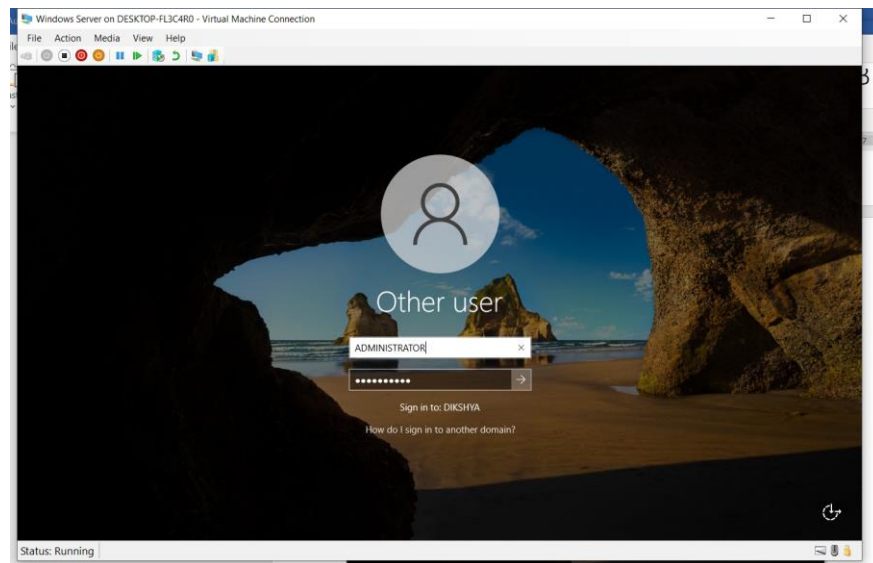


Figure 22: Administrator.

3.19. Step 19

Then, Domain controller verification was started to check if it was adequately set or not through PowerShell.

Below are the steps performed.

To confirm the successful installation of the services, the following command was run on Windows PowerShell.

“Get-Service adws,kdc,netlogon,dns”

The command showed the status of all services.

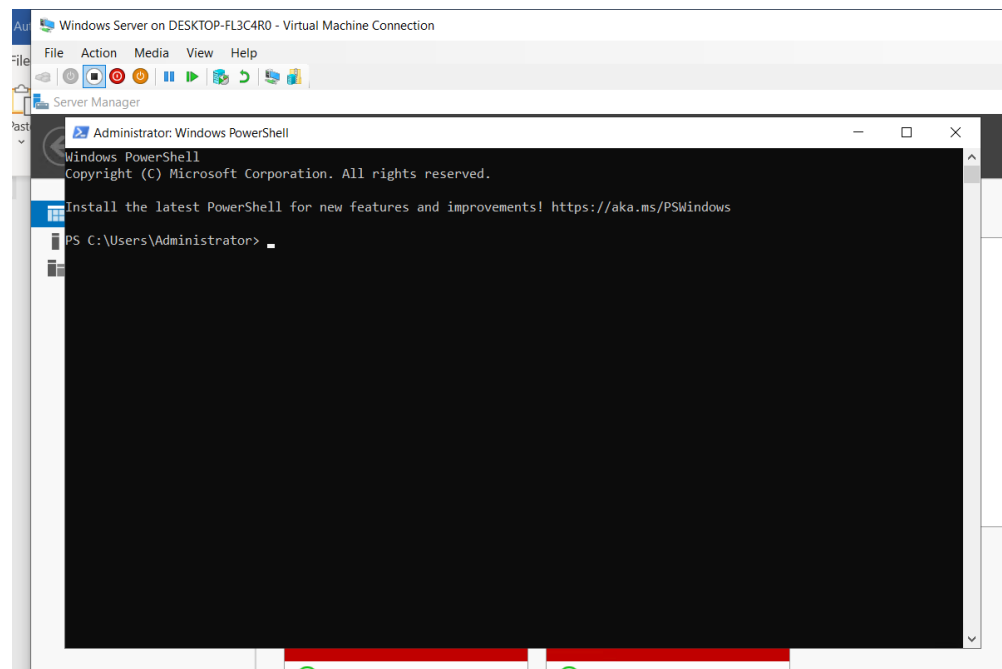
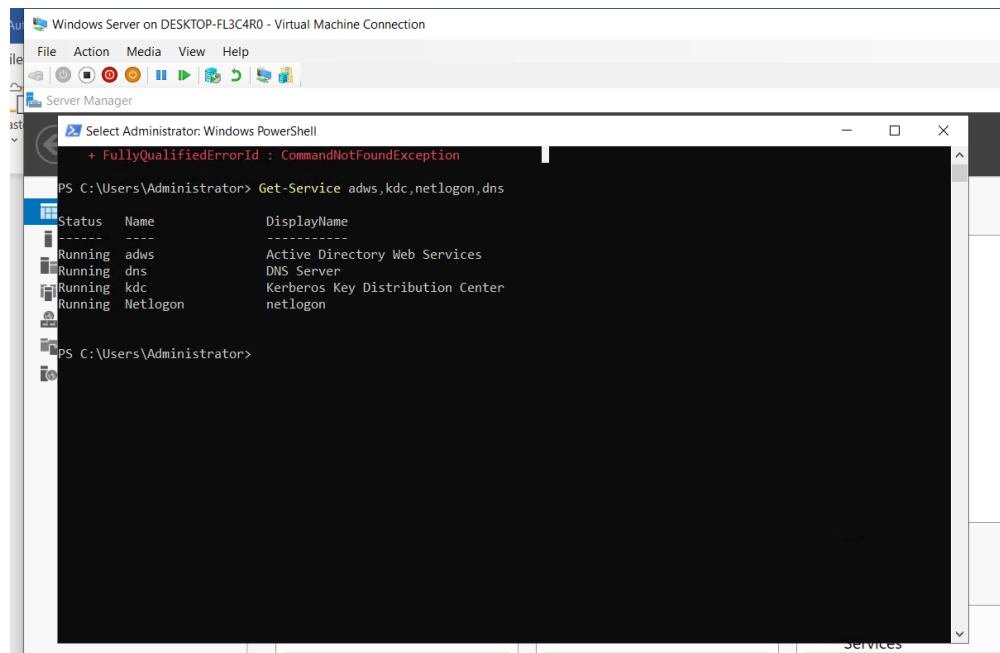


Figure 23: Powershell.



Again, to display all the configuration details of the domain controller, following command was run.

“Get-ADDomainController”

It displayed all the information on the following screen:


```
Windows Server on DESKTOP-FL3C4R0 - Virtual Machine Connection
le Action Media View Help
Server Manager
Administrator: Windows PowerShell
PS C:\Users\Administrator> Get-ADDomainController

ComputerObjectDN      : CN=DIKSHYASSERVER1,OU=Domain Controllers,DC=dikshya,DC=com
DefaultPartition      : DC=dikshya,DC=com
Domain                : dikshya.com
Enabled               : True
Forest                : dikshya.com
HostName              : DikshyasServer1.dikshya.com
InvocationId          : 8edfa362-32ba-4e8d-816d-3276e69acb16
IPv4Address            : 172.19.163.248
IPv6Address           :
IsGlobalCatalog       : True
IsReadOnly            : False
LdapPort              : 389
Name                  : DIKSHYASSERVER1
NTDSSettingsObjectDN  : CN=NTDS Settings,CN=DIKSHYASSERVER1,CN=Servers,CN=Default-First-Site-Name,CN=Sites,CN=Configuration,DC=dikshya,DC=com
OperatingSystem        : Windows Server 2022 Datacenter Evaluation
OperatingSystemHotfix  :
OperatingSystemServicePack :
OperatingSystemVersion : 10.0 (20348)
OperationMasterRoles   : {SchemaMaster, DomainNamingMaster, PDCEmulator, RIDMaster...}
Partitions             : {DC=ForestDnsZones,DC=dikshya,DC=com, DC=DomainDnsZones,DC=dikshya,DC=com, CN=Schema,CN=Configuration,DC=dikshya,DC=com, CN=Configuration,DC=dikshya,DC=com...}
ServerObjectDN        : CN=DIKSHYASSERVER1,CN=Servers,CN=Default-First-Site-Name,CN=Sites,CN=Configuration,DC=dikshya,DC=com
ServerObjectGuid       : 82ad68c4-250f-46ab-83a6-7cbc3fa8e1d4
```

Then, to get detailed information about your domain, following command was run.

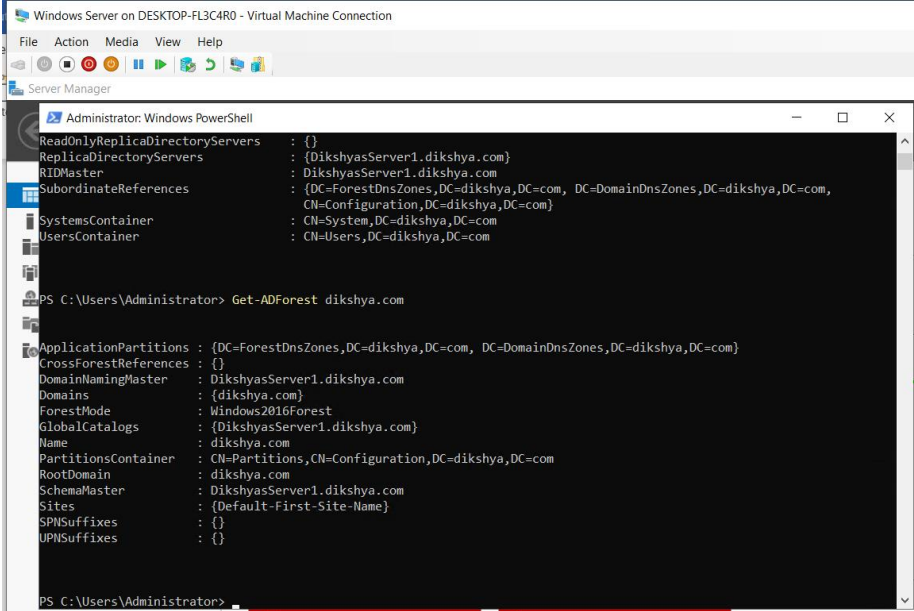
“Get-ADDomain mydomain.com”

```
Administrator: Windows PowerShell
PS C:\Users\Administrator> Get-ADDomain dikshya.com

AllowedDNSSuffixes    : {}
ChildDomains          : {}
ComputersContainer    : CN=Computers,DC=dikshya,DC=com
DeletedObjectsContainer : CN=Deleted Objects,DC=dikshya,DC=com
DistinguishedName     : DC=dikshya,DC=com
DNSRoot               : dikshya.com
DomainControllersContainer : OU=Domain Controllers,DC=dikshya,DC=com
DomainMode            : Windows2016Domain
DomainSID              : S-1-5-21-2807688369-1793696439-4231876369
ForeignSecurityPrincipalsContainer : CN=ForeignSecurityPrincipals,DC=dikshya,DC=com
Forest                : dikshya.com
InfrastructureMaster   : DikshyasServer1.dikshya.com
LastLogonReplicationInterval :
LinkedGroupPolicyObjects : {CN={31B2F340-0160-11D2-945F-00C04FB984F9},CN=Policies,CN=System,DC=dikshya,DC=com}
LostAndFoundContainer : CN=LostAndFound,DC=dikshya,DC=com
ManagedBy            :
Name                  : dikshya
NetBIOSName           : DIKSHYA
ObjectClass            : domainDNS
ObjectGUID             : 08426e53-fda0-4aa3-86ca-ab339c4c480a
ParentDomain          :
PDCEmulator           : DikshyasServer1.dikshya.com
PublicKeyRequiredPasswordRolling : True
QuotasContainer        : CN=NTDS Quotas,DC=dikshya,DC=com
ReadOnlyReplicaDirectoryServers : {}
```

Following that, to display your Active Directory Forest details, following command was run.

“Get-ADForest dikshya.com”



The screenshot shows a Windows PowerShell console window titled "Administrator: Windows PowerShell". The command prompt is at "PS C:\Users\Administrator>". The command "Get-ADForest dikshya.com" has been executed, and the output is displayed as follows:

```
ReadOnlyReplicaDirectoryServers : {}
ReplicaDirectoryServers         : {DikshyasServer1.dikshya.com}
RIDMaster                       : DikshyasServer1.dikshya.com
SubordinateReferences            : {DC=ForestDnsZones,DC=dikshya,DC=com, DC=DomainDnsZones,DC=dikshya,DC=com,
                                   CN=Configuration,DC=dikshya,DC=com}
SystemsContainer                : CN=System,DC=dikshya,DC=com
UsersContainer                   : CN=Users,DC=dikshya,DC=com

PS C:\Users\Administrator> Get-ADForest dikshya.com

ApplicationPartitions : {DC=ForestDnsZones,DC=dikshya,DC=com, DC=DomainDnsZones,DC=dikshya,DC=com}
CrossForestReferences : {}
DomainNamingMaster    : DikshyasServer1.dikshya.com
Domains               : {dikshya.com}
ForestMode             : Windows2016Forest
GlobalCatalogs        : {DikshyasServer1.dikshya.com}
Name                   : dikshya.com
PartitionsContainer    : CN=Partitions,CN=Configuration,DC=dikshya,DC=com
RootDomain             : dikshya.com
SchemaMaster           : DikshyasServer1.dikshya.com
Sites                  : {Default-First-Site-Name}
SPNSuffixes            : {}
UPNSuffixes            : {}

PS C:\Users\Administrator>
```

4. Conclusion

To sum up, the installation of active directory domain service on windows server 2022 was successfully completed following the systematic process. This logbook serves as a comprehensive guide for the installation process as well as record for future reference. The installation process was started by logging in to the windows server and adding several options to it and then verifying the domain controller by running the commands on PowerShell.