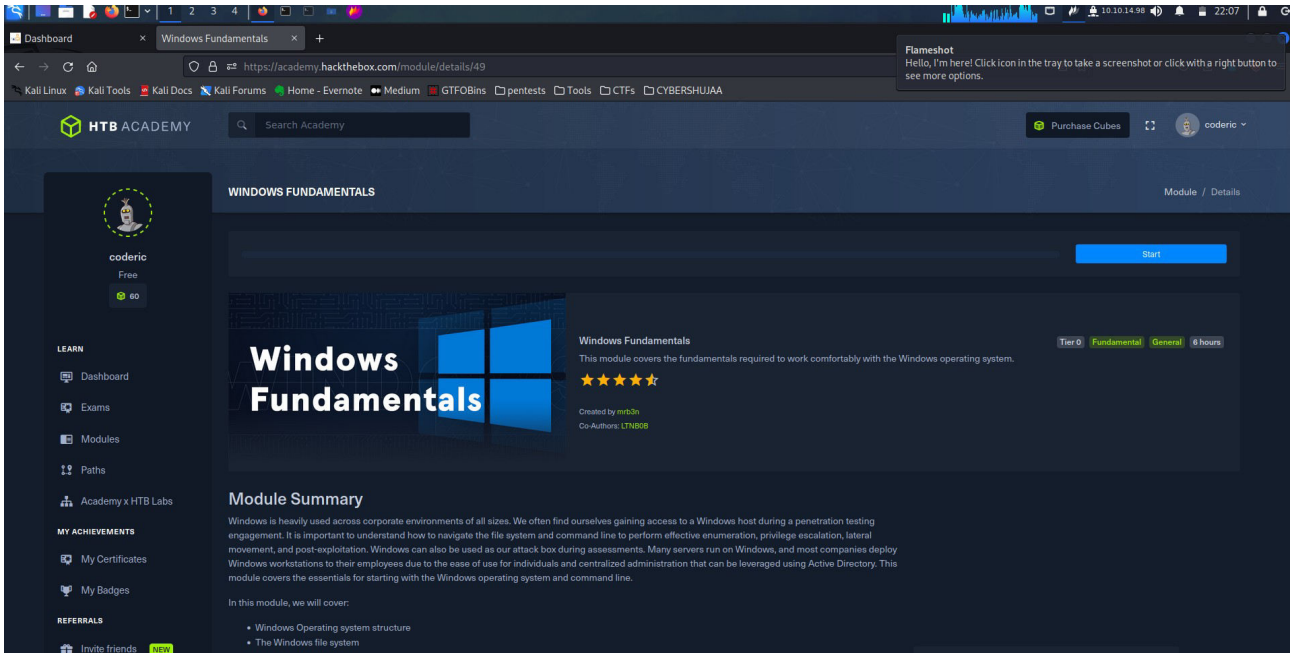
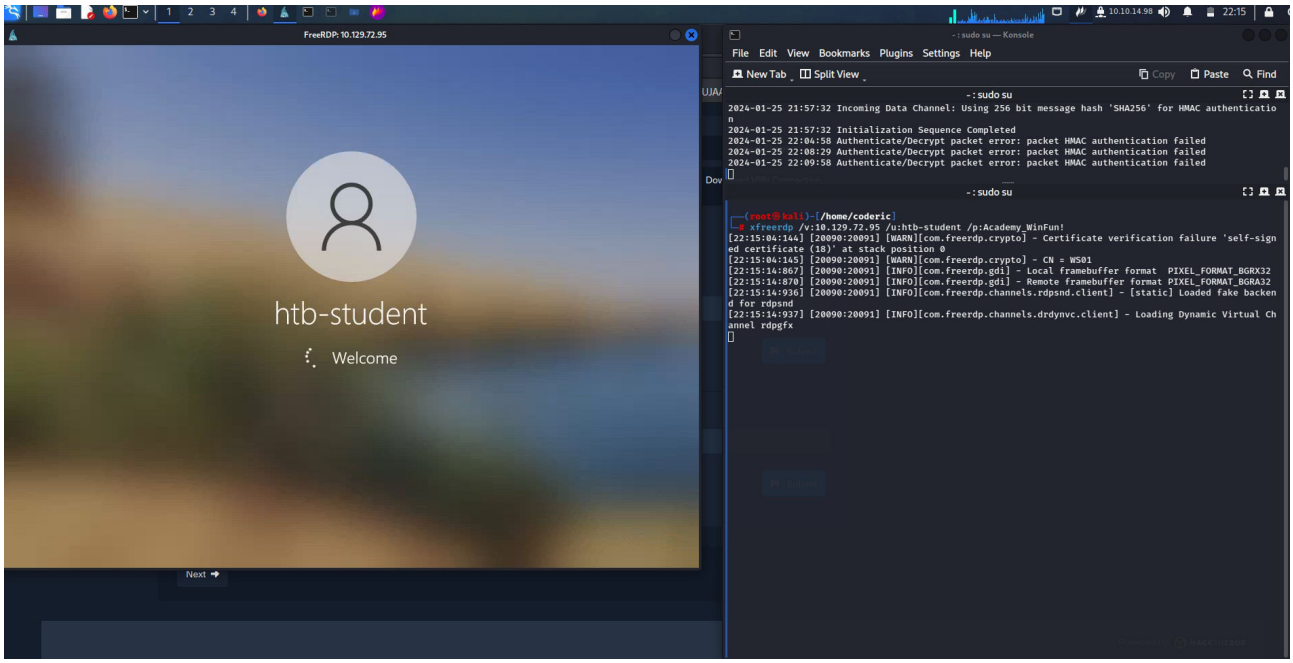
Eric Mwenda

Windows Fundamentals
https://academy.hackthebox.com/achievement/596337/49



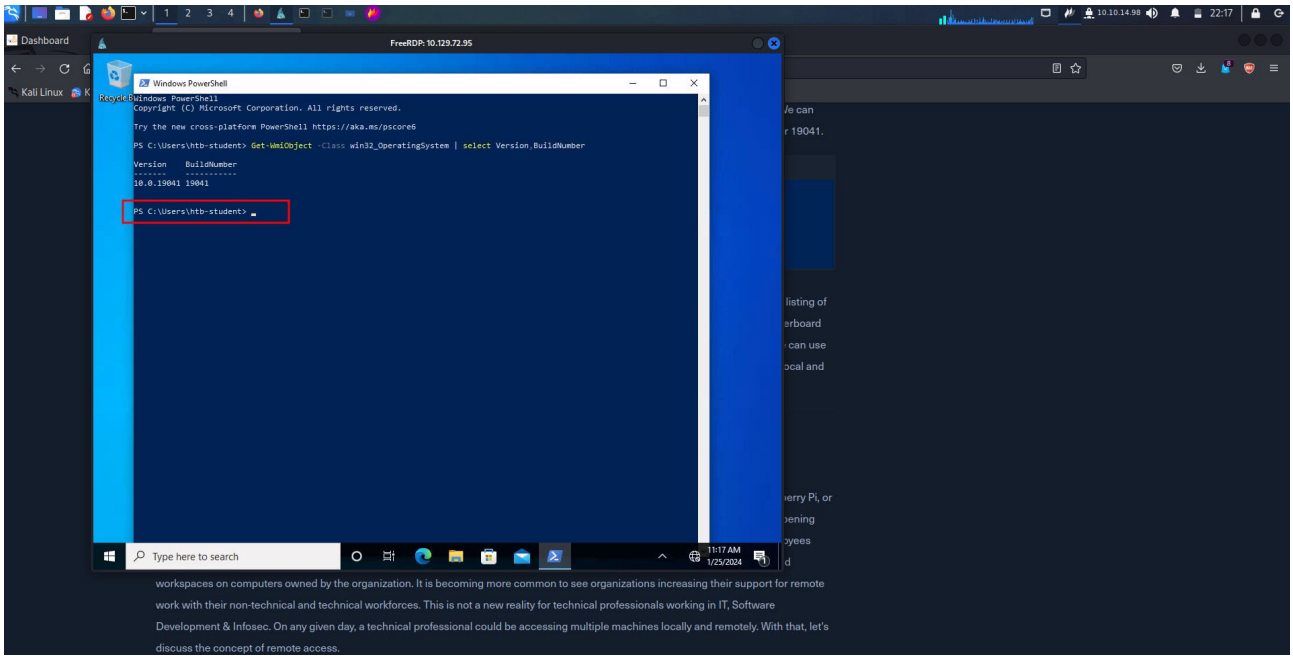
This is the command I shall use to reach the labs windows environment.
xfreerdp /v:10.129.160.72 /u:htb-student /p:Academy_WinFun!



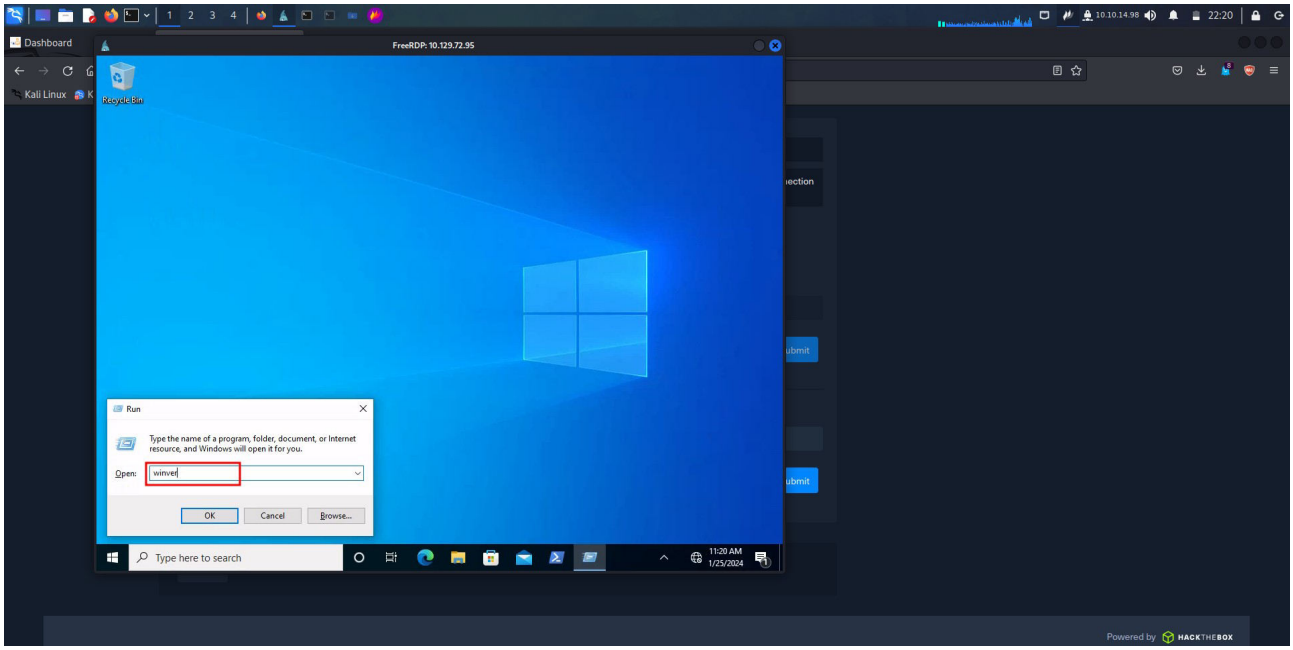
Introduction to Windows

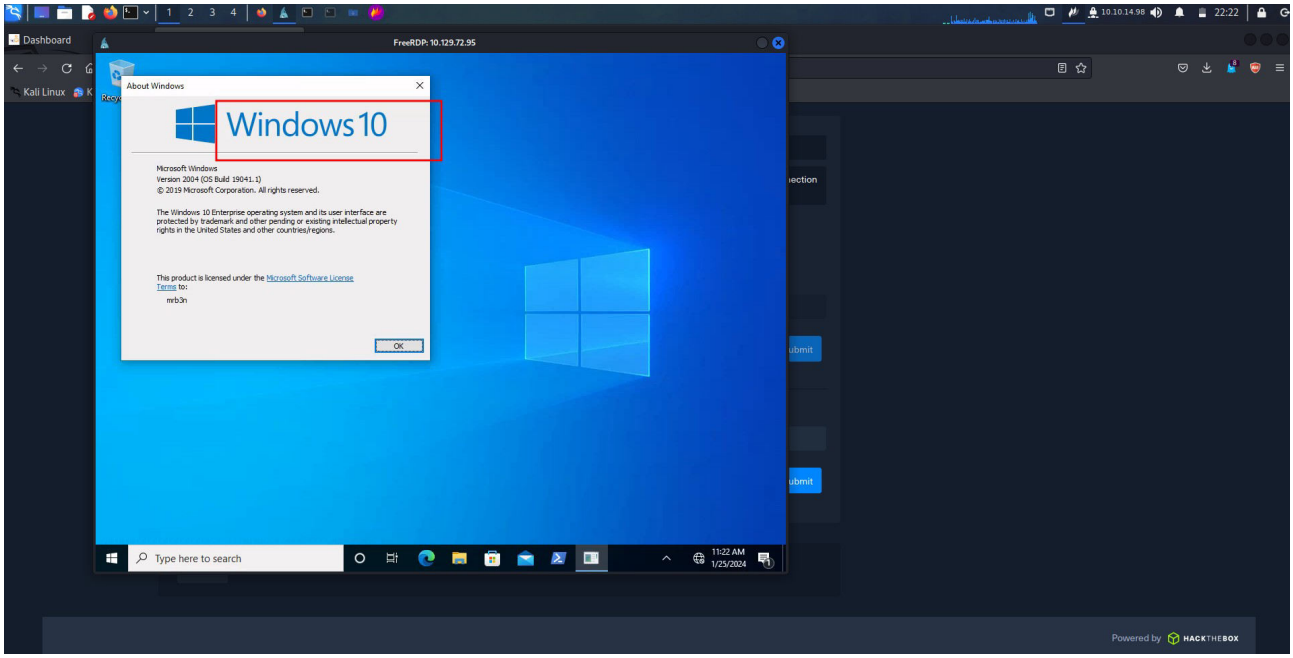
What is the Build Number of the target workstation?

On the notes section we have an example of how to lock at the Build Number, so Iwrote the exact command on power shell and here it is:-
Command used:- Get-WmiObject -Class win32_OperatingSystem | select Version,BuildNumber
ANS: 19041



Which Windows NT version is installed on the workstation? (i.e. Windows X - case sensitive)
Command used:- **WIN + R** – this is a shortcut to opening the Run program in windows.
I typed "winver"on the search bar and hit Enter.
This command displayed the Windows NT version installed.
ANS: Windows 10





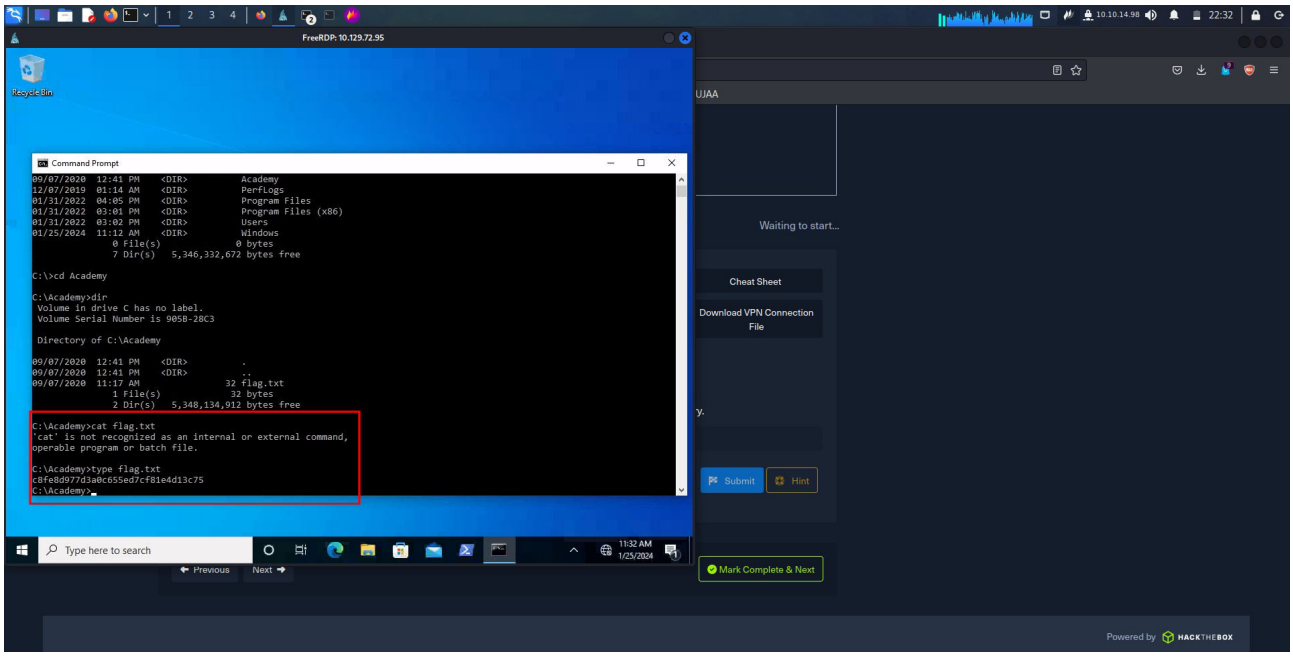
Operating System Structure

Find the non-standard directory in the C drive. Submit the contents of the flag file saved in this directory

I already know that the file am looking for is in the C: drive and because am in a different folder I used “cd ..” to move backwards till I arrive at Drive C:. Using dir I list all files in this folder, but there is no flag file. Of all available files, Academy folder seems to be appealing and on looking inside I found the “flag.txt” file, all I have to do is read the file contents.

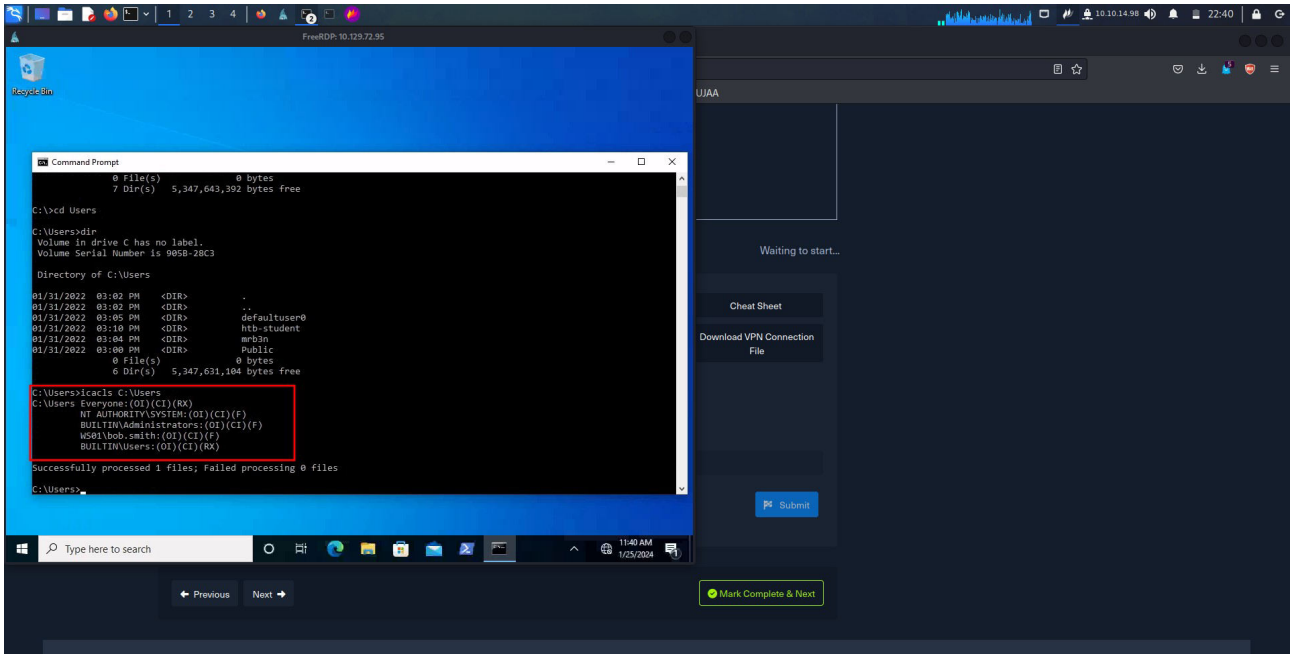
I am tempted to use cat for Linux environments, which results to an error actually, since this is a windows environment. For windows, the correct command to read this file is “type”

Command Used: “type flag.txt”. **ANS: c8fe8d977d3a0c655ed7cf81e4d13c75**



File System

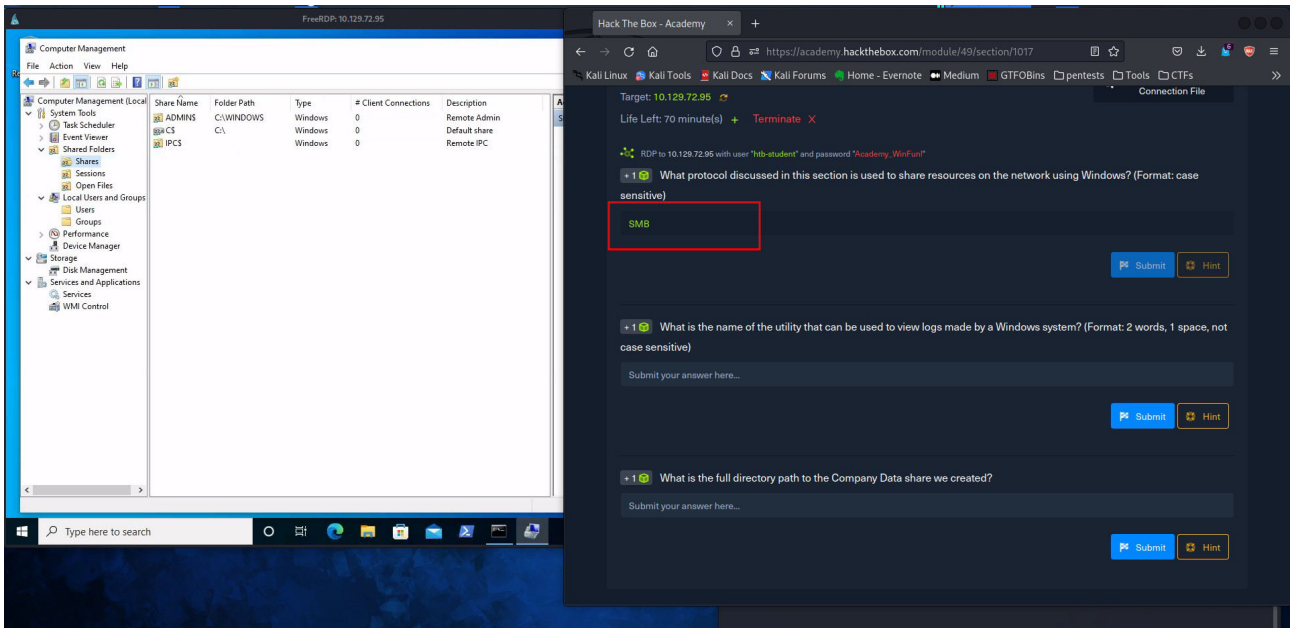
What system user has full control over the c:\users directory?
First I will have to move into the users directory, then after that is to run command:- icacls C:\Users giving away the user in the system with full control.
ANS: bob.smith



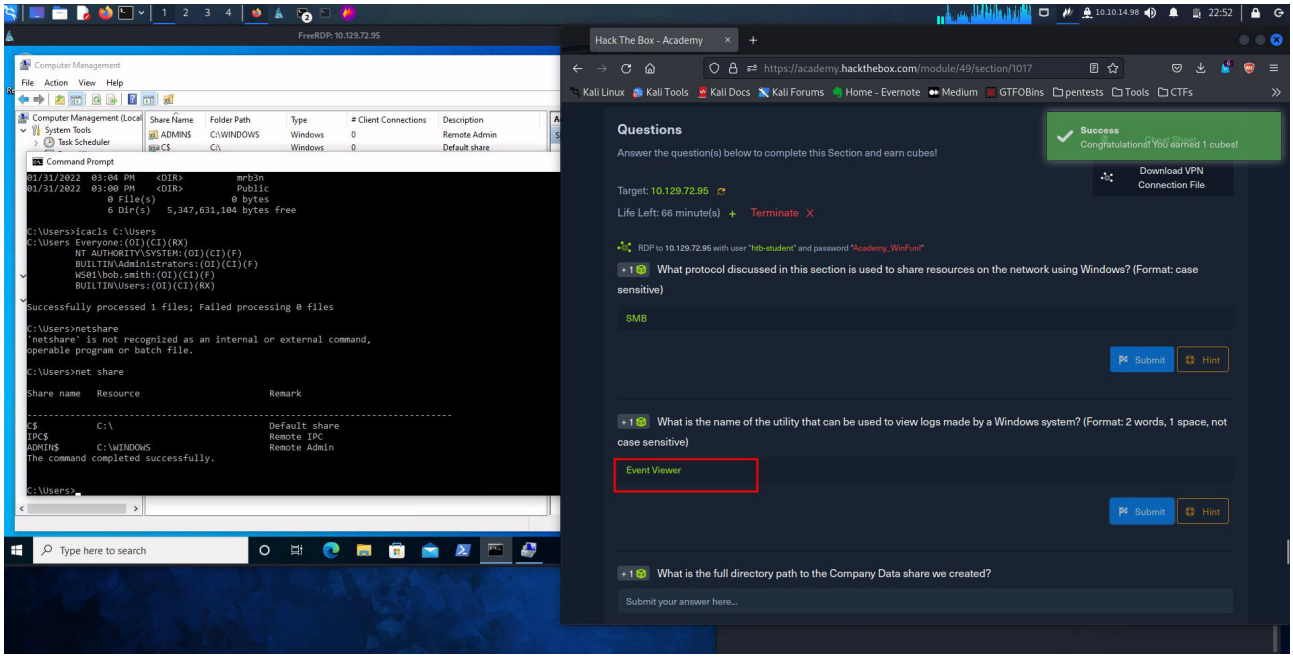
NTFS vs. Share Permissions

What protocol discussed in this section is used to share resources on the network using Windows? (Format: case sensitive)

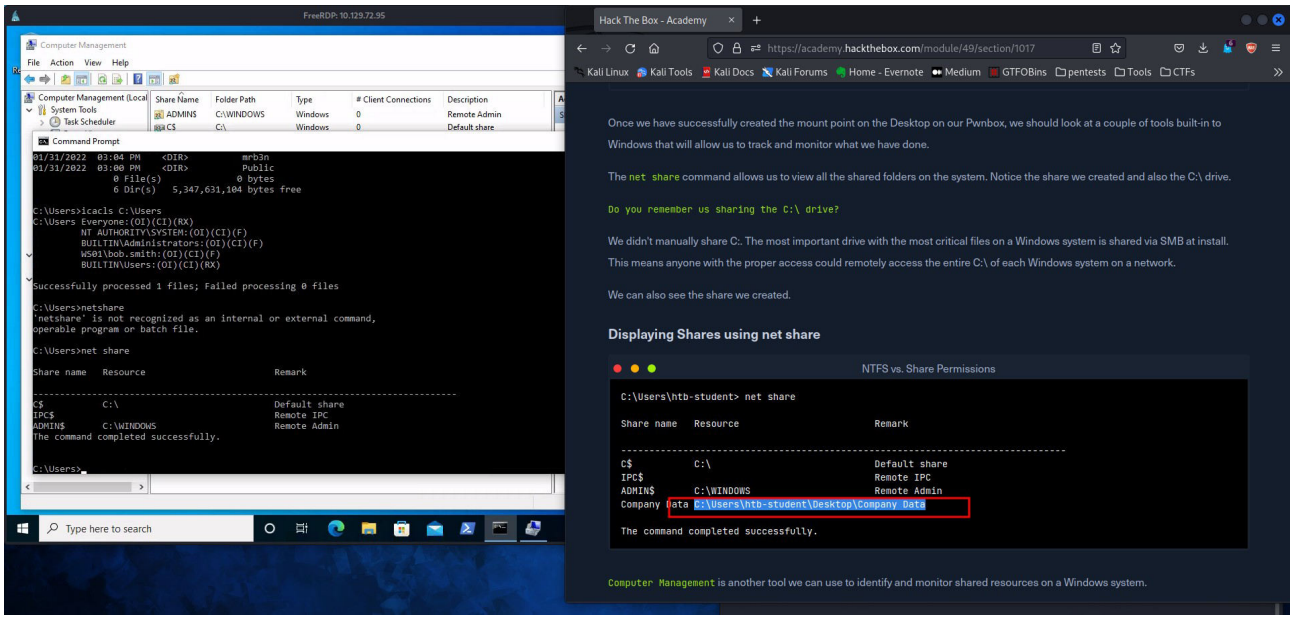
The answer is **SMB**

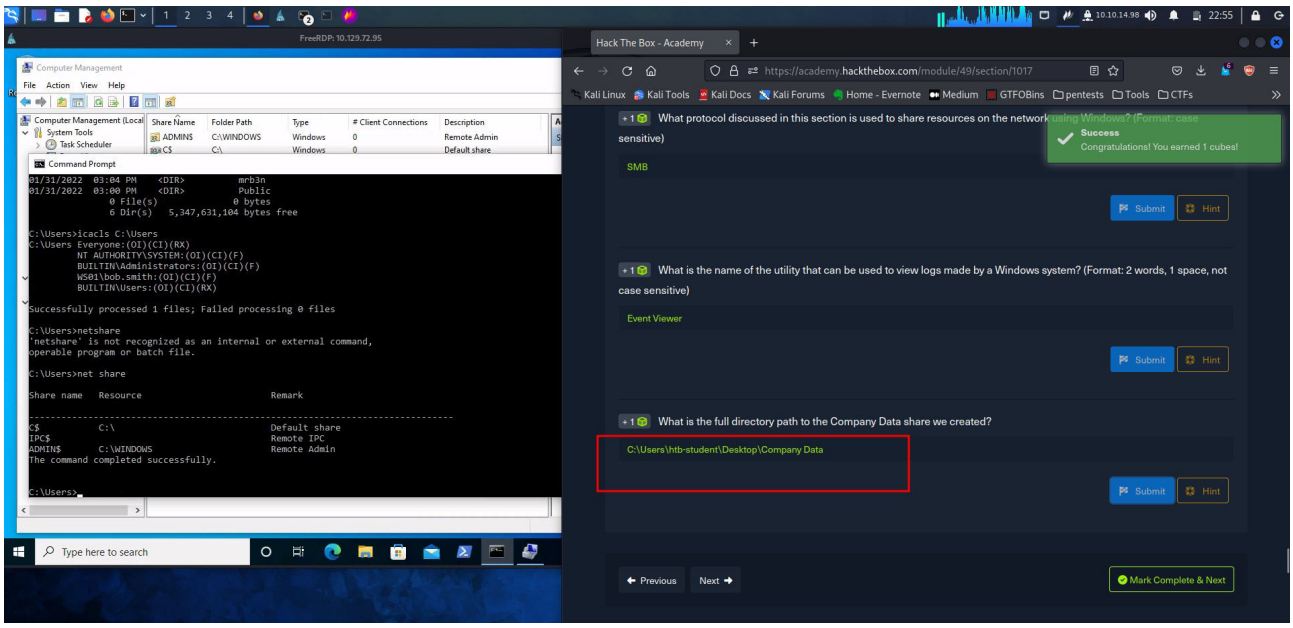


What is the name of the utility that can be used to view logs made by a Windows system? (Format: 2 words, 1 space, not case sensitive)
The answer is: **Event Viewer**



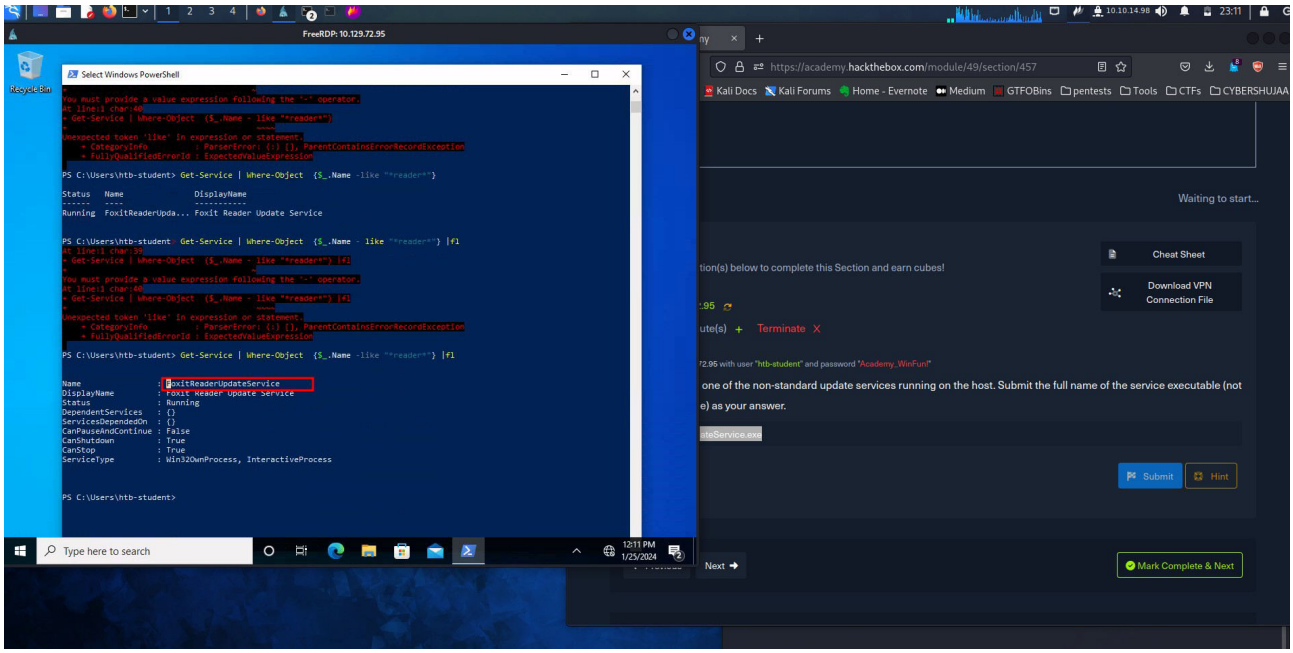
What is the full directory path to the Company Data share we created?
Referencing the notes this was the path for the company data that was created.
ANS: **C:\Users\htb-student\Desktop\Company Data**





Windows Services & Processes

Identify one of the non-standard update services running on the host. Submit the full name of the service executable (not the DisplayName) as your answer.
HINT: Its a pdf editing service.
Commands used:- Get-Service | Where-Object {$_.Name -like "*reader*"} |fl
fl – Displays the property on a different line. From the hint given it is a pdf editing service, therefore it has to be Foxit Reader.
ANS: **FoxitReaderUpdateService.exe**

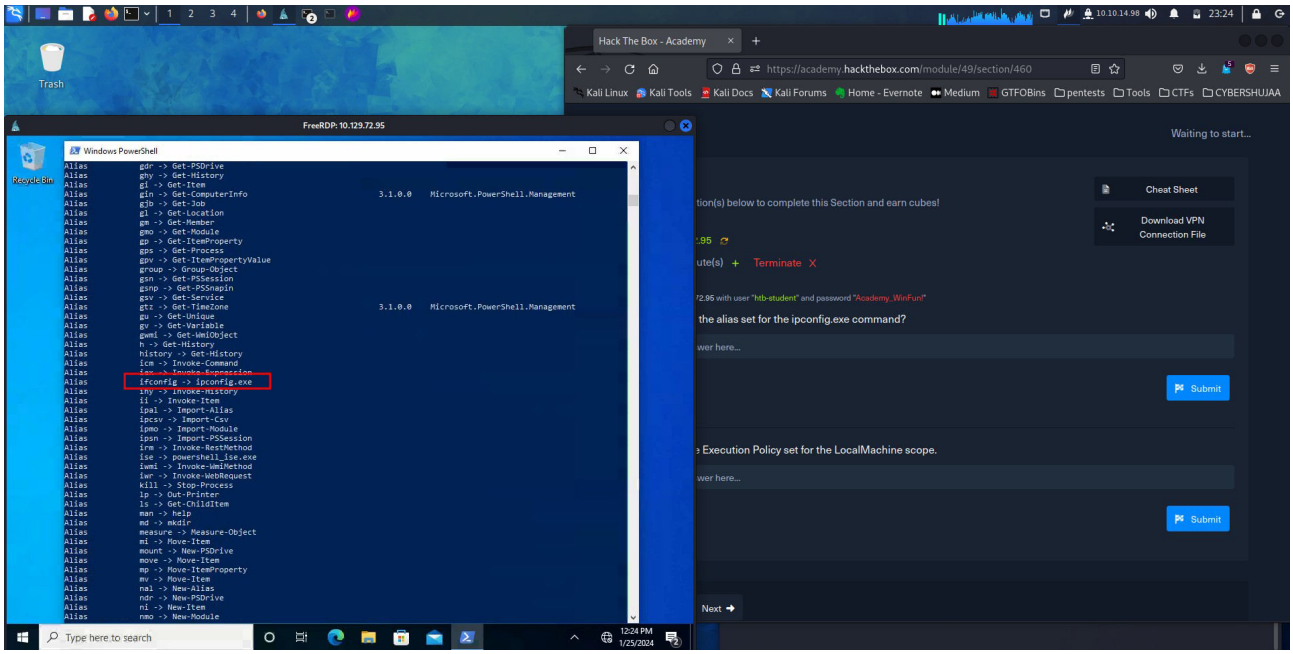


Interacting with the Windows Operating System

What is the alias set for the ipconfig.exe command?

Command used:- get-alias

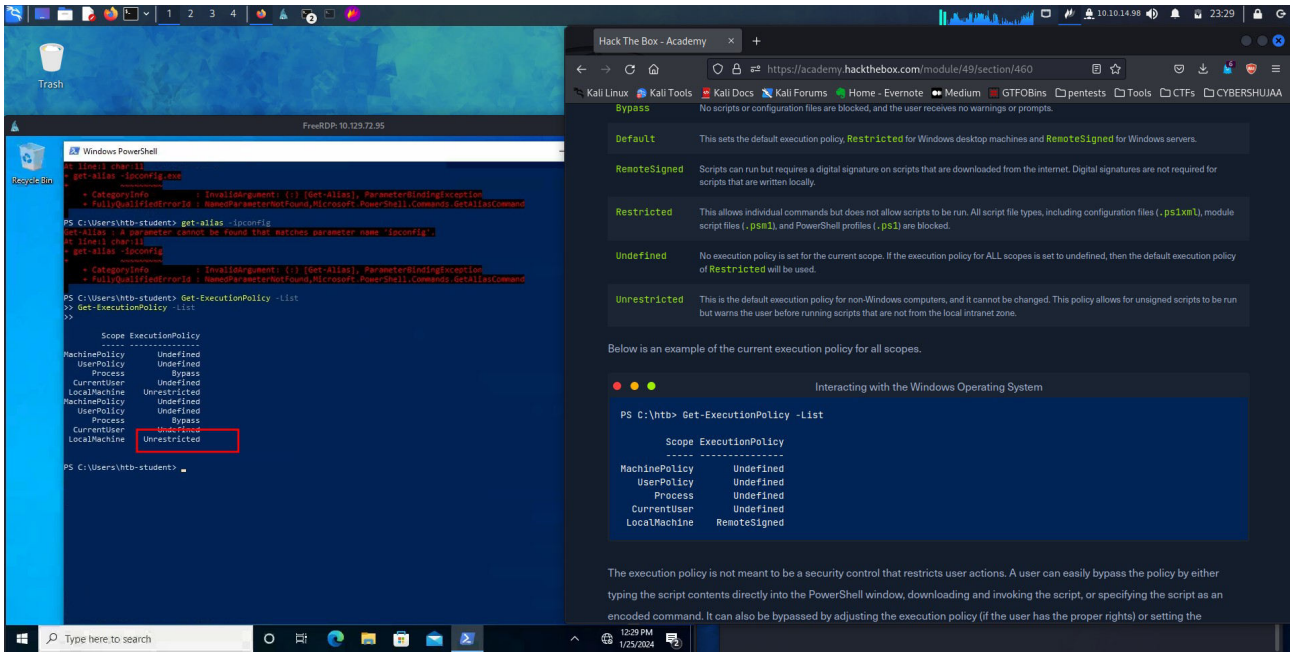
ANS: ifconfig



Find the Execution Policy set for the LocalMachine scope.

Command used:- Get-ExecutionPolicy -List

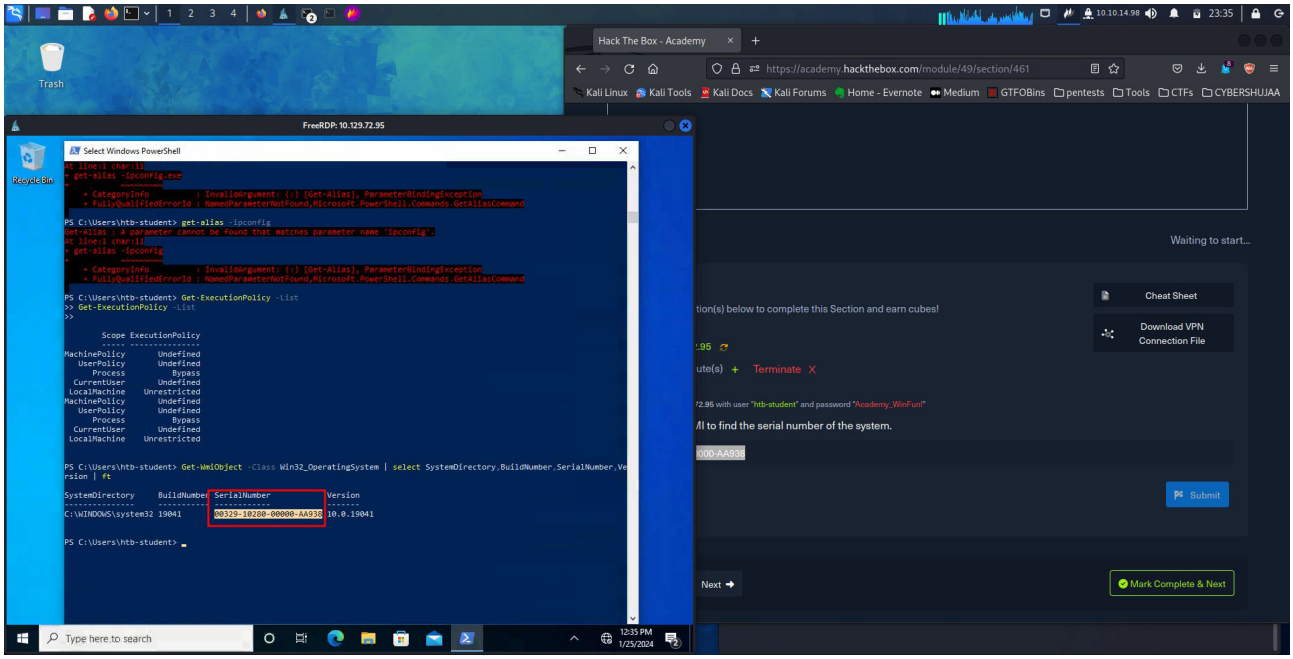
ANS: Unrestricted



Windows Management Instrumentation (WMI)

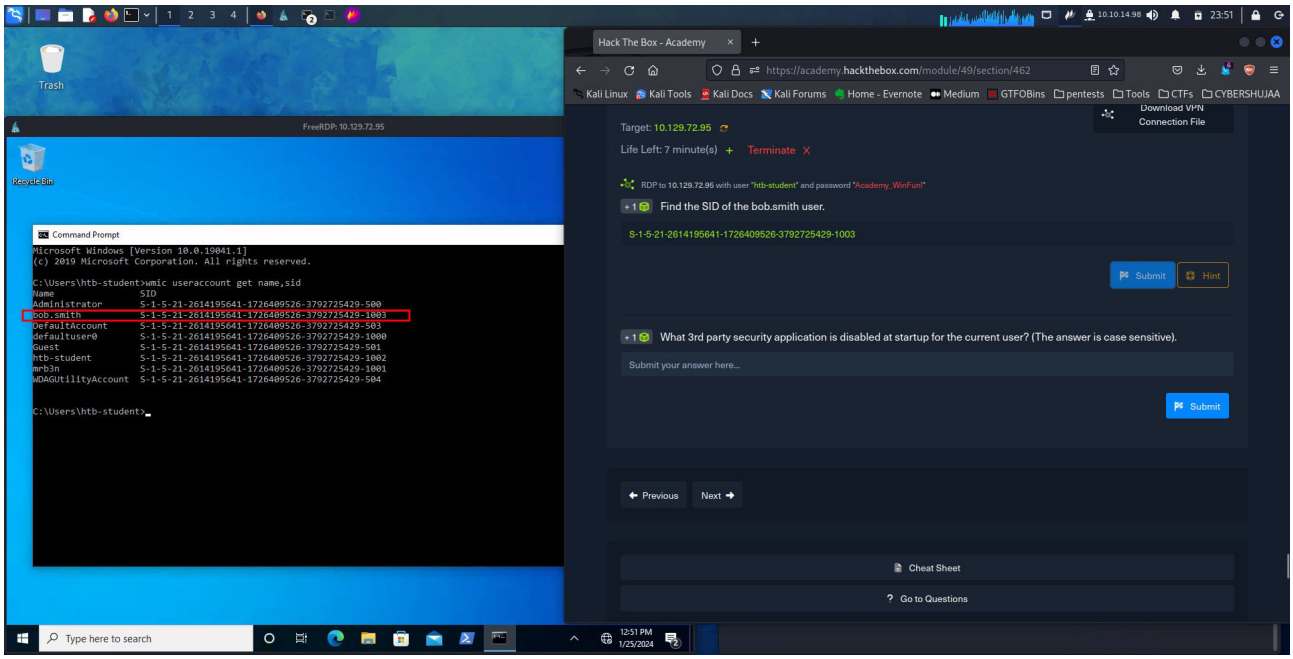
I used WMI to find the serial number of the system.
Command used:- Get-WmiObject -Class Win32_OperatingSystem | select SystemDirectory,BuildNumber,SerialNumber,Version | ft

ANS: 00329-10280-00000-AA938



Windows Security

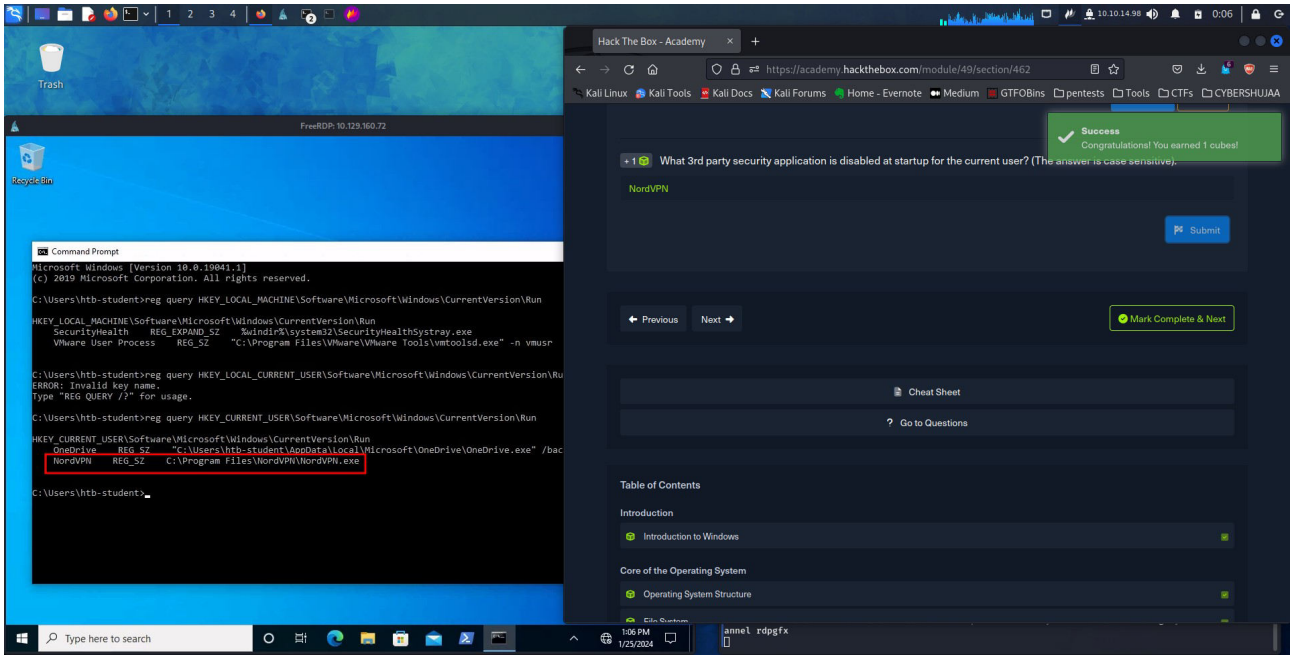
Find the SID of the bob.smith user.
Command used;- wmic useraccount get name,sid
ANS: S-1-5-21-2614195641-1726409526-3792725429-1003



What 3rd party security application is disabled at startup for the current user? (The answer is case sensitive).

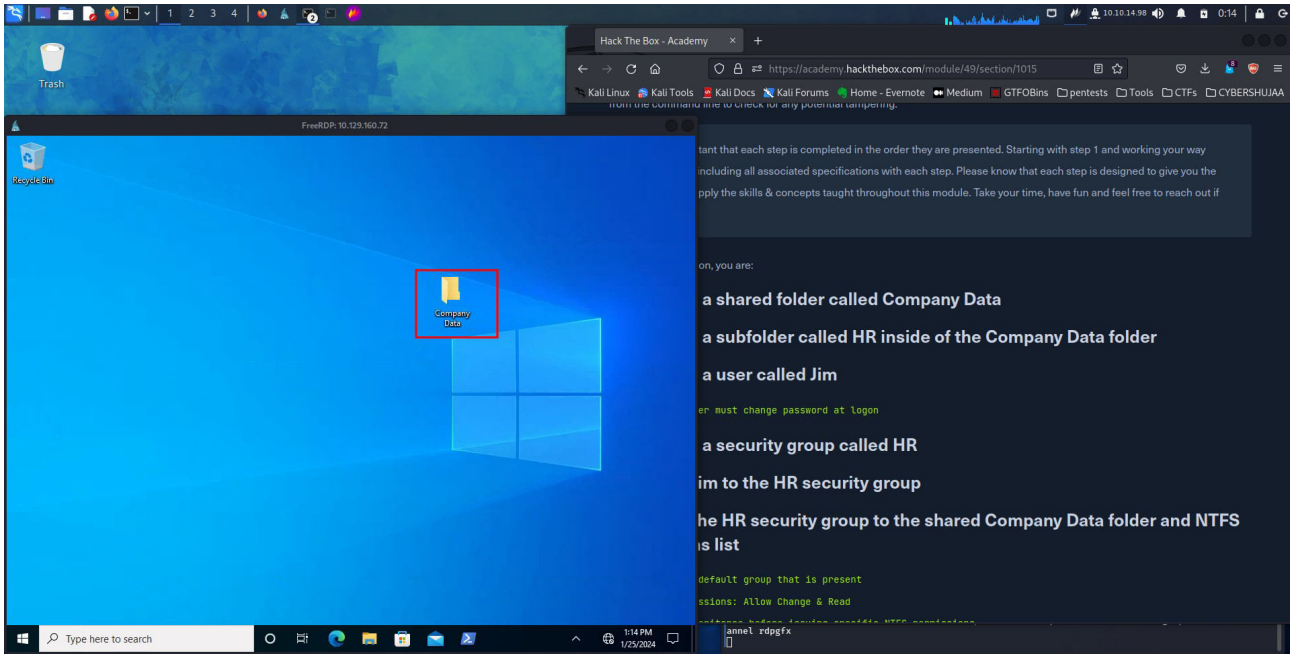
In the notes we searched for disabled at startup applications for the local machine, in this case we are looking for Current Users, Therefore using the command we used, what I needed to change was the user and there it was.

Command used:- reg query HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Run. **ANS: NordVPN**

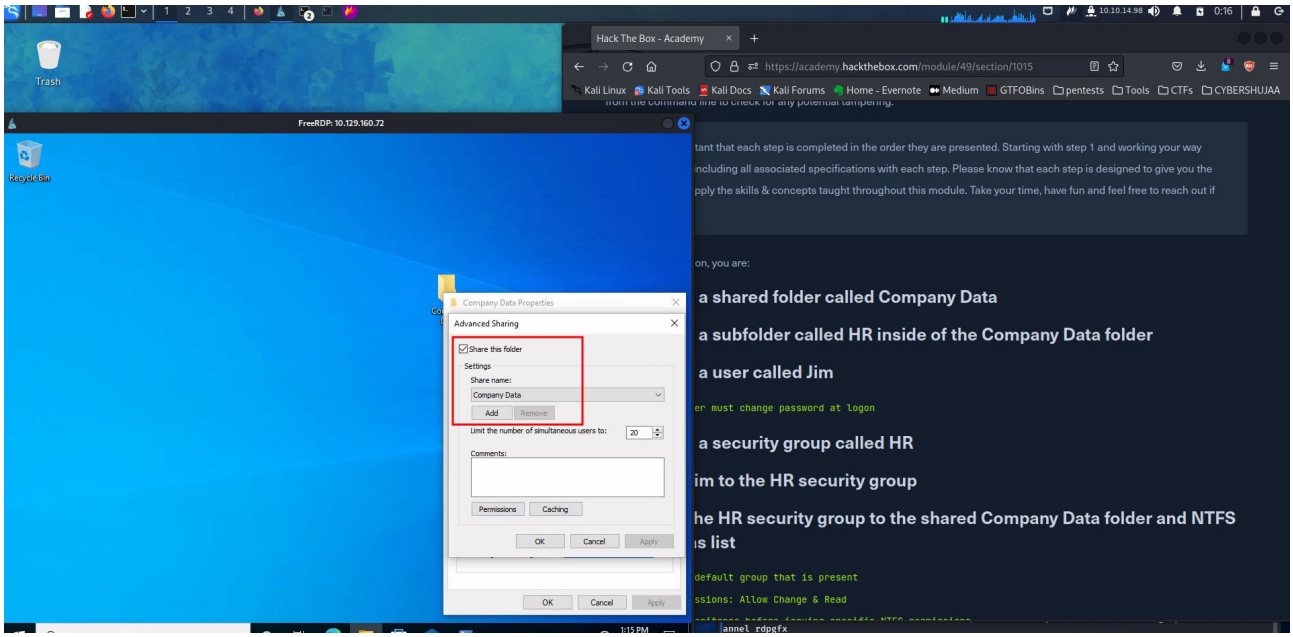


Skills Assessment - Windows Fundamentals

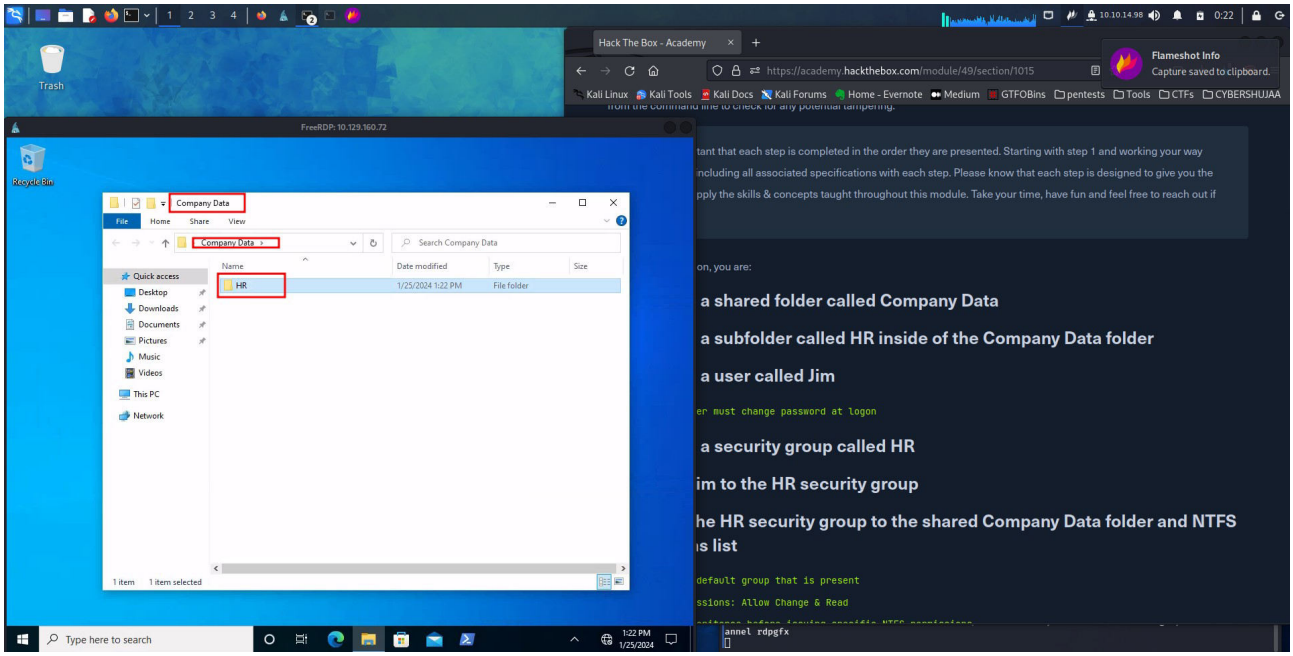
1. Creating a shared folder called Company Data. To do this, right click on the Desktop > New > Folder > Create a folder with the name Company Data.



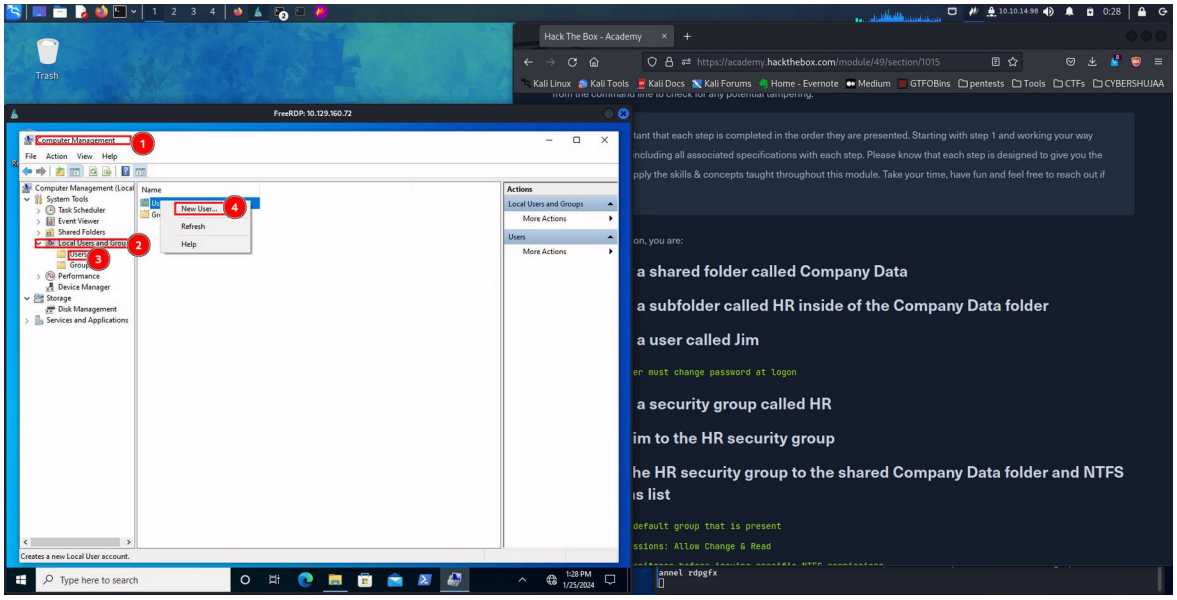
To share this folder right click on the folder > properties > Share Option > Check the share option > Apply > OK > close this widget.



2. Creating a sub folder called HR inside of the Company Data folder
To do this open the Company Data folder, Right click inside the folder > New > Folder, then call the newely created folder as HR.



3. Creating a user called Jim. Uncheck: User must change password at logon
To do this go to Computer Management > Local Users and Groups > Users.
Right click on user.
- Username: Jim
- Full name: Jim
- Check user to change password at next logon
- Password: jim1234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Computer Management
New User...
Refresh
Help
Creates a new Local User account.
a shared folder called Company Data
a subfolder called HR inside of the Company Data folder
a user called Jim
a security group called HR
im to the HR security group
he HR security group to the shared Company Data folder and NTFS
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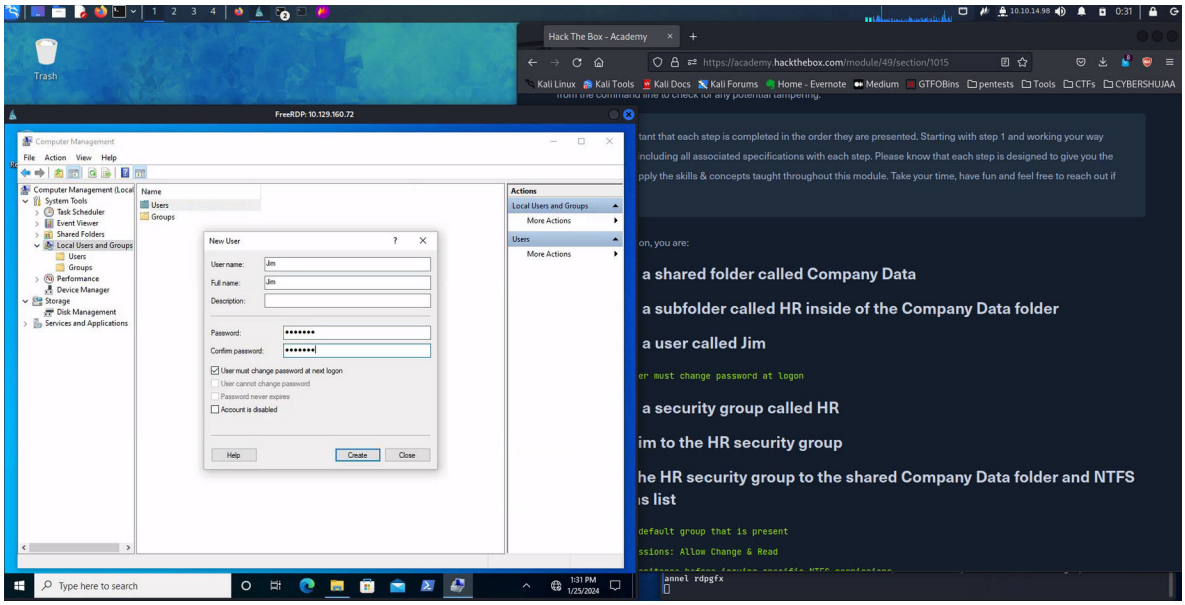
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https://academy.hackthebox.com/module/49/section/1015
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New User
User name: Jim
Full name: Jim
Description:
Password:
Confirm password:
User must change password at next logon
User cannot change password
Password never expires
Account is disabled
Help
Create
Close
a shared folder called Company Data
a subfolder called HR inside of the Company Data folder
a user called Jim
a security group called HR
im to the HR security group
he HR security group to the shared Company Data folder and NTFS
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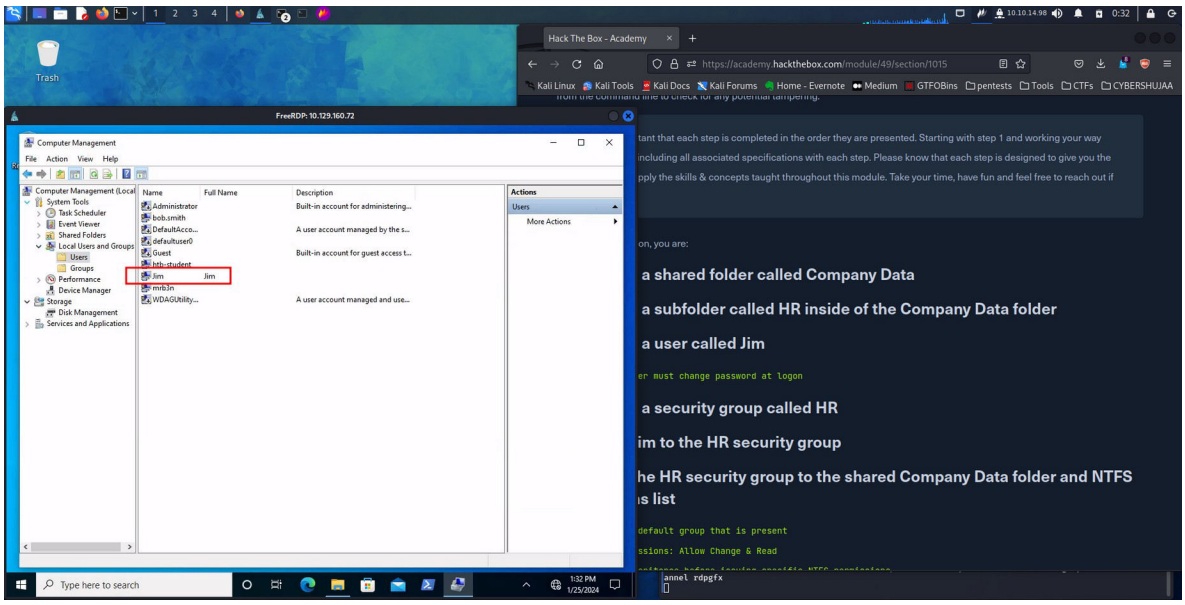
Hack The Box - Academy
https://academy.hackthebox.com/module/49/section/1015
FreeRDP: 10.129.160.72
Jim
a shared folder called Company Data
a subfolder called HR inside of the Company Data folder
a user called Jim
a security group called HR
im to the HR security group
he HR security group to the shared Company Data folder and NTFS
s list
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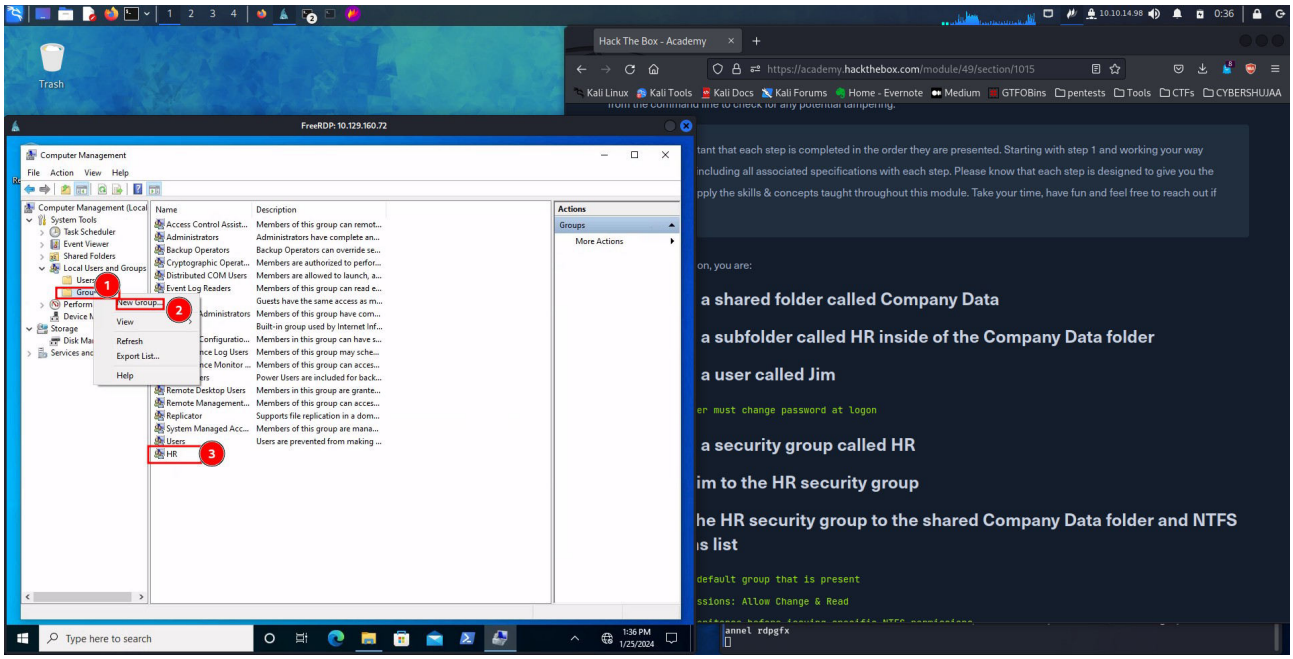
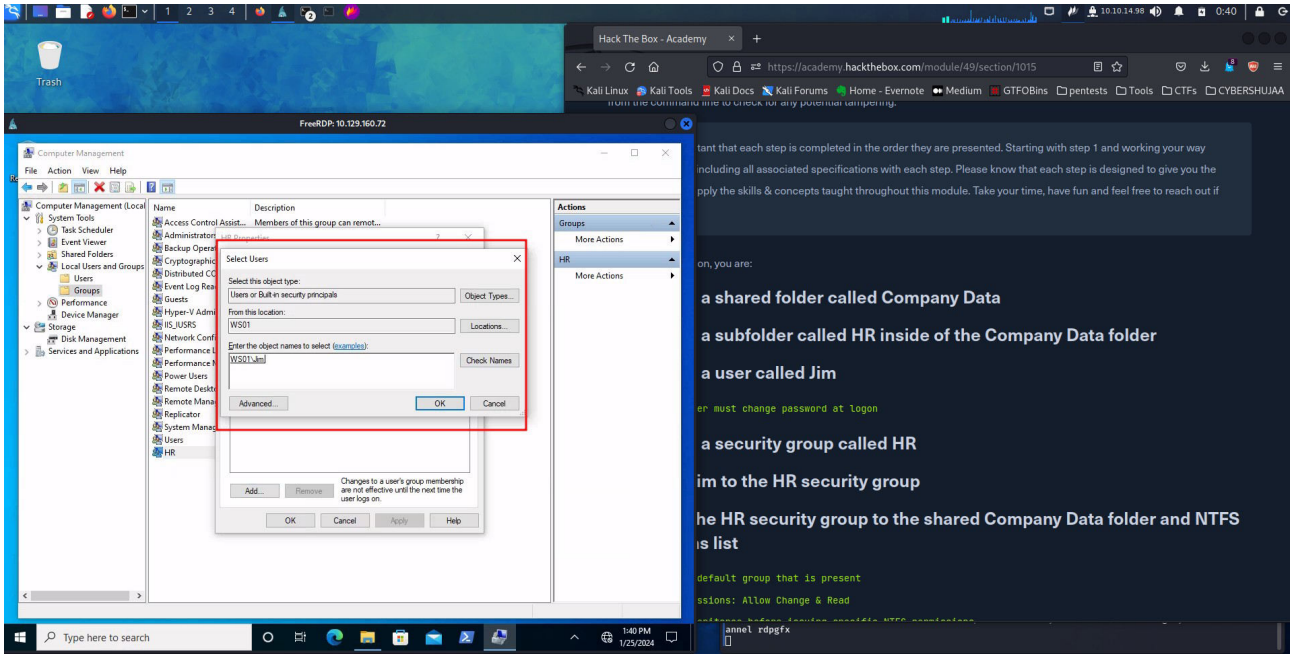
4. Creating a security group called HR

Click on Groups, Right Click then add new group (HR) then click on create button to finish.

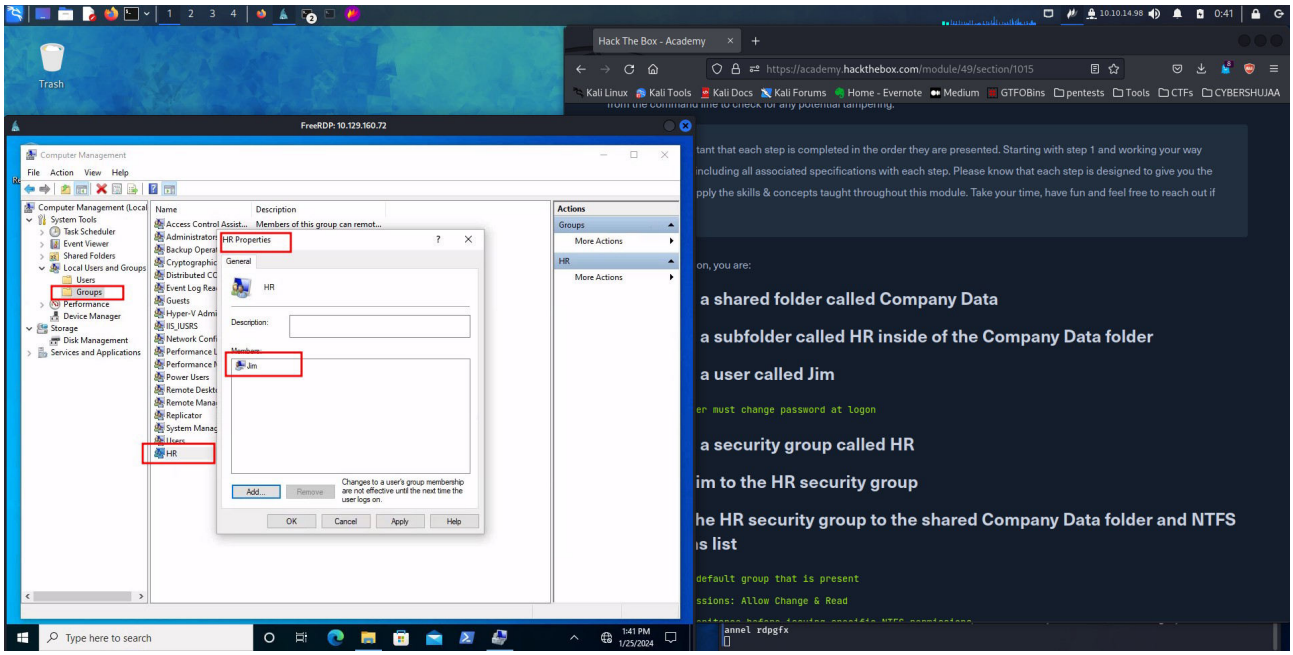


5. Adding Jim to the HR security group

To add Jim in the HR group, double click on Hr group > click on add, Type the name Jim > Check Names (Jim's name is auto selected) > click OK to add.



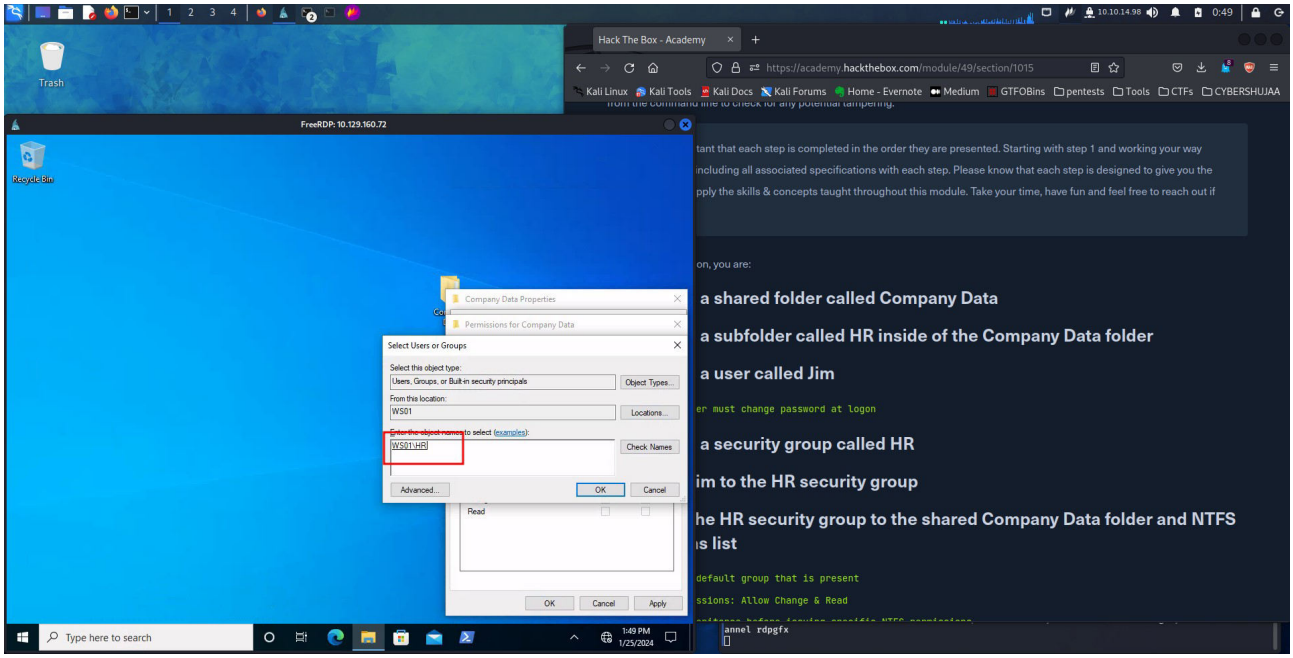
Click Apply > OK to finish adding Jim in HR Security group.



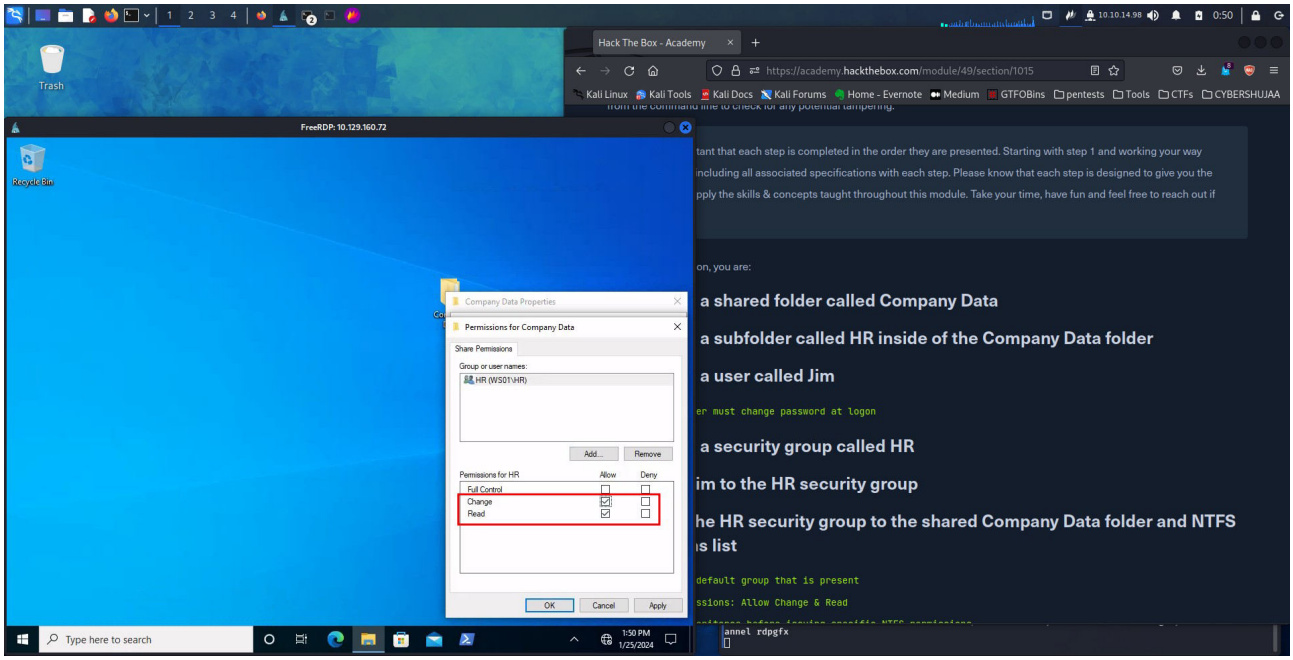
6. Adding the HR security group to the shared Company Data folder and NTFS permissions list

Remove the default group that is present – In this task what I need to do is to remove sharing to everyone and add HR

Properties > Sharing tab > Click Advanced sharing > permissions. From here I removed sharing for everyone and add HR group.

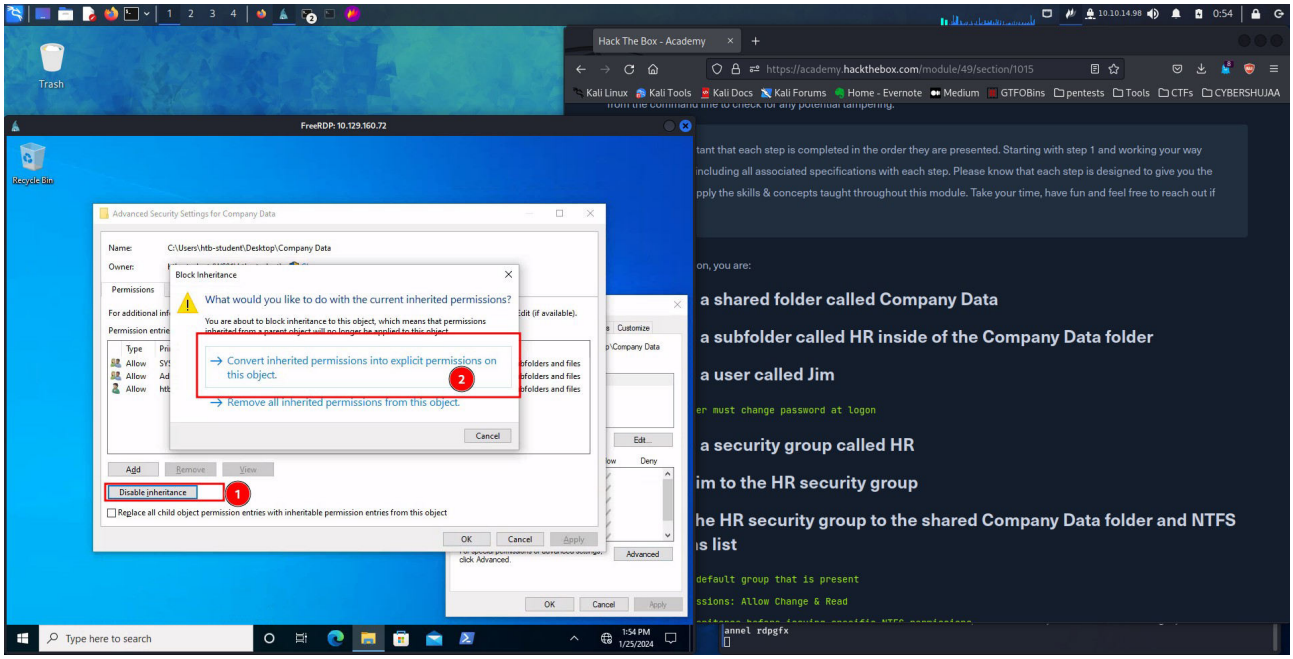


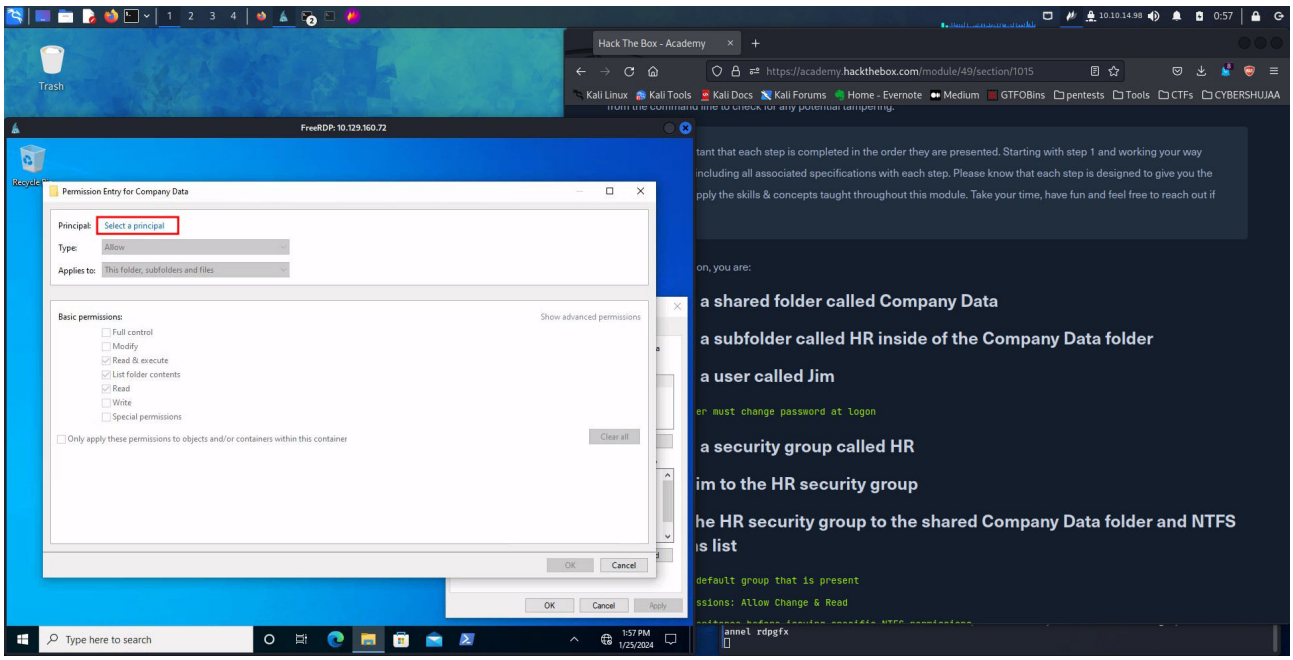
Share Permissions: Allow Change & Read



Disable Inheritance before issuing specific NTFS permissions

To do this I will right click on Company Data folder Click Properties > Security tab > Advanced > Disable Inheritance > Allow the prompt given > Click on Add > Select a principal > Add HR

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Permission Entry for Company Data
Principal: Select a principal
Type: Allow
Applies to: This folder, subfolders and files
Basic permissions:
Show advanced permissions
Full control
Modify
Read & execute
List folder contents
Read
Write
Special permissions
Only apply these permissions to objects and/or containers within this container
Clear all
OK
Cancel
Apply
Type here to search
1:57 PM
1/25/2024
a shared folder called Company Data
a subfolder called HR inside of the Company Data folder
a user called Jim
a security group called HR
im to the HR security group
he HR security group to the shared Company Data folder and NTFS
s list
default group that is present
ssions: Allow Change & Read
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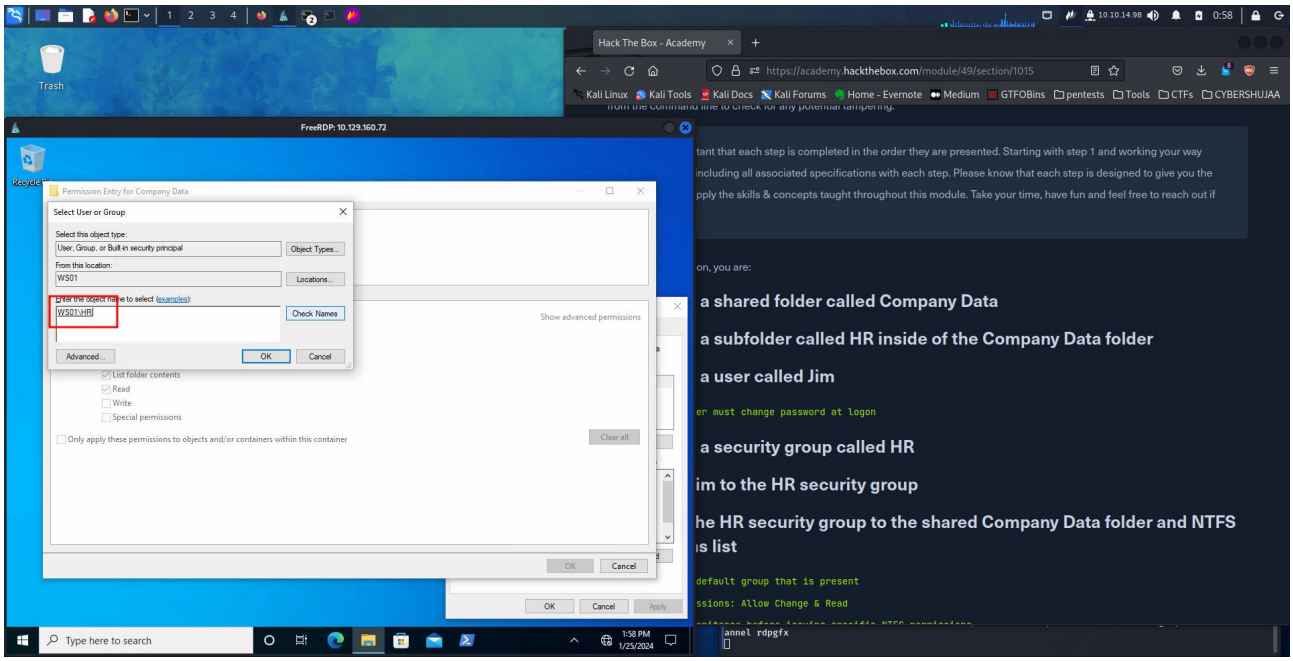
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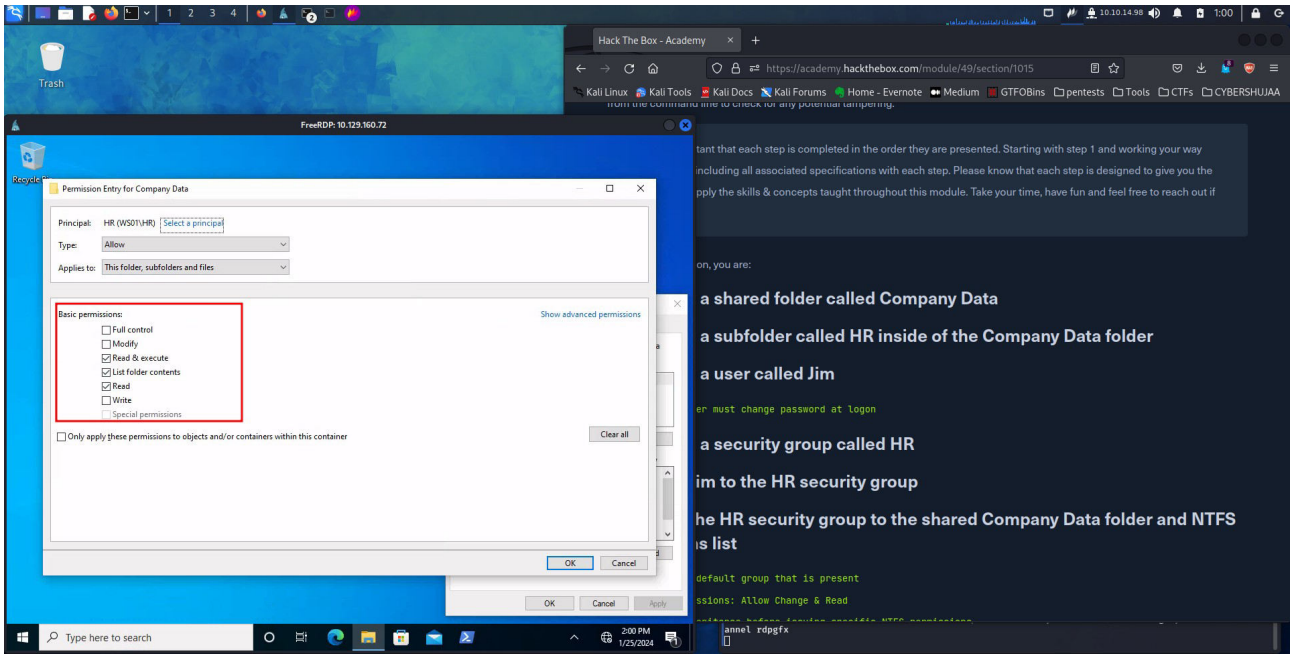
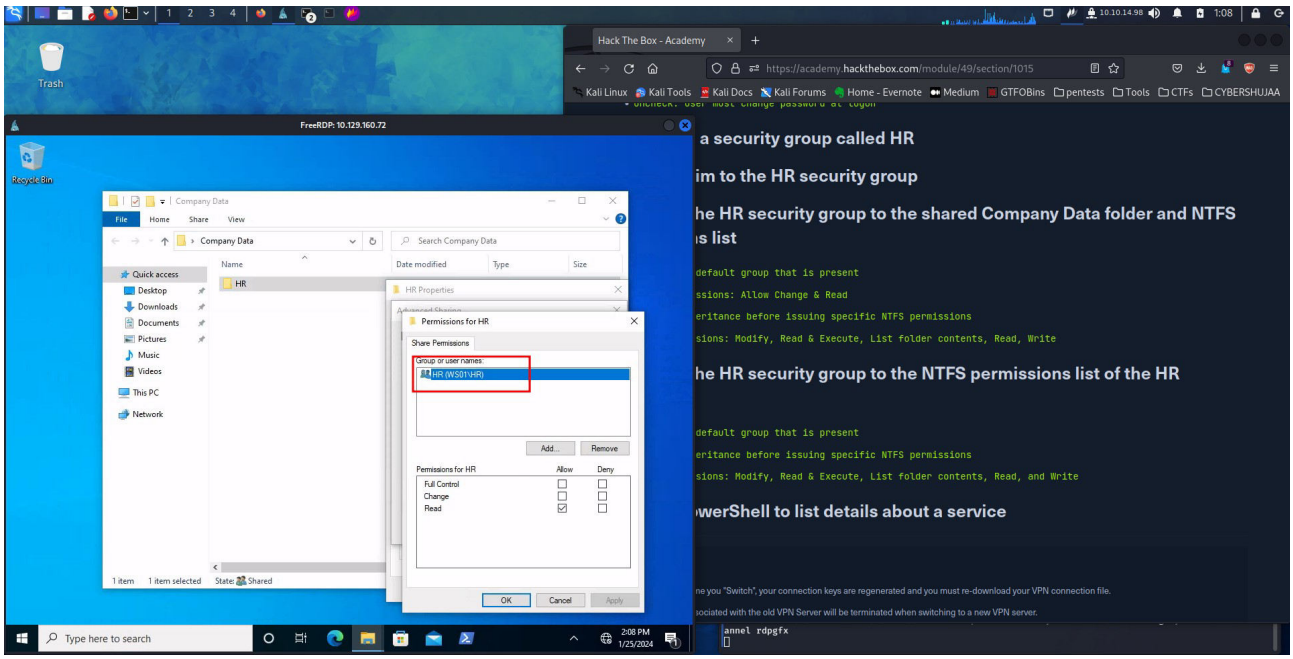
Permission Entry for Company Data
Select User or Group
Select this object type:
User, Group, or Built-in security principal
Object Types...
From this location:
WS01
Locations...
Enter the object name to select (examples):
WS01\HR
Check Names
Advanced...
OK
Cancel
Show advanced permissions
List folder contents
Read
Write
Special permissions
Only apply these permissions to objects and/or containers within this container
Clear all
Type here to search
1:58 PM
1/25/2024
a shared folder called Company Data
a subfolder called HR inside of the Company Data folder
a user called Jim
a security group called HR
im to the HR security group
he HR security group to the shared Company Data folder and NTFS
s list
default group that is present
ssions: Allow Change & Read
annel rdpgfx

NTFS permissions: Modify, Read & Execute, List folder contents, Read, Write

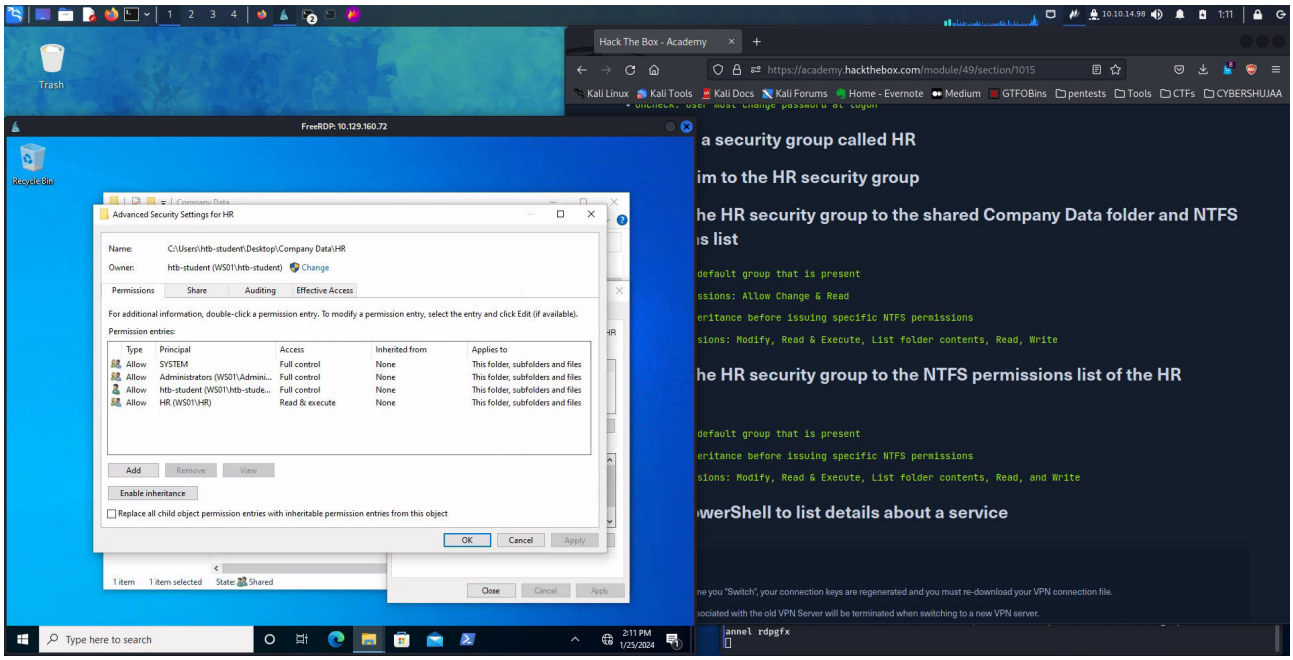


7. Adding the HR security group to the NTFS permissions list of the HR sub-folder
Remove the default group that is present
To do this go to Company's Data folder > HR folder > Properties > Sharing tab > Advanced Sharing > Permissions check that the HR group is available and not default settings

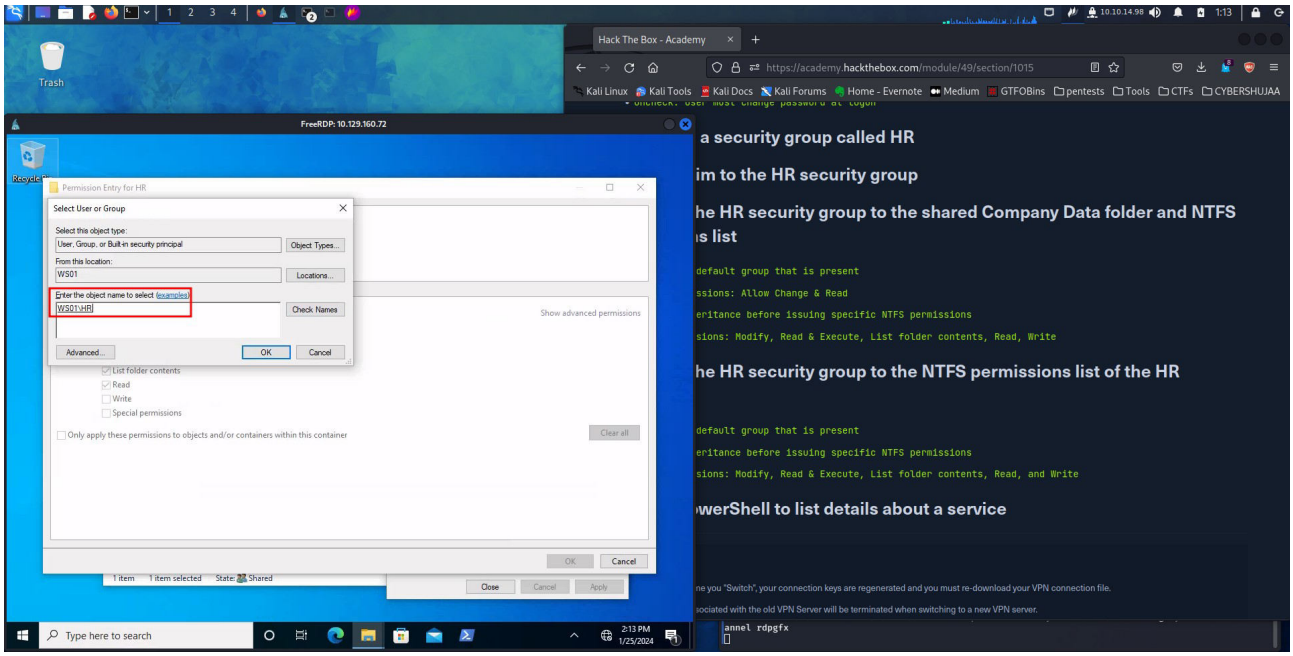


Disable Inheritance before issuing specific NTFS permissions

To do this go to HR folder > Properties > Security tab > Advanced > Disable Inheritance

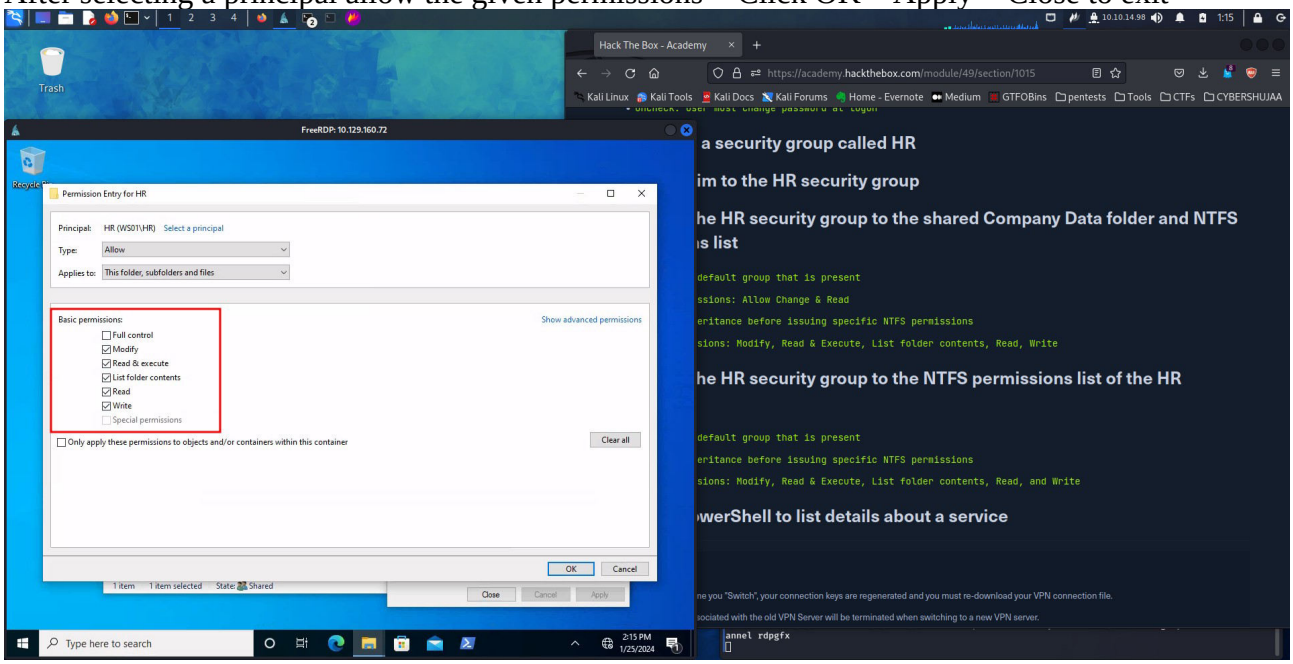


After Disabling Inheritance click on Add to select a principal add HR, click OK.



NTFS permissions: Modify, Read & Execute, List folder contents, Read, and Write

After selecting a principal allow the given permissions > Click OK > Apply > Close to exit



What is the name of the group that is present in the Company Data Share Permissions ACL by default?

ANS: Everyone

What is the name of the tab that allows you to configure NTFS permissions?

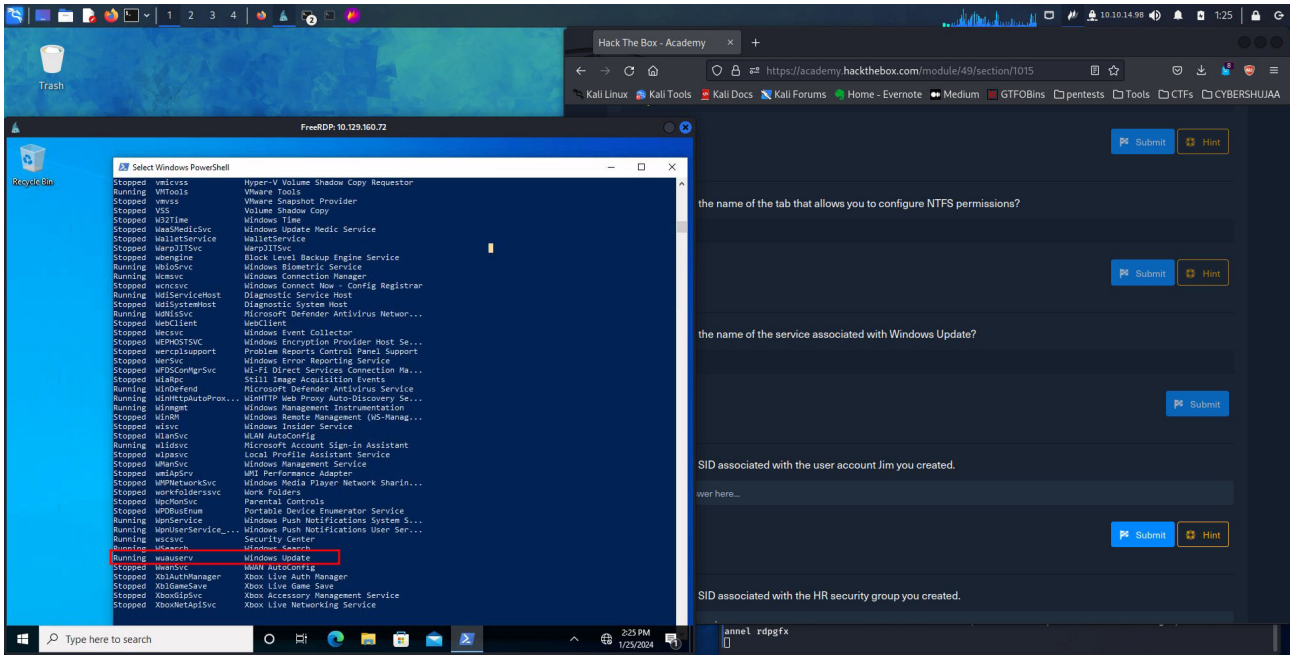
ANS: Security

What is the name of the service associated with Windows Update?

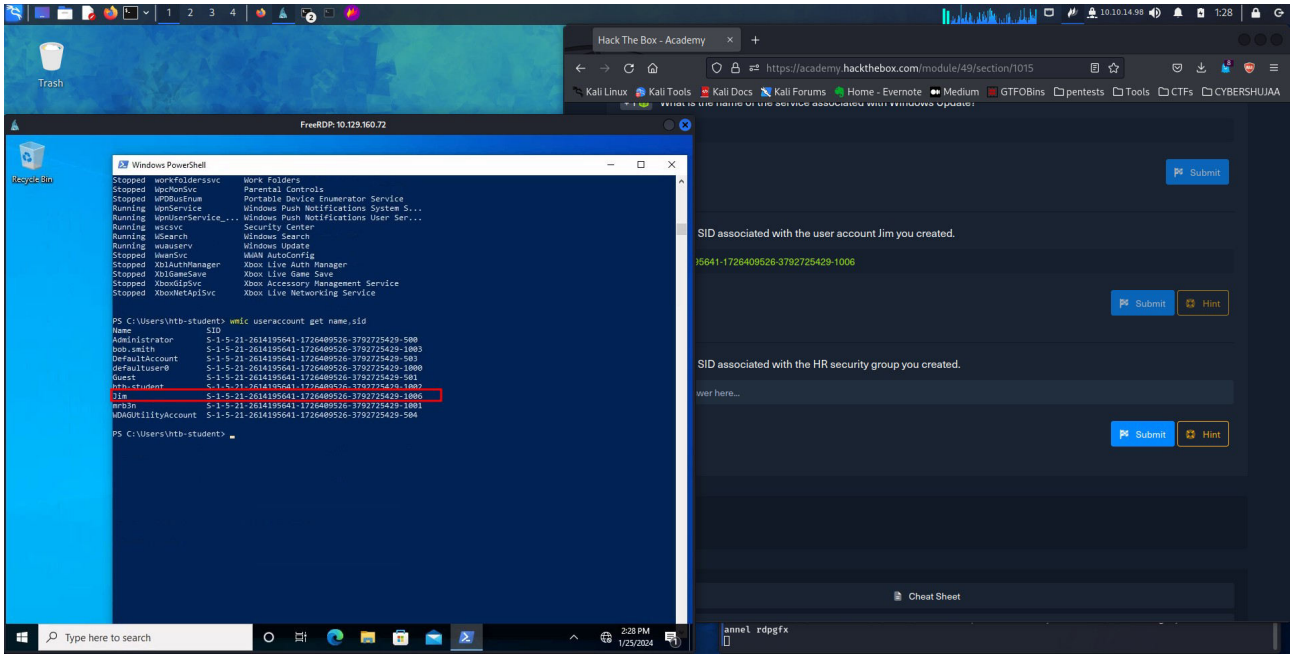
Command used in power shell : Get-Service

This command lists all running commands, so we look for that service associated with windows update.

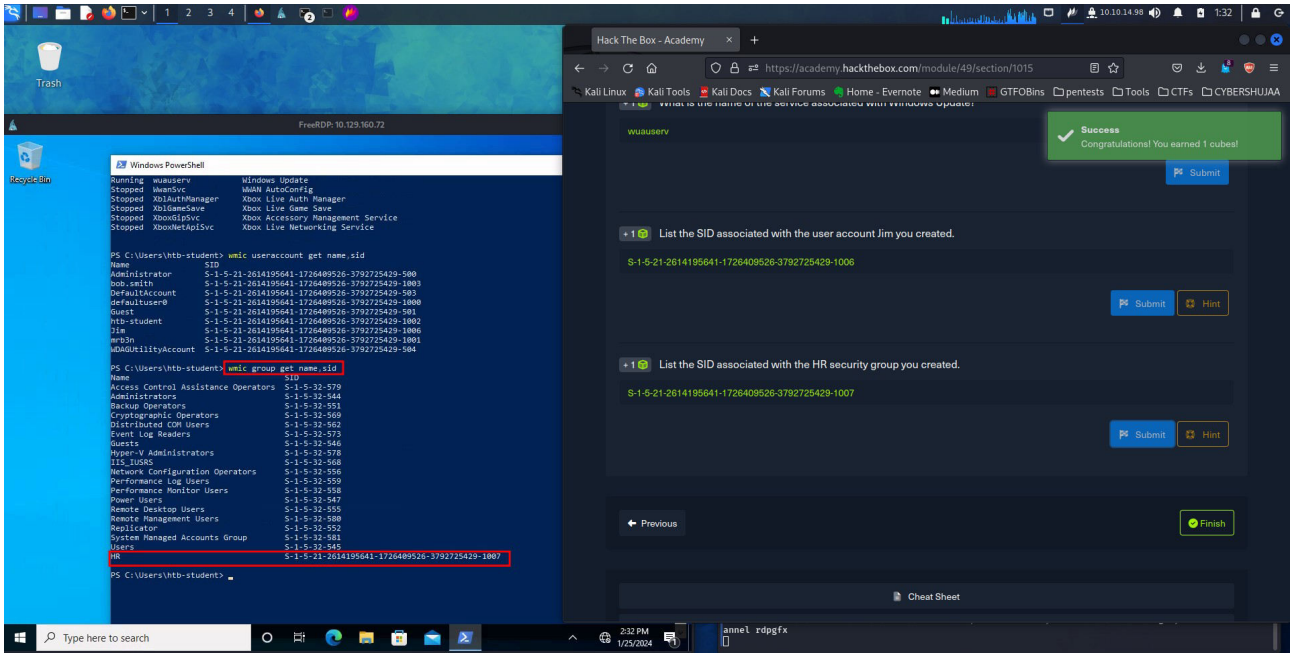
ANS: wuauserv



List the SID associated with the user account Jim you created.
Command Used in Powershell:- wmic useraccount get name,sid
ANS: S-1-5-21-2614195641-1726409526-3792725429-1006



List the SID associated with the HR security group you created.
Command used in power shell:- wmic group get name,sid
ANS: S-1-5-21-2614195641-1726409526-3792725429-1007



Conclusion

Windows has become a norm to most people especially to of us doing penetration and testing we tend to love and prefer Linux but after this module, some of the practices that I have carried out have stirred me up to also want to learn how windows operating systems work especially from the fact that 70% of institutions use windows, I think its important to understand windows in the same manner I understand Linux.
In conclusion, this walk-through of Windows fundamentals in HTB Academy has provided essential concepts and practical skills for navigating and understanding the Windows operating system. From basic file operations to system configuration and security settings, I have gained valuable insights into the core elements of Windows environments. The hands-on exercises and step-by-step guidance have equipped me with the knowledge needed to troubleshoot common issues, manage user accounts, and secure a Windows system effectively.
I have enjoyed the task.

Thank You.