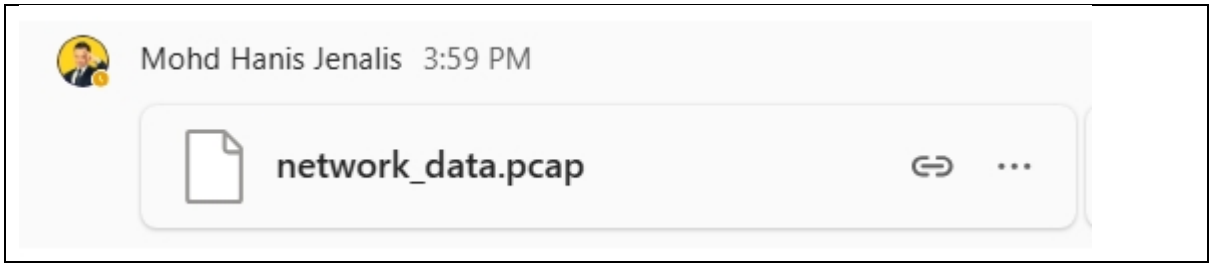
Today Exercise for Mr Hanis Class was Network Forensics.

Hint: it is from skr ctf(so sad, I spend so much time)

Shark Of Wire 2
20
I lose my network data again... Luckily I always got a backup pcap file! Please help me find my "flag" its important!
Flag format: SKR{flag}

Note: There were some stego and crypto elements
Difficulty: Medium
Hint 1:Notice there were some image files?
Hint 2: I got login in a website, using godam as username. But sorry I forgot the password... It also used for a zip file that I kept it somewhere...

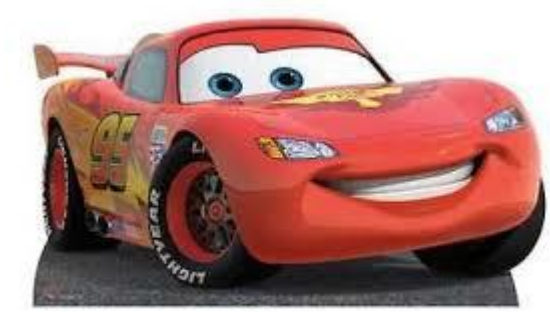
Prerequisite : Download pcap file provided by Mr Hanis



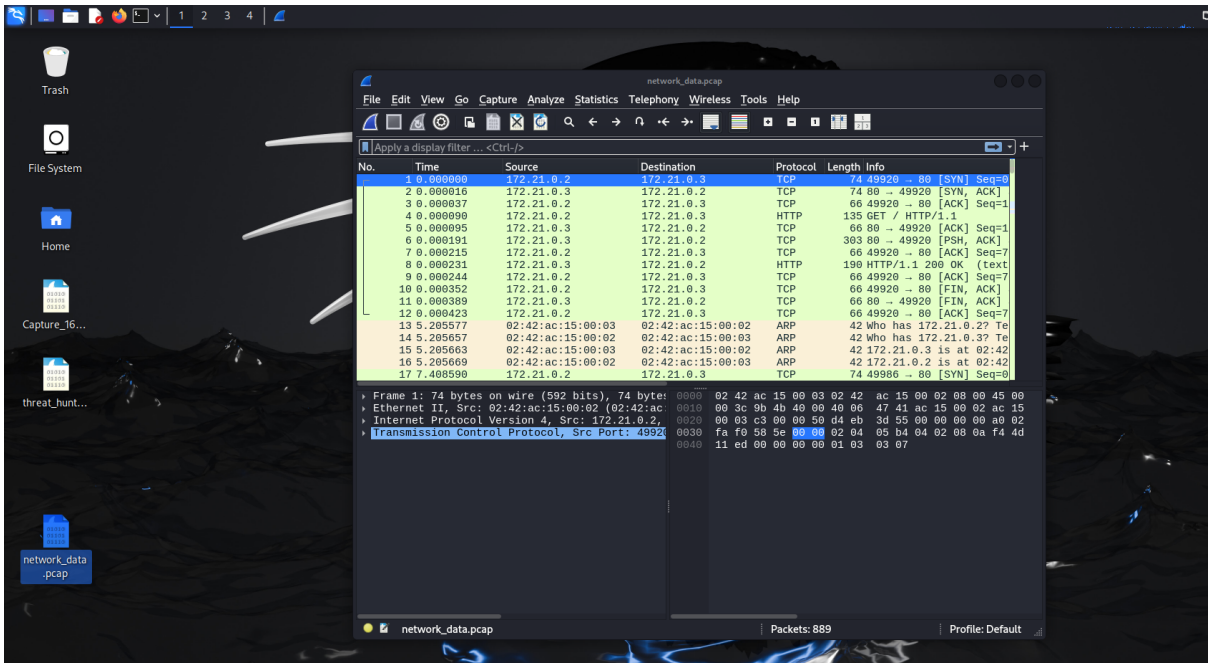
To make the following session interesting, Mr Hanis will Role Play as
Doc Hudson(chief crew)

My Friend will roleplay as The King(former champion racer)

and I will roleplay as Mcqueen(champion racer)



First, Open kali linux, launch wireshark and drag the pcap file to wireshark



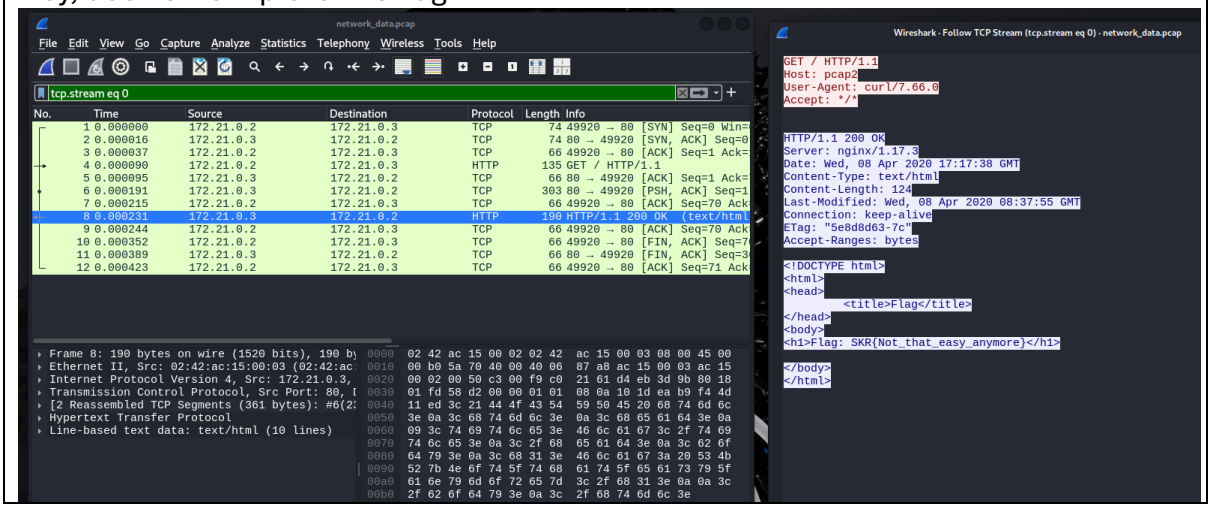
Damn, so many messy characters!

Mcqueen: Hey Doc, what can I do? Like turning left to go right?

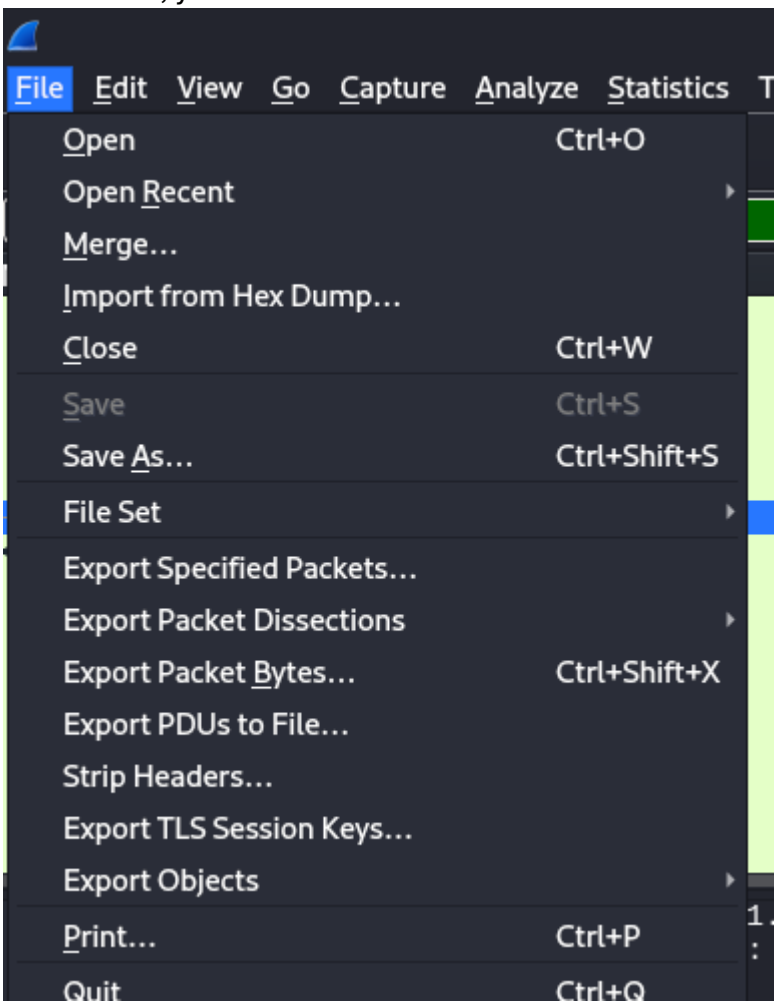
Doc Hudson: Hey Kid, remember in network forensics proctocol is the number one rule (ICMP,TCP/IP, HTTP,HTTPS). Here is some strategy for you.
1)analyze,follow, tcp or anything stream
2)statistics, proctocol hierachy
3) go to filter area, search ftp or http, if it is green, it is available
4) If it is images/data how you extract? ans:Go to file, export object,http,save all

Mcqueen:
Kachow, time to prove I am speed.

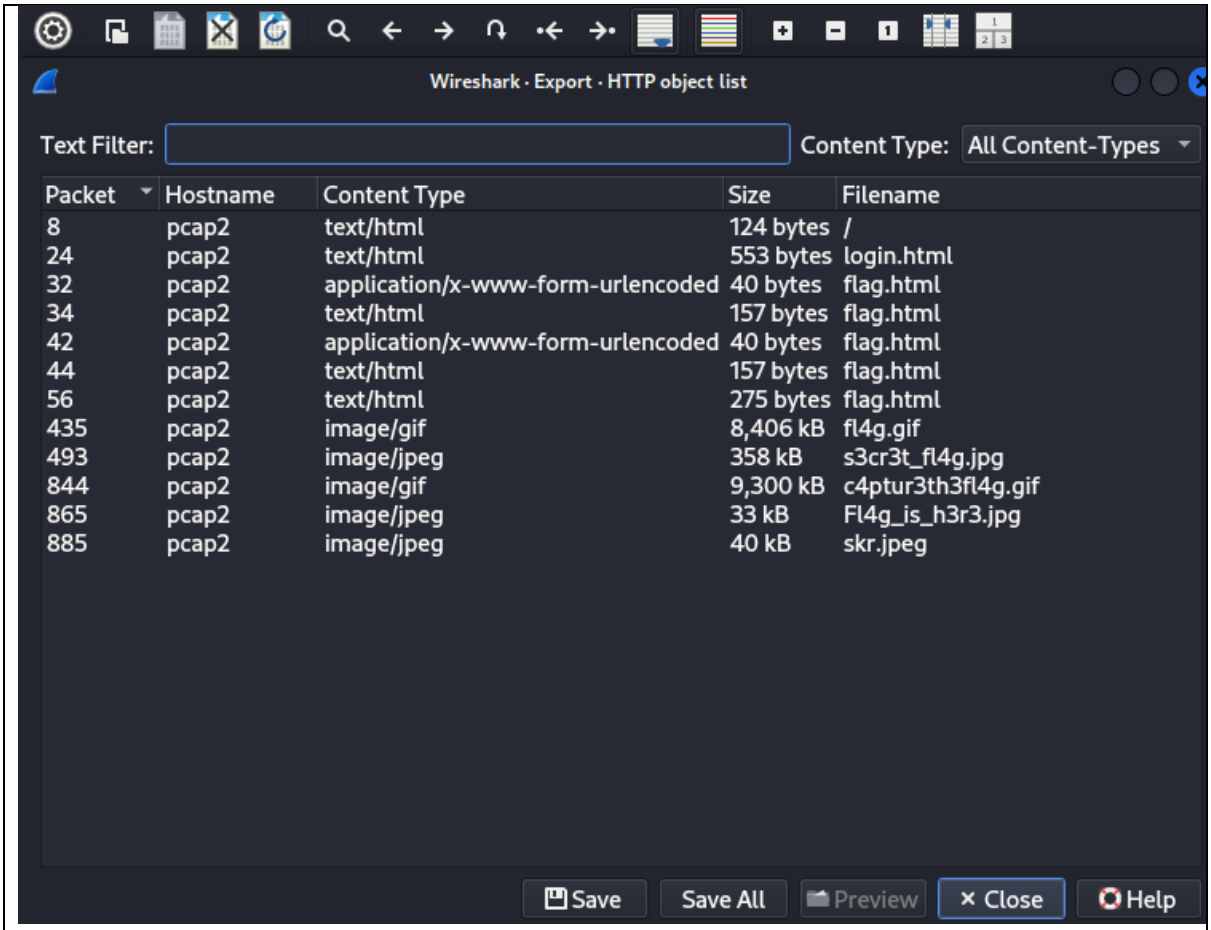
Mcqueen:
Hey, doc how simple is this flag.



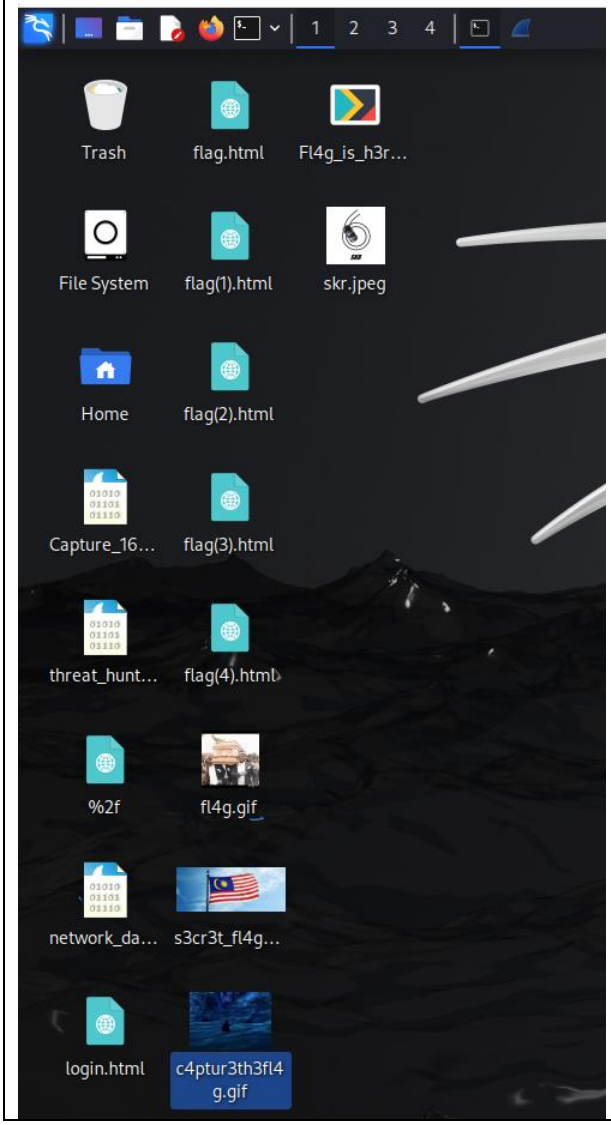
Doc:
Hahaha kid, you are still too naïve.



First, go to exports objects -> http -> save all

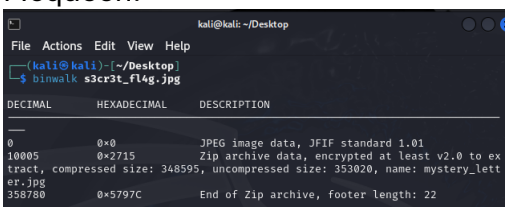

Wireshark · Export · HTTP object list
Text Filter:
Content Type: All Content-Types
Packet Hostname Content Type Size Filename
8 pcap2 text/html 124 bytes /
24 pcap2 text/html 553 bytes login.html
32 pcap2 application/x-www-form-urlencoded 40 bytes flag.html
34 pcap2 text/html 157 bytes flag.html
42 pcap2 application/x-www-form-urlencoded 40 bytes flag.html
44 pcap2 text/html 157 bytes flag.html
56 pcap2 text/html 275 bytes flag.html
435 pcap2 image/gif 8,406 kB fl4g.gif
493 pcap2 image/jpeg 358 kB s3cr3t_fl4g.jpg
844 pcap2 image/gif 9,300 kB c4ptur3th3fl4g.gif
865 pcap2 image/jpeg 33 kB Fl4g_is_h3r3.jpg
885 pcap2 image/jpeg 40 kB skr.jpeg
Save
Save All
Preview
Close
Help

Mcqueen:
Then what? Which file I should start with?

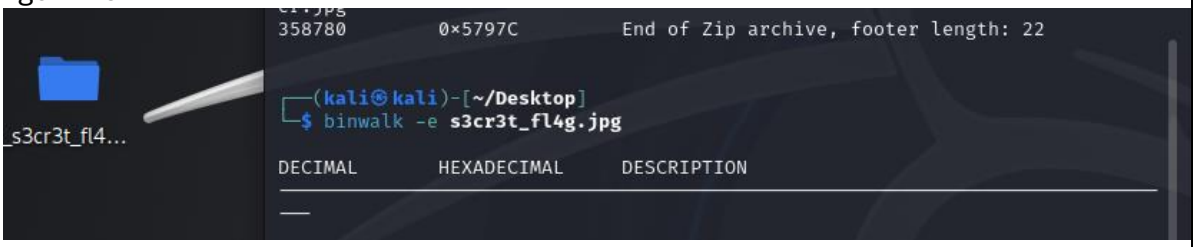


The King(Strip Weathers):
Yo Kid, How about start with that Malaysia Flag jpg file? And try to binwalk it

Mcqueen:

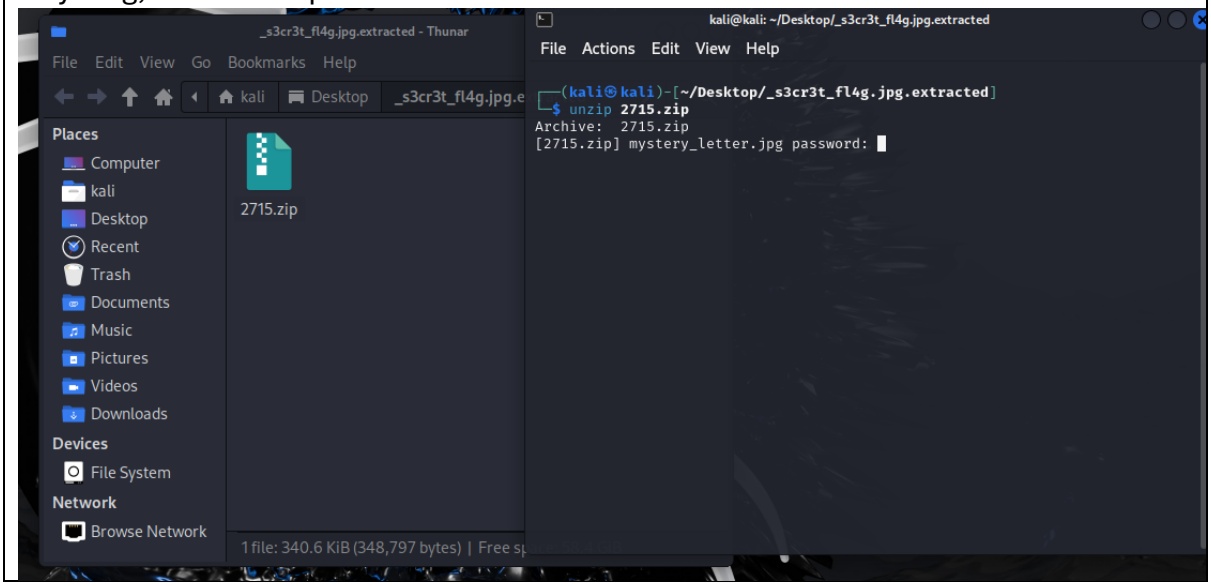


Ok, I saw a hidden zip file. How to extract it? After some reading from stack over flow. I got this!

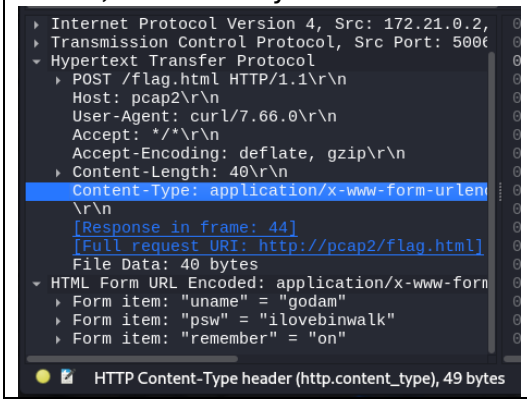


Then, I unzip it

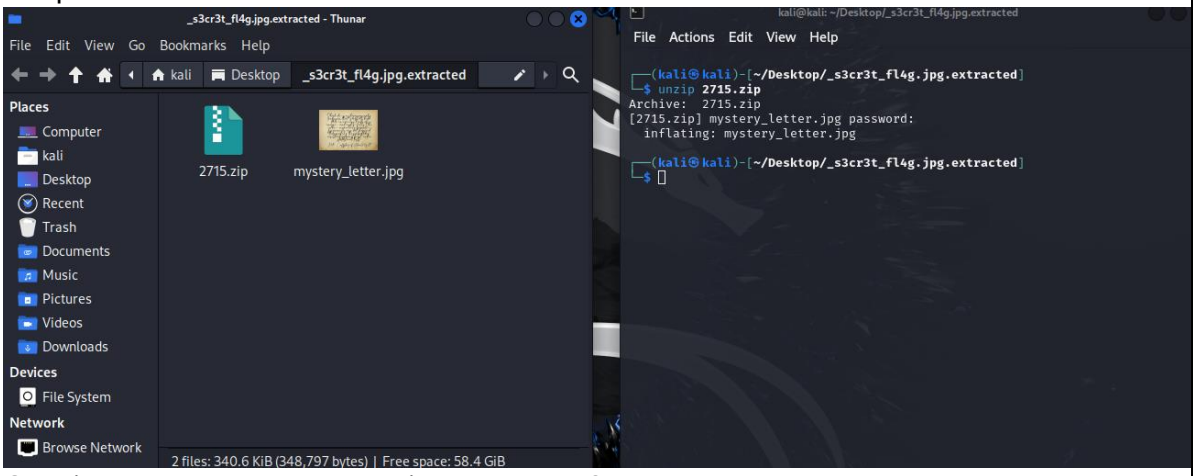
Mcqueen:
Hey King, what is the password.



The King(Strip Weathers):
Yo Kid, Look closely at the hint 2.



Mcqueen:



Ok, I just got a mystery_letter.jpg now what?

Hey Son, have you ever tried the almighty all knowing 345 cubic inch V8 engine(Chatgpt)?
Try to ask.

Mcqueen:

Shark Of Wire 2
20
I lose my network data again... Luckily I always got a backup pcap file! Please help me find my "flag" its important!

Flag format: SKR{flag}

Note: There were some stego and crypto elements

Difficulty: Medium

Hint 1:Notice there were some image files?
Hint 2: I got login in a website, using godam as username. But sorry I forgot the password... It also used for a zip file that I kept it somewhere...

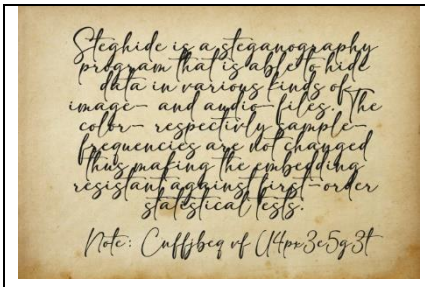
Steps I gone through:
1) Downloaded network_data.pcap file
2) Open and anlyze with wireshark
3) Extracted objects from wireshark.
4) found some files which include flag.html, s3cr3t_fl4g.jpg
5) use binwalk s3cr3t_fl4g.jpg, found hidden zip file.
6) extract the hidden zip file with binwalk -e s3cr3t_fl4g.jpg ,then unzip the zip file with password found in flag.html which is password123
7) Saw a image which is mystery_lettery.jpg, someone tell me it is about steganography

8) Got stucked,and ask chatgpt

Use Steghide: You can try using steghide to extract hidden data from mystery_letter.jpg. Since you mentioned the passphrase was an issue earlier, here's how you can proceed:
bash
Copy code
steghide extract -sf mystery_letter.jpg -p password123

Mcqueen:
You liars, this does not work at all.

The King:
Open Your eyes and try to read from the mystery_letter, You will feel the power of rotary engine.



Mcqueen:
The above message is about “steghide is a steganography program that is able to data in various kinds of”

Vroom, can’t read the others!!!!!
As I remember I won piston cup(first blood) and received the forbidden fuel

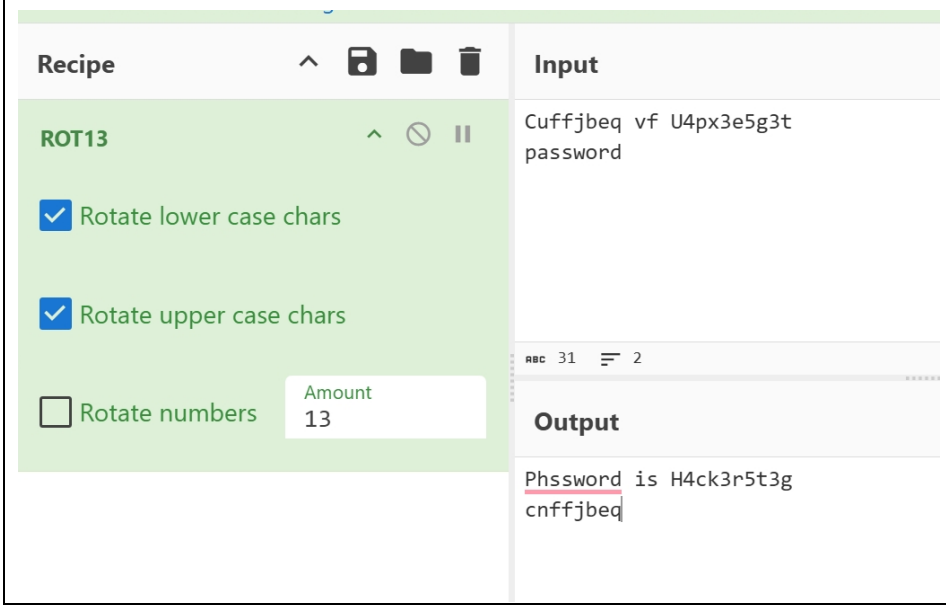
Hmm, It is time to use the forbidden fuel(OSINT) for extra power!
I am SPEED!!!

Mcqueen:
The words in the mystery_letter is actually from https://library.mosse-institute.com/articles/2022/07/steghide-hiding-data-in-plain-sight/steghide-hiding-data-in-plain-sight.html

Now I provide the full paragraph to 345 cubic inch hemi engine(chatgpt),
“Steghide is a steganography program that is able to hide data in various kinds of image and audio files. The color respectively sample-frequencies are not changed thus making the embedding resistant against first-order statistical tests. “

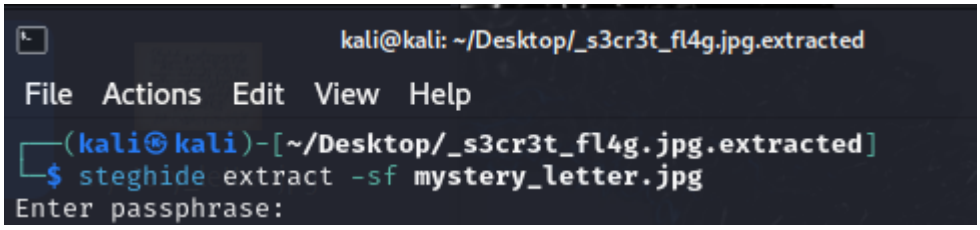
And ask the almightly engine to identify the below text and I get “Cuffjbeq vf U4px3e5g3t”

Which is “Phssword is H4ck3r5t3g”



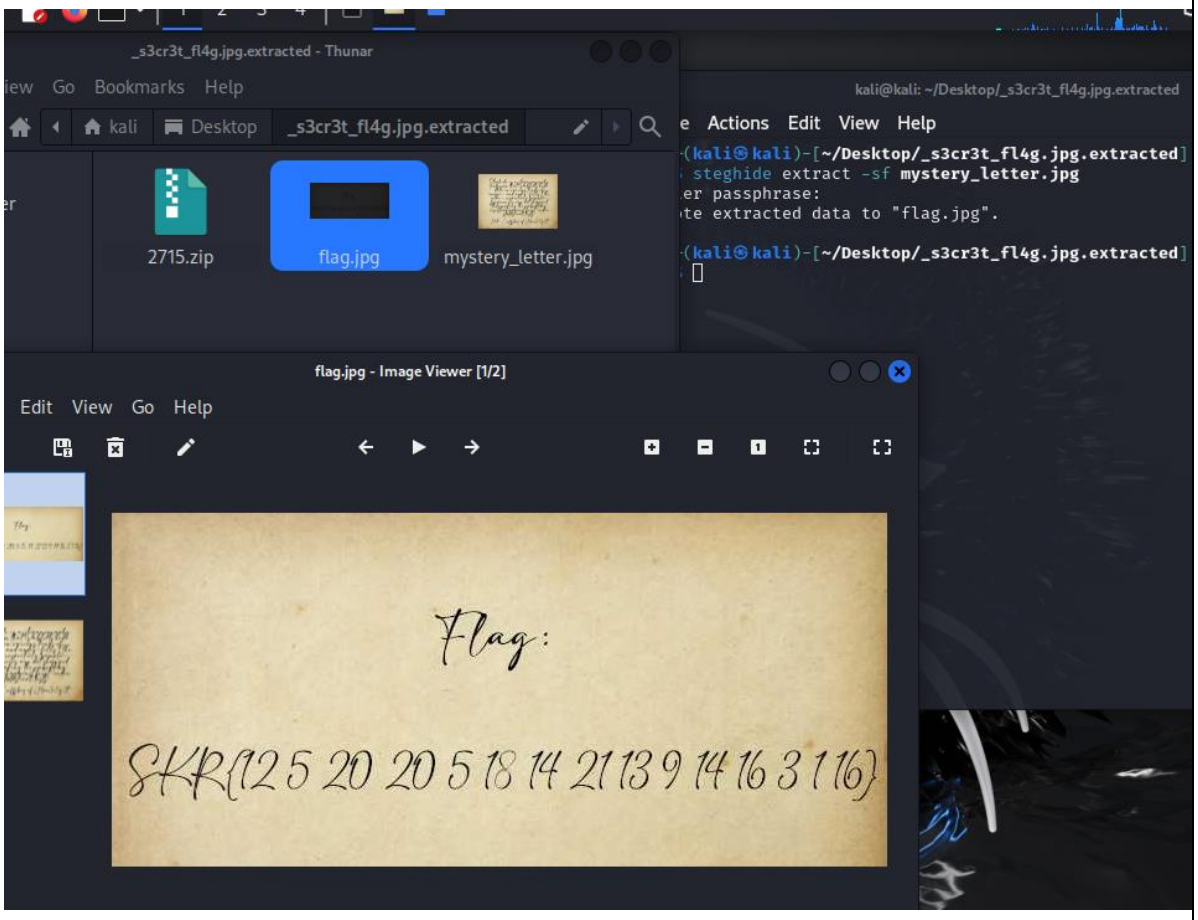
The King:
Hahaha Kid, One more step to go. Remember Steghide?

Mcqueen:
Yes, what was the passphrase?



Jackson Storm:
Remember the password you found?

Mcqueen:
Yes, I saw a strings of numbers.



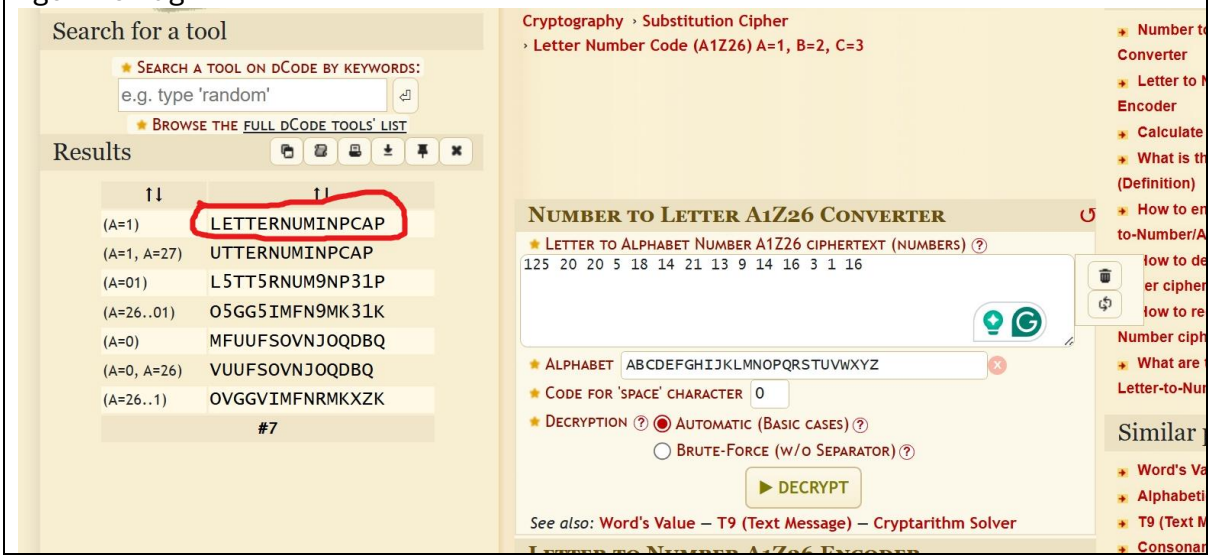
Jackson Storm:
Now try dcode.fr

McQueen:

It looks like Letter number code

Mcqueen:

I got the flag



Doc:
Congrats kid, you won your first piston cup with the correct flag.

Challenge | 233 Solves | Writeups | 6

Shark Of Wire 2

20

I lose my network data again... Luckily I always got a backup pcap file! Please help me find my "flag" its important!

Flag format: SKR{flag}

Note: *There were some stego and crypto elements*

Difficulty: Medium

View Hint

View Hint

SKR{LETTERNUMINPCAP}

Submit

You already solved this and the flag is correct