

Designing a Secure Network Topology (3e)

Network Security, Firewalls, and VPNs, Third Edition - Lab 03

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Time on Task:

4 hours, 37 minutes

Progress:

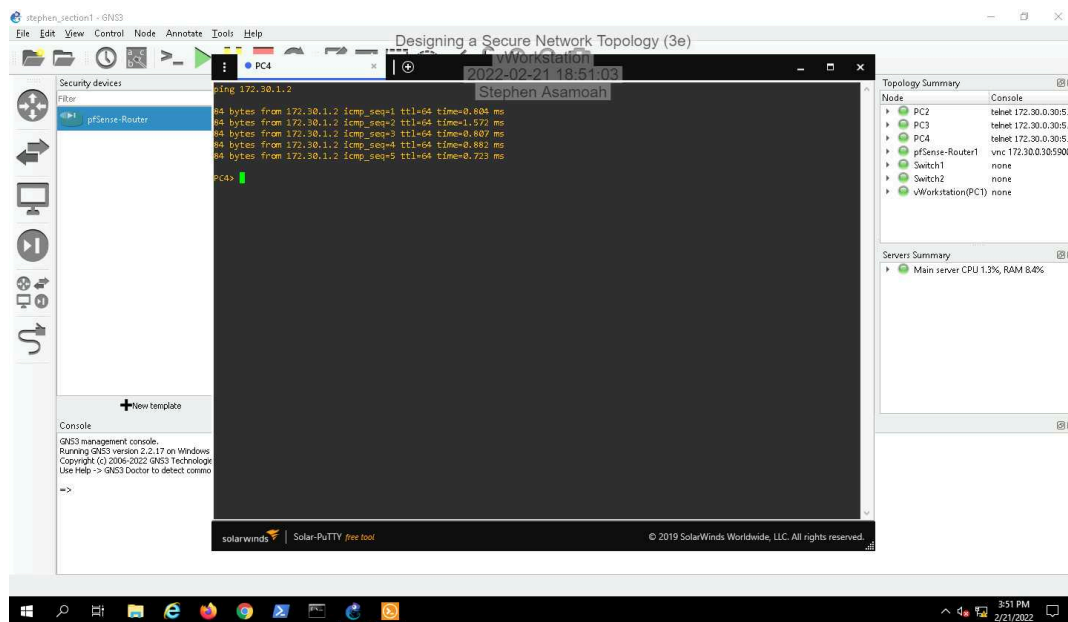
100%

Report Generated: Monday, February 21, 2022 at 10:02 PM

Section 1: Hands-On Demonstration

Part 1: Design a Simple Network Topology

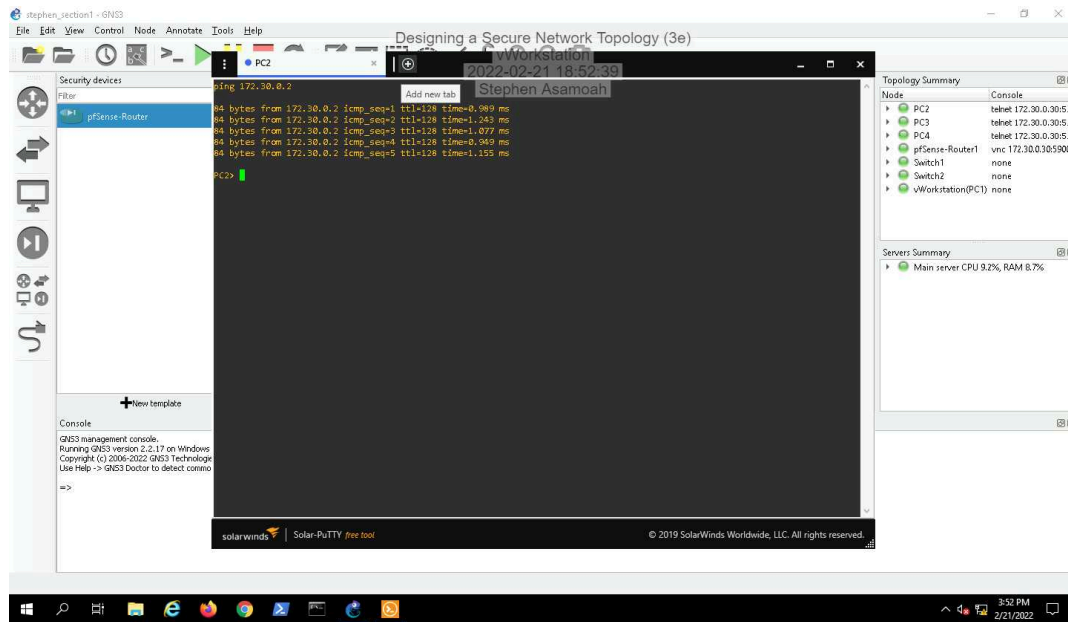
34. Make a screen capture showing the results of the ping attempt from PC4 to PC3.



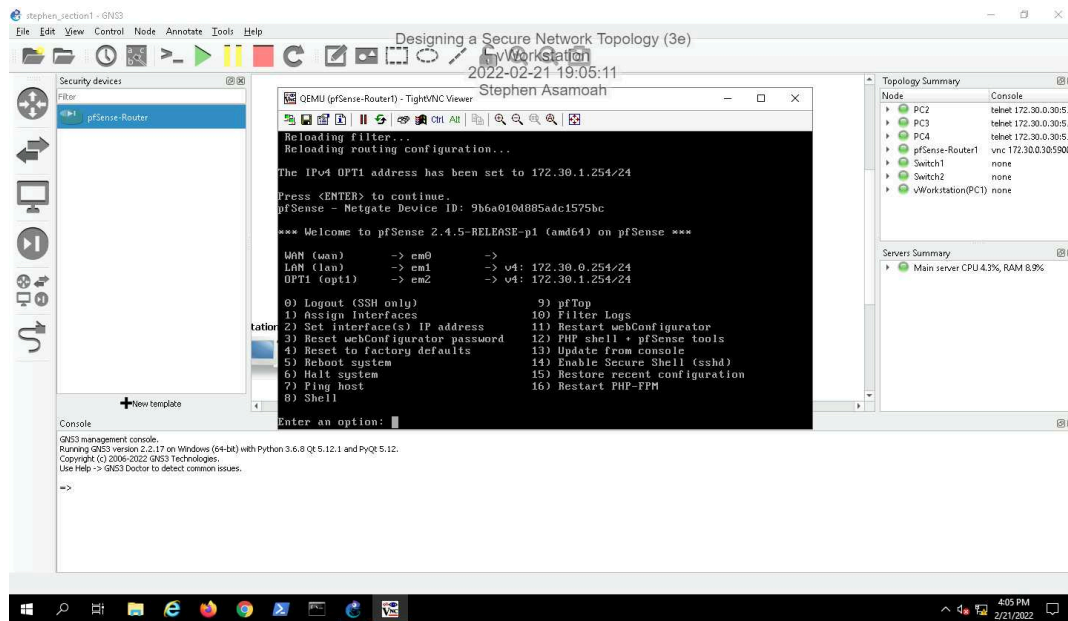
Designing a Secure Network Topology (3e)

Network Security, Firewalls, and VPNs, Third Edition - Lab 03

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



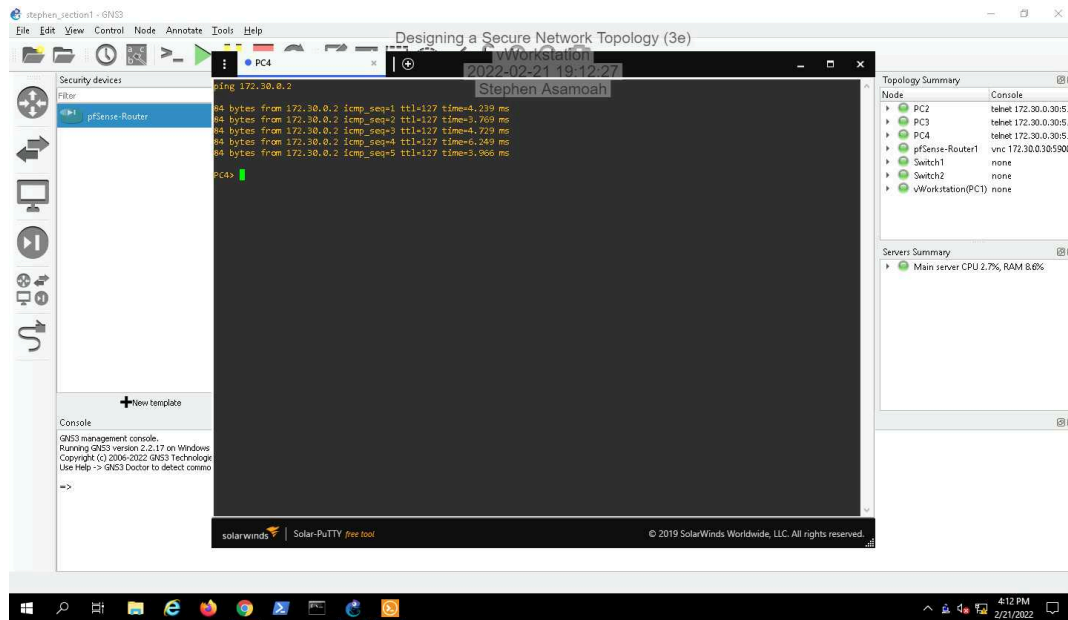
49. Make a screen capture showing the IP address assignments in the pfSense console.



Designing a Secure Network Topology (3e)

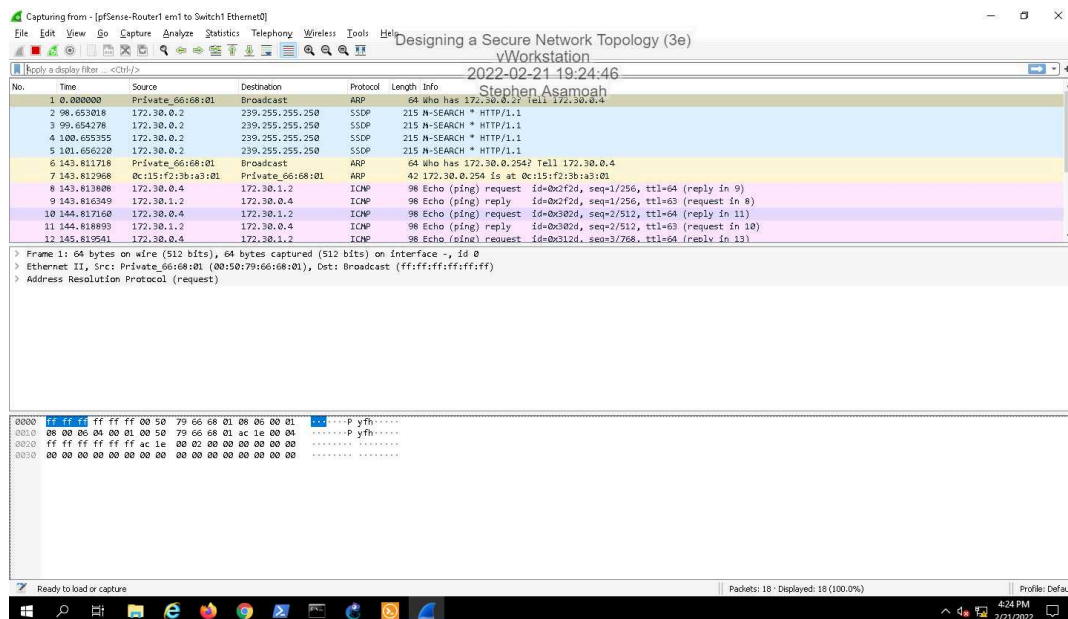
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72. Make a screen capture showing the successful ping from PC4 to the vWorkstation.



Part 2: Capture Network Traffic to Validate Connectivity

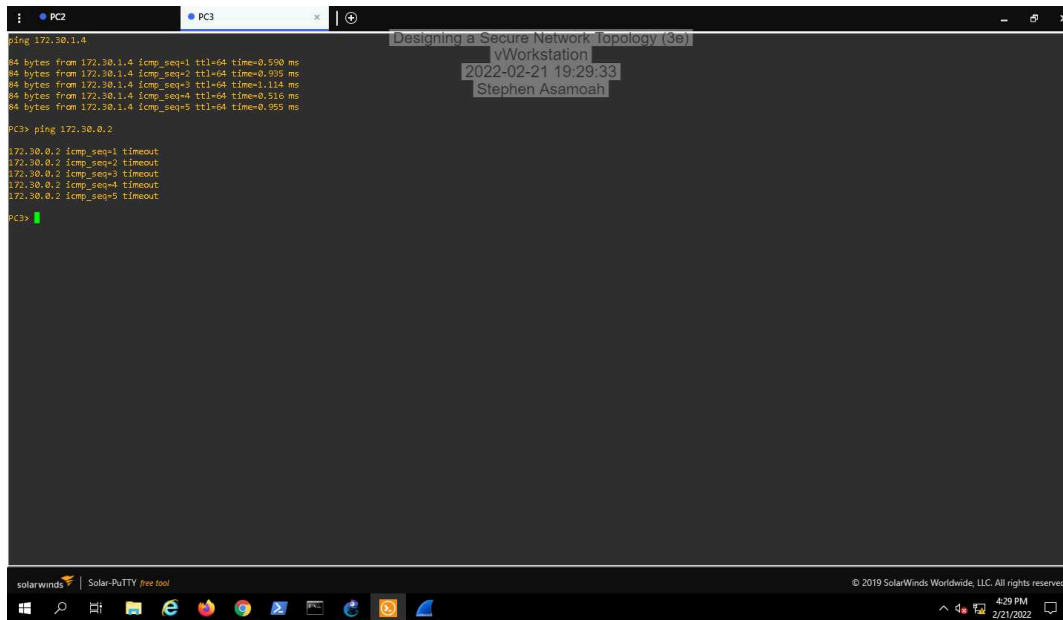
7. Make a screen capture showing the Wireshark capture for the PC2 to PC3 ping request.



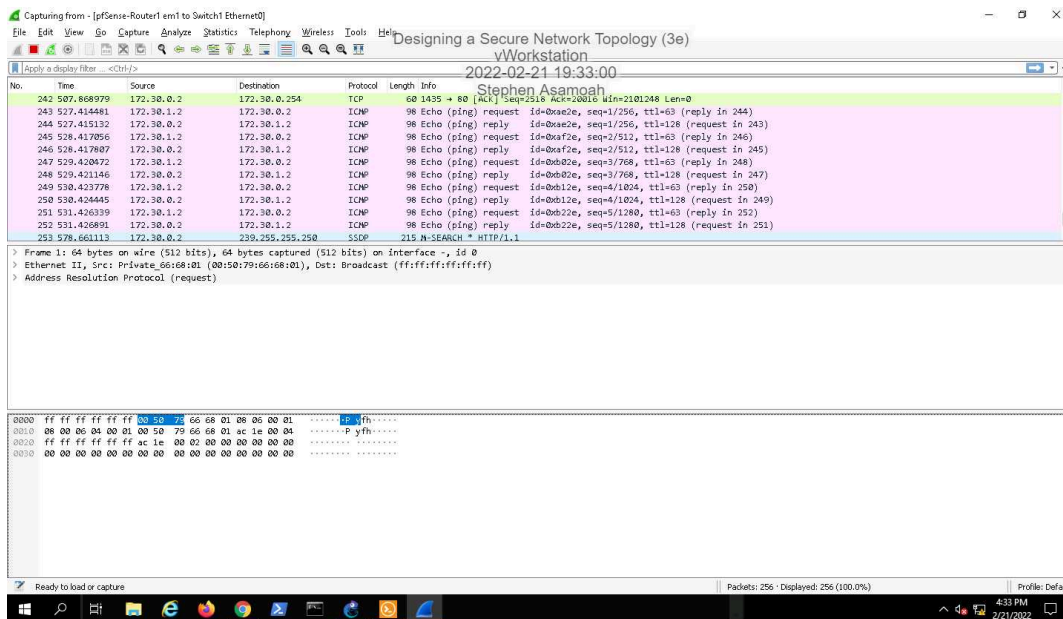
Designing a Secure Network Topology (3e)

Network Security, Firewalls, and VPNs, Third Edition - Lab 03

16. Make a screen capture showing the timed out ping request.



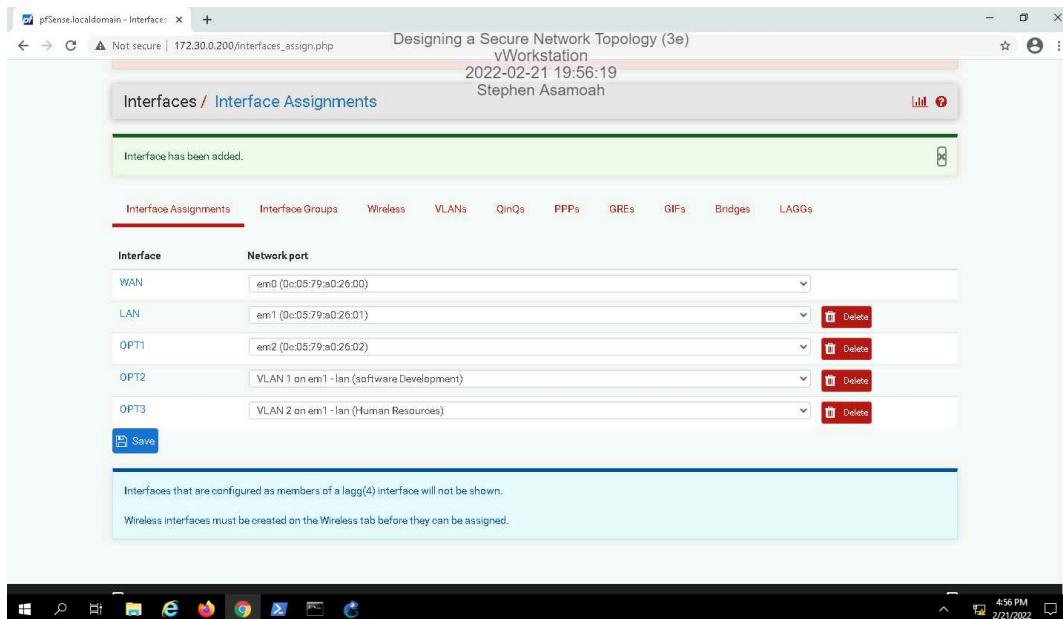
19. Make a screen capture showing the Wireshark capture for the PC3 to vWorkstation ping request.



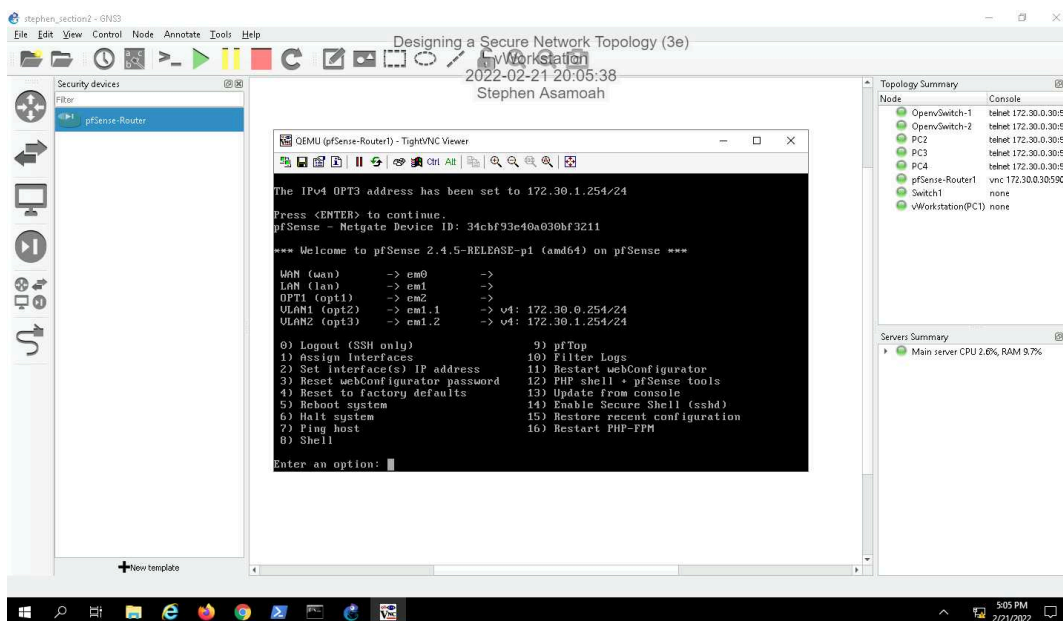
Section 2: Applied Learning

Part 1: Design a More Complex Network Topology

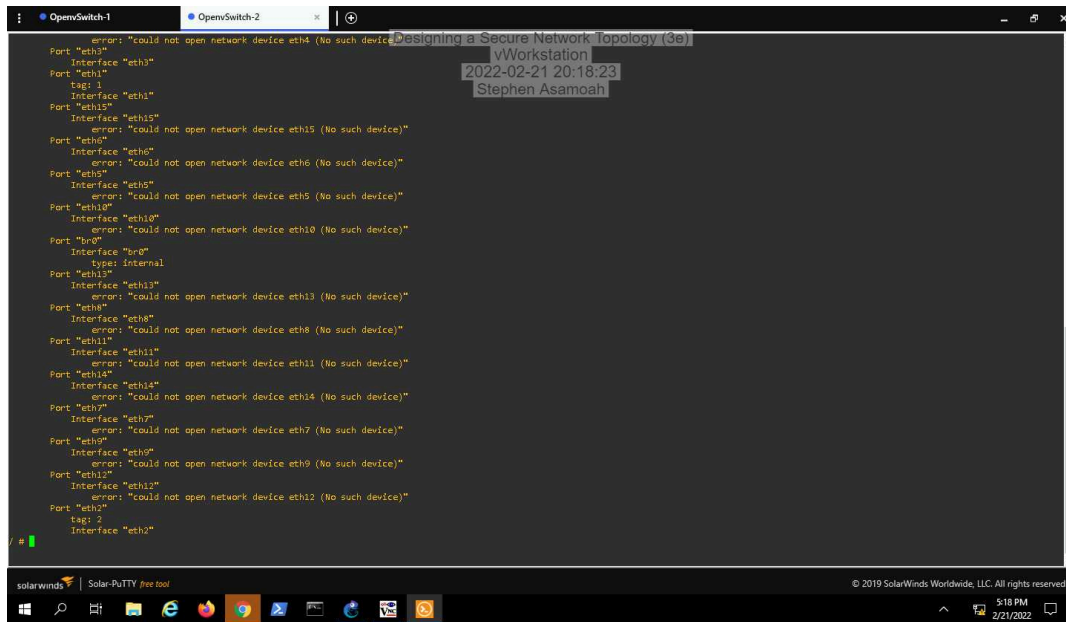
14. Make a screen capture showing the **Interface Assignments** page.



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

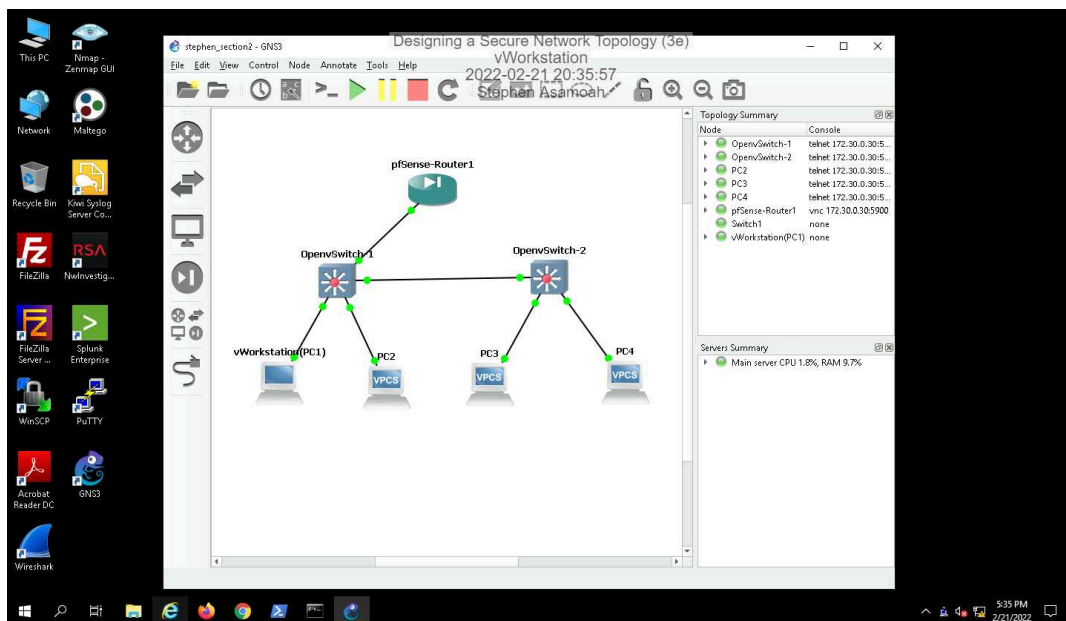


36. Make a screen capture showing the **eth1** and **eth2** interfaces with their assigned VLAN tags on Switch2.



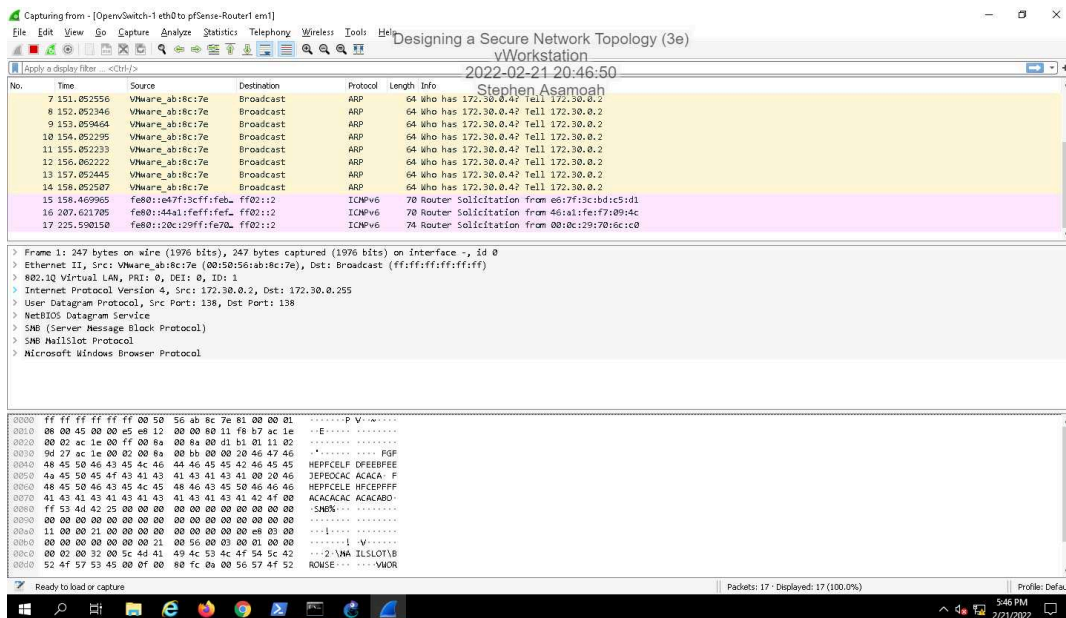
```
error: "could not open network device eth4 (No such device)"
Port "eth3"
  Interface "eth3"
  error: "could not open network device eth3 (No such device)"
Port "eth1"
  tag: 1
  Interface "eth1"
Port "eth15"
  Interface "eth15"
  error: "could not open network device eth15 (No such device)"
Port "eth6"
  Interface "eth6"
  error: "could not open network device eth6 (No such device)"
Port "eth5"
  Interface "eth5"
  error: "could not open network device eth5 (No such device)"
Port "eth10"
  Interface "eth10"
  error: "could not open network device eth10 (No such device)"
Port "brp0"
  Interface "brp0"
  type: Internal
Port "eth13"
  Interface "eth13"
  error: "could not open network device eth13 (No such device)"
Port "eth8"
  Interface "eth8"
  error: "could not open network device eth8 (No such device)"
Port "eth11"
  Interface "eth11"
  error: "could not open network device eth11 (No such device)"
Port "eth14"
  Interface "eth14"
  error: "could not open network device eth14 (No such device)"
Port "eth7"
  Interface "eth7"
  error: "could not open network device eth7 (No such device)"
Port "eth9"
  Interface "eth9"
  error: "could not open network device eth9 (No such device)"
Port "eth12"
  Interface "eth12"
  error: "could not open network device eth12 (No such device)"
Port "eth2"
  tag: 2
  Interface "eth2"
```

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

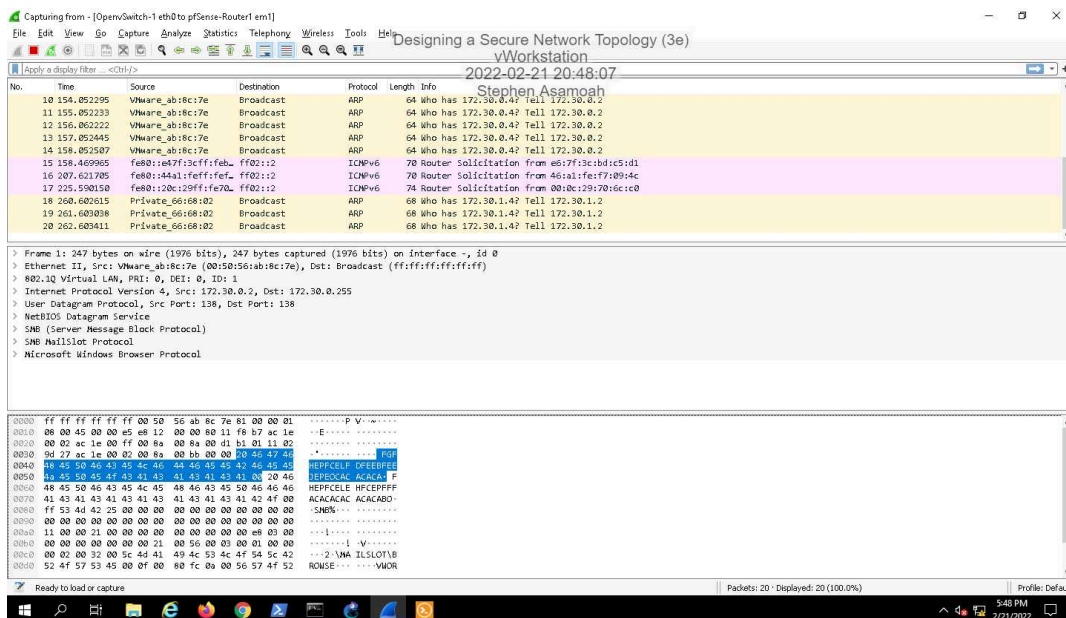


Part 2: Capture Network Traffic to Validate Connectivity

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



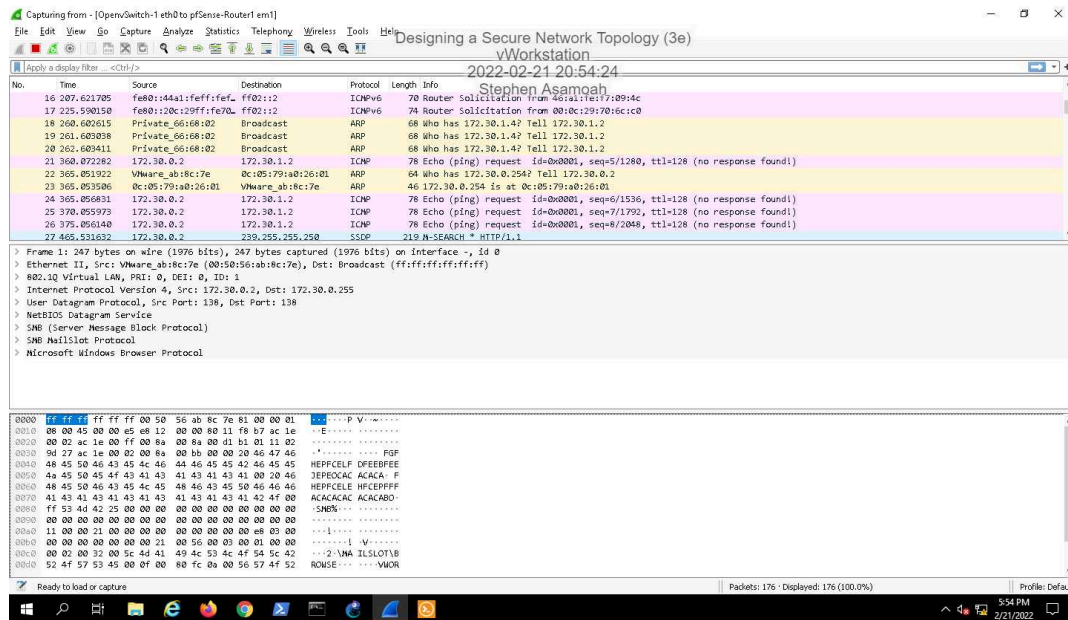
5. Make a screen capture showing the Wireshark capture for the PC2 to PC4 ping request.



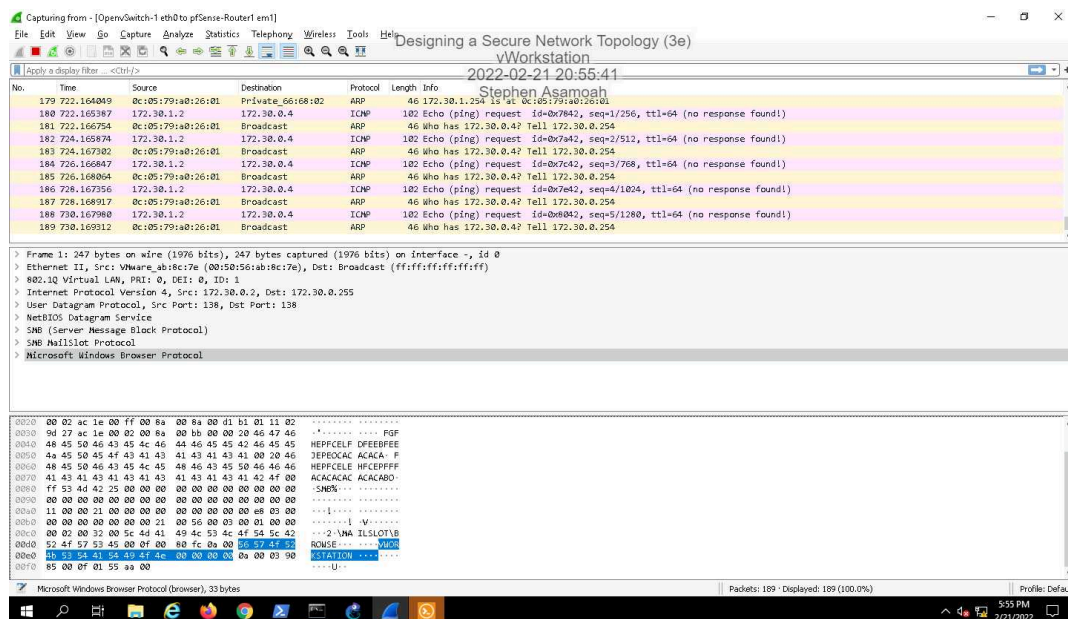
Designing a Secure Network Topology (3e)

Network Security, Firewalls, and VPNs, Third Edition - Lab 03

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



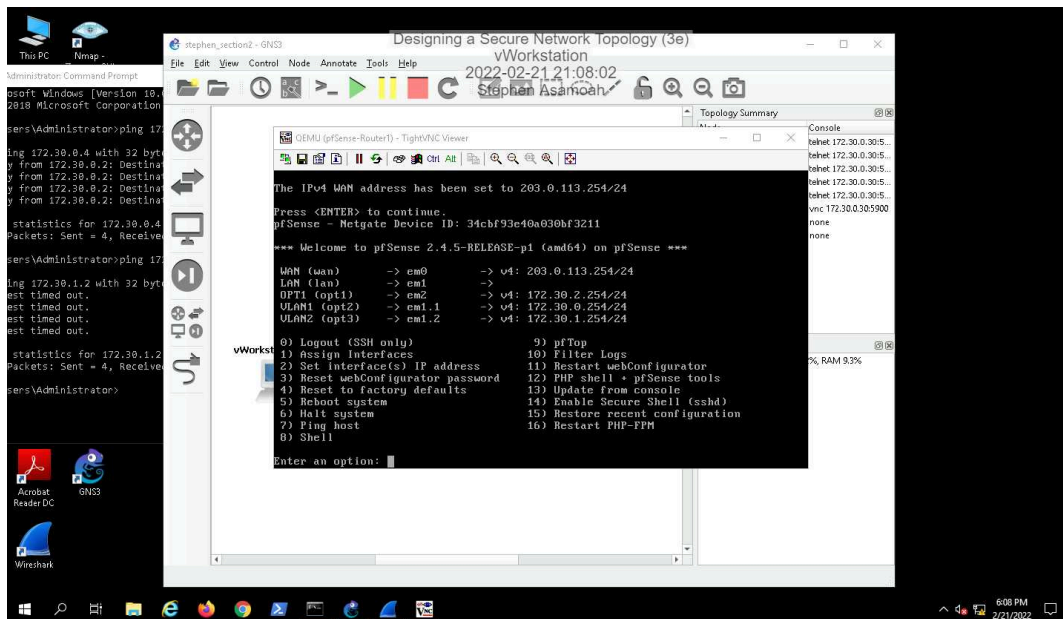
9. Make a screen capture showing the Wireshark capture for the PC2 to PC3 ping request.



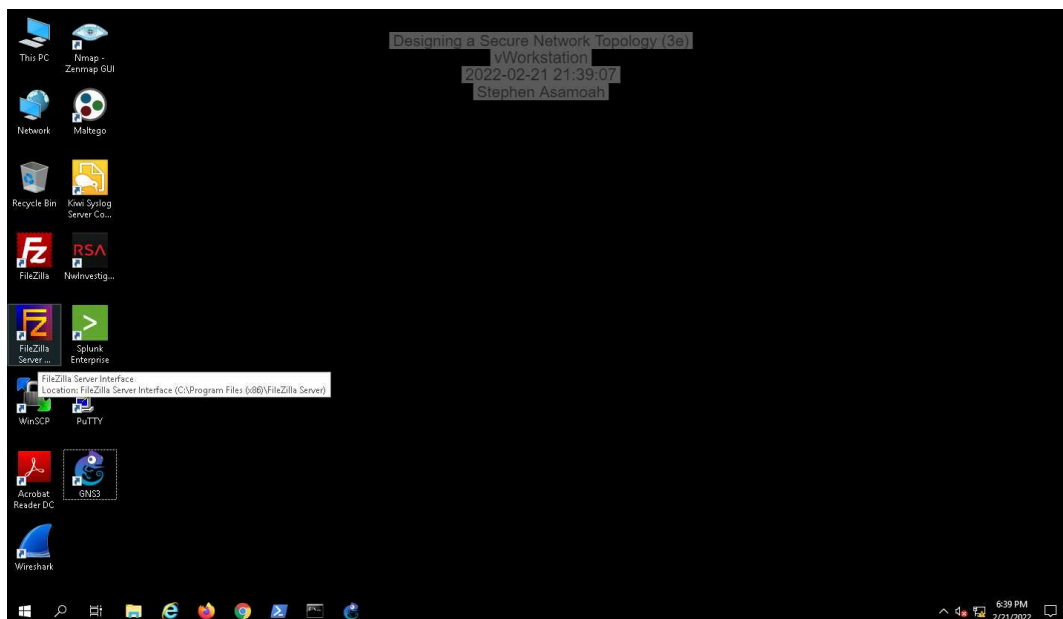
Section 3: Challenge and Analysis

Part 1: Enhance the Network Topology with a DMZ

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

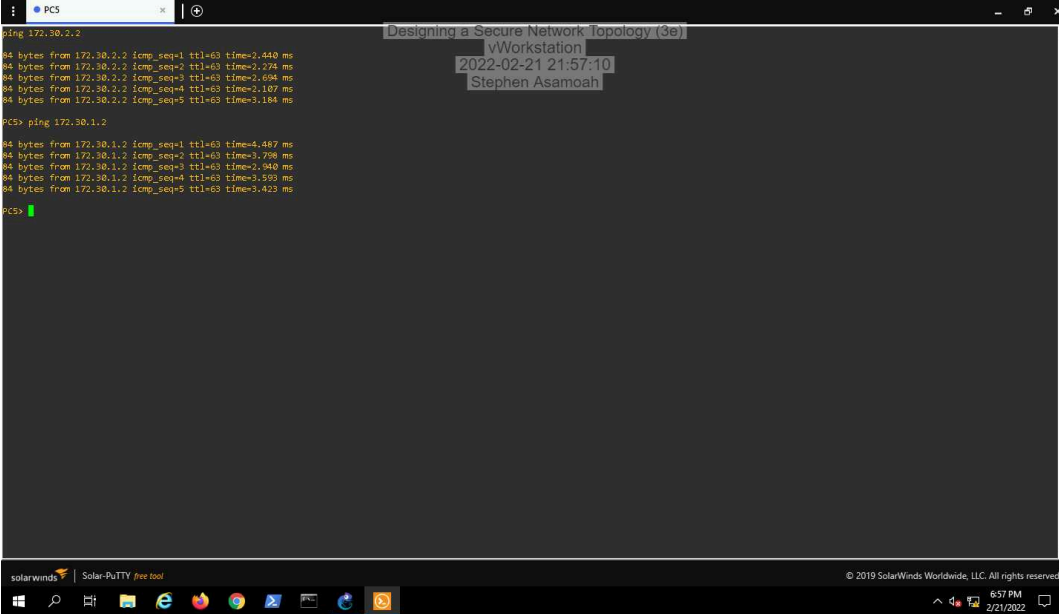


Make a screen capture showing the firewall rule on the WAN interface in the pfSense webConfigurator.



Part 2: Validate DMZ Connectivity

Make a screen capture showing the results of both pings.



The screenshot shows a SolarWinds Solar-PuTTY terminal window. The title bar reads "Designing a Secure Network Topology (3e)". The terminal output shows two ping commands and their results:

```
ping 172.30.2.2
64 bytes from 172.30.2.2: icmp_seq=1 ttl=63 time=2.440 ms
64 bytes from 172.30.2.2: icmp_seq=2 ttl=63 time=2.274 ms
64 bytes from 172.30.2.2: icmp_seq=3 ttl=63 time=2.694 ms
64 bytes from 172.30.2.2: icmp_seq=4 ttl=63 time=2.107 ms
64 bytes from 172.30.2.2: icmp_seq=5 ttl=63 time=3.184 ms

PC5> ping 172.30.1.2
64 bytes from 172.30.1.2: icmp_seq=1 ttl=63 time=4.487 ms
64 bytes from 172.30.1.2: icmp_seq=2 ttl=63 time=3.798 ms
64 bytes from 172.30.1.2: icmp_seq=3 ttl=63 time=2.940 ms
64 bytes from 172.30.1.2: icmp_seq=4 ttl=63 time=3.593 ms
64 bytes from 172.30.1.2: icmp_seq=5 ttl=63 time=3.423 ms

PC5>
```

The bottom of the window shows the SolarWinds logo, "Solar-PuTTY free tool", and a copyright notice: "© 2019 SolarWinds Worldwide, LLC. All rights reserved." The system tray on the right shows the time "6:57 PM" and the date "2/21/2022".