

Endpoint Detection Lab (Sysmon + ELK)

Executive Summary

This project demonstrates endpoint-level detection engineering using Sysmon, Winlogbeat, and the Elastic Stack. The goal was to collect high-fidelity telemetry, identify malicious behavior, tune noise, and build dashboards for rapid triage.

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Architecture

Windows 10 endpoint with Sysmon, Winlogbeat forwarding logs to Elasticsearch, Kibana dashboards, and Kali attacker machine.

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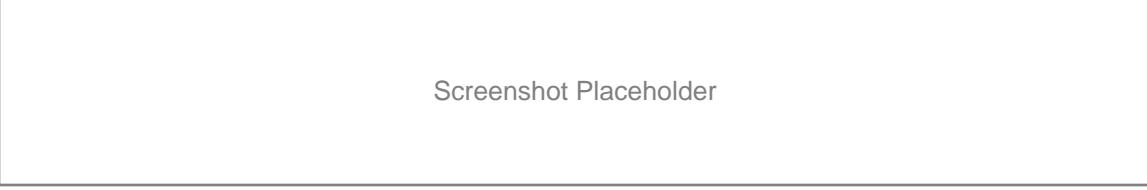
Implementation

Installed Sysmon with SwiftOnSecurity config, forwarded logs, simulated attacks (PowerShell misuse, brute-force), built dashboards.

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Detection Engineering

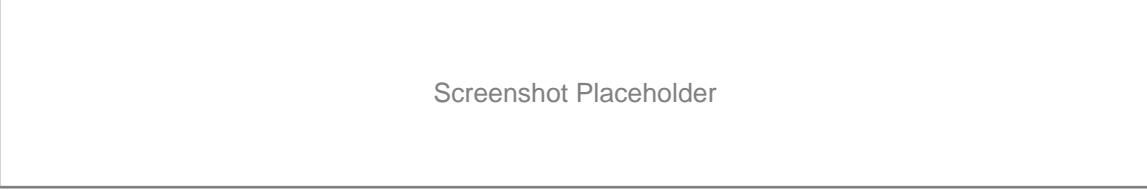
Created & tuned detections for suspicious PowerShell, anomalous parent-child processes, brute-force attempts, and registry persistence.



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MITRE ATT&CK; Mapping

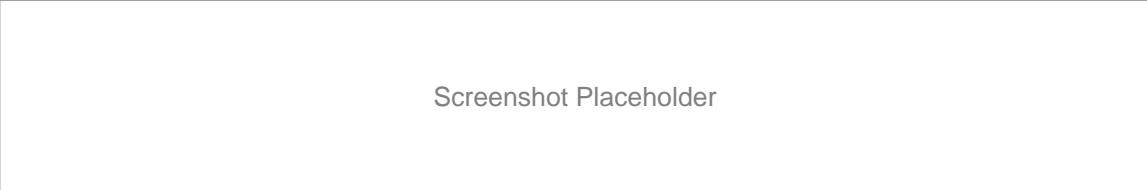
Mapped alerts to T1059, T1112, T1078, T1021.



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Outcome

Delivered a high-fidelity detection playbook and investigation report demonstrating triage workflow.



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