

Student:

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Time on Task:

11 hours, 42 minutes

Progress:

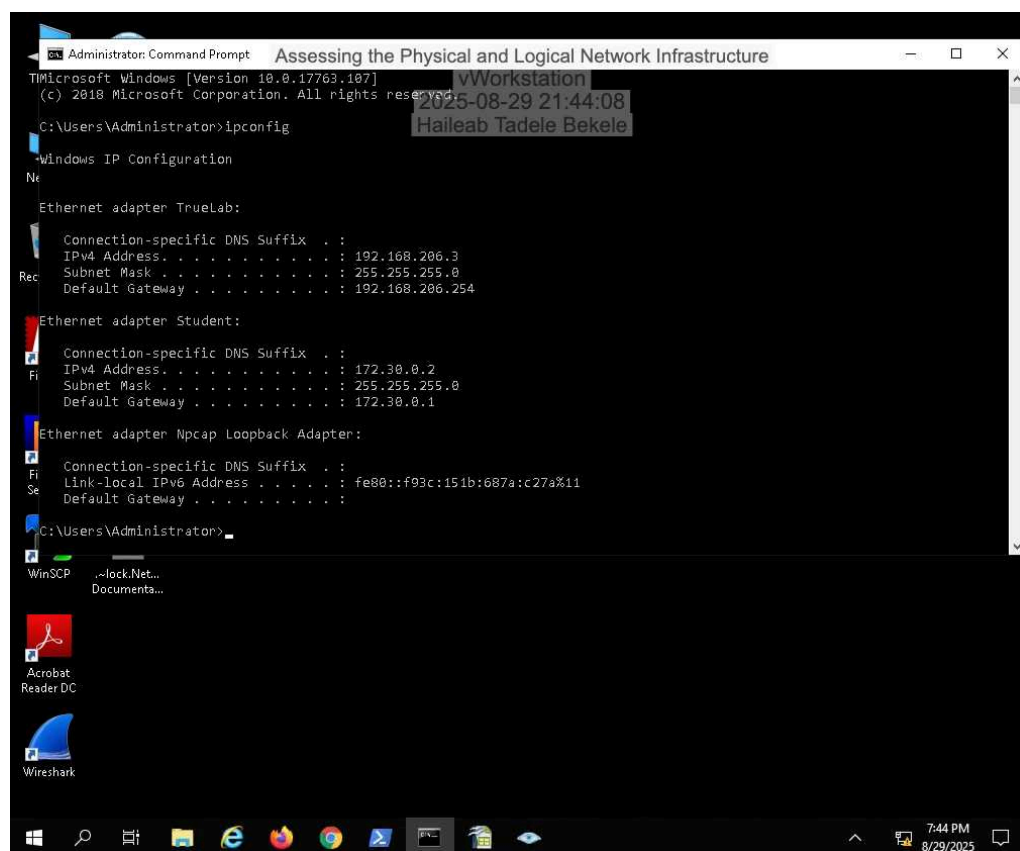
100%

Report Generated: Sunday, August 31, 2025 at 8:29 PM

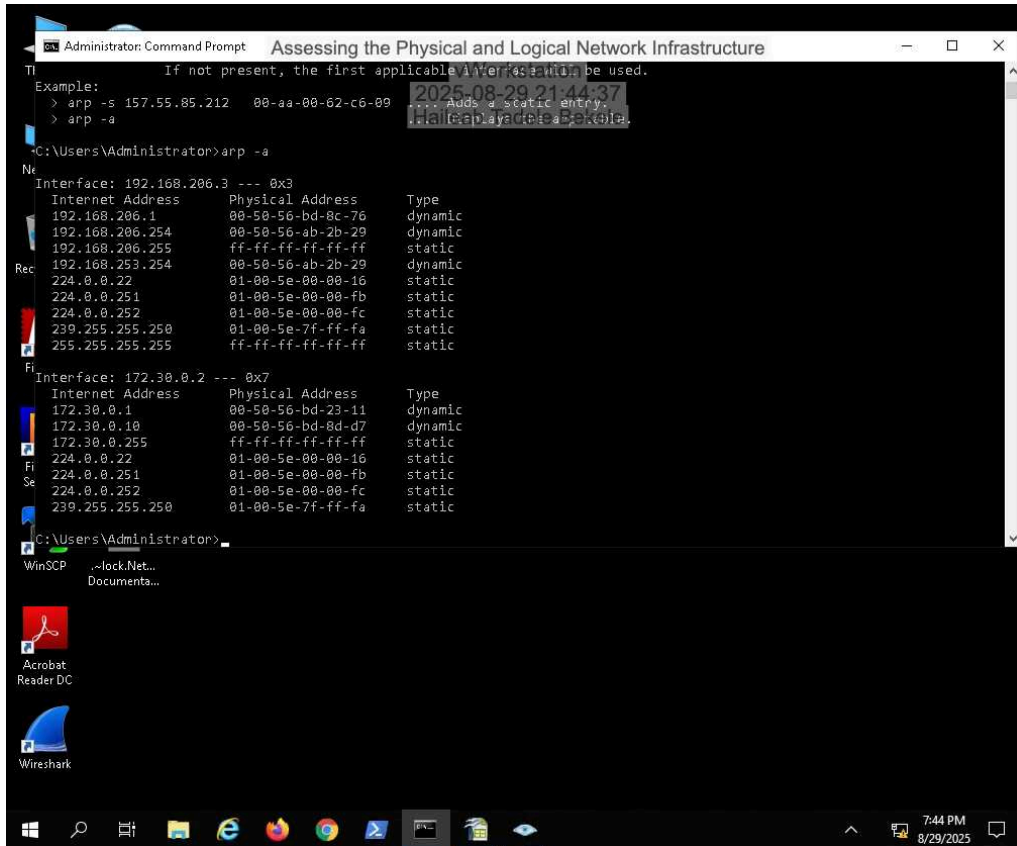
Section 1: Hands-On Demonstration

Part 1: Access the Default Gateway Router

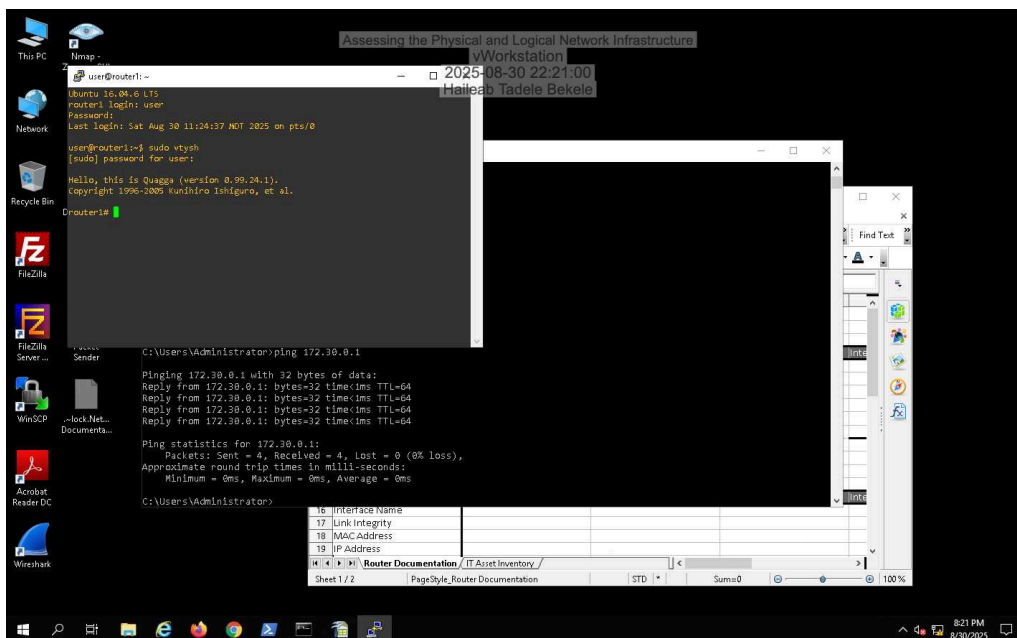
5. Make a screen capture showing the IP configuration for the vWorkstation.



8. **Make a screen capture** showing the **ARP cache** for the vWorkstation.

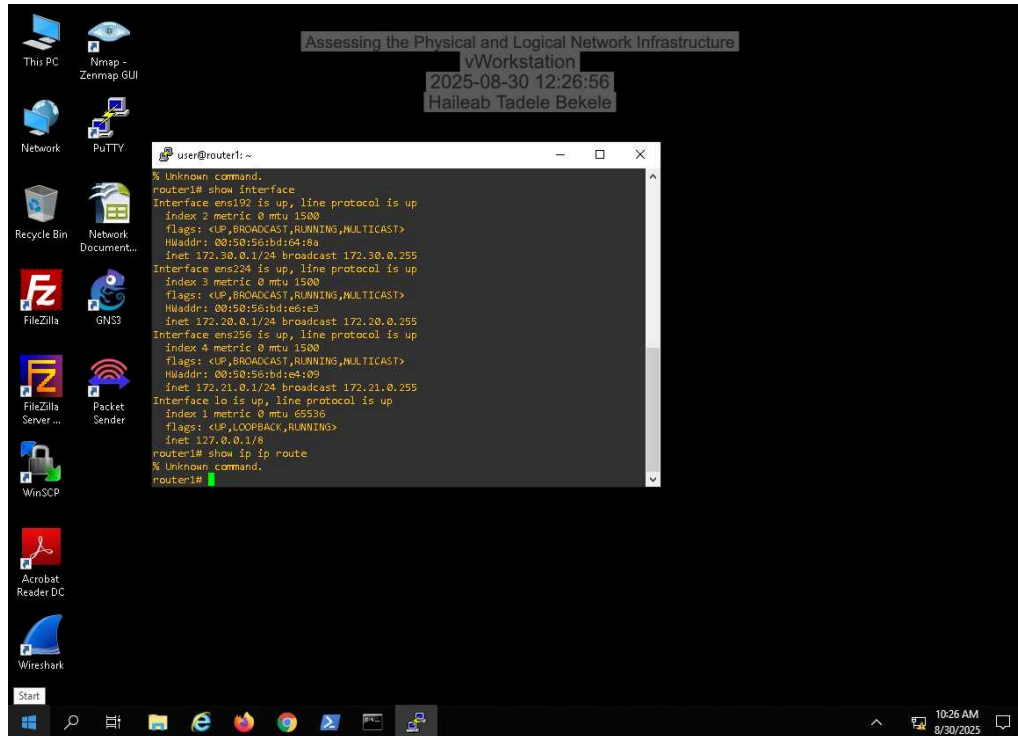


16. **Make a screen capture** showing the **router1 console shell**.

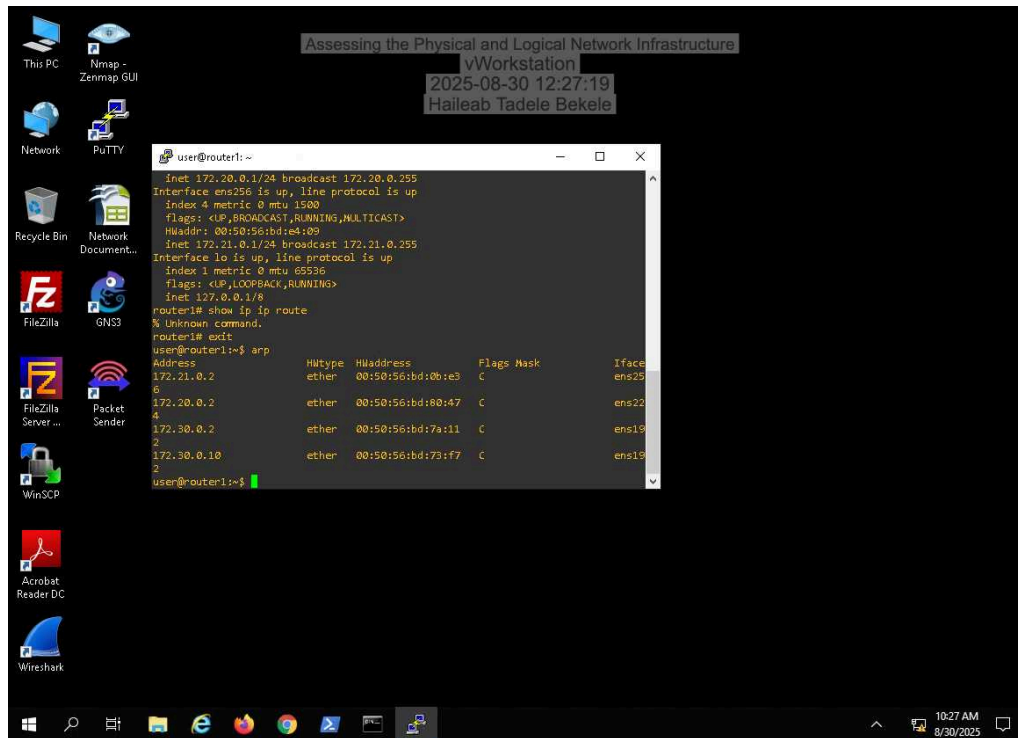


Part 2: Collect Physical, Data Link, and Network Layer Information for a Quagga Router

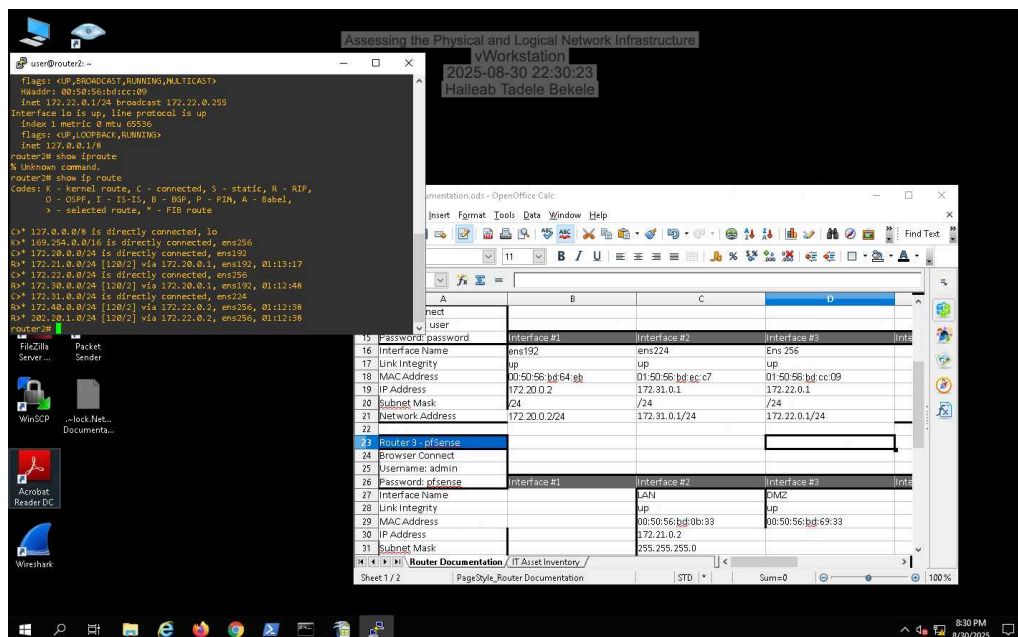
6. Make a screen capture showing the IP routes for router1.



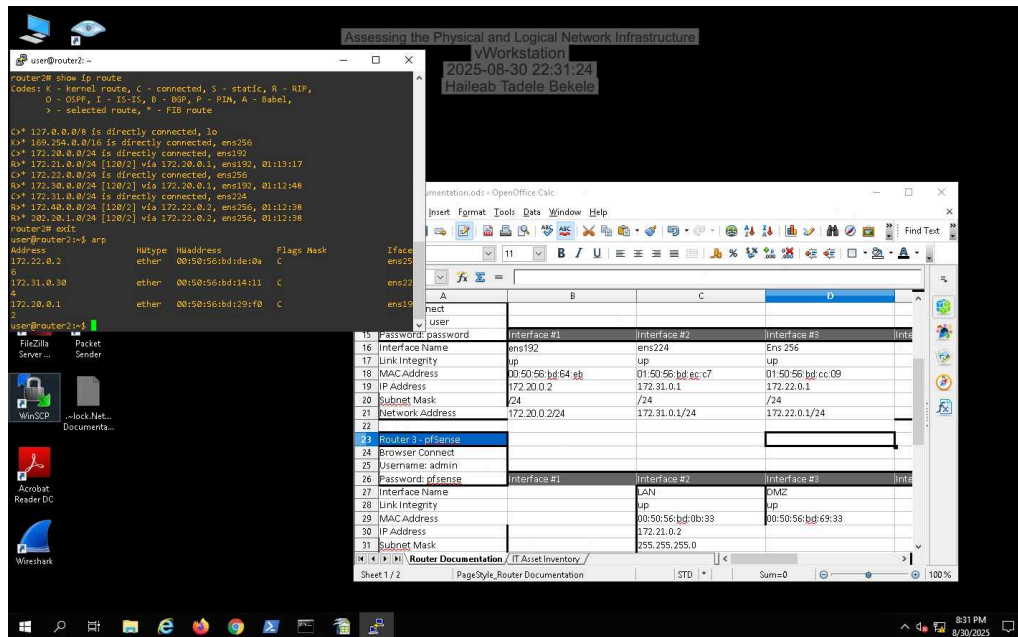
9. Make a screen capture showing the ARP cache for router1.



18. Make a screen capture showing the IP routes for router2.

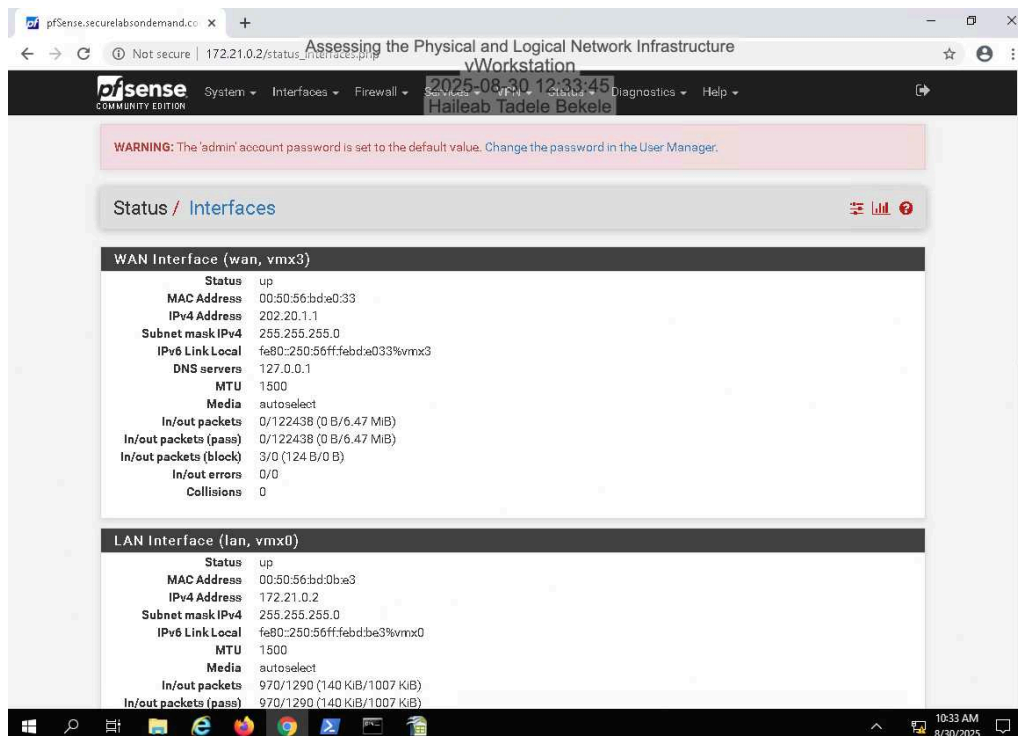


20. Make a screen capture showing the ARP cache for router2.

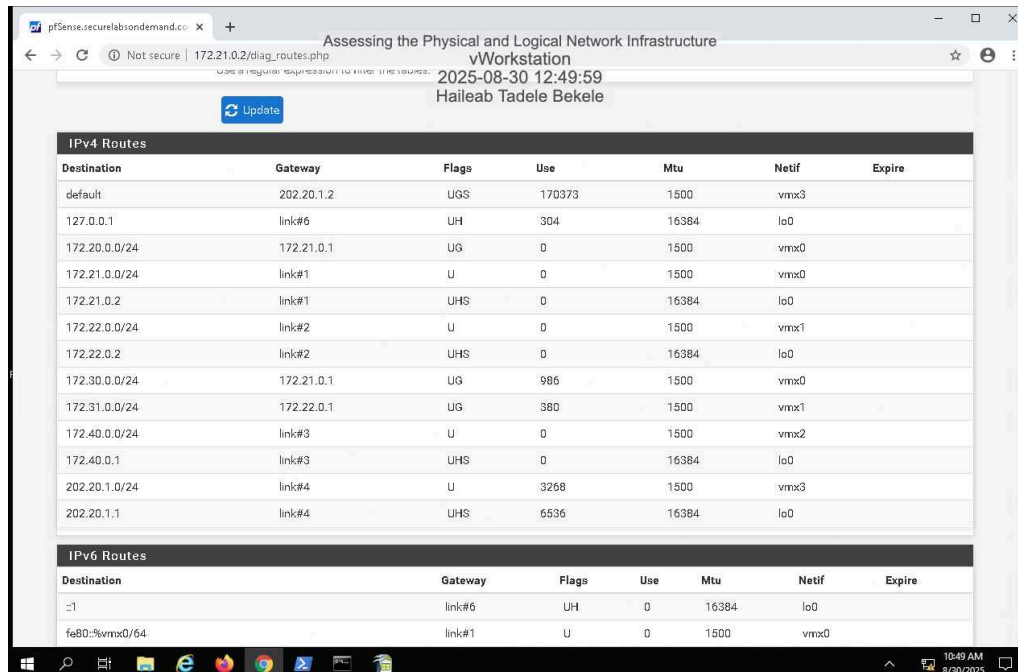


Part 3: Collect Physical, Data Link, and Network Layer Information for a pfSense Device

6. Make a screen capture showing the completed Network Documentation spreadsheet.



8. Make a screen capture showing the IP Routes for the pfSense device.



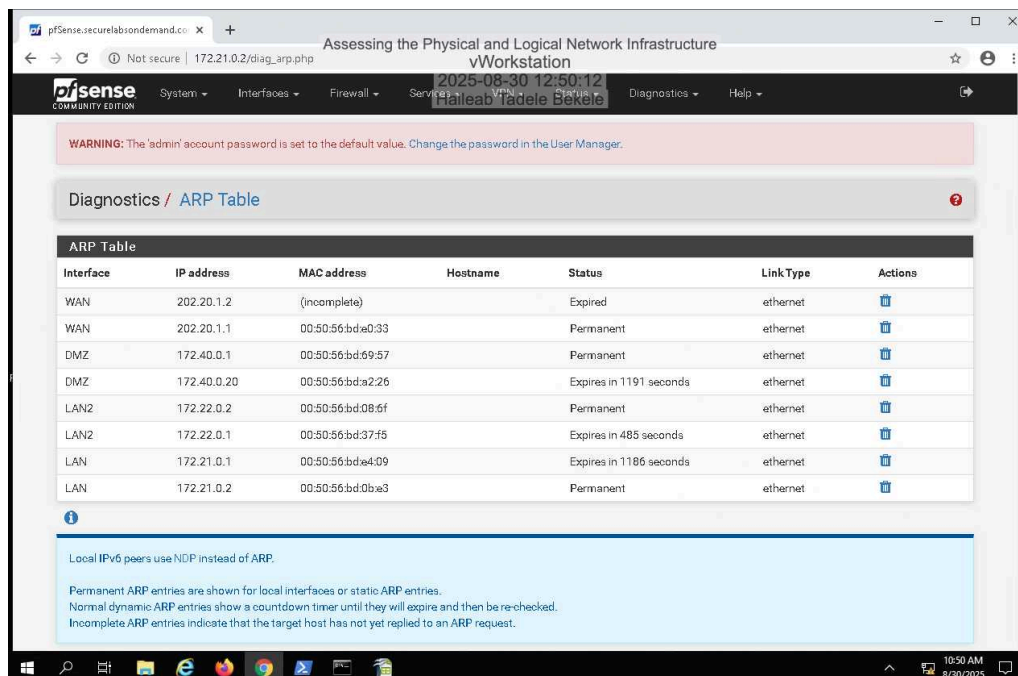
Assessing the Physical and Logical Network Infrastructure
vWorkstation
2025-08-30 12:49:59
Haileab Tadele Bekele

Update

IPv4 Routes						
Destination	Gateway	Flags	Use	Mtu	Netif	Expire
default	202.20.1.2	UGS	170373	1500	vmx3	
127.0.0.1	link#6	UH	304	16384	lo0	
172.20.0.0/24	172.21.0.1	UG	0	1500	vmx0	
172.21.0.0/24	link#1	U	0	1500	vmx0	
172.21.0.2	link#1	UHS	0	16384	lo0	
172.22.0.0/24	link#2	U	0	1500	vmx1	
172.22.0.2	link#2	UHS	0	16384	lo0	
172.30.0.0/24	172.21.0.1	UG	986	1500	vmx0	
172.31.0.0/24	172.22.0.1	UG	380	1500	vmx1	
172.40.0.0/24	link#3	U	0	1500	vmx2	
172.40.0.1	link#3	UHS	0	16384	lo0	
202.20.1.0/24	link#4	U	3268	1500	vmx3	
202.20.1.1	link#4	UHS	6536	16384	lo0	

IPv6 Routes						
Destination	Gateway	Flags	Use	Mtu	Netif	Expire
::1	link#6	UH	0	16384	lo0	
fe80::vmx0/64	link#1	U	0	1500	vmx0	

10. Make a screen capture showing the ARP table for pfSense.



Assessing the Physical and Logical Network Infrastructure
vWorkstation
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WARNING: The 'admin' account password is set to the default value. Change the password in the User Manager.

Diagnostics / ARP Table

Interface	IP address	MAC address	Hostname	Status	Link Type	Actions
WAN	202.20.1.2	(incomplete)		Expired	ethernet	
WAN	202.20.1.1	00:50:56:bd:a0:33		Permanent	ethernet	
DMZ	172.40.0.1	00:50:56:bd:69:57		Permanent	ethernet	
DMZ	172.40.0.20	00:50:56:bd:a2:26		Expires in 1191 seconds	ethernet	
LAN2	172.22.0.2	00:50:56:bd:08:6f		Permanent	ethernet	
LAN2	172.22.0.1	00:50:56:bd:37:f5		Expires in 485 seconds	ethernet	
LAN	172.21.0.1	00:50:56:bd:a4:09		Expires in 1186 seconds	ethernet	
LAN	172.21.0.2	00:50:56:bd:0b:e3		Permanent	ethernet	

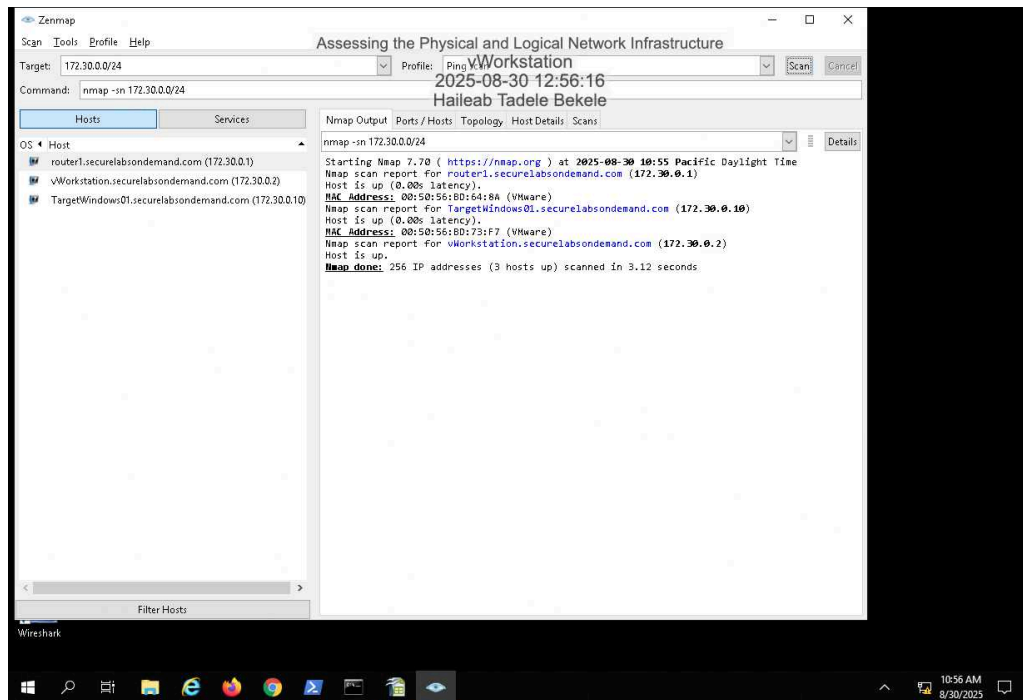
Local IPv6 peers use NDP instead of ARP.

Permanent ARP entries are shown for local interfaces or static ARP entries.
Normal dynamic ARP entries show a countdown timer until they will expire and then be re-checked.
Incomplete ARP entries indicate that the target host has not yet replied to an ARP request.

Section 2: Applied Learning

Part 1: Build an IT Asset Inventory Using Zenmap

8. Make a screen capture showing the **completed IT Asset Inventory tab**.



Part 2: Compare IP Routing Tables

5. **Record** each directly connected IP host and subnet in the router1 IP routing table.

127.0.0.0/8 is directly connected, lo169.254.0.0/16 is directly connected, ens224172.20.0.0/24 is directly connected, ens224172.21.0.0/24 is directly connected, ens256 172.30.0.0/24 is directly connected, ens192

8. **Record** each directly connected IP host and subnet in the router2 IP routing table.

127.0.0.0/8 is directly connected, lo 169.254.0.0/16 is directly connected, ens256172.20.0.0/24 is directly connected, ens192172.31.0.0/24 is directly connected, ens224

12. **Record** each directly connected IP host and subnet in the pfSense IPv4 routing table.

In pfSense, the directly connected hosts or subnets are those that list a link# in the Gateway column, rather than IP address.

172.21.0.0/24 172.22.0.0/24 172.40.0.0/24 202.20.1.0/24

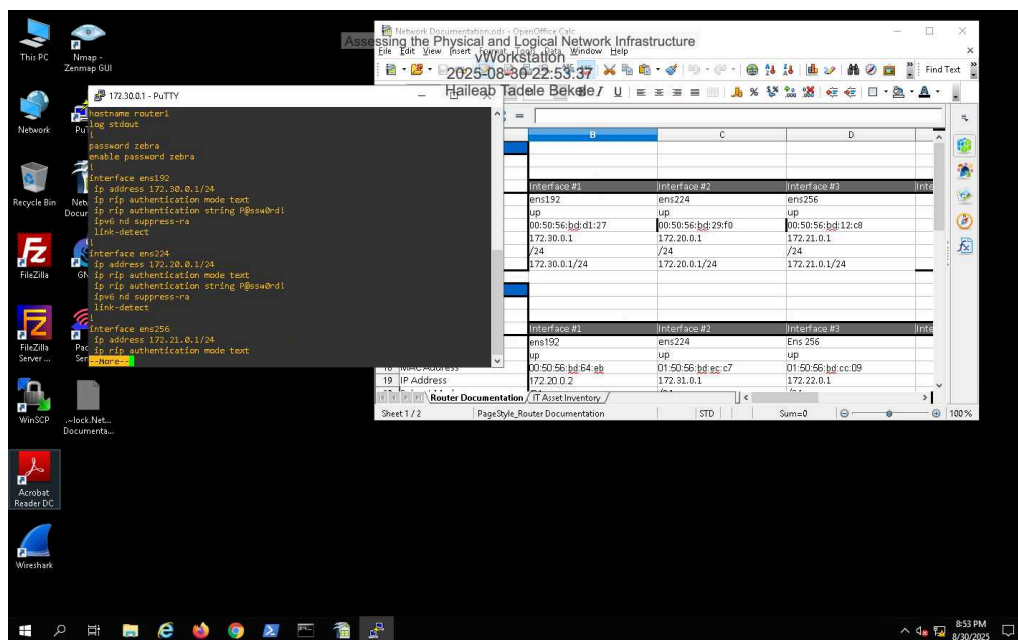
13. **Compare** your findings with the IT Asset Inventory and Router Documentation in the Network Documentation spreadsheet.

Do your findings match your documentation?

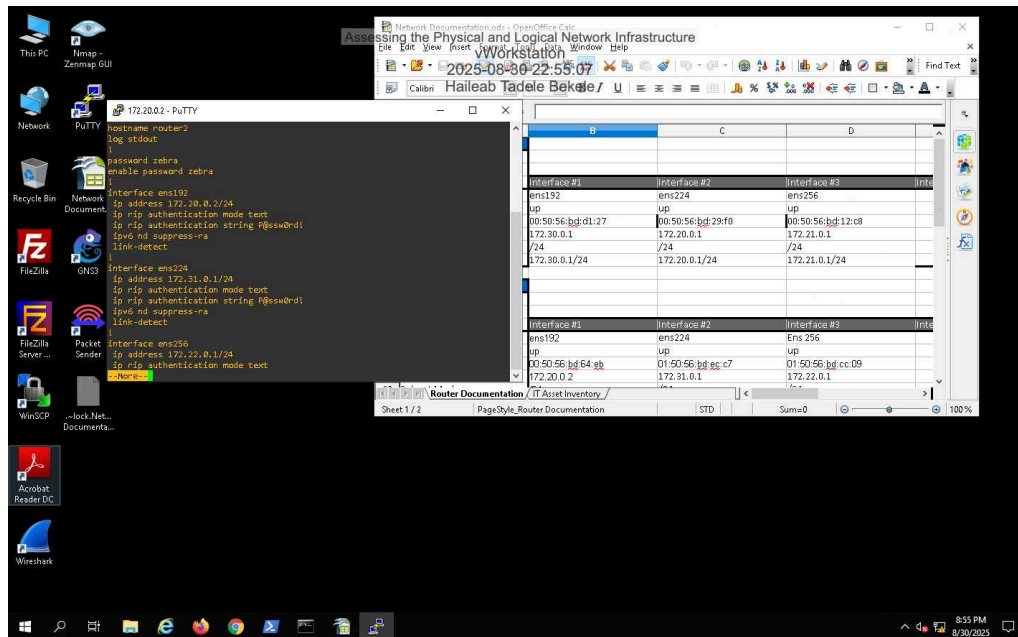
not all

Part 3: Use the Router Configuration File to Verify Interface Documentation

5. **Make a screen capture** showing the **configuration file** for router1.



8. Make a screen capture showing the configuration file for router2.



14. Document the following information from the config.xml file:

- a. Hostname
- b. Interfaces Names and IP Addresses

pfSense. wan 202.20.1.1 lan 172.21.0.2.

15. Compare your findings with the IT Asset Inventory and Router Documentation in the Network Documentation spreadsheet.

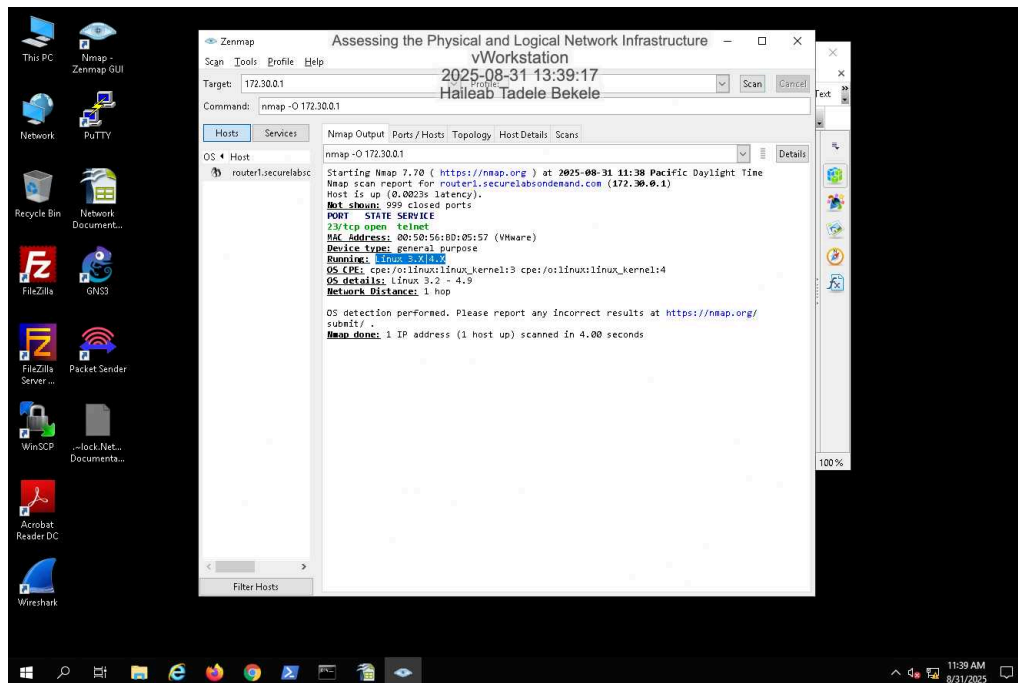
Do your findings match your documentation?

yes

Section 3: Challenge and Analysis

Part 1: Create a Corporate Network Documentation Package

Make a screen capture showing the **completed Asset Inventory** tab with the new OS column.



Part 2: Convert Nmap Output into an HTML Report

Document the command used to generate the XML output file.

```
nmap -oX C:\Users\Administrator\Desktop\networkReport.xml 173.30.0.1
```

Make a screen capture showing the **HTML** report generated from your scan in Internet Explorer.

