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(1) General (CS298 - Introdu...

TryHackMe | Introduction to SI...

tryhackme.com/room/introsiem

An introduction to security information and event management.

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Task 1 Introduction

What is SIEM

SIEM stands for Security Information and Event Management system. It is a tool that collects data from various endpoints/network devices across the network, stores them at a centralized place, and performs correlation on them. This room will cover the basic concepts required to understand SIEM and how it works.

Learning Objective

Some of the learning objectives covered in this room are:

- What is SIEM, and how does it work?
- Why is SIEM needed?
- What is Network Visibility?
- What are Log Sources, and how is log ingestion done?
- What are the capabilities a SIEM provides?

Answer the questions below

What does SIEM stand for?

Security Information and event management system

Correct Answer

Task 2 Network Visibility through SIEM

Task 3 Log Sources and Log Ingestion

Task 4 Why SIEM

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importance of SIEM

Now that we have covered various types of logs, it's time to understand the importance of SIEM. As all these devices generate hundreds of events per second, examining the logs on each device one by one in case of any incident can be a tedious task. That is one of the advantages of having a SIEM solution in place. It not only takes logs from various sources in real-time but also provides the ability to correlate between events, search through the logs, investigate incidents and respond promptly. Some key features provided by SIEM are:

- Real-time log ingestion
- Alerting against abnormal activities
- 24/7 Monitoring and visibility
- Protection against the latest threats through early detection
- Data insights and visualization
- Ability to investigate past incidents.

Answer the questions below

Is Registry-related activity host-centric or network-centric?

host-centric

Correct Answer

Is VPN related activity host-centric or network-centric?

network-centric

Correct Answer

Task 3 Log Sources and Log Ingestion

Task 4 Why SIEM

Task 5 Analysing Logs and Alerts

Woop woop! Your answer is correct.

4. Identify breaches and investigate alerts

SIEM

2. Aggregate data

3. Discover and detect threats

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4) Port-Forwarding: SIEM solutions can also be configured to listen on a certain port, and then the endpoints forward the data to the listening port.

Woop woop! Your answer is correct.

An example of how Splunk provides various methods for log ingestion is shown below:


Or get data in with the following methods



Upload

Files from my computer


Local log files
(Local structured files (e.g. CSV)
Tutorial for adding data)



Monitor

Files and ports on this Splunk platform instance

Files - HTTP - Web - TCP/UDP - Scripts
Monitor inputs for external data sources



Forward

Data from a Splunk forwarder

Files - TCP/UDP - Scripts

Answer the questions below

In which location within a Linux environment are HTTP logs are stored?

/var/log/httpd

Correct Answer

Task 4 Why SIEM

Task 5 Analysing Logs and Alerts

Task 6 Lab Work

Task 7 Conclusion

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• NewProcessName: which process name will be helpful to include in the rule?

Rule: If Log Source is WinEventLog AND EventCode is 4688, and NewProcessName contains whoami, then Trigger an ALERT

whoami command Execution DETECTED

Woop woop! Your answer is correct.

In the previous task, the importance of field-value pairs was discussed. Correlation rules keep an eye on the values of certain fields to get triggered. That is the reason why it is important to have normalized logs ingested.

Alert Investigation

When monitoring SIEM, analysts spend most of their time on dashboards as it displays various key details about the network in a very summarized way. Once an alert is triggered, the events/flows associated with the alert are examined, and the rule is checked to see which conditions are met. Based on the investigation, the analyst determines if it's a True or False positive. Some of the actions that are performed after the analysis are:

- Alert is False Alarm. It may require tuning the rule to avoid similar False positives from occurring again.
- Alert is True Positive. Perform further investigation.
- Contact the asset owner to inquire about the activity.
- Suspicious activity is confirmed. Isolate the infected host.
- Block the suspicious IP.

Let's move on to the next task and explore how SIEM works.

Answer the questions below

Which Event ID is generated when event logs are removed?

104

Correct Answer

What type of alert may require tuning?

false alarm

Correct Answer

Task 6 Lab Work

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completion of some forensics coming direct, complete the lab and answer the following questions.

Answer the questions below

Click on Start Suspicious Activity, which process caused the alert?

culdominer.exe

Correct Answer

Hint

Find the event that caused the alert, which user was responsible for the process execution?

chris.fort

Correct Answer

What is the hostname of the suspect user?

HR_02

Correct Answer

Examine the rule and the suspicious process; which term matched the rule that caused the alert?

miner

Correct Answer

What is the best option that represents the event? Choose from the following:

- False-Positive

- True-Positive

True-Positive

Correct Answer

Selecting the right ACTION will display the FLAG. What is the FLAG?

THM{000_SIEM_INTRO}

Correct Answer

Introduction To SIEM

https://siem.internal/actions/ruleid=36

THM{000_SIEM_INTRO}

Action

How would you like to action this rule?

☒ True-positive and isolate the host

☐ False-positive and tune the rule

Save Action

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Task 5 Analysing logs and Alerts

Task 6 Lab Work

Task 7 Conclusion

In this room, we have covered what SIEM is, its capabilities, and what visibility it provides. To learn in-depth about how incidents are investigated, explore the following rooms and challenges.

- SOC Analyst
- Splunk101
- Splunk201
- Benign
- InvestigatingwithSplunk
- InvestigatingwithELK
- ItsyBitsy

Answer the questions below

Complete this room.

No answer needed

Correct Answer

Created by tryhackme and Dex01

This is a free room, which means anyone can deploy virtual machines in the room (without being subscribed)! 5925 users are in here and this room is 41 days old.

Woop woop! Your answer is correct.

THM{000_SIEM_INTRO}

Action

How would you like to action this rule?

☒ True-positive and isolate the host

☐ False-positive and tune the rule

Save Action

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