Splunk Alert Project: Detecting Failed Logins on Windows Server

1. Project Overview

This project demonstrates how to create and trigger a security alert in Splunk Enterprise using data collected from a Windows Server via the Splunk Universal Forwarder. The alert identifies multiple failed login attempts (Event ID 4625), which can be indicative of brute-force attacks or unauthorized access attempts.

2. Architecture & Setup

• Splunk Universal Forwarder installed on Windows Server.
• Splunk Enterprise installed on Host PC.
• Forwarder configured to send Windows Security logs to Splunk Enterprise.
• Data indexed under 'main' index with sourcetype 'WinEventLog:Security'.

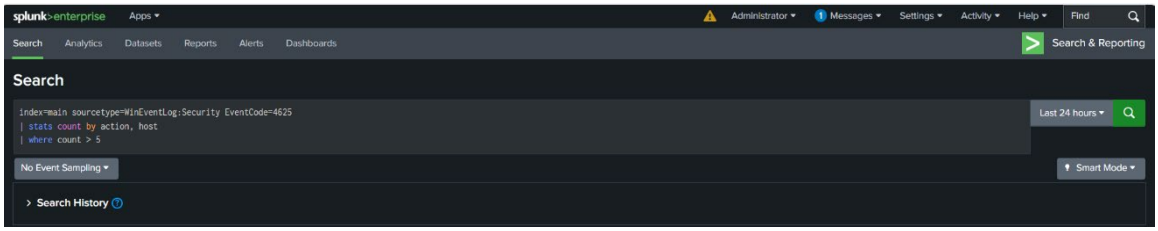
3. Objective

Trigger an alert when more than 5 failed login attempts (EventCode 4625) occur within a 10-minute window.

4. Splunk Search Query

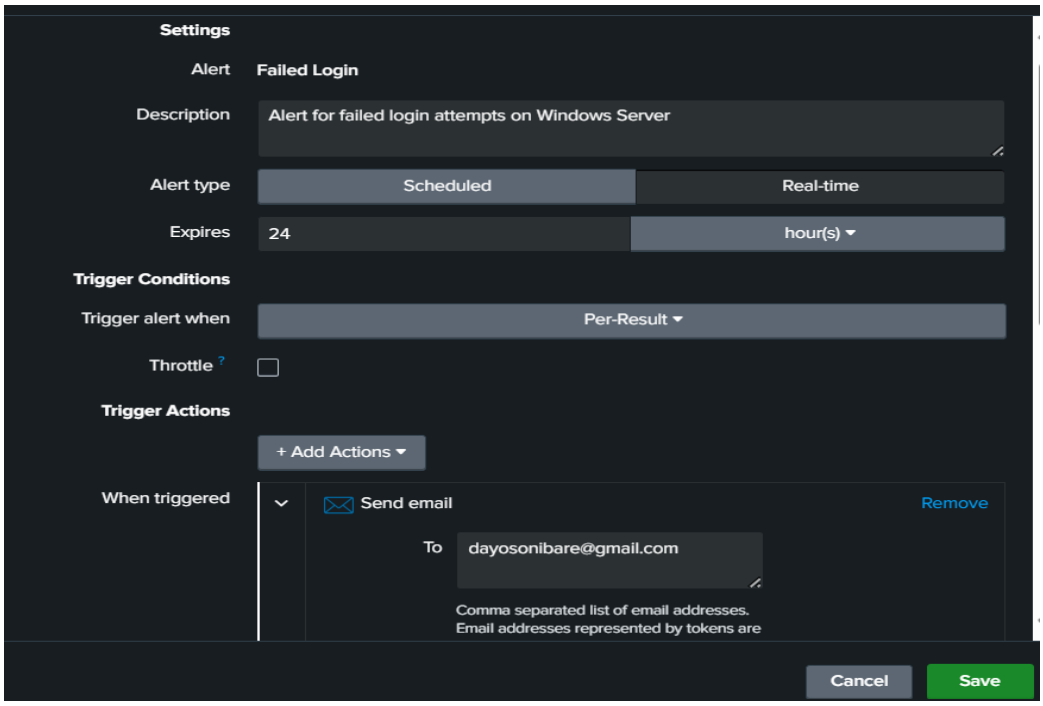
The following SPL query was used to detect failed login attempts:

index=main sourcetype=WinEventLog:Security EventCode=4625
| stats count by action, host
| where count > 5



5. Alert Configuration

• Title: Failed Logins Alert
• Type: Scheduled Alert (Every 10 minutes)
• Time Range: Last 10 minutes
• Trigger Condition: Number of results > 0
• Trigger Actions: Send Email (Configured via SMTP in Splunk Settings)

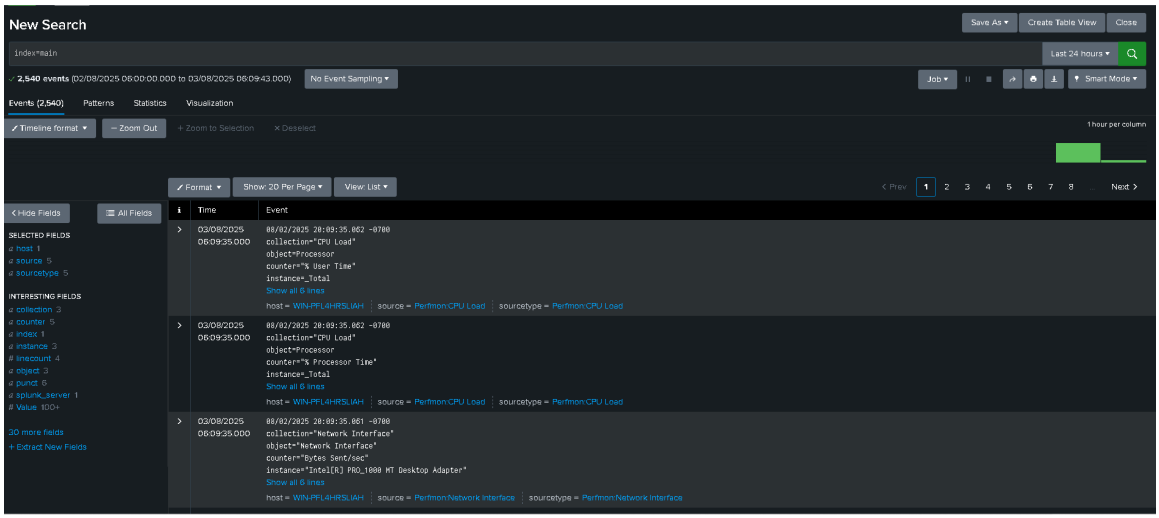


6. Simulating the Alert

To simulate real-world conditions, failed login attempts were manually triggered on the Windows Server using the `runas` command with incorrect credentials. This ensured multiple Event ID 4625 logs were generated and forwarded to Splunk for processing.

7. Validation & Output

The alert was successfully triggered after 6 failed login attempts. It appeared in the 'Triggered Alerts' section of Splunk, and an email notification was received, confirming successful detection and response.



8. Conclusion

This project demonstrates the practical use of Splunk for real-time log monitoring and alerting.