Network Traffic Security Analysis Report

Executive Summary

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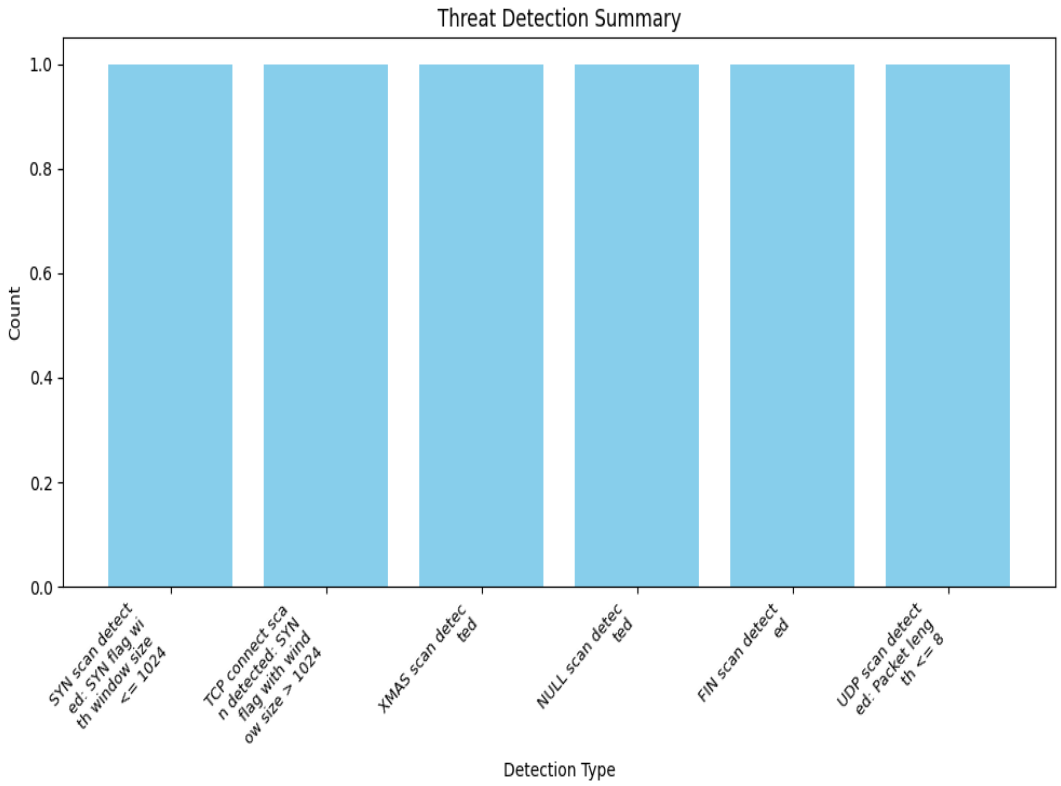
Coordinated scanning activity detected originating from internal IP 192.168.100.95 targeting 192.168.100.99.
Multiple stealth port-scanning techniques observed, including SYN, XMAS, NULL, FIN, and UDP scans.
Critical reconnaissance phase identified, suggesting potential preparation for lateral movement or exploitation.
Risk Assessment

Critical Severity:
Stealth scan patterns (XMAS, NULL, FIN) indicate an attacker evading basic detection mechanisms.
Internal IP involvement (192.168.100.95) raises concerns about compromised hosts or insider threats.
High Severity:
UDP scan (packet length ≤ 8) targeting stateless protocols could expose vulnerable services.
SYN scan variations (window size anomalies) suggest fingerprinting attempts to identify OS/services.
Threat Observations

Scanning Techniques:
SYN scan (packet #199, window ≤ 1024) and **TCP connect scan** (packet #201, window > 1024) detected within seconds.
Advanced TCP flag abuse: XMAS (packet #203), NULL (packet #205), and FIN (packet #207) scans observed in rapid succession.
Low-footprint UDP scan detected, likely probing for DNS, DHCP, or other UDP-based services.
Behavioral Patterns:
All scans originated from 192.168.100.95 within a 1-second timeframe (07:47:31), indicating automated tool usage (e.g., Nmap).
Absence of follow-up attack packets (0 TCP/UDP/ICMP/ARP attack packets logged) suggests **reconnaissance phase in progress**.
Recommendations

Immediate Actions:
Quarantine 192.168.100.95 for forensic analysis to determine if it is compromised or malicious.
Enhance IDS/IPS rules to flag TCP flag anomalies (e.g., FIN without ACK, XMAS combinations).
Network Hardening:
Implement RFC 3704 filtering to block internally originated spoofed traffic.
Restrict UDP services to authorized hosts and deploy UDP flood protection mechanisms.
Monitoring Enhancements:
Deploy endpoint detection on 192.168.100.99 to identify follow-up exploitation attempts.
Enable flow analysis for internal traffic to detect low-and-slow scanning patterns.
Policy Updates:
Enforce strict egress filtering to limit internal hosts from initiating irregular TCP flag combinations.
Segment the 192.168.100.0/24 network to reduce lateral movement opportunities.

Threat Detection Summary



Detection Type	Count
SYN scan detected: SYN flag wi th window size <= 1024	1
TCP connect scan detected: SYN flag with window size > 1024	1
XMAS scan detected	1
NULL scan detected	1
FIN scan detected	1
UDP scan detected: Packet leng th <= 8	1

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