Splunk Alert Project: Detecting Failed Logins on Windows Server

1. Project Overview

This project demonstrates the creation and testing of a **security alert in Splunk Enterprise** using Windows Security Event Logs collected from a Windows Server through the **Splunk Universal Forwarder**. The alert focuses on detecting **multiple failed authentication attempts (Event ID 4625)**, which may indicate brute-force attacks, credential misuse, or unauthorized access attempts.

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2. Architecture & Setup

The environment was configured as follows:

- **Splunk Universal Forwarder** installed on the Windows Server
- **Splunk Enterprise** installed on the host machine
- Windows Security Event Logs forwarded to Splunk Enterprise
- Logs indexed in the **main** index
- Log source type configured as **WinEventLog:Security**

This setup ensures centralized log collection and real-time visibility into authentication-related events.

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3. Objective

The primary objective of this project is to **trigger a security alert when more than five failed login attempts occur within a 10-minute time window**, enabling early detection of suspicious authentication behavior.

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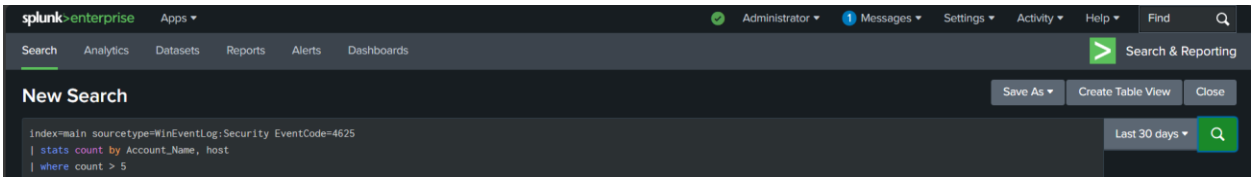
4. Splunk Search Query

The following SPL query was used to identify repeated failed login attempts:

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

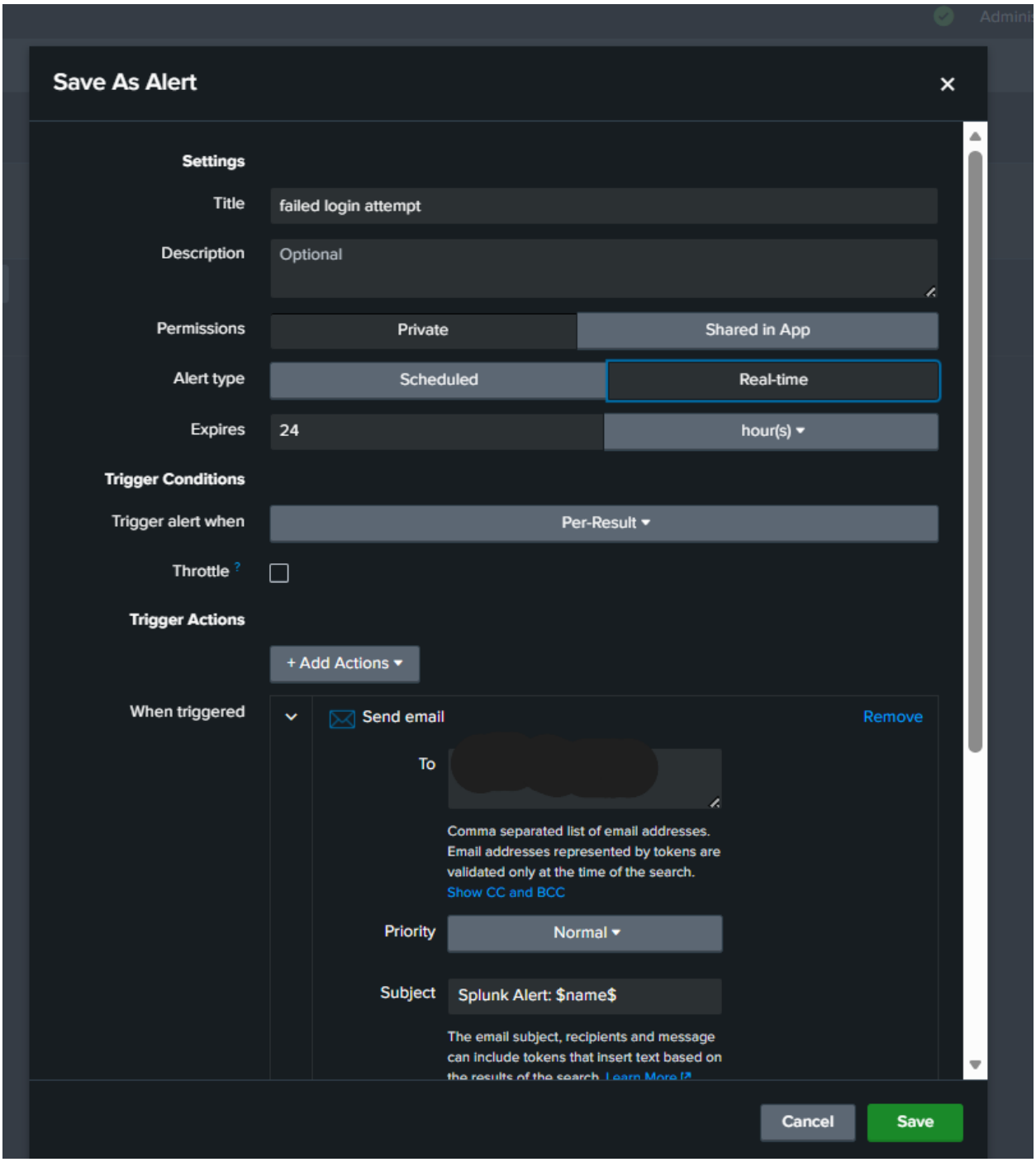
This query aggregates failed login events by user account and host, triggering an alert when the defined threshold is exceeded.

Note: The alert time range in Splunk was configured to run over a **10-minute window** to meet the project objective.



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.