

Incident Response Report

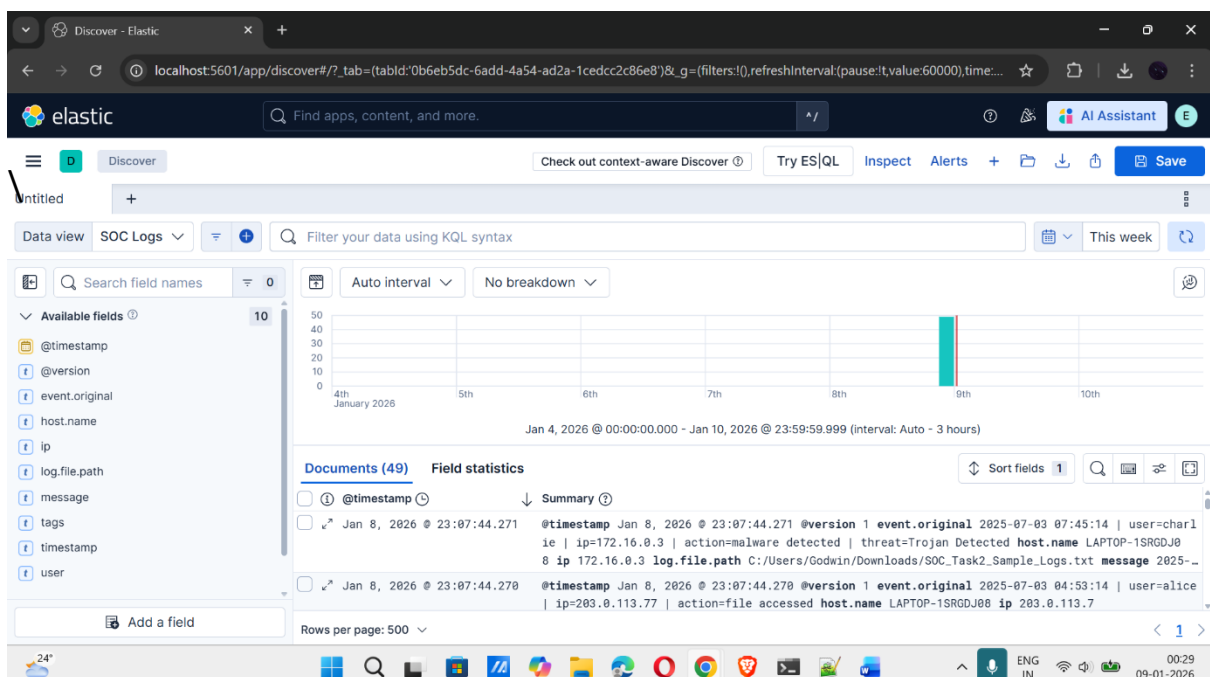
1. Executive Summary

During monitoring using the Elastic Stack (SIEM), multiple high-risk security alerts were detected across several user accounts and IP addresses. The alerts indicated malware infections like, Trojans, Worms, Rootkits, and Ransomware behaviour, combined with repeated authentication failures.

Further analysis confirmed a multi-host malware incident with possible credential compromise.

2. Environment Overview

- **SIEM Tool Used:** Elastic Stack (Elasticsearch + Kibana + Logstash)
- **Log Source:** Simulated SOC logs (SOC_Task2_Sample_Logs)
- **Index Name:** soc-logs
- **Log Types Analysed:**
 - Authentication logs
 - Network connection logs
 - Malware detection alerts
 - File access logs

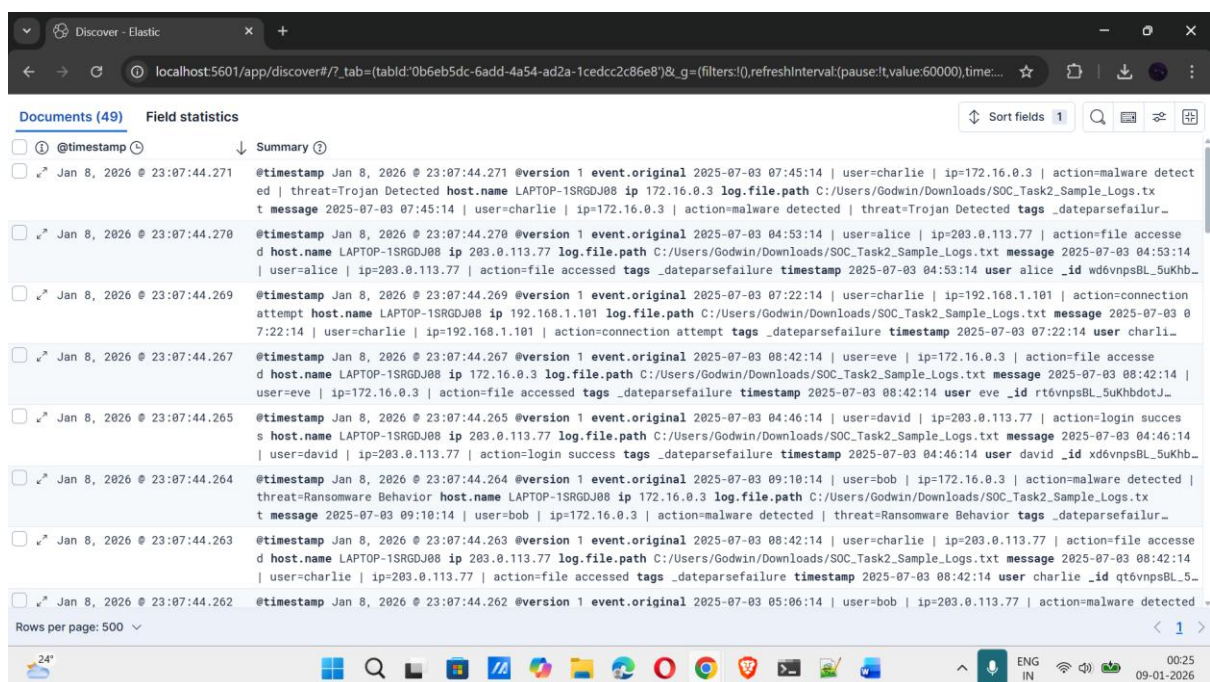


3. Incident Detection

The incident was detected through automated SIEM ingestion and manual analysis in Kibana. Alerts triggered included:

- Malware detection events
- Multiple failed login attempts
- Suspicious IP activity across multiple users

These alerts were reviewed in the **Discover** section of Kibana.



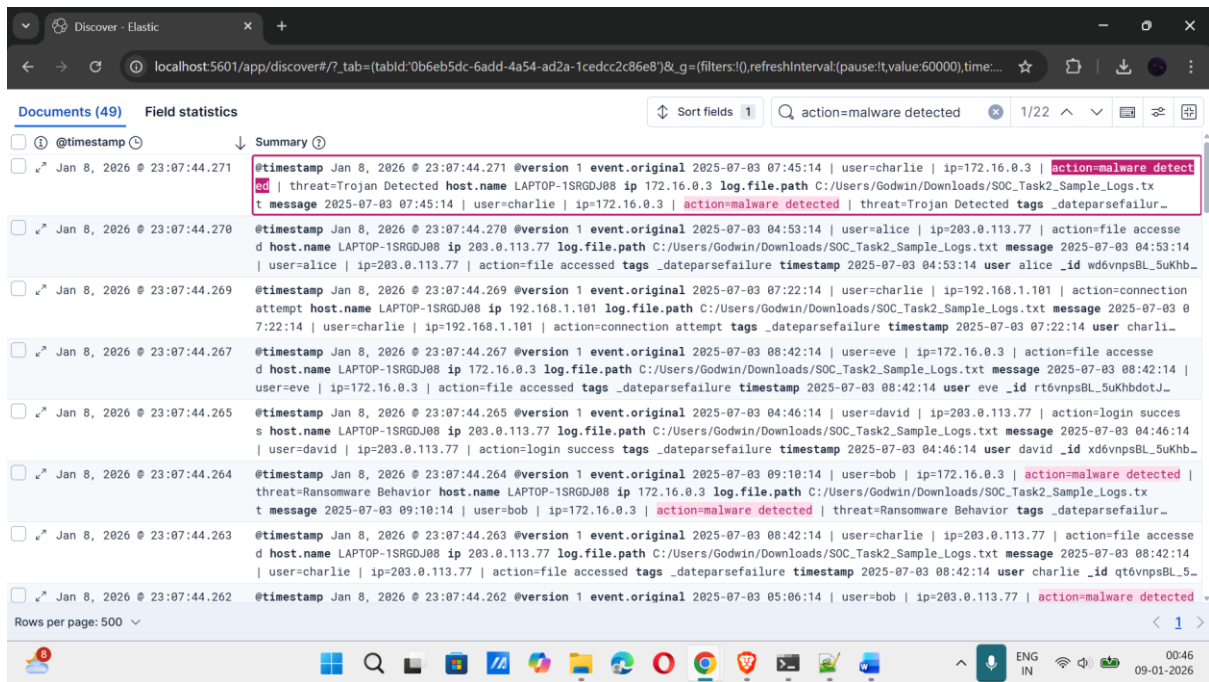
4. Identified Suspicious Activities

4.1 Malware Infections (High Severity)

The following malware related alerts were identified:

- Trojan detections on multiple hosts
- Rootkit signature alerts
- Worm infection attempts
- Ransomware behaviour detection

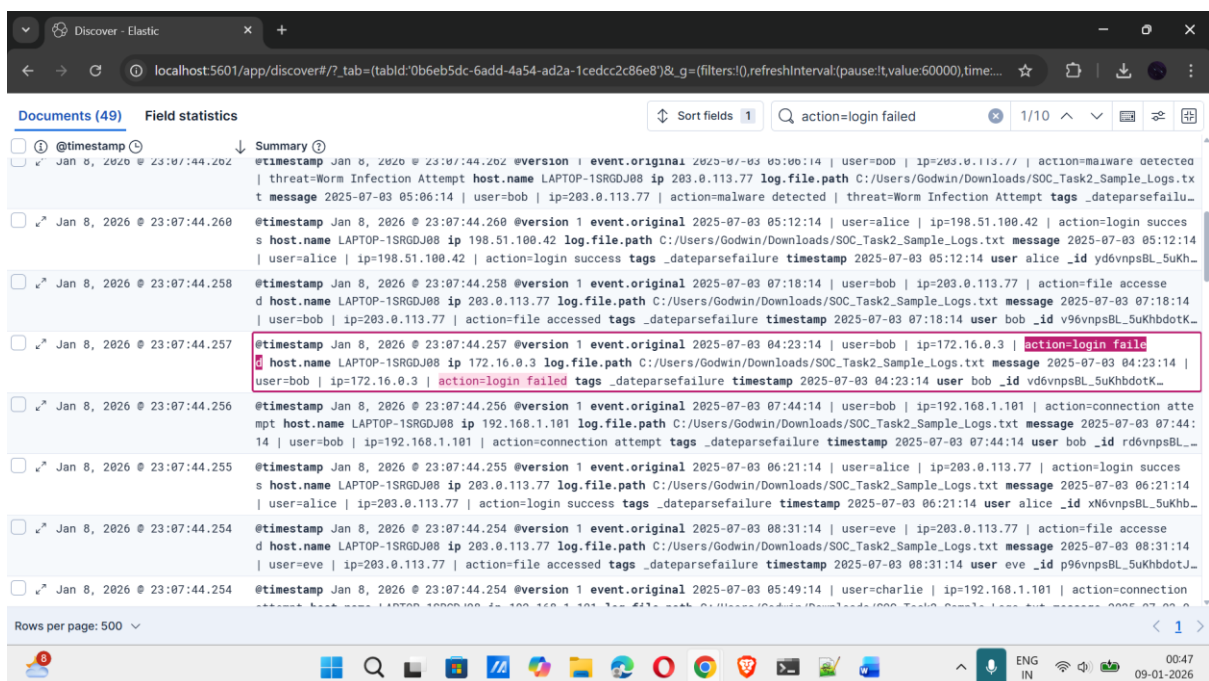
These alerts indicate active system compromise rather than beginning activity.

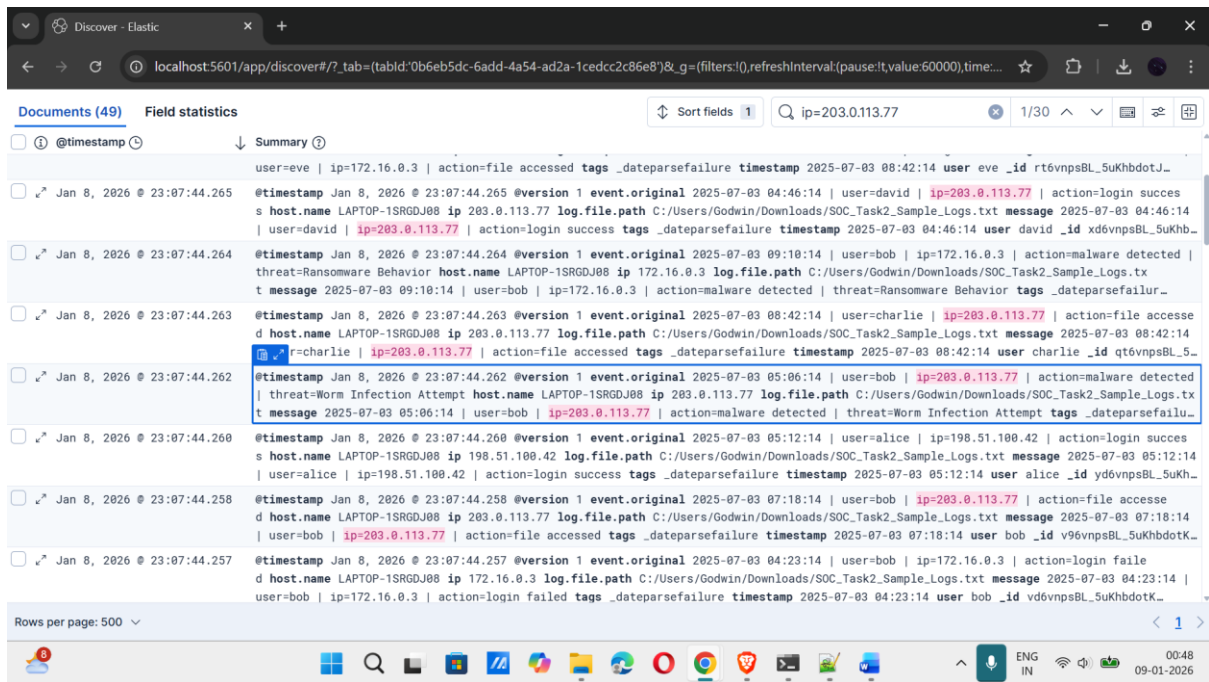


4.2 Authentication Abuse (Medium to High Severity)

- Multiple failed login attempts from the same IP addresses
- Failed login attempts followed by successful access
- Same IPs associated with malware alerts

This behaviour suggests credential brute-force attempts or compromised credentials.





4.3 Suspicious IP Addresses

The following IPs were involved in multiple malicious activities:

- 203.0.113.77
- 172.16.0.3
- 10.0.0.5
- 198.51.100.42

These IPs were flagged as high-risk.

5. Incident Classification

Category	Details
----------	---------

Incident Type	Malware Infection & Credential Compromise
---------------	---

Severity	High
----------	------

Scope	Multiple users and systems
-------	----------------------------

Status	Contained (Simulated)
--------	-----------------------

6. Incident Timeline (Simplified)

1. Initial malware detection alerts triggered
2. Multiple failed login attempts observed
3. Repeated activity from same IPs across users
4. File access events after malware detection
5. Incident confirmed and escalated

7. Impact Assessment

- Potential compromise of multiple endpoints
- Risk of unauthorized access and data exposure
- Possible lateral movement inside the environment
- Business operations at risk if incident were real

8. Incident Response Actions (Simulated)

8.1 Containment

- Isolating affected systems
- Blocking malicious IP addresses
- Temporarily disabling compromised user accounts

8.2 Eradication

- Initiating full malware scans
- Removing detected threats
- Resetting credentials for affected users

8.3 Recovery

- Verifying system integrity
- Restoring normal operations
- Continuing monitoring for recurrence

9. Recommendations

- Enforce strong password policies and MFA
- Improve SIEM alert tuning
- Implement endpoint detection and response (EDR)
- Conduct regular security awareness training
- Monitor high-risk IP ranges proactively

10. Conclusion

The investigation successfully identified and classified a high-severity security incident involving malware and authentication abuse. Proper SOC procedures were followed, and recommended actions were documented to prevent future occurrences.