CYBER LAB DOCUMENTATION

Student Information

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Course: Cybersecurity Capstone

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1. Overview

This documentation outlines the configuration and setup of a cybersecurity lab environment using VirtualBox, Kali Linux, and Windows 10. The goal was to create an internal network between virtual machines for testing and simulation of both offensive and defensive security scenarios.

2. System Requirements

- Host OS: Windows 10
- VirtualBox Version: 7.x
- RAM: Minimum 4 GB (2 GB per VM)
- Storage: Minimum 50 GB total (25 GB per VM)
- Virtualization: Enabled in BIOS

3. Virtual Machines Setup

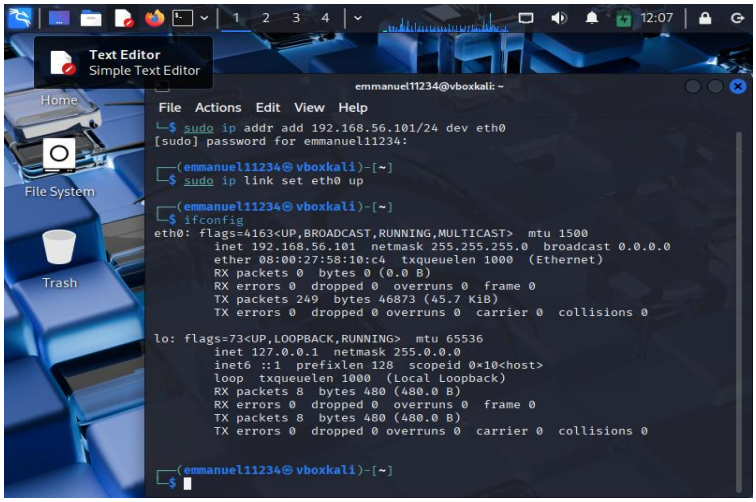
VM Name	Operating System	IP Address	Purpose
Kali Linux	Kali Linux 2023.4	192.168.56.101	Attacker Environment
Windows 10	Windows 10 Pro	192.168.56.102	Target Environment

4. Network Configuration

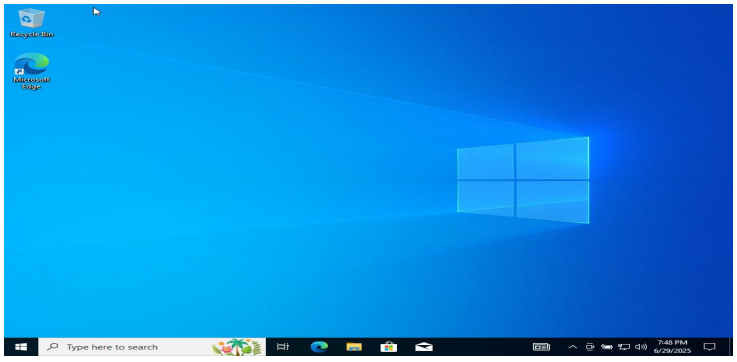
- Network Mode: Internal Network (named 'IntNet')
- Promiscuous Mode: Allow VMs
- Cable Connected: Enabled
- Manual IP Assignment used for both VMs

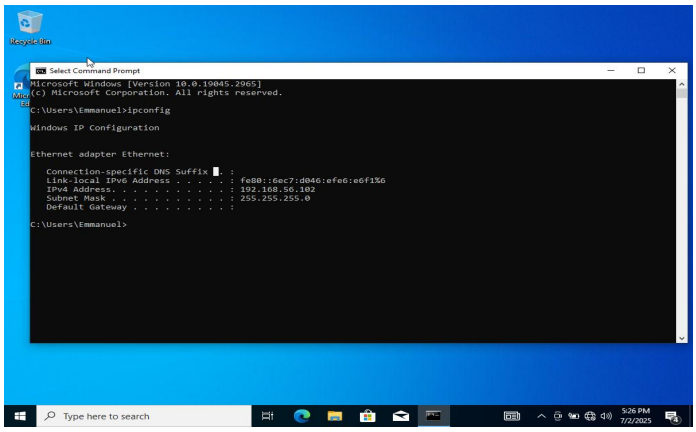
5. Screenshot

[: Kali Desktop & IP (`ip a`)]

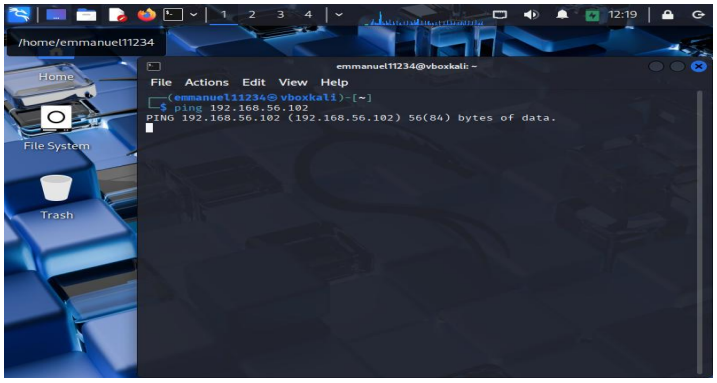


[Windows Desktop & IP (`ipconfig`)]

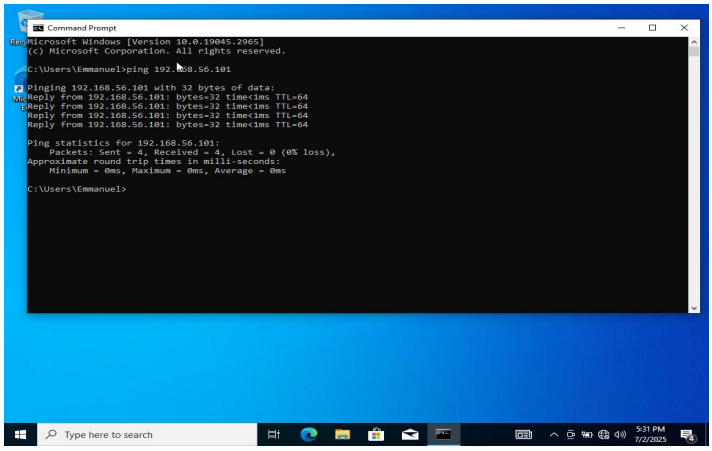




[Ping Kali → Windows]



[Ping Windows → Kali]



6. Tools Installed and Practiced

- Splunk
- Wireshark
- Autopsy
- Nmap
- Shodan
- Wappalyzer
- Windows Event Viewer
- Command Prompt

7. Troubleshooting Notes

- Resolved 'network unreachable' error on Kali by reassigning static IP
- Windows IP showed 169.x.x.x due to no DHCP — fixed by manual assignment
- Adjusted RAM from 3.8 GB to 1 GB for smoother performance

8. Conclusion

The Cybersecurity lab environment was successfully created using VirtualBox with Kali Linux and Windows 10 virtual machines. Manual networking setup allowed full control and understanding of virtual IP communication. The lab serves as a strong foundation for further Cybersecurity tasks and analysis.