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CYBER TALENTS

Challenge Name: Music Chairs

Category: Digital Forensics

Level: medium

Tries: 7232 Times

Solved: 395 Times

Difficulty Level ⓘ

Basic Advanced

Rating ⓘ



Challenge Description

There are a bunch of singers images, however some images might be more related to each others than expected. Two of them have the flag! Flag is the two file names without extensions.

Solution

I downloaded the provide zip file using **wget** tool.

```
kali@kali: ~/Desktop/forensics
File Actions Edit View Help

(kali@kali)~/Desktop
$ wget https://hubchallenges.s3.eu-west-1.amazonaws.com/forensics/music_chairs.zip
--2025-02-20 08:38:48-- https://hubchallenges.s3.eu-west-1.amazonaws.com/forensics/music_chairs.zip
Resolving hubchallenges.s3.eu-west-1.amazonaws.com (hubchallenges.s3.eu-west-1.amazonaws.com) ... 3.5.68.163
Connecting to hubchallenges.s3.eu-west-1.amazonaws.com (hubchallenges.s3.eu-west-1.amazonaws.com)[3.5.68.163]:443 ... connected.
HTTP request sent, awaiting response... 200 OK
Length: 2846552 (2.7M) [application/zip]
Saving to: 'music_chairs.zip'

music_chairs.zip      100%[=====>] 2.71M  541KB/s  in 9.9s
2025-02-20 08:38:59 (281 KB/s) - 'music_chairs.zip' saved [2846552/2846552]

(kali@kali)~/Desktop
$ ls
music_chairs.zip
```

I then unzipped the zip file where images were extracted.

```
File Actions Edit View Help
(kali@kali)-[~/Desktop]
$ unzip music_chairs.zip
Archive:  music_chairs.zip
  extracting: 0bccb1d1c22e0be8.jpg
  extracting: 2e3ce7aac0aaa336.jpg
  inflating: 3a973c5833db32dc.jpg
  inflating: 4b0cfc10c3d111e1.jpg
  inflating: 4d92f7335fe137a5.jpg
  inflating: 6ef417e6992f4447.jpg
  inflating: 7374cab892a94e76.jpg
  inflating: 7e0f1f468037ec6f.jpg
  inflating: 7f49a3c13cf59fb7.png
  inflating: 809c03b6bddcda76.jpg
  inflating: 8242612b93ae2929.png
  inflating: 83521b27baf383a9.jpg
  inflating: 980425b4686e12d7.jpg
  inflating: a013214daf6a3abad.jpg
  inflating: a87e9fdb4ac26186.jpg
  inflating: ad8c6a6913c98e98.jpg
  inflating: af3eead1d4cf1ab91.jpg
  extracting: b7586c22159b2e1a.png
  inflating: bef74b74ebd0387.jpg
  inflating: bff026a57836534d.jpg
  inflating: c62068303f969abf.jpg
  inflating: ca5f33ac4b8ef393.jpg
  inflating: d1dcc744b9cdd5b0.jpg
  inflating: e23e2498d53ece65.jpg
  inflating: e2b3c48de6b49e9ab.jpg
  inflating: e46c279f5d1ea743.jpg
  inflating: e9b752c0c77226bb.jpg
  inflating: eafc520456e66909.jpg
  inflating: eddca12518d0cdb6.jpg
  inflating: f660c3f6e3de3fb6.jpg
  inflating: f90fb2945c5de29a.jpg
  inflating: fb80d6ee782552b2.jpg

(kali@kali)-[~/Desktop]
$ ls
0bccb1d1c22e0be8.jpg  6ef417e6992f4447.jpg  8242612b93ae2929.png  ad8c6a6913c98e98.jpg  c62068303f969abf.jpg  e46c279f5d1ea743.jpg  f90fb2945c5de29a.jpg
2e3ce7aac0aaa336.jpg  7374cab892a94e76.jpg  83521b27baf383a9.jpg  af3eead1d4cf1ab91.jpg  ca5f33ac4b8ef393.jpg  e9b752c0c77226bb.jpg  fb80d6ee782552b2.jpg
3a973c5833db32dc.jpg  7e0f1f468037ec6f.jpg  980425b4686e12d7.jpg  b7586c22159b2e1a.png  d1dcc744b9cdd5b0.jpg  eafc520456e66909.jpg  music_chairs.zip
```

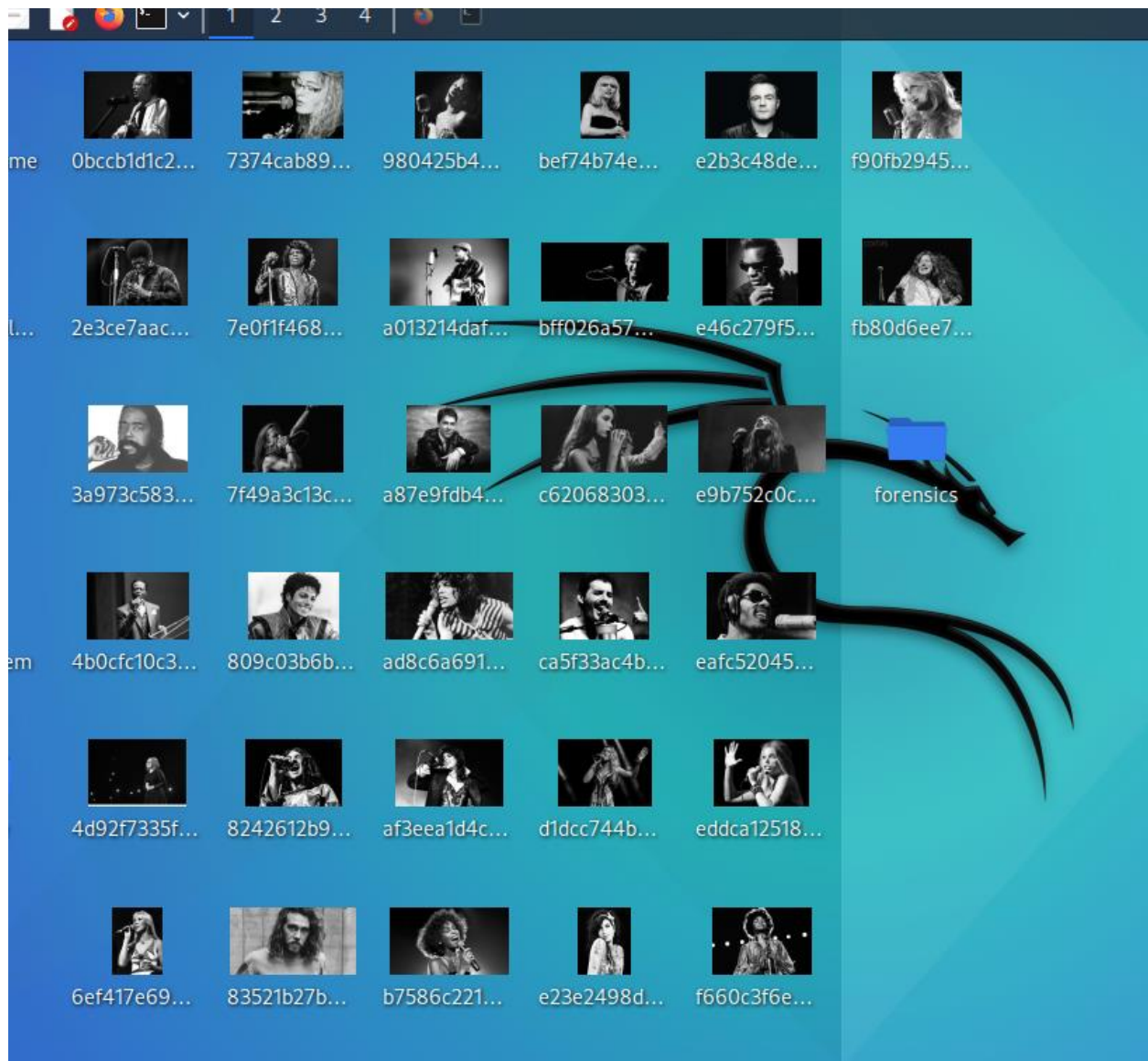
I then went ahead and tried looking at printable strings from the images searching for strings matching "flag" string. I used strings tool together with the grep tool for searching where i found a string "This is not the flag you are looking for!" .

```
File Actions Edit View Help
(kali@kali)-[~/Desktop]
$ strings *.jpg | grep flag
<pdf:Author>not_the_flag</pdf:Author>
This is not the flag you are looking for!

(kali@kali)-[~/Desktop]
$ strings *.png | grep flag

(kali@kali)-[~/Desktop]
$
```

Looking at the images with bare eyes revealed no flag.



After some through investigation, I reread the challenge description and this hint stood out ”
some images might be more related to each other's than expected.” So, i went ahead and run the
`ls -alh` command which returned a detailed list of all files and directories in the current directory,
including hidden ones, with human-readable file sizes.

```
kali@kali: ~/Desktop
File Actions Edit View Help

(kali@kali)~/Desktop
$ ls -alh
total 2.9M
drwxr-xr-x 3 kali kali 700 Feb 20 08:40 .
drwxr-xr-x 17 kali kali 580 Feb 20 07:10 ..
-rw-r--r-- 1 kali kali 39K Jul 18 2018 0bccb1d1c22e0be8.jpg
-rw-r--r-- 1 kali kali 67K Jul 18 2018 2e3ce7aac0aaa336.jpg
-rw-r--r-- 1 kali kali 100K Jul 18 2018 3a973c5833db32dc.jpg
-rw-r--r-- 1 kali kali 36K Jul 18 2018 ab0cfc10c3d111e1.jpg
-rw-r--r-- 1 kali kali 60K Jul 18 2018 ad92f7335fe137a5.jpg
-rw-r--r-- 1 kali kali 63K Jul 18 2018 bef417e6992f4447.jpg
-rw-r--r-- 1 kali kali 50K Jul 18 2018 f37acab892a94e76.jpg
-rw-r--r-- 1 kali kali 100K Jul 18 2018 7e0f1f468037ec6f.jpg
-rw-r--r-- 1 kali kali 102K Jul 18 2018 7f49a3c13cfe59b7.png
-rw-r--r-- 1 kali kali 49K Jul 18 2018 809c83b6bddcda76.jpg
-rw-r--r-- 1 kali kali 162K Jul 18 2018 2242612b93ae2929.png
-rw-r--r-- 1 kali kali 54K Jul 18 2018 83521b27b5f383a9.jpg
-rw-r--r-- 1 kali kali 13K Jul 18 2018 909425b4686e12d7.jpg
-rw-r--r-- 1 kali kali 114K Jul 18 2018 a013214daf3abdad.jpg
-rw-r--r-- 1 kali kali 117K Jul 18 2018 a87e9fdb4ac26186.jpg
-rw-r--r-- 1 kali kali 464K Jul 18 2018 ad8c6a6913c98e98.jpg
-rw-r--r-- 1 kali kali 115K Jul 18 2018 af3eea1d4cf1ab91.jpg
-rw-r--r-- 1 kali kali 294K Jul 18 2018 b7586c22159b2c1a.png
-rw-r--r-- 1 kali kali 146K Jul 18 2018 bef74b74ebd0387.jpg
-rw-r--r-- 1 kali kali 117K Jul 18 2018 bff026a57836524d.jpg
-rw-r--r-- 1 kali kali 6.2K Jul 18 2018 c62068381f969abf.jpg
-rw-r--r-- 1 kali kali 13K Jul 18 2018 ca5f33ac4b8ef393.jpg
-rw-r--r-- 1 kali kali 43K Jul 18 2018 d1dc744b8cdd5b8.jpg
-rw-r--r-- 1 kali kali 109K Jul 18 2018 e23c2498d53ece65.jpg
-rw-r--r-- 1 kali kali 16K Jul 18 2018 e2b3c48de6b49e8b.jpg
-rw-r--r-- 1 kali kali 6.2K Jul 18 2018 e46c279f5d1ea743.jpg
-rw-r--r-- 1 kali kali 72K Jul 18 2018 e9b752c0c77226bb.jpg
-rw-r--r-- 1 kali kali 37K Jul 18 2018 eafc520456e66909.jpg
-rw-r--r-- 1 kali kali 20K Jul 18 2018 eddca12518d0cdb6.jpg
-rw-r--r-- 1 kali kali 191K Jul 18 2018 f608c3f6e3de3fb6.jpg
-rw-r--r-- 1 kali kali 40K Jul 18 2018 f90fb2945c5de29a.jpg
-rw-r--r-- 1 kali kali 52K Jul 18 2018 f8b0d6ee782552b2.jpg
drwxrwxr-x 2 kali kali 700 Feb 20 08:40 forensics

(kali@kali)~/Desktop
```

On closely looking at the file sizes, I learnt that two files had the same file size **100k** each which made them related. The file names were **3a973c5833db32dc.jpg** and **7e0f1f468037ec6f.jpg**.

From the challenge description, The “Flag is the two file names without extensions”. I merged the file names without the extensions and the flag was “**3a973c5833db32dc 7e0f1f468037ec6f**”.