Splunk Alert Project: Detecting Failed Logins on

❖ **Designed by Jaytech enterprises**

➢ ***Windows Server (2022)***

➢ Project Overview

Using Windows authentication logs obtained from a Windows server using the Splunk Universal Forwarder, this project shows how to create and initiate a security alert in Splunk Enterprise. The alert identifies a pattern that is frequently linked to brute-force assaults or illegal access attempts: several unsuccessful login attempts (Event ID 4625) followed by a successful login (Event ID 4624). This application demonstrates Splunk's capacity to provide proactive incident detection in Windows settings, correlate security events, and offer real-time monitoring.

➢ Architecture & Setup

• Windows Server has Splunk Universal Forwarder installed.
• The host PC has Splunk Enterprise installed.
• A forwarder set up to transport Splunk Enterprise Windows Security logs.
• Data with the source type "WinEventLog:Security" is indexed under the "main" index.

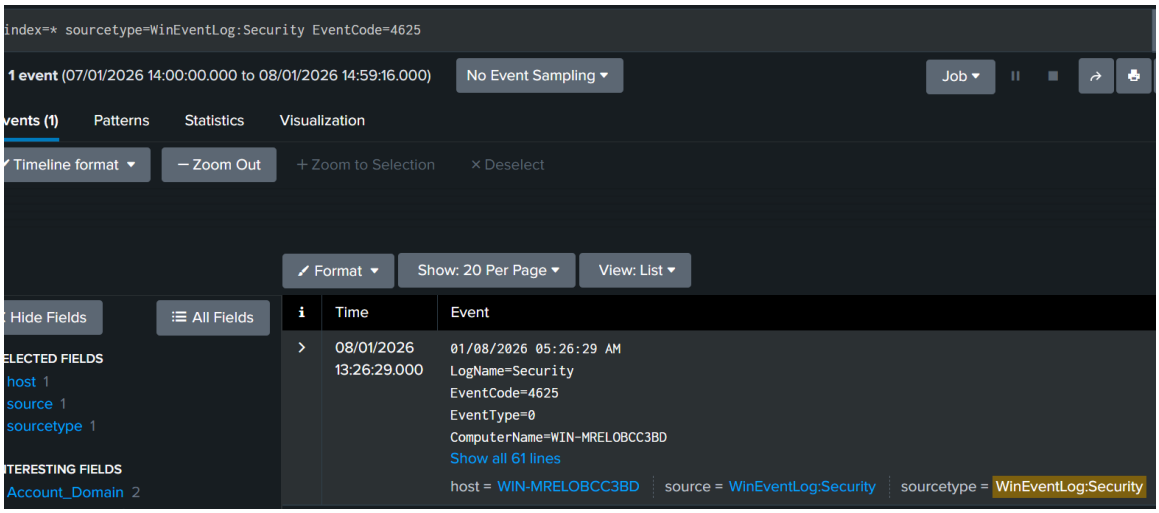
- **Objective**

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

- **Splunk Search Query**

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

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



- **Alert Configuration**

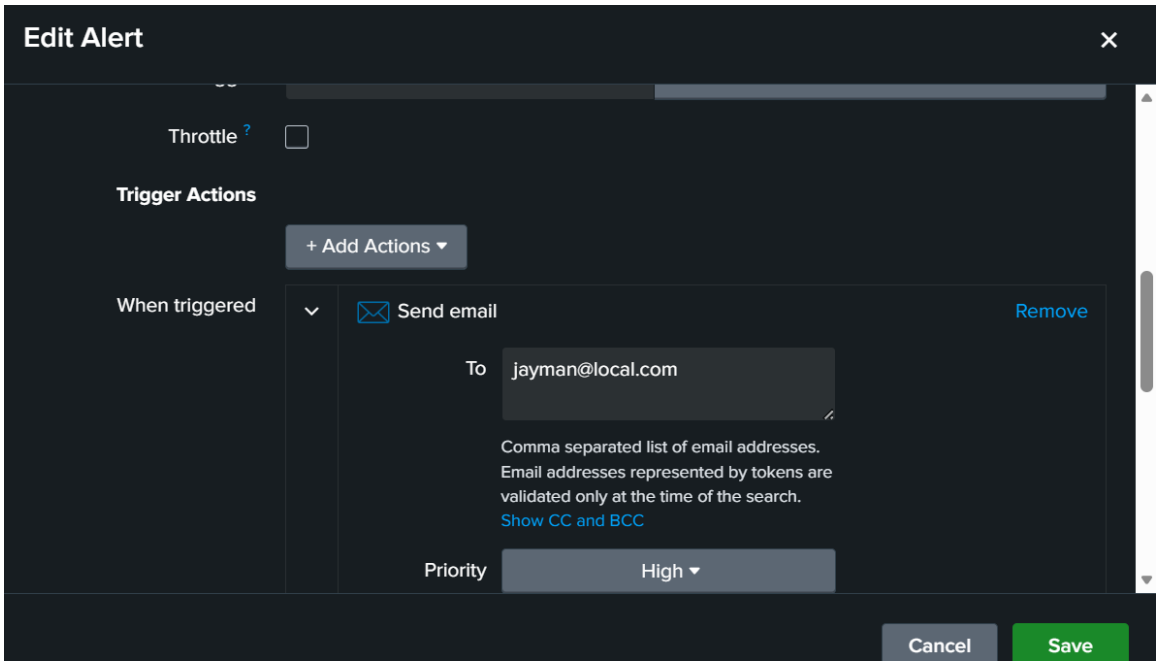
• Title: Failed Logins Alert
• Type: Scheduled Alert (Every 10 minutes)
• Time Range: Last 10 minutes
• Trigger Condition: Number of results > 0
• Trigger Actions: Send Email (Configured via SMTP in Splunk Settings)

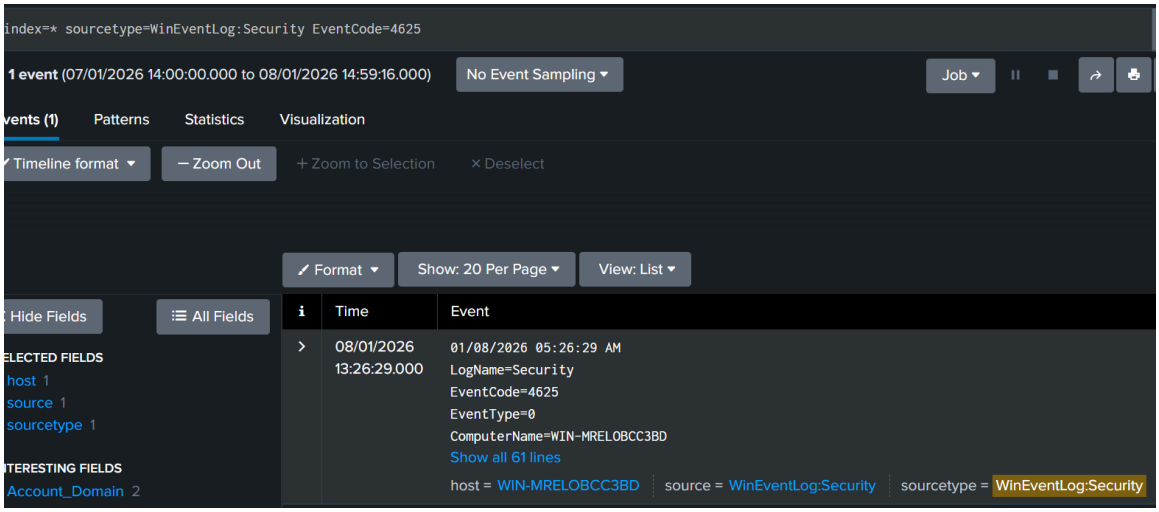
- **Simulating the Alert**

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.

- **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.





- **Conclusion**

This project shows how Splunk can be used practically for real-time log monitoring and alerting, allowing for continuous system activity visibility and the prompt identification of suspicious or security-related events.