

Troubleshooting Common Network Issues

Fundamentals of Communications and Networking, Third Edition - Lab 10

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Time on Task:

8 hours, 42 minutes

Progress:

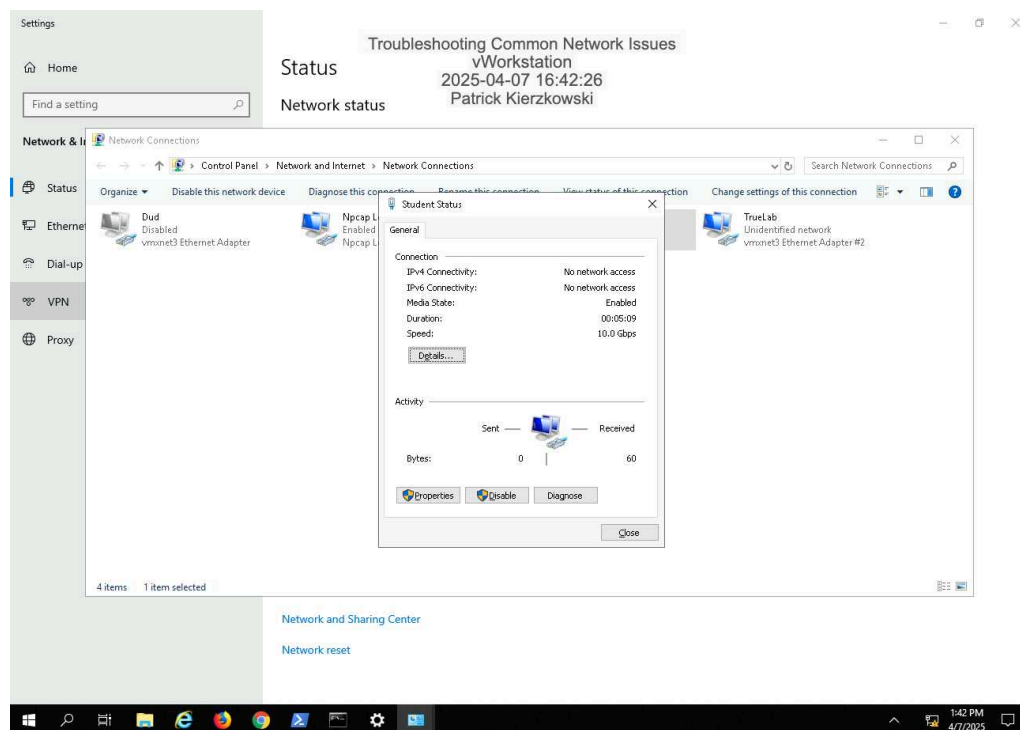
100%

Report Generated: Monday, July 7, 2025 at 9:47 PM

Section 1: Hands-On Demonstration

Part 1: Troubleshoot Connectivity Issues on the LAN

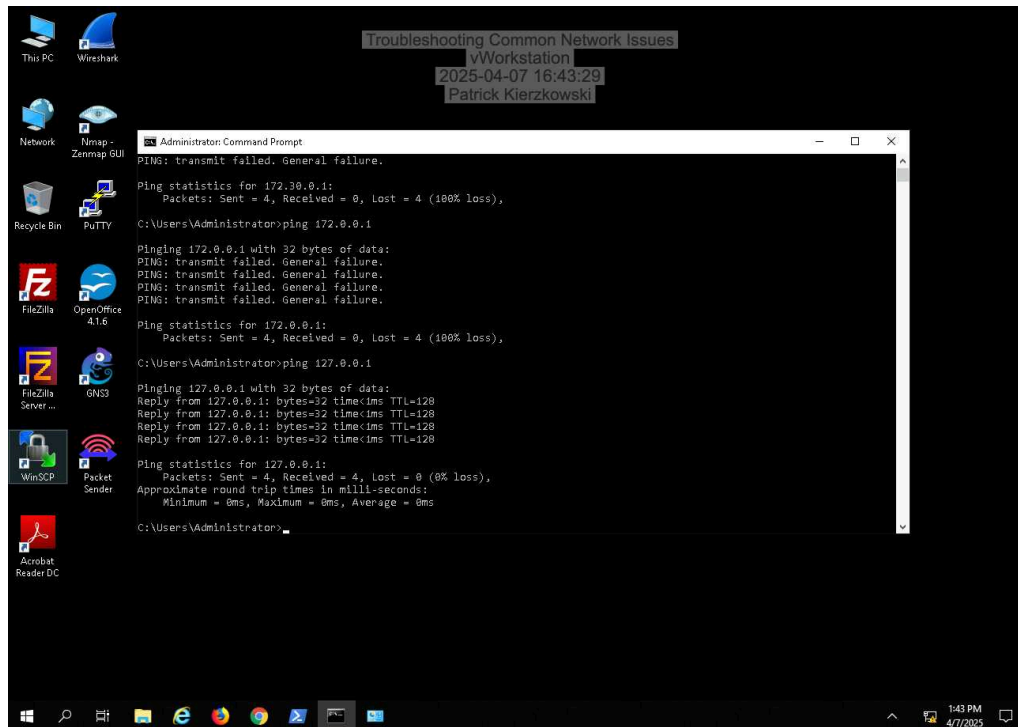
8. **Make a screen capture** showing the **Student connection details** in the **Student Status** window.



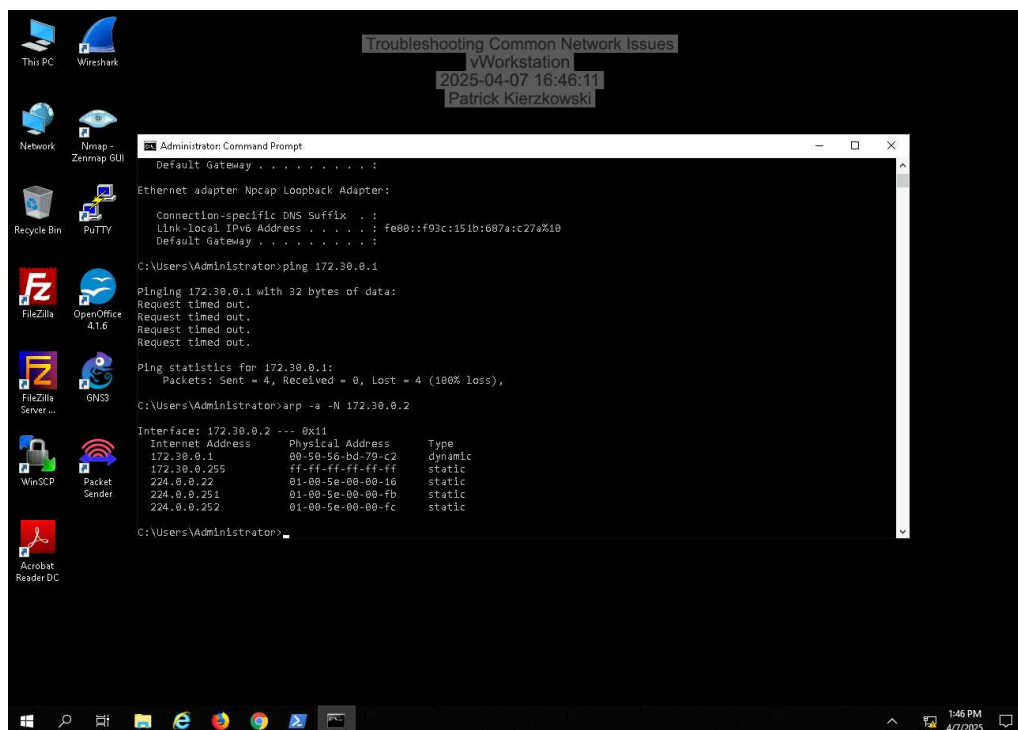
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14. Make a screen capture showing the successful localhost ping.

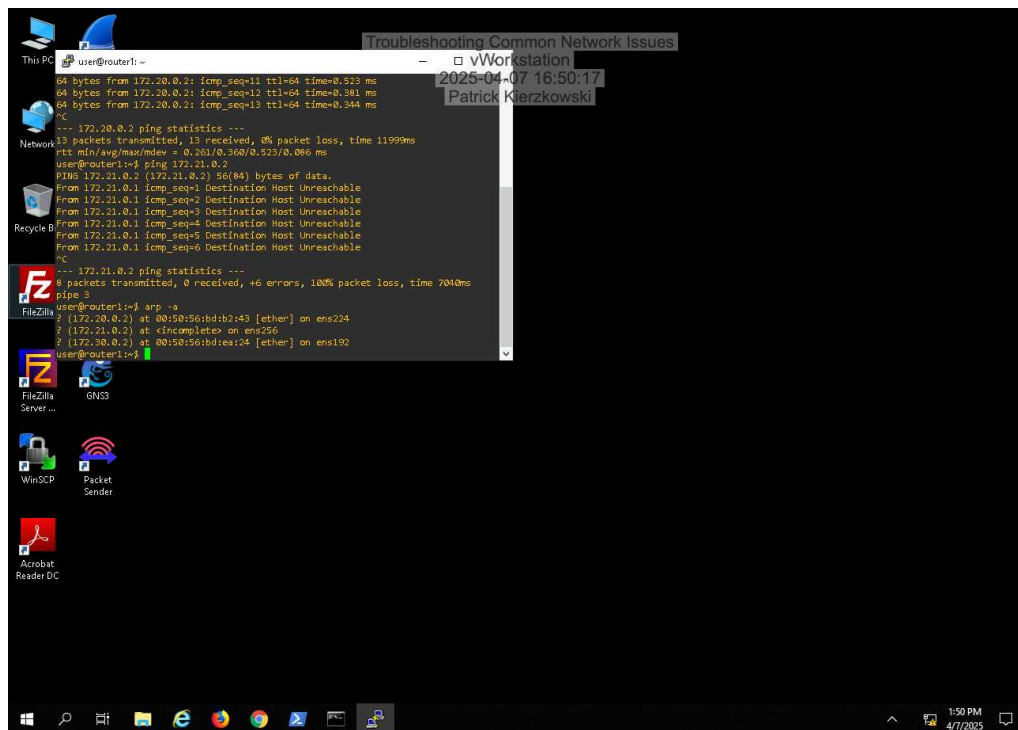


28. Make a screen capture showing the current ARP cache for the vWorkstation machine.

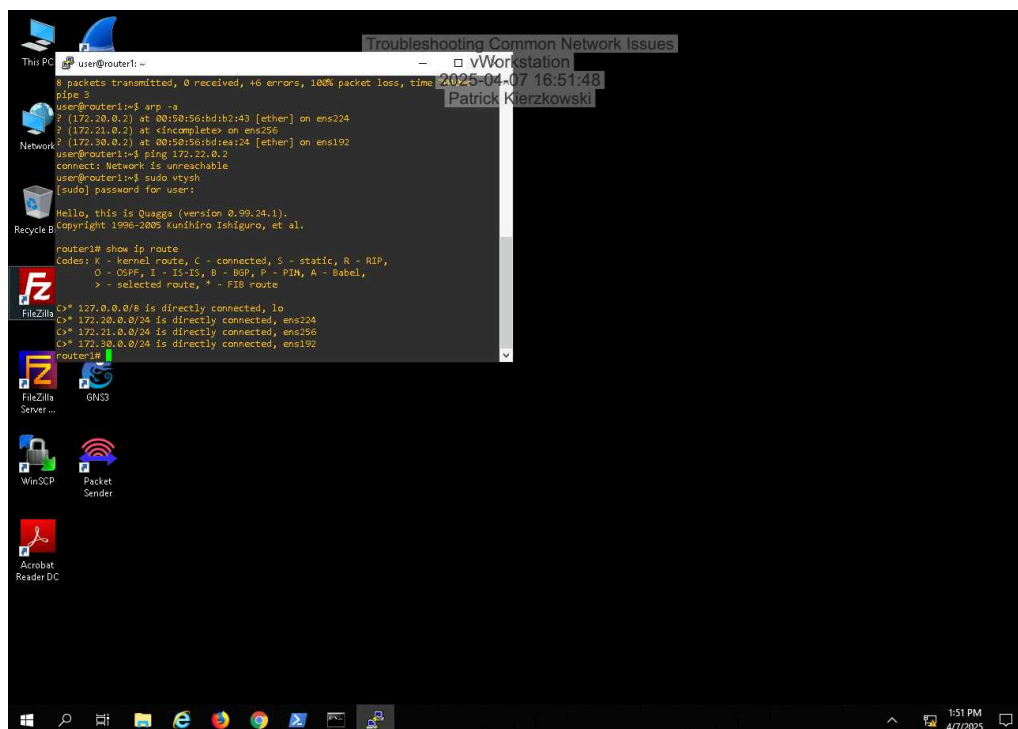


Part 2: Troubleshoot Connectivity Issues on the WAN

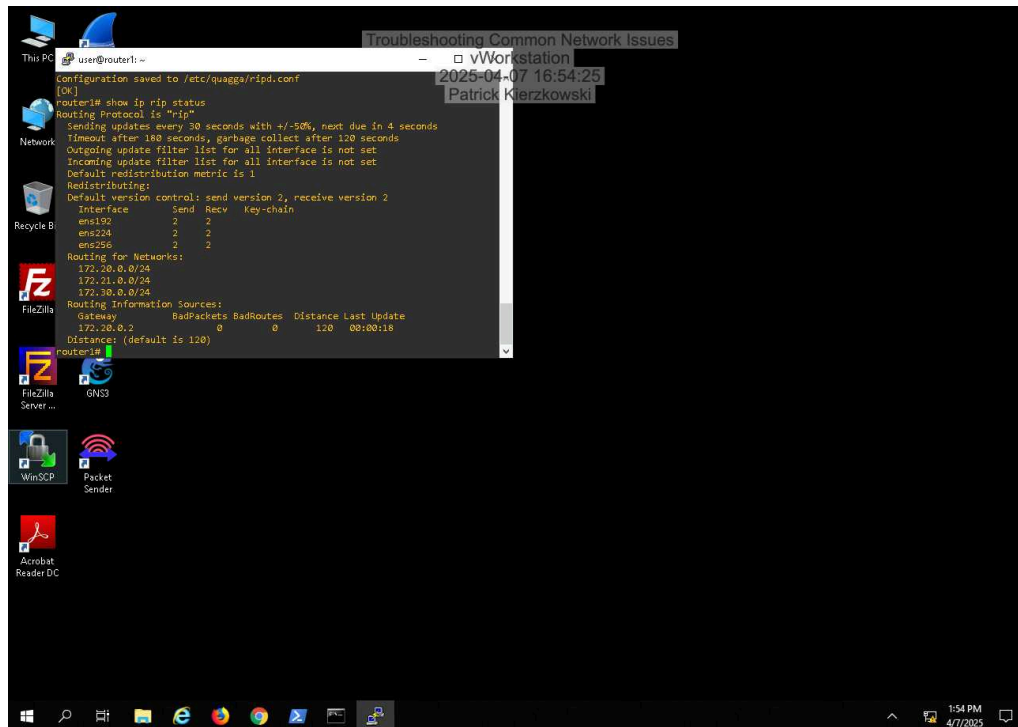
7. Make a screen capture showing the router1 ARP cache.



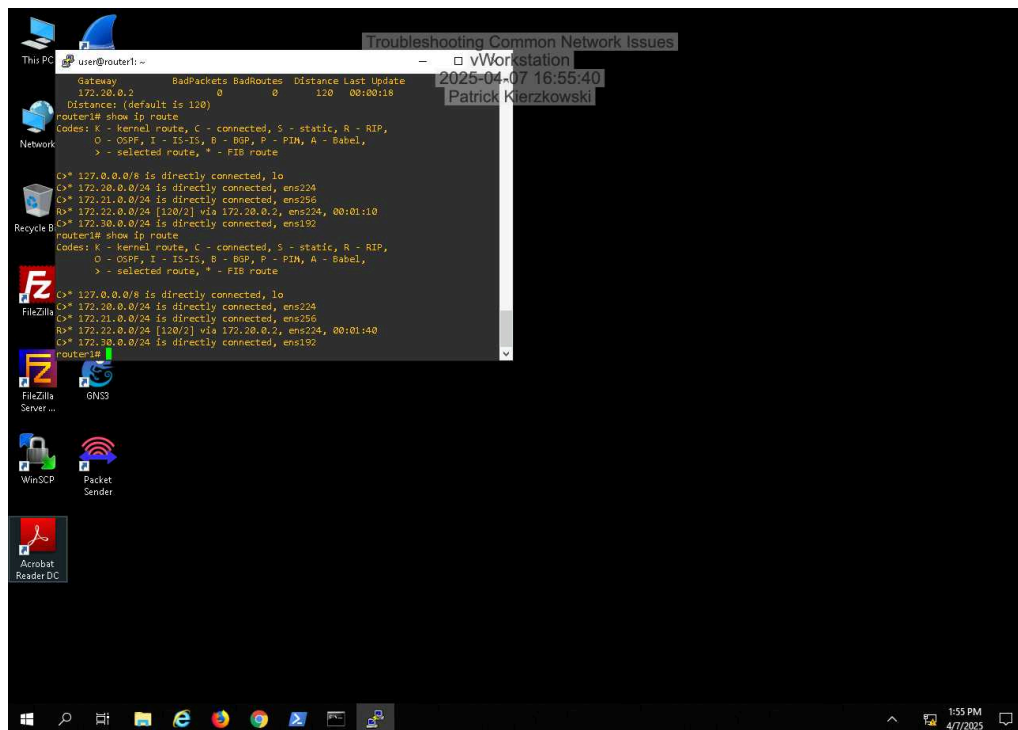
11. Make a screen capture showing the current routing table on router1.



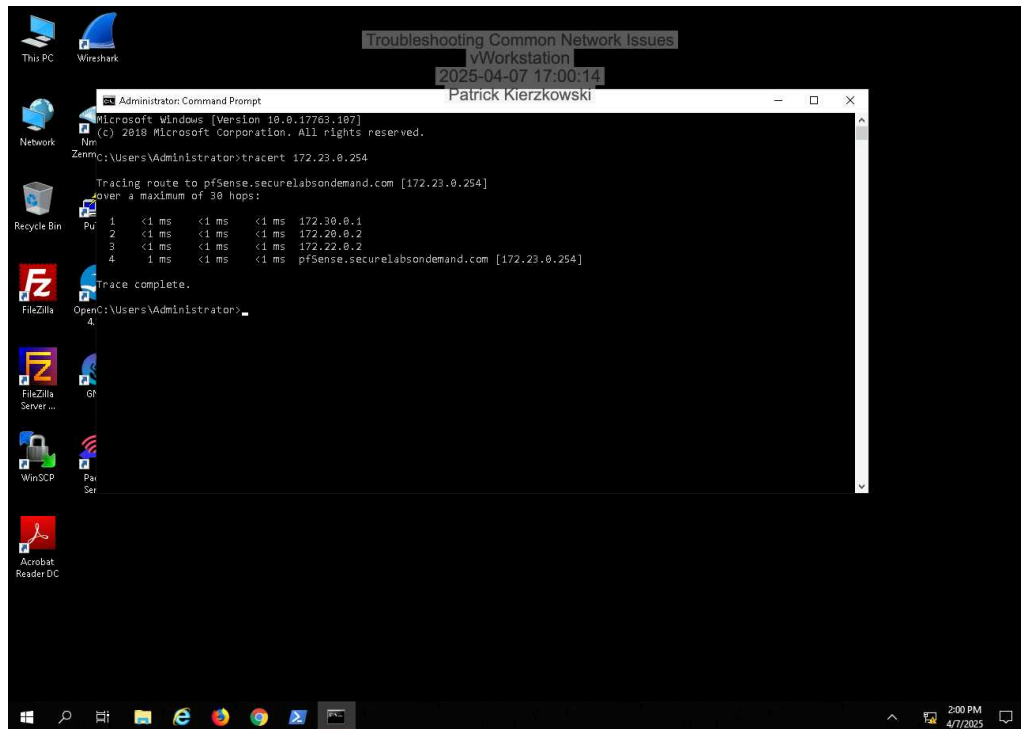
21. Make a screen capture showing the output of your RIP status command.



23. Make a screen capture showing the new RIP-provided route.



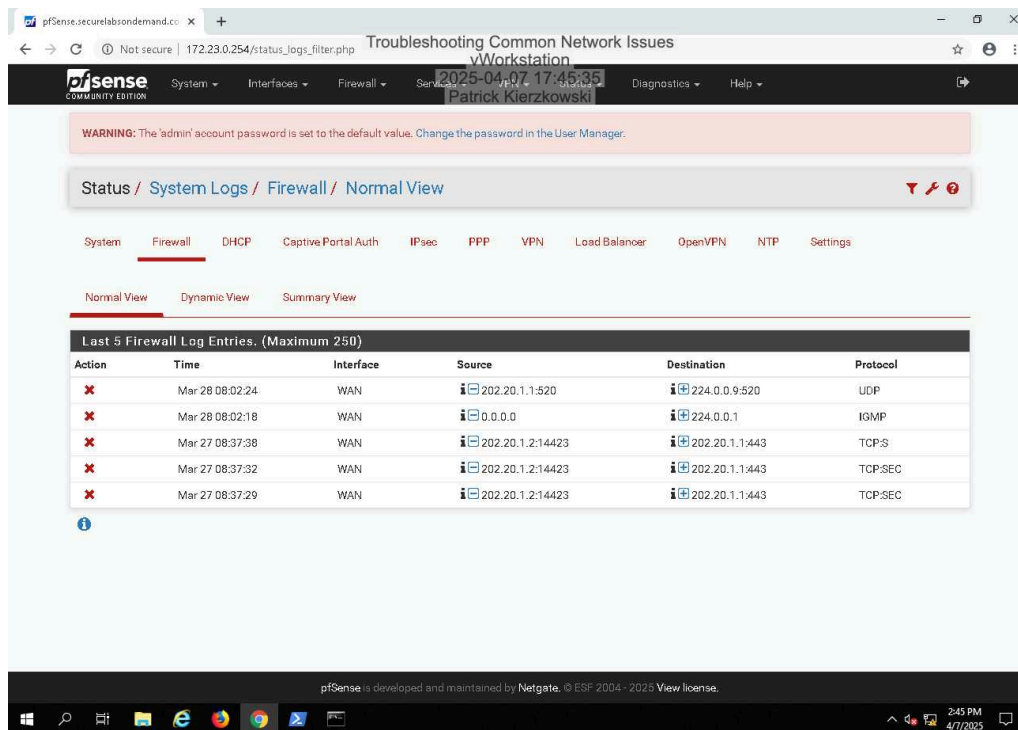
39. **Make a screen capture** showing the **successful traceroute to pfSense** from the **vWorkstation**.



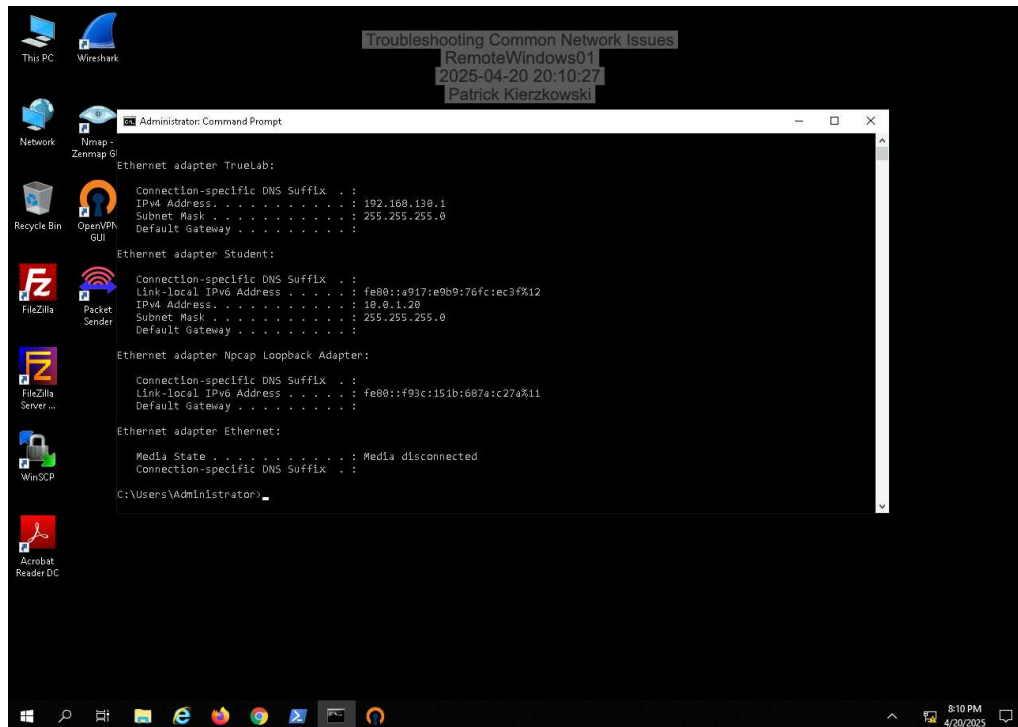
Section 2: Applied Learning

Part 1: Troubleshoot VPN Issues

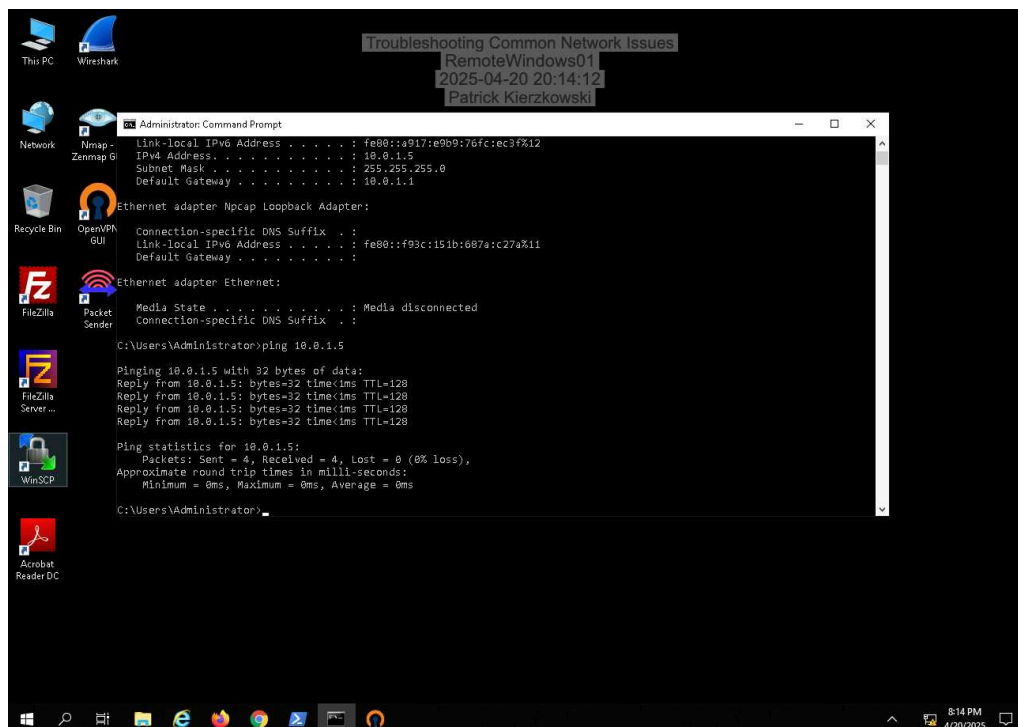
8. Make a screen capture showing the **blocked connections from 202.20.1.2** in the firewall logs.



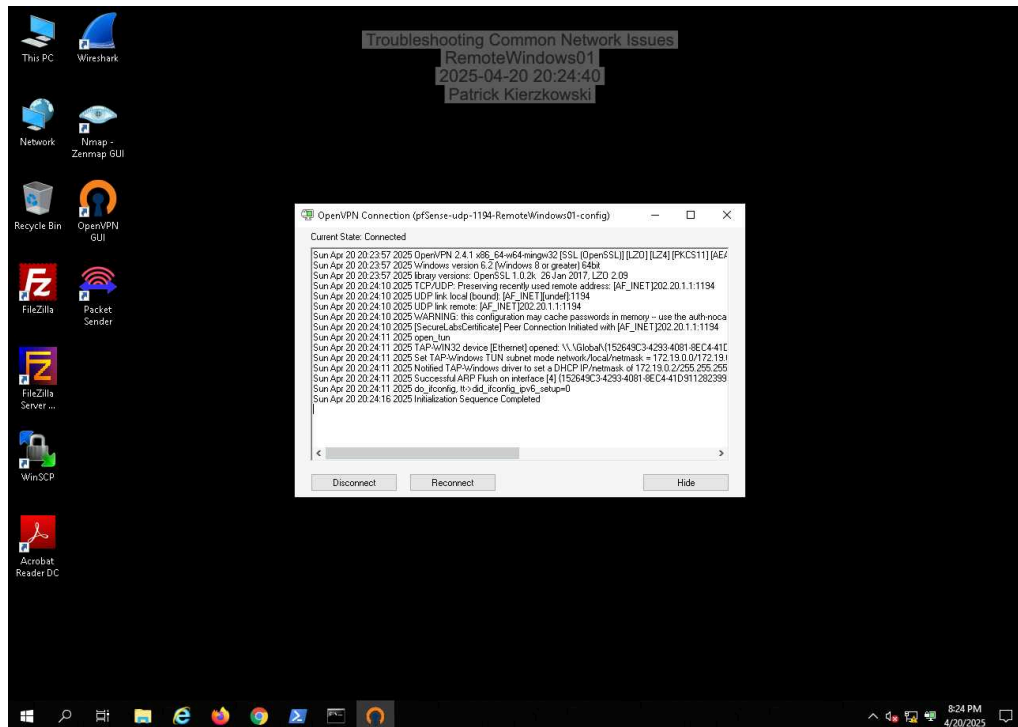
18. Make a screen capture showing the **current IP configuration** on RemoteWindows01.



22. Make a screen capture showing the **successful ping** to the RemoteWindows01 machine's default gateway.

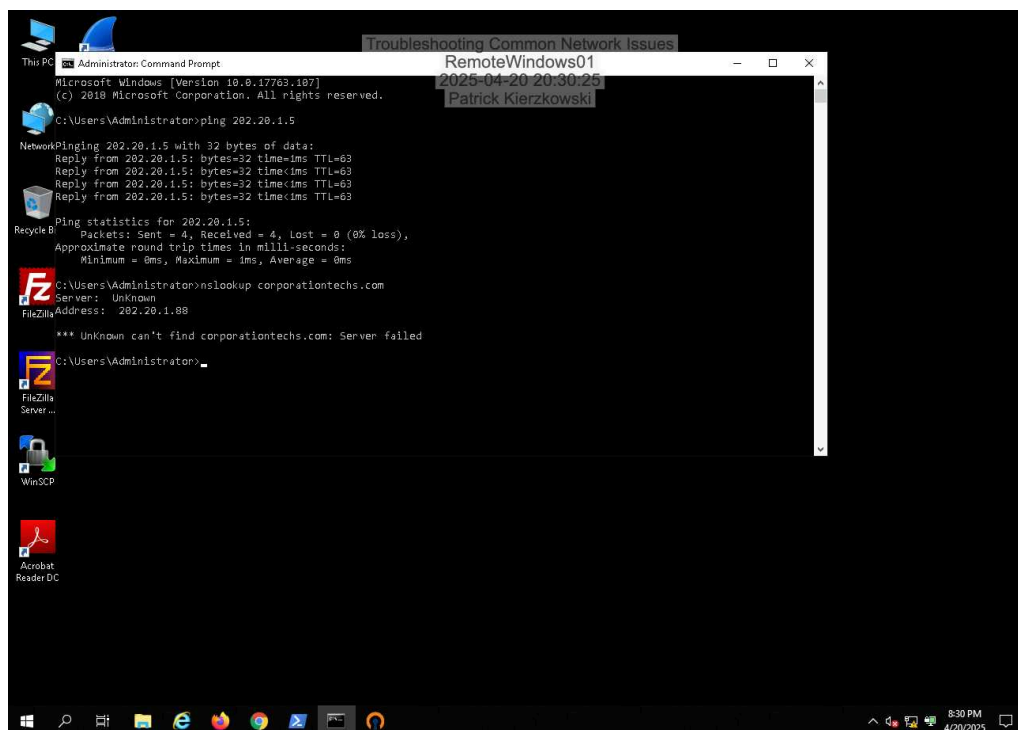


31. Make a screen capture showing the OpenVPN Connection window.

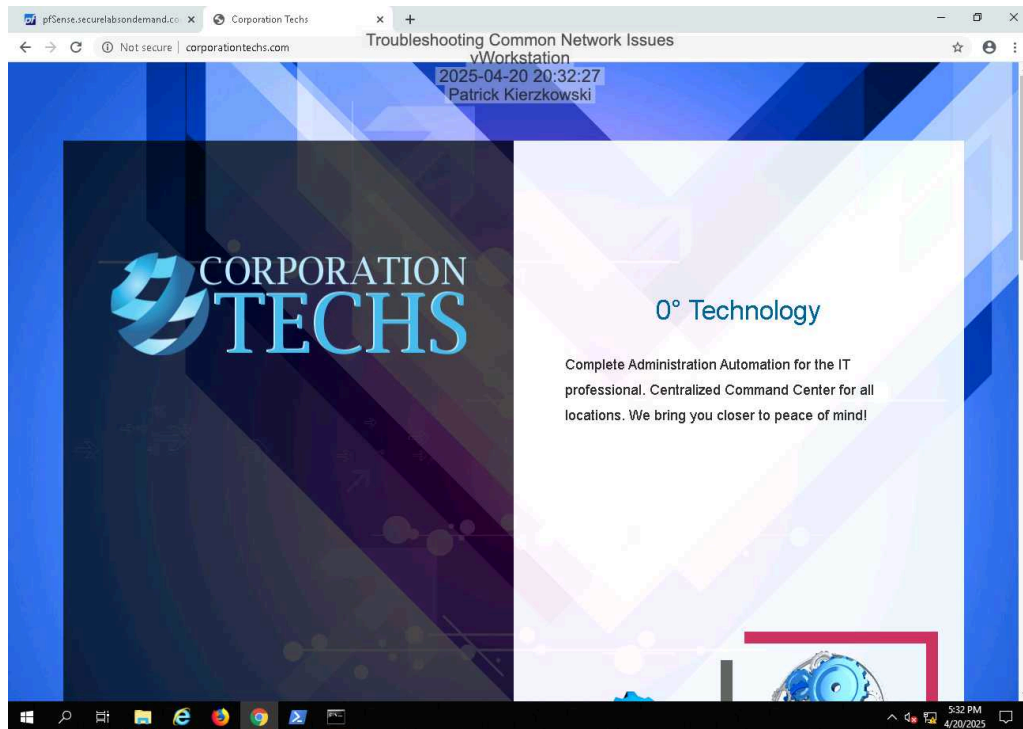


Part 2: Troubleshoot DNS Issues

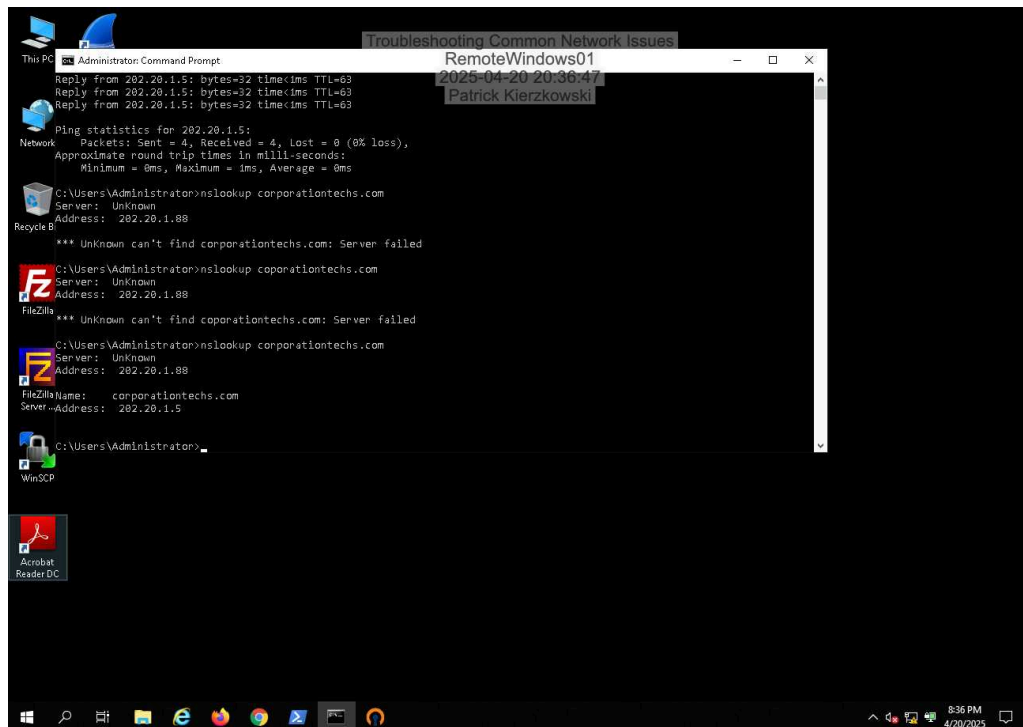
15. Make a screen capture showing the output of your ping and nslookup executions.



22. Make a screen capture showing the **successful connection to the corporationtechs.com website.**



25. Make a screen capture showing the **successful record lookup of corporationtechs.com.**



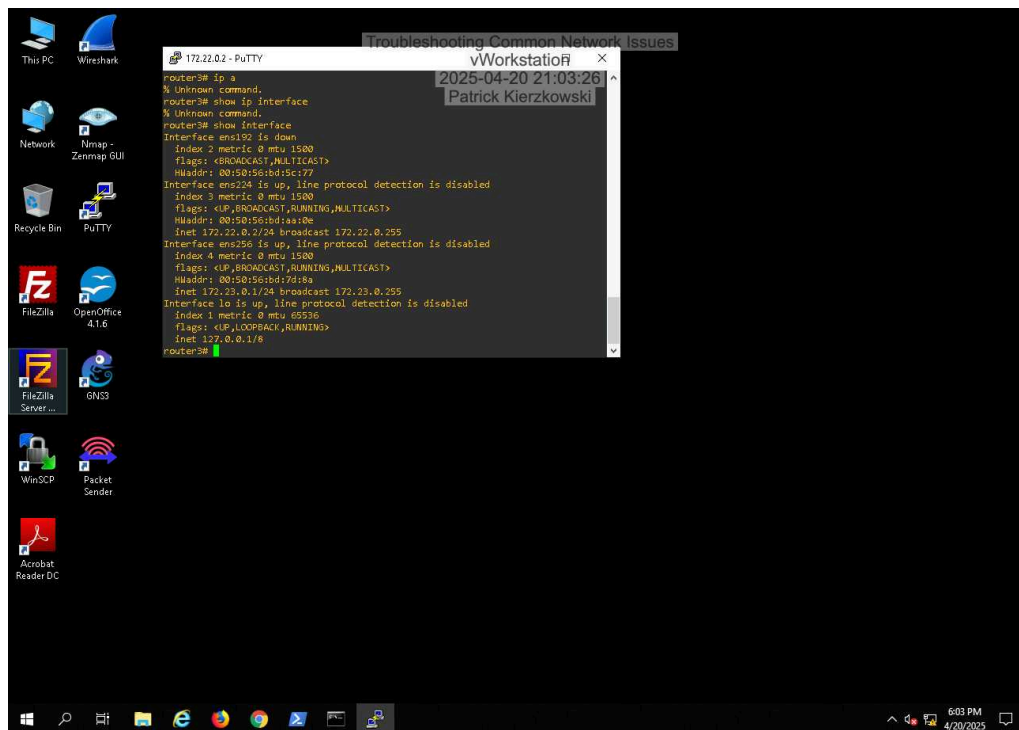
Section 3: Challenge and Analysis

Part 1: Continue Troubleshooting Connectivity Issues

Describe the networking problem you have identified.

interface ens192 is down

Make a screen capture showing the **command output** that corroborates your problem description.



The screenshot shows a Windows desktop environment. A terminal window titled "172.22.0.2 - PuTTY" is open, displaying the following commands and output:

```
router3# ip a
% Unknown command.
router3# show ip interface
% Unknown command.
router3# show interface
Interface ens192 is down
Index 2 metric 0 mtu 1500
flags: <BROADCAST,MULTICAST>
Hardware: 00:50:56:8d:15:c177
Interface ens224 is up, line protocol detection is disabled
Index 3 metric 0 mtu 1500
flags: <UP,BROADCAST,RUNNING,MULTICAST>
Hardware: 00:50:56:8d:1a:10e
Inet 172.22.0.2/24 broadcast 172.22.0.255
Interface ens256 is up, line protocol detection is disabled
Index 4 metric 0 mtu 1500
flags: <UP,BROADCAST,RUNNING,MULTICAST>
Hardware: 00:50:56:8d:72:18a
Inet 172.23.0.1/24 broadcast 172.23.0.255
Interface lo is up, line protocol detection is disabled
Index 1 metric 0 mtu 65536
flags: <UP,LOOPBACK,RUNNING>
Inet 127.0.0.1/8
router3#
```

The desktop background is dark blue. Icons for "This PC", "Wireless", "Network", "Recycle Bin", "FileZilla", "OpenOffice 4.1.6", "FileZilla Server...", "WinSCP", "Packet Sender", and "Acrobat Reader DC" are visible on the left. The taskbar at the bottom shows the Start button, search icon, and several open applications. The system tray in the bottom right corner displays the time as 6:03 PM and the date as 4/20/2025.

Part 2: Resolve the Connectivity Issues

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Make a screen capture showing the output of your status command.

