EX-NO-12

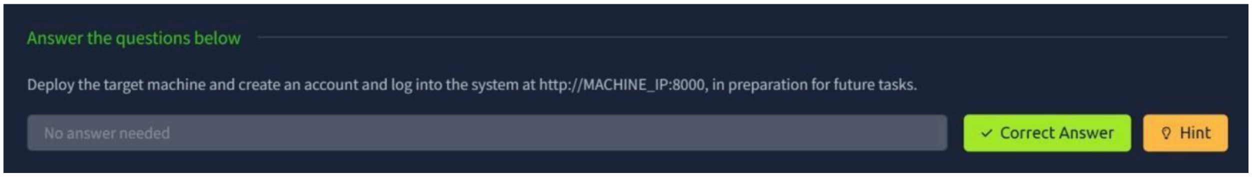
Intrusion Detection

AIM:

Learn cyber evasion techniques and put them to the test against two IDS.

PROCEDURE:

- Task 1 Introduction
- Task 2 Intrusion Detection Basics
- Task 3 Network-based IDS (NIDS)
- Task 4 Reconnaissance and Evasion Basics
- Task 5 Further Reconnaissance Evasion
- Task 6 Open-source Intelligence
- Task 7 Rulesets
- Task 8 Host Based IDS (HIDS)
- Task 9 Privilege Escalation Recon
- Task 10 Performing Privilege Escalation
- Task 11 Establishing Persistence
- Task 12 Conclusion Task 1 Introduction :

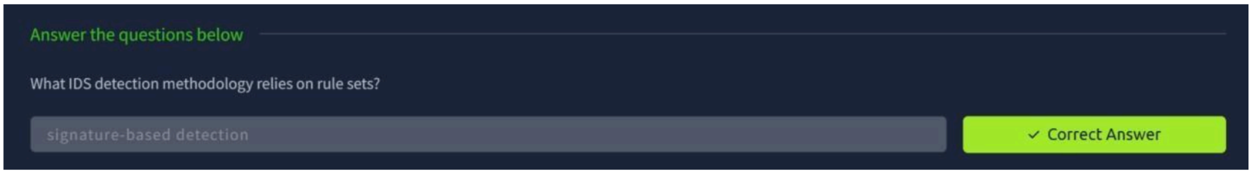


Answer the questions below

Deploy the target machine and create an account and log into the system at http://MACHINE_IP:8000, in preparation for future tasks.

No answer needed

Task 2 Intrusion Detection Basics :

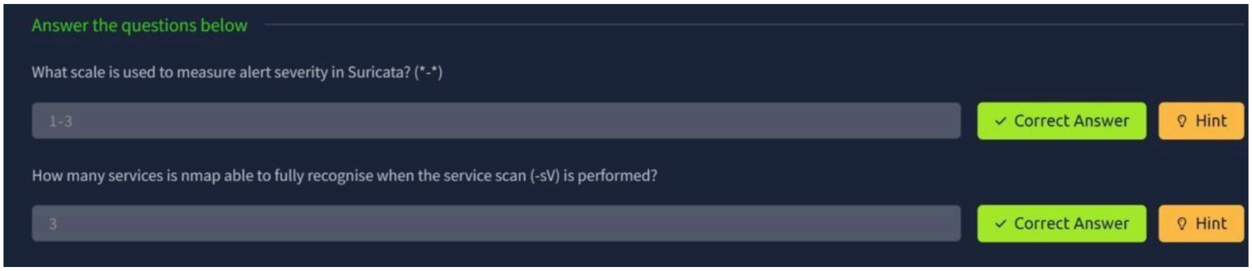


Answer the questions below

What IDS detection methodology relies on rule sets?

signature-based detection

Task 3 Network-based IDS (NIDS)



Answer the questions below

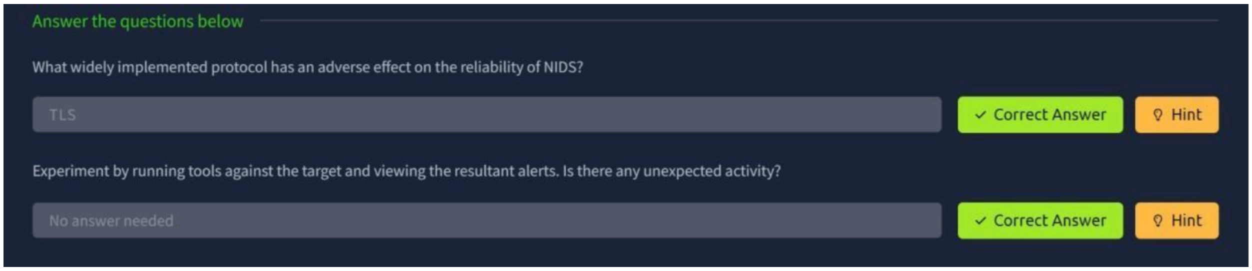
What scale is used to measure alert severity in Suricata? (*-*)

1-3

How many services is nmap able to fully recognise when the service scan (-sV) is performed?

3

Task 4 Reconnaissance and Evasion Basics :



Answer the questions below

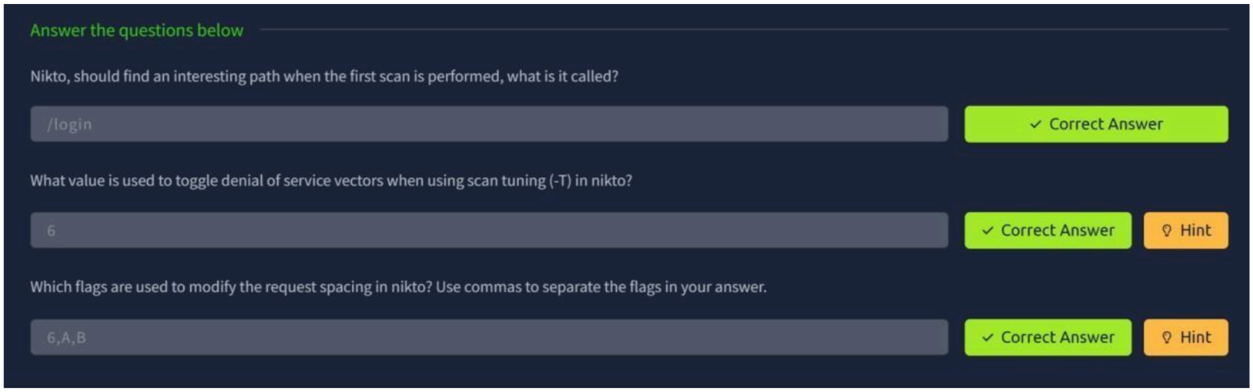
What widely implemented protocol has an adverse effect on the reliability of NIDS?

TLS

Experiment by running tools against the target and viewing the resultant alerts. Is there any unexpected activity?

No answer needed

Task 5 Further Reconnaissance Evasion :



Answer the questions below

Nikto, should find an interesting path when the first scan is performed, what is it called?

/login

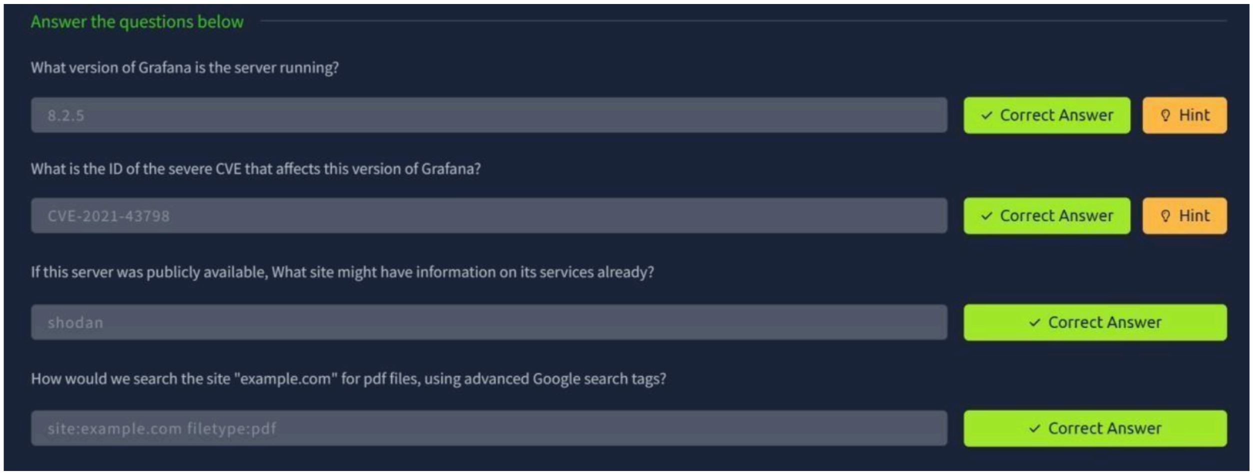
What value is used to toggle denial of service vectors when using scan tuning (-T) in nikto?

6

Which flags are used to modify the request spacing in nikto? Use commas to separate the flags in your answer.

6,A,B

Task 6 Open-source Intelligence :



Answer the questions below

What version of Grafana is the server running?

8.2.5

What is the ID of the severe CVE that affects this version of Grafana?

CVE-2021-43798

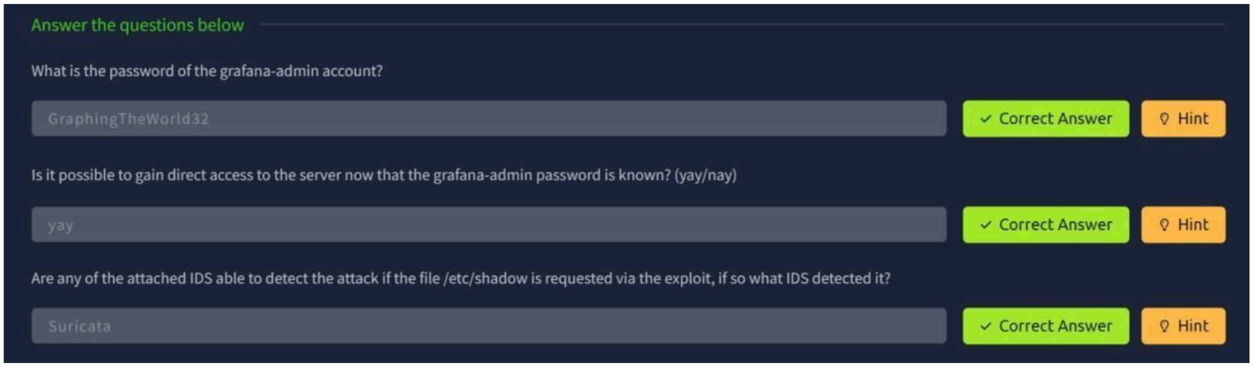
If this server was publicly available, What site might have information on its services already?

shodan

How would we search the site "example.com" for pdf files, using advanced Google search tags?

site:example.com filetype:pdf

Task 7 Rulesets :



Answer the questions below

What is the password of the grafana-admin account?

GraphingTheWorld32

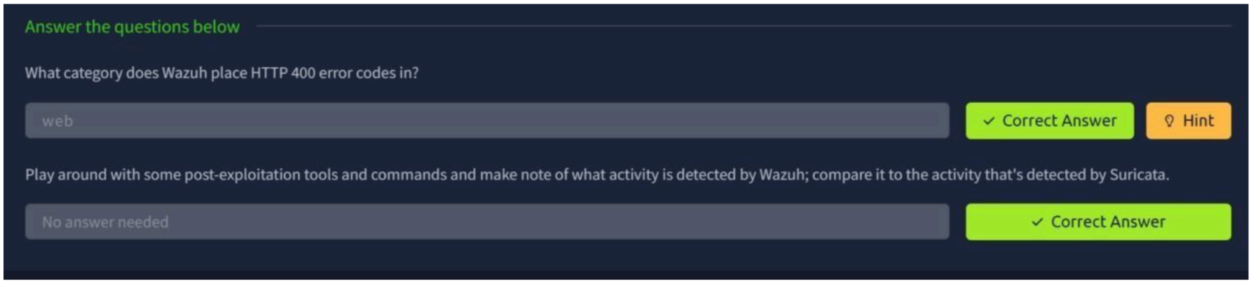
Is it possible to gain direct access to the server now that the grafana-admin password is known? (yay/nay)

yay

Are any of the attached IDS able to detect the attack if the file /etc/shadow is requested via the exploit, if so what IDS detected it?

Suricata

Task 8 Host Based IDS (HIDS) :



Answer the questions below

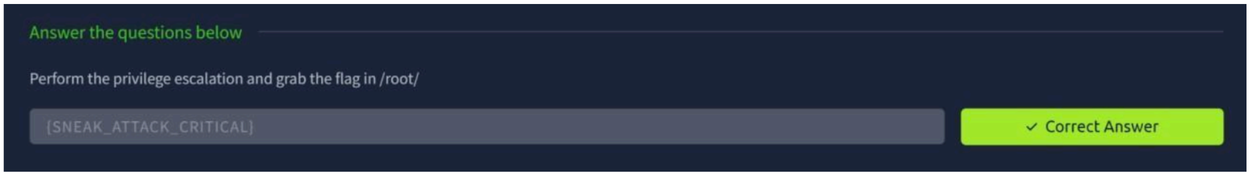
What category does Wazuh place HTTP 400 error codes in?

web

Play around with some post-exploitation tools and commands and make note of what activity is detected by Wazuh; compare it to the activity that's detected by Suricata.

No answer needed

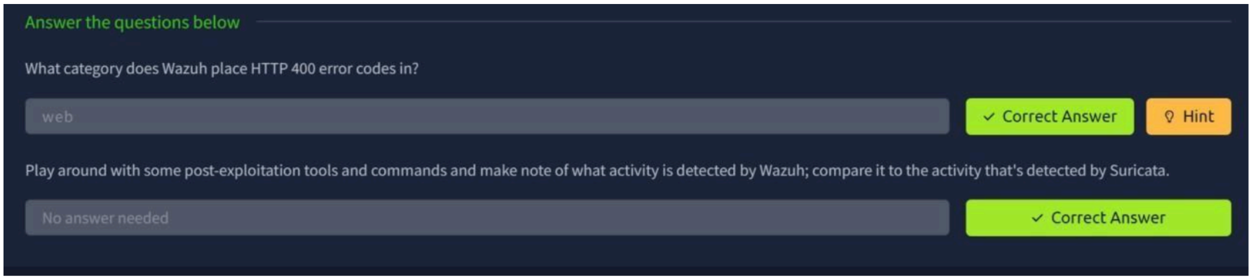
Task 9 Privilege Escalation Recon :


Answer the questions below

Perform the privilege escalation and grab the flag in /root/

{SNEAK_ATTACK_CRITICAL}

Task 10 Performing Privilege Escalation :


Answer the questions below

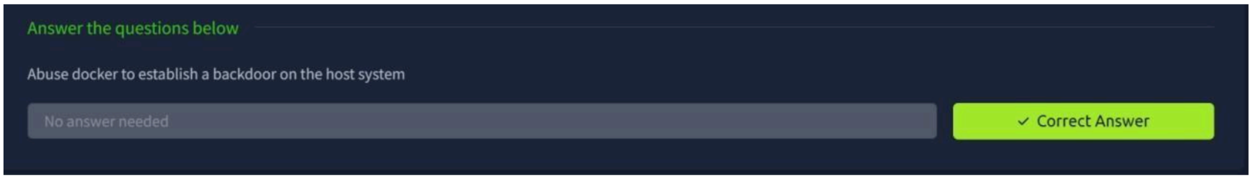
What category does Wazuh place HTTP 400 error codes in?

web

Play around with some post-exploitation tools and commands and make note of what activity is detected by Wazuh; compare it to the activity that's detected by Suricata.

No answer needed

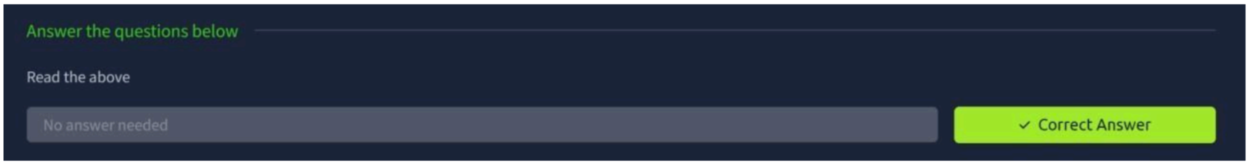
Task 11 Establishing Persistence :


Answer the questions below

Abuse docker to establish a backdoor on the host system

No answer needed

Task 12 Conclusion


Answer the questions below

Read the above

No answer needed

Result:Thus the Intrusion Detection is completed using tryhackme platform.