

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:

6 hours, 42 minutes

Progress:

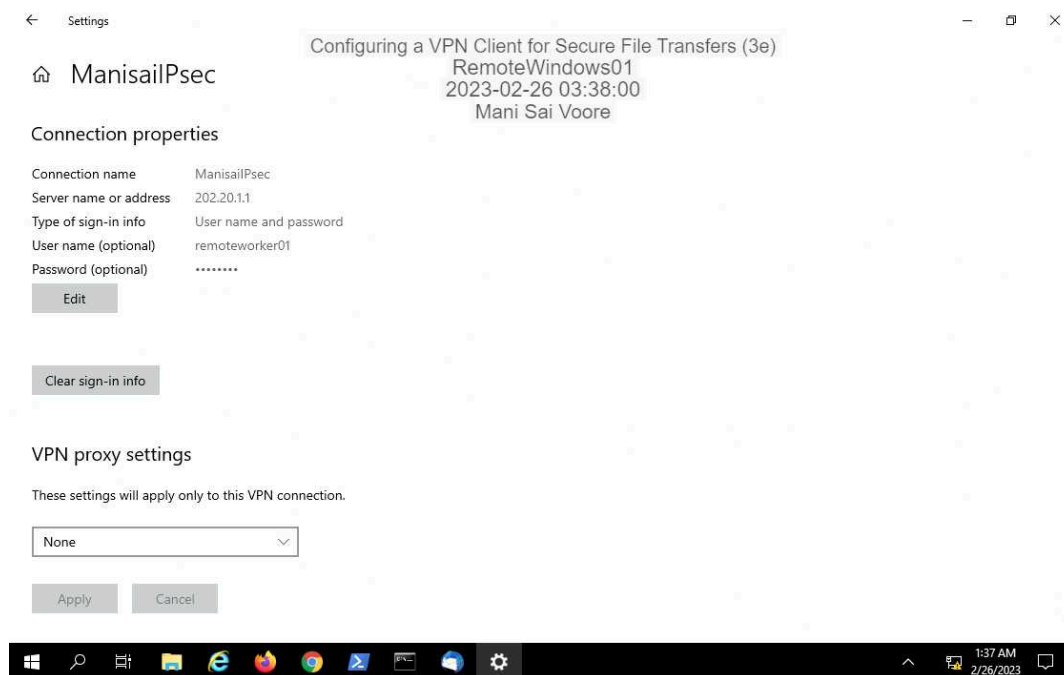
100%

Report Generated: Monday, February 27, 2023 at 1:34 AM

Section 1: Hands-On Demonstration

Part 1: Configure a Windows VPN Client

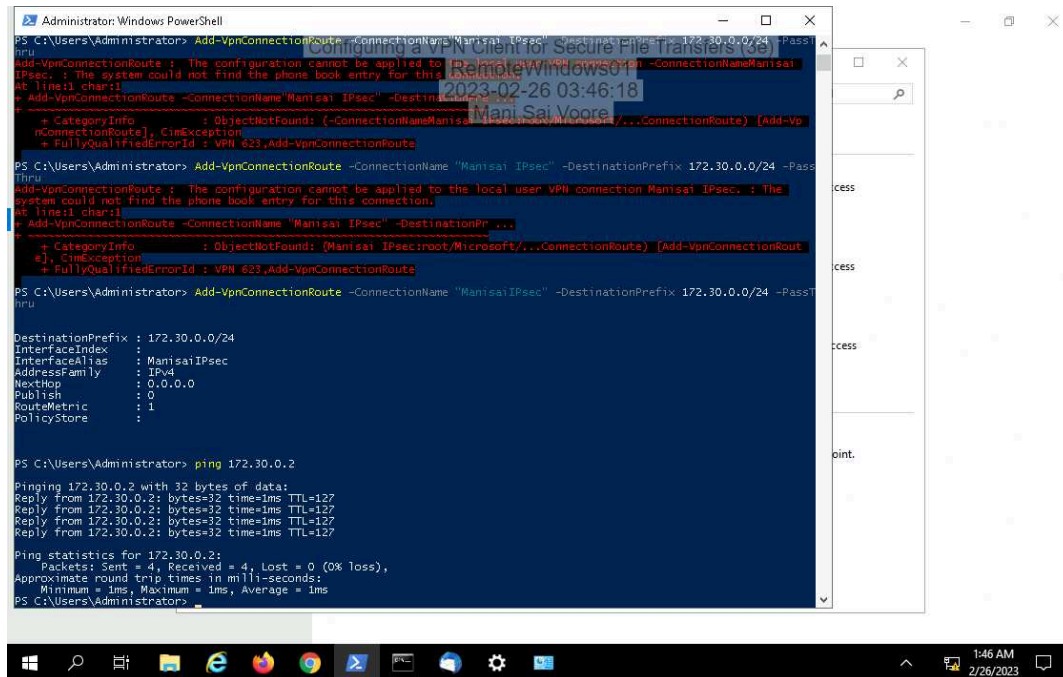
30. Make a screen capture showing the VPN connection properties.



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



The screenshot shows a Windows PowerShell window with the following commands and output:

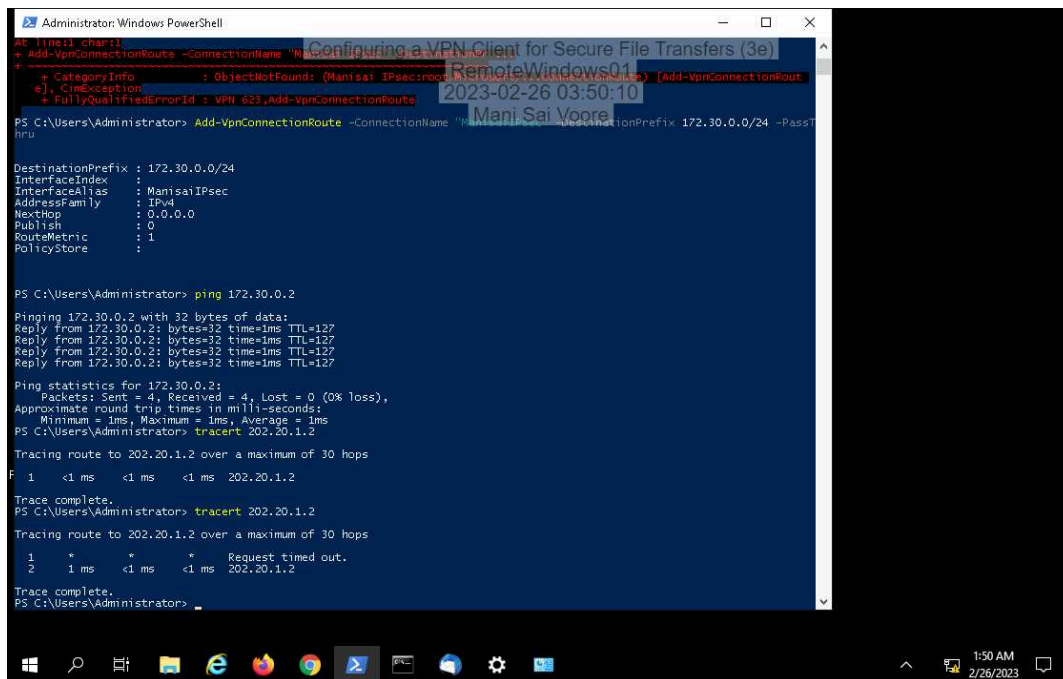
```
PS C:\Users\Administrator> Add-VpnConnectionRoute -ConnectionName "Manisai IPsec" -DestinationPrefix 172.30.0.0/24 -PassThru
Add-VpnConnectionRoute : The configuration cannot be applied to the local user VPN connection Manisai IPsec : The system could not find the phone book entry for this connection.
PS C:\Users\Administrator> Add-VpnConnectionRoute -ConnectionName "Manisai IPsec" -DestinationPrefix 172.30.0.0/24 -PassThru
Add-VpnConnectionRoute : The configuration cannot be applied to the local user VPN connection Manisai IPsec : The system could not find the phone book entry for this connection.
PS C:\Users\Administrator> Add-VpnConnectionRoute -ConnectionName "Manisai IPsec" -DestinationPrefix 172.30.0.0/24 -PassThru
DestinationPrefix : 172.30.0.0/24
InterfaceIndex : 1
InterfaceAlias : ManisaiIPsec
AddressFamily : IPv4
NextHop : 0.0.0.0
Publish : 0
RouteMetric : 1
PolicyStore :

PS C:\Users\Administrator> ping 172.30.0.2

Pinging 172.30.0.2 with 32 bytes of data:
Reply from 172.30.0.2: bytes=32 time=1ms TTL=127
Reply from 172.30.0.2: bytes=32 time=1ms TTL=127
Reply from 172.30.0.2: bytes=32 time=1ms TTL=127
Reply from 172.30.0.2: bytes=32 time=1ms TTL=127

Ping statistics for 172.30.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 1ms, Average = 1ms
PS C:\Users\Administrator>
```

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



The screenshot shows a Windows PowerShell window with the following commands and output:

```
PS C:\Users\Administrator> Add-VpnConnectionRoute -ConnectionName "Manisai IPsec" -DestinationPrefix 172.30.0.0/24 -PassThru
Add-VpnConnectionRoute : The configuration cannot be applied to the local user VPN connection Manisai IPsec : The system could not find the phone book entry for this connection.
PS C:\Users\Administrator> Add-VpnConnectionRoute -ConnectionName "Manisai IPsec" -DestinationPrefix 172.30.0.0/24 -PassThru
DestinationPrefix : 172.30.0.0/24
InterfaceIndex : 1
InterfaceAlias : ManisaiIPsec
AddressFamily : IPv4
NextHop : 0.0.0.0
Publish : 0
RouteMetric : 1
PolicyStore :

PS C:\Users\Administrator> ping 172.30.0.2

Pinging 172.30.0.2 with 32 bytes of data:
Reply from 172.30.0.2: bytes=32 time=1ms TTL=127
Reply from 172.30.0.2: bytes=32 time=1ms TTL=127
Reply from 172.30.0.2: bytes=32 time=1ms TTL=127
Reply from 172.30.0.2: bytes=32 time=1ms TTL=127

Ping statistics for 172.30.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 1ms, Average = 1ms
PS C:\Users\Administrator> tracert 202.20.1.2

Tracing route to 202.20.1.2 over a maximum of 30 hops
  0  *  *  *  Request timed out.
  1  *  *  *  Request timed out.
  2  1 ms <1 ms <1 ms 202.20.1.2

Trace complete.
PS C:\Users\Administrator> tracert 202.20.1.2

Tracing route to 202.20.1.2 over a maximum of 30 hops
  0  *  *  *  Request timed out.
  1  *  *  *  Request timed out.
  2  1 ms <1 ms <1 ms 202.20.1.2

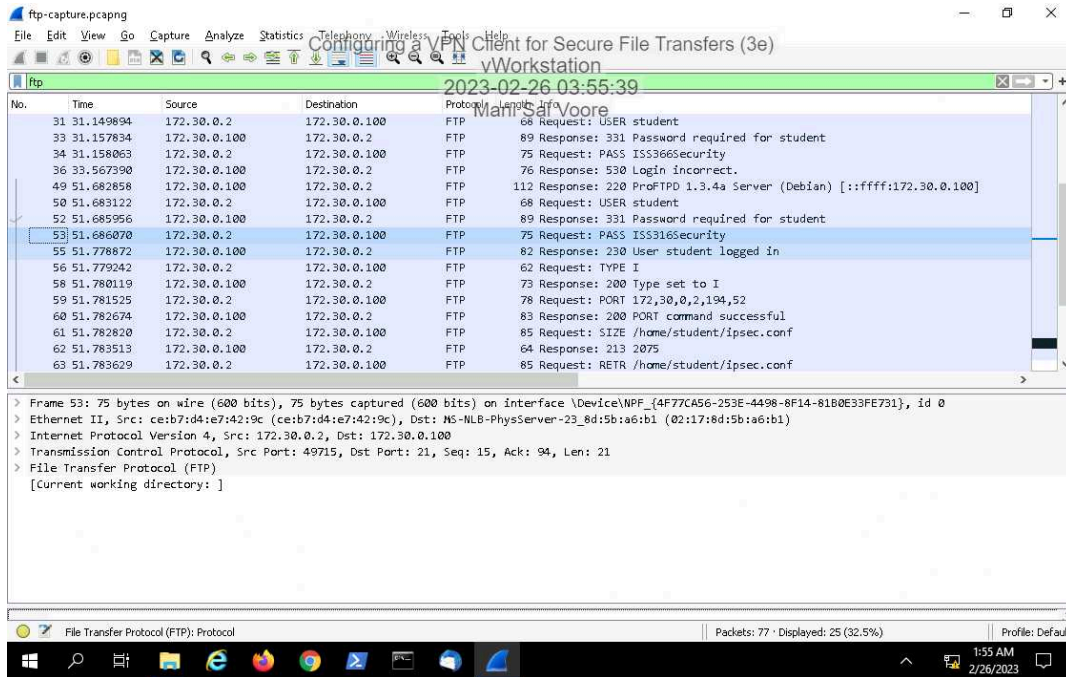
Trace complete.
PS C:\Users\Administrator>
```

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

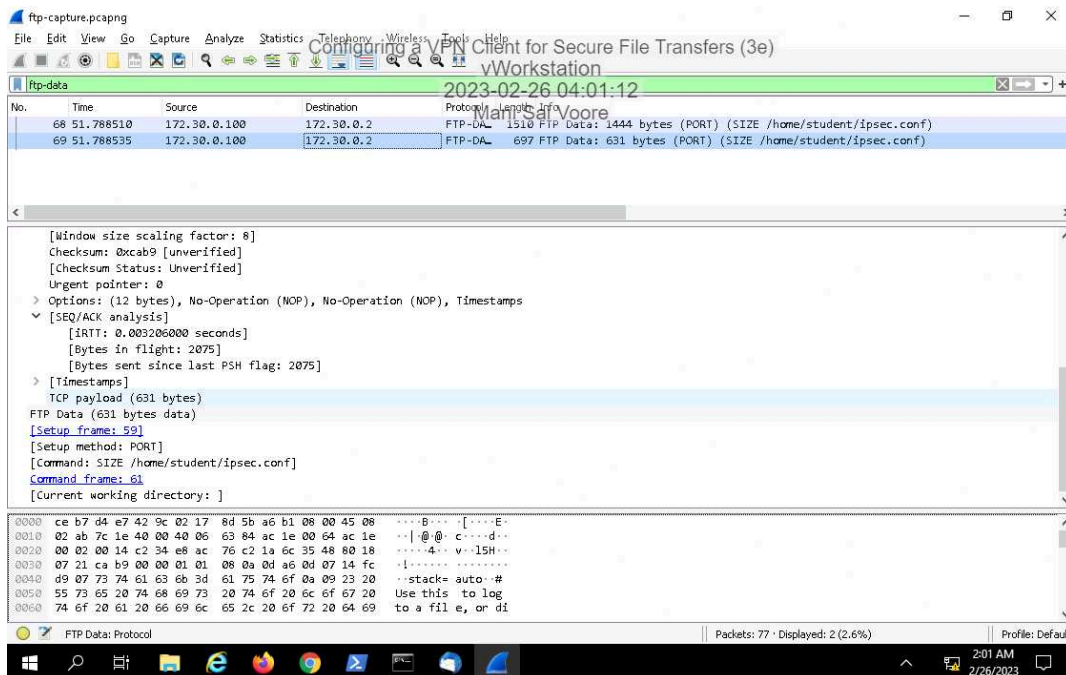
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12. Make a screen capture showing the packet that carries the correct password.



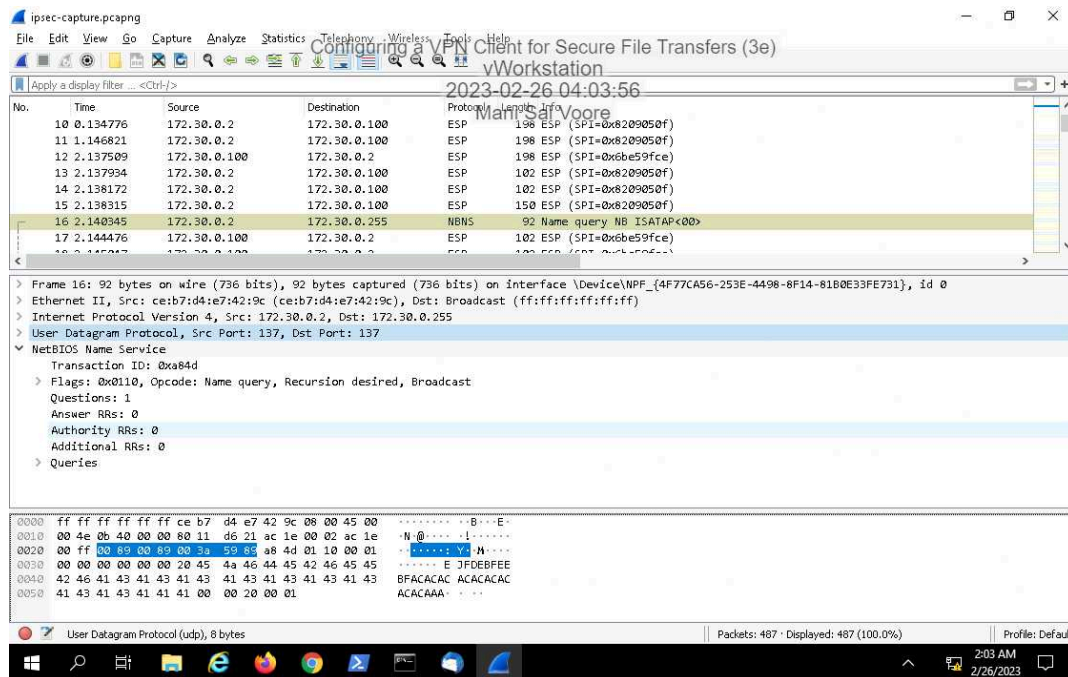
28. Make a screen capture showing the Wireshark window and the packet bytes pane for Packet 69.



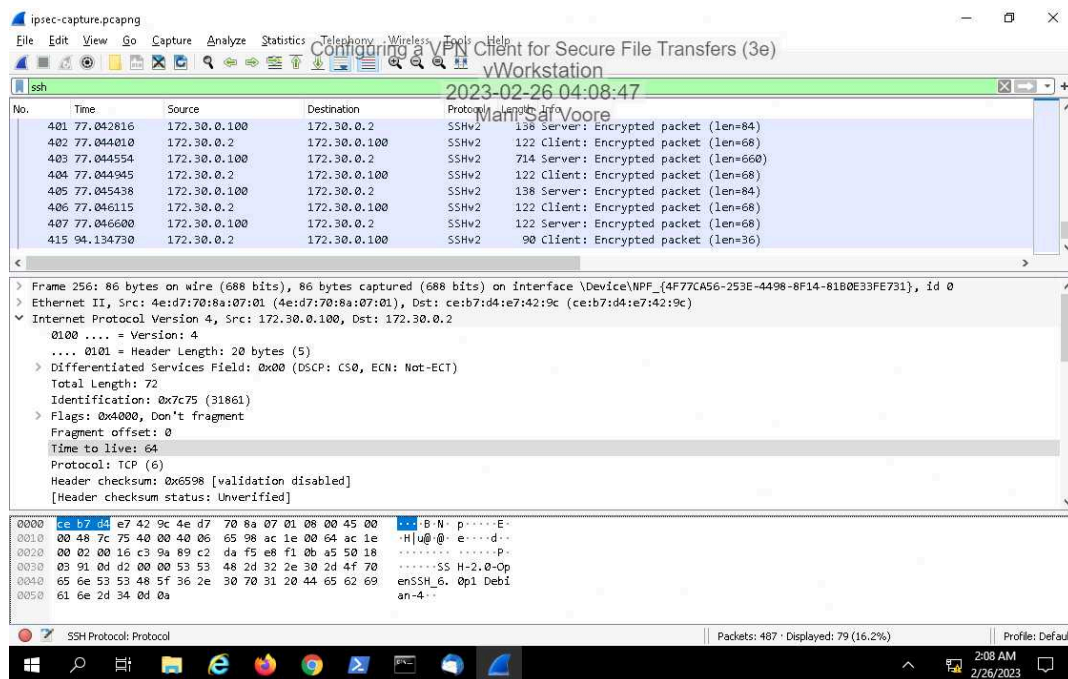
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44. Make a screen capture showing the packet details pane for packet 16.



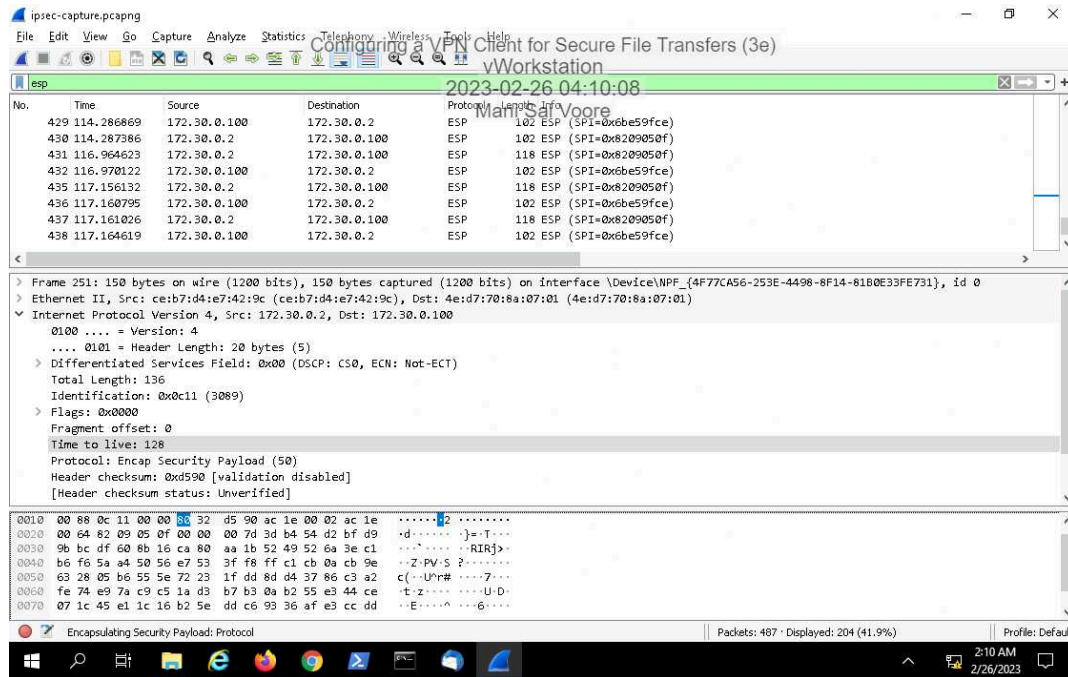
49. Make a screen capture showing the last SSHv2 packet in the SSH file transfer.



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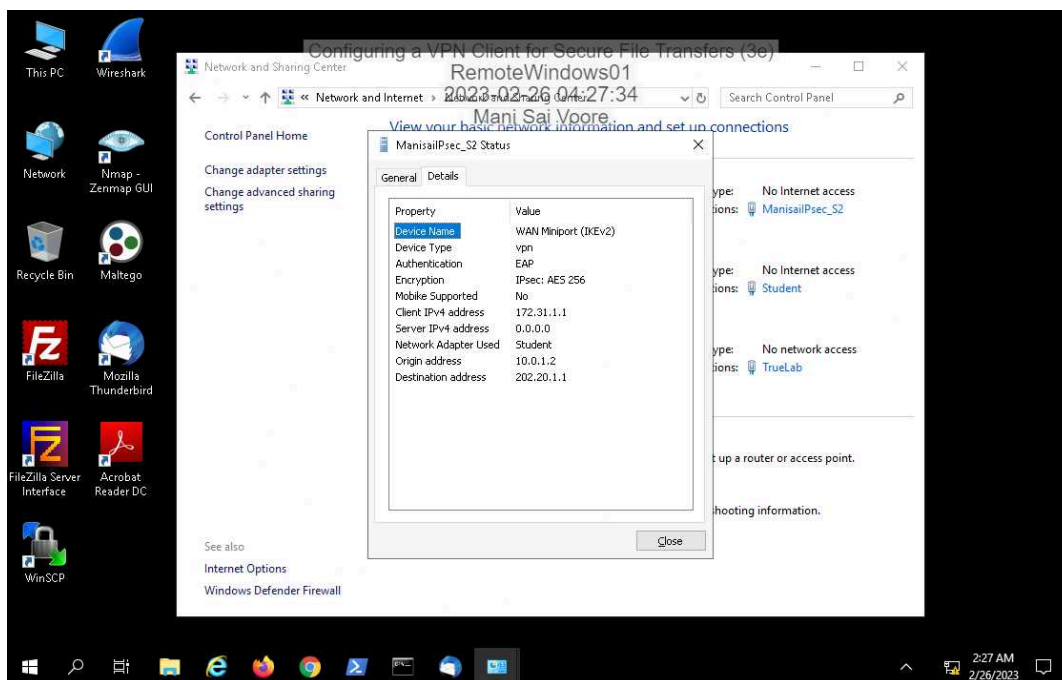
51. Make a screen capture showing the last packets in the ESP exchange.



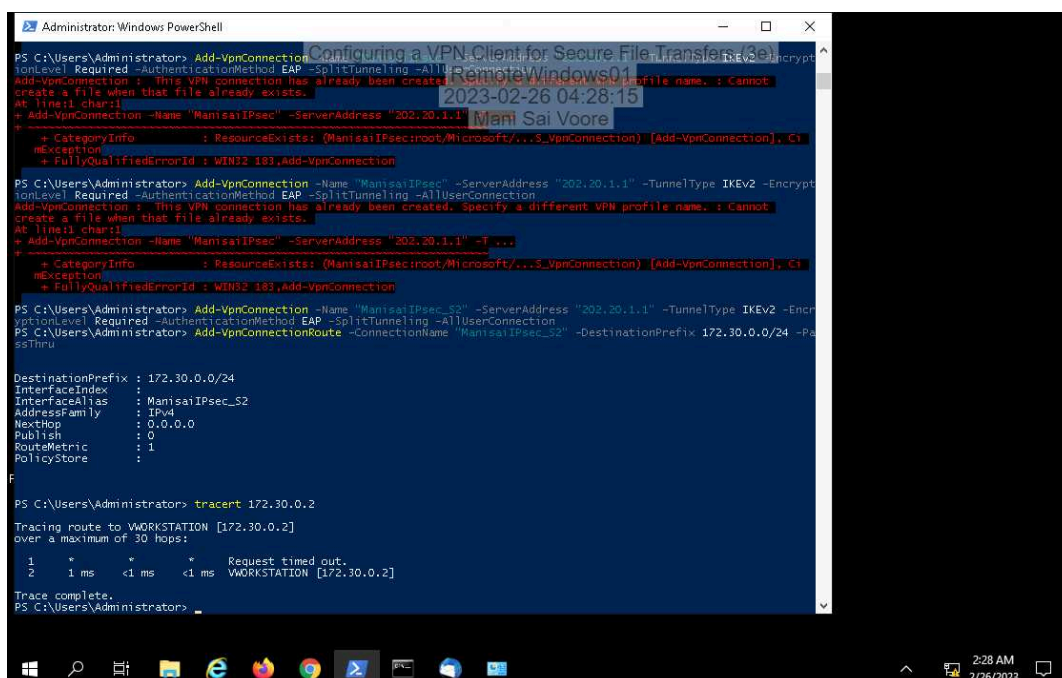
Section 2: Applied Learning

Part 1: Configure a Windows VPN Client

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



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

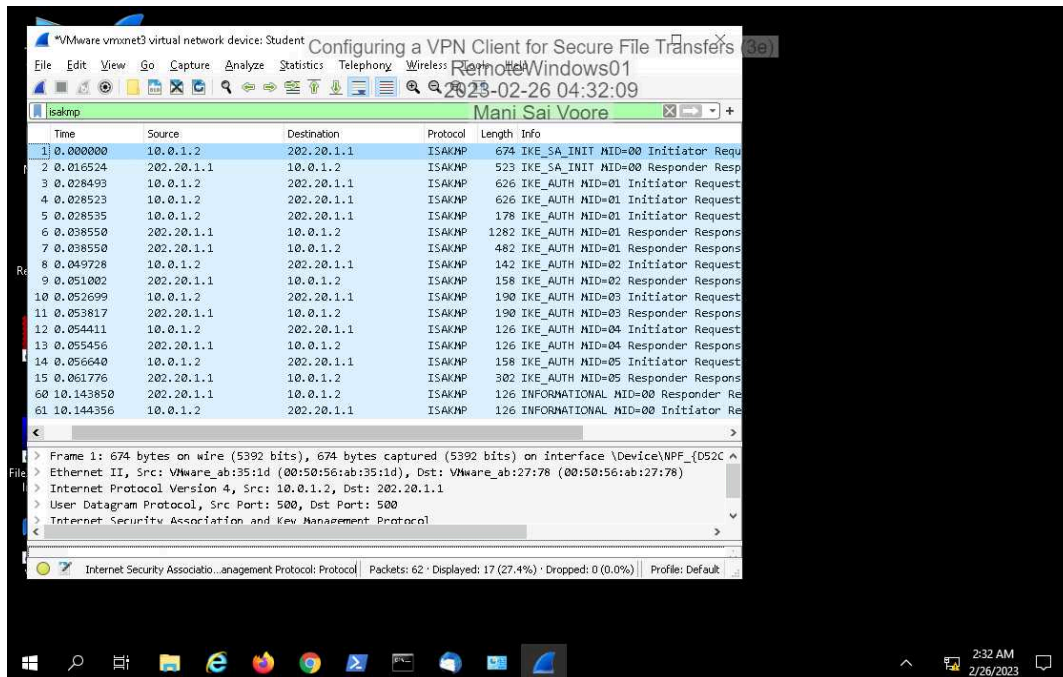


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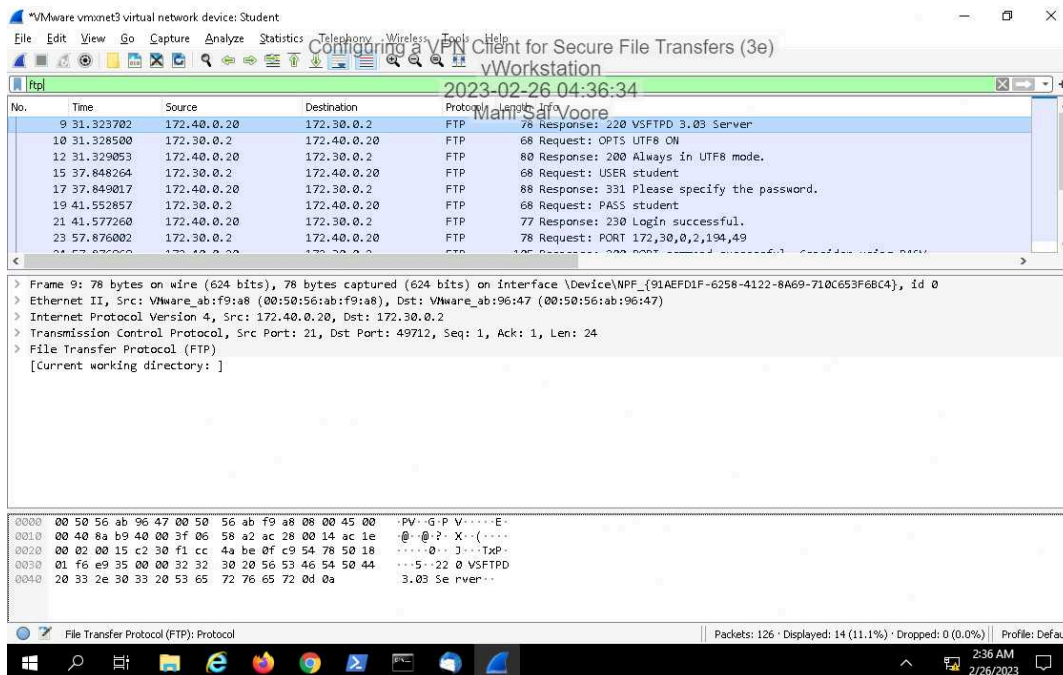
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Part 2: Compare Secure and Non-Secure File Transfers in Wireshark

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

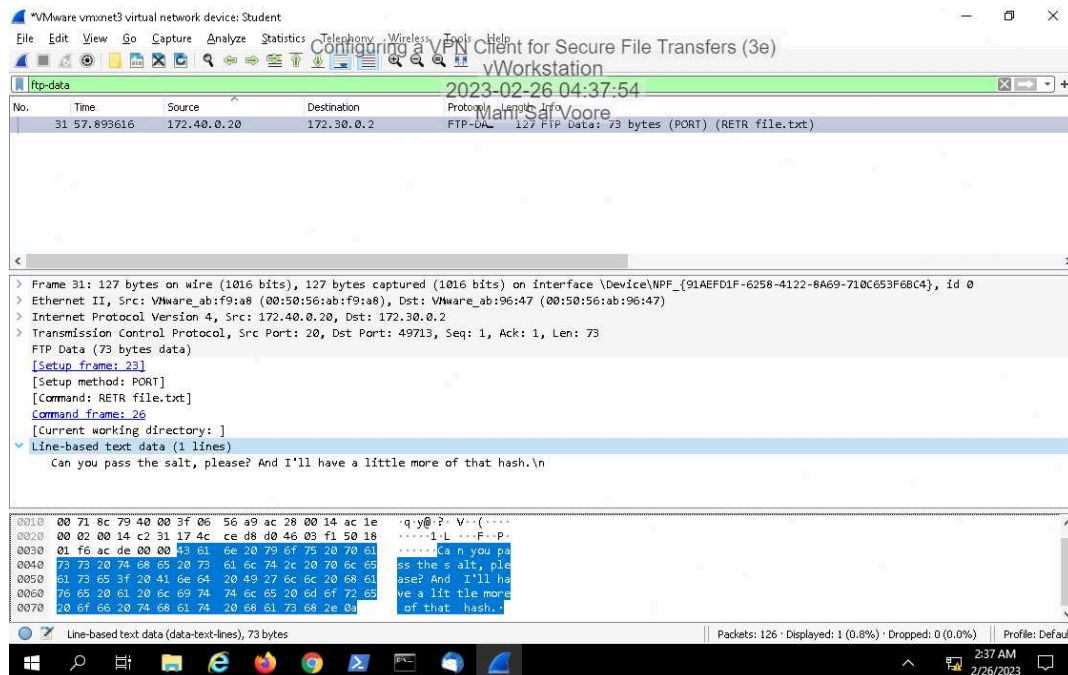


22. Make a screen capture showing the filtered FTP packets in your capture file.

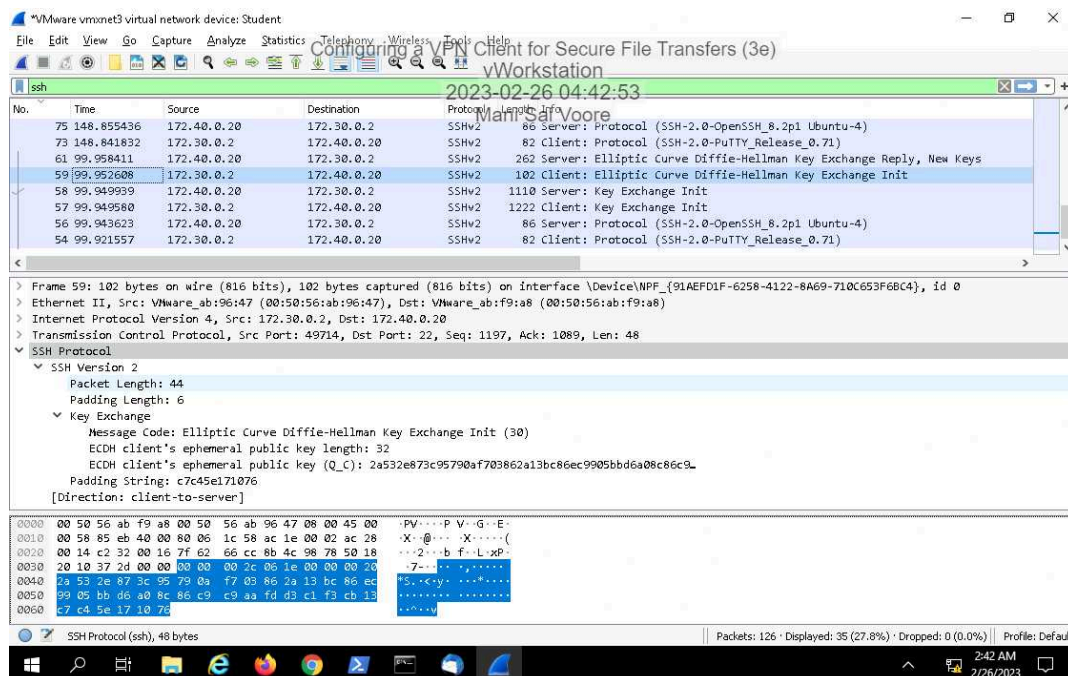


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24. **Make a screen capture** showing the **contents of the file.txt** file in the **packet bytes** pane.



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



Section 3: Challenge and Analysis

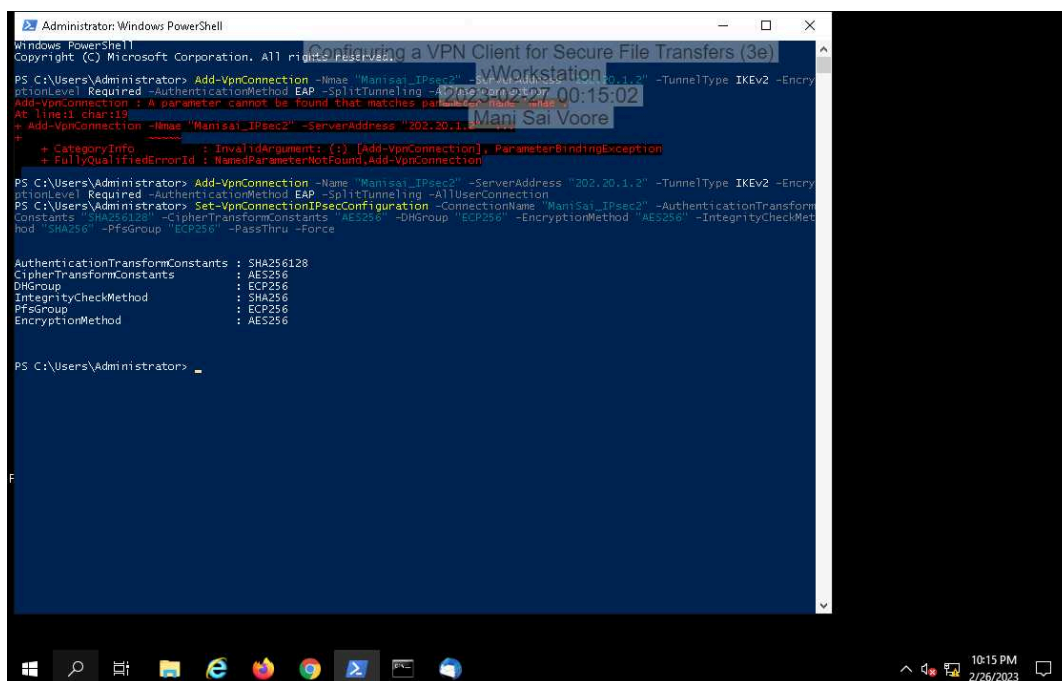
Part 1: Create a New VPN Connection using PowerShell

Document the command you used to add your VPN connection.

Add-VpnConnection -Name "ManiSai_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.

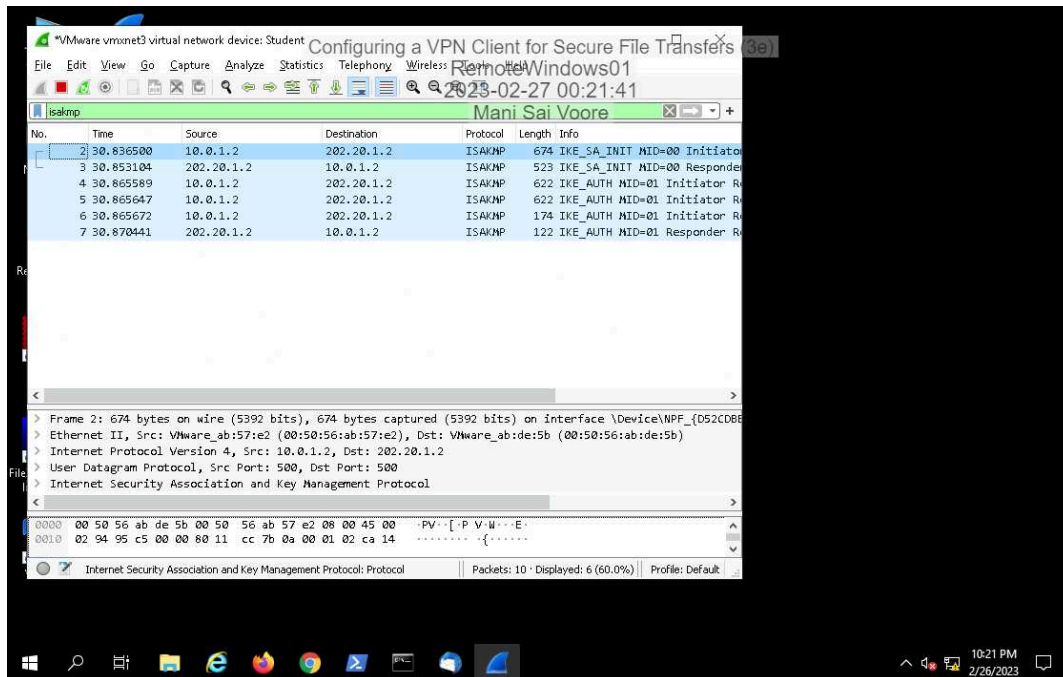


Part 3: Verify Your VPN Implementation using Wireshark

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



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

