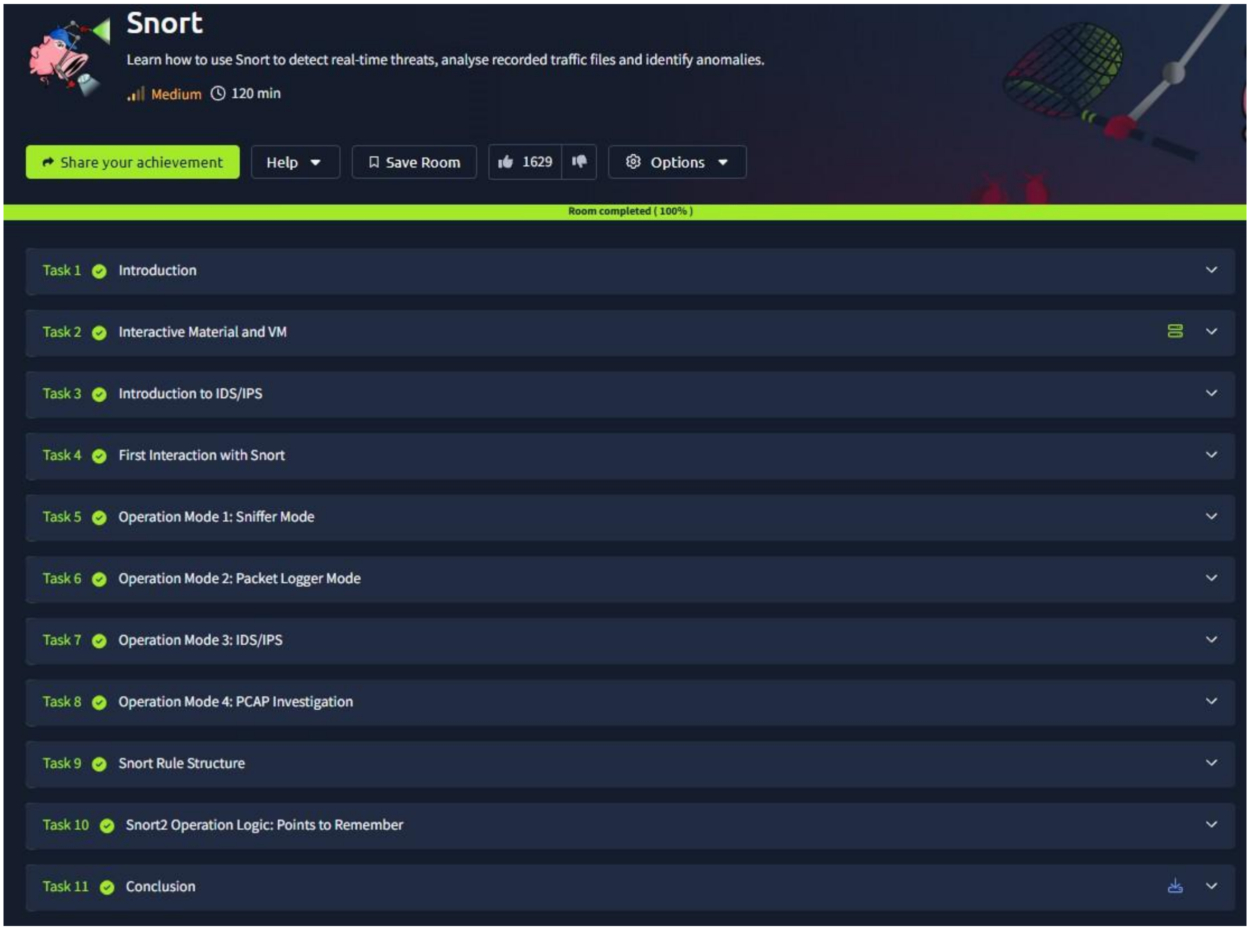
THARUN H **231901055**

EXERCISE 13

Detection of real-time threats, analyse recorded traffic files and identify anomalies

Aim: To learn how to use Snort for real-time threat detection, traffic analysis, and anomaly identification using both live and recorded network data.



Snort

Learn how to use Snort to detect real-time threats, analyse recorded traffic files and identify anomalies.

Task 1 ✓ Introduction

Task 2 ✓ Interactive Material and VM

Task 3 ✓ Introduction to IDS/IPS

Task 4 ✓ First Interaction with Snort

Task 5 ✓ Operation Mode 1: Sniffer Mode

Task 6 ✓ Operation Mode 2: Packet Logger Mode

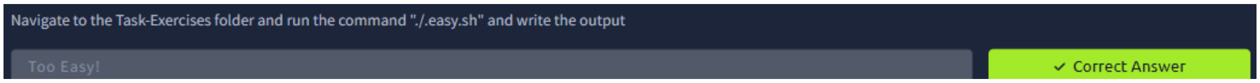
Task 7 ✓ Operation Mode 3: IDS/IPS

Task 8 ✓ Operation Mode 4: PCAP Investigation

Task 9 ✓ Snort Rule Structure

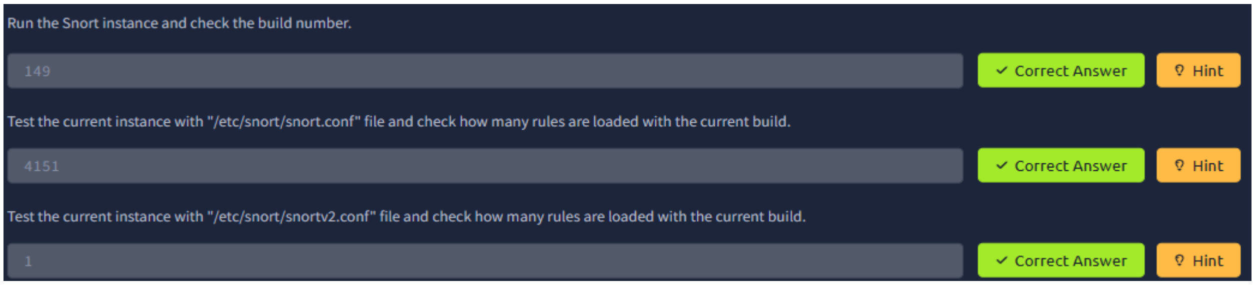
Task 10 ✓ Snort2 Operation Logic: Points to Remember

Task 11 ✓ Conclusion



Navigate to the Task-Exercises folder and run the command "./easy.sh" and write the output

Too Easy!



Run the Snort instance and check the build number.

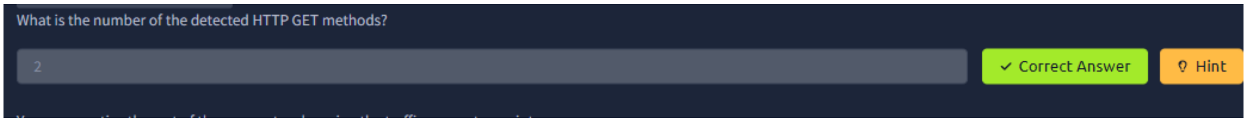
149

Test the current instance with "/etc/snort/snort.conf" file and check how many rules are loaded with the current build.

4151

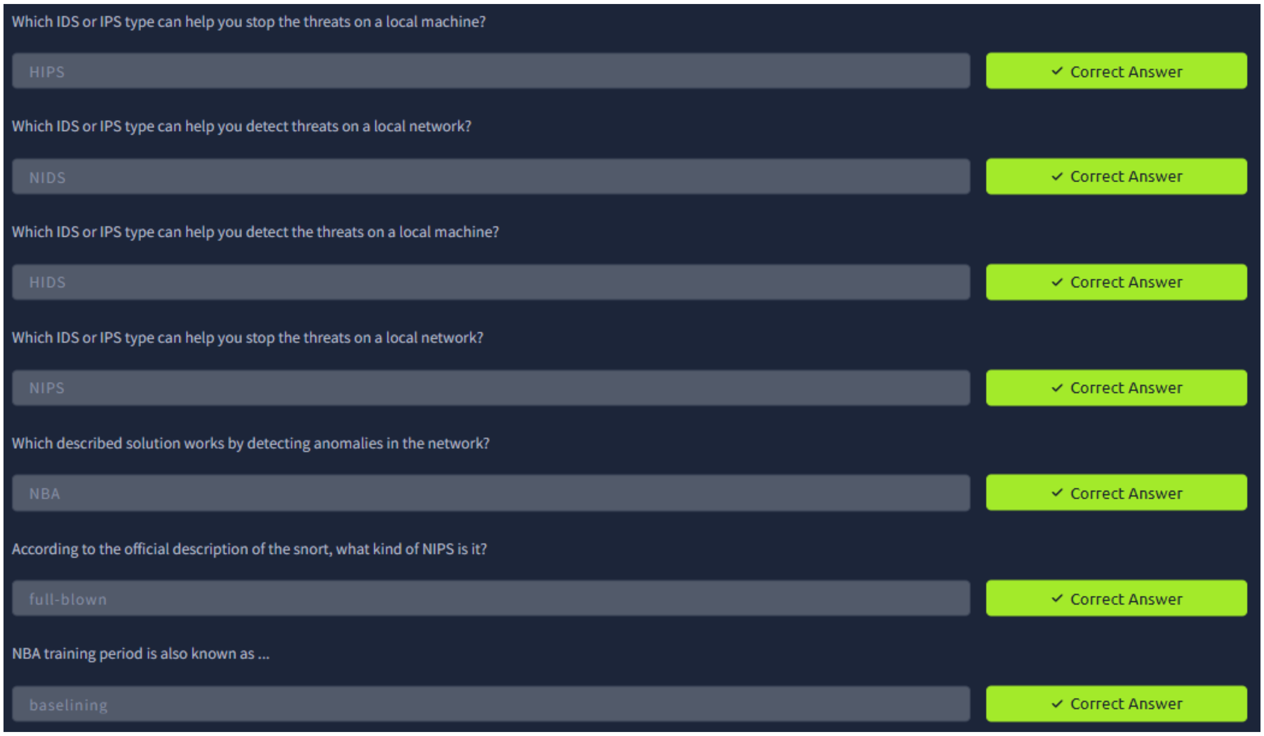
Test the current instance with "/etc/snort/snortv2.conf" file and check how many rules are loaded with the current build.

1



What is the number of the detected HTTP GET methods?

2



Which IDS or IPS type can help you stop the threats on a local machine?

HIPS

Which IDS or IPS type can help you detect threats on a local network?

NIDS

Which IDS or IPS type can help you detect the threats on a local machine?

HIDS

Which IDS or IPS type can help you stop the threats on a local network?

NIPS

Which described solution works by detecting anomalies in the network?

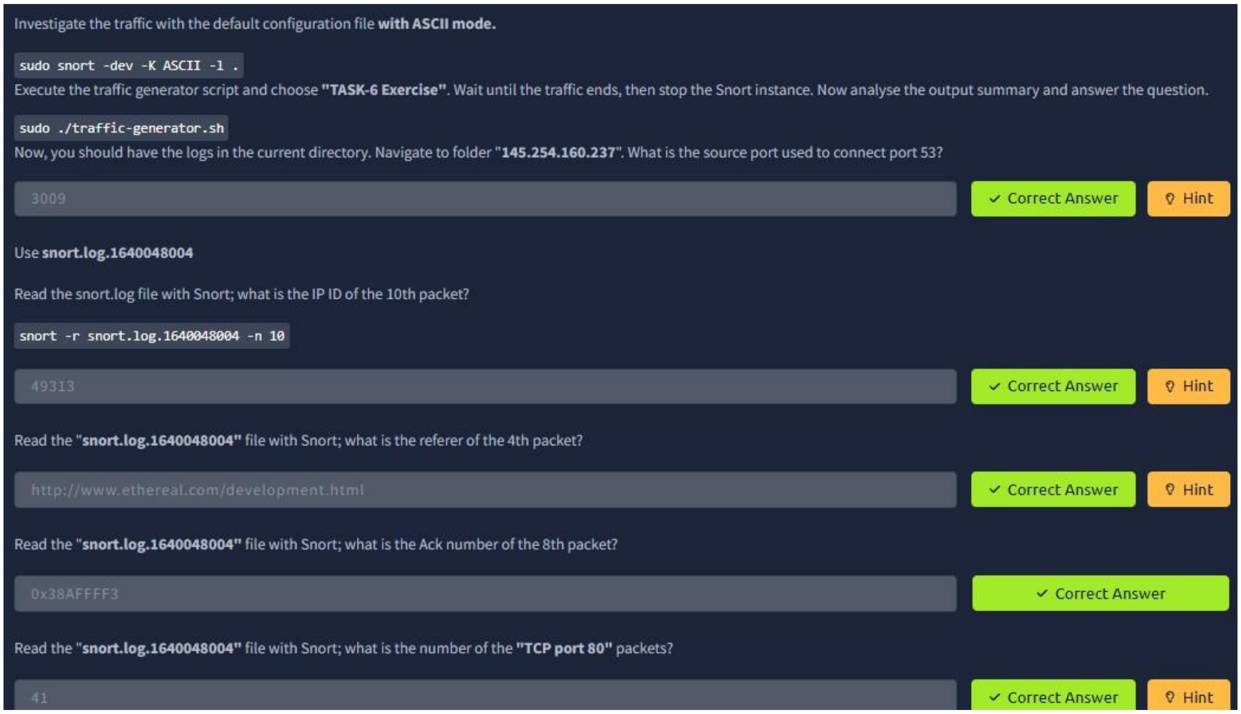
NBA

According to the official description of the snort, what kind of NIPS is it?

full-blown

NBA training period is also known as ...

baselining



Investigate the traffic with the default configuration file **with ASCII mode.**

```
sudo snort -dev -K ASCII -l .
```

Execute the traffic generator script and choose **"TASK-6 Exercise"**. Wait until the traffic ends, then stop the Snort instance. Now analyse the output summary and answer the question.

```
sudo ./traffic-generator.sh
```

Now, you should have the logs in the current directory. Navigate to folder **"145.254.160.237"**. What is the source port used to connect port 53?

3009

Use **snort.log.1640048004**

Read the snort.log file with Snort; what is the IP ID of the 10th packet?

```
snort -r snort.log.1640048004 -n 10
```

49313

Read the **"snort.log.1640048004"** file with Snort; what is the referer of the 4th packet?

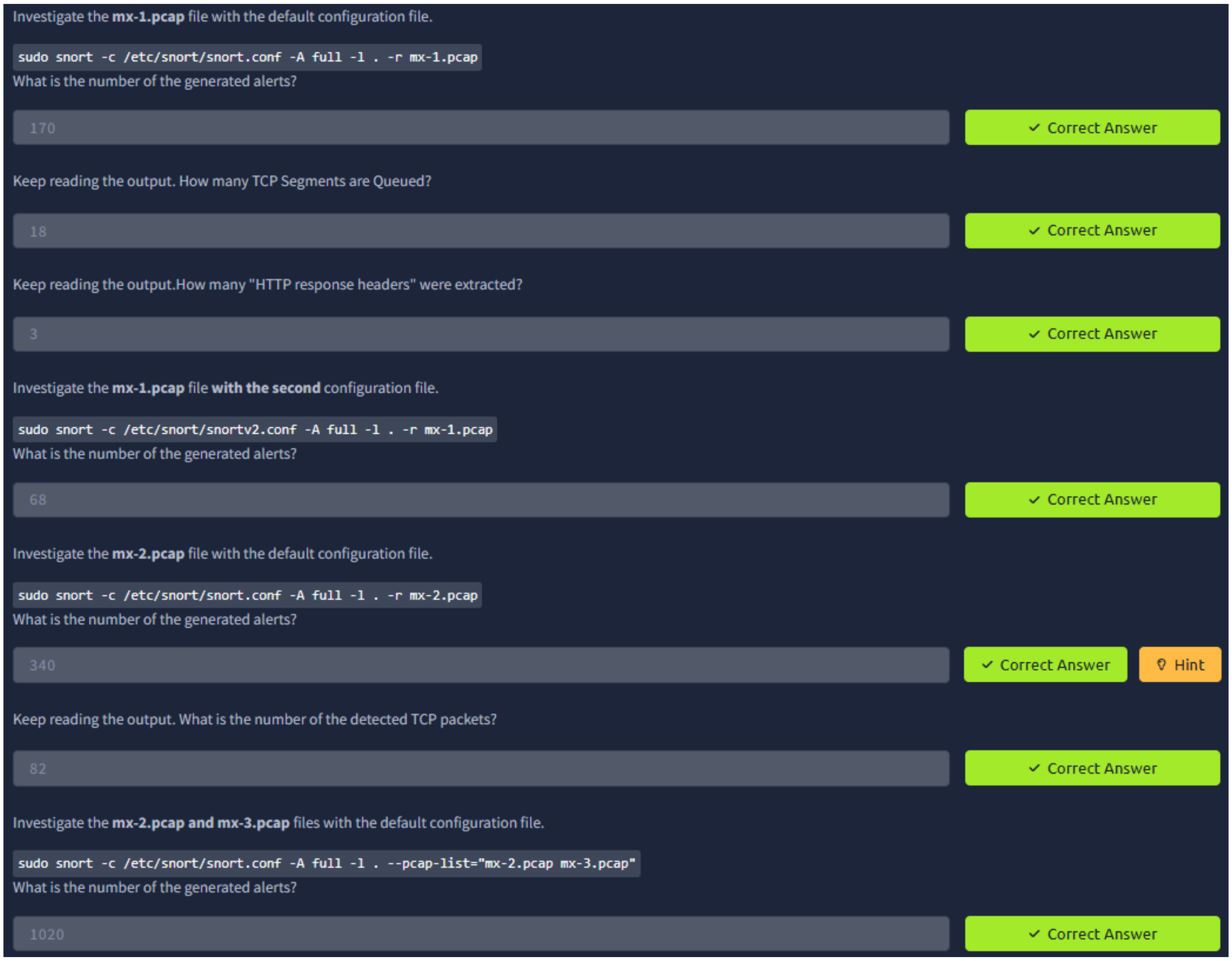
http://www.ethereal.com/development.html

Read the **"snort.log.1640048004"** file with Snort; what is the Ack number of the 8th packet?

0x38AFFFF3

Read the **"snort.log.1640048004"** file with Snort; what is the number of the **"TCP port 80"** packets?

41



Investigate the **mx-1.pcap** file with the default configuration file.

```
sudo snort -c /etc/snort/snort.conf -A full -l . -r mx-1.pcap
```

What is the number of the generated alerts?

170

Keep reading the output. How many TCP Segments are Queued?

18

Keep reading the output.How many "HTTP response headers" were extracted?

3

Investigate the **mx-1.pcap** file **with the second** configuration file.

```
sudo snort -c /etc/snort/snortv2.conf -A full -l . -r mx-1.pcap
```

What is the number of the generated alerts?

68

Investigate the **mx-2.pcap** file with the default configuration file.

```
sudo snort -c /etc/snort/snort.conf -A full -l . -r mx-2.pcap
```

What is the number of the generated alerts?

340

Keep reading the output. What is the number of the detected TCP packets?

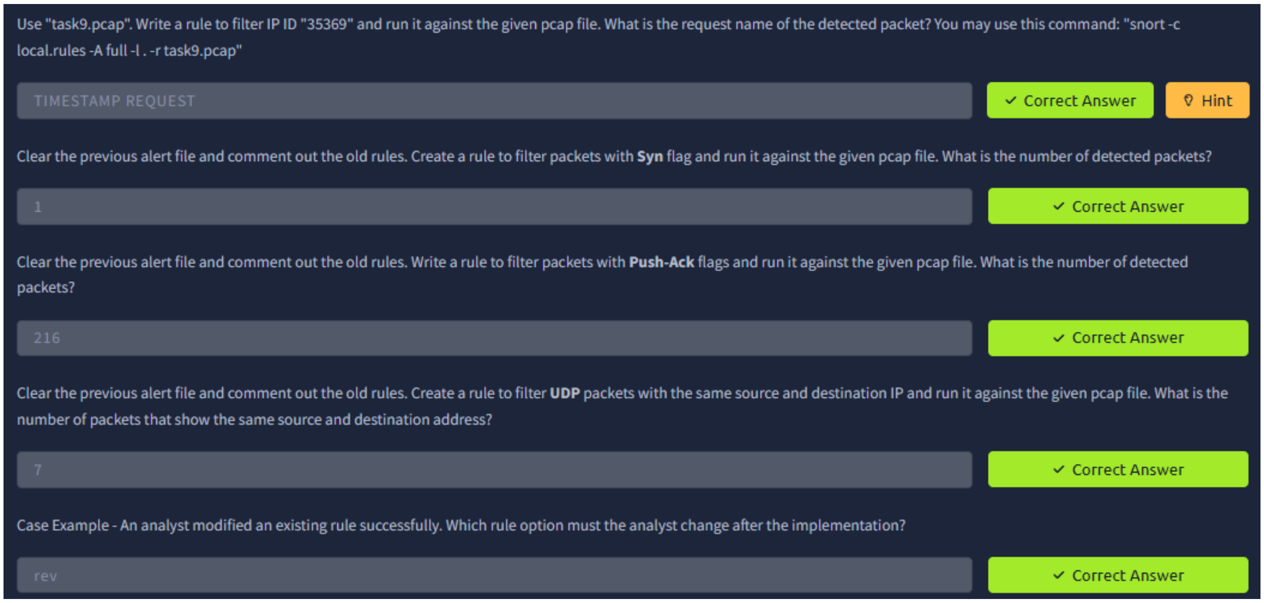
82

Investigate the **mx-2.pcap and mx-3.pcap** files with the default configuration file.

```
sudo snort -c /etc/snort/snort.conf -A full -l . --pcap-list="mx-2.pcap mx-3.pcap"
```

What is the number of the generated alerts?

1020



Use "task9.pcap". Write a rule to filter IP ID "35369" and run it against the given pcap file. What is the request name of the detected packet? You may use this command: "snort -c local.rules -A full -l . -r task9.pcap"

TIMESTAMP REQUEST

Clear the previous alert file and comment out the old rules. Create a rule to filter packets with **Syn** flag and run it against the given pcap file. What is the number of detected packets?

1

Clear the previous alert file and comment out the old rules. Write a rule to filter packets with **Push-Ack** flags and run it against the given pcap file. What is the number of detected packets?

216

Clear the previous alert file and comment out the old rules. Create a rule to filter **UDP** packets with the same source and destination IP and run it against the given pcap file. What is the number of packets that show the same source and destination address?

7

Case Example - An analyst modified an existing rule successfully. Which rule option must the analyst change after the implementation?

rev

Result: Successfully configured Snort to detect live threats, analyzed pcap traffic files, and identified suspicious patterns and anomalies in network behavior.