Consult IT CTF

Klocki

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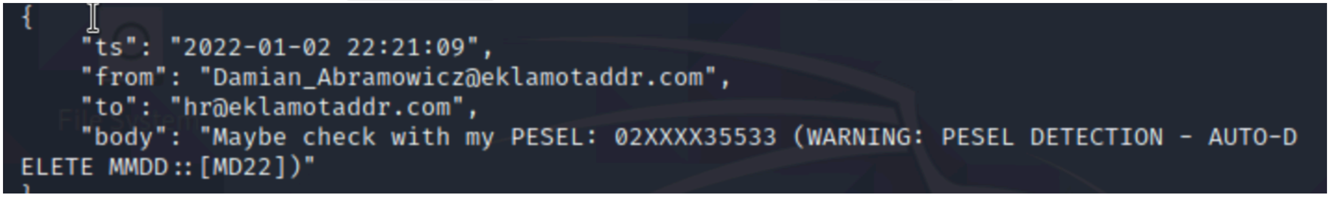
Folder 1:

- Flag 1: Going into folder 1 we can see `Xmyfiles.7z` password protected file. We use 7z2john to obtain file hash: `Xmyfiles.7z:$7z$1$19$0$$8$695579e21423c29d0000000000000000$3980509154$224$209$3fdae4dd6e34989bc3c02a16be58a71b653ba80fa6aa7c3f9` Having hash we can than use Hashcat or JohnTheRipper to crack password. In our case we decided to use john with rockyou.txt wordlist. `sudo john hash.txt --wordlist=/usr/share/wordlists/rockyou.txt` Finally we achieved password: `1q2w3e4r5t` We can now access folder: `7z x Xmyfiles.7z` where we find our first flag in top*pass*reward.txt file.
  FLAG: `CIT{1234567shadowpasswd}`

- Flag 2: Inside Xmyfiles folder we can also find `excelfile.7z` and `dump.pcap file`. First attempt was to brutforce password as we did in previous example, but meanwhile i checked the binary of the `dump.pcap` file and found 3 interesting lines : `E331 Please specify the password.` `PASS 742CITEKL9090$$` `U230 Login successful.` We can extract archive using `742CITEKL9090$$` passsword. Inside excelfile we can finde another 2 files: `note.txt` and `bossfile.7z`. The note is:
  "Note: Hey! I'm sending you Damian Abramowicz files, password - his PESEL. Make sure you are using the right one. PS. Don't look for CIT, I moved it to next file. This had... questionable security." In `HR_talk.json` we found pattern for Damian's pesel: `02XXXX35533`
  

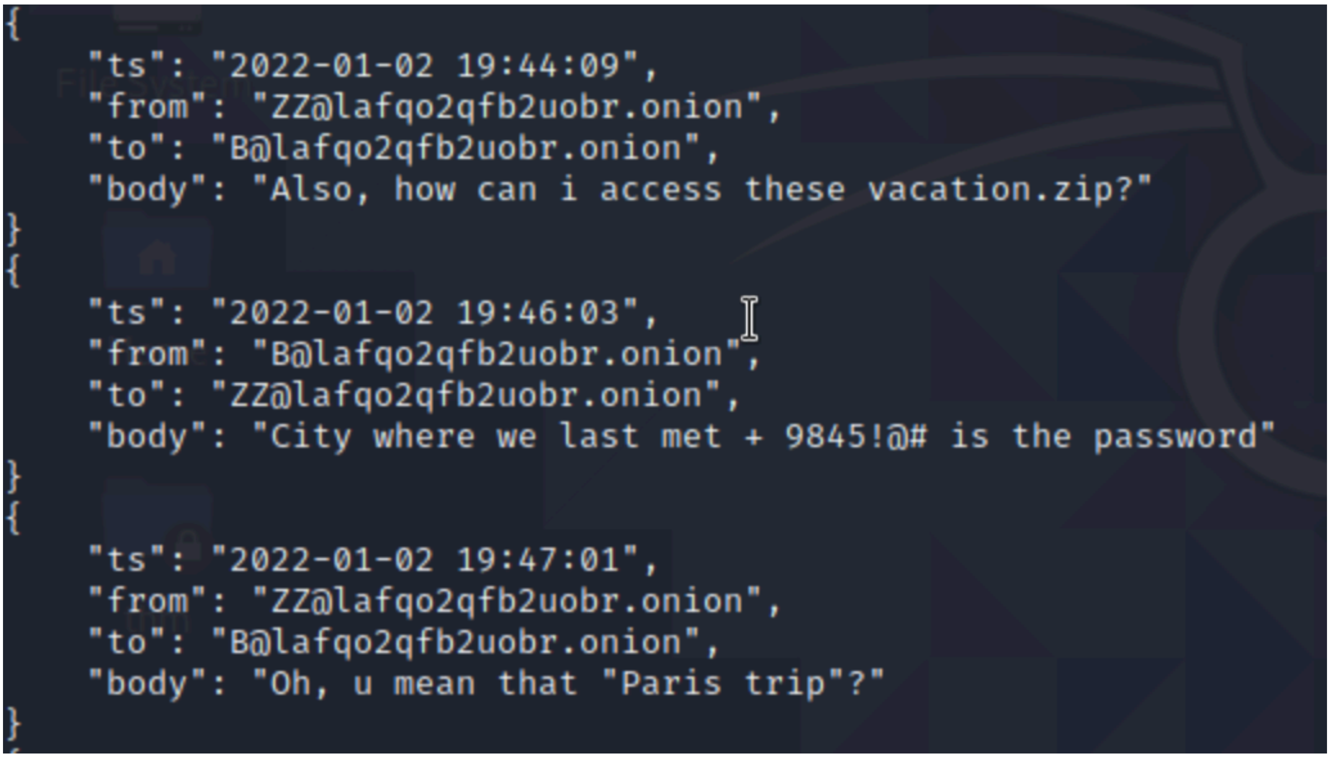
```
{
    "ts": "2022-01-02 22:21:09",
    "from": "Damian_Abramowicz@eklamotaddr.com",
    "to": "hr@eklamotaddr.com",
    "body": "Maybe check with my PESEL: 02XXXX35533 (WARNING: PESEL DETECTION - AUTO-D
ELETE MMDD::[MD22])"
```

  .
  We generated wordlist for our usage using exrex tool.

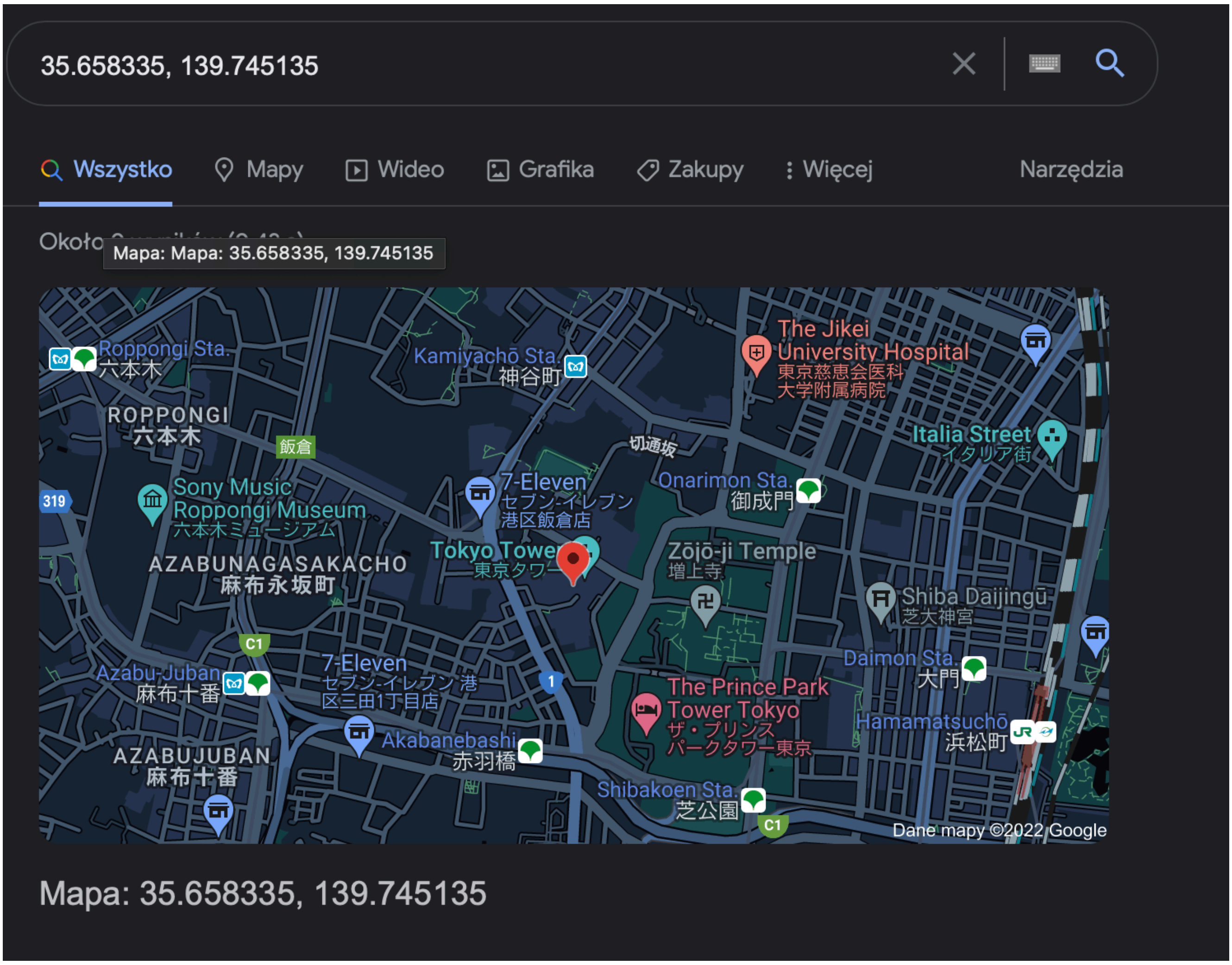
```
import exrex

def checkSum(pesel):
    weights = [1,3,7,9,1,3,7,9,1,3,0]
    sum = 0
    for idx, num in enumerate(pesel):
        sum += int(num) * weights[idx]
    if 10 - (sum % 10) == int(pesel[-1]):
        return True
    else:
        return False



result = list(exrex.generate('^02[0-1][0-9][0-3][0-9]35533$'))
#result = [each[::-1] for each in result]
result = [each for each in result if checkSum(each)]
result = "\n".join(result)

with open("wlist.txt", "w") as file:
    file.writelines(result)
```

Folder 2:

- Flag 1: As vacations is a clue we binwalked and extracted metadata from all photos. In metadata of `paris-2295123123_1920.jpg` we can find "original coordinates": `35.658335, 139.745135` which is in Tokyo. Moreover inside the chat we found the information that the password is a city thet they met lastly + 9845!@#. Password is `Tokyo9845!@#`. Inside we can find our flag in `vacation_reward.txt` and flag is FLAG: `CIT{HOW_ABOUT_YOur_Vacation?}`



```
{
    "ts": "2022-01-02 19:44:09",
    "from": "ZZ@lafqo2qfb2uobr.onion",
    "to": "B@lafqo2qfb2uobr.onion",
    "body": "Also, how can i access these vacation.zip?"
}
{
    "ts": "2022-01-02 19:46:03",
    "from": "B@lafqo2qfb2uobr.onion",
    "to": "ZZ@lafqo2qfb2uobr.onion",
    "body": "City where we last met + 9845!@# is the password"
}
{
    "ts": "2022-01-02 19:47:01",
    "from": "ZZ@lafqo2qfb2uobr.onion",
    "to": "B@lafqo2qfb2uobr.onion",
    "body": "Oh, u mean that "Paris trip"?"
}
```



35.658335, 139.745135

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Mapa: Mapa: 35.658335, 139.745135

Mapa: 35.658335, 139.745135

- Flag 2: In binary of dump.pcacp we found:

`Please login with USER and PASS USER zachary PASS 742CITEKL9090$$ Login successful Here comes the directory listing Mar 18 11:1`

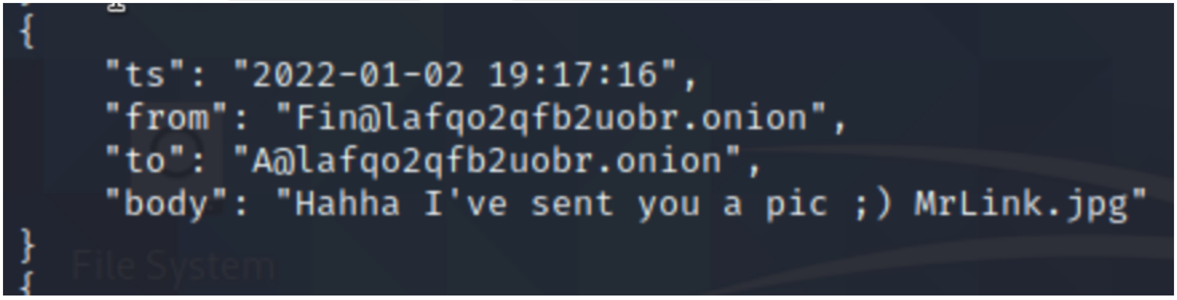
Using 742CITEKL9090$$ we can extract new archive. We ended up with the same bossfile as in the folder1

Folder 3:

- In chat we found out that PIN to DYM242 is a data of birth of Damian. We can grab it from his pesel.

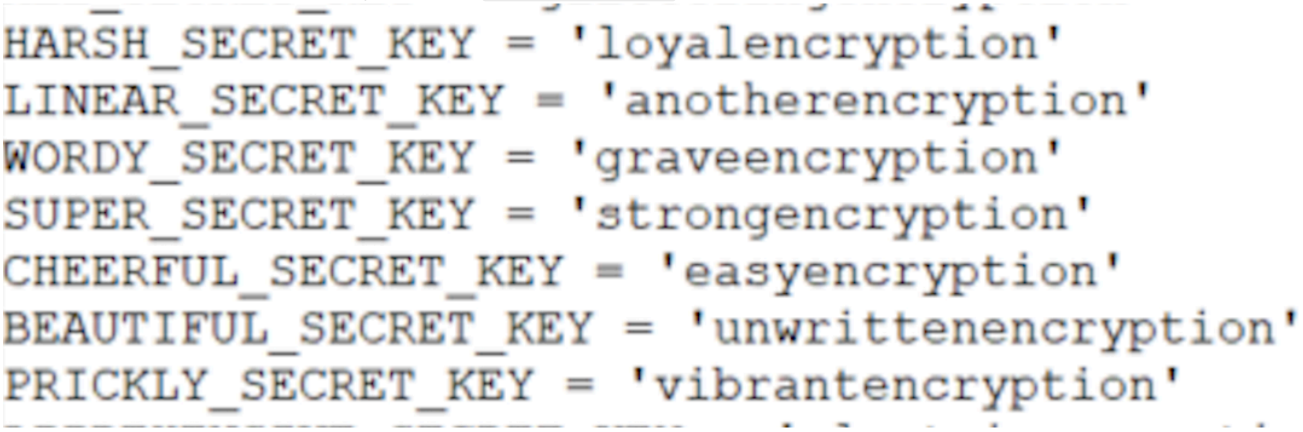
Folder 4:

- Flag 1: Name of the cat is mentioned in chat as "Mr Link". Looking througth the photos we found a cat with LINCOLN cup below. `Licoln` is a password for folder 4 and flag hidden in `osint_reward.txt` is FLAG: `CIT{0sINTisYourP0wer!}`



```
{
    "ts": "2022-01-02 19:17:16",
    "from": "Fin@lafqo2qfb2uobr.onion",
    "to": "A@lafqo2qfb2uobr.onion",
    "body": "Hahha I've sent you a pic ;) MrLink.jpg"
}
{
```

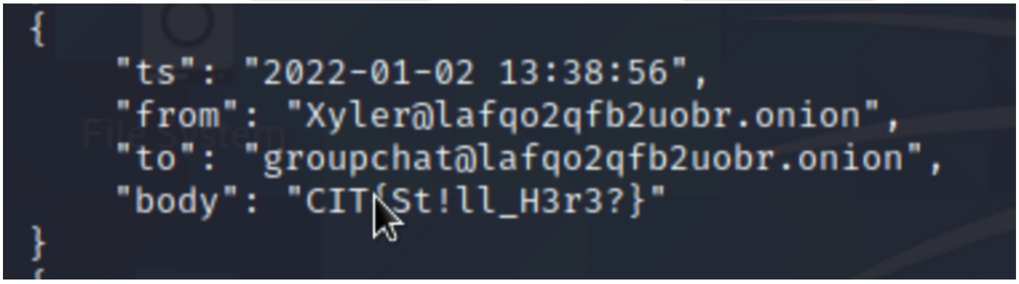
- Flag 2: Inside we found `encryptor.py`. Inside there was an os.environ.get() with many chars inside. We transalted it and it said `"SUPER_SECRET_KEY"`. We found that variable in avaliable env3.png. It's value is `strongencryption`.



```
HARSH_SECRET_KEY = 'loyalencryption'
LINEAR_SECRET_KEY = 'anotherencryption'
WORDY_SECRET_KEY = 'graveencryption'
SUPER_SECRET_KEY = 'strongencryption'
CHEERFUL_SECRET_KEY = 'easyencryption'
BEAUTIFUL_SECRET_KEY = 'unwrittenencryption'
PRICKLY_SECRET_KEY = 'vibrantencryption'
```

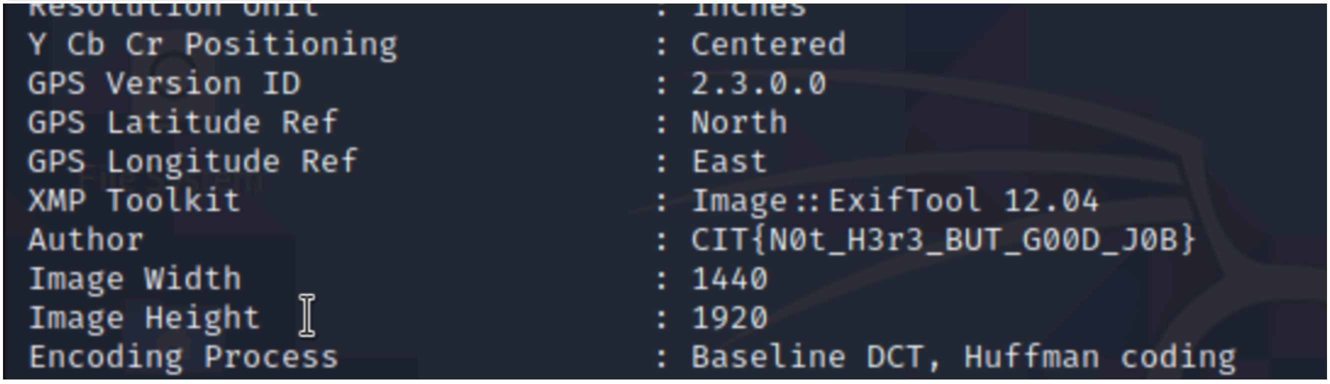
Folder All*other*files:

- Flag 1: Reading throught the `group_chat.json` on line 557 we found FLAG: `CIT{St!ll_H3r3?}`



```
{
    "ts": "2022-01-02 13:38:56",
    "from": "Xyler@lafqo2qfb2uobr.onion",
    "to": "groupchat@lafqo2qfb2uobr.onion",
    "body": "CIT{St!ll_H3r3?}"
}
{
```

- Flag 2: using exiftool to look for metadata in all images, hidden flag occured in `saint-cirq-lapopie-2398843_1920.jpg` FLAG: `CIT{N0t_H3r3_BUT_G00D_J0B}`



```
Resolution Unit                 : inches
Y Cb Cr Positioning             : Centered
GPS Version ID                  : 2.3.0.0
GPS Latitude Ref                : North
GPS Longitude Ref               : East
XMP Toolkit                     : Image::ExifTool 12.04
Author                          : CIT{N0t_H3r3_BUT_G00D_J0B}
Image Width                     : 1440
Image Height                    : 1920
Encoding Process                : Baseline DCT, Huffman coding
```