

Splunk Fundamentals 1 Lab Exercises

Lab typographical conventions:

[sourcetype=db_audit] OR [cs_mime_type] indicates either a source type or the name of a field.

NOTE: Lab work will be done on your personal computer or virtual machine, no lab environment is provided. We suggest you **DO NOT** do the lab work on your production environment.

The lab instructions refer to these source types by the types of data they represent:

Type	Sourcetype	Fields of interest
Web Application	access_combined_wcookie	action, bytes, categoryId, clientip, itemId, JSESSIONID, productId, referer, referer_domain, status, useragent, file
Database	db_audit	Command, Duration, Type
Web server	linux_secure	COMMAND, PWD, pid, process

Lab Module 13 – Creating Alerts

WARNING: This lab will not work with a free license. Please only do this lab if your trial license has not converted to a free license.

NOTE: This lab document has two sections. The first section includes the instructions without answers. The second section includes instructions with the expected search string (answer) in **red**. This course will use internal Splunk data and require an Admin account.

Description

In this lab exercise, you will create and trigger an alert that will display in the Splunk interface.

Scenario: For security reasons, you need to monitor failed login attempts on your Splunk search head. You are only interested in failed logins from the admin account. You want to be notified when there is more than one failed login attempt within one minute.

Task 1: Change user account and run a sample search.

1. Log out of Splunk Enterprise using the **uname > Logout** menu.
2. Enter `admin` for user name and the password of `WrongPassword`.
3. Now, enter `admin` for user name and the password you selected in Module 3.
4. Navigate to the Search view. (If you are in the **Home** app, click **Search & Reporting** from the column on the left side of the screen. You can also access the Search view by clicking the **Search** menu option on the bar at the top of the screen.)

- Search the `_audit` index for events where the action of "login attempt" returned a "failed" info value for the username of admin over the **Last 15 Minutes**.

Example Results:

i	Time	Event
>	5/22/18 3:23:37.220 PM	Audit:[timestamp=05-22-2018 15:23:37.220, user=admin, action=login attempt, info=failed, src=127.0.0.1][n/a] host = cbreshears-MBP-B120D source = audittrail sourcetype = audittrail

Task 2: Create an alert.

- From the **Save As** menu, select **Alert**.
- Title the alert: **Splunk Web Login Attempts**
- For **Permissions**, select **Shared in App**.
- For **Alert type**, select **Real-time**.
- For **Trigger alert when**, select **Number of Results**.
- Set the number of results to: **is greater than 0**.
- The **in** field should be set to **1 minute**.
- For **Trigger**, select **For each result**.
- Check the **Throttle** checkbox.
- For **Suppress results containing field value**, type: `host`
- Make sure **Suppress triggering for** is set to **60 seconds**.
- Click **Add Actions** and select **Add to Triggered Alerts**.
- Set the **Severity** to **High**.

Example:

Save As Alert

Settings

Title: Splunk Web Login Attempts

Description: Optional

Permissions: Private | **Shared in App**

Alert type: Scheduled | **Real-time**

Trigger Conditions

Trigger alert when: Number of Results ▼

is greater than ▼ 0

in 1 minute(s) ▼

Trigger: Once | **For each result**

Throttle [?] ☒

Suppress results containing field value: host

Suppress triggering for: 60 second(s) ▼

Trigger Actions

+ Add Actions ▼

When triggered ▼

- Add to Triggered Alerts Remove
- Severity: High ▼

Cancel Save

- Click **Save** and Click **View Alert**.

Task 3: Test alert.

20. Log out of Splunk Enterprise using the **Administrator > Logout** menu.
21. Enter `admin` for user name and the password of `WrongPassword` three times in a row.
22. Now, enter `admin` for user name and the correct password.
23. From the Splunk bar, click **Activity > Triggered Alerts**.
24. Make sure **Search & Reporting** is selected for **App**.

Example:

	Time ↕	Fired alerts ↕	App	Type ↕	Severity ↕	Mode ↕	Actions
<input type="checkbox"/>	2018-05-22 15:30:03 PDT	Splunk Web Login Attempts	search	Real-time	High	Per Result	View results Edit search Delete

25. Click the **View results** link on a triggered alert to see the event(s) that caused the alert.

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Database	db_audit	Command, Duration, Type
Web server	linux_secure	COMMAND, PWD, pid, process

Lab Module 13 – Creating Alerts with Solutions

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Description

In this lab exercise, you will create and trigger an alert that will display in the Splunk interface.

Scenario: For security reasons, you need to monitor failed login attempts on your Splunk search head. You are only interested in failed logins from the admin account. You want to be notified when there is more than one failed login attempt within one minute.

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2. Enter `admin` for user name and the password of `WrongPassword`.
3. Now, enter `admin` for user name and the password you selected in Module 3.
4. Navigate to the Search view. (If you are in the **Home** app, click **Search & Reporting** from the column on the left side of the screen. You can also access the Search view by clicking the **Search** menu option on the bar at the top of the screen.)

- Search the `_audit` index for events where the action of "login attempt" returned a "failed" info value for the username of admin over the **Last 15 Minutes**.

(`index=_audit action="login attempt" info=failed user=admin`)

Example Results:

i	Time	Event
>	5/22/18 3:23:37.220 PM	Audit:[timestamp=05-22-2018 15:23:37.220, user=admin, action=login attempt, info=failed, src=127.0.0.1][n/a] host = cbreshears-MBP-B120D source = audittrail sourcetype = audittrail

Task 2: Create an alert.

- From the **Save As** menu, select **Alert**.
- Title the alert: `Splunk Web Login Attempts`
- For **Permissions**, select **Shared in App**.
- For **Alert type**, select **Real-time**.
- For **Trigger alert when**, select **Number of Results**.
- Set the number of results to: **is greater than 0**.
- The **in** field should be set to **1 minute**.
- For **Trigger**, select **For each result**.
- Check the **Throttle** checkbox.
- For **Suppress results containing field value**, type: `host`
- Make sure **Suppress triggering for** is set to **60 seconds**.
- Click **Add Actions** and select **Add to Triggered Alerts**.
- Set the **Severity** to **High**.

Example:

The screenshot shows the 'Save As Alert' configuration window. The settings are as follows:

- Title:** Splunk Web Login Attempts
- Description:** Optional
- Permissions:** Shared in App
- Alert type:** Real-time
- Trigger Conditions:**
 - Trigger alert when:** Number of Results
 - is greater than:** 0
 - in:** 1 minute(s)
 - Trigger:** For each result
- Throttle:** ☒
- Suppress results containing field value:** host
- Suppress triggering for:** 60 second(s)
- Trigger Actions:**
 - When triggered:** Add to Triggered Alerts (Severity: High)

Buttons at the bottom: Cancel, Save.

- Click **Save** and Click **View Alert**.

Task 3: Test alert.

20. Log out of Splunk Enterprise using the **Administrator > Logout** menu.
21. Enter `admin` for user name and the password of `WrongPassword` three times in a row.
22. Now, enter `admin` for user name and the correct password.
23. From the Splunk bar, click **Activity > Triggered Alerts**.
24. Make sure **Search & Reporting** is selected for **App**.

Example:

	Time ▾	Fired alerts ▾	App	Type ▾	Severity ▾	Mode ▾	Actions
<input type="checkbox"/>	2018-05-22 15:30:03 PDT	Splunk Web Login Attempts	search	Real-time	● High	Per Result	View results Edit search Delete

25. Click the **View results** link on a triggered alert to see the event(s) that caused the alert.