



# SIEM Courseware Beginner

## LAB GUIDE

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# SIEM Courseware Beginner Training Module

## **Preface**

June 2021

## **NOTICES**

<Any necessary notices with regards to the course material.>

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# SIEM Courseware Beginner Training Module

## Table of Contents

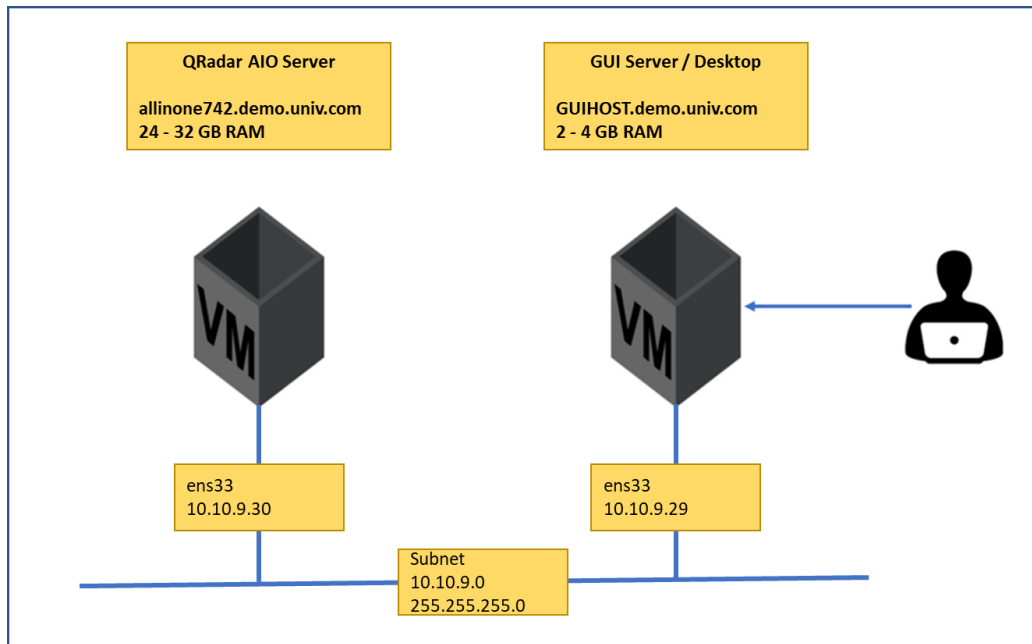
<b>Beginning.....</b>	<b>4</b>
Virtual Machines.....	4
Login into the Qradar Interface .....	7
Access Command Line Interface of Qradar Server .....	7
<b>Lab 1 - Using the QRadar SIEM user interface .....</b>	<b>8</b>
Explore Qradar User Interface .....	9
Sending Sample Data to QRadar .....	12
<b>Lab 2 - Investigating the offense.....</b>	<b>16</b>
<b>Lab 3 - Looking for events that contribute to an offense.....</b>	<b>21</b>
<b>Lab 4 - Investigating an offense that is triggered by flows .....</b>	<b>25</b>
<b>Lab 5 - Using rules.....</b>	<b>28</b>
Create an Event Rule .....	28
Working with rule parameters .....	36
<b>Lab 6 - Using the Network Hierarchy.....</b>	<b>39</b>
Create a Network Object .....	39
View Network Objects in Flow.....	41
<b>Lab 7 - Index and Aggregated Data Management .....</b>	<b>44</b>
Enable an Index.....	44
Use an Enabled Indexed property in a search .....	45
<b>Lab 8 - Using Dashboards .....</b>	<b>48</b>
<b>Lab 9 - Creating reports .....</b>	<b>51</b>
Viewing an existing Report .....	51
Creating a new event report .....	53

# SIEM Courseware Beginner Training Module

## Beginning

### Virtual Machines

The following figure shows the setup of the virtual machines in the training lab.



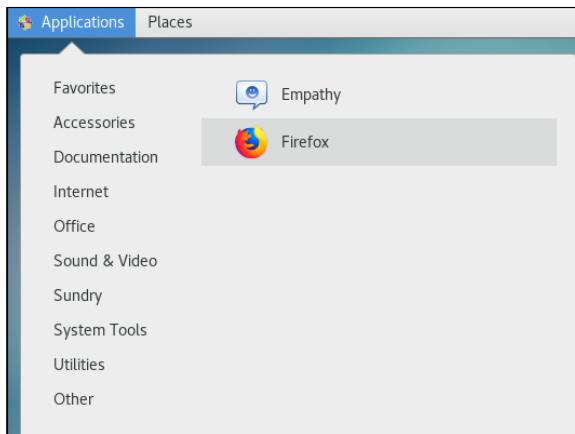
The lab environment uses the following two virtual machines (VMs):

- Qradar AIO Server - a virtual machine running IBM QRadar All-in-one setup on Red Hat Enterprise Linux.
  - Hostname - **allinone742.demo.univ.com**
  - IP Address - **10.10.9.30**
- GUI Server - a virtual machine providing a graphical user interface to access Qradar Application. It hosts the graphical desktop where you perform the course exercises.
  - Hostname - **GUIHOST.demo.univ.com**
  - IP Address - **10.10.9.29**

You log in to **guihost** as user **root** with password **p@ssw0rd**. You need two tools on the desktop to perform the exercises:

# SIEM Courseware Beginner Training Module

1. A web browser for accessing the Qradar interface, found at Applications > Internet > Firefox Web Browser

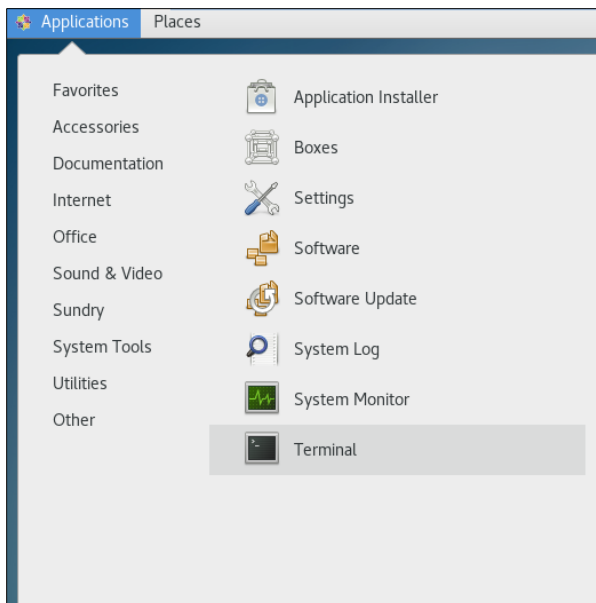


Use the URL <https://10.10.9.30/console> to access Qradar Graphical Interface, the Username and Password fields should already be populated. If they are not populated, enter the following credentials:

Username: admin

Password: p@ssw0rd the '0' is the digit zero.

2. A terminal window to run commands on osprey and G10, found on the desktop or through Application > System Tools > Terminal



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You need the following accounts and passwords to complete the labs.

- GUIHOST
  - User root, password p@ssw0rd
  - User gui, password p@ssw0rd123
- ALLINONE742
  - User root, password p@ssw0rd
  - User admin, password p@ssw0rd

## QRadar UI - Overview exercises

1. Where can you see an initial summary view of your QRadar Console?
2. How do you pin tabs to the Console?
3. Which two main functions that are included in your in QRadar installation require additional licensing?
4. What is the name of the default user that is used to establish SSH connections to the command-line interface?
5. In addition to the local system, name 3 other authentication methods that are supported by QRadar.
6. How can you access the system notification center?
7. How can you access the QRadar documentation from the Console
8. How often is data refreshed by default?
9. What range of intervals can you select to monitor network or log activity?
10. On which tab can you view QRadar rules and building blocks?

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## Login into the Qradar Interface

Follow these steps to prepare for the course exercises:

1. Start GUI Server **guihost** “**Centos-GUI**” and Qradar Server Allinone742 “**SIEM-All-in-One-742**” virtual machines.
2. Login to the **guihost** virtual machine as user *root* with password *p@ssw0rd*.
3. Ensure the GUI Server can connect to the QRadar Application and that Qradar is running.
  - a. Start the Firefox web browser and navigate to the Qradar interface.

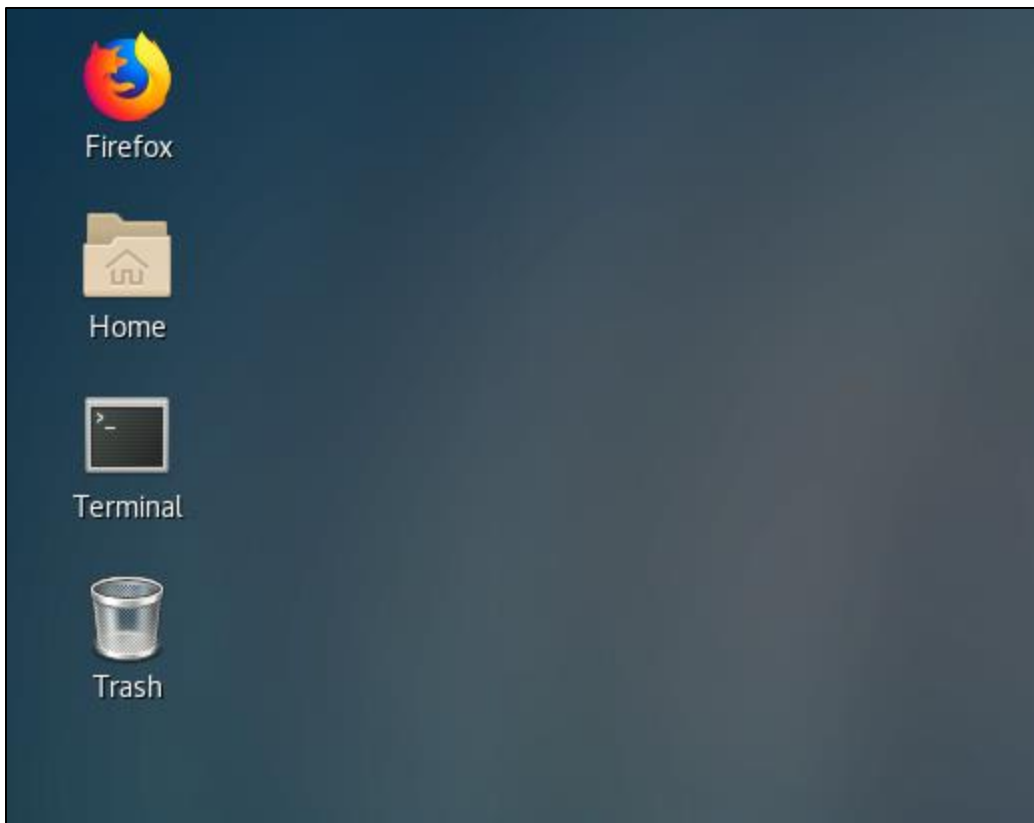


- b. If the Qradar interface does not appear, consult with the instructor to troubleshoot the issue.

## Access Command Line Interface of Qradar Server

1. To open the SSH session to the Qradar VM, click the Terminal Icon on the Desktop window.

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2. Run the following command on SSH Terminal –

*ssh root@allinone742*

Enter the password as 'p@ssw0rd'

```
root@allinone742:~  
File Edit View Search Terminal Help  
[root@GUIHOST ~]# ssh root@allinone742  
root@allinone742's password:  
Last login: Tue Jun  1 21:35:23 2021 from 10.10.9.29  
This server was upgraded to QRadar 7.4.2 FixPack 2 (Build 20210120225428) on Wed  
May 26 23:37:01 IST 2021.  
[root@allinone742 ~]#
```

### Lab 1 - Using the QRadar SIEM user interface

In these exercises, you become familiar with the web-based control center and sending sample data to Qradar.



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## Explore Qradar User Interface

In this exercise, you become familiar with the Qradar Web Based control center.

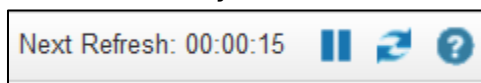
1. Use a web browser to go to URL <https://10.10.9.30/console> to access the web interface login page.
2. Log in to the web interface with the user admin and password p@ssw0rd to access the home page.



3. The Qradar Dashboard interface opens. Most of the sections in this dashboard may be empty. We will initiate a sample feed to see all these data.
4. You can navigate from one dashboard to another and create, rename or remove any existing dashboard from the panel as shown in the screenshot.

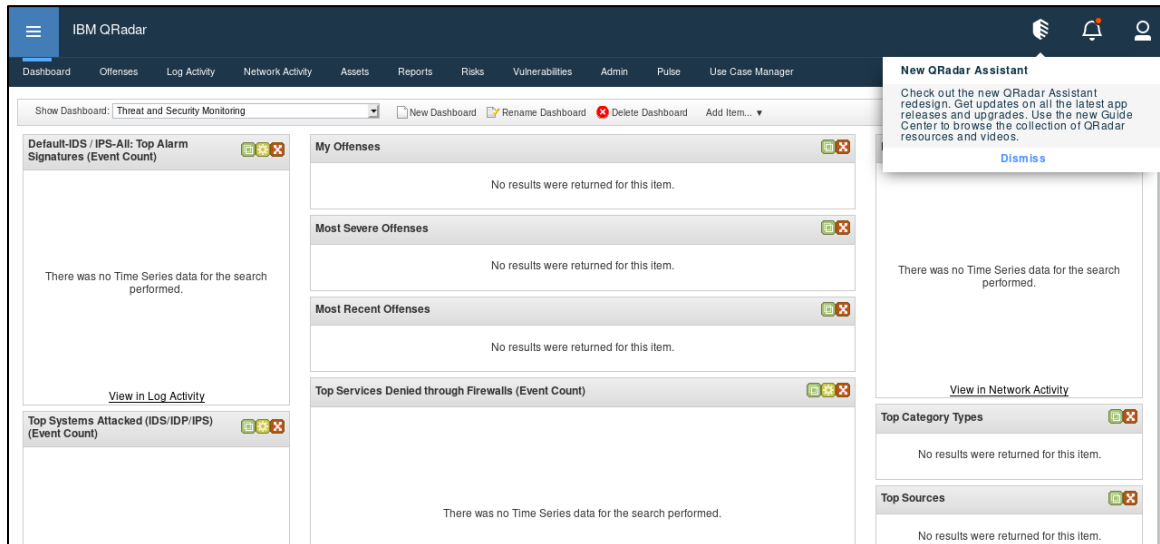


5. The Dashboard tab automatically refreshes every 60 seconds. The timer indicates the amount of time that remains until the tab is automatically refreshed.



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6. Functionality is divided into tabs. The Dashboard tab is displayed when you log in. You can easily navigate the tabs to locate the data or functionality you require.



Click and Explore each tab in the user interface.

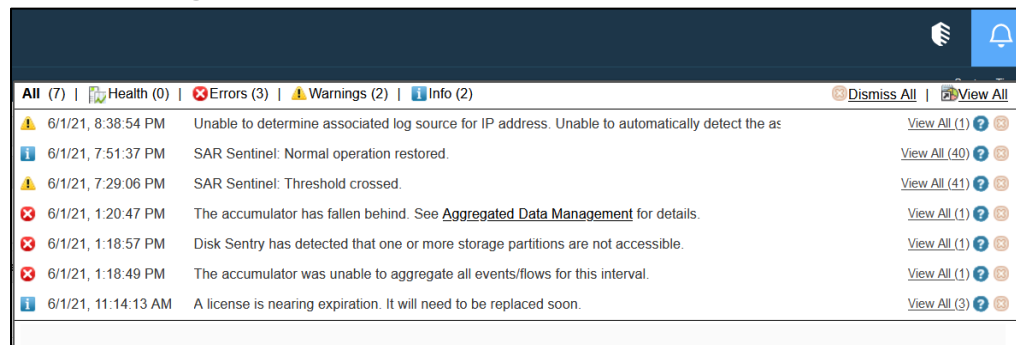
- **Dashboard tab** - The Dashboard tab is a workspace environment that provides summary and detailed information on events occurring in your network.
- **Offenses tab** - View offenses that occur on your network, which you can locate by using various navigation options or through powerful searches.
- **Log activity tab** - Investigate event logs that are sent to QRadar in real-time, perform powerful searches, and view log activity by using configurable time-series charts.
- **Network activity tab** - Use the Network Activity tab to investigate flows that are sent in real-time, perform powerful searches, and view network activity by using configurable time-series charts.
- **Assets tab** - QRadar automatically discovers assets, servers, and hosts that are operating on your network.
- **Reports tab** - Use the Reports tab to create, distribute, and manage reports for any data within QRadar.

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- **IBM QRadar Risk Manager** - IBM QRadar Risk Manager is a separately installed appliance for monitoring device configurations, simulating changes to your network environment, and prioritizing risks and vulnerabilities in your network.
- **Admin tab**– In this tab, an Administrator can perform Admin related tasks.
  - Deploy and manage Qradar Hosts and licenses.
  - Configure user accounts and authentication.
  - Build a network hierarchy
  - Configure domains and set up a multi-tenant environment
  - Define and manage log and flow data sources etc.

### 7. Click Notifications

- a. On the Messages window, view the system notification details.




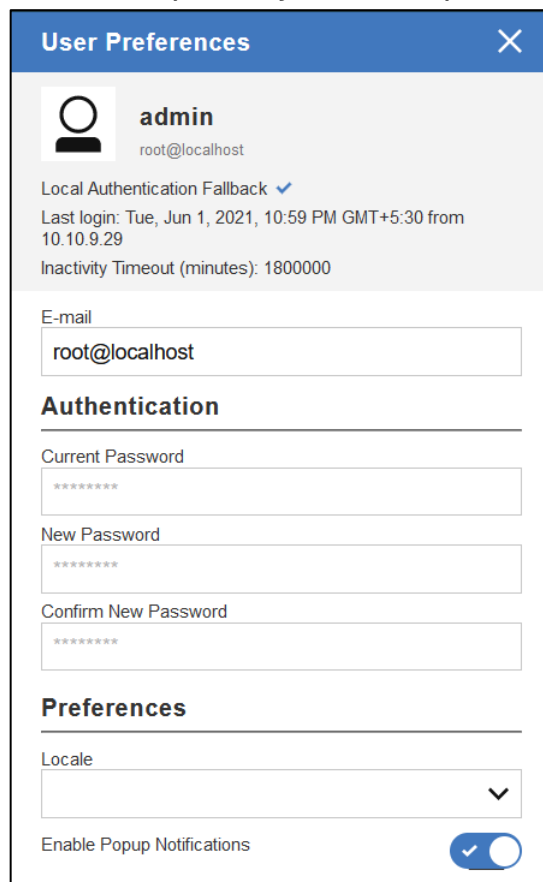
- b. To refine the list of system notifications, click one of the following options:
  - Health
  - Errors
  - Warnings
  - Info
- c. Optional: To close system notifications, choose one of the following options:
  - Dismiss All Info
  - Dismiss

## SIEM Courseware Beginner Training Module

8. The upper right of the QRadar® console displays the system time, which is the local time on the console. The console time is used to determine what time events were received from other devices for correct time synchronization correlation.

System Time: 11:39 PM

9. Click the **user** icon , and then click **User Preferences** to access your user information.
  - a. You can update your user preferences from this panel.



The image shows a 'User Preferences' dialog box with a blue header bar containing the title 'User Preferences' and a close button (X). The main content area is divided into several sections. At the top, there is a user profile section with a circular icon, the name 'admin', and the email 'root@localhost'. Below this, it shows 'Local Authentication Fallback' with a checkmark, 'Last login: Tue, Jun 1, 2021, 10:59 PM GMT+5:30 from 10.10.9.29', and 'Inactivity Timeout (minutes): 1800000'. The next section is 'E-mail' with a text input field containing 'root@localhost'. Below that is the 'Authentication' section, which includes three password fields: 'Current Password', 'New Password', and 'Confirm New Password', each with a masked input (asterisks). The 'Preferences' section follows, featuring a 'Locale' dropdown menu and a toggle switch for 'Enable Popup Notifications' which is currently turned on.

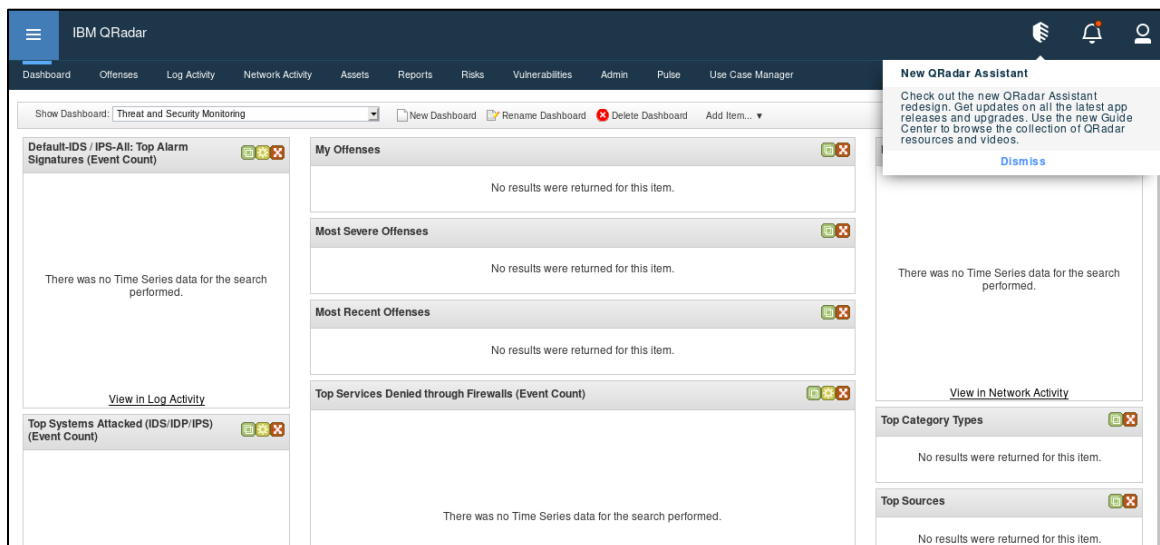
- b. Click **Save**.

### Sending Sample Data to QRadar

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In this exercise, you will become familiar with sending and process sample data in the Qradar. This Data will be useful for further exercises in this course.

1. Verify the Qradar VM is started and accessible from the GUI Virtual machine.
2. Log in the Qradar portal (<https://10.10.9.30/console>) use the procedure as outlined in the earlier section.
3. After logging in, you see a home dashboard screen like the below screenshot.



4. Run the following command on SSH Terminal, to access the remote shell to the Qradar.

```
ssh root@allinone742
```

Enter the password as 'p@ssw0rd'

```
root@allinone742:~  
File Edit View Search Terminal Help  
[root@GUIHOST ~]# ssh root@allinone742  
root@allinone742's password:  
Last login: Tue Jun 1 21:35:23 2021 from 10.10.9.29  
This server was upgraded to QRadar 7.4.2 FixPack 2 (Build 20210120225428) on Wed  
May 26 23:37:01 IST 2021.  
[root@allinone742 ~]#
```

5. Run the following commands:

## SIEM Courseware Beginner Training Module

*cd /labfiles*

```
[root@allinone742 ~]# cd /labfiles/
[root@allinone742 labfiles]# ll
total 8
drwxr-xr-x 3 root root 24 Jun 8 14:45 events
-rw-r--r-- 1 root root 6488 Jun 4 23:24 sendCheckpoint.sh
```

*./sendCheckpoint.sh*

```
[root@allinone742 labfiles]# ./sendCheckpoint.sh
generating 35 messages per second to 10.10.9.30:514
Ctrl-c to stop
generating 35 messages per second to 10.10.9.30:514
Ctrl-c to stop
generating 35 messages per second to 10.10.9.30:514
Ctrl-c to stop
generating 35 messages per second to 10.10.9.30:514
Ctrl-c to stop
generating 35 messages per second to 10.10.9.30:514
Ctrl-c to stop
generating 35 messages per second to 10.10.9.30:514
Ctrl-c to stop
generating 35 messages per second to 10.10.9.30:514
Ctrl-c to stop
```

This script runs for around 10 minutes. Do not close the terminal window.

6. Bring the browser to the front. One to two minutes after starting the script, dashboard items and the log activity tab start visualizing the sample data.

# SIEM Courseware Beginner Training Module

Dashboard Offenses Log Activity Network Activity Assets Reports Risks Vulnerabilities Admin Pulse Use Case Manager System Time: 6:43 PM										
Search... Quick Searches Add Filter Save Criteria Save Results Cancel False Positive Rules Actions										
Quick Filter Search										
Viewing real time events View: Select An Option: Display: Default (Normalized)										
Event Name	Log Source	Even Coun	Time	Low Level Category	Source IP	Source Port	Destination IP	Destin Port	Username	Magnitude
Firewall Permit	Check Point @ FW-1Machine	1	Jun 8, 2021, 6:49:22 PM	Firewall Permit	23.18.14.249	4078	10.253.246.212	55300	N/A	100
Firewall Permit	Check Point @ FW-1Machine	1	Jun 8, 2021, 6:49:12 PM	Firewall Permit	192.168.27.25	33675	192.168.30.14	47110	N/A	100
Firewall Permit	Check Point @ FW-1Machine	1	Jun 8, 2021, 6:49:12 PM	Firewall Permit	192.168.27.30	36941	192.168.30.14	47110	N/A	100
Firewall Permit	Check Point @ FW-1Machine	1	Jun 8, 2021, 6:49:22 PM	Firewall Permit	23.144.4.233	4734	10.253.246.214	55300	N/A	100
Firewall Permit	Check Point @ FW-1Machine	1	Jun 8, 2021, 6:49:22 PM	Firewall Permit	21.160.23.253	2349	10.253.246.226	55300	N/A	100
Firewall Permit	Check Point @ FW-1Machine	1	Jun 8, 2021, 6:49:22 PM	Firewall Permit	21.62.23.251	4155	10.253.246.214	55300	N/A	100
Firewall Permit	Check Point @ FW-1Machine	1	Jun 8, 2021, 6:49:22 PM	Firewall Permit	30.30.96.3	4073	10.253.247.218	55310	N/A	100
Firewall Permit	Check Point @ FW-1Machine	1	Jun 8, 2021, 6:49:22 PM	Firewall Permit	45.178.14.249	2772	10.253.246.218	55300	N/A	100
Firewall Permit	Check Point @ FW-1Machine	1	Jun 8, 2021, 6:49:22 PM	Firewall Permit	45.133.4.250	1178	10.253.247.216	55310	N/A	100
Firewall Permit	Check Point @ FW-1Machine	1	Jun 8, 2021, 6:49:22 PM	Firewall Permit	45.40.1.248	1201	10.253.246.216	55300	N/A	100
Firewall Permit	Check Point @ FW-1Machine	1	Jun 8, 2021, 6:49:22 PM	Firewall Permit	30.94.48.252	2197	10.253.246.218	55300	N/A	100
Firewall Permit	Check Point @ FW-1Machine	1	Jun 8, 2021, 6:49:22 PM	Firewall Permit	22.108.24.249	1377	10.253.246.216	55300	N/A	100
Firewall Permit	Check Point @ FW-1Machine	1	Jun 8, 2021, 6:49:22 PM	Firewall Permit	45.40.1.244	4121	10.253.246.216	55300	N/A	100
Firewall Permit	Check Point @ FW-1Machine	1	Jun 8, 2021, 6:49:22 PM	Firewall Permit	23.50.11.58	3395	10.253.247.212	55310	N/A	100
Firewall Permit	Check Point @ FW-1Machine	1	Jun 8, 2021, 6:49:22 PM	Firewall Permit	30.74.16.243	2279	10.253.246.218	55300	N/A	100
Firewall Permit	Check Point @ FW-1Machine	1	Jun 8, 2021, 6:49:22 PM	Firewall Permit	21.156.25.124	4346	10.253.246.208	55300	N/A	100
Information Message	System Notification-2 : allnon...	1	Jun 8, 2021, 6:49:22 PM	Information	10.10.9.30	0	127.0.0.1	0	N/A	100
Information Message	System Notification-2 : allnon...	1	Jun 8, 2021, 6:49:22 PM	Information	10.10.9.30	0	127.0.0.1	0	N/A	100
Information Message	System Notification-2 : allnon...	1	Jun 8, 2021, 6:49:22 PM	Information	10.10.9.30	0	127.0.0.1	0	N/A	100
Information Message	System Notification-2 : allnon...	1	Jun 8, 2021, 6:49:22 PM	Information	10.10.9.30	0	127.0.0.1	0	N/A	100
Firewall Permit	Check Point @ FW-1Machine	1	Jun 8, 2021, 6:49:22 PM	Firewall Permit	46.56.9.249	4920	10.253.246.218	55300	N/A	100
Firewall Permit	Check Point @ FW-1Machine	1	Jun 8, 2021, 6:49:22 PM	Firewall Permit	21.120.5.207	4145	10.253.246.214	55300	N/A	100

Receiving an average of 124 results per second.

# SIEM Courseware Beginner Training Module

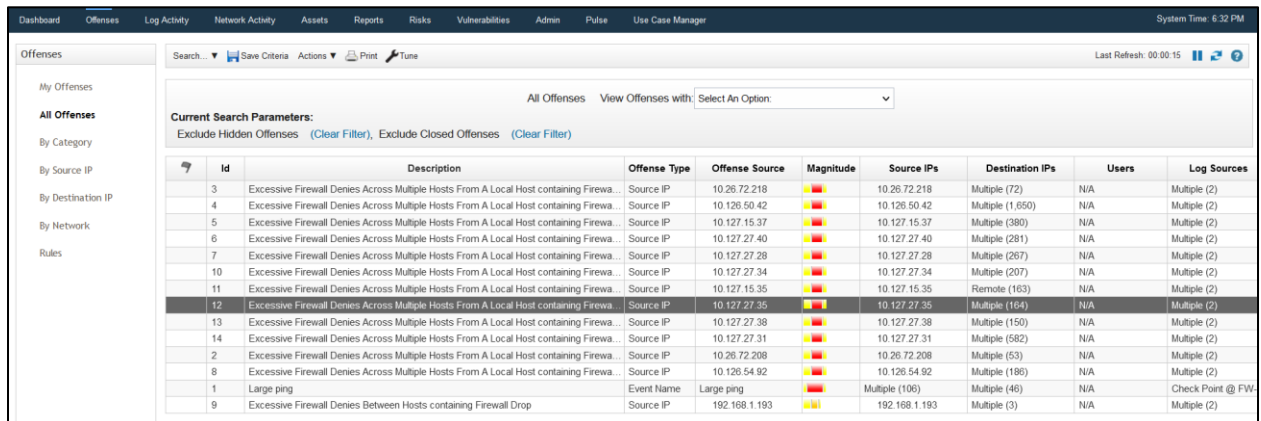
## Lab 2 - Investigating the offense

In this Lab, We will try to investigate an offense triggered by events, we may have pushed in last lab.

We will look at the offense named “**Local DNS Scanner containing invalid DNS**” or “**Excessive Firewall Denies**”

Perform the below steps:

1. Login in the Qradar Interface, on Home page, Click the **Offenses** tab.

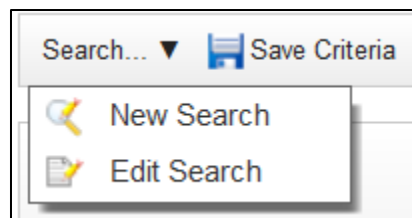


The screenshot shows the Qradar Offenses interface. The top navigation bar includes Dashboard, Offenses, Log Activity, Network Activity, Assets, Reports, Risks, Vulnerabilities, Admin, Pulse, and Use Case Manager. The Offenses tab is selected. On the left, there is a sidebar with filters: My Offenses, All Offenses, By Category, By Source IP, By Destination IP, By Network, and Rules. The main area displays a table of offenses. The table has columns: Id, Description, Offense Type, Offense Source, Magnitude, Source IPs, Destination IPs, Users, and Log Sources. The table contains 14 rows of offenses, mostly related to excessive firewall denies. The 12th row is highlighted.

Id	Description	Offense Type	Offense Source	Magnitude	Source IPs	Destination IPs	Users	Log Sources
3	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewa...	Source IP	10.26.72.218	High	10.26.72.218	Multiple (72)	N/A	Multiple (2)
4	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewa...	Source IP	10.126.50.42	High	10.126.50.42	Multiple (1,050)	N/A	Multiple (2)
5	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewa...	Source IP	10.127.15.37	High	10.127.15.37	Multiple (380)	N/A	Multiple (2)
6	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewa...	Source IP	10.127.27.40	High	10.127.27.40	Multiple (281)	N/A	Multiple (2)
7	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewa...	Source IP	10.127.27.28	High	10.127.27.28	Multiple (267)	N/A	Multiple (2)
10	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewa...	Source IP	10.127.27.34	High	10.127.27.34	Multiple (207)	N/A	Multiple (2)
11	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewa...	Source IP	10.127.15.35	High	10.127.15.35	Remote (163)	N/A	Multiple (2)
12	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewa...	Source IP	10.127.27.35	High	10.127.27.35	Multiple (164)	N/A	Multiple (2)
13	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewa...	Source IP	10.127.27.38	High	10.127.27.38	Multiple (150)	N/A	Multiple (2)
14	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewa...	Source IP	10.127.27.31	High	10.127.27.31	Multiple (582)	N/A	Multiple (2)
2	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewa...	Source IP	10.26.72.208	High	10.26.72.208	Multiple (53)	N/A	Multiple (2)
8	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewa...	Source IP	10.126.54.92	High	10.126.54.92	Multiple (186)	N/A	Multiple (2)
1	Large ping	Event Name	Large ping	High	Multiple (106)	Multiple (46)	N/A	Check Point @ FW...
9	Excessive Firewall Denies Between Hosts containing Firewall Drop	Source IP	192.168.1.193	High	192.168.1.193	Multiple (3)	N/A	Multiple (2)

2. Select the Offense with the description **Local DNS Scanner containing Invalid DNS** or **Excessive Firewall Denies**

- a. If you are not able to see the offense with this name, you may search of the offense.
- b. From the **Search** list, click **New Search**.



- c. In the Search parameters pane, define **Description** as any Keyword.



## SIEM Courseware Beginner Training Module

Search Parameters	
Offense Id	<input type="text"/>
Description	<input type="text" value="Excessive Firewall"/>
Assigned to user	All (Assigned and Unassigned) ▼
Direction	Any ▼
Source IP	<input type="text"/>
Destination IP	<input type="text"/>
Magnitude	Equal to ▼ <input type="text"/>
Severity	Equal to ▼ <input type="text"/>

d. Click **Search**.

Search
--------

The All Offenses page will show the offenses that meet the search criteria.

3. Answer the following questions for the selected offense.

a. What is the offense type and offense source and magnitude?

---

b. What Network does the offense source IP belong to?

---

4. Double click the offense to view the offense Summary page. This summary page provides detailed information about the offense.

# SIEM Courseware Beginner Training Module

All Offenses > Offense 9 (Summary)

Offense 9

Summary

Display

Events

Connections

Flows

View Attack Path

Actions

Print

Tune

Magnitude	<div></div>	Status	Relevance 3	Severity 4	Credibility 2
Description	Excessive Firewall Denies Between Hosts containing Firewall Drop	Offense Type	Source IP		
Source IP(s)	192.168.1.193	Event/Flow count	402 events and 0 flows in 2 categories		
Destination IP(s)	10.3.33.67 Remote (2)	Start	Jun 8, 2021, 3:24:31 PM		
Network(s)	Multiple (2)	Duration	3m 45s		
		Assigned to	Unassigned		

Offense Source Summary

IP	192.168.1.193	Location	Net-10-172-192-Net_192_168_0_0
Magnitude	<div></div>	Vulnerabilities	0
Username	Unknown	MAC Address	Unknown NIC
Host Name	Unknown		
Asset Name	Unknown	Weight	0
Offenses	1	Events/Flows	402

5. Answer the following questions for this offense.
- a. How many events or flows have been added to this offense?

---

- b. What time did this offense begin?

---

- c. Is the Source IP involved in any other offenses?

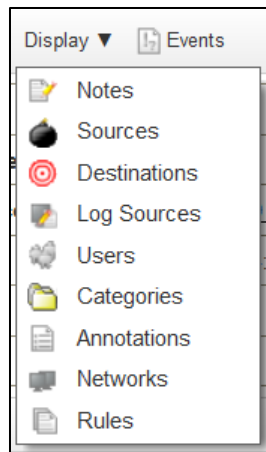
---

- d. How many destination IPs are targets o the offense? Are the destination Ips local or remote?

---

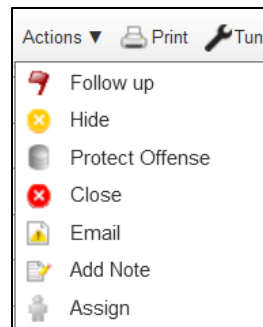
- e. List the categories of the events that contributed to this offense. From the **Display** drop-down list on the toolbar, select **Categories** to display the event categories.

## SIEM Courseware Beginner Training Module



- 
- f. What do you learn about this offense based on the annotation? From the **Display** drop-down list on the toolbar, select **Annotations**.
- 
- g. What is the event name, event category, and destination port for the events listed in the **Last 10 Events list**? Click Summary on the toolbar and scroll down to the Last 10 Events list.
- 
- h. For which service is the destination port well known?
- 
6. Perform the following actions on this offense.
- Add a note:
    - From the **Actions** drop-down list, select **Add Note**.

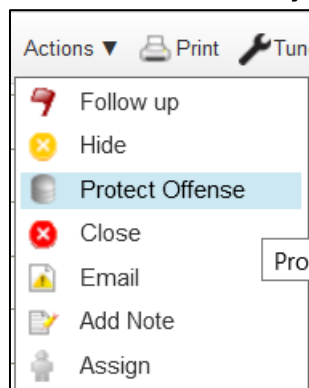
## SIEM Courseware Beginner Training Module




- ii. Enter “This offense is investigated as a part of Qradar Lab”

- iii. Click **Add Note**.

- b. Protect the offense. From the **Actions** drop-down list on the Offense Summary page, select **Protect Offense**.



- c. As a result, the **Protected** icon is displayed in the **Status** field on the Offense Summary page and in the flag column for the offense on the All Offenses page.

	1	Large ping	Event Name
	9	Excessive Firewall Denies Between Hosts containing Firewall Drop	Source IP

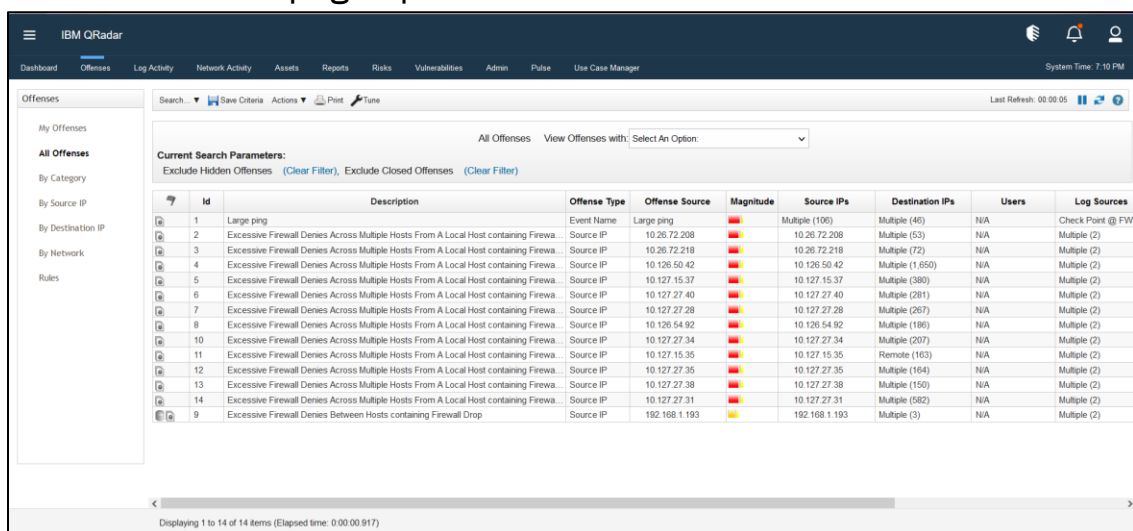
# SIEM Courseware Beginner Training Module

## Lab 3 - Looking for events that contribute to an offense

In the previous lab exercise, we learnt about Investigating an offense. In this exercise, we will further analyze and explore the events that are contributed to any offense.

Perform the below steps:

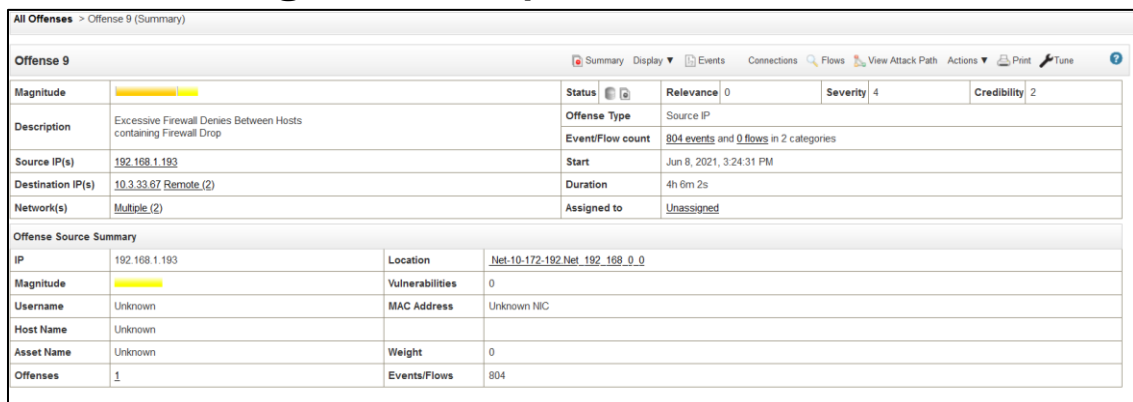
1. Login in the Qradar Interface, on Home page, Click the **Offenses** tab. The All Offenses page opens.



The screenshot shows the IBM QRadar interface with the 'Offenses' tab selected. The 'All Offenses' page is displayed, showing a list of offenses. The table has columns for Id, Description, Offense Type, Offense Source, Magnitude, Source IPs, Destination IPs, Users, and Log Sources. The first offense (Id 1) is 'Large ping' with a magnitude of 1000. The second offense (Id 2) is 'Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop' with a magnitude of 1000. The third offense (Id 3) is 'Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop' with a magnitude of 1000. The fourth offense (Id 4) is 'Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop' with a magnitude of 1000. The fifth offense (Id 5) is 'Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop' with a magnitude of 1000. The sixth offense (Id 6) is 'Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop' with a magnitude of 1000. The seventh offense (Id 7) is 'Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop' with a magnitude of 1000. The eighth offense (Id 8) is 'Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop' with a magnitude of 1000. The ninth offense (Id 9) is 'Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop' with a magnitude of 1000. The tenth offense (Id 10) is 'Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop' with a magnitude of 1000. The eleventh offense (Id 11) is 'Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop' with a magnitude of 1000. The twelfth offense (Id 12) is 'Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop' with a magnitude of 1000. The thirteenth offense (Id 13) is 'Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop' with a magnitude of 1000. The fourteenth offense (Id 14) is 'Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop' with a magnitude of 1000. The fifteenth offense (Id 15) is 'Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop' with a magnitude of 1000.

Id	Description	Offense Type	Offense Source	Magnitude	Source IPs	Destination IPs	Users	Log Sources
1	Large ping	Event Name	Large ping	1000	Multiple (100)	Multiple (46)	N/A	Check Point @ FW
2	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop	Source IP	10.26.72.208	1000	Multiple (53)	Multiple (53)	N/A	Multiple (2)
3	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop	Source IP	10.26.72.218	1000	Multiple (72)	Multiple (72)	N/A	Multiple (2)
4	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop	Source IP	10.126.50.42	1000	Multiple (1,650)	Multiple (1,650)	N/A	Multiple (2)
5	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop	Source IP	10.127.15.37	1000	Multiple (380)	Multiple (380)	N/A	Multiple (2)
6	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop	Source IP	10.127.27.40	1000	Multiple (281)	Multiple (281)	N/A	Multiple (2)
7	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop	Source IP	10.127.27.28	1000	Multiple (267)	Multiple (267)	N/A	Multiple (2)
8	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop	Source IP	10.126.54.92	1000	Multiple (186)	Multiple (186)	N/A	Multiple (2)
10	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop	Source IP	10.127.27.34	1000	Multiple (207)	Multiple (207)	N/A	Multiple (2)
11	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop	Source IP	10.127.15.35	1000	Remote (163)	Remote (163)	N/A	Multiple (2)
12	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop	Source IP	10.127.27.35	1000	Multiple (164)	Multiple (164)	N/A	Multiple (2)
13	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop	Source IP	10.127.27.38	1000	Multiple (150)	Multiple (150)	N/A	Multiple (2)
14	Excessive Firewall Denies Across Multiple Hosts From A Local Host containing Firewall Drop	Source IP	10.127.27.31	1000	Multiple (582)	Multiple (582)	N/A	Multiple (2)
9	Excessive Firewall Denies Between Hosts containing Firewall Drop	Source IP	192.168.1.193	1000	Multiple (3)	Multiple (3)	N/A	Multiple (2)

2. Find and double-click the “**Excessive Firewall Denies between Hosts containing Firewall Drop**”.

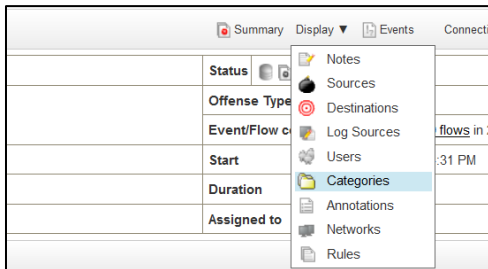


The screenshot shows the 'Offense 9' summary page in the IBM QRadar interface. The page displays various details about the offense, including its magnitude, description, source IP(s), destination IP(s), network(s), and assigned to. The offense is titled 'Excessive Firewall Denies Between Hosts containing Firewall Drop'. The source IP is 192.168.1.193, and the destination IP is 10.3.33.67. The network is Multiple (2). The offense is assigned to Unassigned. The page also shows a table of related events and flows.

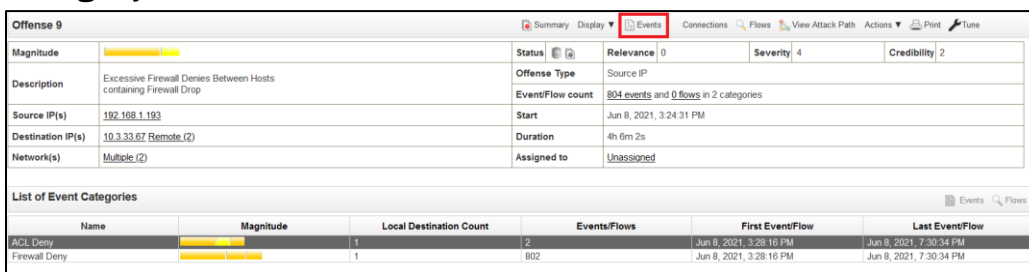
Offense 9	Summary	Display	Events	Connections	Flows	View Attack Path	Actions	Print	Tune
Magnitude	1000	Status	Relevance	0	Severity	4	Credibility	2	
Description	Excessive Firewall Denies Between Hosts containing Firewall Drop	Offense Type	Source IP						
Source IP(s)	192.168.1.193	Event/Flow count	804 events and 0 flows in 2 categories						
Destination IP(s)	10.3.33.67 Remote (2)	Start	Jun 8, 2021, 3:24:31 PM						
Network(s)	Multiple (2)	Duration	4h 6m 2s						
		Assigned to	Unassigned						
Offense Source Summary									
IP	192.168.1.193	Location	Net-10-172-192-Net_192_168_0_0						
Magnitude	1000	Vulnerabilities	0						
Username	Unknown	MAC Address	Unknown NIC						
Host Name	Unknown	Weight	0						
Asset Name	Unknown								
Offenses	1	Events/Flows	804						

## SIEM Courseware Beginner Training Module

3. Show the low-level categories of the offense's events by selecting **Display > Categories** on the toolbar

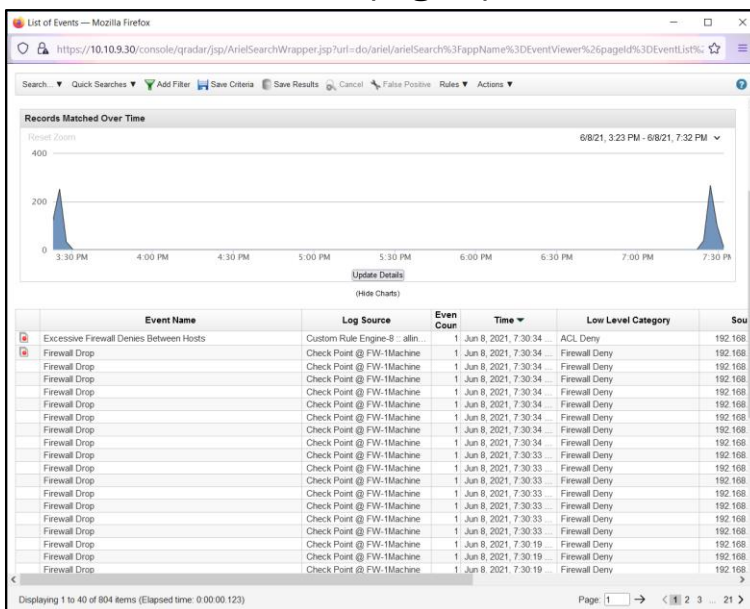


4. To investigate the events that are associated with this offense in the low-level category, Right click the table row that shows the Event category and click **Events**.



Note: You can select any of the event and category from the “**List of Event categories**” table.

The List of the events page opens.



# SIEM Courseware Beginner Training Module

5. Create a filter to exclude the source IP that contributed to the offense.
  - Select an event, Right click on **<IP Address>** and select **Filter on Source IP is not <IP Address>**.

[illegible]

- ## 6. What results are returned?

7. What do the results of this search indicate?

8. To look for similar other events unrelated to the particular offense, click Clear Filter for the Offense is “**Excessive Firewall Denies between Hosts containing Firewall Drop**”.

**Original Filters:**

Offense is Excessive Firewall Denies Between Hosts containing Firewall Drop (Clear Filter)

## What results are returned? Why?

9. Select **Last 24 Hours** to view events from the last 24 hours, in the View drop-down list.

Explore other search filters and options. You can also save the filter criteria by following the below steps.

1. Save the current search criteria
  - a. On the Toolbar, click **Save Criteria**.
  - b. Configure the Save Criteria window as shown below

## SIEM Courseware Beginner Training Module

➤ Search Name	Firewall Deny events
➤ Assign Search to group(s)	Disable
➤ Timespan options	Recent last 24 hours
➤ Include in my Quick Searches	Enable
➤ Set as Default	Disable
➤ Share with Everyone	Disable

- c. Review the Save Criteria and Click **OK**.
2. Save the current search results.
  - a. On the toolbar, click **Save Results**.
  - b. Enter the name in the name field.
  - c. Click **Ok**.
3. Revisit or delete your saved search results.
  - a. On the list of events page's toolbar, click **Search > Manage Search Results**.
  - b. In the Search Results management page, select your search results and click Delete.
  - c. Close the Search Results Management page



# SIEM Courseware Beginner Training Module

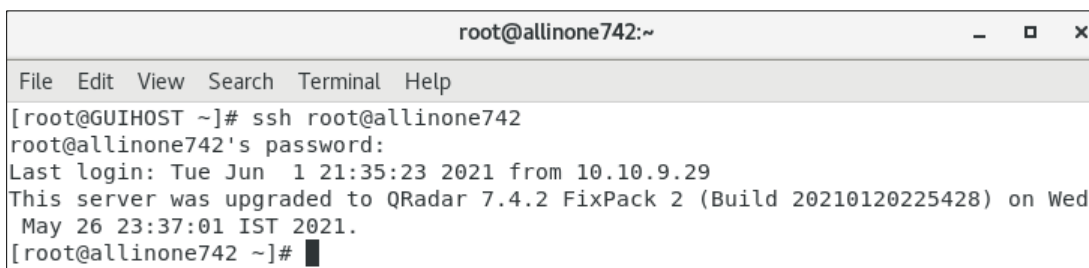
## Lab 4 - Investigating an offense that is triggered by flows

Follow the below steps to investigate an offense that is triggered by flows.

1. Run the following command on SSH Terminal, to access the remote shell to the Qradar.

```
ssh root@allinone742
```

Enter the password as 'p@ssw0rd'



```
root@allinone742:~  
File Edit View Search Terminal Help  
[root@GUIHOST ~]# ssh root@allinone742  
root@allinone742's password:  
Last login: Tue Jun 1 21:35:23 2021 from 10.10.9.29  
This server was upgraded to QRadar 7.4.2 FixPack 2 (Build 20210120225428) on Wed  
May 26 23:37:01 IST 2021.  
[root@allinone742 ~]#
```

2. Run the following commands:

```
inconfig ens33 promisc
```

```
[root@allinone742 configurationsets]# ifconfig ens33 promisc
```

```
cd /labfiles
```

```
./startRdp.sh
```

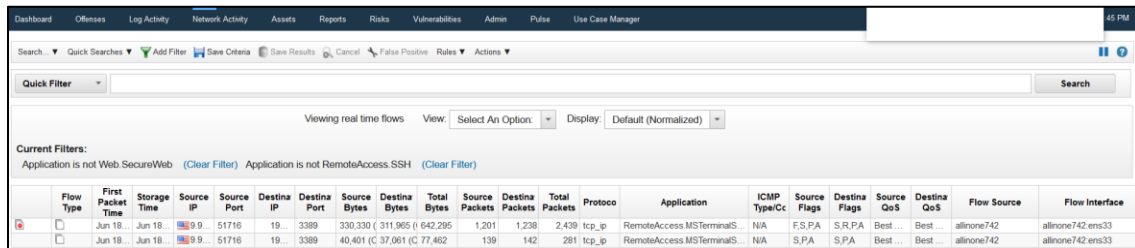
```
[root@allinone742 labfiles]# ./startRdp.sh  
Actual: 311 packets (79977 bytes) sent in 7.86 seconds  
Rated: 10163.3 Bps, 0.081 Mbps, 39.52 pps  
Flows: 2 flows, 0.25 fps, 311 flow packets, 0 non-flow  
Statistics for network device: ens33  
    Successful packets:      311  
    Failed packets:         0  
    Truncated packets:      0  
    Retried packets (ENOBUFFS): 0  
    Retried packets (EAGAIN): 0  
You have new mail in /var/spool/mail/root  
[root@allinone742 labfiles]#
```

3. In the Qradar user interface, navigate to the Network Activity tab.



## SIEM Courseware Beginner Training Module

4. Observe the network activity and verify that a network activity triggers an offense.



The screenshot shows the SIEM interface with a top navigation bar and a search bar. Below the search bar, there are tabs for 'Dashboard', 'Offenses', 'Log Activity', 'Network Activity', 'Assets', 'Reports', 'Risks', 'Vulnerabilities', 'Admin', 'Pulse', and 'Use Case Manager'. The 'Network Activity' tab is selected. Below the tabs, there is a 'Quick Filter' section with a search bar and a 'Search' button. Below the search bar, there is a 'Viewing real time flows' section with a 'View' dropdown and a 'Display' dropdown. Below the view section, there is a 'Current Filters' section with two filters: 'Application is not Web SecureWeb' and 'Application is not RemoteAccess.SSH'. Below the filters, there is a table of flows.

Flow Type	First Packet Time	Storage Time	Source IP	Source Port	Destination IP	Destination Port	Source Bytes	Destination Bytes	Total Bytes	Source Packets	Destination Packets	Total Packets	Protocol	Application	ICMP Type/Cc	Source Flags	Destination Flags	Source QoS	Destination QoS	Flow Source	Flow Interface
	Jun 18	Jun 18	192.168.1.1	51716	192.168.1.2	3389	330,330	311,905	642,235	1,201	1,238	2,439	tcp_ip	RemoteAccess.MSTerminalS...	N/A	F,S,P,A	S,R,P,A	Best...	Best...	allnone742	allnone742 ens33
	Jun 18	Jun 18	192.168.1.1	51716	192.168.1.2	3389	40,401	37,061	77,462	139	142	281	tcp_ip	RemoteAccess.MSTerminalS...	N/A	S,P,A	S,P,A	Best...	Best...	allnone742	allnone742 ens33

5. To investigate the offense, click the red icon in the left-most column. Red Icon in the left most column signifies the flows that contribute to an offense.
6. The Offense Summary page opens.
7. What is the name of the offense, Offense Type, Offense Source and Destination IP?

8. How many events or Flows are associated with this offense?

9. Which Rule added events or flows to this offense?

To investigate the flows that contributed to the offense. Follow the below steps.

1. Click **Flows** on the Offense Summary page toolbar  
The Flow List page opens.
2. Examine the Flow associated with this offense. Double-Click on the flow listed.
3. Answer the flowing questions:
  - a. What is the flow direction?

## SIEM Courseware Beginner Training Module

- 
- b. What is the Application name?
- 
- c. Which Activity triggered this offense?
- 
4. Tune the flow as a false positive.
- a. On the Flow details page's toolbar, click **False Positive**.
  - b. Click **Tune**.
  - c. Click **Close**.
5. Close the offense.
- a. On the **Offense** tab navigation menu, select **All Offenses**.
  - b. From the **Actions** drop-down list on the toolbar, select **Close**.
  - c. From the **Reason for Closing** list, select **False-Positive, Tuned**.
  - d. Click **OK**.

# SIEM Courseware Beginner Training Module

## Lab 5 - Using rules

In this lab, we will create Rules to monitor the Login Activity. Below is the use case.

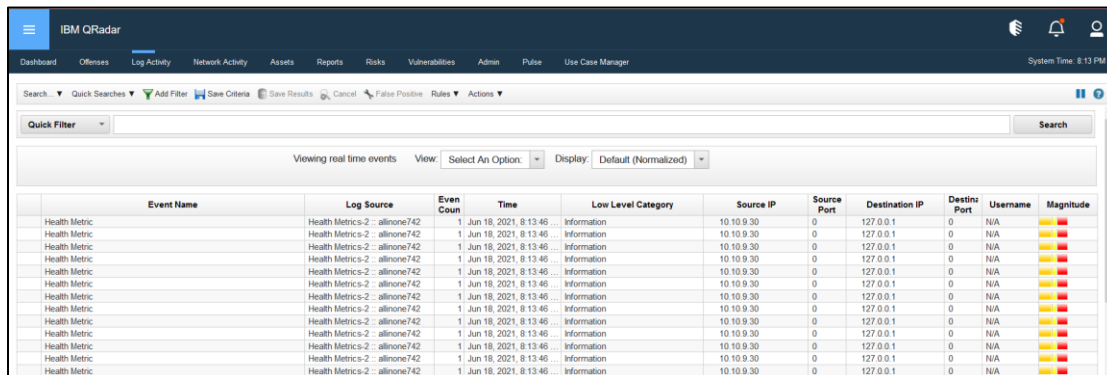
An Organization wants to monitor the user accounts of terminated employees.

- Create a rule to generate offenses for invalid login activities.
- Reference set should be used to store and look up for the usernames of terminated employees.

### Create an Event Rule

Perform the below steps in this lab.

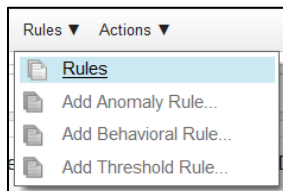
1. Login in the Qradar Interface, on Home page, Click the **Log Activity** tab.



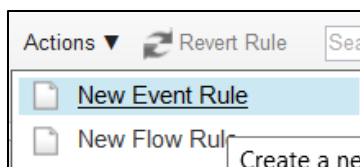
The screenshot shows the IBM QRadar Log Activity interface. At the top, there's a navigation bar with tabs: Dashboard, Offenses, Log Activity (selected), Network Activity, Assets, Reports, Risks, Vulnerabilities, Admin, Pulse, and Use Case Manager. Below the navigation bar, there's a search bar with options like Quick Searches, Add Filter, Save Criteria, Save Results, Cancel, False Positive, Rules, and Actions. A 'Quick Filter' dropdown is also present. The main area displays a table of events with columns: Event Name, Log Source, Event Count, Time, Low Level Category, Source IP, Source Port, Destination IP, Destination Port, Username, and Magnitude. The table shows multiple rows of 'Health Metric' events from 'Health Metrics-2 : allnone742'.

Event Name	Log Source	Event Count	Time	Low Level Category	Source IP	Source Port	Destination IP	Destination Port	Username	Magnitude
Health Metric	Health Metrics-2 : allnone742	1	Jun 18, 2021, 8:13:46	Information	10.10.9.30	0	127.0.0.1	0	N/A	1
Health Metric	Health Metrics-2 : allnone742	1	Jun 18, 2021, 8:13:46	Information	10.10.9.30	0	127.0.0.1	0	N/A	1
Health Metric	Health Metrics-2 : allnone742	1	Jun 18, 2021, 8:13:46	Information	10.10.9.30	0	127.0.0.1	0	N/A	1
Health Metric	Health Metrics-2 : allnone742	1	Jun 18, 2021, 8:13:46	Information	10.10.9.30	0	127.0.0.1	0	N/A	1
Health Metric	Health Metrics-2 : allnone742	1	Jun 18, 2021, 8:13:46	Information	10.10.9.30	0	127.0.0.1	0	N/A	1
Health Metric	Health Metrics-2 : allnone742	1	Jun 18, 2021, 8:13:46	Information	10.10.9.30	0	127.0.0.1	0	N/A	1
Health Metric	Health Metrics-2 : allnone742	1	Jun 18, 2021, 8:13:46	Information	10.10.9.30	0	127.0.0.1	0	N/A	1
Health Metric	Health Metrics-2 : allnone742	1	Jun 18, 2021, 8:13:46	Information	10.10.9.30	0	127.0.0.1	0	N/A	1
Health Metric	Health Metrics-2 : allnone742	1	Jun 18, 2021, 8:13:46	Information	10.10.9.30	0	127.0.0.1	0	N/A	1
Health Metric	Health Metrics-2 : allnone742	1	Jun 18, 2021, 8:13:46	Information	10.10.9.30	0	127.0.0.1	0	N/A	1
Health Metric	Health Metrics-2 : allnone742	1	Jun 18, 2021, 8:13:46	Information	10.10.9.30	0	127.0.0.1	0	N/A	1
Health Metric	Health Metrics-2 : allnone742	1	Jun 18, 2021, 8:13:46	Information	10.10.9.30	0	127.0.0.1	0	N/A	1
Health Metric	Health Metrics-2 : allnone742	1	Jun 18, 2021, 8:13:46	Information	10.10.9.30	0	127.0.0.1	0	N/A	1
Health Metric	Health Metrics-2 : allnone742	1	Jun 18, 2021, 8:13:46	Information	10.10.9.30	0	127.0.0.1	0	N/A	1
Health Metric	Health Metrics-2 : allnone742	1	Jun 18, 2021, 8:13:46	Information	10.10.9.30	0	127.0.0.1	0	N/A	1

2. From the **Rules** drop-down menu, select **Rules**.



3. From the **Actions** Drop-down menu, select **New Event Rule**.




## SIEM Courseware Beginner Training Module



4. In the Rules Wizard window, click **Next** twice.
5. In the Rule Test Stack Editor Window, Enter the following name in the rule name field.

*Lab 5 Employees Login Activity*

Apply <input type="text" value="Lab 5 Employees Login Activity"/>	on events which are detected by the	<input type="text" value="Local"/>	<input type="text" value="system"/>
---	-------------------------------------	------------------------------------	-------------------------------------






6. Add the following tests by clicking  to the rule under these conditions:


- when any of these event properties are contained in any of these reference set(s)
- when an event matches any/all of the following rules

Apply <input type="text" value="Lab 5 Employees Login Activity"/>	on events which are detected by the	<input type="text" value="Local"/>	<input type="text" value="system"/>
 and when <u>any of these event properties</u> are contained in <u>any of these reference set(s)</u>			
 and when an event matches <u>any of the following rules</u>			

To add the first rule test, when any of these event properties are contained in any of these reference set(s), perform the following steps:

- i. Filter the options in the **Test Group** list. For **Type to filter**, enter *ref*

ref
 when any of <b>these event properties</b> are contained in any of <b>these reference set(s)</b>
 when any of <b>these event properties</b> is the key and any of <b>these event properties</b> is the value in any of <b>these reference maps</b>
 when any of <b>these event properties</b> is the key and any of <b>these event properties</b> is the value in any of <b>these reference map of sets</b>
 when any of <b>these event properties</b> is the key of the first map and any of <b>these event properties</b> is the key of the second map and any of <b>these event properties</b> is the value in any of <b>these reference map of maps</b>
 when <b>Reference Table Key</b> data matches <b>any/all selected event properties</b> and <b>selected reference table column Select operator</b> the value of <b>selected event property</b>

- ii. Click the green **plus (+)**  icon next to the when any of these event properties are contained in any of these reference set(s) test.
- iii. Click the parameter **these event properties**.

## SIEM Courseware Beginner Training Module

- iv. Filter the fields in the event property list. In the **Type to filter** field, enter user.

Select an event property and click 'Add'

user

- Identity Username
- Originating\_User (custom)
- Recipient\_User (custom)
- Target User Name (custom)
- User ID (custom)
- Username**

Add +

Selected Items

Remove -

Submit Cancel

- v. Select **Username** and click **Add**.

Add +

- vi. Click **Submit**.
- vii. Click the parameter **these reference set(s)**.
- viii. Select the reference set **Exercise: User Watchlist** and click **Add** and Click **Submit**.

Select one or more reference sets and click 'Add'

user

- Exercise: User Watchlist - AlphaNumeric**

Add +

[View Reference Sets](#)

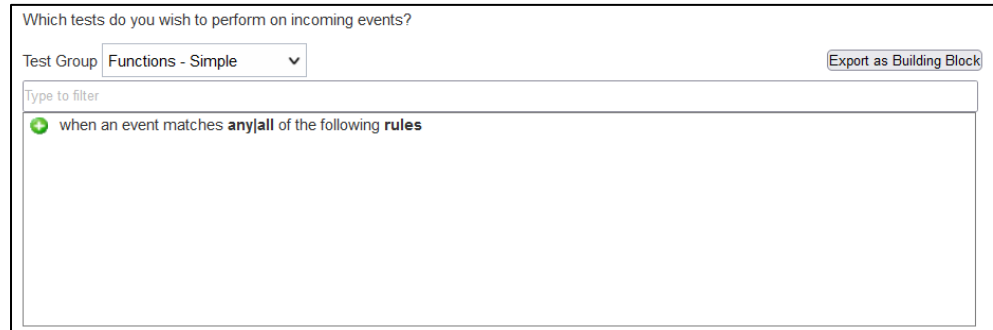
Selected Items

Remove -

Submit Cancel

## SIEM Courseware Beginner Training Module

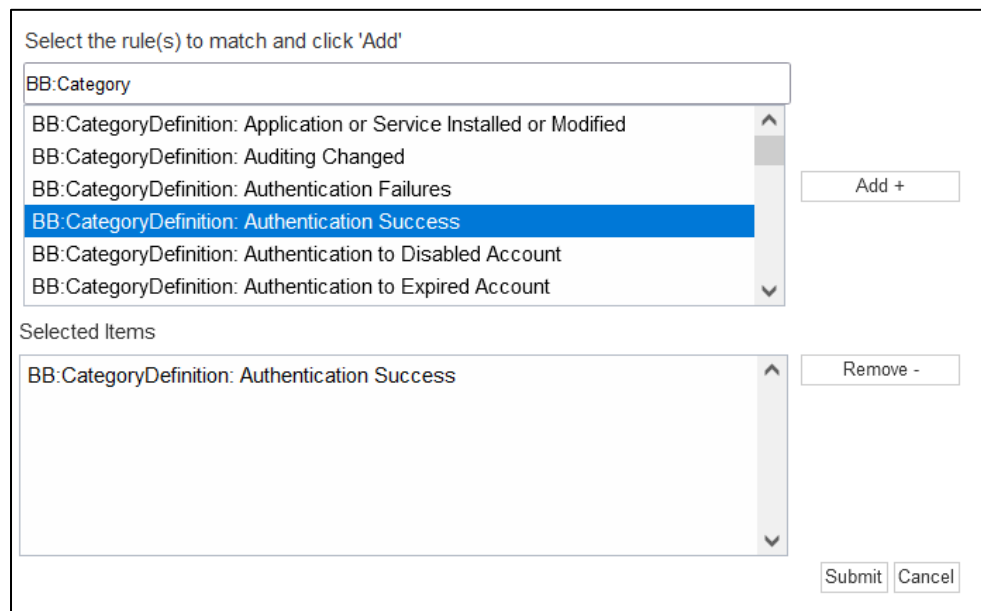
7. To add the second rule test, when an event matches any | all of the following rules, perform the following steps:
- In the **Test Group** drop-down list, select **Functions - Simple**.
  - Click the **green plus (+)** icon next to the only test listed.



- Click the parameter **rules**.



- Filter the options in the rules list. In the **Type to filter** field, enter the following text:  
BB: Category
- Select **BB: Category Definition: Authentication Success** and click **Add**, and Click Submit.



## SIEM Courseware Beginner Training Module

### 8. Assign the rule to the group **Authentication**.

Please select any groups you would like this rule to be a member of:

- ☐ Anomaly
- ☐ Asset Reconciliation Exclusion
- ☒ Authentication
- ☐ Botnet
- ☐ Category Definitions

### 9. To document the rule in the **Notes** field, enter the following text.

*This rule tracks the successful login of terminated users accounts.*

### 10. Click **Next**.

**Rule Wizard**

**Rule Wizard: Rule Test Stack Editor**

Which tests do you wish to perform on incoming events?

Test Group: Functions - Simple Export as Building Block

Type to filter

+ when an event matches **any**all of the following rules

Rule (Click on an underlined value to edit it)  
Invalid tests are highlighted and must be fixed before rule can be saved.

Apply Lab 5 Employees Login Activity on events which are detected by the Local system

and when any of Username are contained in any of Exercise: User Watchlist - AlphaNumeric

and when an event matches any of the following BB:CategoryDefinition: Authentication Success

Please select any groups you would like this rule to be a member of:

- ☐ Anomaly
- ☐ Asset Reconciliation Exclusion
- ☒ Authentication
- ☐ Botnet
- ☐ Category Definitions

Notes (Enter your notes about this rule)

This rule tracks the successful login of terminated users accounts.

<< Back Next >> Finish Can



## SIEM Courseware Beginner Training Module

11. Configure the rule action and response as shown below

### Rule Action

- Ensure the detected event is part of an offense: **enable**
- Index offense based on list: **Username**
- Annotate this offense: **enable, User Watchlist login success**
- Annotate event: **enable, User Watchlist login success**

The screenshot shows the 'Rule Action' configuration window. At the top, it says 'Rule Action' and 'Choose the action(s) to take when an event occurs that triggers this rule'. Below this, there are several configuration options:

- ☐ Severity: Set to 0
- ☐ Credibility: Set to 0
- ☐ Relevance: Set to 0
- ☒ Ensure the detected event is part of an offense
  - Index offense based on: Username
  - ☒ Annotate this offense: User Watchlist login success
  - ☐ Include detected events by Username from this point forward, in the offense, for : 300 second(s)
- ☒ Annotate event
  - Enter annotation for this event: User Watchlist login success
- ☐ Bypass further rule correlation event

### Rule Response

- Dispatch New Event: **enable**
- Type Event Name: **User Watchlist login**
- Type Event Description: **User Watchlist login**
- Severity: **8**
- Credibility: **10**
- Relevance: **10**
- High Level Category: **Authentication**
- Low Level Category: **User Login Success**
- Annotate this offense: **enable, User Watchlist login success**
- Ensure the dispatched event is part of an offense: **enable**
- Index offense based on: **Username**

## SIEM Courseware Beginner Training Module

- This information should contribute to the naming of the associated offense(s): **enable**

**Rule Response**  
Choose the response(s) to make when an event triggers this rule

☒ Dispatch New Event

Enter the details of the event to dispatch

Event Name:

Event Description:

**Event Details:**

Severity  Credibility  Relevance

High-Level Category:  Low-Level Category:

☒ Annotate this offense:

☒ Ensure the dispatched event is part of an offense

Index offense based on

☐ Include detected events by Username from this point forward, in the offense, for :  second(s)

**Offense Naming**

☒ This information should contribute to the name of the associated offense(s)

☐ This information should set or replace the name of the associated offense(s)

☐ This information should not contribute to the naming of the associated offense(s)

☐ Email

☐ Send to Local Syslog

☐ Send to Forwarding Destinations

☐ Notify

☐ Add to a Reference Set

☐ Add to Reference Data

☐ Remove from a Reference Set

☐ Remove from Reference Data

☐ Execute Custom Action

12. Click Next.

## SIEM Courseware Beginner Training Module

13. Verify that your rule summary looks similar to the one in the screen capture and click Finish

Rule Summary

Review this rule summary to ensure all the details you have specified are correct. You may click 'Back' to change incorrect settings.

Note that your rule has not yet been saved or deployed. It will be saved when you select 'Finish' and only be deployed if you chose the 'Enable Rule' checkbox on the previous screen.

Rule Description

Apply Lab 5 Employees Login Activity on events which are detected by the Local system and when any of Username are contained in any of Exercise: User Watchlist - AlphaNumeric and when an event matches any of the following BB:CategoryDefinition: Authentication Success

Rule Notes

This rule tracks the successful login of terminated users accounts.

Rule Actions

- Force the detected Event to create a NEW offense, select the offense using Username
  - Annotate this offense with: User Watchlist login success
- Annotate the Event with: User Watchlist login success

Rule Responses

- Dispatch New Event
  - Event Name: User Watchlist login
  - Event Description: User Watchlist login
  - Severity: 8 Credibility: 10 Relevance: 10
  - High-Level Category: Authentication
  - Low-Level Category: User Login Success
  - Annotate the offense with User Watchlist login success
  - Force the dispatched event to create a NEW offense, select the offense using Username

This Rule will be: Enabled

<< Back Next >> Finish Cancel

14. Open a remote shell to the QRadar VM. Use the procedure as outlined in Running commands on the QRadar VM.
15. To feed prepared syslog messages to QRadar, run the following commands:

```
cd /labfiles
```

```
./sendWindows.sh
```

```
[root@allinone742 labfiles]# ./sendWindows.sh
generating 35 messages per second to 10.10.9.30:514
Ctrl-c to stop
generating 35 messages per second to 10.10.9.30:514
Ctrl-c to stop
```

# SIEM Courseware Beginner Training Module

Wait for five minutes and return to the Offenses tab in browser



The screenshot shows the QRadar Offenses tab interface. At the top, there is a search bar and a 'Save Criteria' button. Below this, a message states: 'Offenses with last Event/Flow received from Jun 18, 2021, 11:22:44 PM to Jun 19, 2021, 12:22:44 AM'. A 'View Offenses with:' dropdown menu is set to 'Select An Option'. Under 'Current Search Parameters', there are links for 'Exclude Hidden Offenses (Clear Filter)' and 'Exclude Closed Offenses (Clear Filter)'. The main table lists offenses with columns: Id, Description, Offense Type, Offense Source, Magnitude, Source IPs, Destination IPs, Users, and Log Sources.

Id	Description	Offense Type	Offense Source	Magnitude	Source IPs	Destination IPs	Users	Log Sources
19	User Watchlist login containing Success Audit: Authentication Ticket Granted	Username	CF000297	High	10.2.121.29	10.0.120.11	CF000297	Multiple (2)
18	User Watchlist login containing Success Audit: Authentication Ticket Granted	Username	jg000565	High	10.128.140.40	10.0.120.11	jg000565	Multiple (2)

Investigate the offenses created. Answer the following questions:

- How many offenses did the BQX Watchlist User Activity rule create? On the Rule list page, select the rule and look for the offense count parameter.

---

- List the user IDs that created offenses. In the QRadar user interface, double-click the Offenses tab and find offenses that have Watchlist in the description.

---

- What is the source IP address of the offenses created?

---

## Working with rule parameters

To work with the parameters of a rule, perform the following steps:

- In the QRadar user interface, navigate to the Offenses tab.



- Click Rules in the left pane.

## SIEM Courseware Beginner Training Module



- Sort the Offense Count column in descending order, Click the header for the Offense Count column to sort in descending order.

Rule Name	Group	Rule Category	Rule Type	Enabled	Response	Events/Flow Count	Offense Count ▲	Origin ^
Login Failures Followed By Success to the same Destination IP	Authentication, Intr...	Custom Rule	Event	True	Dispatch New Event	8,037	1	System
Multiple Login Failures for Single Username	Authentication, Re...	Custom Rule	Event	True	Dispatch New Event	36	1	System
Multiple Login Failures to the Same Destination	Authentication, Re...	Custom Rule	Event	True	Dispatch New Event	307	1	System
Remote _RDP_Access		Custom Rule	Flow	True		3	1	User
All Exploits Become Offenses	Intrusion Detection	Custom Rule	Event	False		0	0	System
Anomaly: Excessive Firewall Accepts Across Multiple Hosts	Recon	Custom Rule	Event	False	Dispatch New Event	0	0	System
AssetExclusion: Exclude DNS Name By IP	Asset Reconciliati...	Custom Rule	Event	True	ReferenceSet	0	0	System
AssetExclusion: Exclude DNS Name By MAC Address	Asset Reconciliati...	Custom Rule	Event	True	ReferenceSet	0	0	System
AssetExclusion: Exclude DNS Name By NetBIOS Name	Asset Reconciliati...	Custom Rule	Event	True	ReferenceSet	0	0	System
AssetExclusion: Exclude IP By DNS Name	Asset Reconciliati...	Custom Rule	Event	True	ReferenceSet	0	0	System
AssetExclusion: Exclude IP By MAC Address	Asset Reconciliati...	Custom Rule	Event	True	ReferenceSet	0	0	System

- What rule created the most offenses?

- On the **Rules** page, from the **Display** drop-down list, select **Rules**.
- From the **Group** drop-down list, do **not** select any group.
- In the Search Rules field, enter the following name:

*BB:CategoryDefinition: Authentication Success*

The Rules display lists all the rules that meet the search criteria.

- Select several of the rules and review the rule tests.

Notice that the rules listed include the BB:CategoryDefinition: Authentication Success building block. Before editing a building block or rule, determine which other rules use it.

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Display: Rules		Group: Select a group...		Groups	Actions	Revert Rule	BB CategoryDefinition: Authentication		View the IBM App Exchange for more...		
Rule Name	Group	Rule Category	Rule Type	Enabled	Response	Event/Flow Count	Offense Count	Origin			
Database Concurrent Logins from Multiple Locations	Compliance, Post...	Custom Rule	Event	True	Dispatch New Event	0	0	System			
Database Remote Login Success	Compliance	Custom Rule	Event	True	Dispatch New Event	0	0	System			
First-Time User Access to Critical Asset	Anomaly, Authentication	Custom Rule	Event	True	Dispatch New Event	0	0	System			
Load Basic Building Blocks	System	Custom Rule	Event	True		0	0	System			
Login Failures Followed By Success from the same Source IP	Authentication, Intr...	Custom Rule	Event	True	Dispatch New Event	0	0	System			
Login Failures Followed By Success to the same Destination IP	Authentication, Intr...	Custom Rule	Event	True	Dispatch New Event	8,037	1	System			
Login Failures Followed By Success to the same Username	Authentication, Intr...	Custom Rule	Event	True	Dispatch New Event	0	0	System			
Login Successful After Scan Attempt	Authentication, Intr...	Custom Rule	Common	True	Dispatch New Event	0	0	System			
<div></div>											

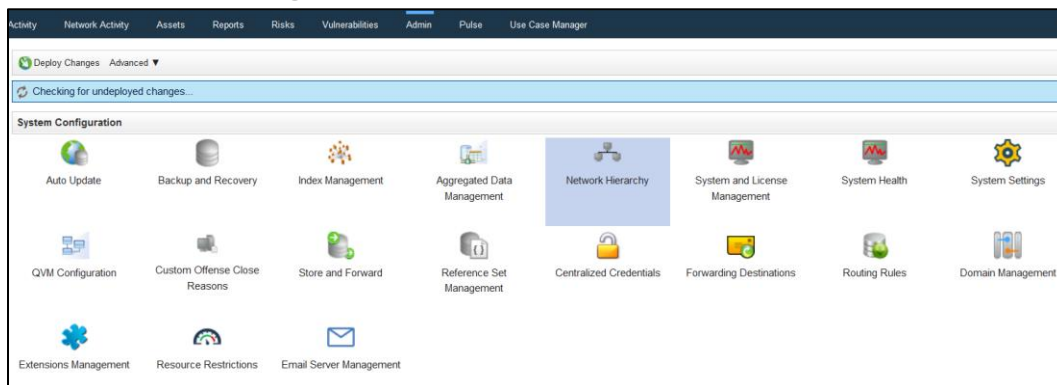
# SIEM Courseware Beginner Training Module

## Lab 6 - Using the Network Hierarchy

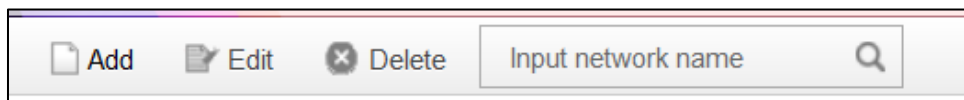
In this lab, we will explore the Network Hierarchy feature of Qradar. We will create and view a Network Hierarchy Object.


### Create a Network Object

1. Navigate to the **Admin** tab and click the **Network Hierarchy** icon in the System configuration section.



2. Click **Add**.



3. In the Add network window, click the  **Yellow gear wheel** icon.
4. For **Name** in the Add a new Group window, enter the following text. *QRadar.Clients* and Click **Save**.

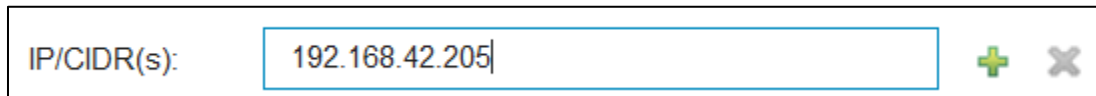
A screenshot of the 'Add a new group' dialog box. The dialog has a title bar that says 'Add a new group'. Inside, there is a text input field labeled 'Name:' which contains the text 'QRadar.Clients'. Below the input field are two buttons: 'Save' and 'Cancel'.



5. In the Add network Window, enter the values shown below.

Field	Value
Name	Student
Description	Exercise
IP/CIDR(s)	192.168.42.205


## SIEM Courseware Beginner Training Module

6. Make sure you click the plus icon to add the IP/CIDR(s) value to the object's list.

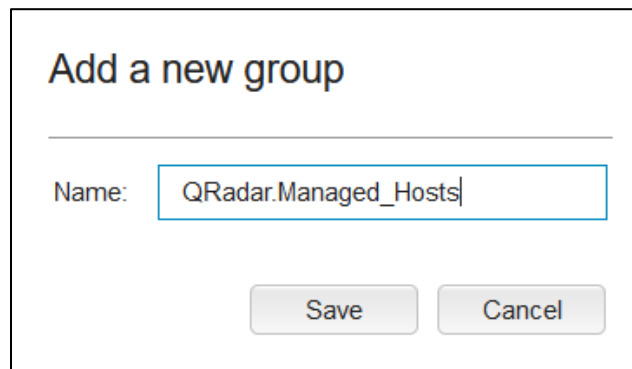


IP/CIDR(s):   

7. Using the similar process from step 2 to 6, add a new network object as per below data.

- a. In the Add network window, click the  **Yellow gear wheel** icon.

- b. In the Name field, enter QRadar.Managed\_Hosts. Click **Save**.



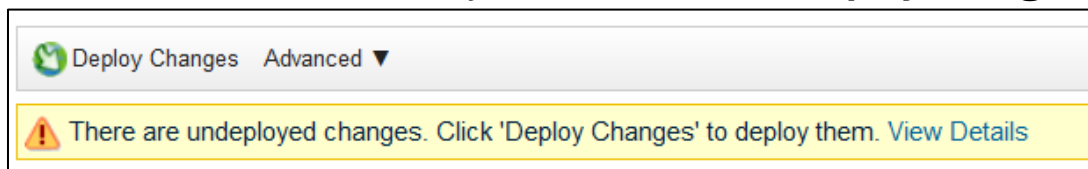
Add a new group


Name:


- c. In the add network window, enter the values shown as below.

Field	Value
Name	On_Premise
Description	Exercise
IP/CIDR(s)	192.168.10.20/32 192.168.10.16/30 192.168.10.12/30 192.168.42.150/31

8. Close the Network Hierarchy Window and Click **Deploy Changes**.



 Deploy Changes Advanced ▼

 There are undeployed changes. Click 'Deploy Changes' to deploy them. [View Details](#)



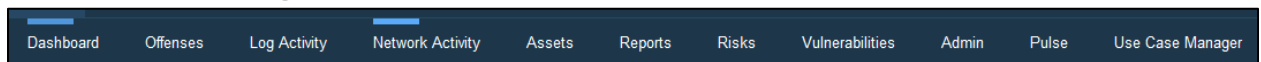
## SIEM Courseware Beginner Training Module

Open the Network hierarchy tab and verify that the **Student** and **On\_Premise** network objects are listed.


QRadar		
Clients		
Student	192.168.42.205/32	Exercise
Managed_Hosts		
On_Premise	192.168.10.12/30 192.168.10.16/30 192.168.10.20/32 192.168.42.150/31	Exercise

### View Network Objects in Flow

1. To view incoming flows, double-click the **Network Activity** tab.



Note: The double-click resets the tab to its default settings.

2. Wait until you see flows with the IP addresses 192.168.42.150 and 192.168.42.205.
3. To pause the incoming events, click the **Pause**  icon in the upper-right corner of the QRadar user interface.
4. Hover the mouse over either of the IP addresses and review the Network field information.
5. Open a remote shell to the QRadar VM. And run the following commands:

```
cd /labfiles
```

```
./startPcap.sh
```

## SIEM Courseware Beginner Training Module

```
[root@allinone742 labfiles]#  
[root@allinone742 labfiles]# ./startPcap.sh  
Warning: /labfiles/flows/bittorrent1.pcap was captured using a snaplen of 128 bytes. This may mean you have truncated packets.  
Actual: 18 packets (1539 bytes) sent in 13.06 seconds  
Rated: 117.7 Bps, 0.000 Mbps, 1.37 pps  
Flows: 12 flows, 0.91 fps, 16 flow packets, 2 non-flow  
Statistics for network device: ens33  
Successful packets: 18  
Failed packets: 0  
Truncated packets: 0  
Retried packets (ENOBUFS): 0  
Retried packets (EAGAIN): 0  
Warning: /labfiles/flows/bittorrent2.pcap was captured using a snaplen of 64 bytes. This may mean you have truncated packets.  
Actual: 53 packets (3392 bytes) sent in 4.42 seconds  
Rated: 766.4 Bps, 0.006 Mbps, 11.97 pps  
Flows: 52 flows, 11.75 fps, 53 flow packets, 0 non-flow  
Statistics for network device: ens33  
Successful packets: 53  
Failed packets: 0  
Truncated packets: 0  
Retried packets (ENOBUFS): 0  
Retried packets (EAGAIN): 0  
Warning: /labfiles/flows/bittorrent3.pcap was captured using a snaplen of 64 bytes. This may mean you have truncated packets.
```

6. In the browser return to the Network Activity Tab.
7. If refresh of the Network Activity tab is paused, press the **Play** button in the upper-right corner of the QRadar user interface. Wait for at least one minute.
8. To display only flows with destination IP addresses part of the

network objects you created, click **Add Filter**.



- a. In the Add Filter window, enter the values shown below.

Field	Value
Parameter	Destination Network
Operator	Equals
Value	Qradar.Managed_Hosts

- b. Click **Add Filter**.

Add Filter

Parameter:

Operator:

Value:

Destination Network

Equals

Qradar.Managed\_Hosts

Add Filter

Cancel

9. If there are no rows with a Destination Network of **On\_Premise** listed.
10. Change the View to show the **Last Hour**.
11. Change the Display to **Destination Network**.

## SIEM Courseware Beginner Training Module

12. Use the right-click option menu on the Destination IP column to apply **Filter on Destination IP is not 192.168.42.150**.
13. Verify that you only see rows with Destination IP 192.168.10.12.
14. However the mouse over the Destination IP address and review the **Network** Field Information.
15. Navigate to the **Admin** tab, click the **Network Hierarchy** icon in the System Configuration section.
  - a. Click the plus signs in front of Qradar and Managed\_Hosts.
  - b. Double click **On\_Premise**.
  - c. Select **192.168.10.12/30** from the IP/CIDR(s) list and click the red **X**.
  - d. Click **Save**.
  - e. Close the **Network Hierarchy** Window.
  - f. Click **Deploy Changes**.
16. Return to the Network Activity page.
  - a. Hover the mouse over the Destination IP address and review the **Network** field information to verify that it no longer displays **QRadar.Managed\_Hosts.On\_Premise**.
  - b. Clear the **Destination Network is QRadar.Managed\_Hosts** filter.
  - c. Reapply the **Destination Network is QRadar.Managed\_Hosts** filter.
  - d. Verify that the result set is now empty.

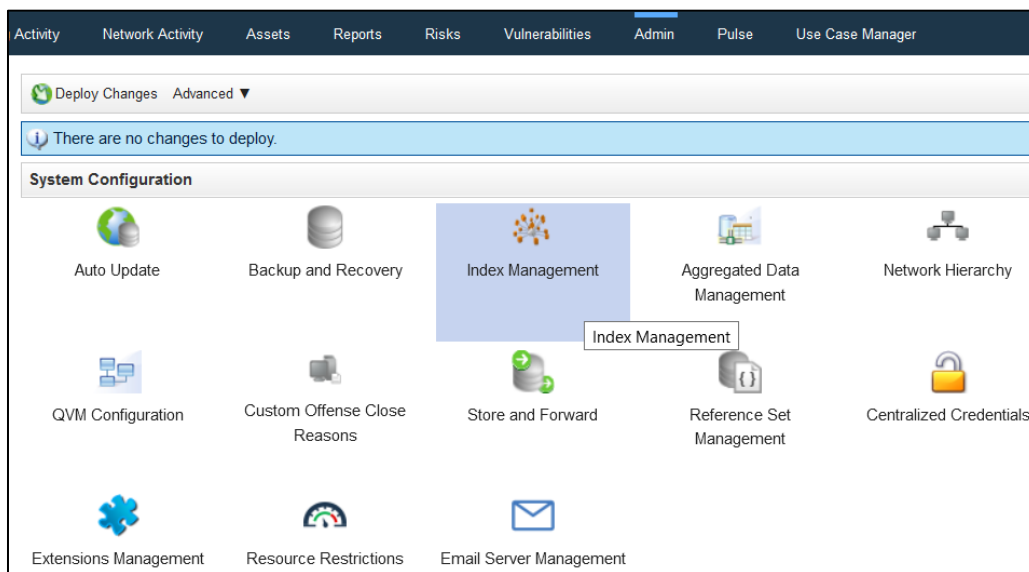
# SIEM Courseware Beginner Training Module

## Lab 7 - Index and Aggregated Data Management

In this lab, we will explore and create indexes. We will also use the indexed properties in searches and observe how the statistics for the indexed properties are updated.

### Enable an Index

1. In the QRadar user interface, click the **Index Management** icon under **Admin** tab.



2. In the Index Management window opened, Verify that some indexed properties have data-written values by sorting the Data Written column in descending order.

A screenshot of the QRadar Index Management window. At the top, there are buttons for 'Enable Index' (green) and 'Disable Index' (red), along with a search bar. Below these are filters for 'Display: Last 24 Hours', 'View: All', 'Database: All', and 'Show: All'. A warning message states: 'WARNING: Enabling indexing on too many properties, can have a negative impact on system performance. It is important that you return to this page after adjusting indexing to monitor the health of the indexes.' The main part of the window is a table with the following data:

Indexed	Property	% of Searches Using Property	% of Searches Hitting Index	% of Searches Missing Index	Data Written	Database
	Destination Network	5.88%	0%	66.67%	0KB	flows
	Identity Host Name	0%	0%	0%	0KB	events
	Flows per Second - Average 15 Min (custom)	0%	0%	0%	0KB	events
	File Directory (custom)	0%	0%	0%	0KB	events
	Peak EPS Rate (custom)	0%	0%	0%	0KB	events
	Event Collector ID	0%	0%	0%	0KB	events


3. Enter *Account* in the search field on the top of the screen and click Search Magnifier icon.

## SIEM Courseware Beginner Training Module

- Right click **AccountName (custom)** and click **Enable Index**.
- Click **Save**.
- Click **Ok**.

Property
AccountName (custom)
AccountID (custom)
Account Name (custom)
AWS Account ID

Enable Index  
Disable Index

Indexed	Property	% of Searches Using Property	% of Searches Hitting Index	% of Searches Missing Index
	AccountName (custom)	0%	0%	0%

### Use an Enabled Indexed property in a search

- Open a remote shell to the QRadar VM and run the following commands.

```
cd /labfiles
```

```
./sendWindows.sh
```

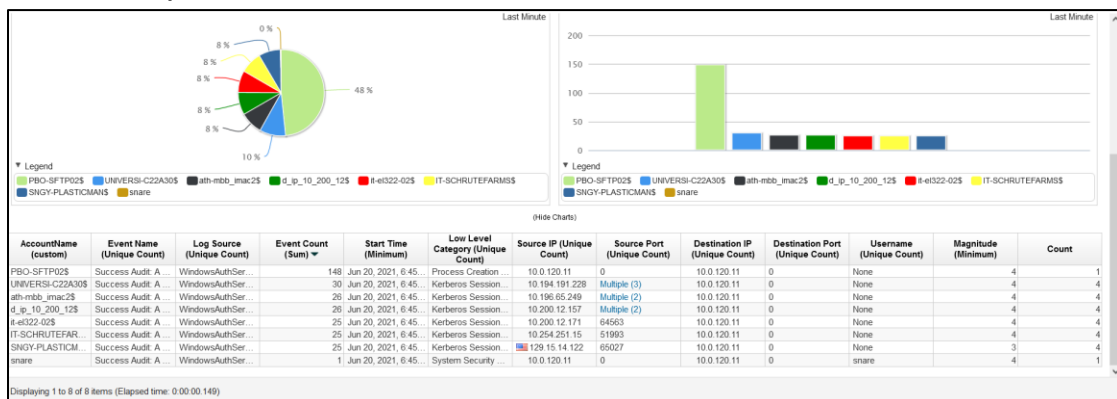
```
[root@allinone742 labfiles]# ./sendWindows.sh
generating 35 messages per second to 10.10.9.30:514
Ctrl-c to stop
generating 35 messages per second to 10.10.9.30:514
Ctrl-c to stop
```

- In the QRadar user interface, double-click the Log Activity tab. Click on **Add Filter** and **View** using the following criteria.
  - View the events from the last 30 minutes.
  - Add the **AccountName (custom) [Indexed] is not N/A** filter.
  - Add the **Log Source is WindowsAuthServer @ 10.0.120.11** filter.
  - Edit the search.
    - In the columns definition pane, group the search results by **AccountName (custom)**.

## SIEM Courseware Beginner Training Module

- ii. For the Columns list, select only **Event Name** and **Event Count (Sum)**.
  - iii. From the Order By list, select **Event Count (Sum)**.
- e. Click Search

3. Verify that search results look similar to the results in the following screen capture.



4. Click **Save Criteria** to save the search.
5. Save the search using the values shown below.

Field / Option	Value
Search Name	Exercise:Index Management
Timespan Options	Recent <enabled> Last 15 Minutes
Include in my Quick Searches	<enabled>

## SIEM Courseware Beginner Training Module

6. Wait for the sendWindows.sh script to finish.
7. Click **Index Management** Icon under **Admin** Tab.
8. Verify that the AccountName property now includes statistics for the indexed property.

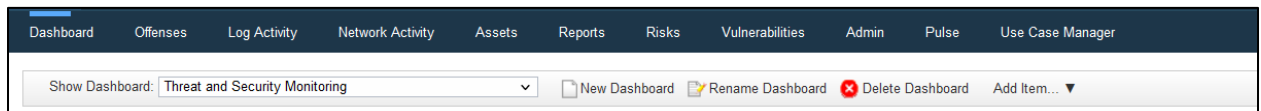
# SIEM Courseware Beginner Training Module

## Lab 8 - Using Dashboards

In this lab, we will learn about Creating a new dashboard and add items to the dashboard.

Follow the below steps to create a new dashboard.

1. Navigate to the **Dashboard** tab.
2. Click the **New Dashboard** button.



3. For **Name**, enter *Student Dashboard*.
4. For **Description**, enter *Lab Demonstration Dashboard*.
5. Click **Ok**.

### New Dashboard

---

Provide a name and description for this dashboard:

Name:

Description:

Share:

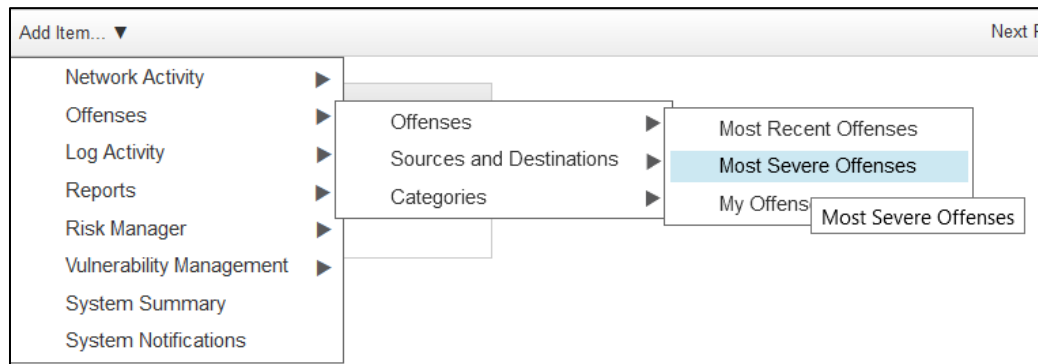
☐



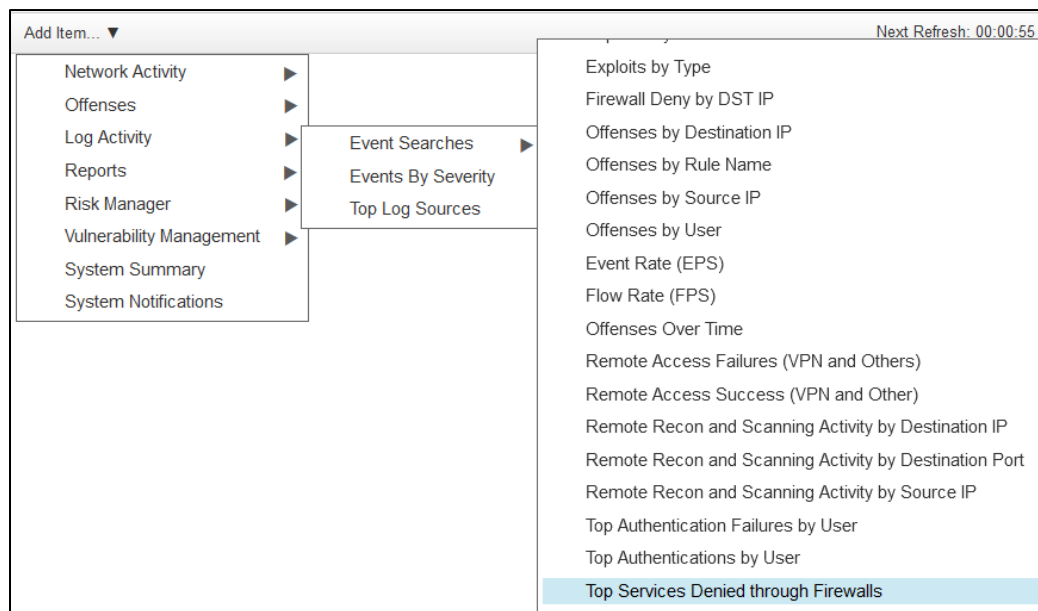
## SIEM Courseware Beginner Training Module

6. To add items to the new dashboard, from the **Add Item** list, select the following items:

**a. Offenses > Offenses > Most Severe Offenses**

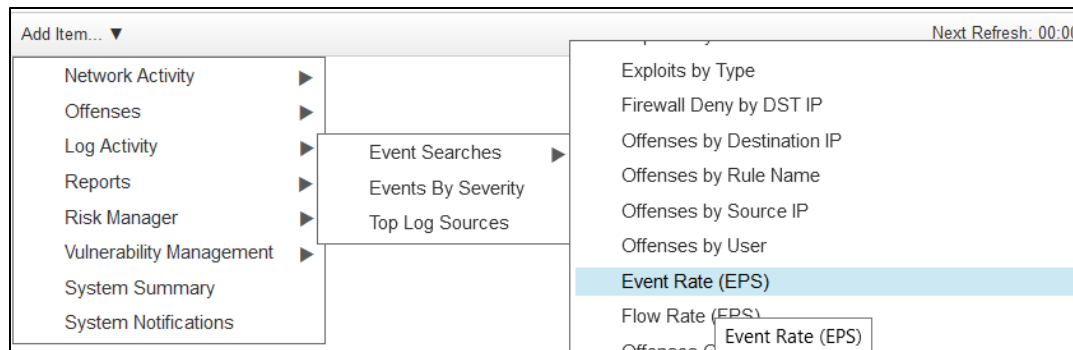


**b. Log Activity > Event Searches > Top Services Denied through Firewalls**

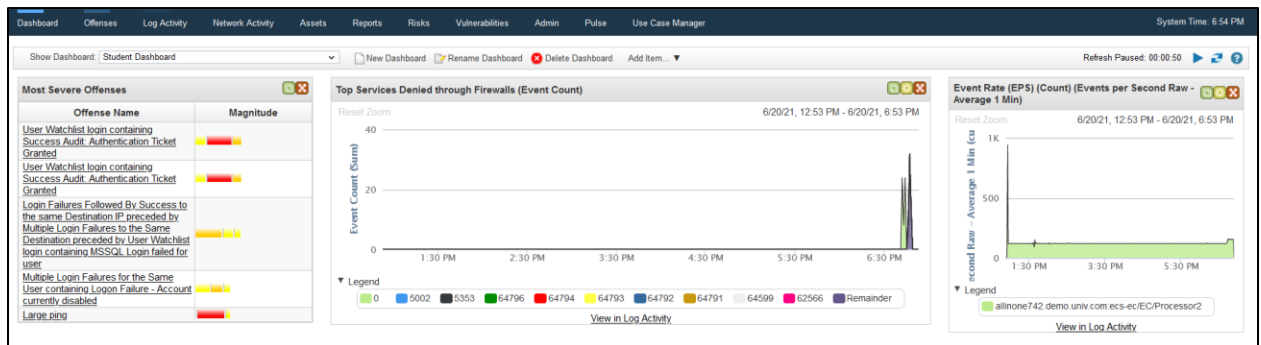


**c. Log Activity > Event Searches > Event Rate (EPS)**

# SIEM Courseware Beginner Training Module



7. Drag the items to an empty spot on the dashboard.
8. Click the **Refresh** icon to update the window.
9. Verify that the dashboard includes an offense item and two log events items. Depending on where you positioned the items, your dashboard looks like below screenshot.



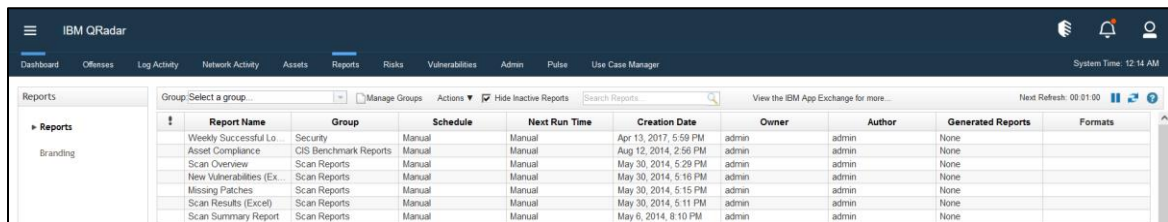
# SIEM Courseware Beginner Training Module

## Lab 9 - Creating reports

### Viewing an existing Report

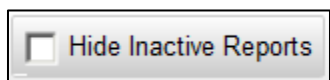
Qradar has over 100 ready to use reports. Perform the following steps to view the configuration and run a report provided by Qradar SIEM.

1. In the Qradar user interface, navigate to the **Reports** tab.

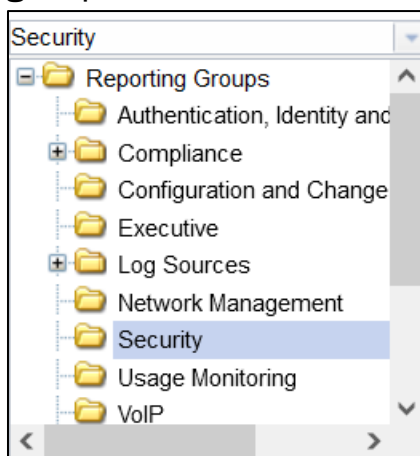


Report Name	Group	Schedule	Next Run Time	Creation Date	Owner	Author	Generated Reports	Formats
Weekly Successful Logins	Security	Manual	Manual	Apr 13, 2017, 5:59 PM	admin	admin	None	
Asset Compliance	CIS Benchmark Reports	Manual	Manual	Aug 12, 2014, 2:56 PM	admin	admin	None	
Scan Overview	Scan Reports	Manual	Manual	May 30, 2014, 5:29 PM	admin	admin	None	
New Vulnerabilities (Excel)	Scan Reports	Manual	Manual	May 30, 2014, 5:16 PM	admin	admin	None	
Missing Patches	Scan Reports	Manual	Manual	May 30, 2014, 5:15 PM	admin	admin	None	
Scan Results (Excel)	Scan Reports	Manual	Manual	May 30, 2014, 5:11 PM	admin	admin	None	
Scan Summary Report	Scan Reports	Manual	Manual	May 6, 2014, 8:10 PM	admin	admin	None	

2. Disable the **Hide Inactive Reports** check box.



3. From the **Group** drop down list, scroll down and select the **Security** group.

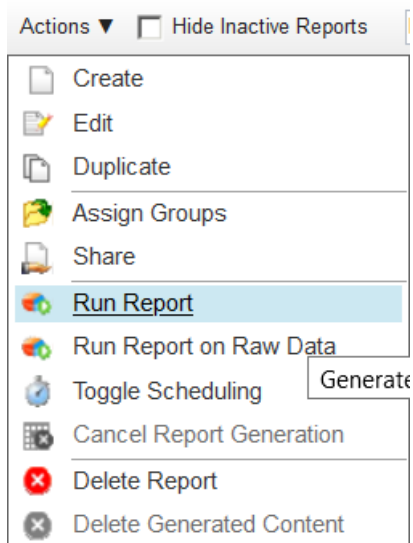


4. In the **Search Reports** field, type *Daily Top* and click the **Search Reports** icon to filter the report list.
5. Select **Daily Top Targeted Hosts**.

## SIEM Courseware Beginner Training Module

Group: Security					
<input type="checkbox"/> Manage Groups   Actions ▼ <input type="checkbox"/> Hide Inactive Reports   Daily Top					
!	Report Name	Group	Schedule	Next Run Time	Creation Date ▼
	Daily Top Attacking Hosts	GLBA, HIPAA, SOX, Se...	Daily	Inactive	Oct 25, 2010, 3:54 PM
	Daily Top Security and ...	GLBA, HIPAA, SOX, Se...	Daily	Inactive	Sep 17, 2010, 4:53 AM
	Daily Top Targeted IPs	GLBA, HIPAA, SOX, Se...	Daily	Inactive	Jul 28, 2010, 9:45 AM
	Daily Top Targeted IPs ...	GLBA, HIPAA, SOX, Se...	Daily	Inactive	Jul 28, 2010, 9:45 AM
	Daily Top Virus Sources...	GLBA, HIPAA, SOX, Se...	Daily	Inactive	Aug 16, 2007, 3:34 AM
	Daily Top IPs for Blocke...	GLBA, HIPAA, SOX, Se...	Daily	Inactive	Aug 16, 2007, 3:13 AM
	Daily Top Targeted Hosts	GLBA, HIPAA, SOX, Se...	Daily	Inactive	Aug 15, 2007, 11:44 PM

6. From the **Actions** drop-down list on the **Reports** toolbar, select **Run Report**.



7. Explore the report and try to answer below query.
- What groups contain the **Daily Top Targeted Hosts** report?

---

8. Double click the **Daily Top Targeted Hosts**, click **Next** until you see the Specify Report Contents page.
9. Click **Define** in the top container.

- What is the name of the event search that generates the data in the top container?

---

- What is the graph type?

---

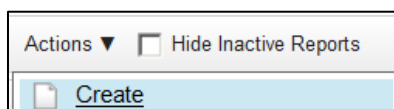
## SIEM Courseware Beginner Training Module

- c. What parameters are graphed on the X and Y axes?
- 
- d. Click **Cancel** to exit the top container details page.
- e. Click **Define** in the bottom container. The bottom container details page opens. What is the name of the event search that generates the data in the bottom container?
- 
10. Click **Cancel** to exit the bottom container details page, click **Next** twice.
11. On the **Reports** tab, click the **Refresh** icon to update the status of the generation of the Daily Top Targeted Hosts Report.
- a. When the report generated content, click the **PDF** icon in the **Formats** column to view the report.
12. Clear the report filters.

### Creating a new event report

Saved Searches can be used to create reports. To use an existing search to create a report.

1. From the **Actions** drop-down list on the Reports toolbar, select Create. Click **Next**.



2. Select the **Daily** option and the check boxes for **Monday** through **Friday**. Click **Next**.

## SIEM Courseware Beginner Training Module

This report should be scheduled to generate:

☐ Manually

☐ Hourly

☒ Daily

Time:

Days of the week:

☐ Sunday

☒ Monday

☒ Tuesday

☒ Wednesday

☒ Thursday

☒ Friday

☐ Saturday

☐ Weekly

☐ Monthly

Allow this report to generate manually?

☒ Yes - Manually generate report.

☐ No - Schedule report only.

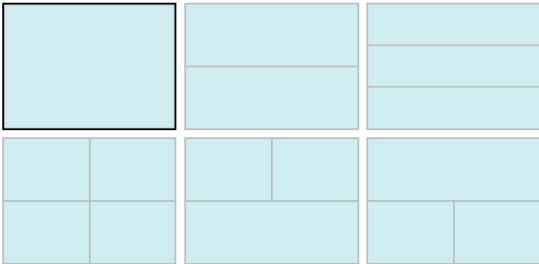
<< Back Next >>

3. On the Choose a Layout page, from the **Orientation** drop-down list, select **Landscape**.
  - a. Click the single-Container layout. Click **Next**.

Choose a Layout

Each divided section holds one chart. Click the layout that represents the size and number of charts required.

Orientation:



<< Back Next >> Finish Cancel

4. On the Specify Report Contents page, in the **Reports Title** field, type *Top Log Sources*.

## SIEM Courseware Beginner Training Module

5. In the **Chart type** drop down list, select **Events/Logs**. Configure the **Container Details** as below data.

Field / Option	Setting
Type Chart Title	Today's Top Log Sources
Limit the Events/Logs to Top	10
Graph type	Stacked Line
Saved Searches	Top Log Sources
Horizontal (X) Axis	Time
Vertical (Y) Axis	Event Count (Sum)
Timeline Interval	1 Minute

The screenshot shows the 'Container Details - Events/Logs' configuration window. The title bar indicates 'This report displays collected event/log data.' The 'Chart Title' is set to 'Today's Top Log Sources' and 'Chart Sub-Title' is checked for 'Automatically Specified'. Under 'Daily Scheduling', the schedule is set to 'All data from previous day (24 hours)' with a start time of 1:00 AM and an end time of 1:30 AM, in the 'GMT+05:30 Asia/Kolkata (India Standard Time)' zone. The 'Graph Content' section shows data is currently being accumulated. In the 'Saved Searches' section, 'Top Log Sources' is selected from the available list. The 'Create New Event Search' section shows the group as 'Log Source' and the order by 'Event Count, descending'. The 'Additional Details' section shows 'Graph Type' as 'Stacked Line', 'Limit Events/Logs to Top' as 10, 'Horizontal (X) Axis' as 'Time', 'Vertical (Y) Axis' as 'Event Count (Sum)', and 'Timeline Interval' as '1 minute'. The 'Response Details' section has 'Generate Offense' unchecked. At the bottom, there are 'Save Container Details' and 'Cancel' buttons.

6. Verify the Container details and click Save Container Details.  
7. Click **Next** Twice

## SIEM Courseware Beginner Training Module

8. On the reports format page, select **HTML** and **PDF**.
9. Click **Next** until the Finish page.
10. Type the below text in **Report Description** field.  
*The Daily Top Log Sources report lists the top ten log sources by event count.*
11. Verify that the **Yes – Run this report when the wizard is complete** check box is enabled.
12. Click **Next**.
13. Click **Finish**.
14. Click the **Refresh** icon to update the status of the generation of the **Top Log Sources** Report.
15. View the Next Run Time Column for the Top Log Sources Report.
16. Click PDF icon in the formats column to view the report.