

Configuring a VPN Client for Secure File Transfers (3e)

Network Security, Firewalls, and VPNs, Third Edition - Lab 09

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Time on Task:

3 hours, 20 minutes

Progress:

100%

Report Generated: Sunday, November 30, 2025 at 4:16 PM

Section 1: Hands-On Demonstration

Part 1: Configure a Windows VPN Client

30. Make a screen capture showing the **VPN connection properties**.

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VPN proxy settings

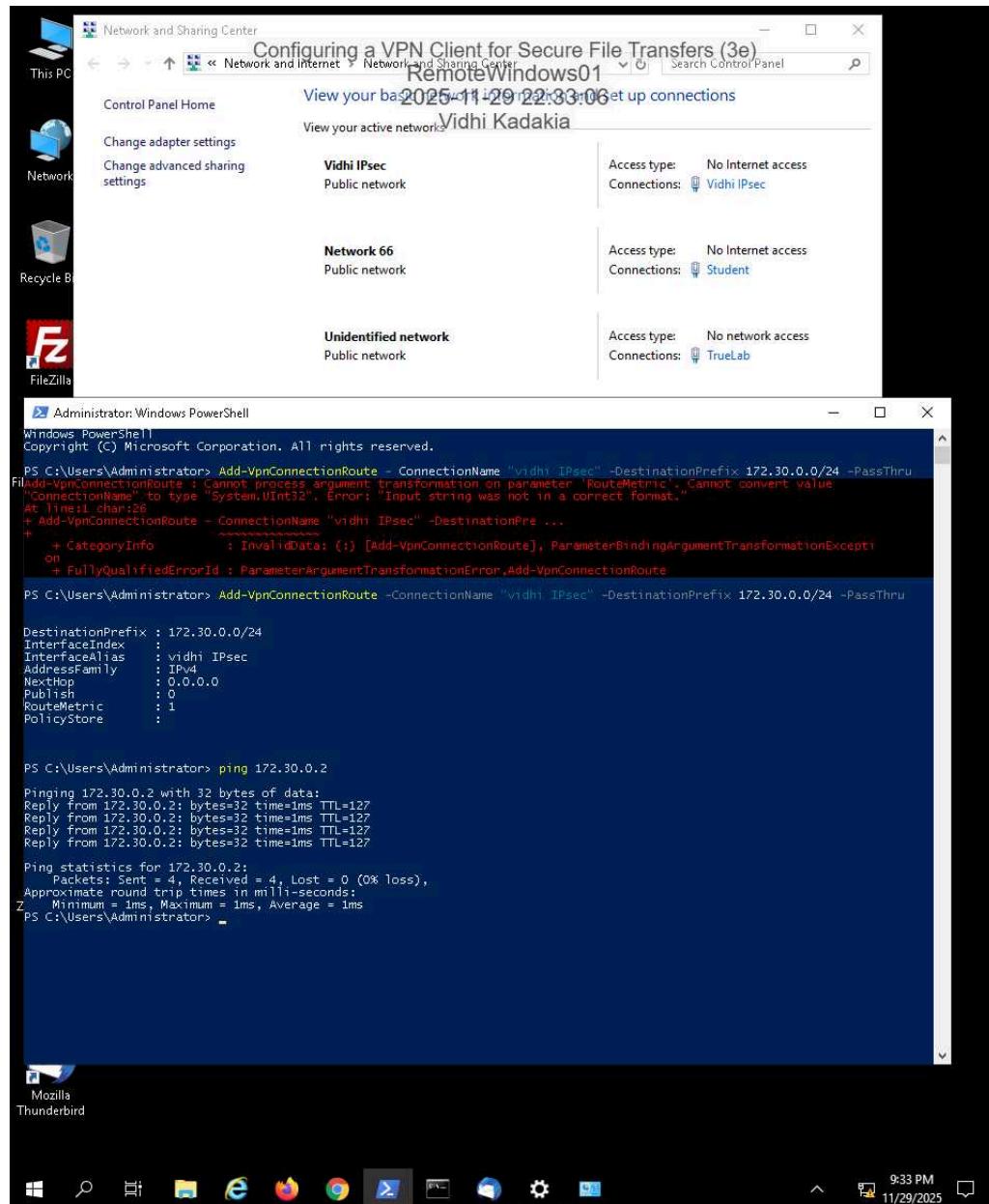
These settings will apply only to this VPN connection.



54. Make a screen capture showing the successful ping response.

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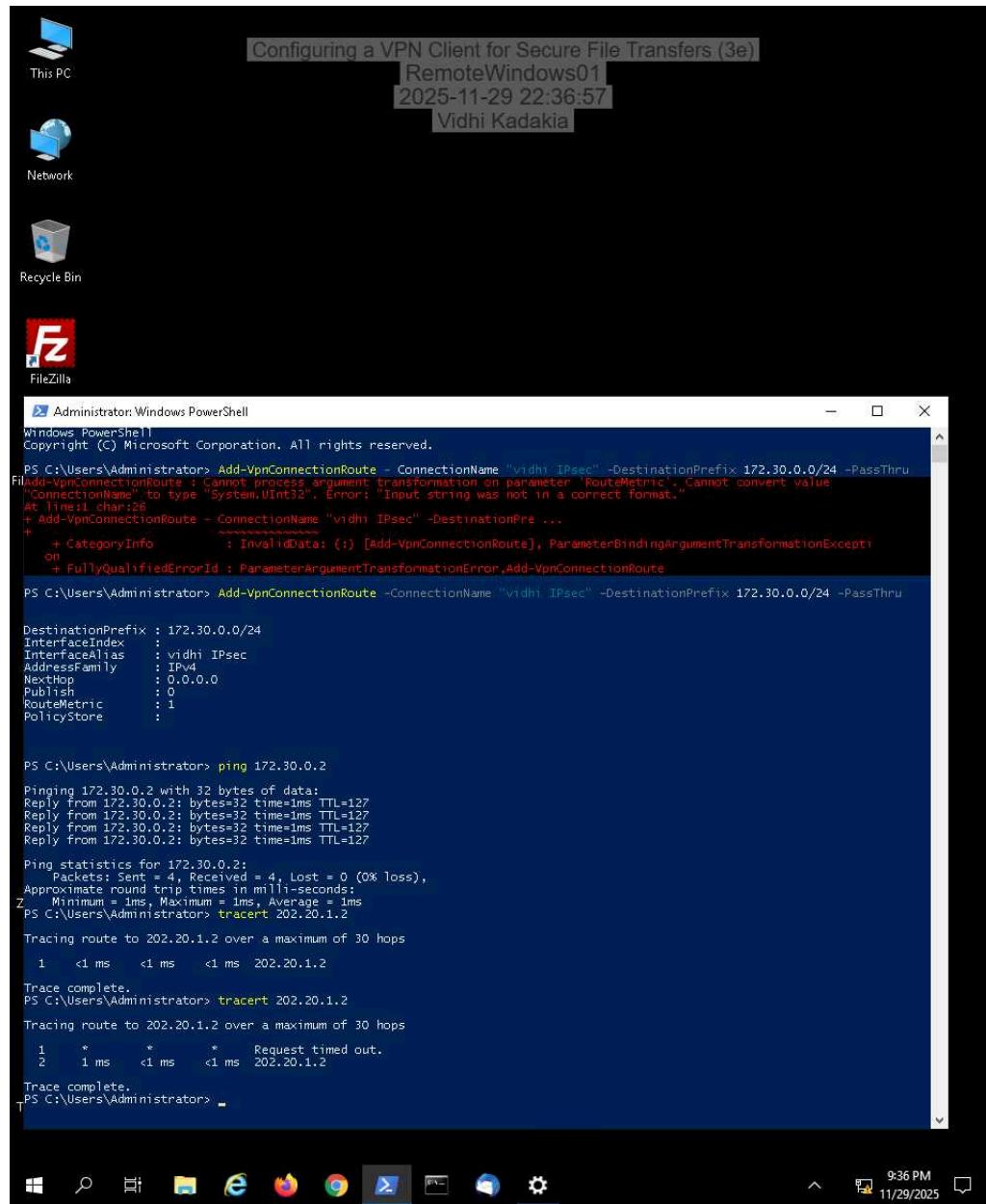
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72. Make a screen capture showing your new tracert results.

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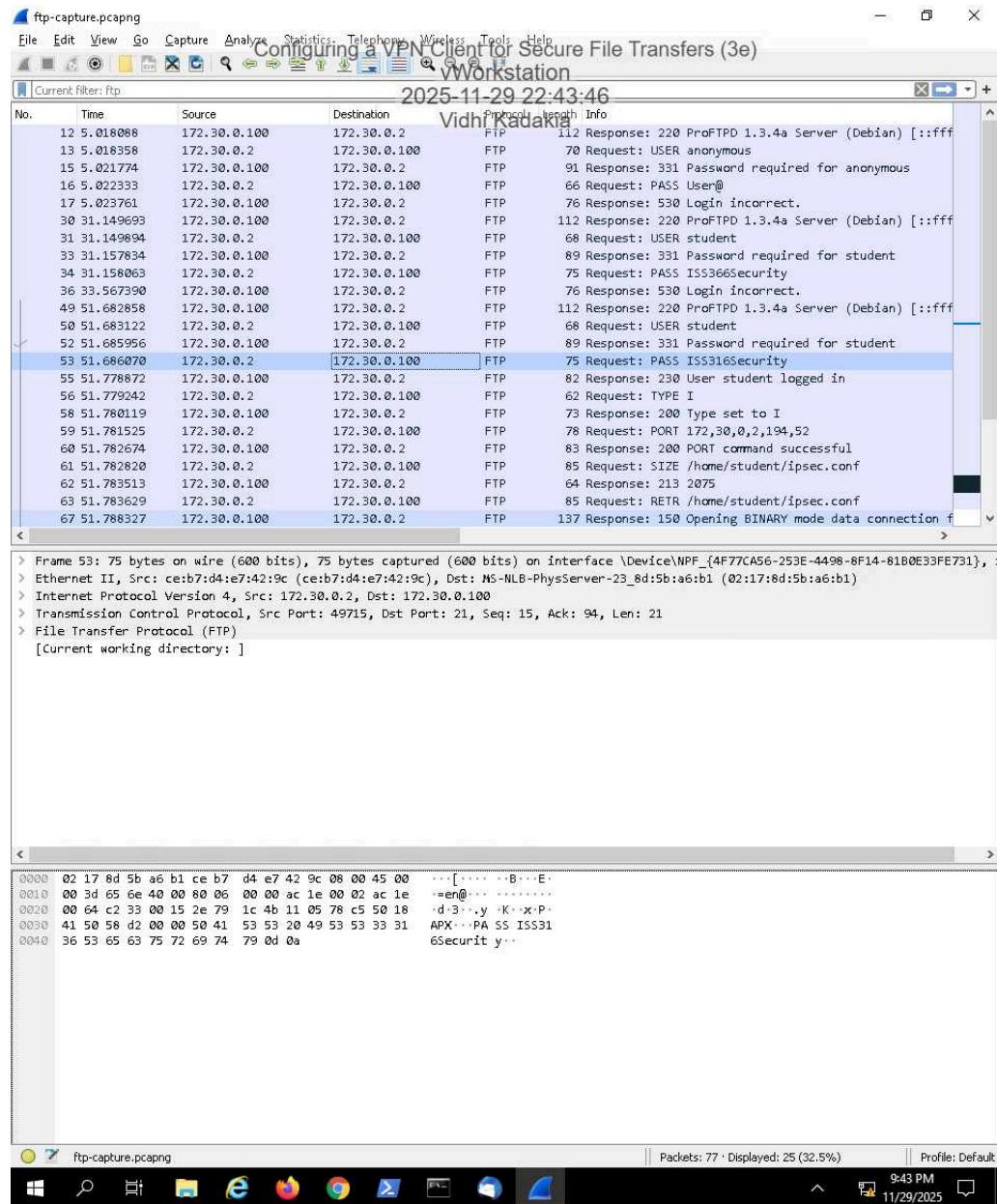


Part 2: Compare Secure and Non-Secure File Transfers in Wireshark

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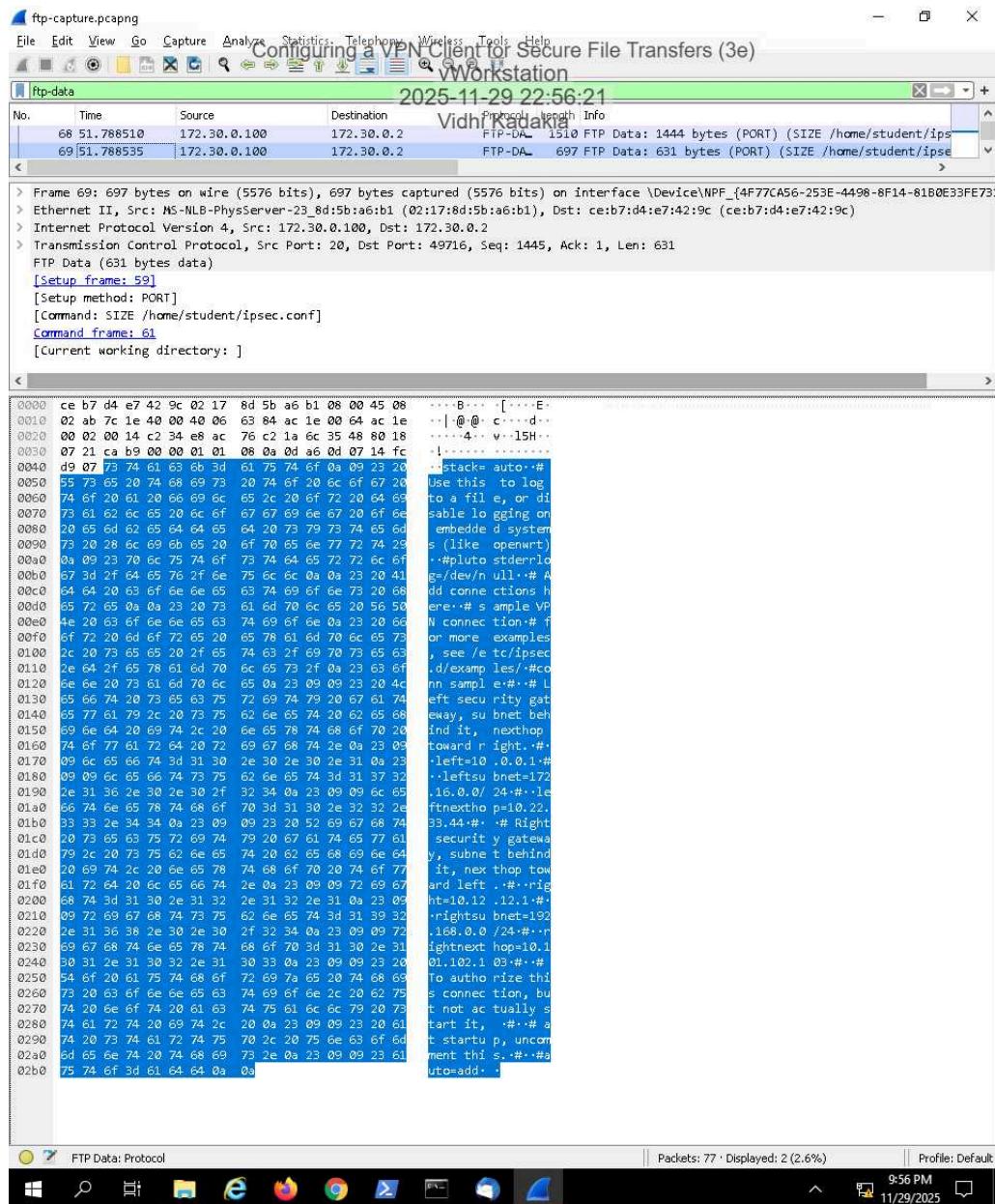
12. Make a screen capture showing the packet that carries the correct password.



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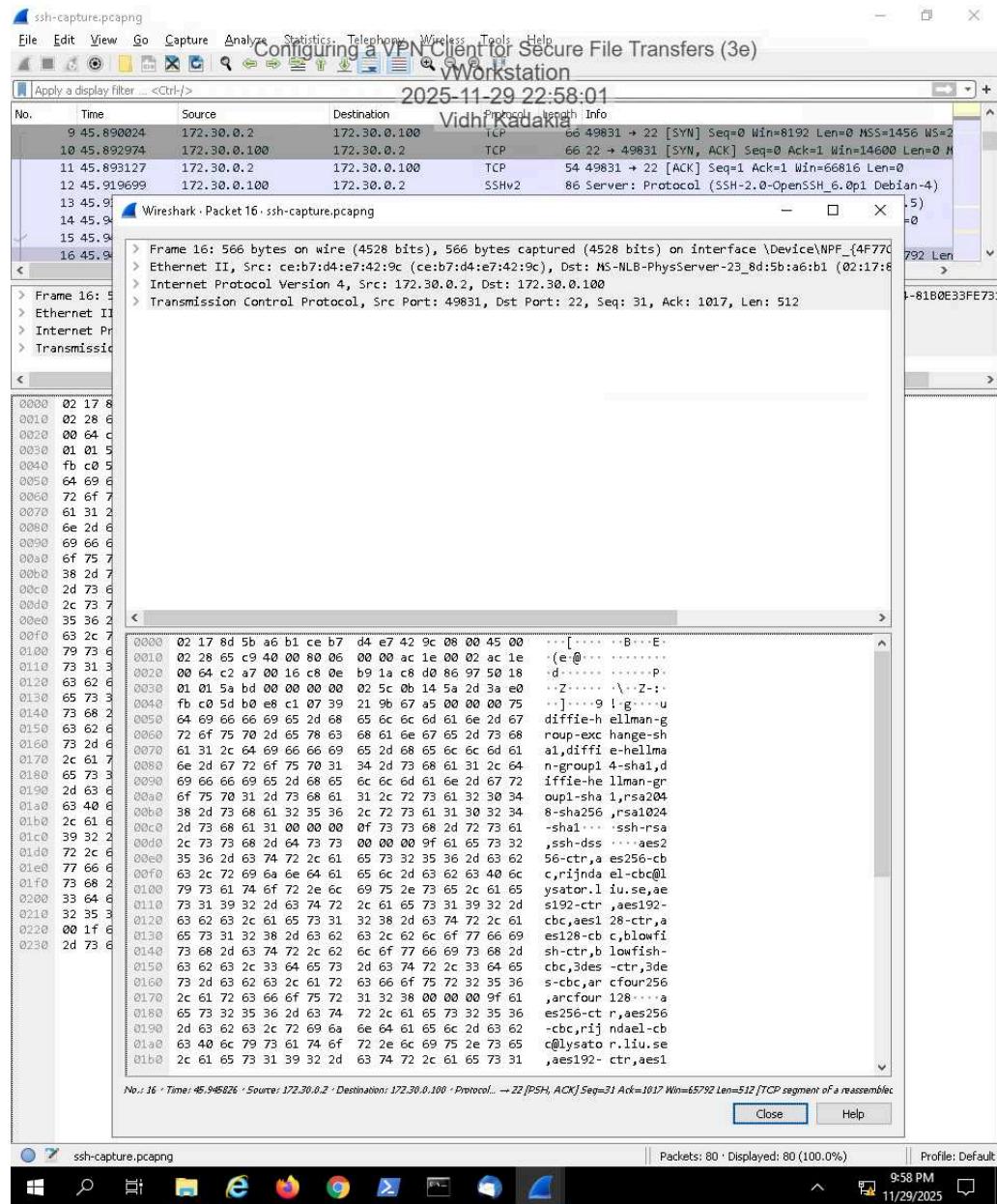
28. Make a screen capture showing the Wireshark window and the packet bytes pane for Packet 69.



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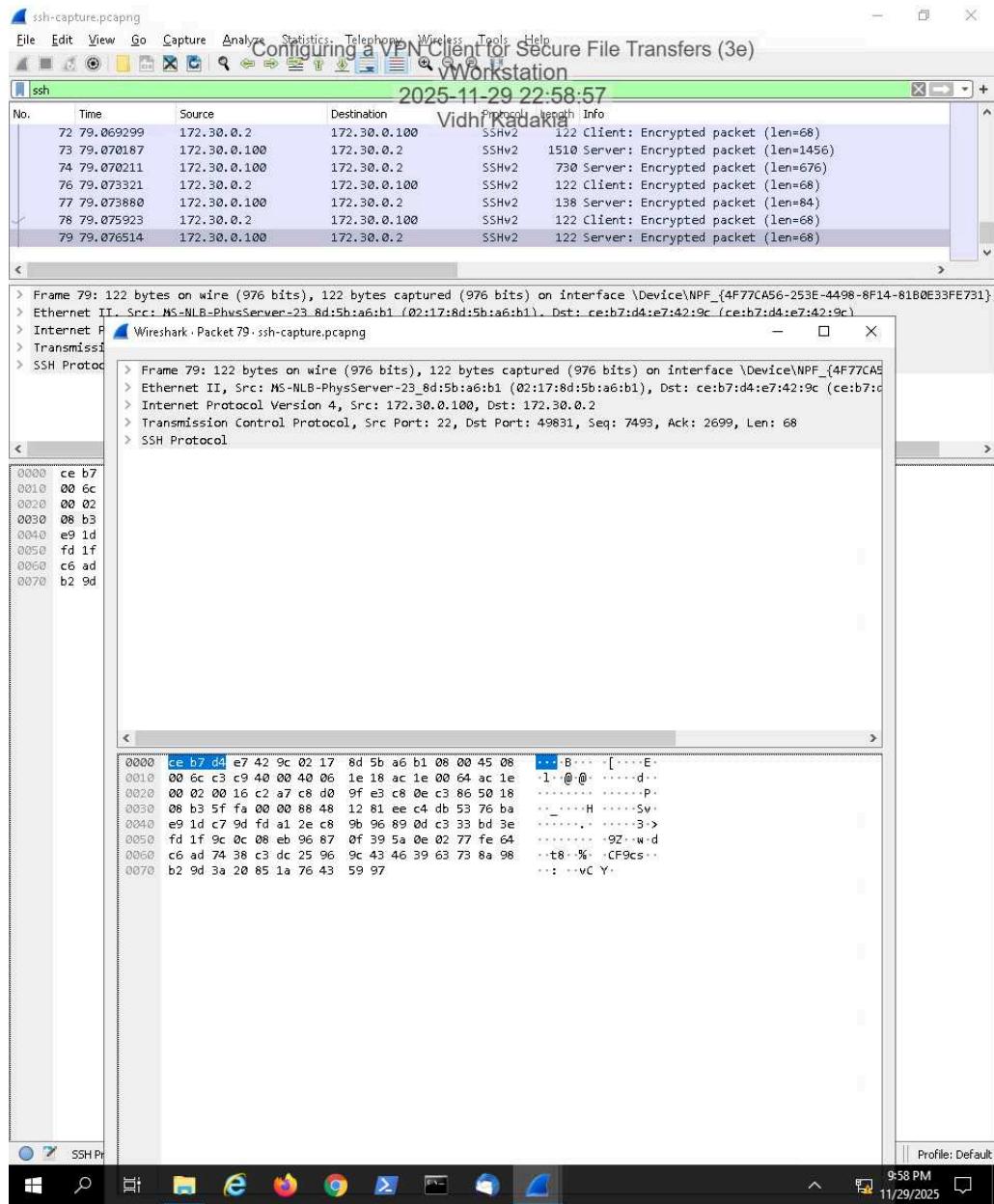
44. Make a screen capture showing the packet details pane for packet 16.



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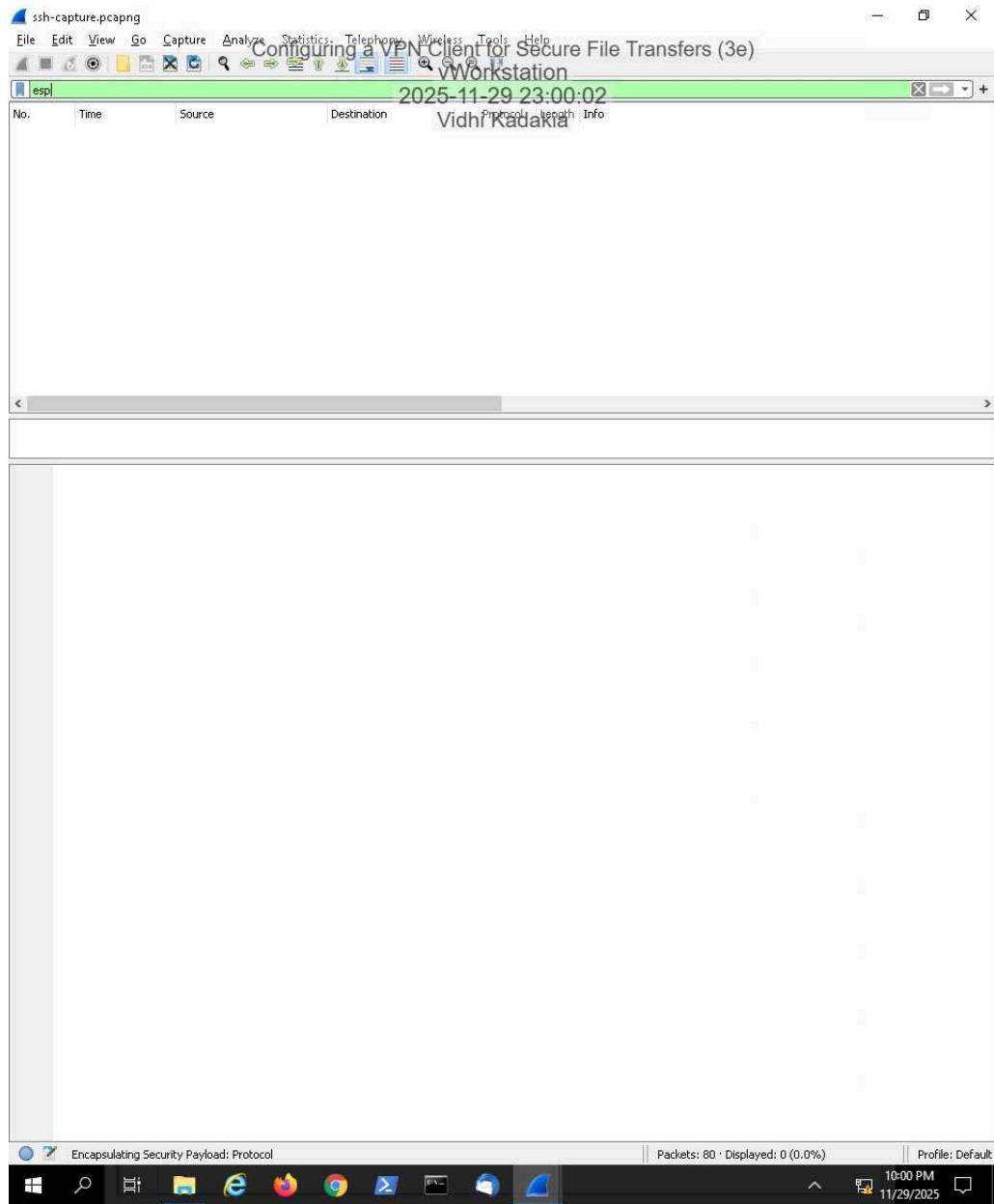
49. Make a screen capture showing the last SSHv2 packet in the SSH file transfer.



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51. Make a screen capture showing the last packets in the ESP exchange.



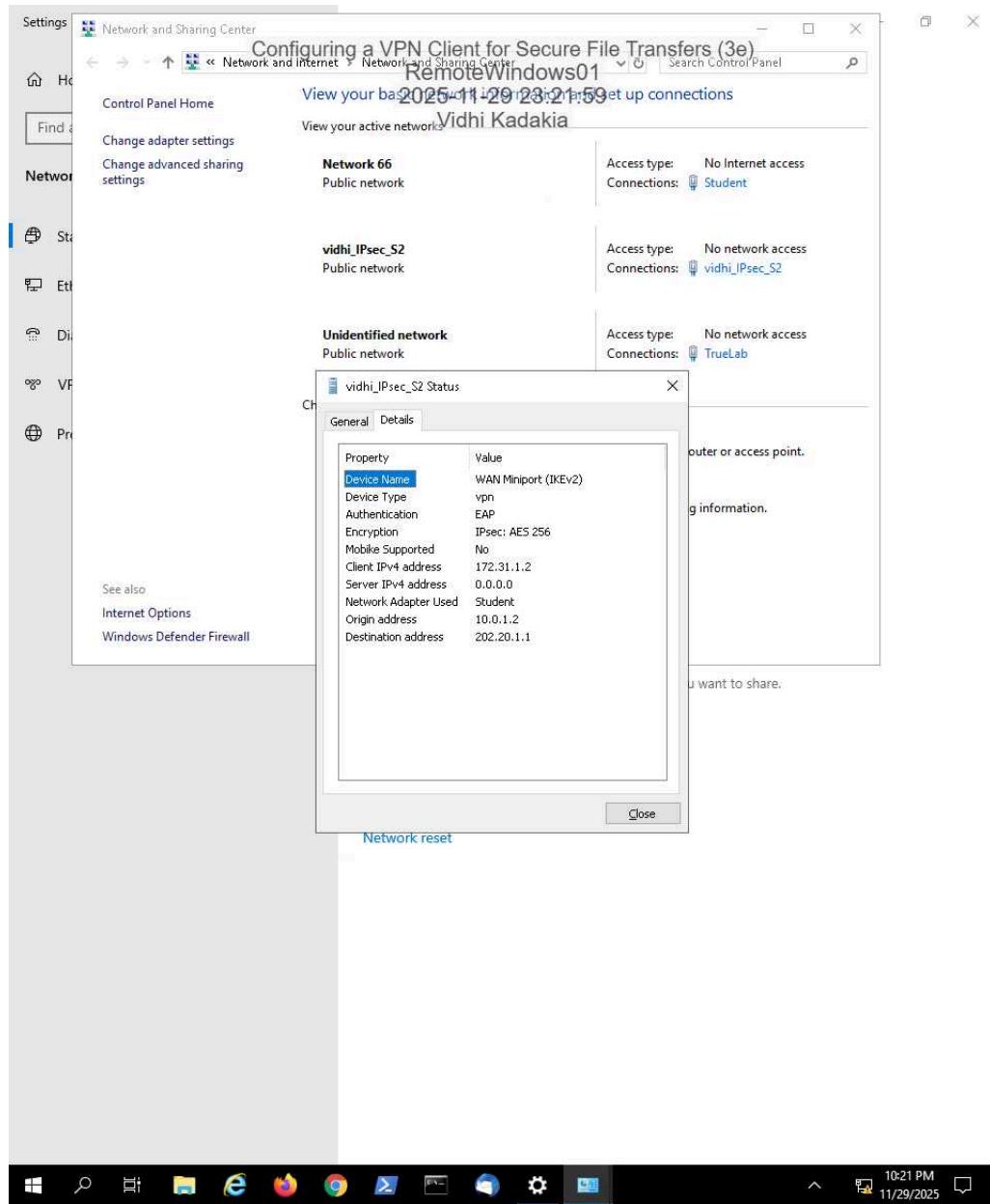
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Section 2: Applied Learning

Part 1: Configure a Windows VPN Client

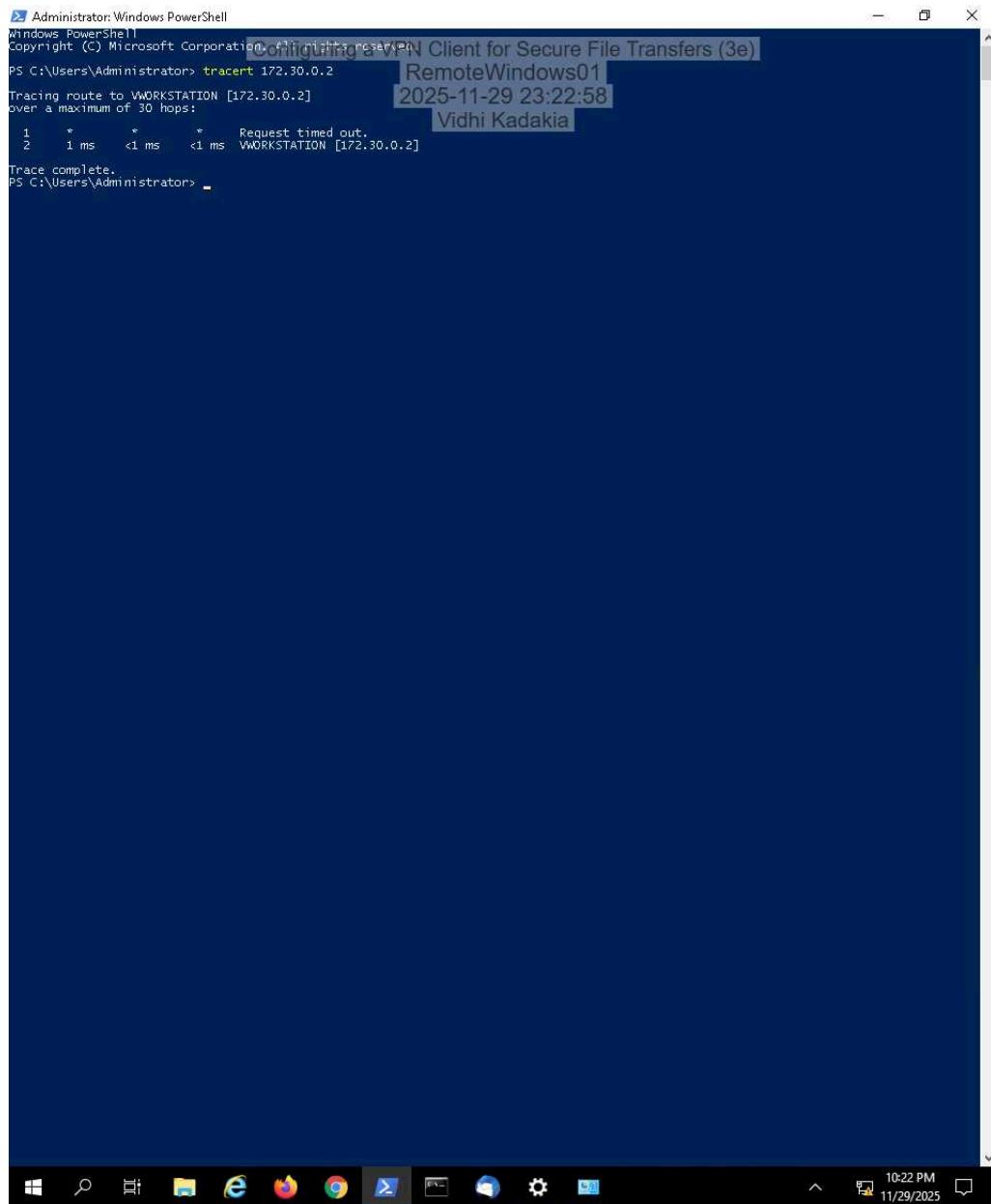
19. Make a screen capture showing the IPsec VPN connection encrypted with AES 256.



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23. Make a screen capture showing your successful tracert to the remote machine.



A screenshot of a Windows PowerShell window titled "Administrator: Windows PowerShell". The command run is "tracert 172.30.0.2". The output shows a route to "RemoteWindows01" at "2025-11-29 23:22:58" via "Vidhi Kadakia". The route consists of two hops: 1 (Request timed out) and 2 (1 ms <1 ms). The PowerShell prompt "PS C:\Users\Administrator>" is visible at the bottom.

```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

PS C:\Users\Administrator> tracert 172.30.0.2
Tracing route to VWORKSTATION [172.30.0.2]
over a maximum of 30 hops:
1 * * * Request timed out.
2 1 ms <1 ms VWORKSTATION [172.30.0.2]

Trace complete.

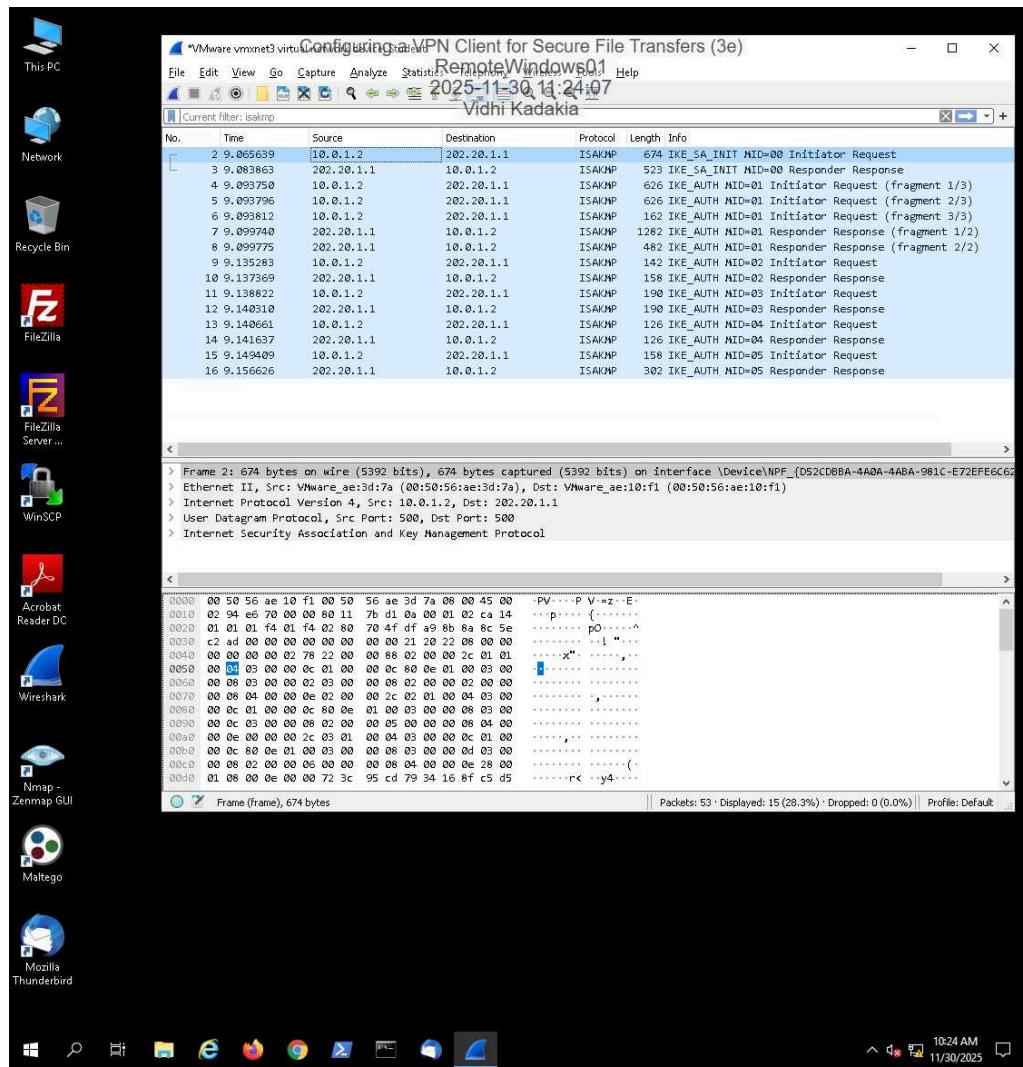
PS C:\Users\Administrator>
```

Part 2: Compare Secure and Non-Secure File Transfers in Wireshark

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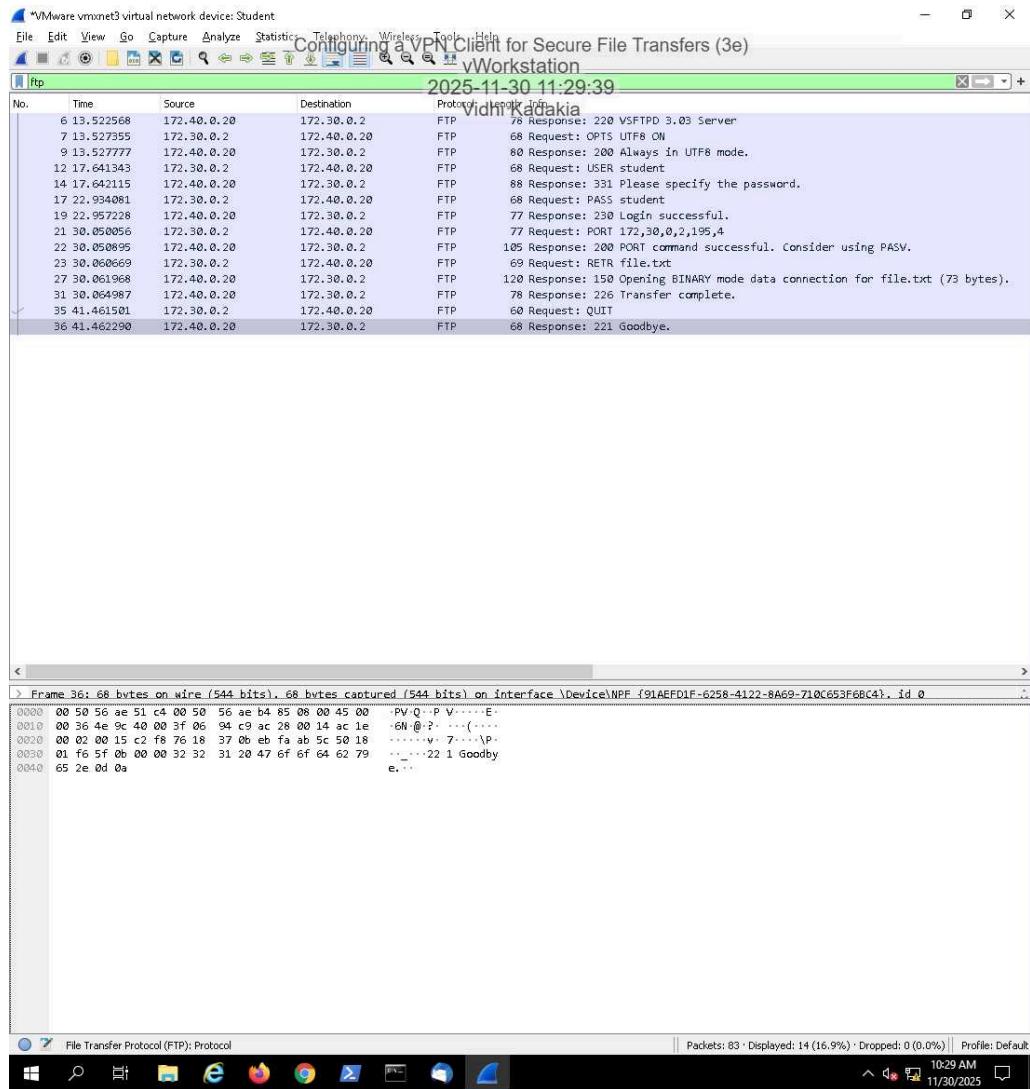
7. Make a screen capture showing the IKE_SA_INIT and IKE_AUTH packets.



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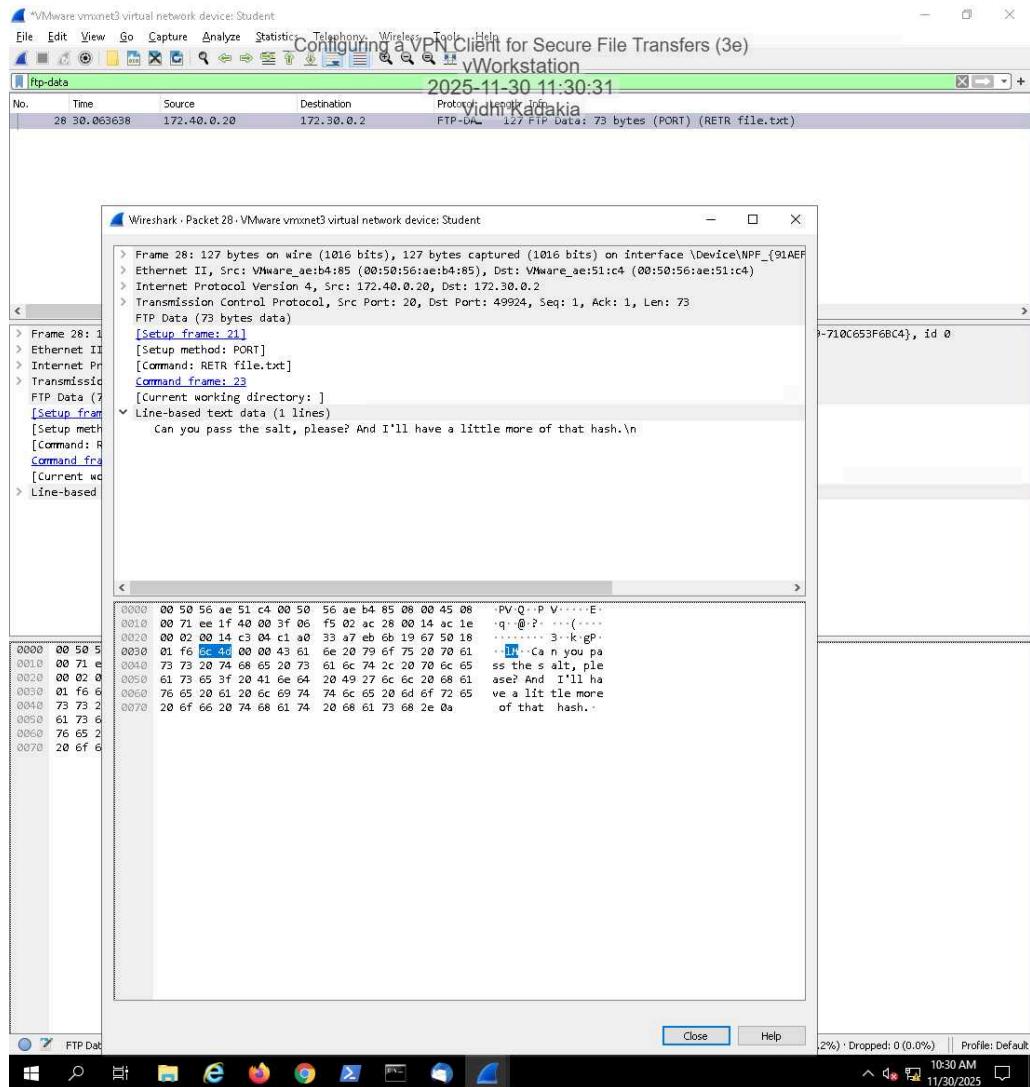
22. Make a screen capture showing the filtered FTP packets in your capture file.



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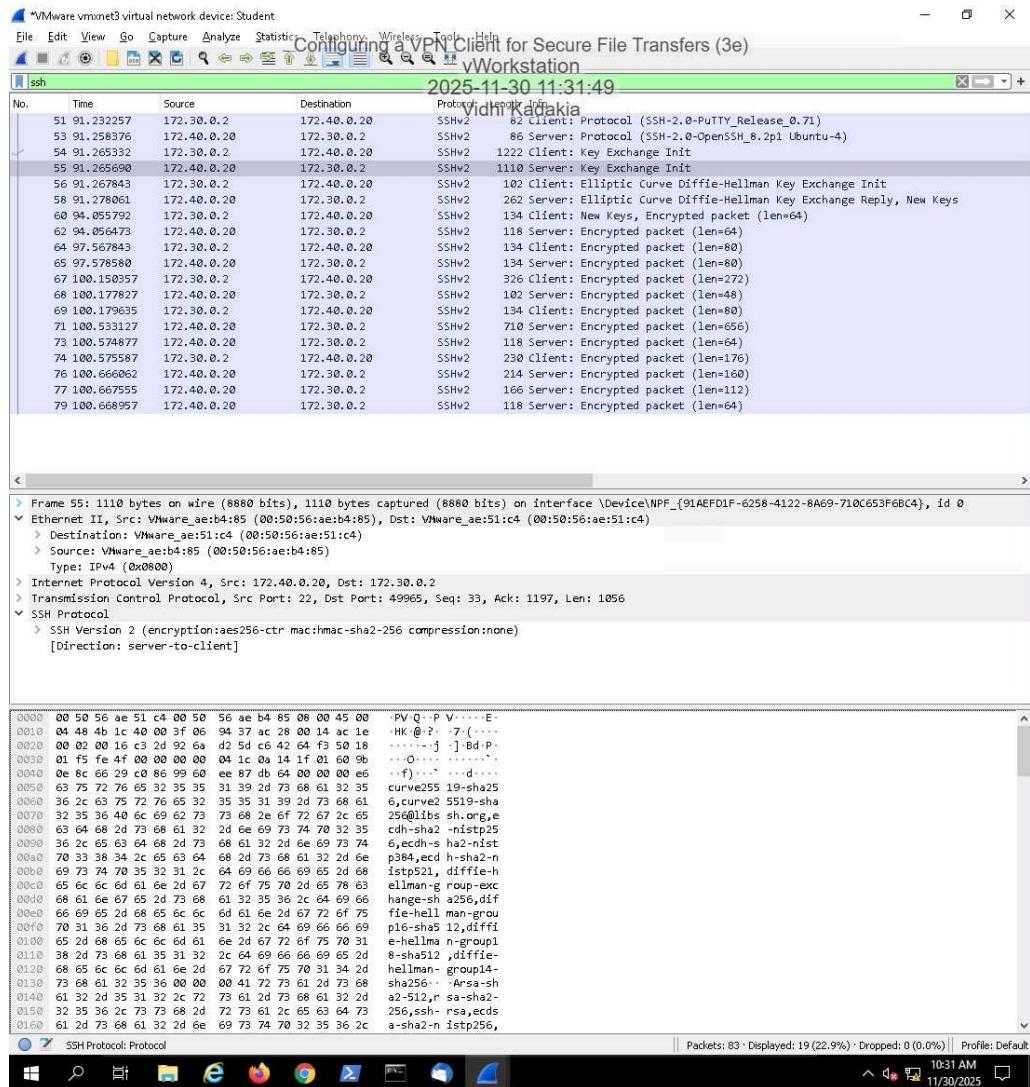
24. Make a screen capture showing the contents of the file.txt file in the packet bytes pane.



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27. Make a screen capture showing the filtered SSH packets in your capture file.



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Section 3: Challenge and Analysis

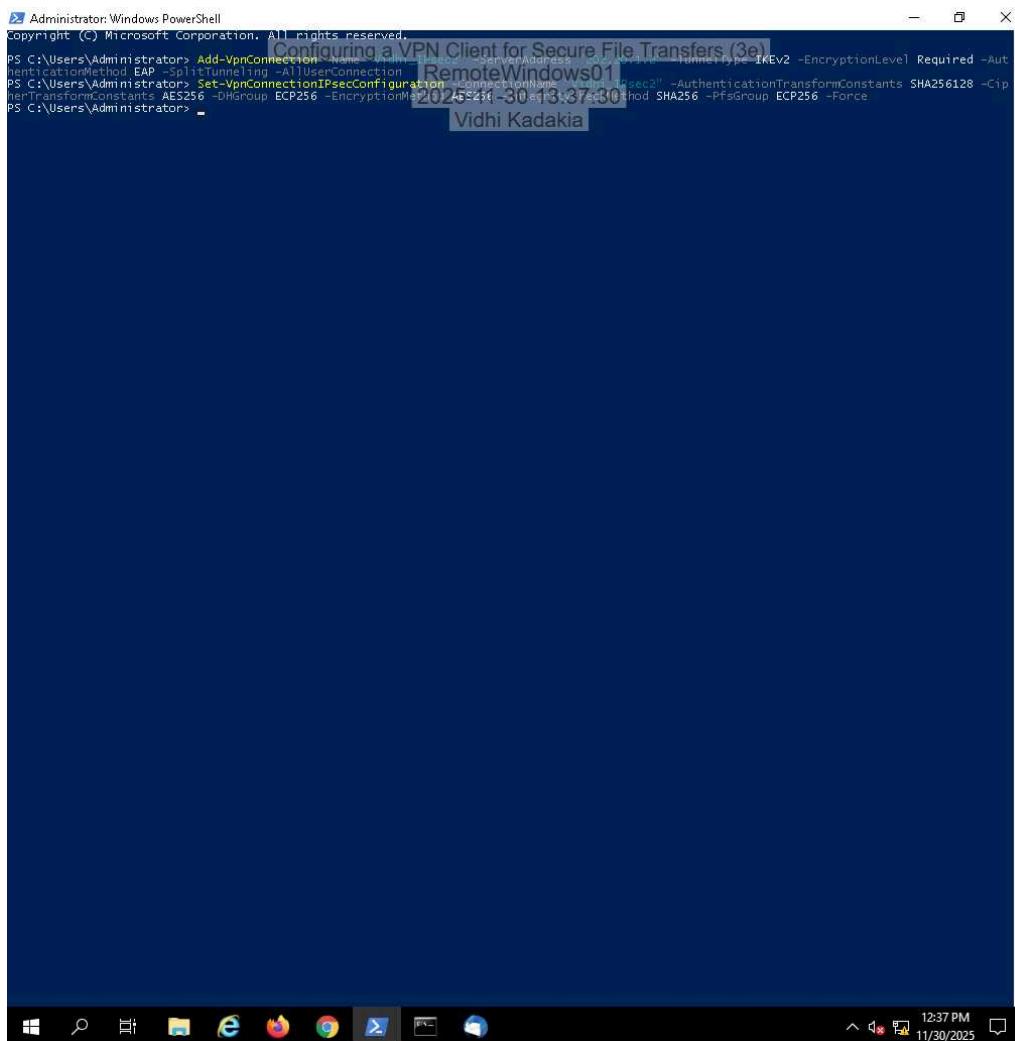
Part 1: Create a New VPN Connection using PowerShell

Document the command you used to add your VPN connection.

```
Add-VpnConnection -Name "Vidhi_IPsec2" -ServerAddress "202.20.1.2" -TunnelType IKEv2  
-EncryptionLevel Required -AuthenticationMethod EAP -SplitTunneling -AllUserConnection
```

Part 2: Implement a Custom IPsec Policy

Make a screen capture showing the successfully executed **Set-VpnConnectionIPsecConfiguration** command in PowerShell.



The screenshot shows a Windows PowerShell window titled "Administrator: Windows PowerShell". The command entered is:

```
PS C:\Users\Administrator> Set-VpnConnectionIPsecConfiguration -ConnectionName "Vidhi_IPsec2" -AuthenticationTransformConstants SHA256128 -CipherTransformConstants AES256 -DhGroup ECP256 -EncryptionMethod SHA256 -PfsGroup ECP256 -Force
```

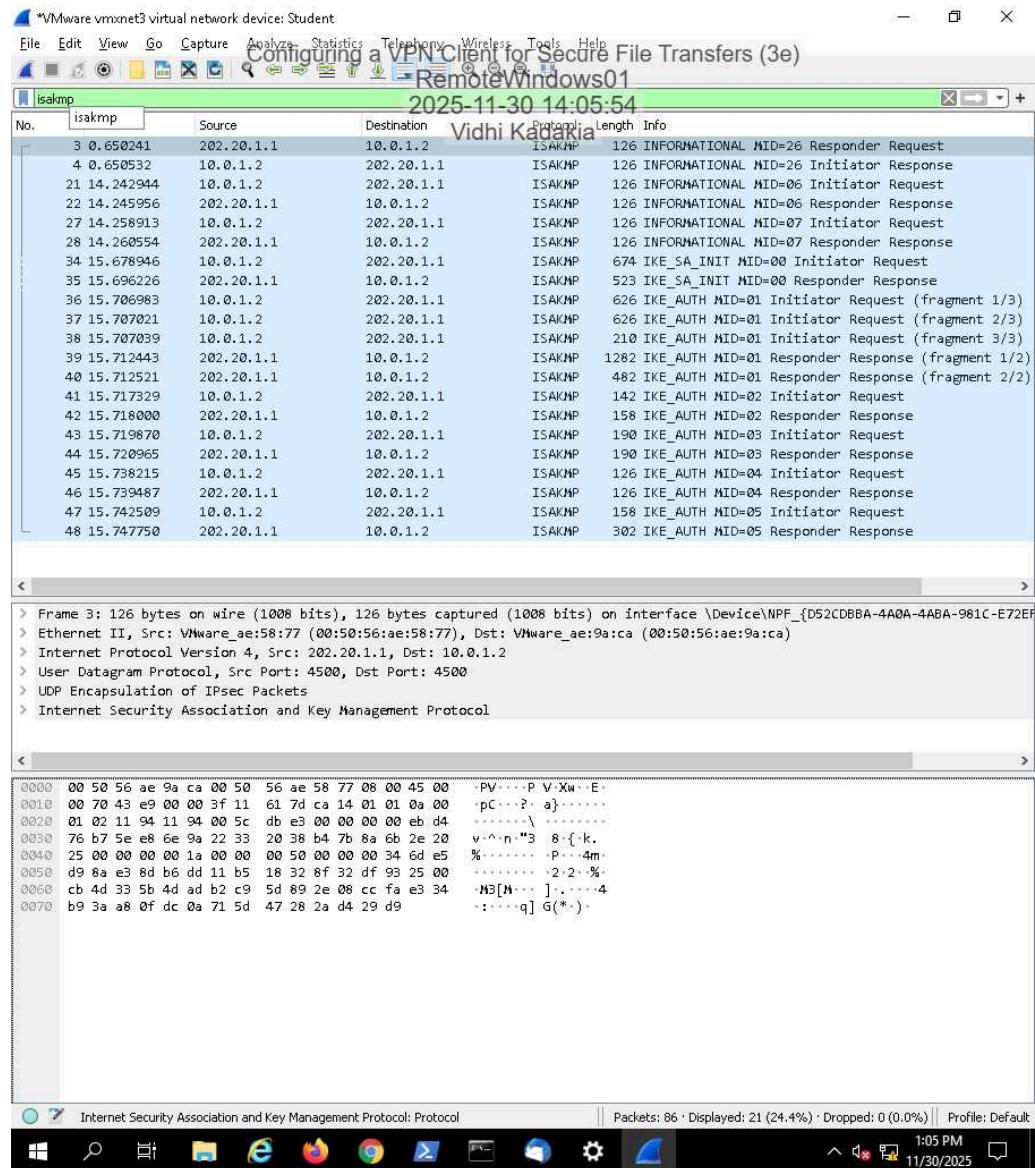
The command is being run on a computer named "RemoteWindows01" at 202.20.1.30. The user "Vidhi Kadakia" is logged in. The PowerShell window has a dark blue background and white text. The taskbar at the bottom shows various icons for Windows, File Explorer, Internet Explorer, Firefox, Google Chrome, and others. The system tray in the bottom right corner shows the date and time as 11/30/2025 12:37 PM.

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Part 3: Verify Your VPN Implementation using Wireshark

Make a screen capture showing the **CREATE_CHILD_SA** exchange.



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Make a screen capture showing the selected Diffie-Hellman transform.

