

# Designing a Secure Network Topology (3e)

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

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Time on Task:

2 hours, 24 minutes

Progress:

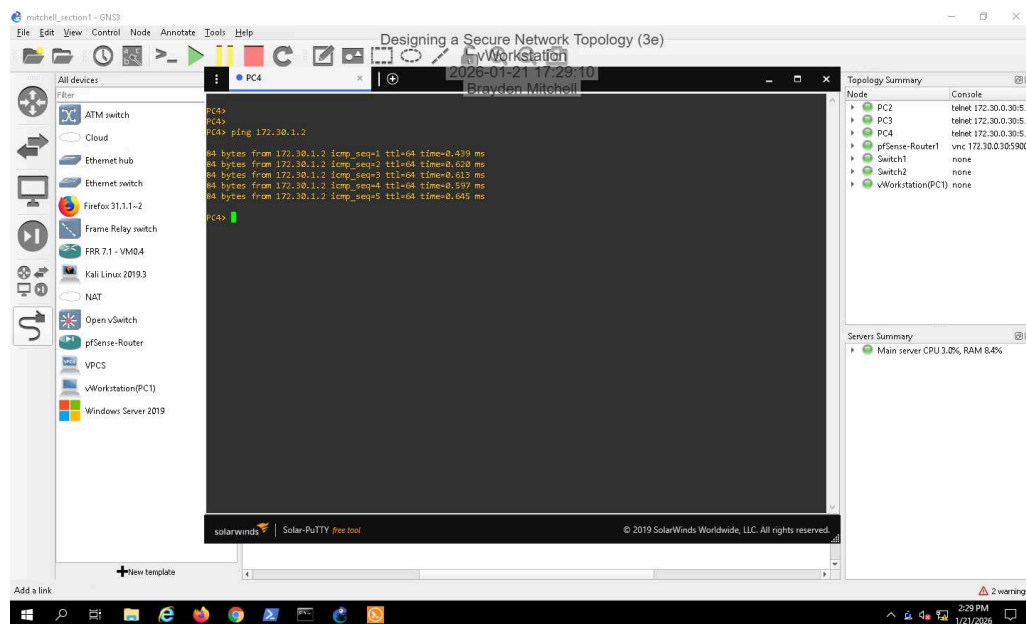
100%

Report Generated: Wednesday, January 21, 2026 at 8:09 PM

## Section 1: Hands-On Demonstration

### Part 1: Design a Simple Network Topology

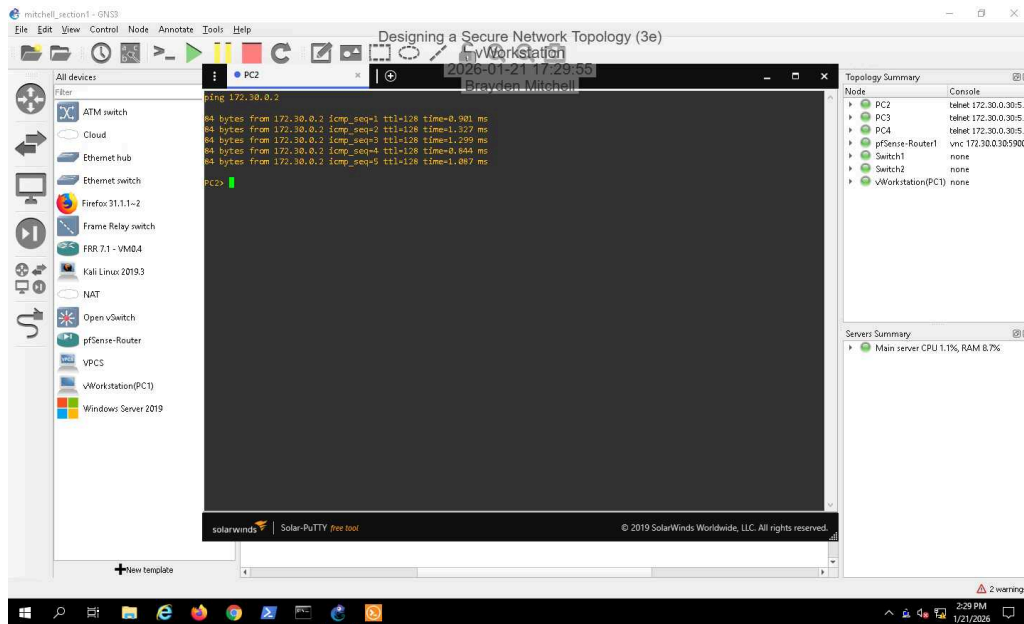
34. Make a screen capture showing the results of the ping attempt from PC4 to PC3.



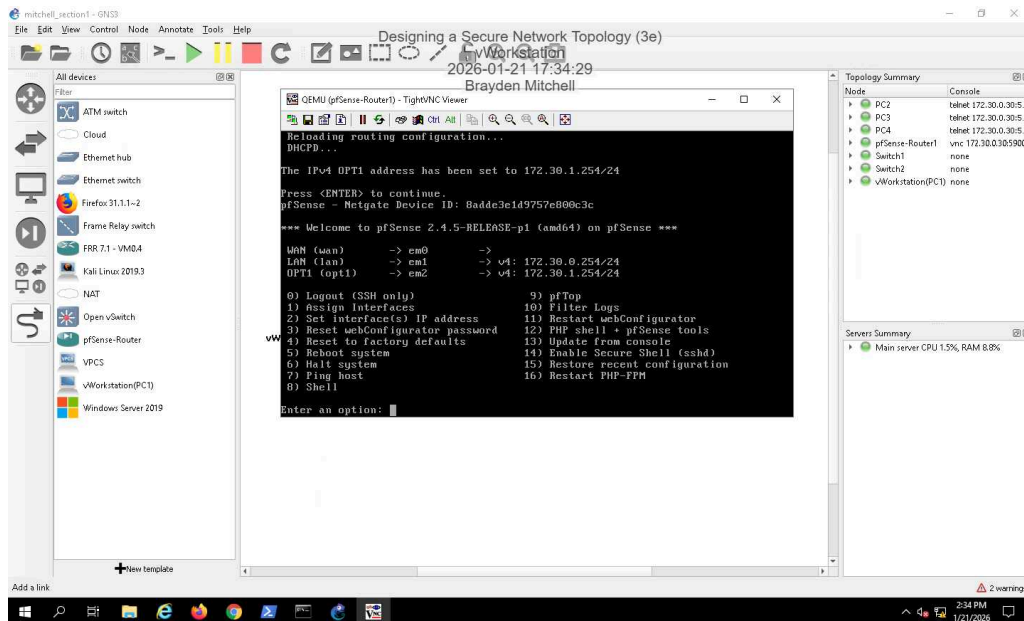
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37. Make a screen capture showing the results of the ping attempt from PC2 to the vWorkstation (172.30.0.2).



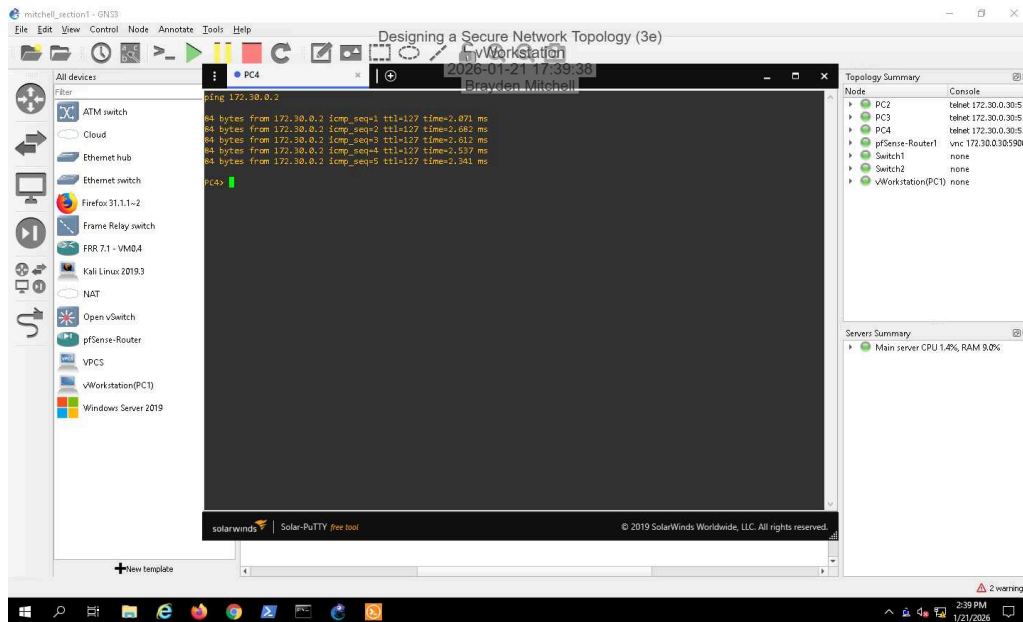
49. Make a screen capture showing the IP address assignments in the pfSense console.



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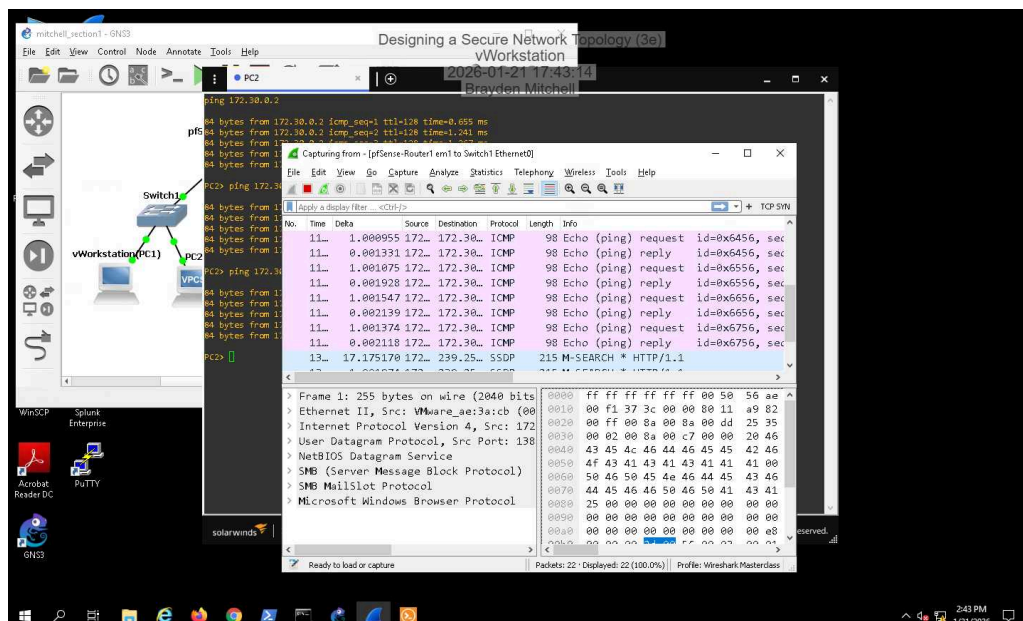
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72. Make a screen capture showing the successful ping from PC4 to the vWorkstation.



## Part 2: Capture Network Traffic to Validate Connectivity

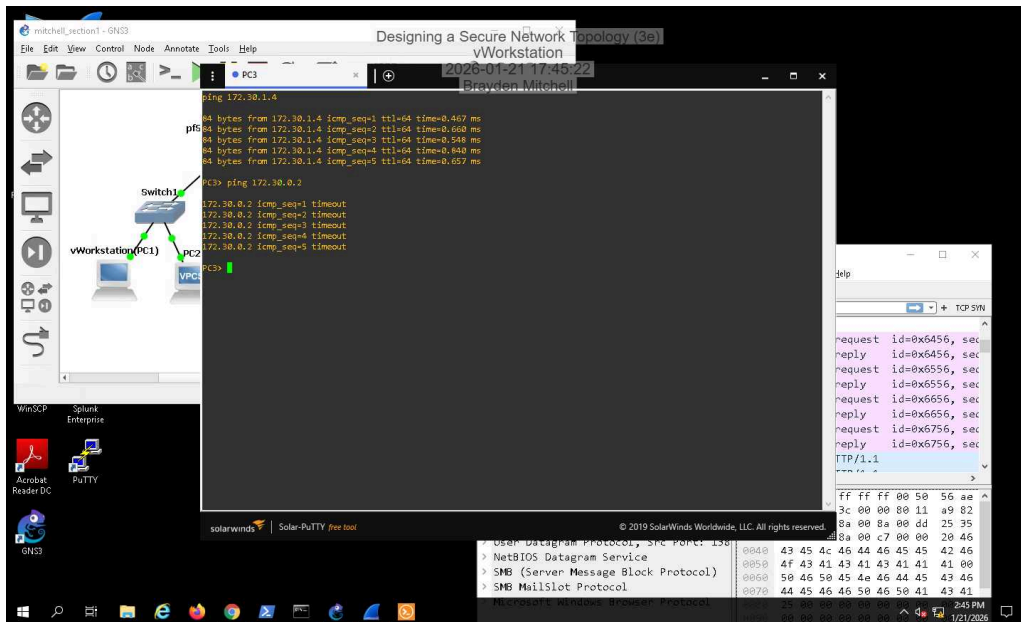
7. Make a screen capture showing the Wireshark capture for the PC2 to PC3 ping request.



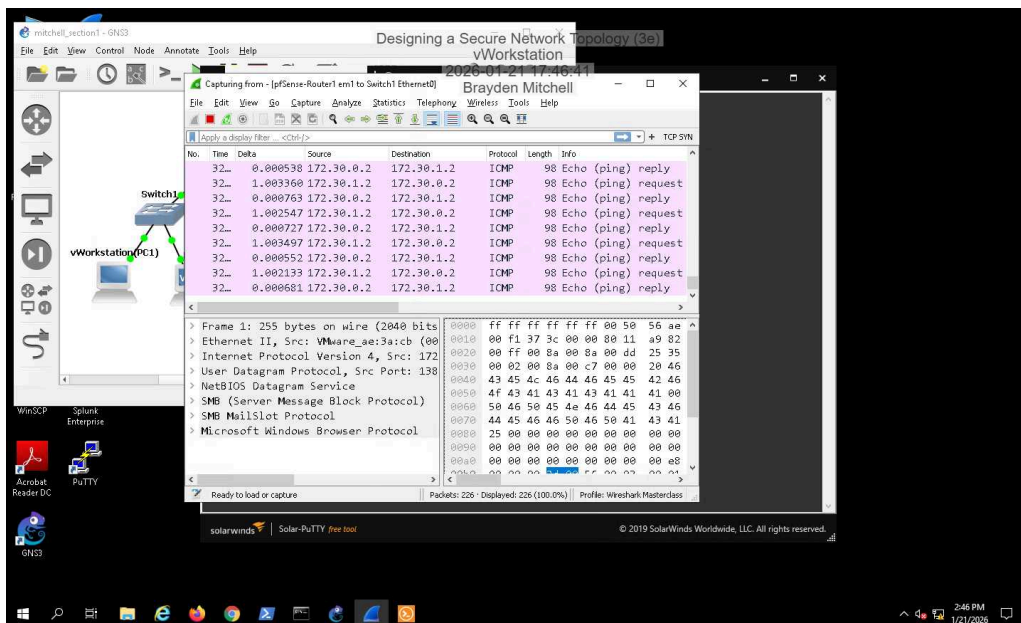
# Designing a Secure Network Topology (3e)

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



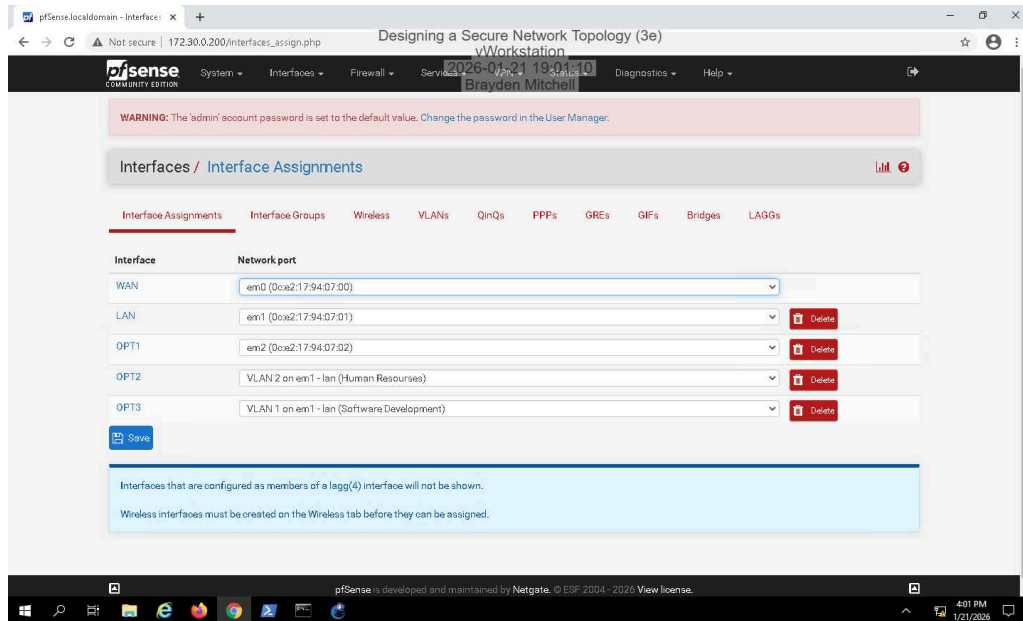
### 20. Make a screen capture showing the Wireshark capture for the PC3 to vWorkstation ping request.



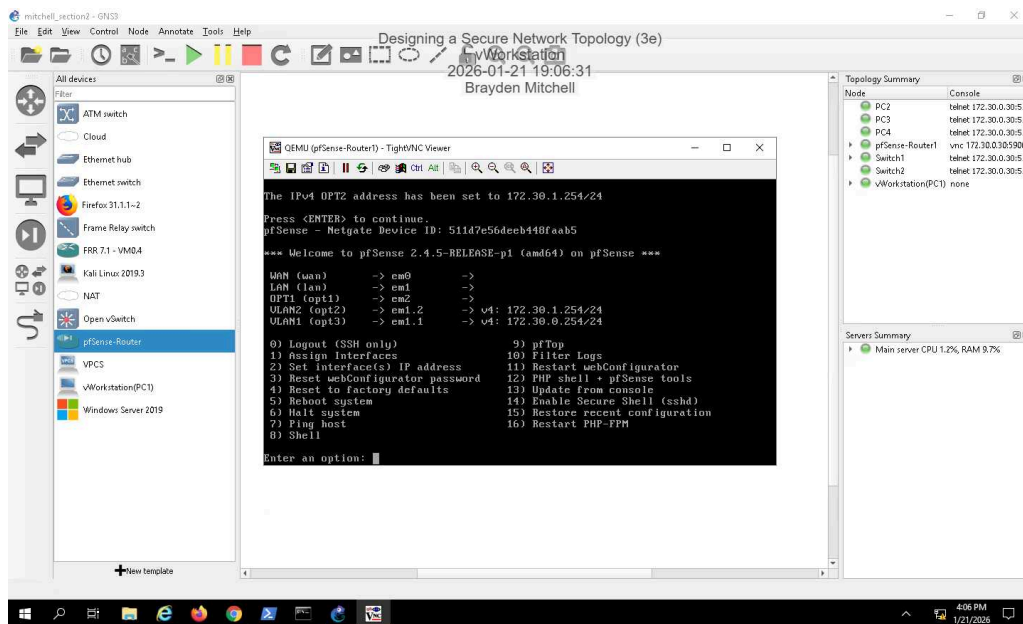
## Section 2: Applied Learning

### 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**.



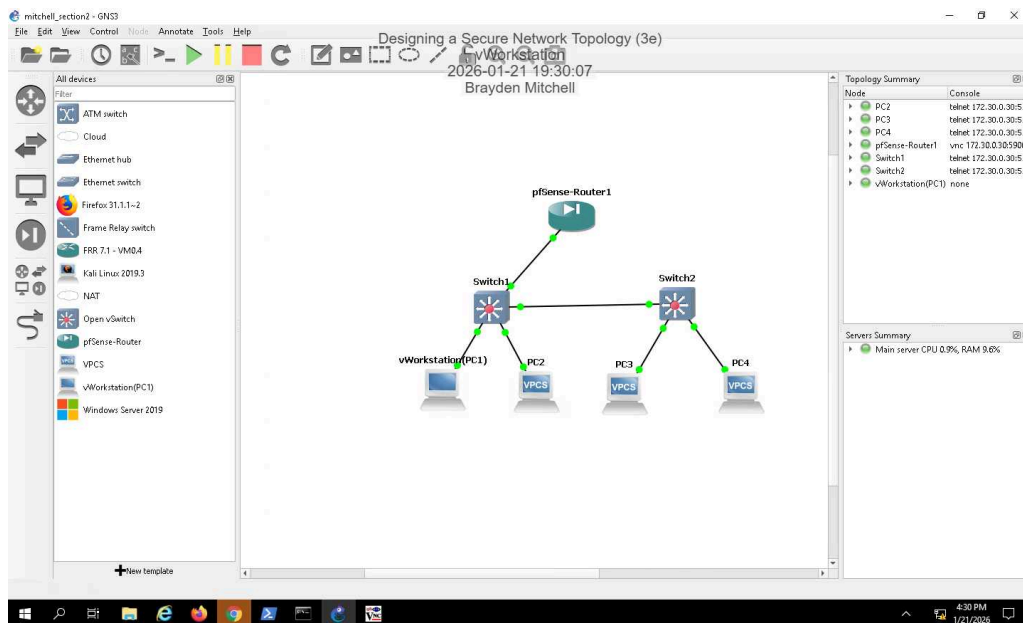
# Designing a Secure Network Topology (3e)

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

```
Switch2
brctl: Error detected while setting up 'eth14'. See ovs-vsctd log
brctl: Error detected while setting up 'eth15'. See ovs-vsctd log for de
# ovs-vsctl del-port br0 eth1
# ovs-vsctl del-port br0 eth2
# ovs-vsctl add-port br0 eth1 tag=1
# ovs-vsctl add-port br0 eth2 tag=2
# ovs-vsctl show
721725fb-1e6b-4d34-b60c-009ae3680c17
Bridge "br0"
  Port "eth0"
    Interface "eth0"
    error: "could not open network device eth0 (No such device)"
  Port "eth2"
    tag: 2
    Interface "eth2"
  Port "eth10"
    Interface "eth10"
    error: "could not open network device eth10 (No such device)"
  Port "eth11"
    tag: 1
    Interface "eth11"
  Port "eth15"
    Interface "eth15"
    error: "could not open network device eth15 (No such device)"
  Port "eth3"
    Interface "eth3"
  Port "eth4"
    Interface "eth4"
    error: "could not open network device eth4 (No such device)"
  Port "eth12"
    Interface "eth12"
    error: "could not open network device eth12 (No such device)"
  Port "eth13"
    Interface "eth13"
    error: "could not open network device eth13 (No such device)"
  Port "eth0"
    Interface "eth0"
    error: "could not open network device eth0 (No such device)"
  Port "eth14"
    Interface "eth14"
    error: "could not open network device eth14 (No such device)"
  Port "br0"
    Interface "br0"
    type: Internal
  Port "eth7"
    Interface "eth7"
```

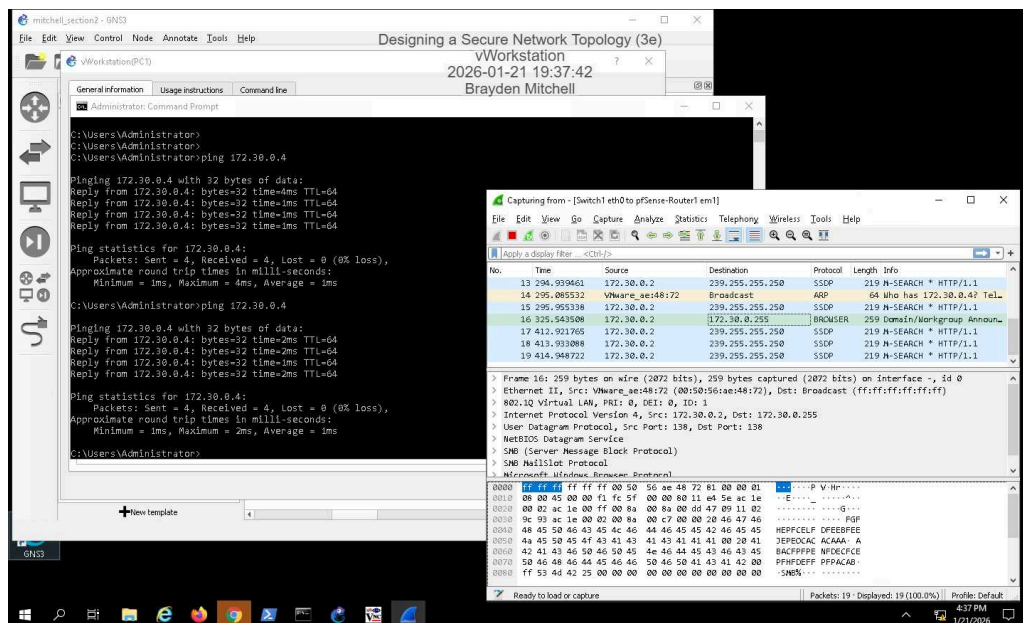
39. Make a screen capture showing the **completed topology**.



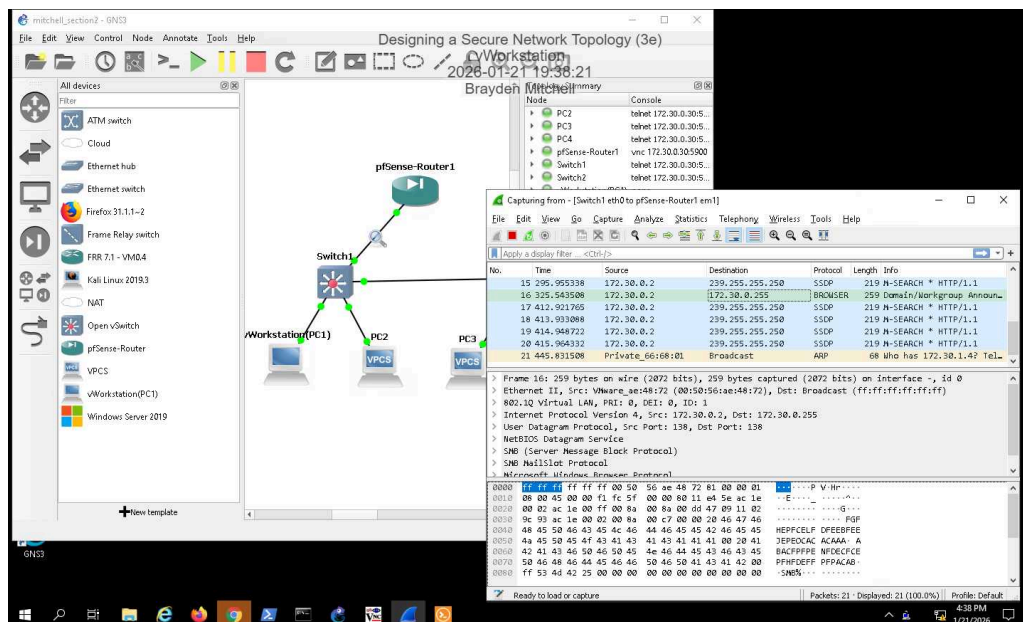
## Part 2: Capture Network Traffic to Validate Connectivity



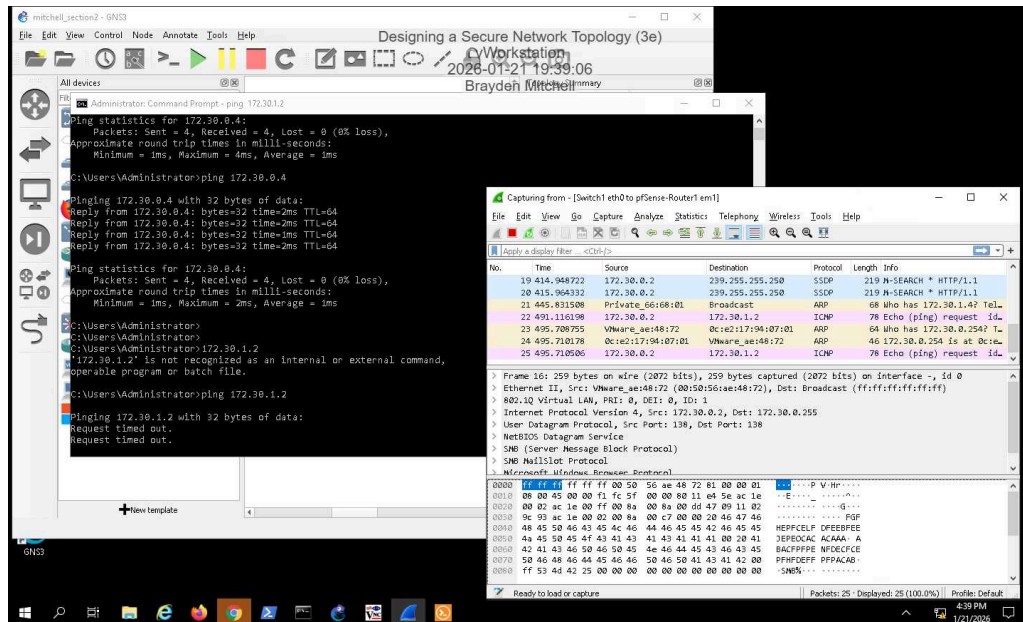
3. Make a screen capture showing the Wireshark capture for the vWorkstation to PC3 ping request.



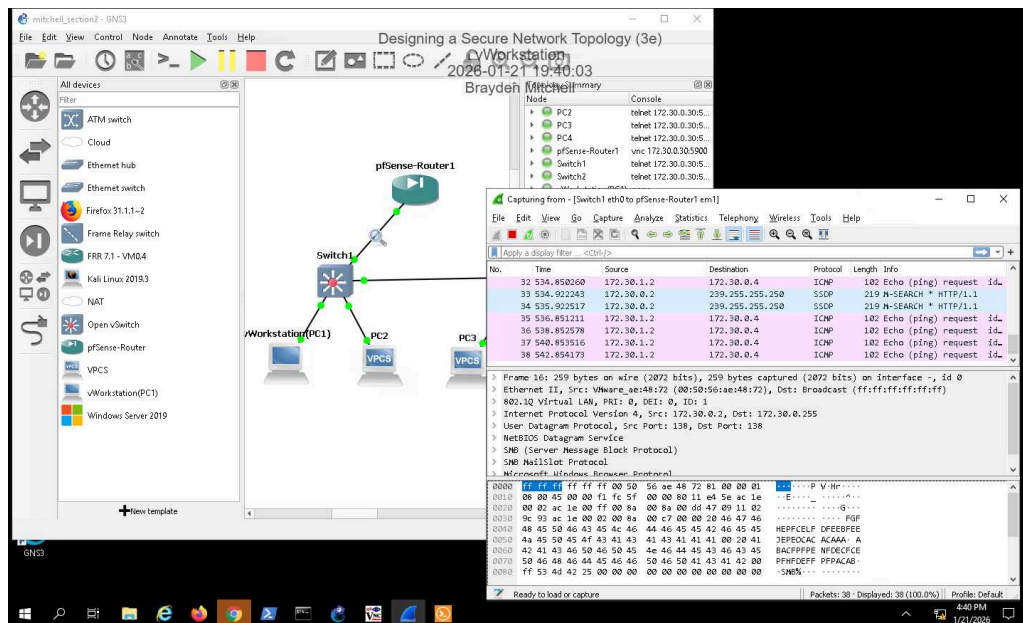
5. Make a screen capture showing the Wireshark capture for the PC2 to PC4 ping request.



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



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

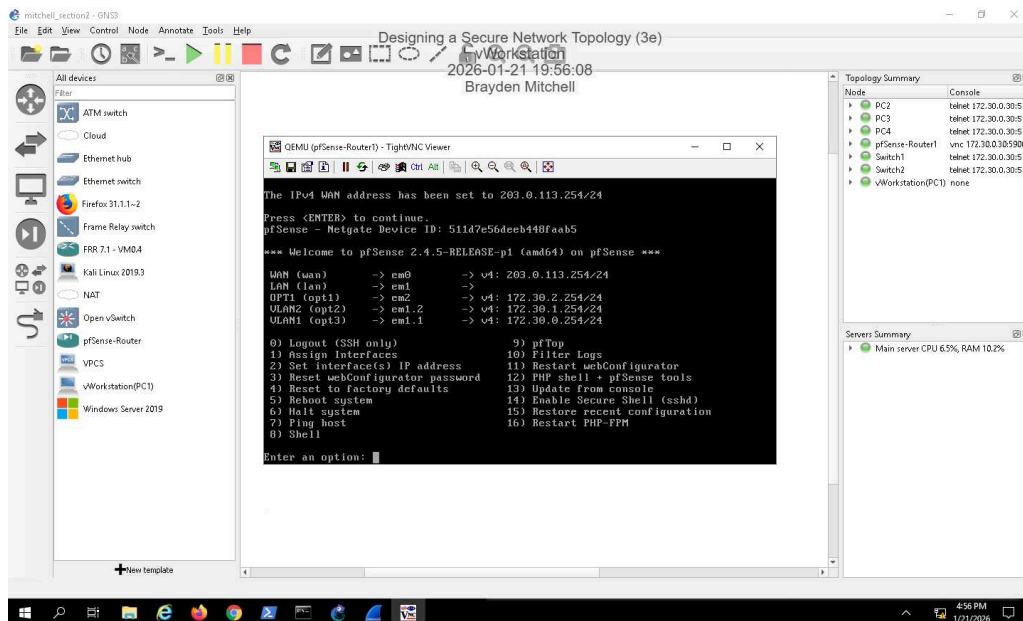




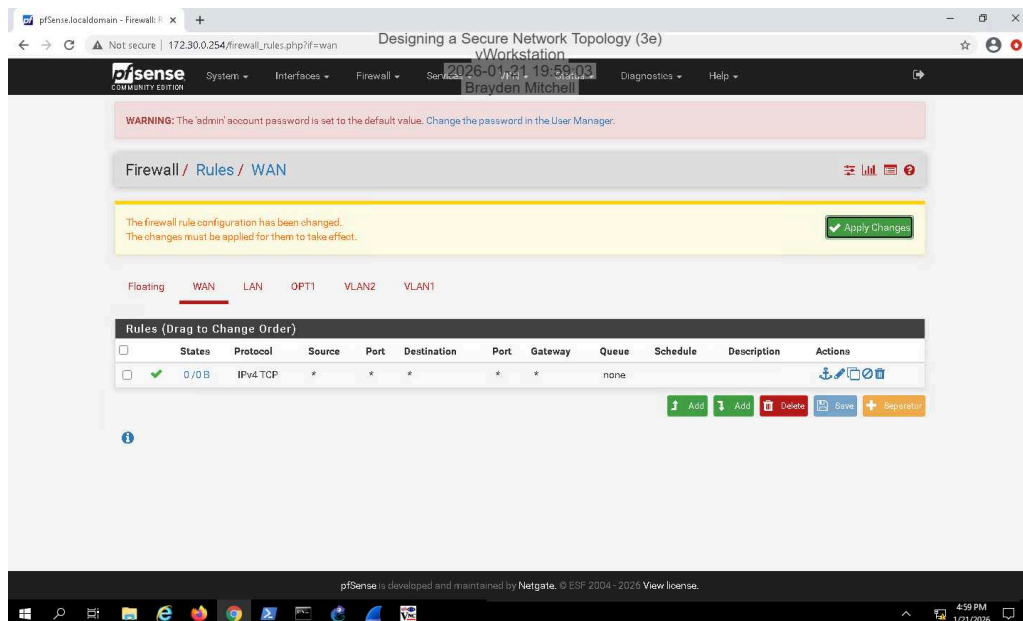
## Section 3: Challenge and Analysis

### 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.

