Creating Alerts and Dashboard

Splunk® Configuration Guide

IBM Confidential

Note:

Before you use this information and the product it supports, read the information in "Notices" on page 11.

August 2024 edition

This edition applies to IBM Storage Defender Data Management Service and to all subsequent releases and modifications until otherwise indicated in new editions:

- IBM Storage Defender ordered through Passport Advantage® (product number 5900-AXW)
- IBM Storage Defender Data Management Service ordered through AAS (product number 5900-AY6)

Contents

About this publication

This publication provides overview, planning, installation, and user instructions for IBM Storage Defender Data Resiliency Service.

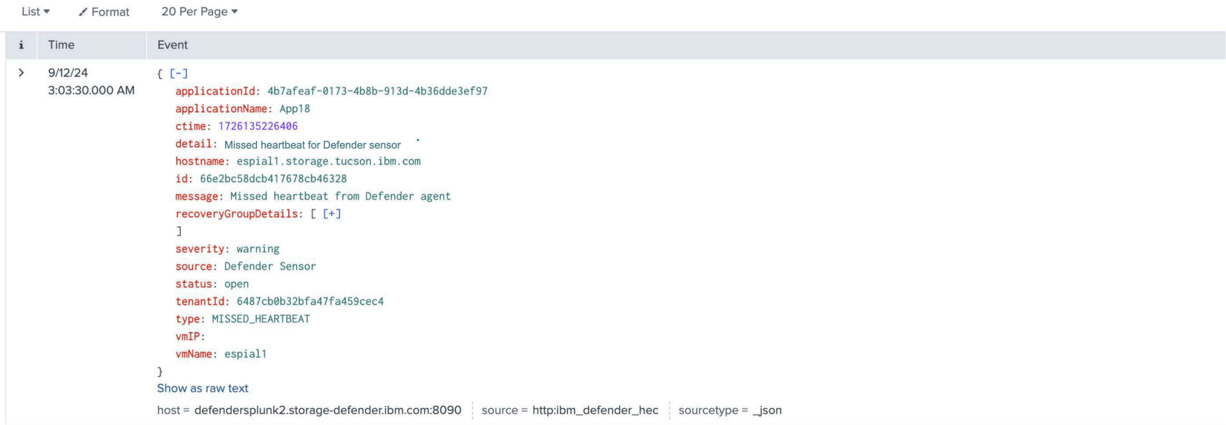
Chapter 1. Creating IBM Storage Defender alerts in Splunk®

Procedure

1. Log in with your Splunk® Enterprise account by using your admin credentials.
2. Click **Search and reporting** in the navigation bar under **Apps**.
3. Search for `index=ibm_defender type POTENTIAL_THREAT` in the search bar.

   ```
   index="ibm_defender" message="Potential threat detected"
   ```

   The following figure displays the alert details for the `MISSED_HEARTBEAT` type alert.

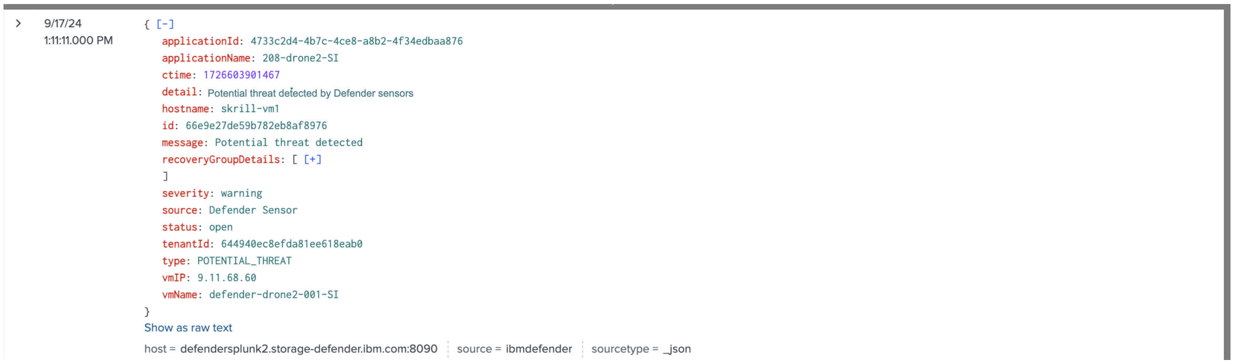
   9/12/24
   3:03:30.000 AM

   ```
   { [-]
     applicationId: 4b7afeaf-0173-4b8b-913d-4b36dde3ef97
     applicationName: App18
     ctime: 1726135226406
     detail: Missed heartbeat for Defender sensor
     hostname: espial1.storage.tucson.ibm.com
     id: 66e2bc58dcb417678cb46328
     message: Missed heartbeat from Defender agent
     recoveryGroupDetails: [ [+]
     ]
     severity: warning
     source: Defender Sensor
     status: open
     tenantId: 6487cb0b32bfa47fa459cec4
     type: MISSED_HEARTBEAT
     vmIP:
     vmName: espial1
   }
   ```

   host = defendersplunk2.storage-defender.ibm.com:8090 | source = http:ibm_defender_hec | sourcetype = _json

   Figure 1. Alert details for MISSED_HEARTBEAT

   The following figure displays the alert details for the `POTENTIAL_THREAT` type alert.

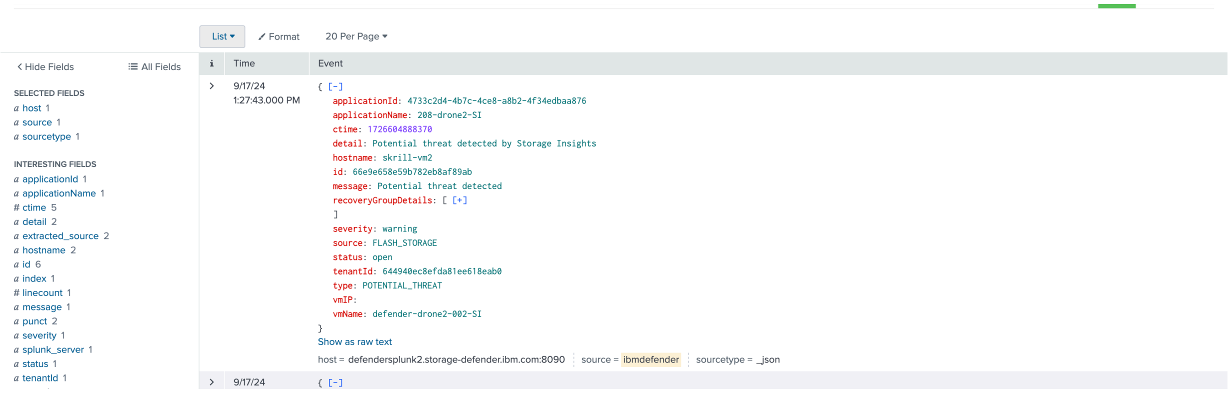
   9/17/24
   1:11:11.000 PM

   ```
   { [-]
     applicationId: 4733c2d4-4b7c-4ce8-a8b2-4f34edbaa876
     applicationName: 208-drone2-SI
     ctime: 1726603901467
     detail: Potential threat detected by Defender sensors
     hostname: skrill-vm1
     id: 66e9e27de59b782eb8af8976
     message: Potential threat detected
     recoveryGroupDetails: [ [+]
     ]
     severity: warning
     source: Defender Sensor
     status: open
     tenantId: 644940ec8efda81ee618eab0
     type: POTENTIAL_THREAT
     vmIP: 9.11.68.60
     vmName: defender-drone2-001-SI
   }
   ```

   host = defendersplunk2.storage-defender.ibm.com:8090 | source = ibmdefender | sourcetype = _json

   Figure 2. Alert details for POTENTIAL_THREAT

   The following figure displays the alert details for the `FLASH_STORAGE POTENTIAL_THREAT` type alert.



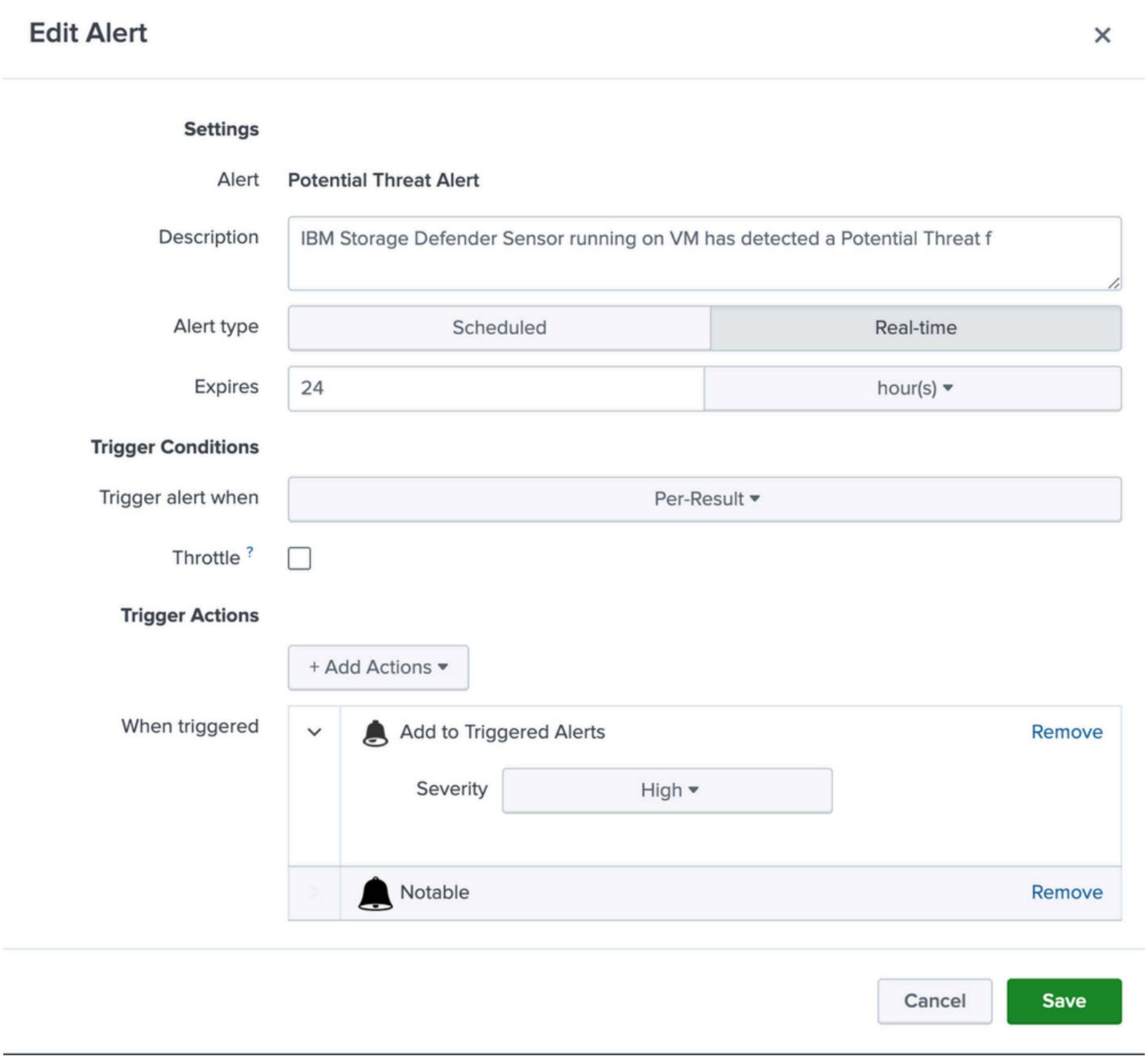
```
{ [-]
   applicationId: 4733c2d4-4b7c-4ce8-a8b2-4f34edbaa876
   applicationName: 208-drone2-SI
   ctime: 1726604888370
   detail: Potential threat detected by Storage Insights
   hostname: skrill-vm2
   id: 66e9e658e59b782eb8af89ab
   message: Potential threat detected
   recoveryGroupDetails: [ [+]
   ]
   severity: warning
   source: FLASH_STORAGE
   status: open
   tenantId: 644940ec8efda81ee618eab0
   type: POTENTIAL_THREAT
   vmIP:
   vmName: defender-drone2-002-SI
}
```

host = defendersplunk2.storage-defender.ibm.com:8090 | source = ibmdefender | sourcetype = _json

```
{ [-]
```

Figure 3. Alert details for FLASH_STORAGE POTENTIAL_THREAT

4. Click **Save As** and select **Alert**.
5. Provide details about the alert in the **Edit Alert** section. Enter the description in the **Description** field. Select the alert type and schedule in the respective fields.
   a) If Splunk® Enterprise Security app is installed, then in **Trigger Actions**, click **Add Actions**, and choose **Notable**. For example, **Add to Triggered Alerts**, and click **Save**. The step generates an alert in Splunk® Enterprise Security.
   b) You can choose other appropriate actions based on your setup.



Edit Alert

Settings

Alert: Potential Threat Alert

Description: IBM Storage Defender Sensor running on VM has detected a Potential Threat f

Alert type: Scheduled | Real-time

Expires: 24 hour(s)

Trigger Conditions

Trigger alert when: Per-Result

Throttle: □

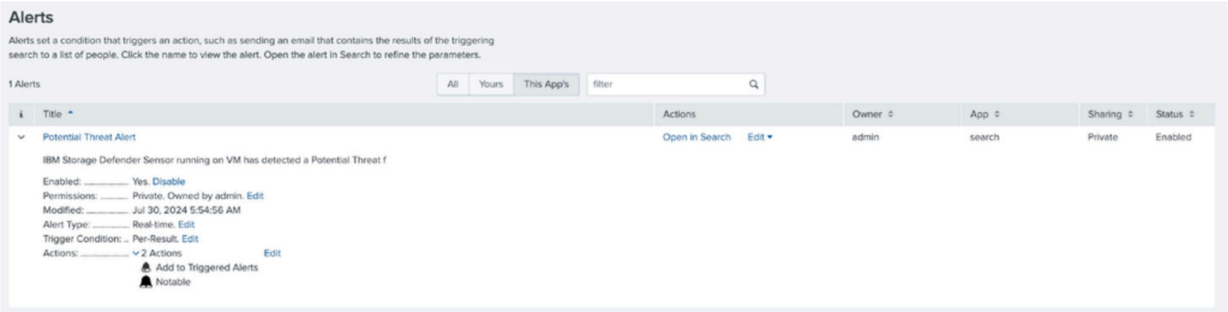
Trigger Actions

When triggered:

- Add to Triggered Alerts — Severity: High
- Notable

Figure 4. Editing alerts

6. Verify the alerts that you have created in the **Alert** section.



Alerts

Alerts set a condition that triggers an action, such as sending an email that contains the results of the triggering search to a list of people. Click the name to view the alert. Open the alert in Search to refine the parameters.

1 Alerts

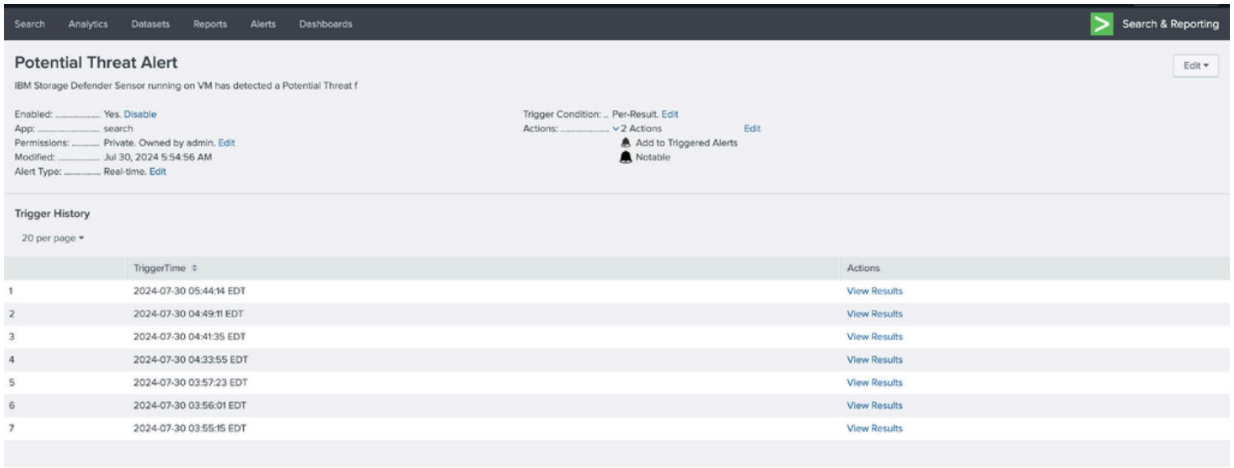
i	Title	Actions	Owner	App	Sharing	Status
⌄	Potential Threat Alert	Open in Search Edit ▾	admin	search	Private	Enabled

IBM Storage Defender Sensor running on VM has detected a Potential Threat f

Enabled: .... Yes. Disable
Permissions: .... Private. Owned by admin. Edit
Modified: .... Jul 30, 2024 5:54:56 AM
Alert Type: .... Real-time. Edit
Trigger Condition: .. Per-Result. Edit
Actions: .... ⌄2 Actions Edit
Add to Triggered Alerts
Notable

Figure 5. Verifying alerts

The following figure displays a sample of alerts' trigger history.



Potential Threat Alert

IBM Storage Defender Sensor running on VM has detected a Potential Threat f

Enabled: Yes. Disable
App: search
Permissions: Private. Owned by admin. Edit
Modified: Jul 30, 2024 5:54:56 AM
Alert Type: Real-time. Edit

Trigger Condition: Per-Result. Edit
Actions: 2 Actions Edit
Add to Triggered Alerts
Notable

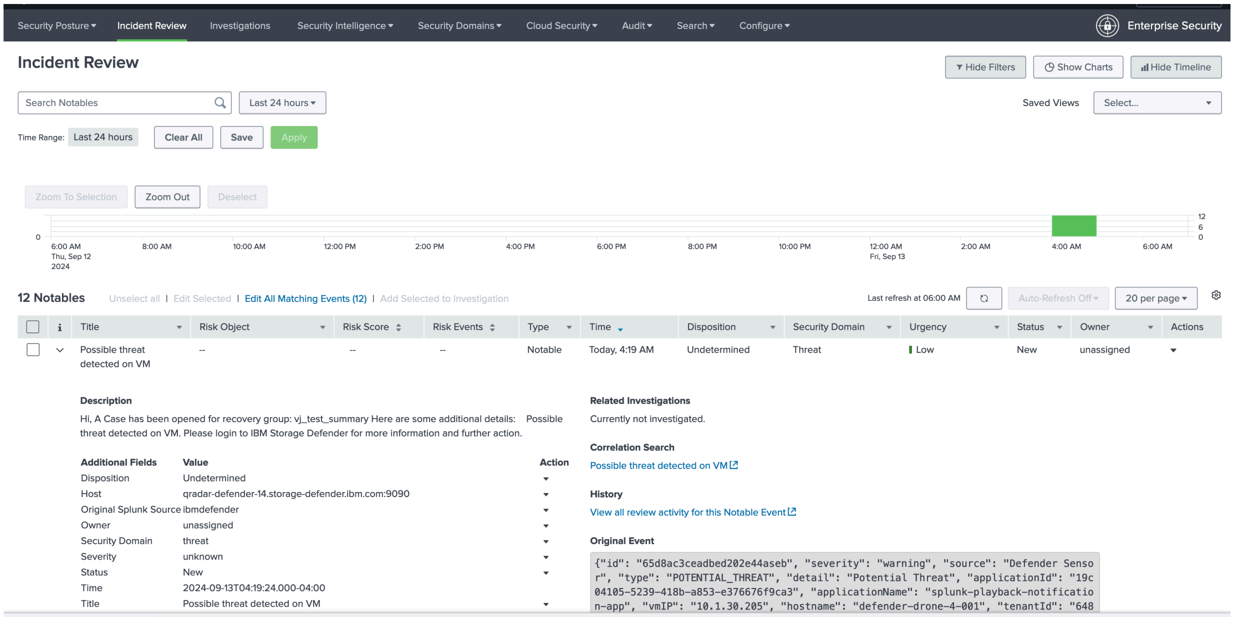
Trigger History

20 per page ▾

	TriggerTime	Actions
1	2024-07-30 05:44:14 EDT	View Results
2	2024-07-30 04:49:11 EDT	View Results
3	2024-07-30 04:41:35 EDT	View Results
4	2024-07-30 04:33:55 EDT	View Results
5	2024-07-30 03:57:23 EDT	View Results
6	2024-07-30 03:56:01 EDT	View Results
7	2024-07-30 03:55:15 EDT	View Results

Figure 6. Viewing trigger history of alerts

7. If you are using Splunk® Enterprise Security, you can check the **Incident Review** dashboard. Go to **Enterprise Security** > **Incident Review**. You can view the notable events and incidents that are generated.



Incident Review

Time Range: Last 24 hours

12 Notables

Last refresh at 06:00 AM

☐	i	Title	Risk Object	Risk Score	Risk Events	Type	Time	Disposition	Security Domain	Urgency	Status	Owner	Actions
☐	⌄	Possible threat detected on VM	--	--	--	Notable	Today, 4:19 AM	Undetermined	Threat	Low	New	unassigned	▾

Description

Hi, A Case has been opened for recovery group: vj_test_summary Here are some additional details: Possible threat detected on VM. Please login to IBM Storage Defender for more information and further action.

Additional Fields	Value	Action
Disposition	Undetermined	▾
Host	qradar-defender-14.storage-defender.ibm.com:9090	▾
Original Splunk Source	ibmdefender	▾
Owner	unassigned	▾
Security Domain	threat	▾
Severity	unknown	▾
Status	New	▾
Time	2024-09-13T04:19:24.000-04:00	
Title	Possible threat detected on VM	▾

Related Investigations

Currently not investigated.

Correlation Search

Possible threat detected on VM

History

View all review activity for this Notable Event

Original Event

```
{"id": "65d8ac3ceadbed202e44aseb", "severity": "warning", "source": "Defender Senso
r", "type": "POTENTIAL_THREAT", "detail": "Potential Threat", "applicationId": "19c
04105-5239-418b-a853-e376676f9ca3", "applicationName": "splunk-playback-notificatio
n-app", "vmIP": "10.1.30.205", "hostname": "defender-drone-4-001", "tenantId": "648
```

Figure 7. Viewing incidents and events

The following table describes the custom properties of IBM Storage Defender events.

Table 1. Custom properties of IBM Storage Defender events

Property name	Description
`applicationId`	The ID of the recovery group for which the IBM Storage Defender event is triggered.
`applicationName`	The name of the recovery group for which the IBM Storage Defender event is triggered.
`hostname`	The hostname of the virtual machine for which an IBM Storage Defender event is generated.
`status`	The case status of the IBM Storage Defender event.

Table 1. Custom properties of IBM Storage Defender events (continued)

Property name	Description
`type`	The type of the IBM Storage Defender event.
`vmIP`	The IP address of the virtual machine for which the IBM Storage Defender event is generated.
`vmName`	The name of the virtual machine for which the IBM Storage Defender event is generated.

For more information, see Recovery group.

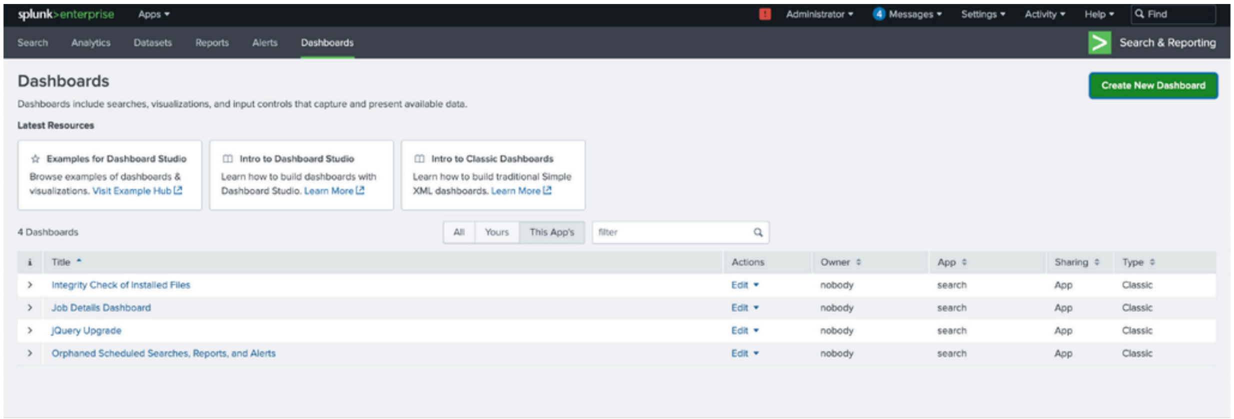
Chapter 2. Creating a dashboard in Splunk®

The following steps are optional and are meant to be a guide for you to add dashboards in Splunk® for IBM Storage Defender events, if needed.

About this task

Procedure

1. Click the **Dashboard** tab, then click **Create New Dashboard**.



Dashboards

Dashboards include searches, visualizations, and input controls that capture and present available data.

Latest Resources

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Intro to Dashboard Studio
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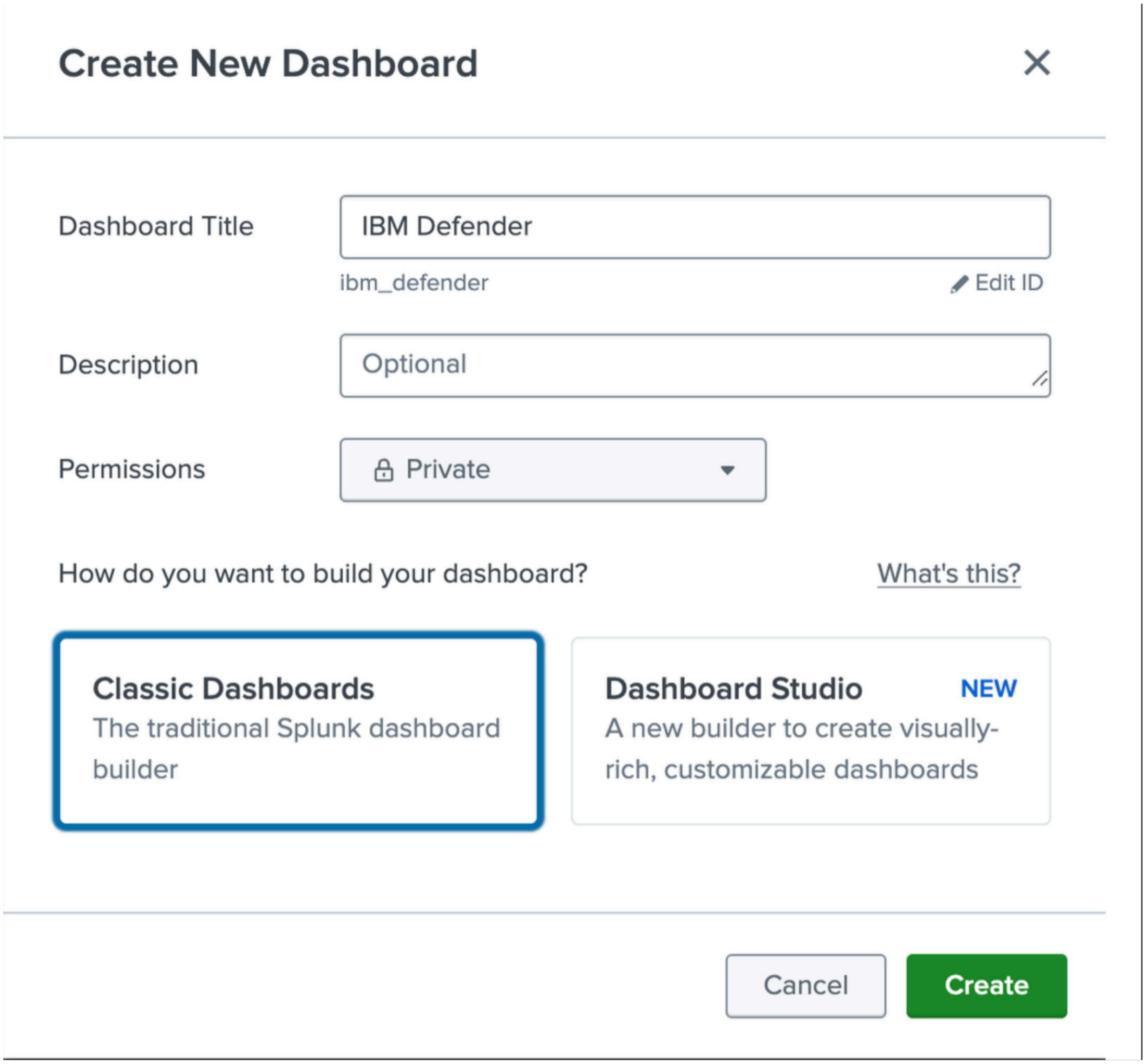
Intro to Classic Dashboards
Learn how to build traditional Simple XML dashboards. Learn More

4 Dashboards

i	Title ▴	Actions	Owner ⇕	App ⇕	Sharing ⇕	Type ⇕
>	Integrity Check of Installed Files	Edit ▾	nobody	search	App	Classic
>	Job Details Dashboard	Edit ▾	nobody	search	App	Classic
>	JQuery Upgrade	Edit ▾	nobody	search	App	Classic
>	Orphaned Scheduled Searches, Reports, and Alerts	Edit ▾	nobody	search	App	Classic

Figure 8. Creating a dashboard

2. Provide the details, and select **Classic Dashboard**.



Create New Dashboard

Dashboard Title: IBM Defender

ibm_defender

Description: Optional

Permissions: Private

How do you want to build your dashboard?

Classic Dashboards
The traditional Splunk dashboard builder

Dashboard Studio NEW
A new builder to create visually-rich, customizable dashboards

Figure 9. Providing required details

3. Click **Add Panel**, then select **Statistics Table**.

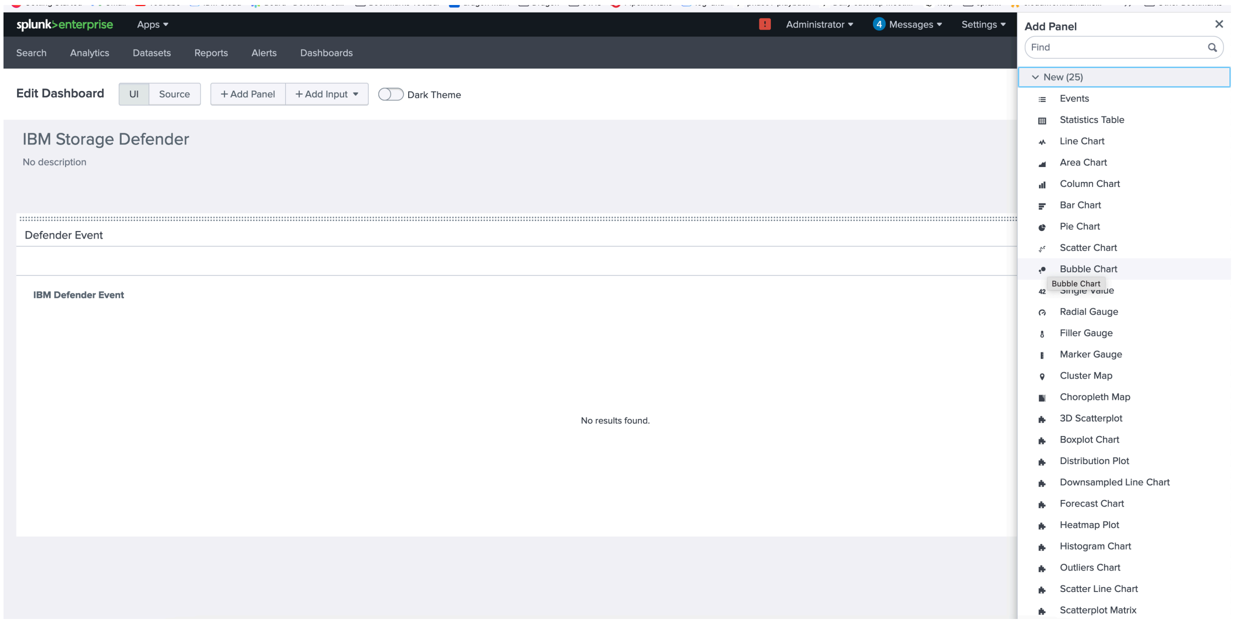
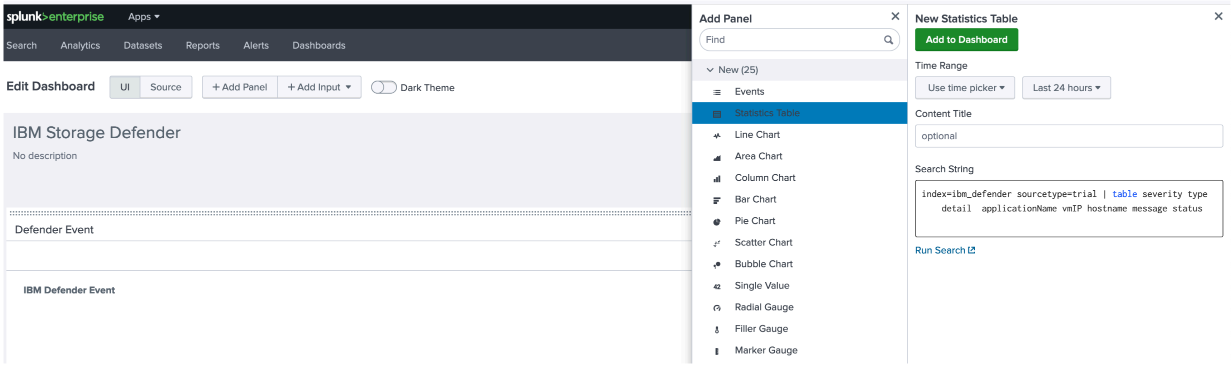


Figure 10. Adding panel and table

4. Provide content title and search string. A sample search string is shown as follows:

```
index=ibm_defender | table severity type
     detail applicationName vmIP hostname message status
```



Time Range: Use time picker ▾ Last 24 hours ▾

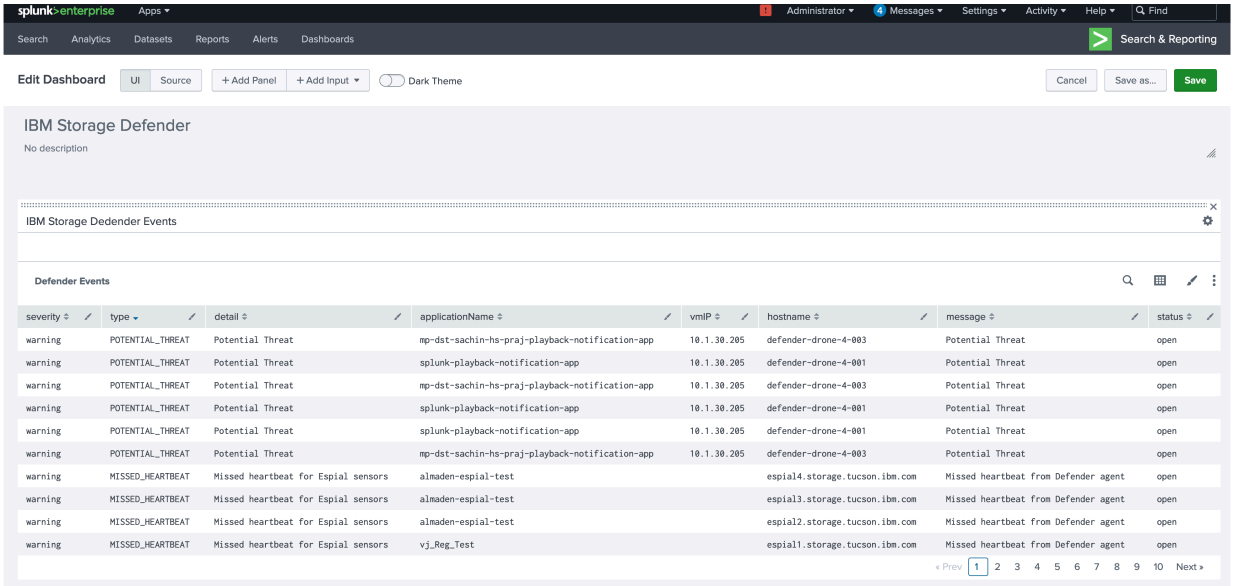
Content Title: optional

Search String:

```
index=ibm_defender sourcetype=trial | table severity type
    detail  applicationName vmIP hostname message status
```

Figure 11. Adding content tile and search string

5. Click **Add to Dashboard**, then click **Save**.



IBM Storage Defender

No description

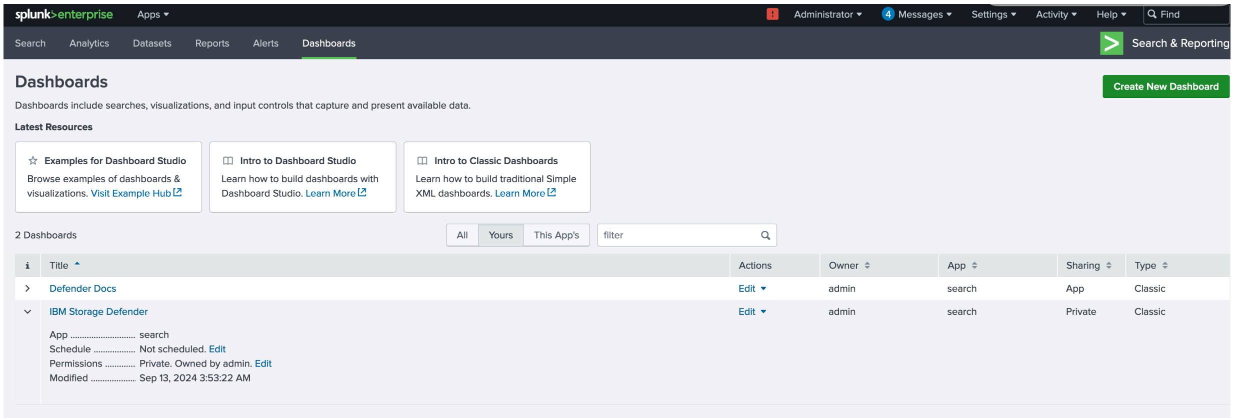
IBM Storage Dedender Events

Defender Events

severity	type	detail	applicationName	vmIP	hostname	message	status
warning	POTENTIAL_THREAT	Potential Threat	mp-dst-sachin-hs-praj-playback-notification-app	10.1.30.205	defender-drone-4-003	Potential Threat	open
warning	POTENTIAL_THREAT	Potential Threat	splunk-playback-notification-app	10.1.30.205	defender-drone-4-001	Potential Threat	open
warning	POTENTIAL_THREAT	Potential Threat	mp-dst-sachin-hs-praj-playback-notification-app	10.1.30.205	defender-drone-4-003	Potential Threat	open
warning	POTENTIAL_THREAT	Potential Threat	splunk-playback-notification-app	10.1.30.205	defender-drone-4-001	Potential Threat	open
warning	POTENTIAL_THREAT	Potential Threat	splunk-playback-notification-app	10.1.30.205	defender-drone-4-001	Potential Threat	open
warning	POTENTIAL_THREAT	Potential Threat	mp-dst-sachin-hs-praj-playback-notification-app	10.1.30.205	defender-drone-4-003	Potential Threat	open
warning	MISSED_HEARTBEAT	Missed heartbeat for Espial sensors	almaden-espial-test		espial4.storage.tucson.ibm.com	Missed heartbeat from Defender agent	open
warning	MISSED_HEARTBEAT	Missed heartbeat for Espial sensors	almaden-espial-test		espial3.storage.tucson.ibm.com	Missed heartbeat from Defender agent	open
warning	MISSED_HEARTBEAT	Missed heartbeat for Espial sensors	almaden-espial-test		espial2.storage.tucson.ibm.com	Missed heartbeat from Defender agent	open
warning	MISSED_HEARTBEAT	Missed heartbeat for Espial sensors	vj_Reg_Test		espial1.storage.tucson.ibm.com	Missed heartbeat from Defender agent	open

Figure 12. Saving dashboard

6. Go to the **Dashboard** tab, and selecting IBM Storage Defender to view the dashboard you created.



Dashboards

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Intro to Classic Dashboards
Learn how to build traditional Simple XML dashboards. Learn More

2 Dashboards

i	Title	Actions	Owner	App	Sharing	Type
>	Defender Docs	Edit ▾	admin	search	App	Classic
⌄	IBM Storage Defender	Edit ▾	admin	search	Private	Classic

App .... search
Schedule .... Not scheduled. Edit
Permissions .... Private. Owned by admin. Edit
Modified .... Sep 13, 2024 3:53:22 AM

Figure 13. Viewing dashboard

Related information

Splunk | Steps to create an alert in splunk

Modify notable event urgency

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