



LAN ANALYZER

- OMER PORTNOY, 207251018
- RUBEN VENTURA, 328759675
- ESTY BRANDES, 209021211

INTRODUCTION



Simplifying Network Analysis for Security: Our LAN analyzer tool provides essential functionalities to enhance network security.



Streamlining Monitoring with Integrated Tools: Integration of Nmap, P0F, and Scapy simplifies network traffic monitoring rule based detections.



RATIONALE AND OBJECTIVES

- ENHANCE NETWORK SECURITY BY IDENTIFYING POTENTIAL VULNERABILITIES.
- PROVIDE BASIC NETWORK TRAFFIC MONITORING.
- SIMPLIFY NETWORK ANALYSIS WITH A STRAIGHTFORWARD GRAPHICAL INTERFACE.
- DETECT ANOMALIES OVER PROCESSES AND NETWORK TRAFFIC

MAIN FUNCTIONALITY



PORT SCANNING: USE
NMAP FOR IDENTIFYING
OPEN PORTS.



FINGERPRINTING: USE
POF FOR OS AND
SERVICE
FINGERPRINTING.



**BASIC TRAFFIC
ANALYSIS:** USE SCAPY
TO CAPTURE AND
DISPLAY NETWORK
PACKETS.



USER INTERFACE:
PROVIDE A SIMPLE UI
USING TKINTER.



Integration of Functionalities:

Use a modular design to efficiently combine port scanning, fingerprinting, traffic and behavioral analysis .



Real-time Processing:

Leverage optimized libraries like Scapy for efficient real-time traffic analysis.



UI Development:

Implement a straightforward and responsive GUI using the Tkinter framework.

CHALLENGES AND SOLUTIONS

DEVELOPMENT ENVIRONMENT AND TOOLS

1

Leveraging Python for Networking and GUI Development:

Python's libraries empower robust networking functionalities and streamlined GUI development.

2

Optimizing Network Analysis with Scapy, POF and WMI:

Scapy and POF enhance network analysis accuracy and efficiency for robust security.

3

Enhancing User Experience Through Tkinter GUI:

Tkinter simplifies UI development, ensuring user-friendly interface for tool usage.