Student:	Email:
Vidhi Kadakia	jinsukrishna108@gmail.com

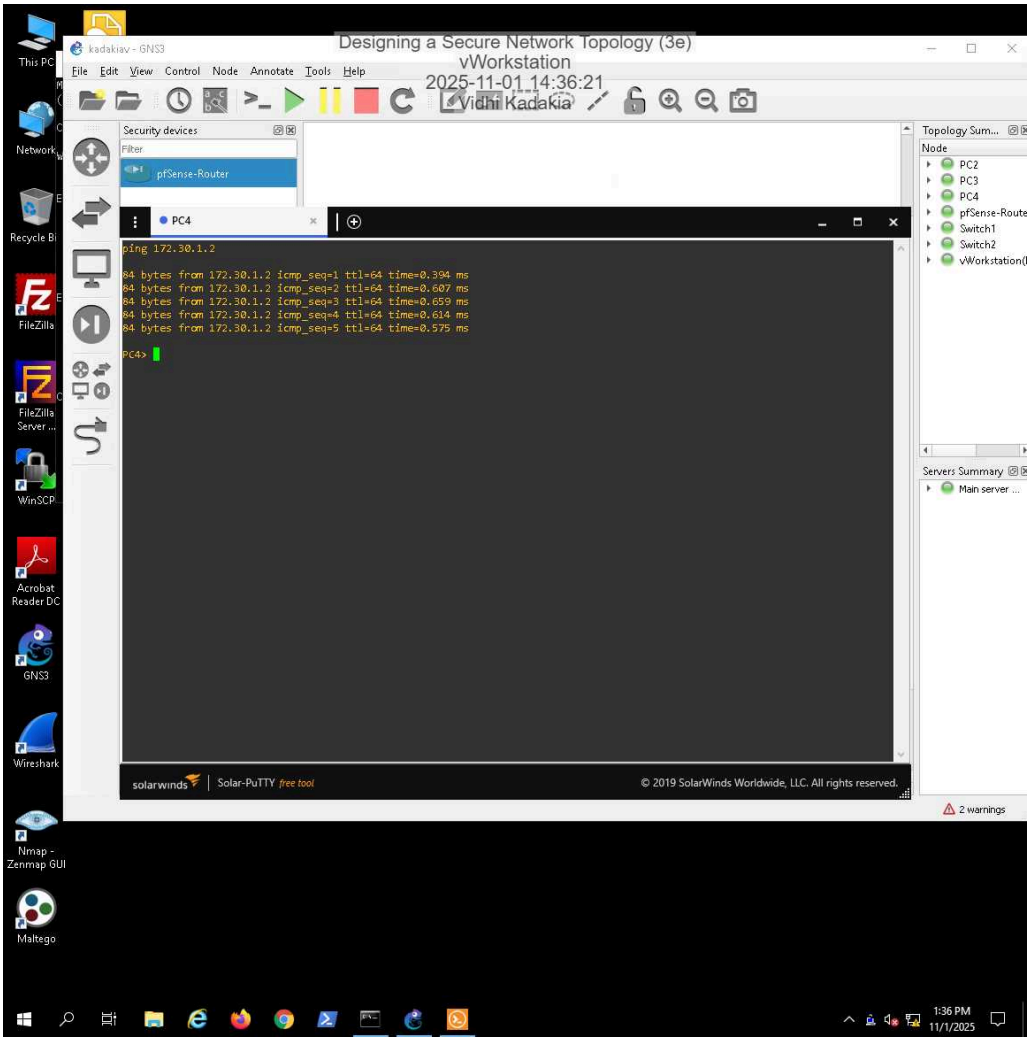
Time on Task:	Progress:
11 hours, 58 minutes	88%

Report Generated: Sunday, November 2, 2025 at 6:39 PM

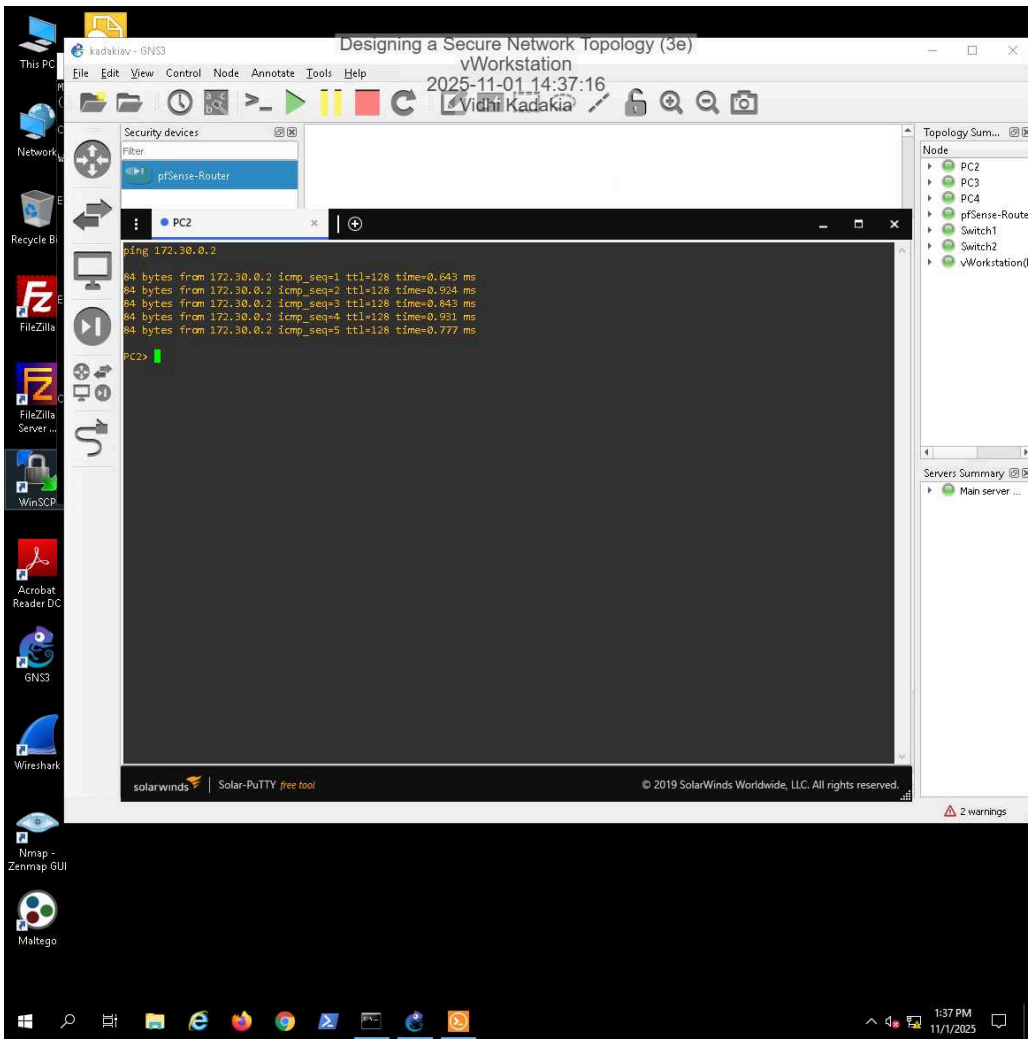
Section 1: Hands-On Demonstration

Part 1: Design a Simple Network Topology

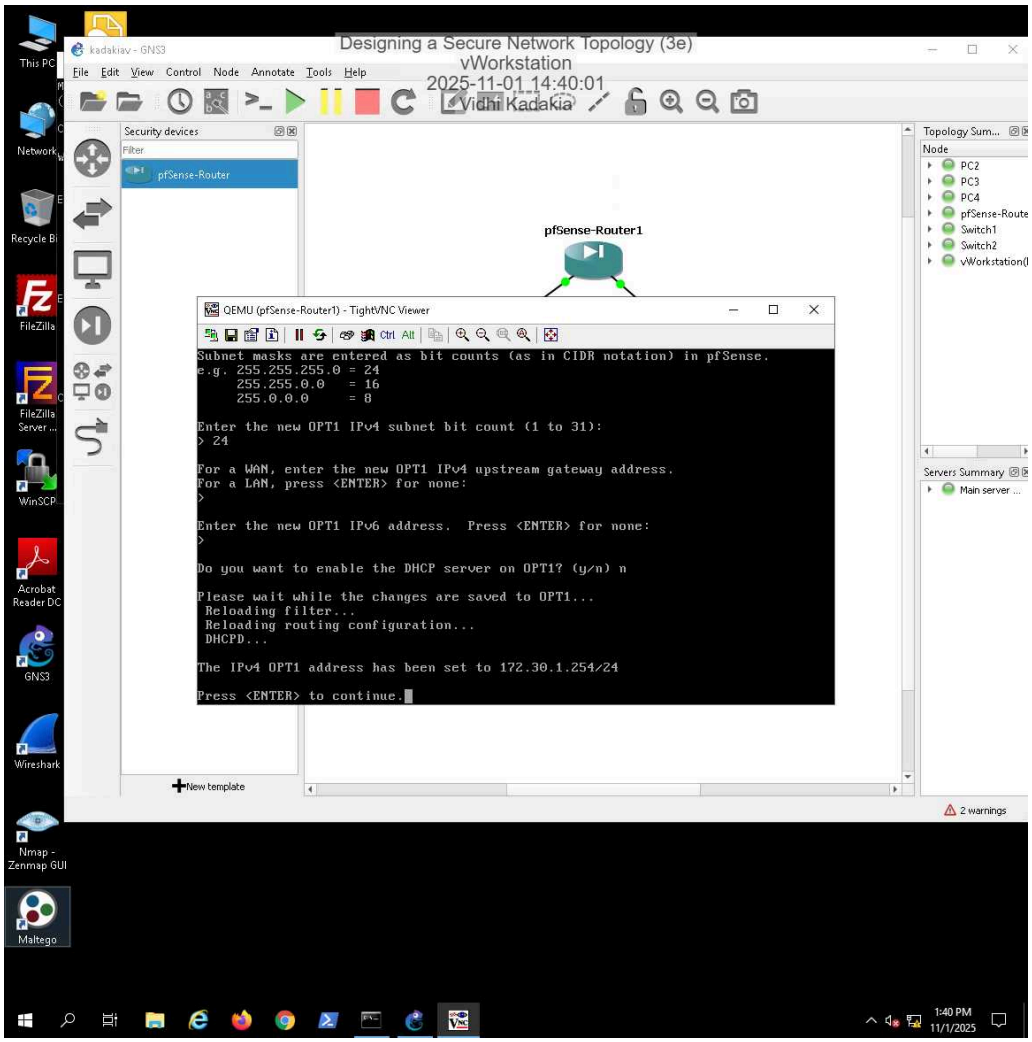
34. **Make a screen capture** showing the **results of the ping attempt from PC4 to PC3**.



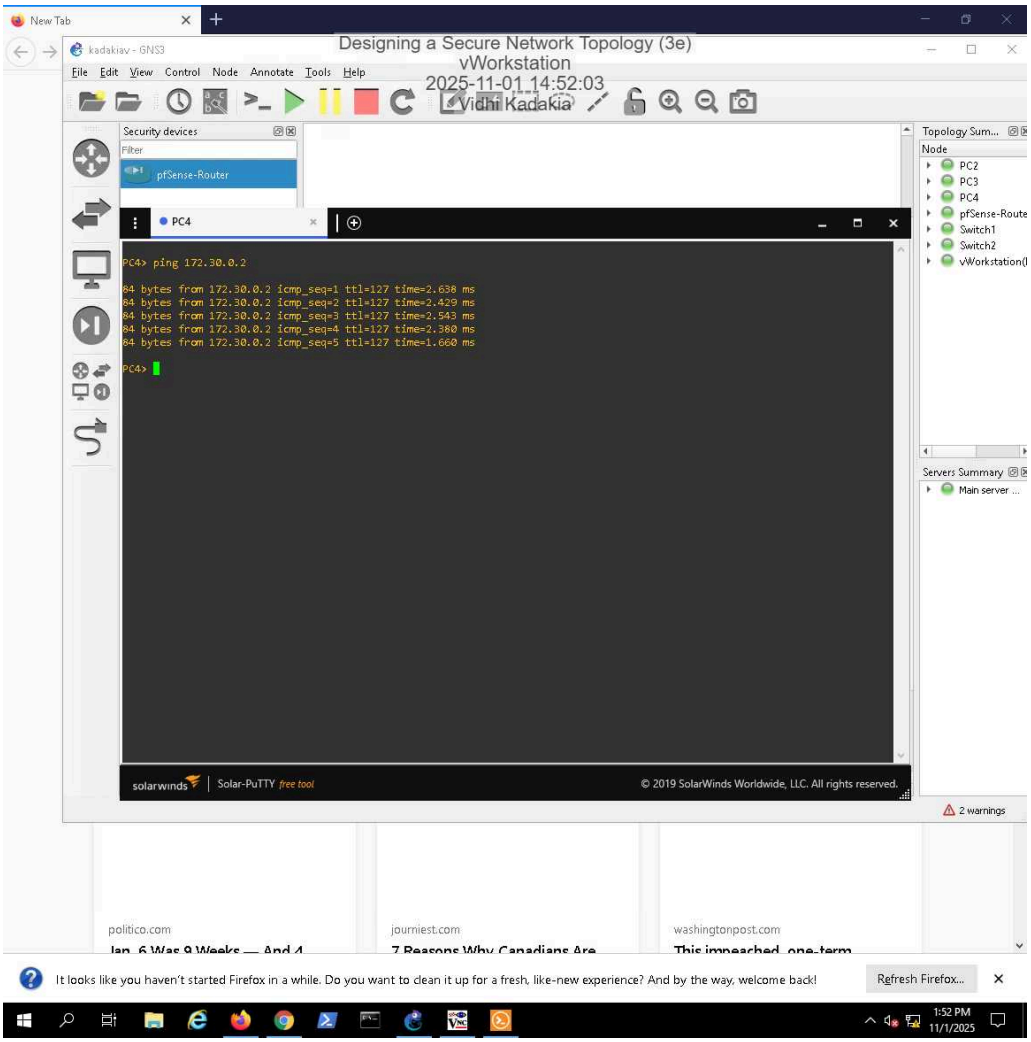
37. **Make a screen capture** showing the **results of the ping attempt from PC2 to the vWorkstation (172.30.0.2)**.



49. **Make a screen capture** showing the **IP address assignments in the pfSense console.**

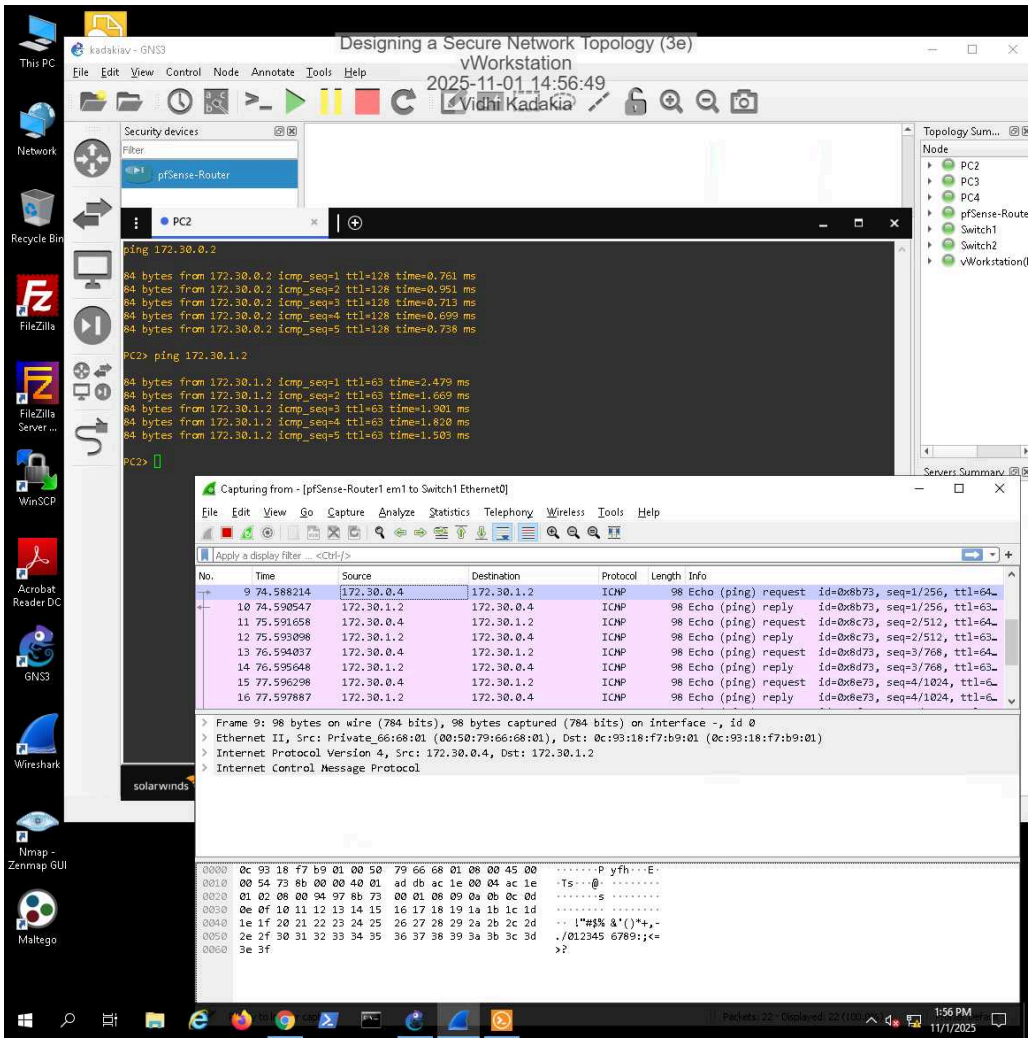


72. **Make a screen capture** showing the **successful ping from PC4 to the vWorkstation**.

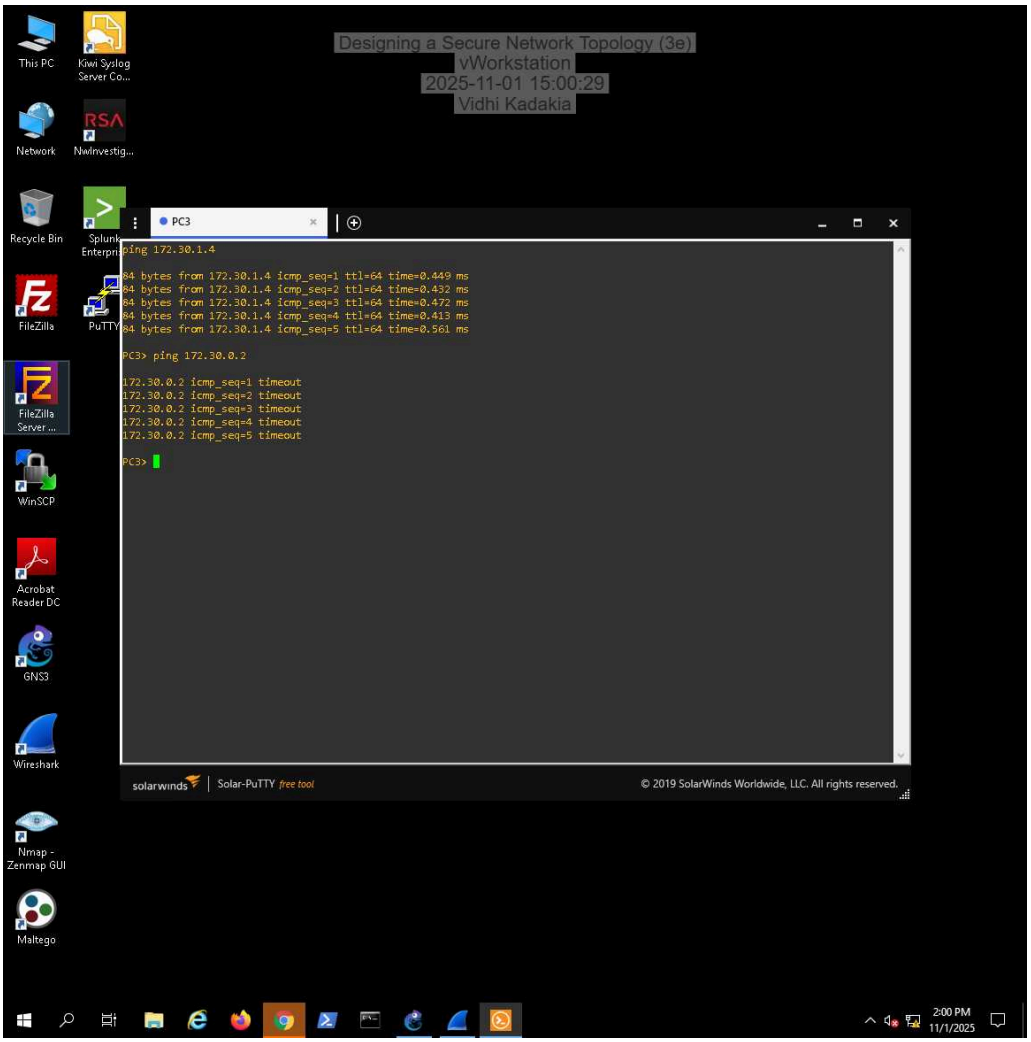


Part 2: Capture Network Traffic to Validate Connectivity

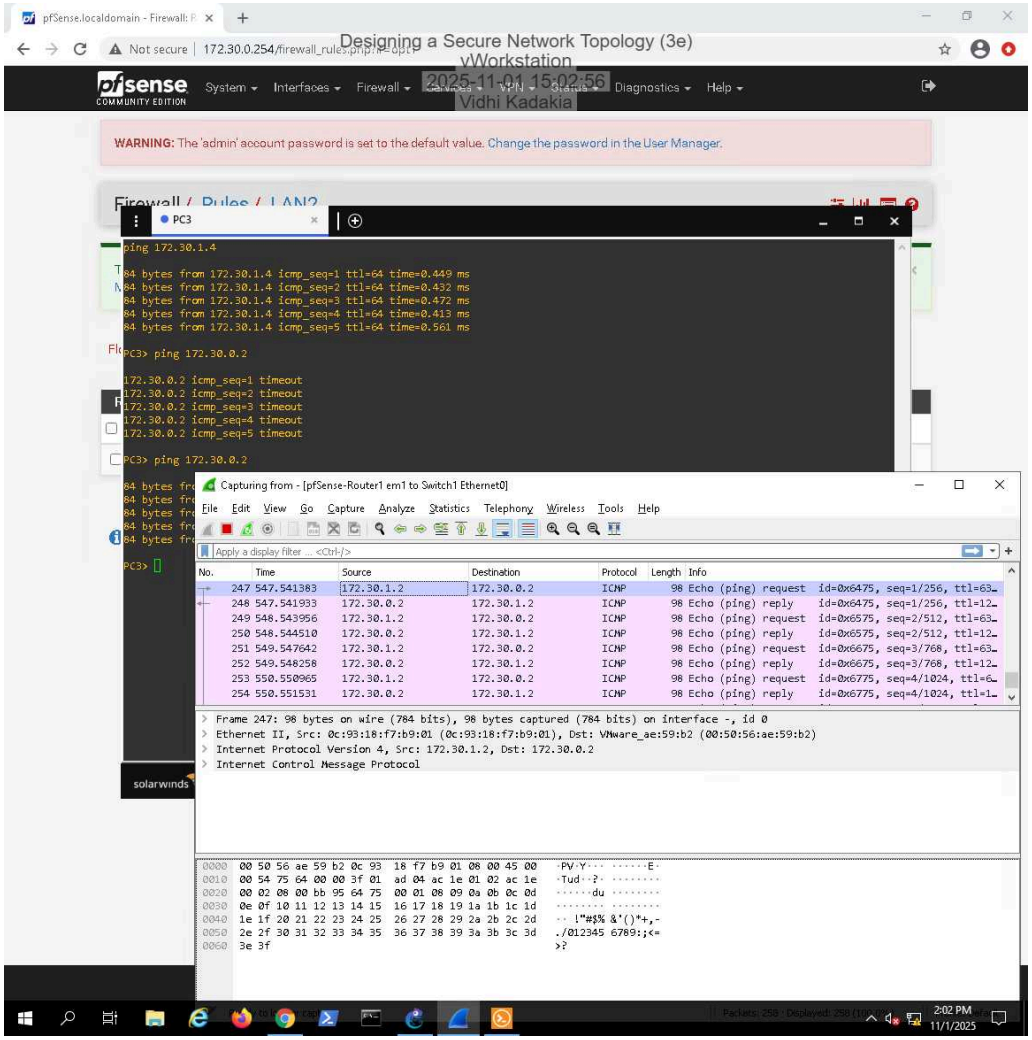
7. **Make a screen capture** showing the **Wireshark capture for the PC2 to PC3 ping request**.



17. **Make a screen capture** showing the **timed out ping request**.



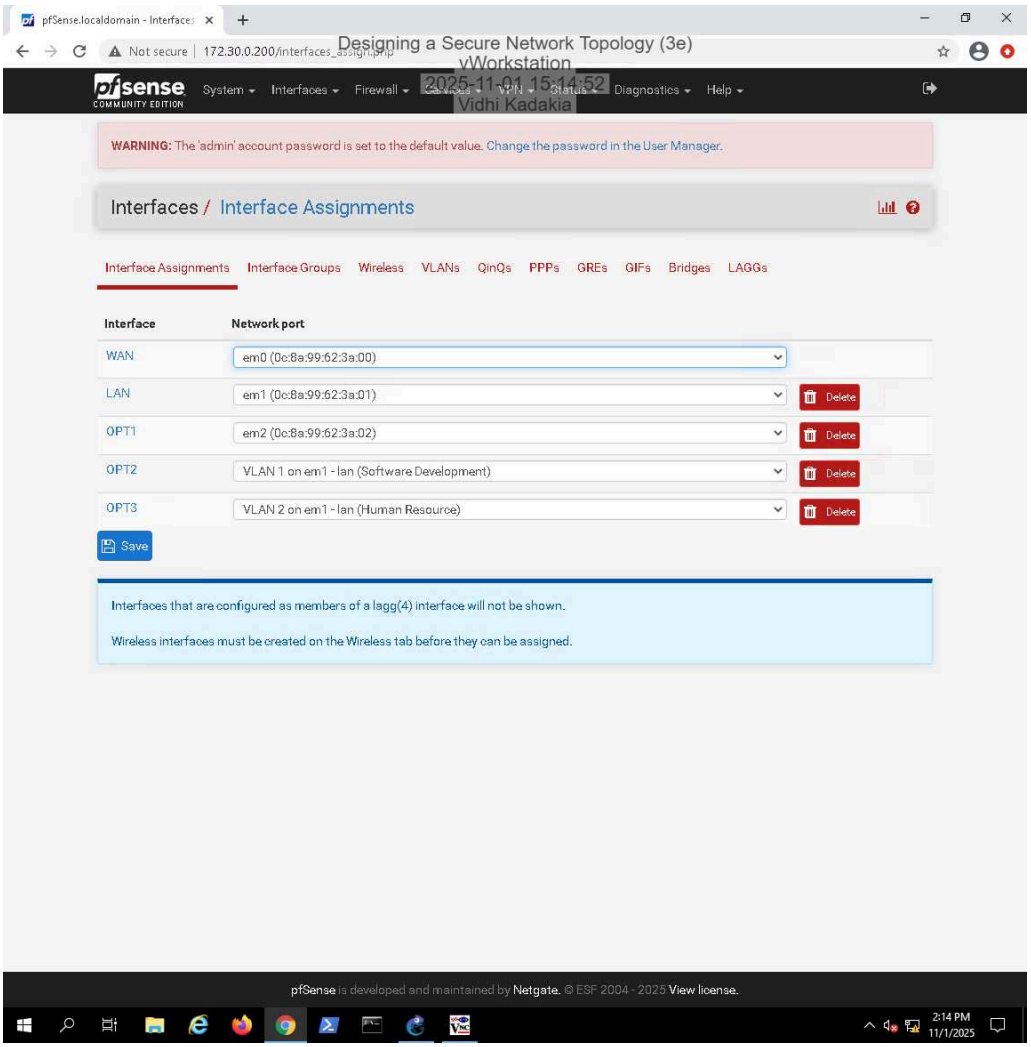
20. **Make a screen capture** showing the **Wireshark capture for the PC3 to vWorkstation ping request**.



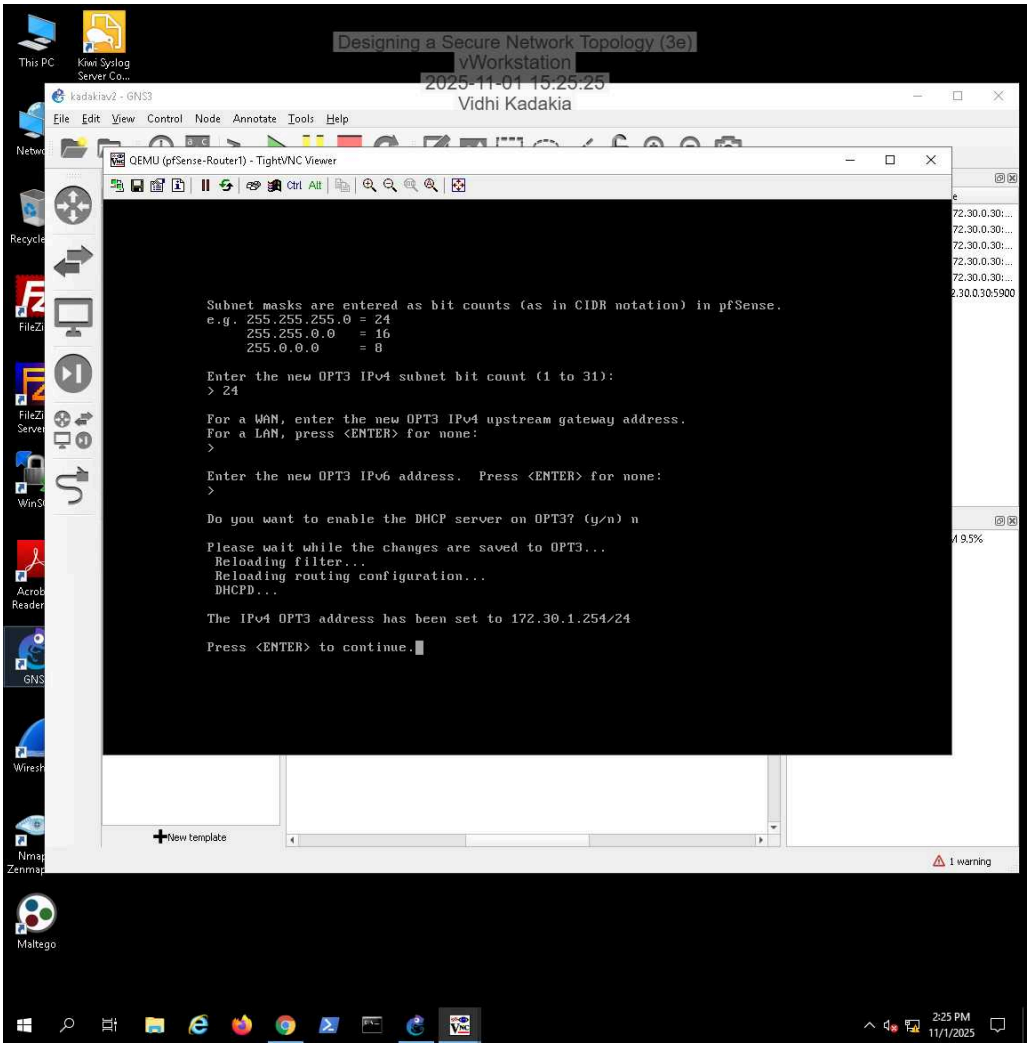
Section 2: Applied Learning

Part 1: Design a More Complex Network Topology

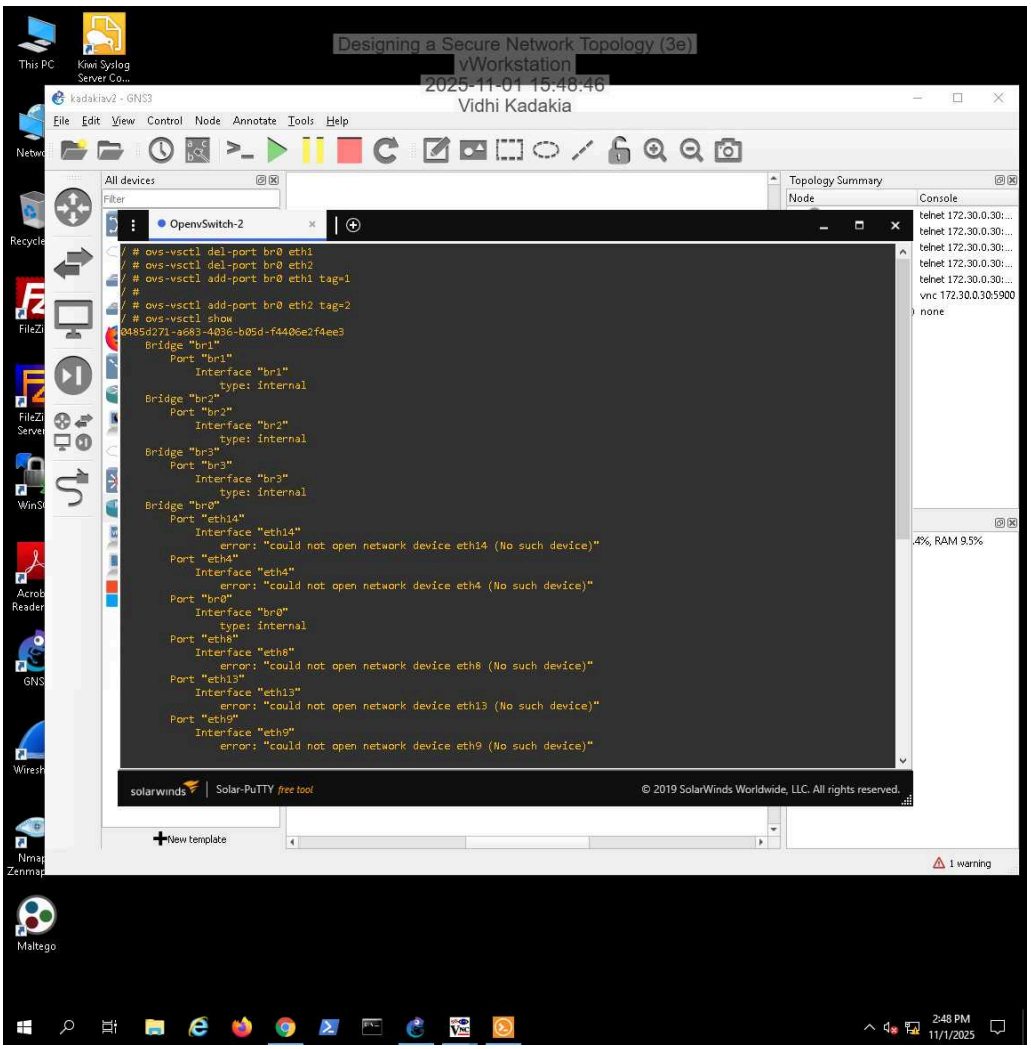
14. **Make a screen capture** showing the **Interface Assignments page**.



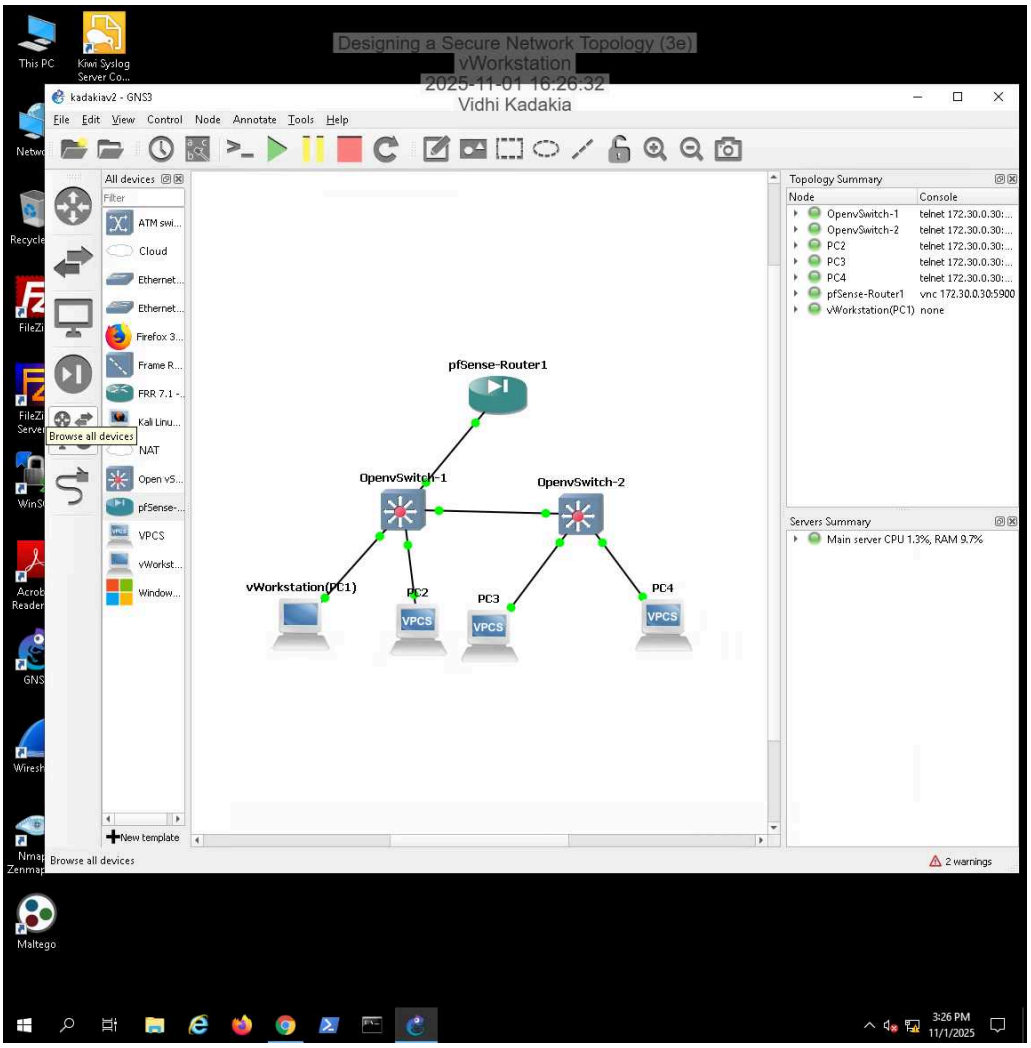
28. **Make a screen capture** showing the **updated pfSense router settings with the VLAN IP address assignments**.



36. **Make a screen capture** showing the **eth1 and eth2 interfaces with their assigned VLAN tags on Switch2**.

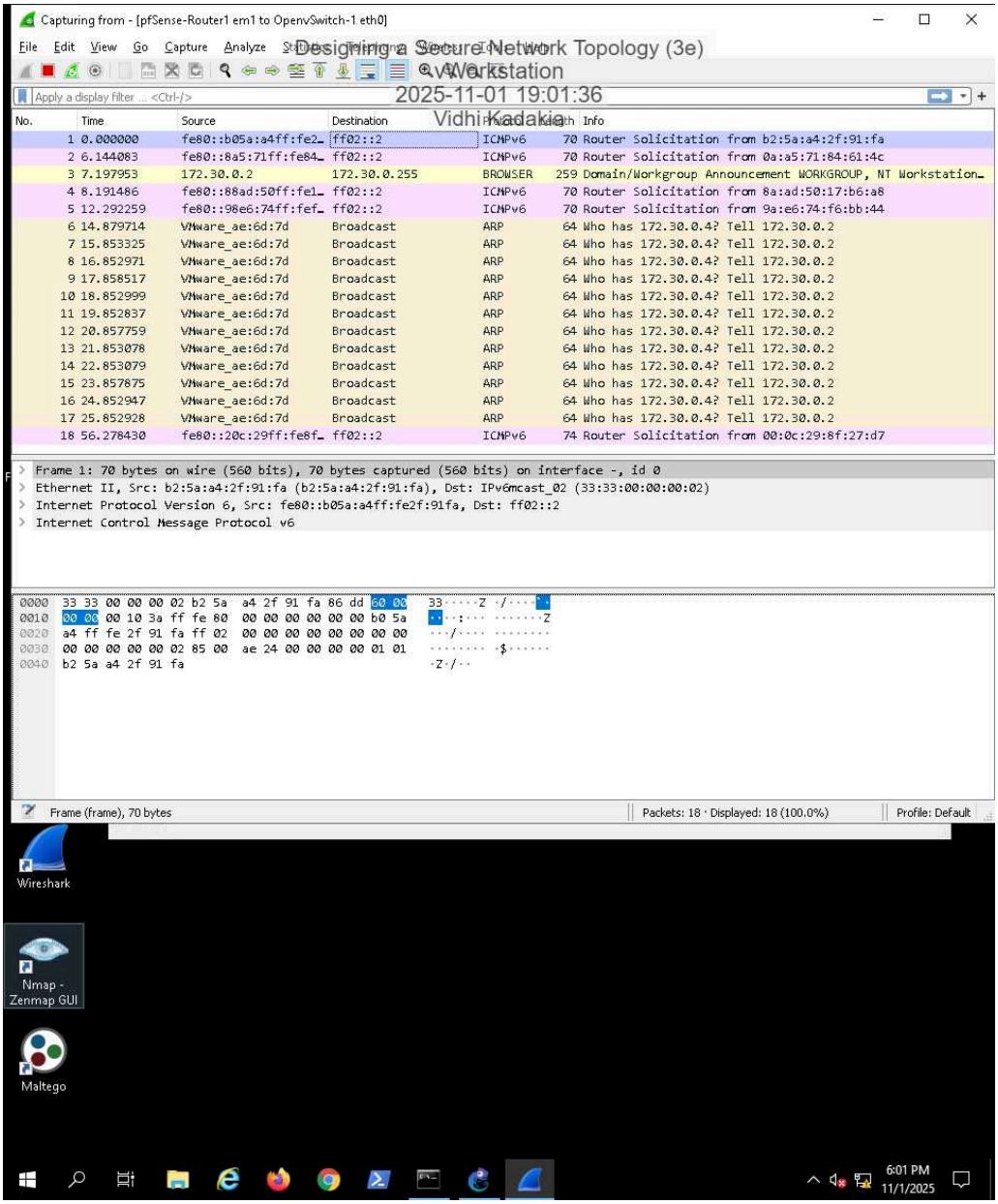


39. **Make a screen capture** showing the **completed topology**.

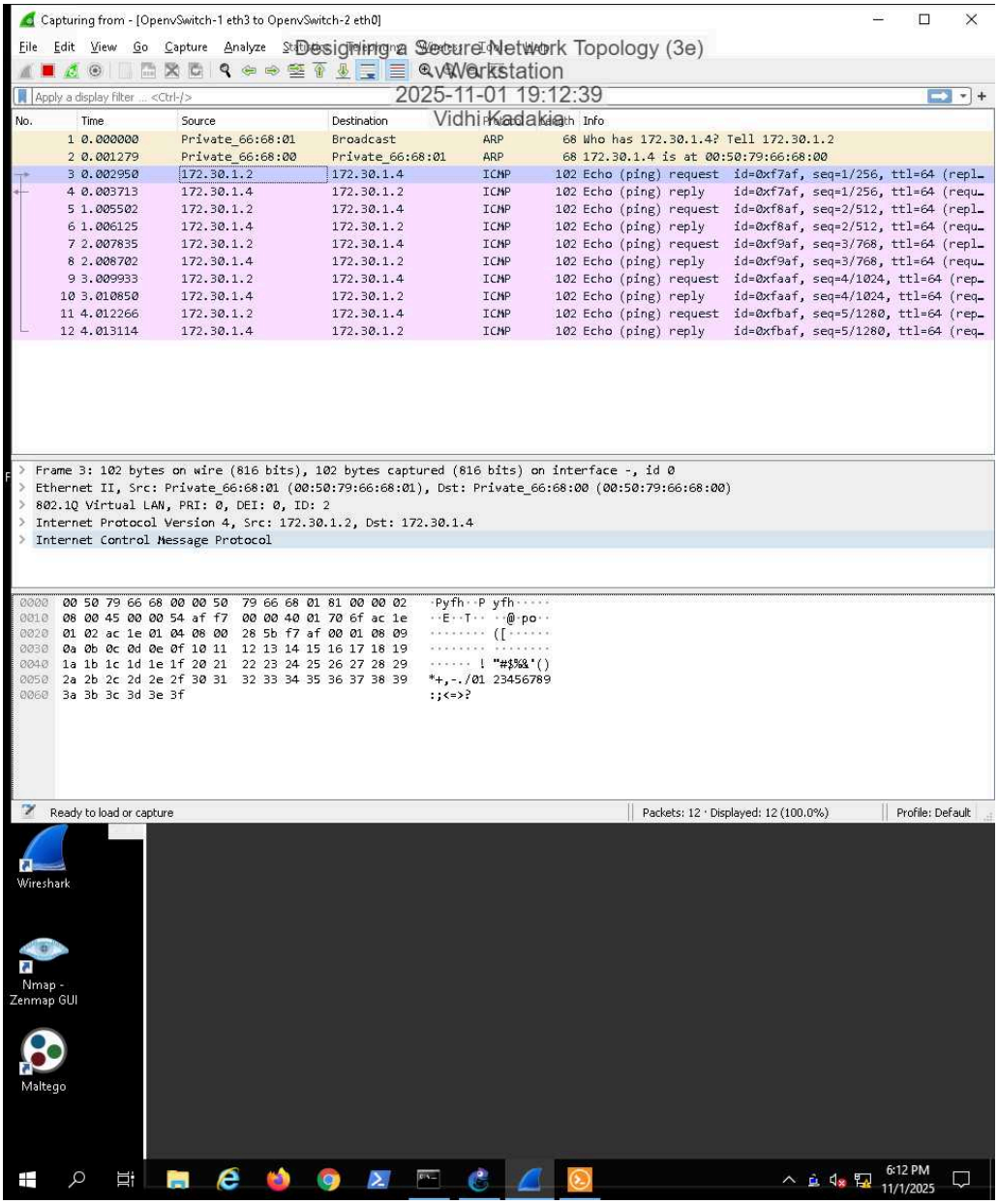


Part 2: Capture Network Traffic to Validate Connectivity

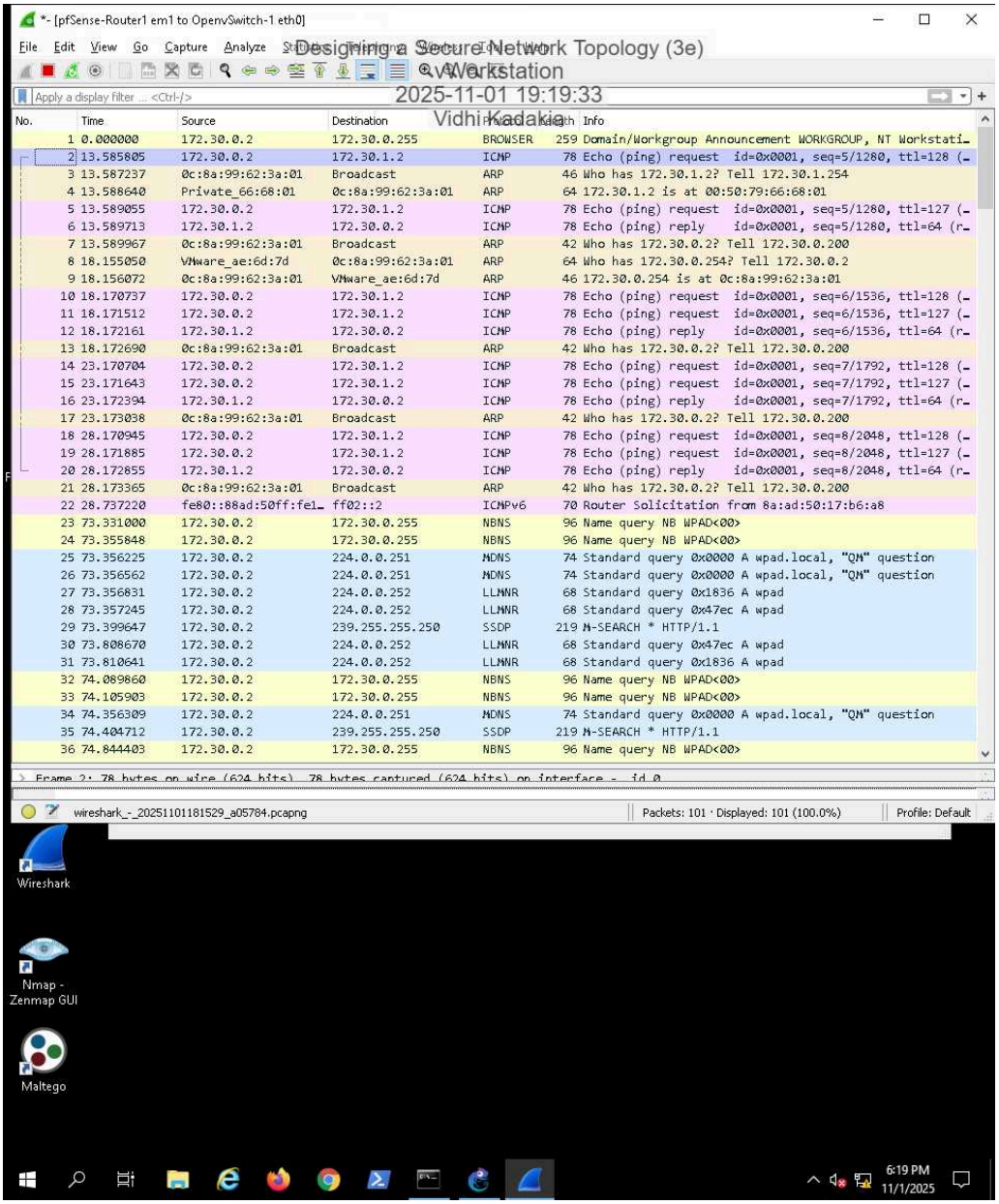
3. **Make a screen capture** showing the **Wireshark capture for the vWorkstation to PC3 ping request**.



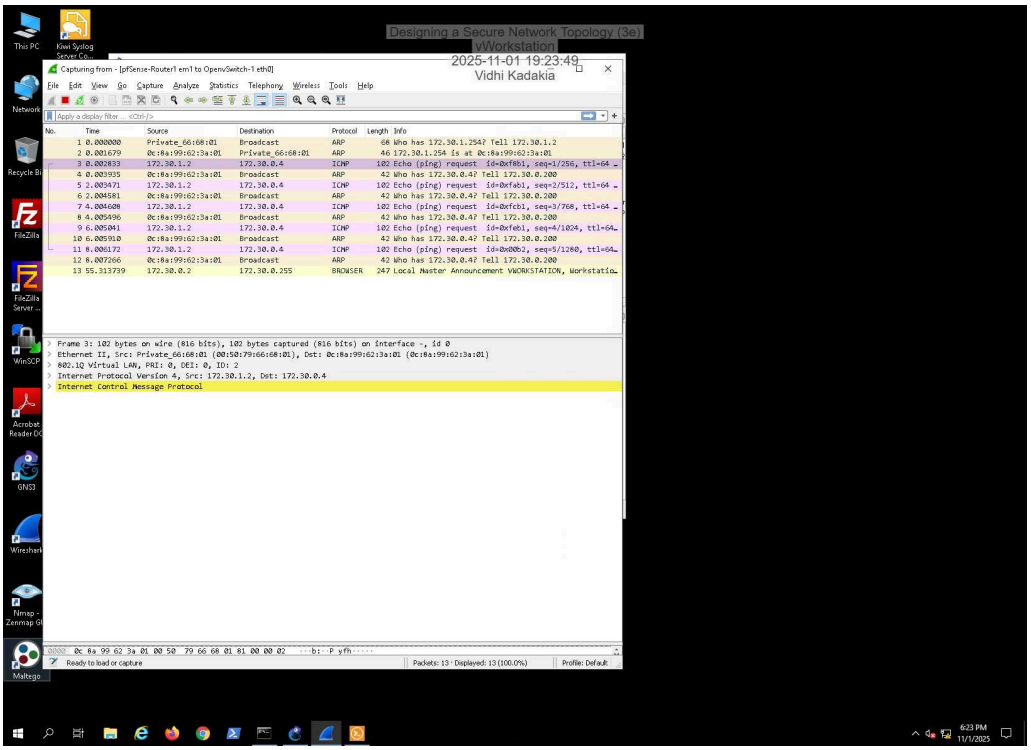
5. **Make a screen capture** showing the **Wireshark capture for the PC2 to PC4 ping request**.



7. **Make a screen capture** showing the **Wireshark capture for the vWorkstation to PC2 ping request**.


*- [pfSense-Router1 em1 to OpenvSwitch-1 eth0]
File Edit View Go Capture Analyze
Designing a Secure Network Topology (3e)
VM Workstation
2025-11-01 19:19:33
Vidhi Kadakia
Apply a display filter ... <Ctrl-/>
No. Time Source Destination Protocol Length Info
1 0.000000 172.30.0.2 172.30.0.255 BROWSER 259 Domain/Workgroup Announcement WORKGROUP, NT Workstati…
2 13.585805 172.30.0.2 172.30.1.2 ICMP 78 Echo (ping) request id=0x0001, seq=5/1280, ttl=128 (…
3 13.587237 0c:8a:99:62:3a:01 Broadcast ARP 46 Who has 172.30.1.2? Tell 172.30.1.254
4 13.588640 Private_66:68:01 0c:8a:99:62:3a:01 ARP 64 172.30.1.2 is at 00:50:79:66:68:01
5 13.589055 172.30.0.2 172.30.1.2 ICMP 78 Echo (ping) request id=0x0001, seq=5/1280, ttl=127 (…
6 13.589713 172.30.1.2 172.30.0.2 ICMP 78 Echo (ping) reply id=0x0001, seq=5/1280, ttl=64 (r…
7 13.589967 0c:8a:99:62:3a:01 Broadcast ARP 42 Who has 172.30.0.2? Tell 172.30.0.200
8 18.155050 VMware_ae:6d:7d 0c:8a:99:62:3a:01 ARP 64 Who has 172.30.0.254? Tell 172.30.0.2
9 18.156072 0c:8a:99:62:3a:01 VMware_ae:6d:7d ARP 46 172.30.0.254 is at 0c:8a:99:62:3a:01
10 18.170737 172.30.0.2 172.30.1.2 ICMP 78 Echo (ping) request id=0x0001, seq=6/1536, ttl=128 (…
11 18.171512 172.30.0.2 172.30.1.2 ICMP 78 Echo (ping) request id=0x0001, seq=6/1536, ttl=127 (…
12 18.172161 172.30.1.2 172.30.0.2 ICMP 78 Echo (ping) reply id=0x0001, seq=6/1536, ttl=64 (r…
13 18.172690 0c:8a:99:62:3a:01 Broadcast ARP 42 Who has 172.30.0.2? Tell 172.30.0.200
14 23.170704 172.30.0.2 172.30.1.2 ICMP 78 Echo (ping) request id=0x0001, seq=7/1792, ttl=128 (…
15 23.171643 172.30.0.2 172.30.1.2 ICMP 78 Echo (ping) request id=0x0001, seq=7/1792, ttl=127 (…
16 23.172394 172.30.1.2 172.30.0.2 ICMP 78 Echo (ping) reply id=0x0001, seq=7/1792, ttl=64 (r…
17 23.173038 0c:8a:99:62:3a:01 Broadcast ARP 42 Who has 172.30.0.2? Tell 172.30.0.200
18 28.170945 172.30.0.2 172.30.1.2 ICMP 78 Echo (ping) request id=0x0001, seq=8/2048, ttl=128 (…
19 28.171885 172.30.0.2 172.30.1.2 ICMP 78 Echo (ping) request id=0x0001, seq=8/2048, ttl=127 (…
20 28.172855 172.30.1.2 172.30.0.2 ICMP 78 Echo (ping) reply id=0x0001, seq=8/2048, ttl=64 (r…
21 28.173365 0c:8a:99:62:3a:01 Broadcast ARP 42 Who has 172.30.0.2? Tell 172.30.0.200
22 28.737220 fe80::88ad:50ff:fe1… ff02::2 ICMPv6 70 Router Solicitation from 8a:ad:50:17:b6:a8
23 73.331000 172.30.0.2 172.30.0.255 NBNS 96 Name query NB WPAD<00>
24 73.355848 172.30.0.2 172.30.0.255 NBNS 96 Name query NB WPAD<00>
25 73.356225 172.30.0.2 224.0.0.251 MDNS 74 Standard query 0x0000 A wpad.local, "QM" question
26 73.356562 172.30.0.2 224.0.0.251 MDNS 74 Standard query 0x0000 A wpad.local, "QM" question
27 73.356831 172.30.0.2 224.0.0.252 LLMNR 68 Standard query 0x1836 A wpad
28 73.357245 172.30.0.2 224.0.0.252 LLMNR 68 Standard query 0x47ec A wpad
29 73.399647 172.30.0.2 239.255.255.250 SSDP 219 M-SEARCH * HTTP/1.1
30 73.808670 172.30.0.2 224.0.0.252 LLMNR 68 Standard query 0x47ec A wpad
31 73.810641 172.30.0.2 224.0.0.252 LLMNR 68 Standard query 0x1836 A wpad
32 74.089860 172.30.0.2 172.30.0.255 NBNS 96 Name query NB WPAD<00>
33 74.105903 172.30.0.2 172.30.0.255 NBNS 96 Name query NB WPAD<00>
34 74.356309 172.30.0.2 224.0.0.251 MDNS 74 Standard query 0x0000 A wpad.local, "QM" question
35 74.404712 172.30.0.2 239.255.255.250 SSDP 219 M-SEARCH * HTTP/1.1
36 74.844403 172.30.0.2 172.30.0.255 NBNS 96 Name query NB WPAD<00>
Frame 2: 78 bytes on wire (624 bits), 78 bytes captured (624 bits) on interface -, id 0
wireshark_-_20251101181529_a05784.pcapng
Packets: 101 · Displayed: 101 (100.0%)
Profile: Default
Wireshark
Nmap - Zenmap GUI
Maltego
6:19 PM
11/1/2025

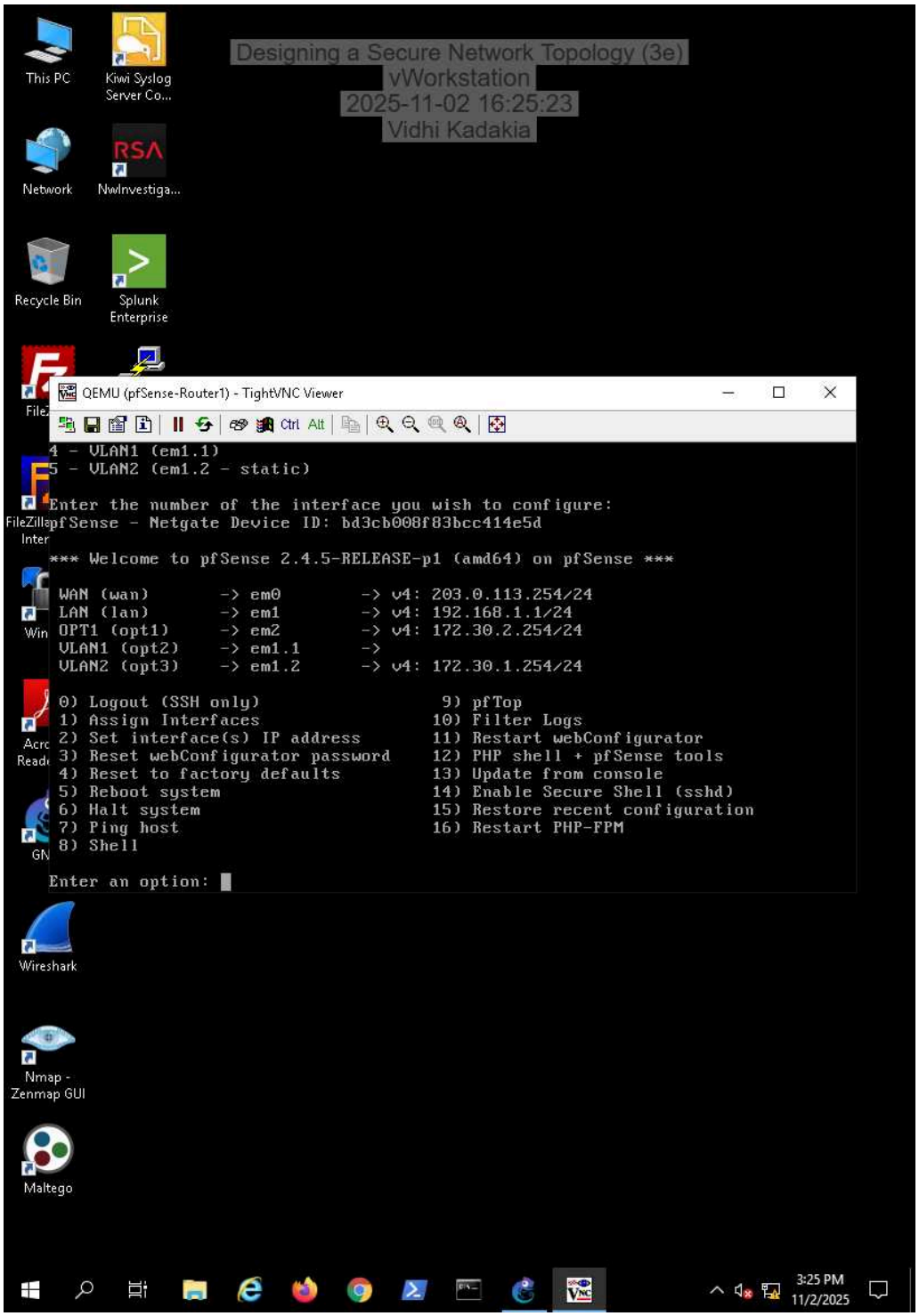
9. **Make a screen capture** showing the **Wireshark capture for the PC2 to PC3 ping request**.



Section 3: Challenge and Analysis

Part 1: Enhance the Network Topology with a DMZ

Make a screen capture showing the **interface configurations in the pfSense console**.



Make a screen capture showing the **firewall rule on the WAN interface in the pfSense webConfigurator**.

Incomplete

Part 2: Validate DMZ Connectivity

Make a screen capture showing the **results of both pings.**

Incomplete