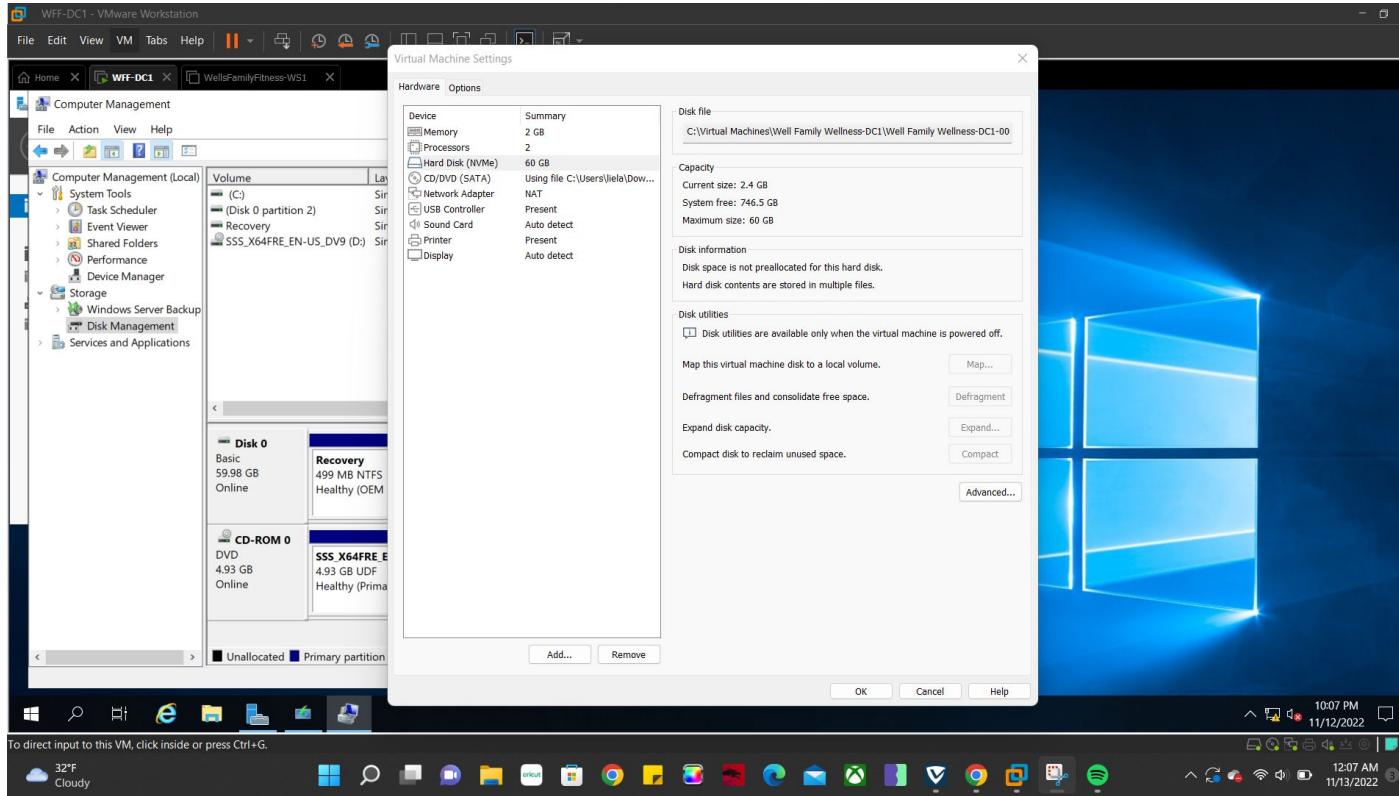
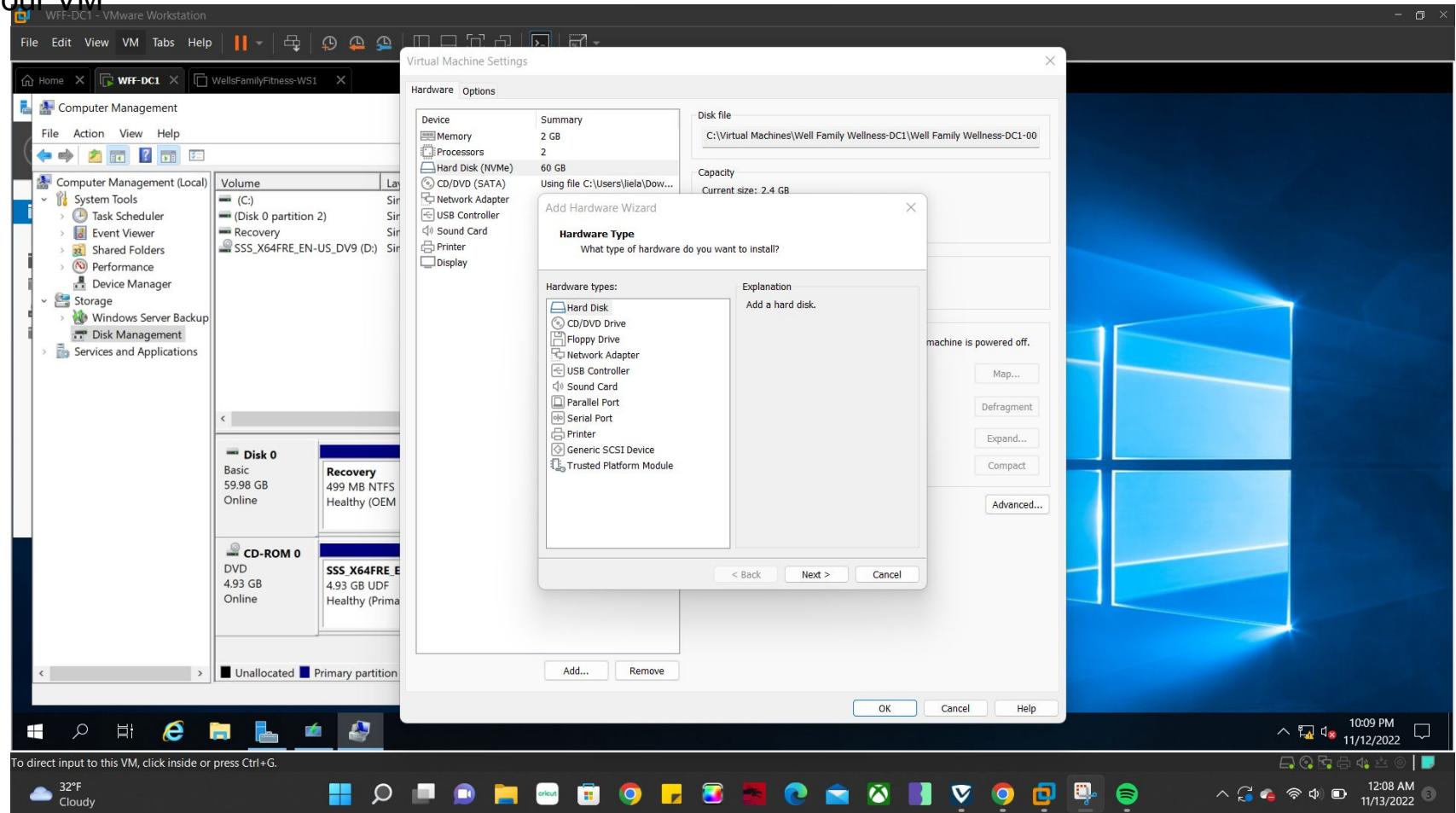


Prior to setting up backup, because the server is not connected to the internet we need to create a D: disk that is not local or a removable drive that we can store our backup data.

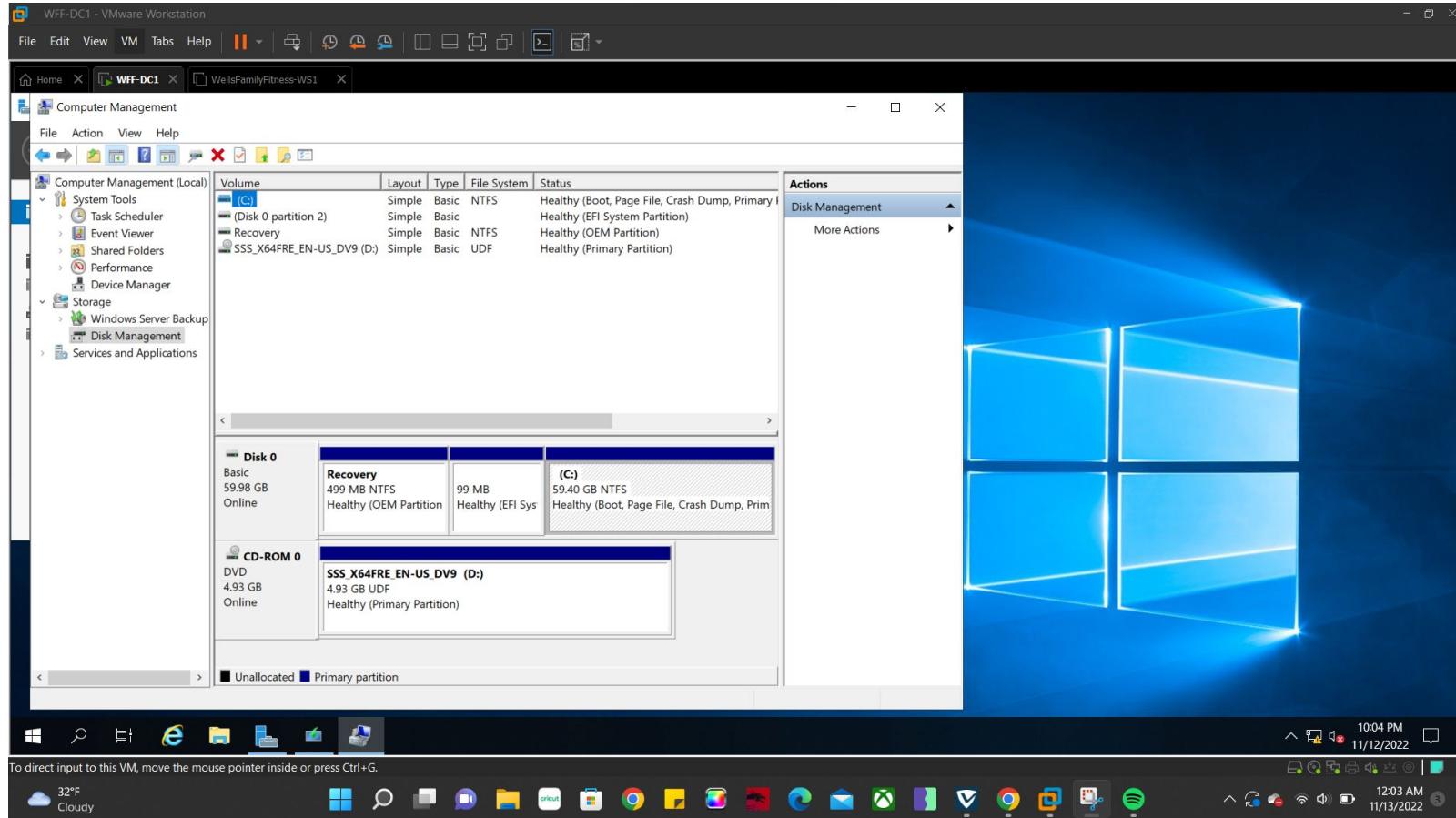
1. Go to VM Settings and select Hard Disk then Add...



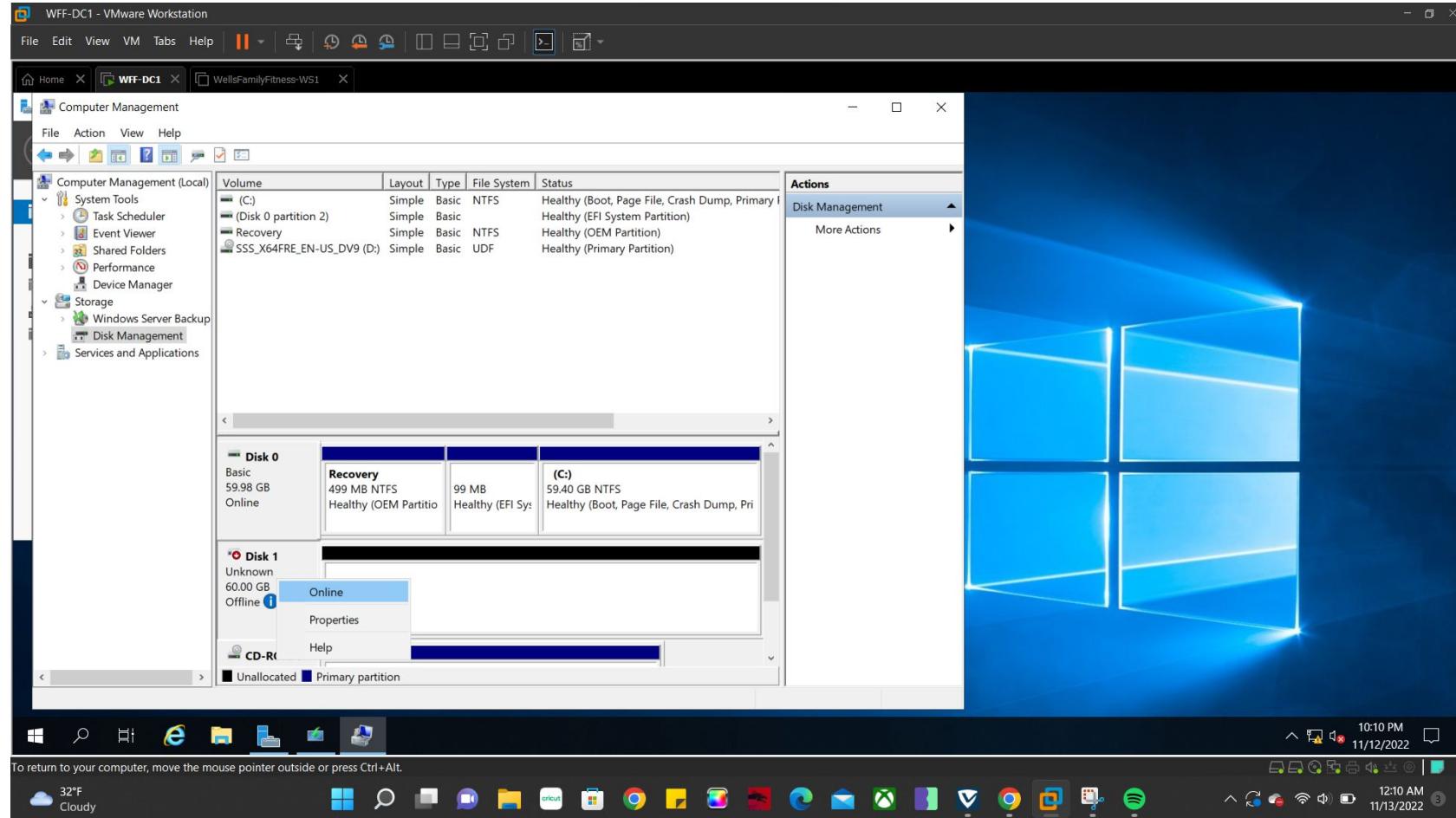
2. Select the hardware type: Hard Disk, then Next until it is ready to install and it will automatically update your VM.



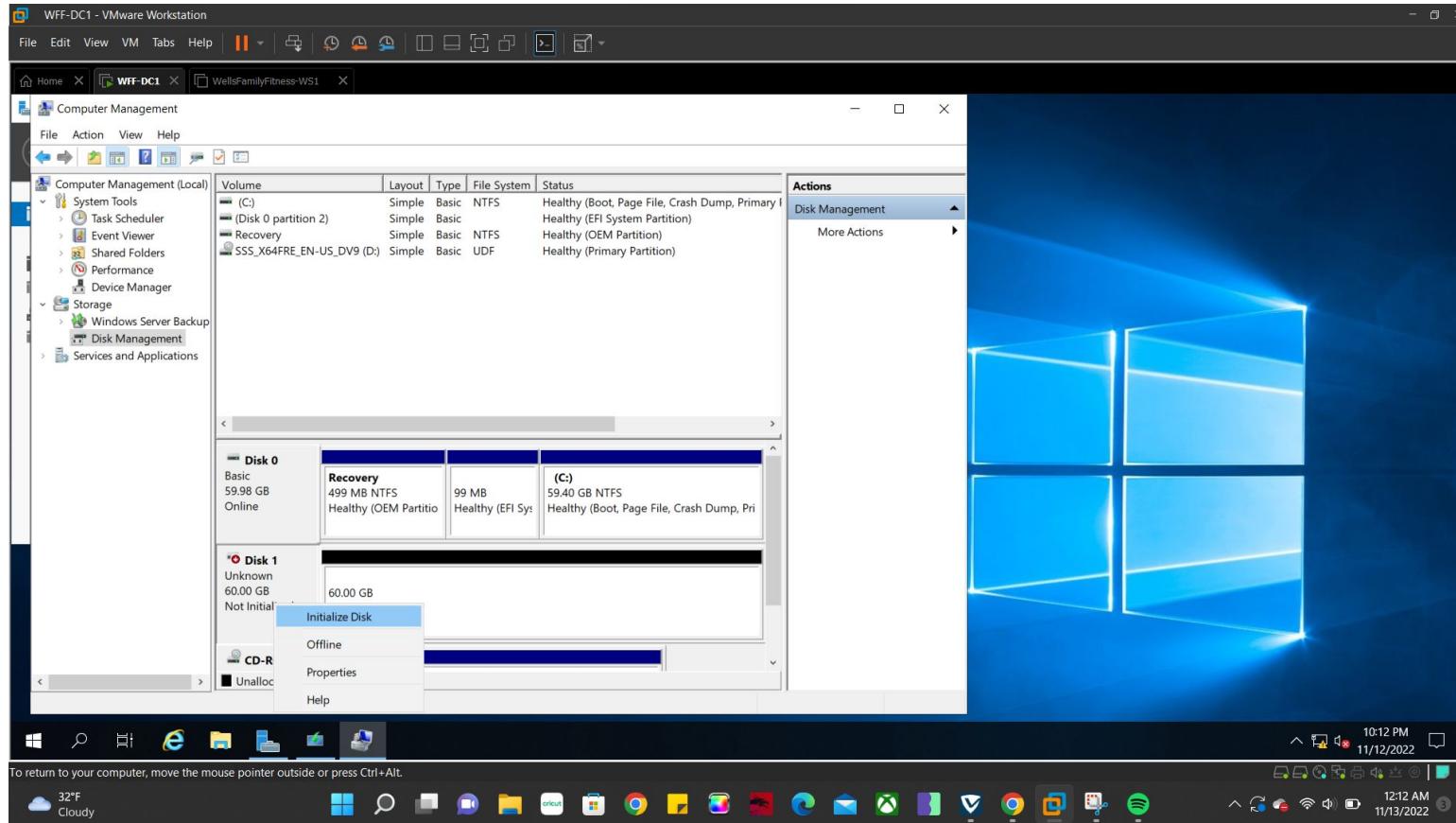
3. Open Server Manager and under Computer Management> Disk Management you will be able to see the new disk that you added.



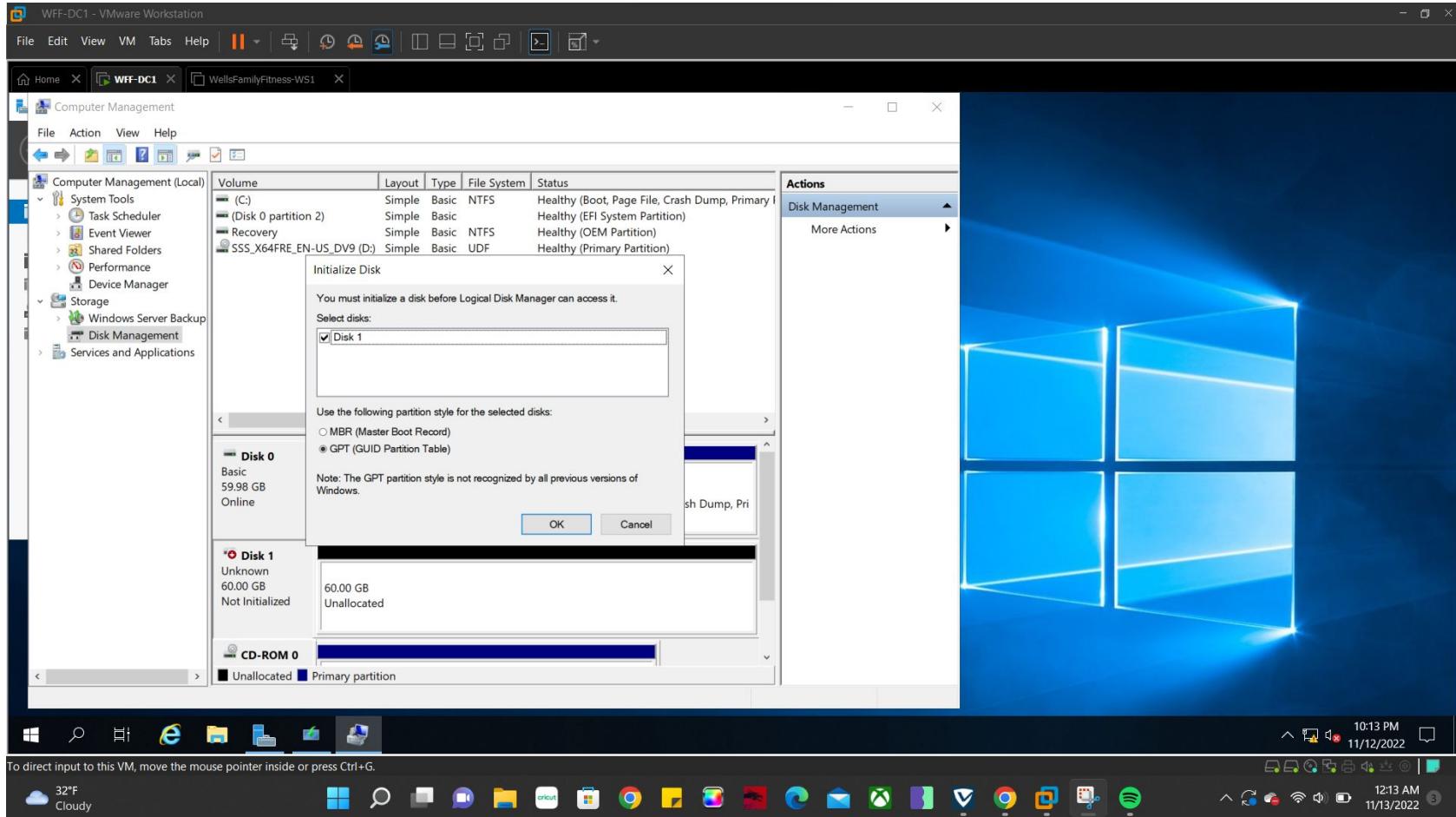
4a. If you right click on that new disk you will be able to turn it online and initialize it.



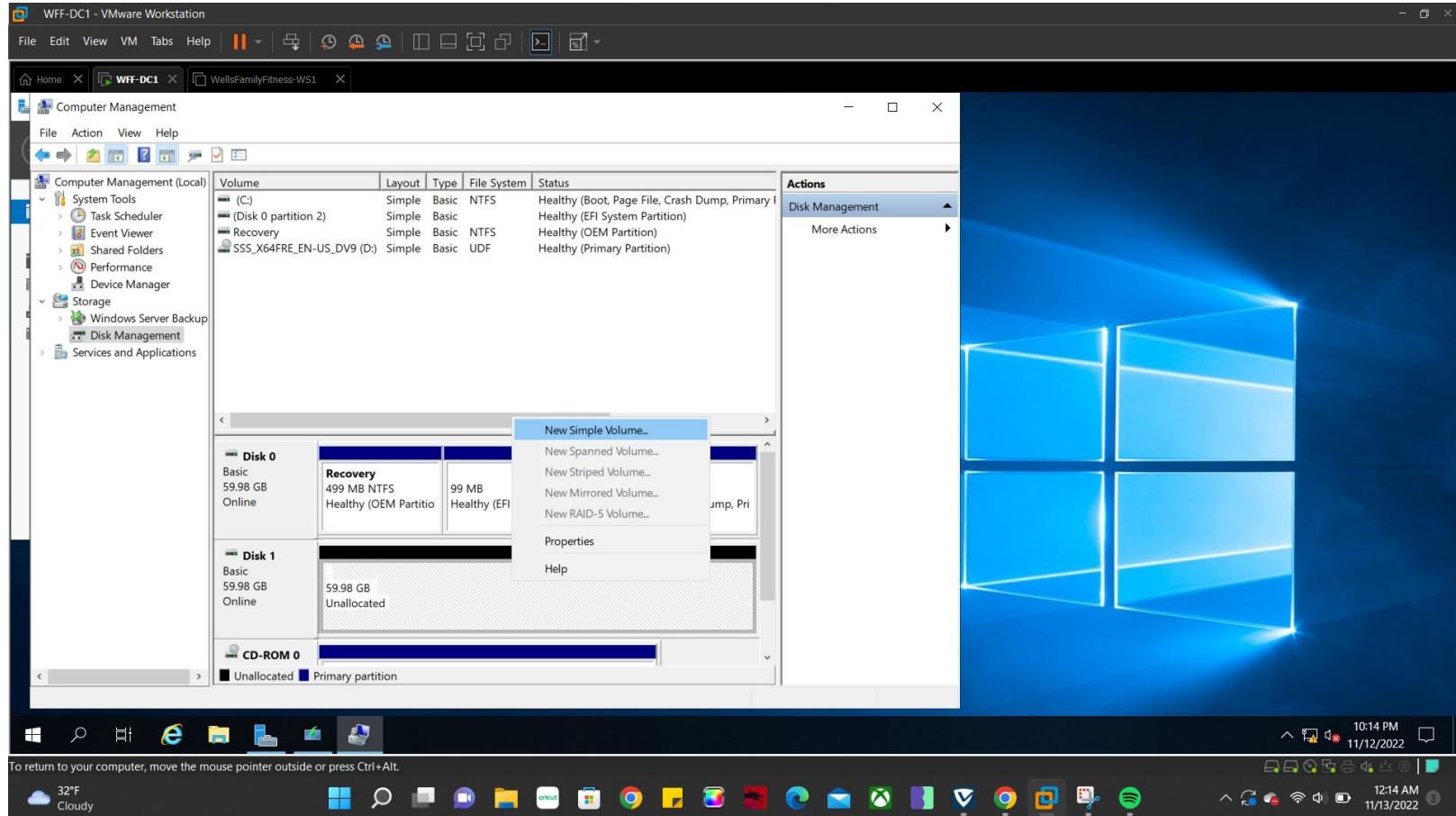
4b. Being able to initialize the disk

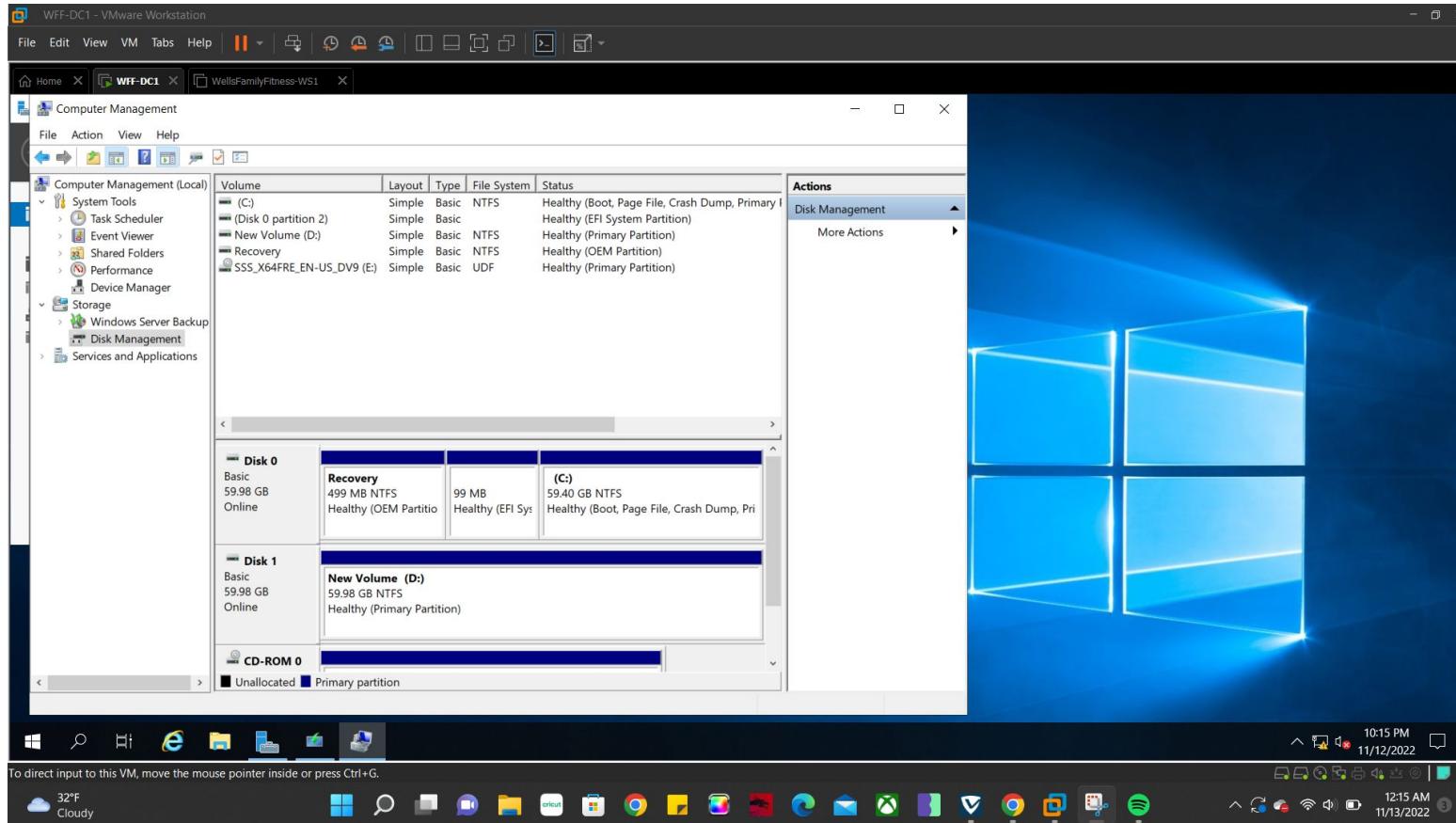


5. To initialize the disk, select disk one and leave the default settings then select ok

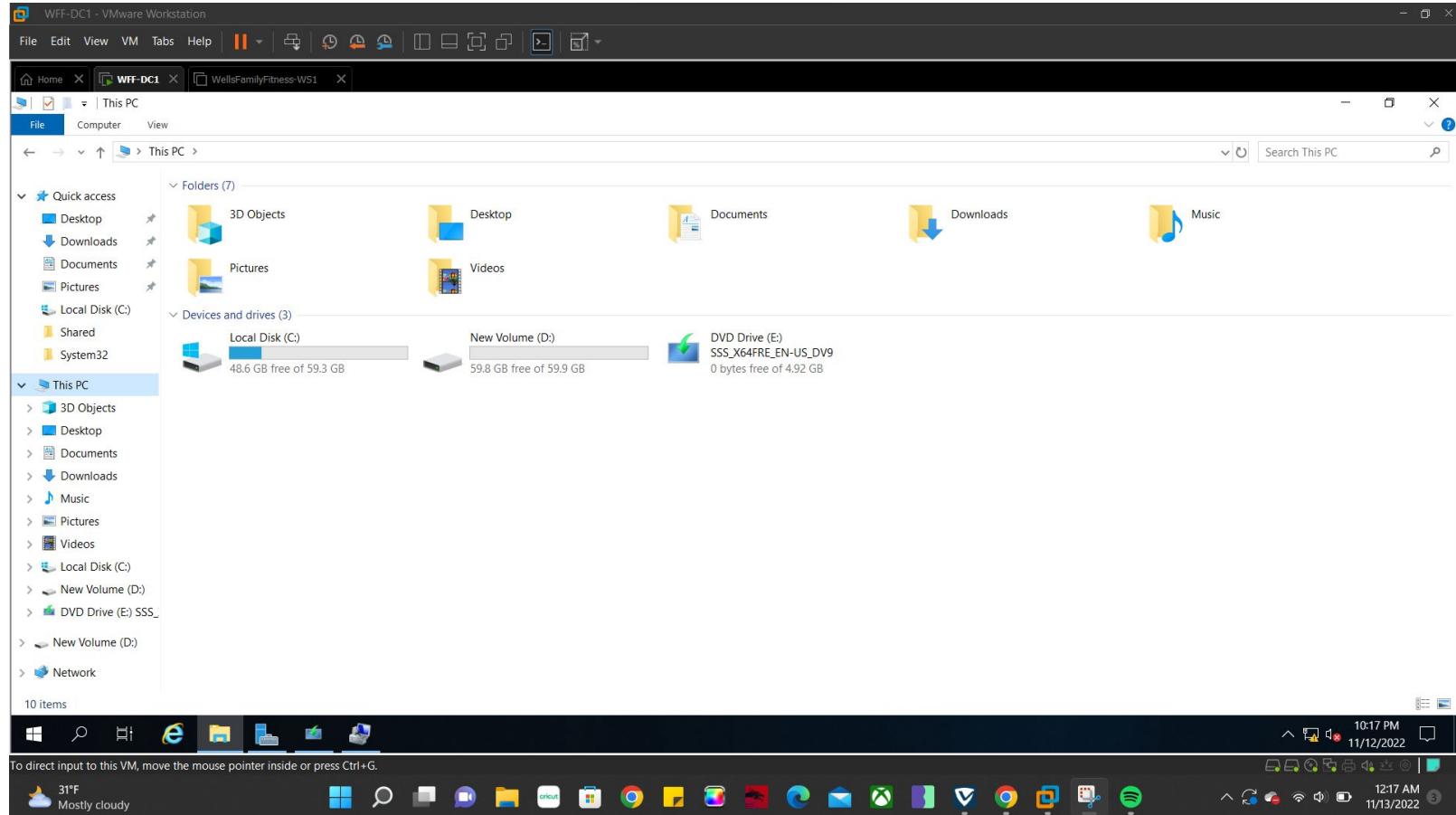


6. Right click on the disk and select new simple volume, after selecting the appropriate settings you are now able to

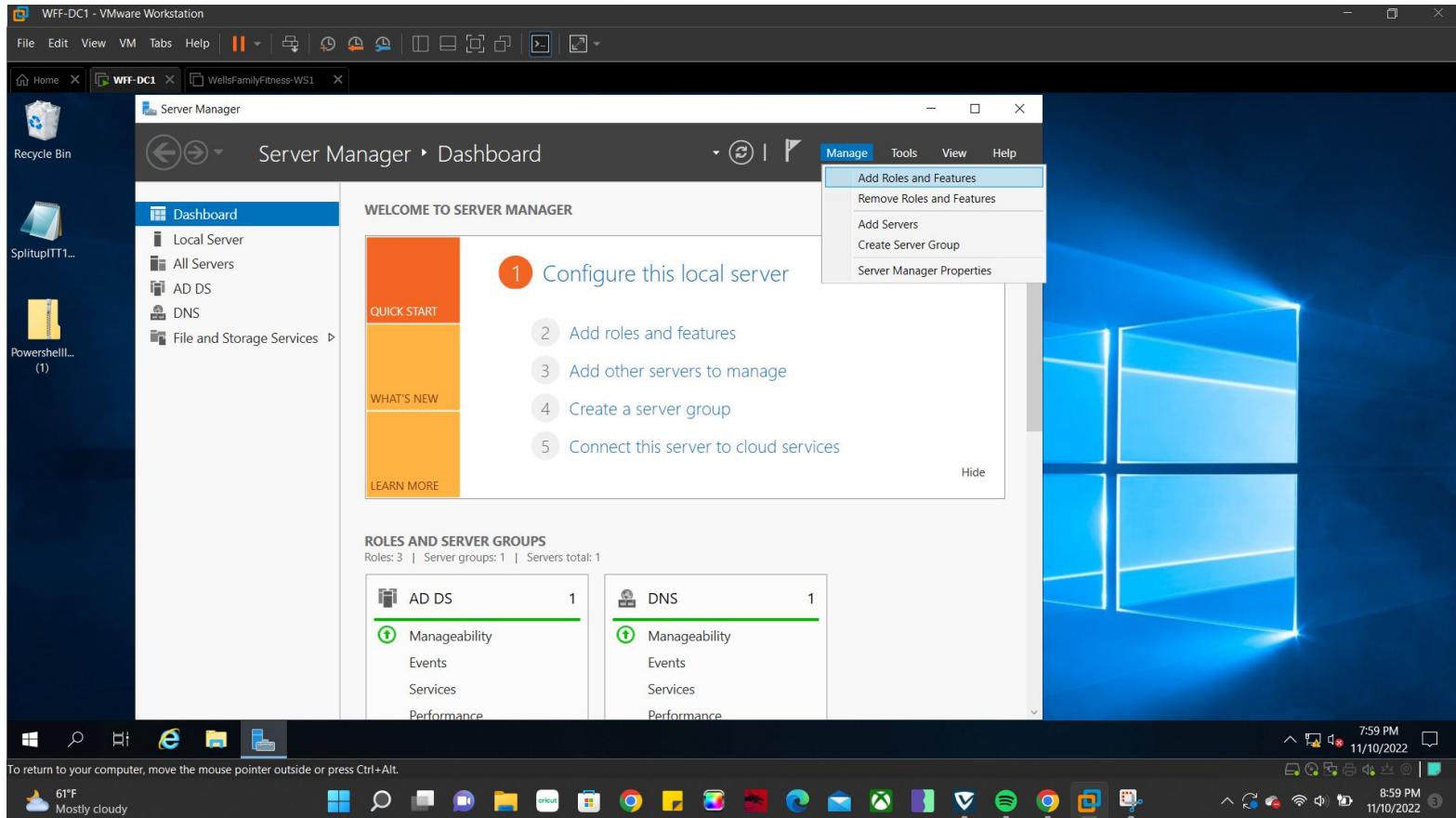




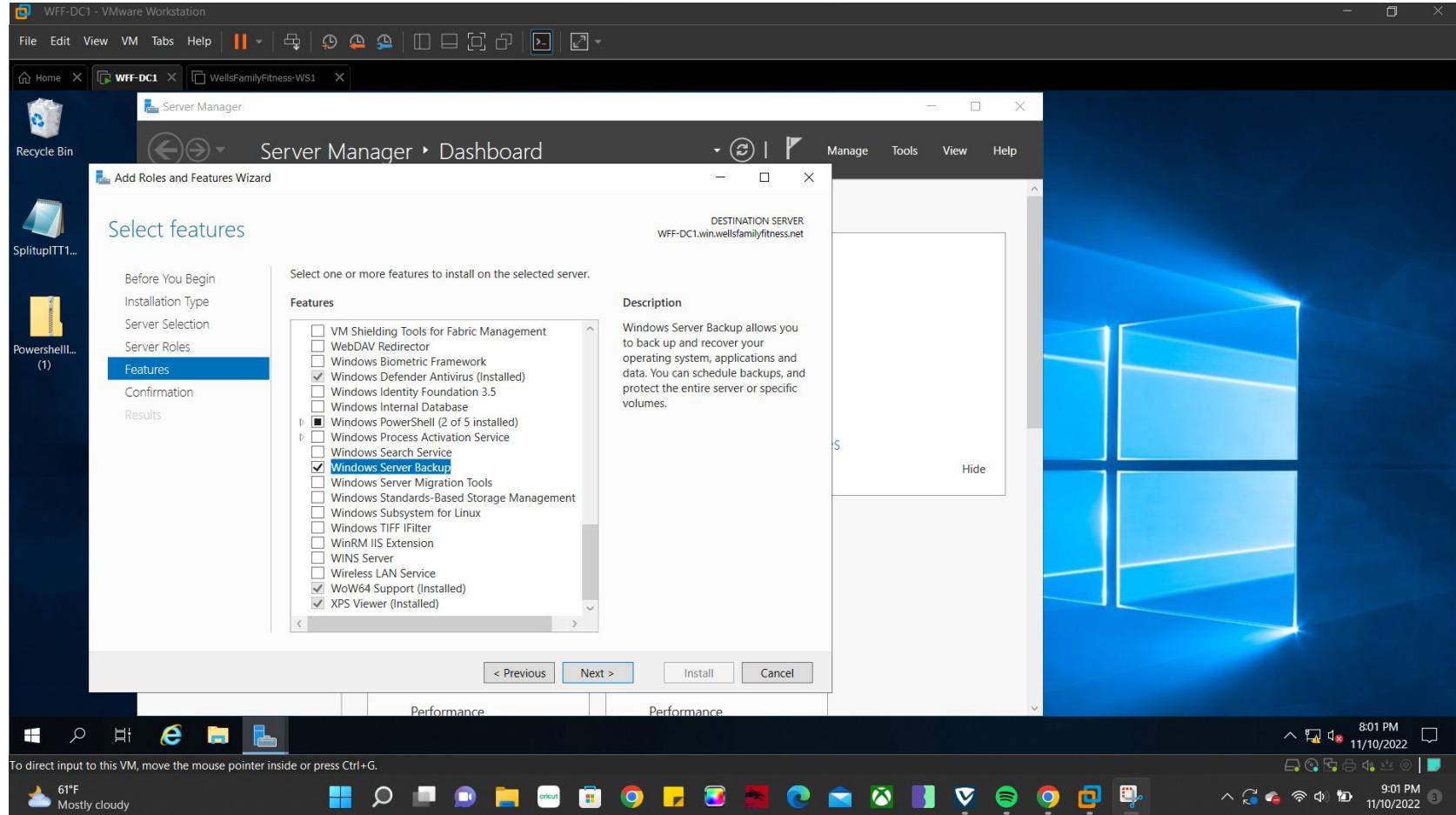
7. You can now see that the new disk is available and on the server



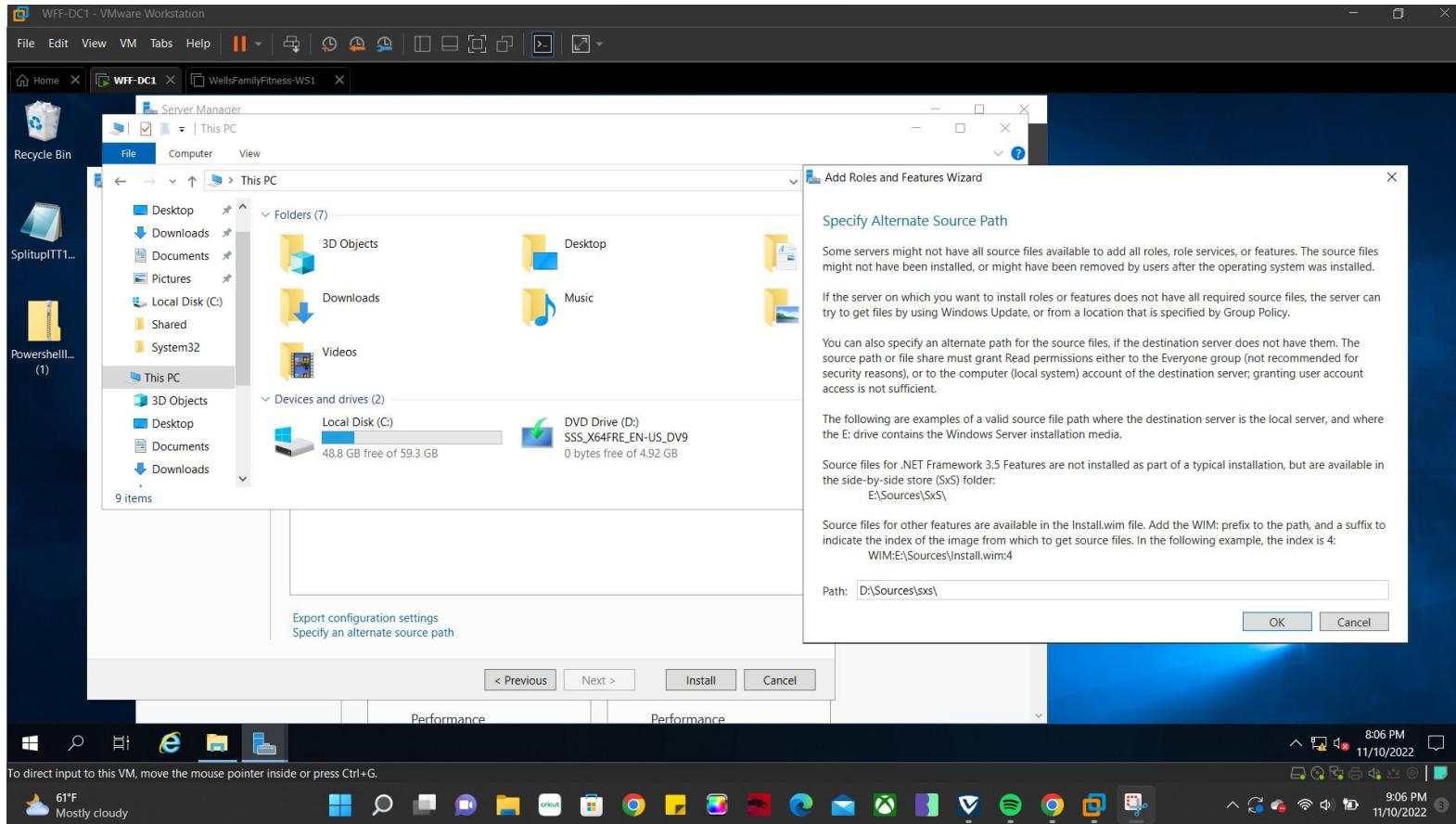
1. To install and set up Windows Backup, within your Server Manager Dashboard go to Manage> Add Roles and Features



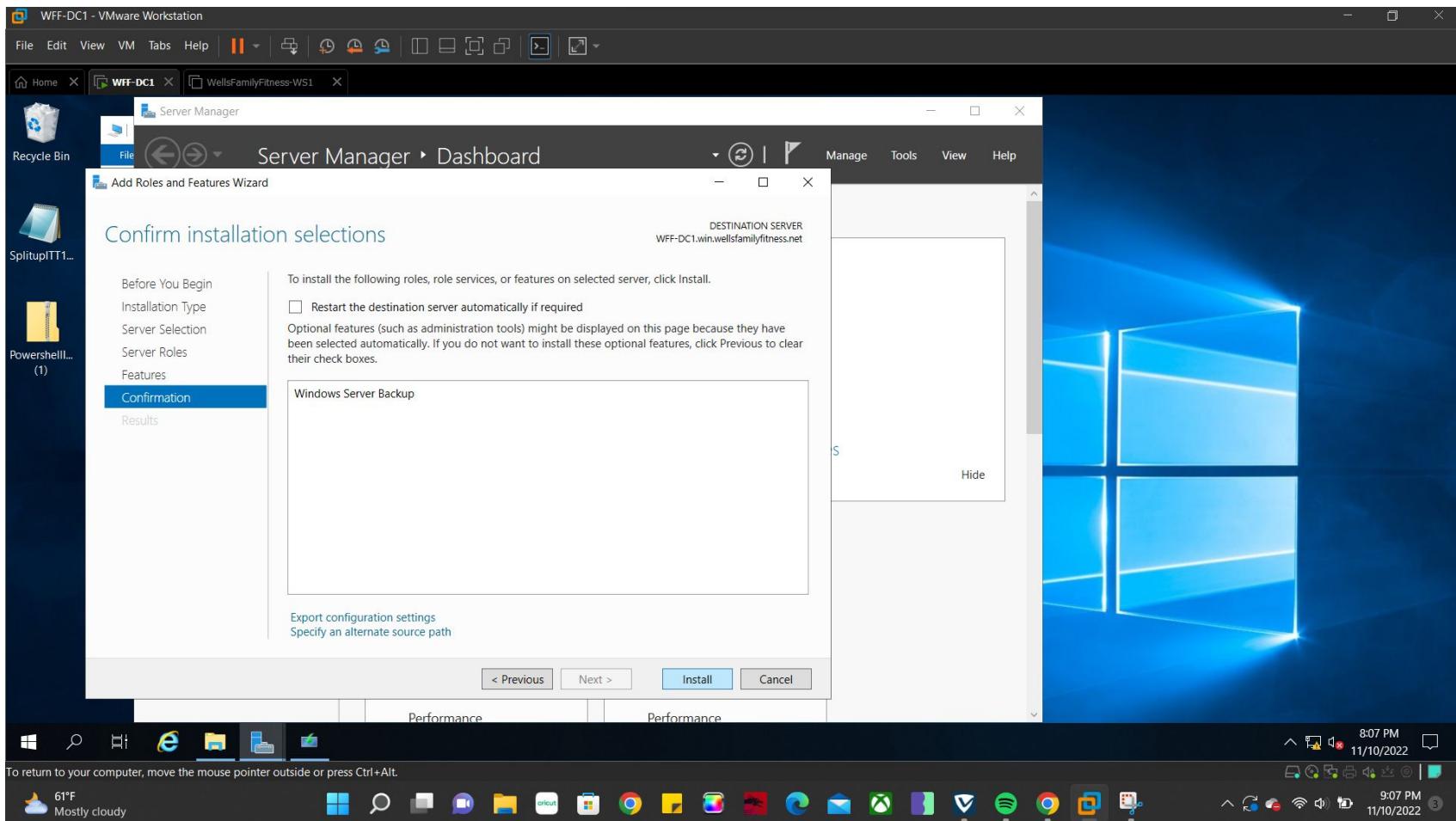
2. Under Features, select Windows Server Backup, then Next, leaving all the default settings



3. It will prompt you to select a path to which the backup will be saved. My backup drive is D: so I used the path presented on the screenshot.



4. After finishing all of the set up, select install



File Edit View VM Tabs Help || ⏴ ⏵ ⏶ ⏷ ⏸ ⏹ ⏺ ⏻ ⏼ ⏽ ⏾ ⏿

Home WFF-DC1 WellsFamilyFitness-WS1



Recycle Bin



SplitupIT1...

Powershell...
(1)

9 ite

Server Manager

File



Server Manager > Dashboard

Add Roles and Features Wizard

Installation progress

DESTINATION SERVER
WFF-DC1.win.wellfamilyfitness.net

View installation progress

Feature installation

Installation started on WFF-DC1.win.wellfamilyfitness.net

Windows Server Backup

You can close this wizard without interrupting running tasks. View task progress or open this page again by clicking Notifications in the command bar, and then Task Details.

Export configuration settings

< Previous

Next >

Close

Cancel

Services

Services

Performance

Performance

8:08 PM
11/10/2022

To direct input to this VM, move the mouse pointer inside or press Ctrl+G.

61°F
Mostly cloudy9:08 PM
11/10/2022



Recycle Bin



SplitupIT1...

Powershell...
(1)

9 ite

Server Manager > Dashboard

Add Roles and Features Wizard

Installation progress

DESTINATION SERVER
WFF-DC1.win.wellsfamilyfitness.net

View installation progress

Feature installation

Installation succeeded on WFF-DC1.win.wellsfamilyfitness.net.

Windows Server Backup

You can close this wizard without interrupting running tasks. View task progress or open this page again by clicking Notifications in the command bar, and then Task Details.

Export configuration settings

< Previous Next > Close Cancel

Services	Services
Performance	Performance



Setting up the server backup (once)...

1. Within Server Manager to Windows Server Backup

The screenshot shows the Windows Server Manager interface on a Windows 10 desktop. The title bar reads "WFF-DC1 - VMware Workstation". The left sidebar has icons for Recycle Bin, SplitupIT1..., and Powershell!... (1). The main area displays the "Server Manager Dashboard" with a "WELCOME TO SERVER MANAGER" section. It features a "QUICK START" button, a "WHAT'S NEW" section, and a "LEARN MORE" button. Below this, there's a "ROLES AND SERVER GROUPS" section showing roles: AD DS (1), DNS (1). The "AD DS" role has sub-options: Manageability, Events, Services, Performance. The "DNS" role also has sub-options: Manageability, Events, Services, Performance. A callout bubble highlights the "Configure this local server" step. The "Tools" menu is open, listing various management tools, with "Windows Server Backup" highlighted.

File Edit View VM Tabs Help

Home WFF-DC1 WellsFamilyFitness-WS1

Server Manager

Dashboard

WELCOME TO SERVER MANAGER

1 Configure this local server

2 Add roles and features

3 Add other servers to manage

4 Create a server group

5 Connect this server to cloud services

QUICK START

WHAT'S NEW

LEARN MORE

ROLES AND SERVER GROUPS

Roles: 3 | Server groups: 1 | Servers total: 1

AD DS 1	DNS 1
Manageability	Manageability
Events	Events
Services	Services
Performance	Performance

Tools View Help

Defragment and Optimize Drives

Disk Cleanup

DNS

Event Viewer

Group Policy Management

iSCSI Initiator

Local Security Policy

Microsoft Azure Services

ODBC Data Sources (32-bit)

ODBC Data Sources (64-bit)

Performance Monitor

Print Management

Recovery Drive

Registry Editor

Resource Monitor

Services

System Configuration

System Information

Task Scheduler

Windows Defender Firewall with Advanced Security

Windows Memory Diagnostic

Windows PowerShell

Windows PowerShell (x86)

Windows PowerShell ISE

Windows PowerShell ISE (x86)

Windows Server Backup

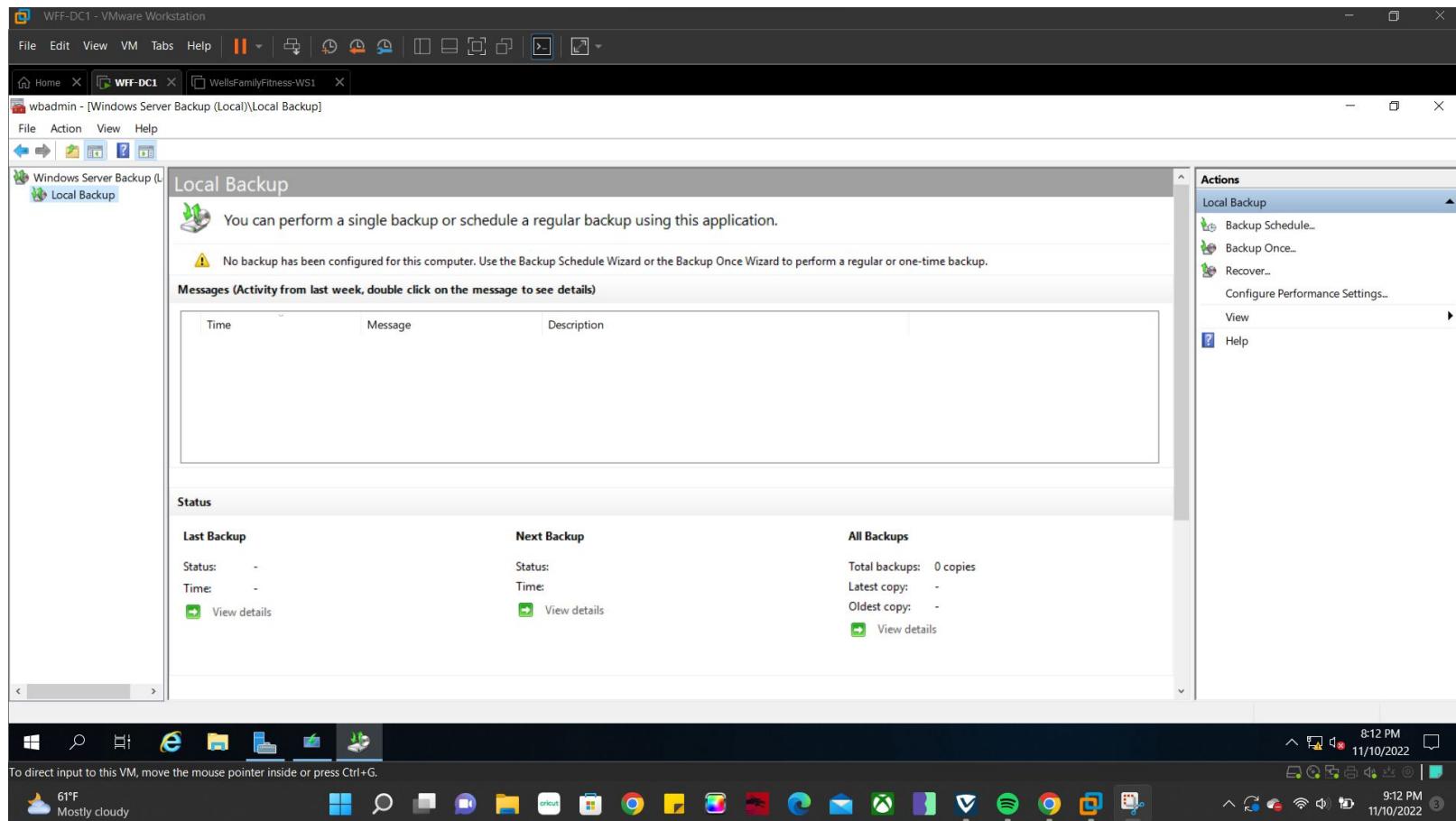
8:10 PM 11/10/2022

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

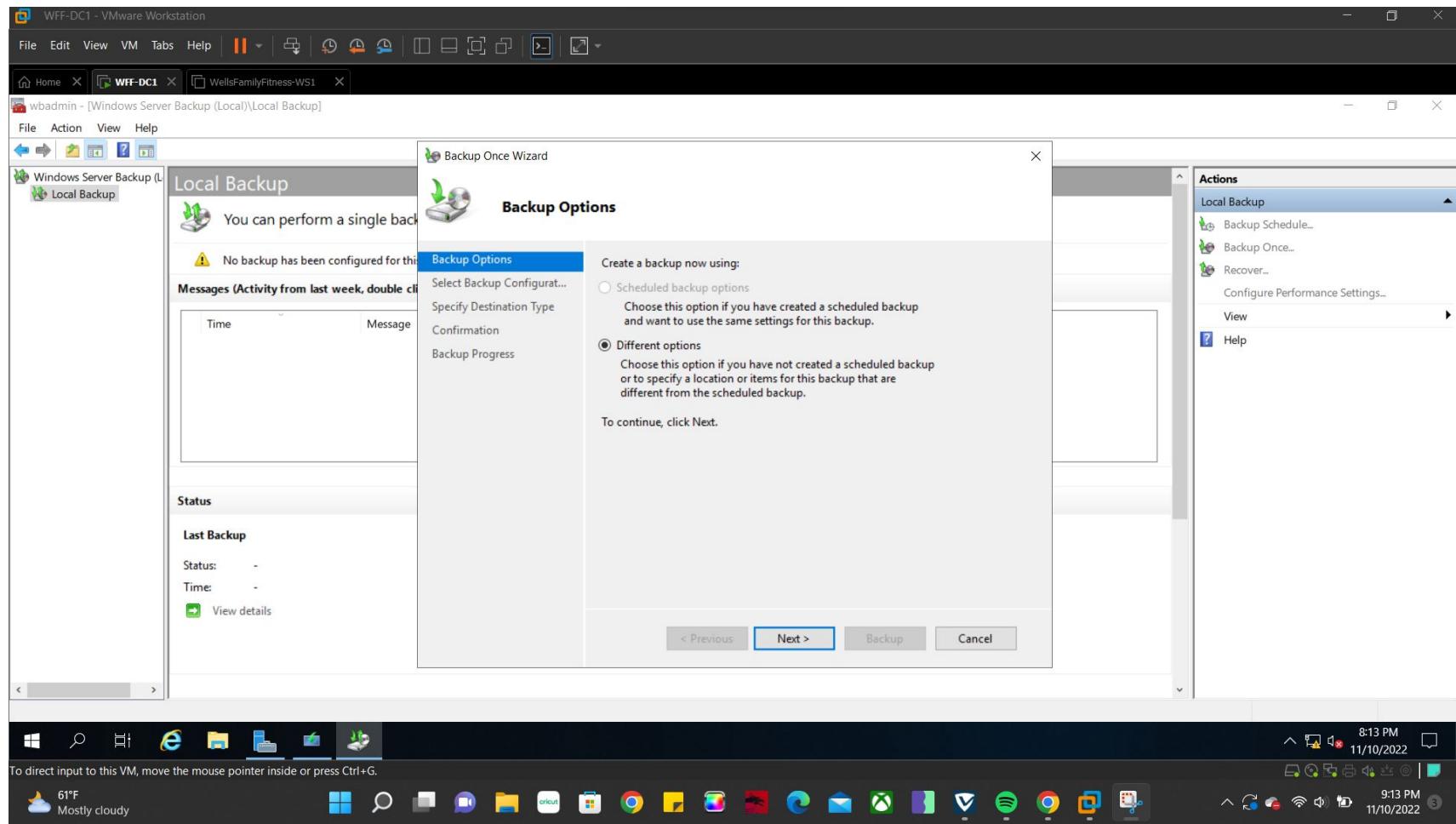
61°F Mostly cloudy

9:10 PM 11/10/2022

2. Under local backup you can select backup once.



3.Leaving most of the default settings, select next.



WFF-DC1 - VMware Workstation

File Edit View VM Tabs Help

Home WFF-DC1 WellsFamilyFitness-WS1

wbadmin - [Windows Server Backup (Local)\Local Backup]

Action View Help

Windows Server Backup (Local) Local Backup

Local Backup

You can perform a single backup.

No backup has been configured for this server.

Messages (Activity from last week, double click to view details)

Time	Message
-	-

Status

Last Backup

Status: - Time: - View details

Backup Once Wizard

Select Backup Configuration

Backup Options

Select Backup Configuration... (highlighted)

Select Items for Backup

Specify Destination Type

Confirmation

Backup Progress

What type of configuration do you want to schedule?

Full server (recommended)
I want to back up all my server data, applications and system state.
Backup size: 11.19 GB

Custom
I want to choose custom volumes, files for backup.

< Previous Next > Backup Cancel

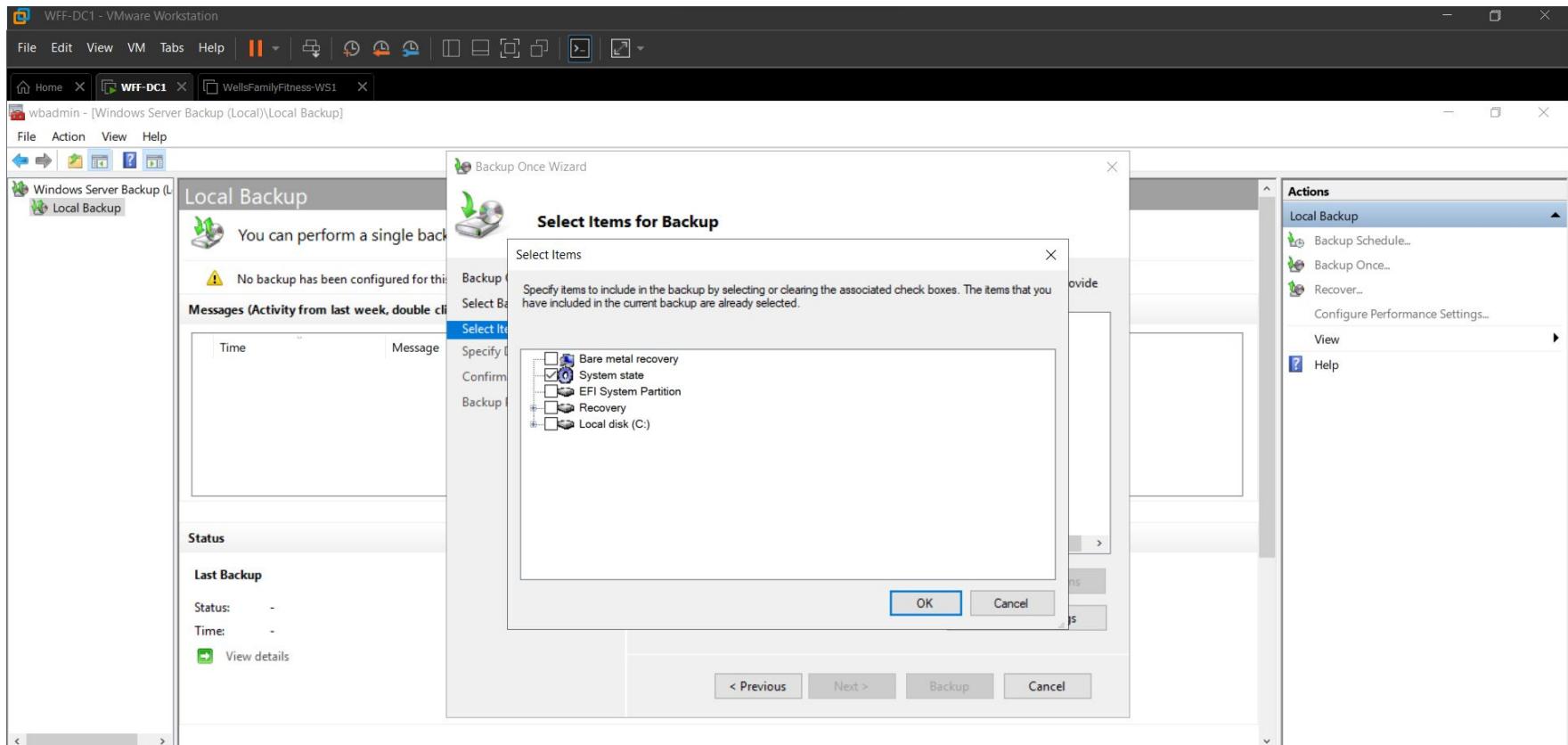
Actions

- Local Backup
- Backup Schedule...
- Backup Once...
- Recover...
- Configure Performance Settings...
- View
- Help

To direct input to this VM, move the mouse pointer inside or press Ctrl+G.

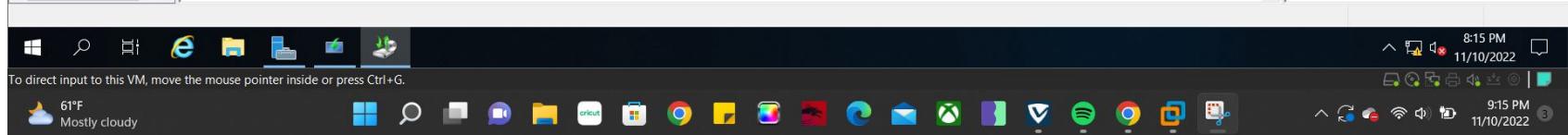
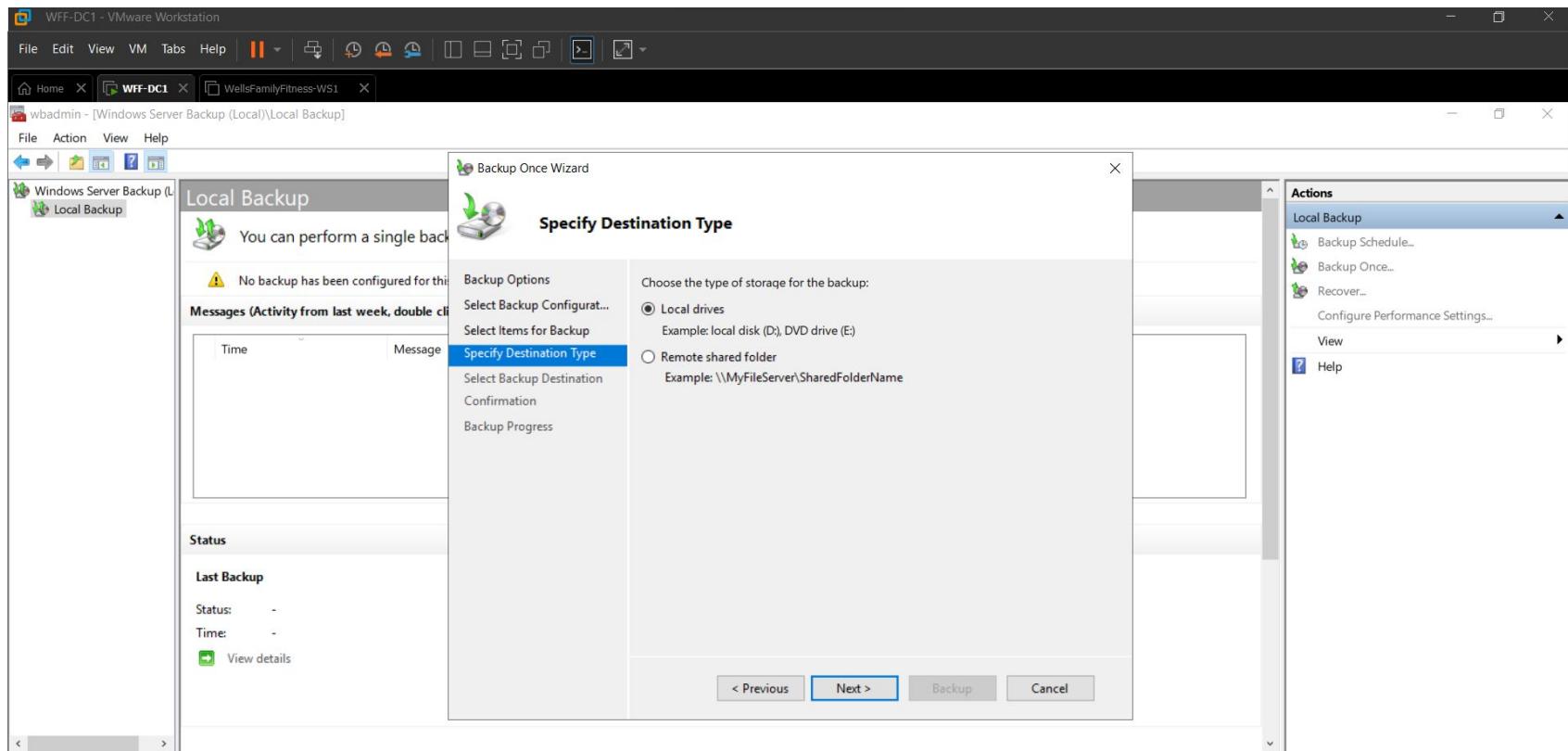


4. When selecting items for backup, select system state then next.

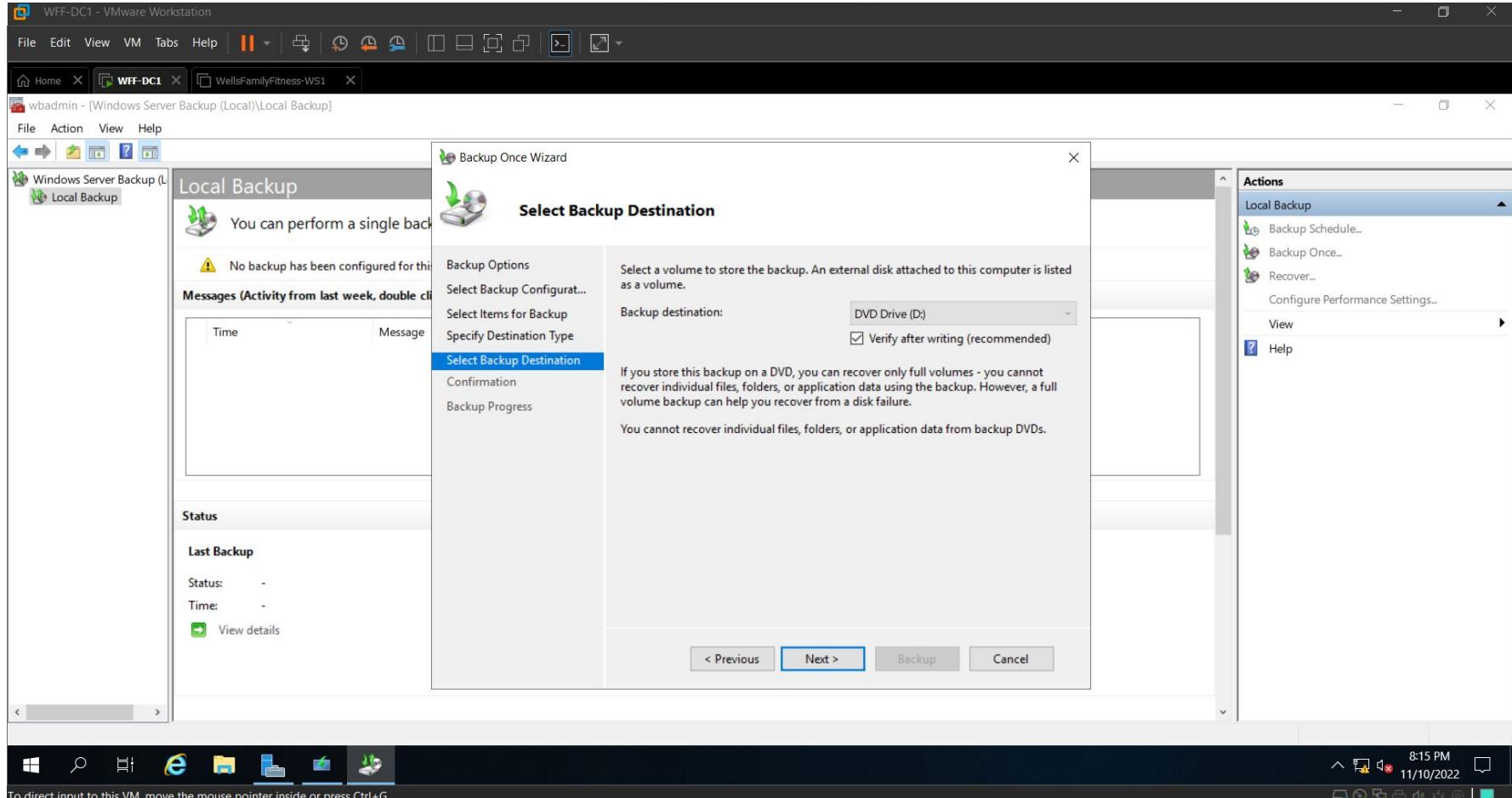


To direct input to this VM, move the mouse pointer inside or press Ctrl+G.

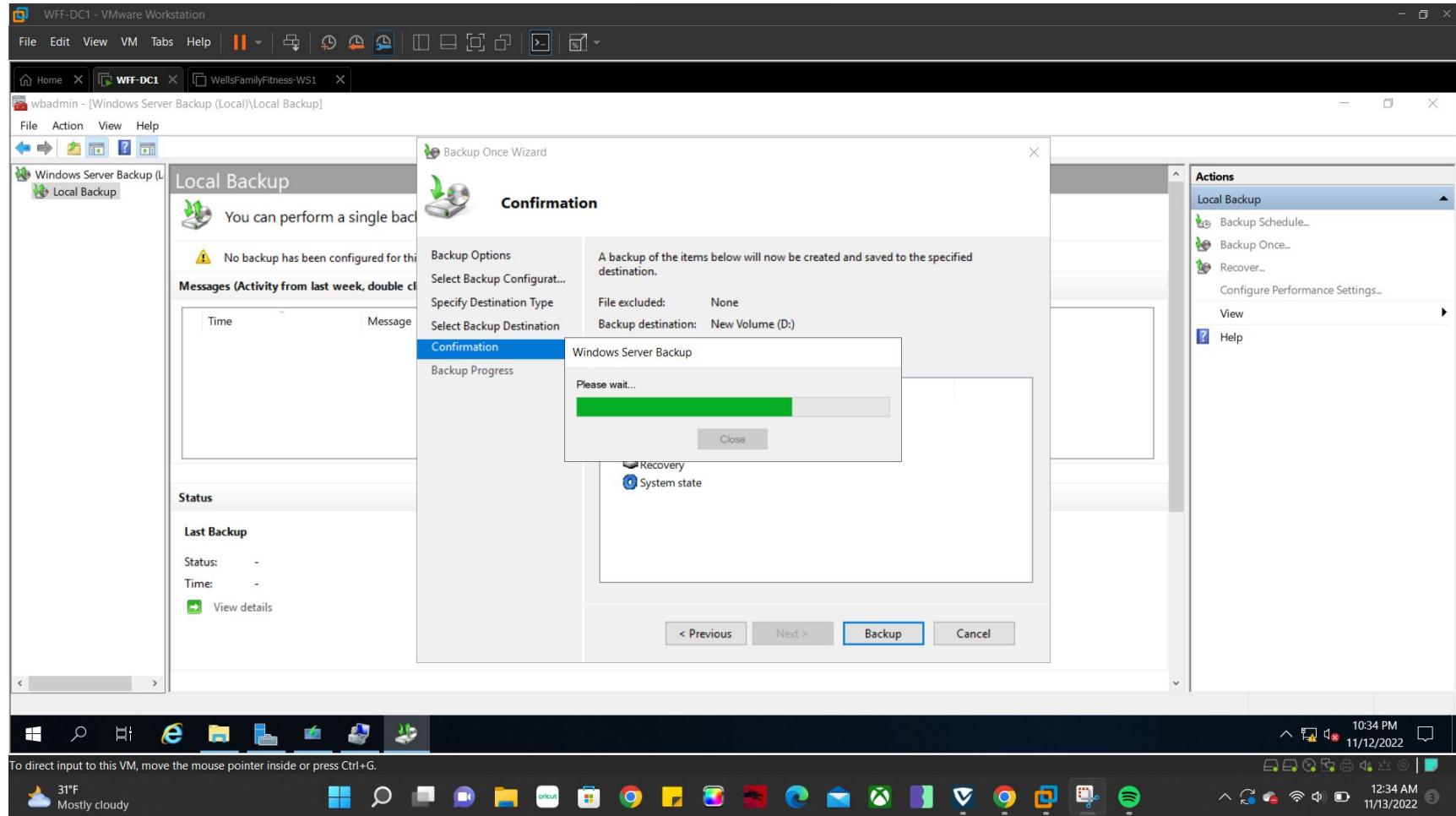
5. Make sure that the destination type is local drives



7. For backup destination, make sure it says D: (the picture was from before i created the new disk drive, but DVD drives DO NOT WORK because they are considered removable, make sure you choose the proper drive like in the next slide



8. After ensuring you selected the proper backup destination and what you wanted to backup, select backup



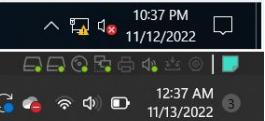
After the backup is complete it will display this screen where you can then close it.

The screenshot shows a Windows Server Backup interface. On the left, the 'Local Backup' pane displays a message: 'You can perform a single backup' and 'No backup has been configured for this computer'. It also shows a 'Messages' section with an activity from 'doubleclick' on 11/12/2022 at 10:34 PM. Below that is a 'Status' section showing a successful backup from 11/12/2022 at 10:34 PM. On the right, a 'Backup Once Wizard' window is open, specifically the 'Backup Progress' step. The status is 'Completed.' The backup location is 'D:' and 10.19 GB of data was transferred. A detailed table shows the completion status for various items:

Item	Status	Data transferred
EFI System Par...	Completed.	95.00 MB of 95.00 MB
Recovery	Completed.	412.56 MB of 412.56 ..
Local disk (C)	Completed.	9.69 GB of 9.69 GB
System state	Completed.	-
Bare metal rec...	Completed.	-

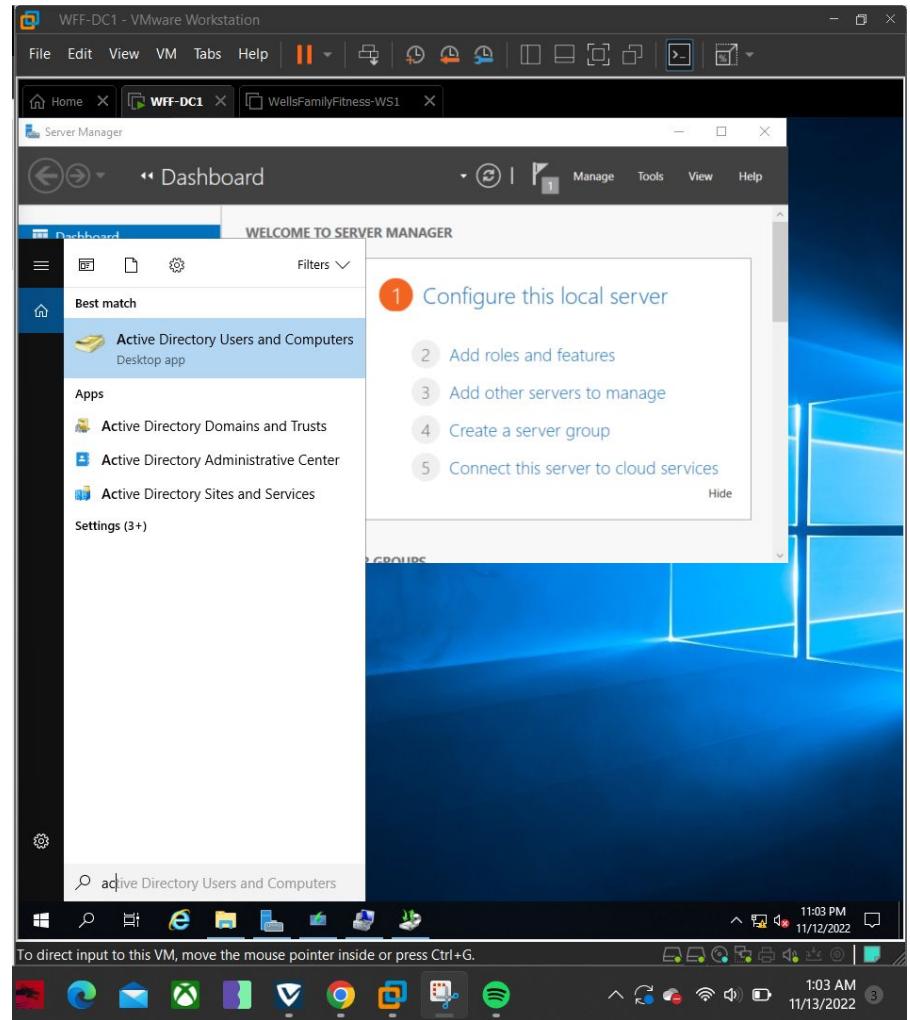
At the bottom of the 'Backup Progress' window are buttons for '< Previous', 'Next >', 'Close', and 'Cancel'.

To direct input to this VM, move the mouse pointer inside or press Ctrl+G.



12:37 AM
11/13/2022

Enable AD recycle bin



1. Open AD users and computers to create a new user account that we can use to practice deleting and recovering. By right clicking within wells fitness, create a new user : Jobob

The screenshot shows a Windows Server 2019 desktop environment. On the left, the Server Manager dashboard is open, displaying various server roles like Local Server, All Servers, AD DS, and DNS. A vertical sidebar on the right features sections for WELCOME, QUICK, WHAT'S NEW, and LEARN. In the center, the Active Directory Users and Computers window is displayed, showing a list of users and security groups. The user 'Jobob' is highlighted in the list. The taskbar at the bottom includes icons for File Explorer, Edge, and other system tools. The system tray shows the date and time as 11:13 PM on 11/12/2022.

WFF-DC1 - VMware Workstation

File Edit View VM Tabs Help

Home WFF-DC1 WellsFamilyFitness-WS1

Server Manager

Dashboard

WELCOME

QUICK

WHAT'S NEW

LEARN

ROLES

Active Directory Users and Computers

Name Type Description

Name	Type	Description
Accounting	Security Group	...
Administrators	Security Group	...
Cindy	User	
Customer Se...	Security Group	...
David	User	
Fitness and ...	Security Group	...
Healthcare	Security Group	
HR	Security Group	
IT	Security Group	...
Jacob	User	
JoBob	User	
Kimmy	User	
Kristen	User	
Management	Security Group	...
Mary	User	
Payroll	Security Group	...
Polly	User	
Renee	User	
Retail	Security Group	...
Sally	User	
Sarah	User	
Tracy	User	
Warehouse	Security Group	...
Zach	User	

To direct input to this VM, move the mouse pointer inside or press Ctrl+G.

31°F Mostly cloudy

11:13 AM 11/12/2022

File Action View Help

11:13 AM 11/13/2022

2. Open Active Directory Admin Center and right click on win (local) and select Enable Recycle Bin

The screenshot shows the Windows Start Menu with the search bar containing "Active Directory Admin". Below it, the "Active Directory Admin Center" application is open in a window titled "WFF-DC1 - VMware Workstation". The main pane displays the "win (local)" container under "Active Directory...". A context menu is open over the "win (local)" entry, with the "Enable Recycle Bin ..." option highlighted. To the right, a "Tasks" sidebar lists options like "New", "Delete", and "Properties" for both the current node and the "win (local)" container. At the bottom, the Windows Taskbar shows the "Windows PowerShell History" and the system tray indicates the date and time as 11/12/2022 at 11:14 PM.

File Edit View VM Tabs Help ||| Home WFF-DC1 WellsFamilyFitness-WS1 Active Directory Administrative Center

Active Directory Admin Center

Active Directory Admin Center > win (local) >

Active Directory... < win (local) (14)

Overview

win (local)

- Change domain controller
- Raise the forest functional level...
- Raise the domain functional level...
- Enable Recycle Bin ...**
- New
- Search under this node
- Properties

Name Type Description

builtinDom...	Container	Default container for upgr...
Organizati...	Container	Default container for dom...
principals	Container	Default container for secur...
infrastructu...	Container	Default container for key o...
lostAndFou...	Container	Default container for orph...
Managed Service Accounts	Container	Default container for man...
NTDS Quotas	msDS-Quo...	Quota specifications conta...
Program Data	Container	Default location for storag...

Builtin

Object class: builtinDomain Modified: 10/9/2022 11:48 PM

Description:

Summary

Tasks

Builtin

- New
- Delete
- Search under this node
- Properties

win (local)

- Change domain controller
- Raise the forest functional level...
- Raise the domain functional level...
- Enable Recycle Bin ...**
- New
- Search under this node
- Properties

WINDOWS POWERSHELL HISTORY

11:14 PM 11/12/2022

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

31°F Mostly cloudy

1:14 AM 11/13/2022

3. Confirm that you want to enable the recycle bin

The screenshot shows the Windows Active Directory Administrative Center interface. On the left, the navigation pane includes options like Overview, win (local), Dynamic Access Control, Authentication, and Global Search. The main pane displays a list of containers under the 'win (local)' node, with 'Builtin' selected. A confirmation dialog box is overlaid on the screen, asking 'Are you sure you want to perform this action? Once Recycle Bin has been enabled, it cannot be disabled.' with 'OK' and 'Cancel' buttons. The status bar at the bottom shows the Windows PowerShell history and system status.

File Edit View VM Tabs Help ||| Home WFF-DC1 WellsFamilyFitness-WS1 Active Directory Administrative Center Active Directory Administrative Center › win (local) ›

Active Directory... < win (local) (14)

Overview

win (local)

Builtin Computers Domain Controllers ForeignSecurityPrincipals Infrastructure Keys LostAndFound Managed Service Accounts NTDS Quotas Program Data

Name Type Description

Builtin builtinDomain... Container Default container for upgr... Computers Container Default container for dom... ForeignSecurityPrincipals Container Default contain... Infrastructure Container infrastructu... Keys Container Default contain... LostAndFound lostAndFou... Default contain... Managed Service Accounts Container Default contain... NTDS Quotas msDS-Quo... Quota specific... Program Data Container Default location...

Enable Recycle Bin Confirmation

Are you sure you want to perform this action? Once Recycle Bin has been enabled, it cannot be disabled.

OK Cancel

Tasks

Builtin

- New
- Delete
- Search under this node
- Properties

win (local)

- Change domain controller
- Raise the forest functional level...
- Raise the domain functional level...
- Enable Recycle Bin ...

New

Search under this node

Properties

Object class: builtinDomain

Description:

Modified: 10/9/2022 11:48 PM

Summary

WINDOWS POWERSHELL HISTORY

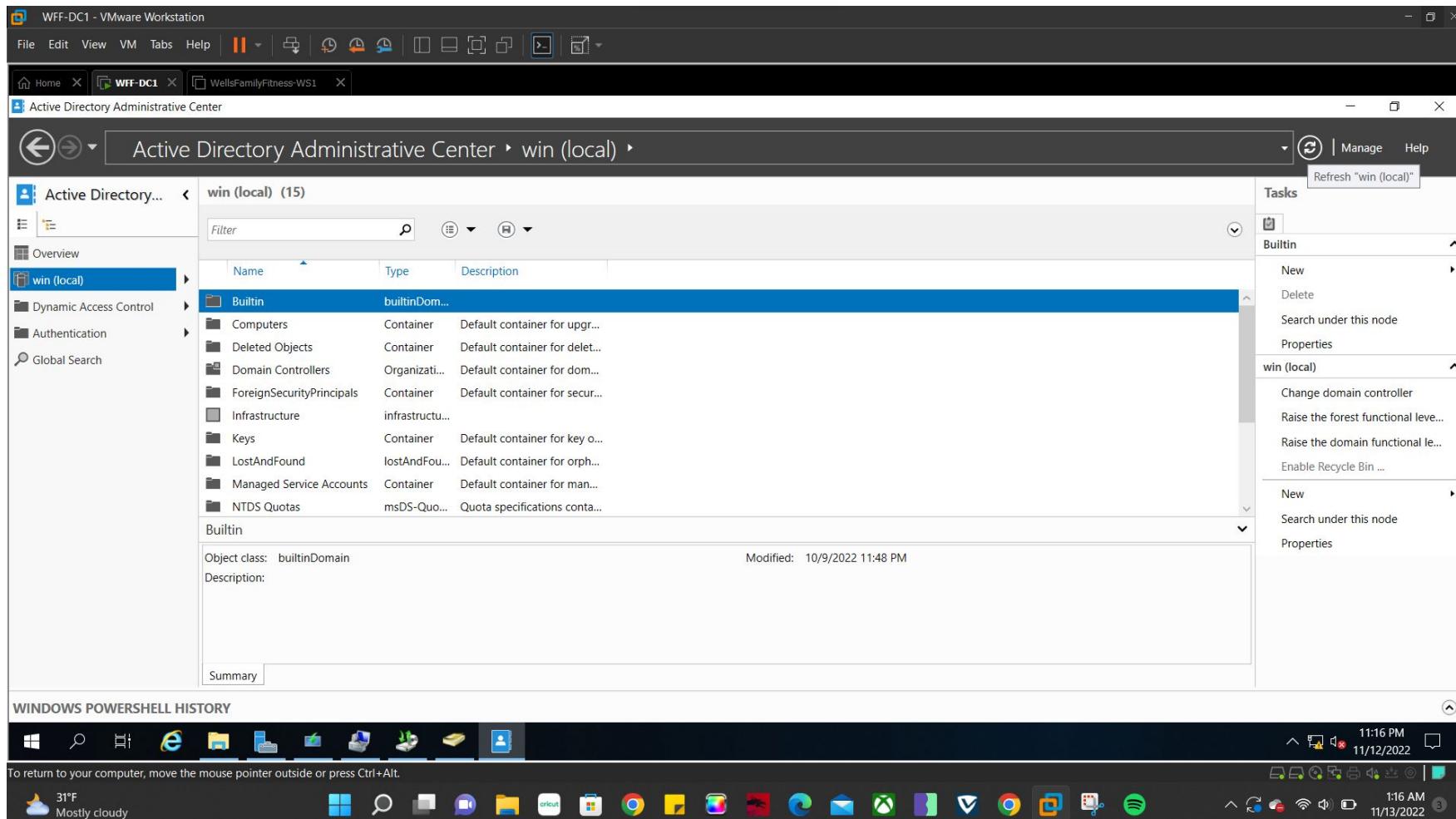
To return to your computer, move the mouse pointer outside or press Ctrl+Alt.

31° Mostly cloudy

11:15 PM 11/12/2022

1:15 AM 11/13/2022

4. You will notice that Deleted Objects is now an available selection under win(local)



The screenshot shows the Windows Server 2022 Active Directory Administrative Center. The left navigation pane shows 'Active Directory...' and 'win (local)'. The main pane displays a table of objects under the 'Builtin' container, including 'Deleted Objects'. The right pane shows a 'Tasks' sidebar with options like 'New', 'Delete', and 'Properties' for 'win (local)'.

Active Directory Administrative Center › win (local) ›

Tasks

Builtin

- New
- Delete
- Search under this node
- Properties

win (local)

- Change domain controller
- Raise the forest functional level...
- Raise the domain functional level...
- Enable Recycle Bin ...

New

Search under this node

Properties

Name	Type	Description
Computers	Container	Default container for upgr...
Deleted Objects	Container	Default container for delet...
Domain Controllers	Organizati...	Default container for dom...
ForeignSecurityPrincipals	Container	Default container for secur...
Infrastructure	infrastructu...	
Keys	Container	Default container for key o...
LostAndFound	lostAndFou...	Default container for orph...
Managed Service Accounts	Container	Default container for man...
NTDS Quotas	msDS-Quo...	Quota specifications conta...

Builtin

Object class: builtinDomain

Modified: 10/9/2022 11:48 PM

Description:

Summary

WINDOWS POWERSHELL HISTORY

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

11:16 PM
11/12/2022

31°F
Mostly cloudy

11:16 AM
11/13/2022

5. We are now going back to AD users and computers to delete the Jobob

The screenshot shows the Windows Server Manager interface. On the left, there's a dashboard with sections for Local Server, All Servers, AD DS, DNS, and File and Storage Services. A central column has sections for WELCOME, QUICK, WHAT'S NEW, and LEARN. The main pane is titled "Active Directory Users and Computers" and lists users and security groups. The "Jobob" user is selected, and a context menu is open, with the "Delete" option highlighted.

Name	Type	Description
Accounting	Security Group ...	
Administrators	Security Group ...	
Cindy	User	
Customer Sales	Security Group ...	
David	User	
Fitness and ...	Security Group ...	
Healthcare	Security Group ...	
HR	Security Group ...	
IT	Security Group ...	
Jacob	User	
Jobob	User	
Kimmy	User	Copy...
Kristen	User	Add to a group...
Management	Security Group	Name Mappings...
Mary	User	Disable Account
Payroll	User	Reset Password...
Polly	User	Move...
Renee	User	Open Home Page
Retail	Security Group	Send Mail
Sally	User	All Tasks >
Sarah	User	Cut
Tracy	User	Delete
Warehouse	Security Group	Rename
Zach	User	Properties
		Help

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

31°F Mostly cloudy

11:18 PM 11/12/2022

1:18 AM 11/13/2022

6. We can see that Jobob account can be viewed in the deleted objects folder of AD Admin Center

The screenshot shows the Windows 10 desktop environment with the "WFF-DC1 - VMware Workstation" window open. The taskbar at the bottom displays various pinned icons and the system tray showing the date and time as 11:19 AM on 11/12/2022.

The main window is the "Active Directory Administrative Center". The navigation pane on the left shows the following structure:

- Active Directory...
- Overview
- win (local) ▶

 - Deleted Objects ▶
 - Dynamic Access Control
 - Authentication
 - Global Search

The "Deleted Objects" node under "win (local)" is selected. The main pane displays the "Deleted Objects (1)" table with one item:

Name	When Deleted	Last known pa...	Type	Description
JobBob	11/12/2022 11:...	OU=WellsFitne...	User	

The "JobBob" row is highlighted. The details pane below shows the following information for the selected object:

User logon: jobob	Expiration: <Never>
E-mail:	Last log on: <Not Set>
Modified: 11/12/2022 11:18 PM	
Description:	

At the bottom of the main pane, there are tabs for "Summary" and "Details".

The right-hand sidebar contains the "Tasks" section with options: "Restore", "Restore To...", "Locate Parent", and "Properties". Below that is the "Deleted Objects" section with options: "New", "Delete", "Search under this node", and "Properties".

7. Right click on the user object and you will have the option to restore the user account.

The screenshot shows the Windows Server 2022 Active Directory Administrative Center interface. The left navigation pane shows the tree structure: Active Directory... > win (local) > Deleted Objects. The main pane displays a table titled "Deleted Objects (1)" with one item: "JoBob" (User). A context menu is open over the "JoBob" row, with the "Restore" option highlighted. The right pane shows detailed information for the "JoBob" user, including fields like User logon, E-mail, and Last log on. The status bar at the bottom indicates "To return to your computer, move the mouse pointer outside or press Ctrl+Alt."

WFF-DC1 - VMware Workstation

File Edit View VM Tabs Help

Home WFF-DC1 WellsFamilyFitness-WS1

Active Directory Administrative Center

Active Directory Center > win (local) > Deleted Objects

Deleted Objects (1)

Name	When Deleted	Last known pa...	Type	Description
JoBob	11/12/2022 11:...	OU=WellsFitne...	User	

JoBob

User logon: jobob
E-mail:
Modified: 11/12/2022 11:18 PM
Description:

Expiration: <Never>
Last log on: <Not Set>

Summary

WINDOWS POWERSHELL HISTORY

11:19 PM 11/12/2022

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

31°F Mostly cloudy

11:19 AM 11/13/2022

Tasks

- Jobob
- Restore
- Restore To...
- Locate Parent
- Properties

Deleted Objects

- New
- Delete
- Search under this node
- Properties

8. Jobob is back and restored!

WFF-DC1 - VMware Workstation

File Edit View VM Tabs Help

Home WFF-DC1 WellsFamilyFitness-WS1

Server Manager Dashboard

WELCOME QUICK WHAT LEARN ROLES

Active Directory Users and Computers

File Action View Help

Name Type Description

Name	Type	Description
Accounting	Security Group	
Builtin	Security Group	
Administrati...	Security Group	
Cindy	User	
Customer Se...	Security Group	
David	User	
Fitness and ...	Security Group	
Healthcare	Security Group	
HR	Security Group	
IT	Security Group	
Jacob	User	
JoBob	User	
Kimmy	User	
Kristen	User	
Management	Security Group	
Mary	User	
Payroll	Security Group	
Polly	User	
Renee	User	
Retail	Security Group	
Sally	User	
Sarah	User	
Tracy	User	
Warehouse	Security Group	
Zach	User	

31°F Mostly cloudy

11:20 PM 11/12/2022

To direct input to this VM, move the mouse pointer inside or press Ctrl+G.

1:20 AM 11/13/2022