[CTF] 攻防世界MISC高手区部分题目WriteUp

原创

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订阅专栏

记录一些有意思的题目

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双色块

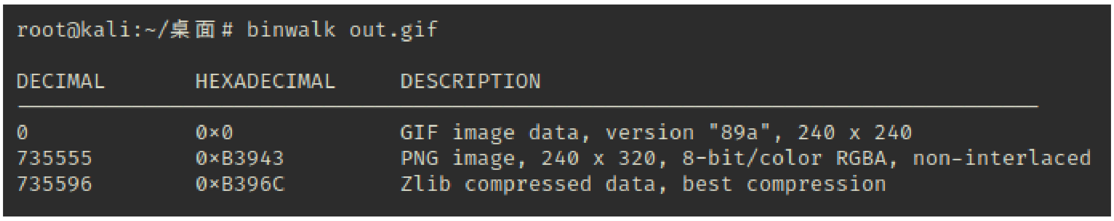
下载附件解压出来是个gif文件，仔细观察一下，发现两种色块应该分别代表01。写段Python脚本把数据提取出来

```
from PIL import Image
# 读取图片
image = Image.open('C:\\Users\\28919\\Desktop\\out.gif')
# 存放分离出的图片的路径
split = 'C:\\Users\\28919\\Desktop\\gif\\'
# 循环读取gif的每一帧
try:
 while True:
  # 当前位置
  current = image.tell()
  # 保存图片
  image.save(split + str(current) + '.png')
  # 移动到下一张
  image.seek(current + 1)
except:
 pass
# 储存提取出的字符
string = ''
# 直接把2进制转为10进制储存在line里
line = 0
i = 0
# 图片里每一个色块是10×10像素大小，总共24×24个色块
for y in range(24):
 for x in range(24):
  # 载入一张图片
  pix = Image.open(split+str(i)+'.png').convert('RGBA').load()
  # 读取色块的颜色值
  r, g, b, p = pix[x*10,y*10]
  if g == 255:
   # 0
   line = line << 1
  if r == 255 and b == 255:
   # 1
   line = (line << 1) + 1
  i += 1
  # 凑够8位就把line转为字符储存在string里
  if i%8 == 0:
   string += chr(line)
   line = 0
print(string)
```

运行后得到：

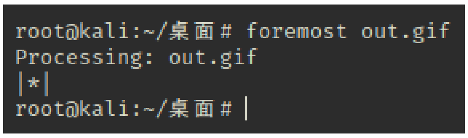
> o8DlxK+H8wsiXe/ERFpAMaBPiIcj1sHyGOMmQDkK+uXsVZgre5DSXw==hhhhhhhhhhhhhhhh

去掉后面那串无意义的hhhh就应该是个base64加密，但是直接解码出来还是乱码，应该在哪里还有别的东西。把图片丢到Kali里用binwalk命令跑一下：



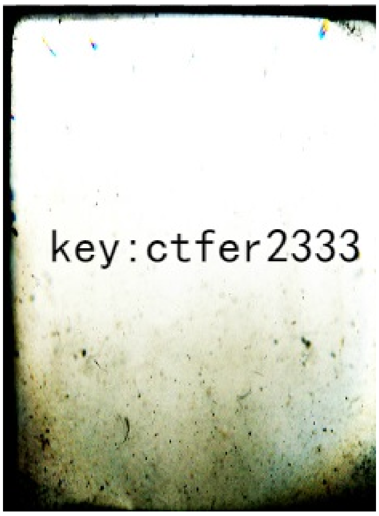
```
root@kali:~/桌面# binwalk out.gif

DECIMAL       HEXADECIMAL     DESCRIPTION
--------------------------------------------------------------------------------
0             0×0             GIF image data, version "89a", 240 x 240
735555        0×B3943         PNG image, 240 x 320, 8-bit/color RGBA, non-interlaced
735596        0×B396C         Zlib compressed data, best compression
```

果然还有东西，用foremost命令提取出来：



```
root@kali:~/桌面# foremost out.gif
Processing: out.gif
|*|
root@kali:~/桌面# |
```

得到一张图片：

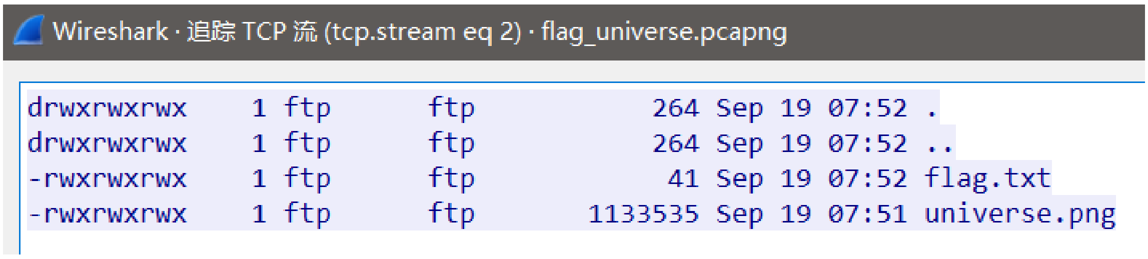


得到一个密码ctfer2333，用DES解密出来就得到flag了，解密网站：http://tool.chacuo.net/cryptdes

> flag{2ce3b416457d4380dc9a6149858f71db}

flag_universe

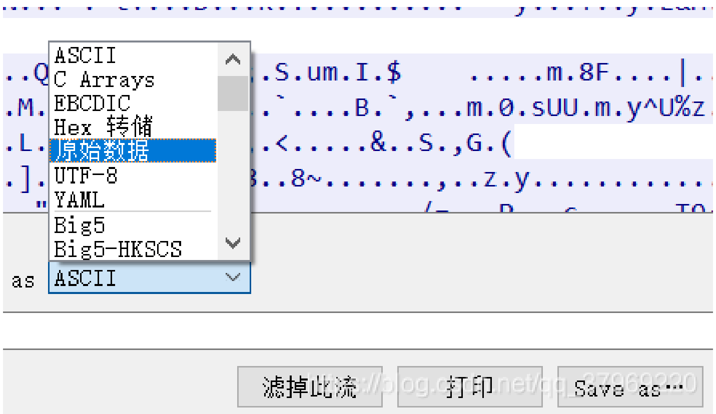
下载附件解压出来是个流量包，用wireshark打开，追踪TCP流，在第二个流里发现存在一个flag.txt文件



Wireshark · 追踪 TCP 流 (tcp.stream eq 2) · flag_universe.pcapng

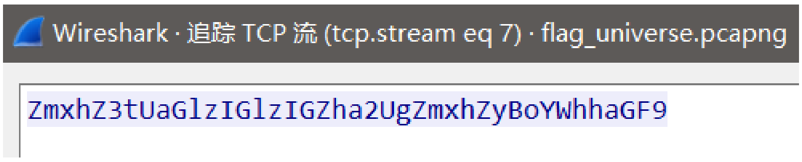
```
drwxrwxrwx    1 ftp      ftp           264 Sep 19 07:52 .
drwxrwxrwx    1 ftp      ftp           264 Sep 19 07:52 ..
-rwxrwxrwx    1 ftp      ftp            41 Sep 19 07:52 flag.txt
-rwxrwxrwx    1 ftp      ftp       1133535 Sep 19 07:51 universe.png
```

继续往后翻，在第三个流里面发现一个png文件，在下面选择原始数据，保存。



```
..Q       .S.um.I.$    .....m.8F....|.
.M.       .`....B.`,...m.0.sUU.m.y^U%z
.L.       .<.....&..S.,G.(
.].       3..8~........,..z.y..........
```

继续翻，在第七个流里面发现一段base64文本，解码后是一个假flag



Wireshark · 追踪 TCP 流 (tcp.stream eq 7) · flag_universe.pcapng

```
ZmxhZ3tUaGlzIGlzIGZha2UgZmxhZyBoYWhhaGF9
```

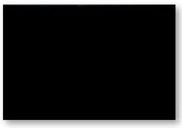
> flag{This is fake flag hahaha}

全都保存出来后得到了这么几个文件：

a.png

b.png

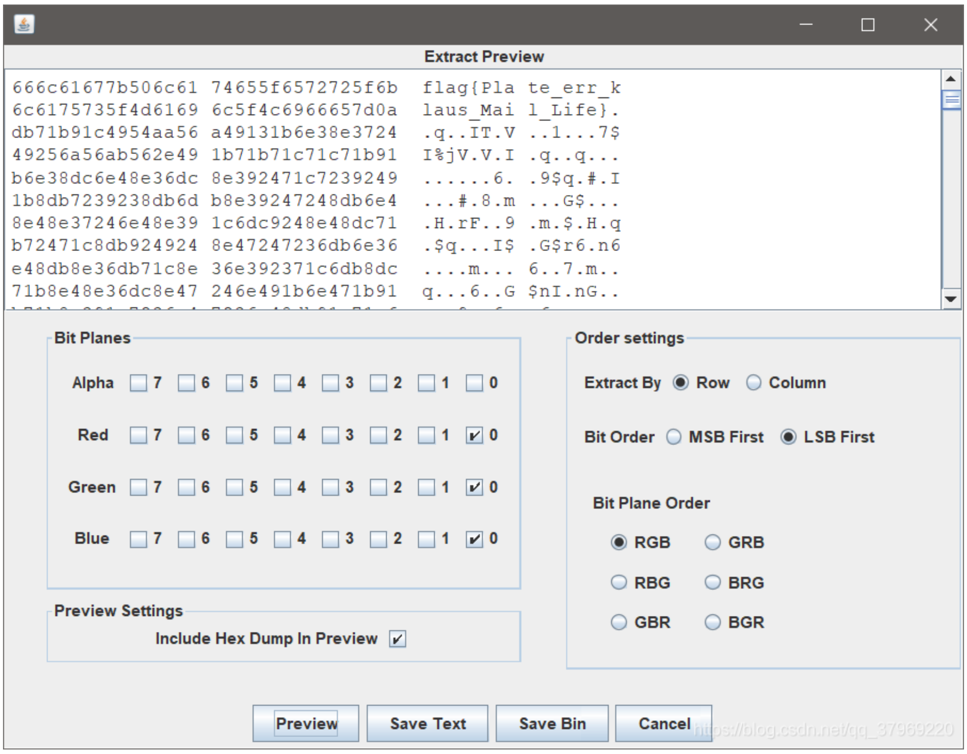
c.png


d.png

e.png

f.png

逐个检查这几张图片，发现在最后一张里存在LSB隐写，用Stegsolve打开文件，一番操作之后flag就出来了


Extract Preview

```
666c61677b506c61 74655f6572725f6b  flag{Pla te_err_k
6c6175735f4d6169 6c5f4c6966657d0a  laus_Mai l_Life}.
db71b91c4954aa56 a49131b6e38e3724  .q..IT.V ..1...7$
49256a56ab562e49 1b71b71c71c71b91  I%jV.V.I .q..q...
b6e38dc6e48e36dc 8e392471c7239249  ......6. .9$q.#.I
1b8db7239238db6d b8e39247248db6e4  ...#.8.m ...G$...
8e48e37246e48e39 1c6dc9248e48dc71  .H.rF..9 .m.$.H.q
b72471c8db924924 8e47247236db6e36  .$q...I$ .G$r6.n6
e48db8e36db71c8e 36e392371c6db8dc  ....m... 6..7.m..
71b8e48e36dc8e47 246e491b6e471b91  q...6..G $nI.nG..
```

Bit Planes

Alpha □ 7 □ 6 □ 5 □ 4 □ 3 □ 2 □ 1 □ 0

Red □ 7 □ 6 □ 5 □ 4 □ 3 □ 2 □ 1 ☑ 0

Green □ 7 □ 6 □ 5 □ 4 □ 3 □ 2 □ 1 ☑ 0

Blue □ 7 □ 6 □ 5 □ 4 □ 3 □ 2 □ 1 ☑ 0

Preview Settings

Include Hex Dump In Preview ☑

Order settings

Extract By ● Row ○ Column

Bit Order ○ MSB First ● LSB First

Bit Plane Order

● RGB ○ GRB

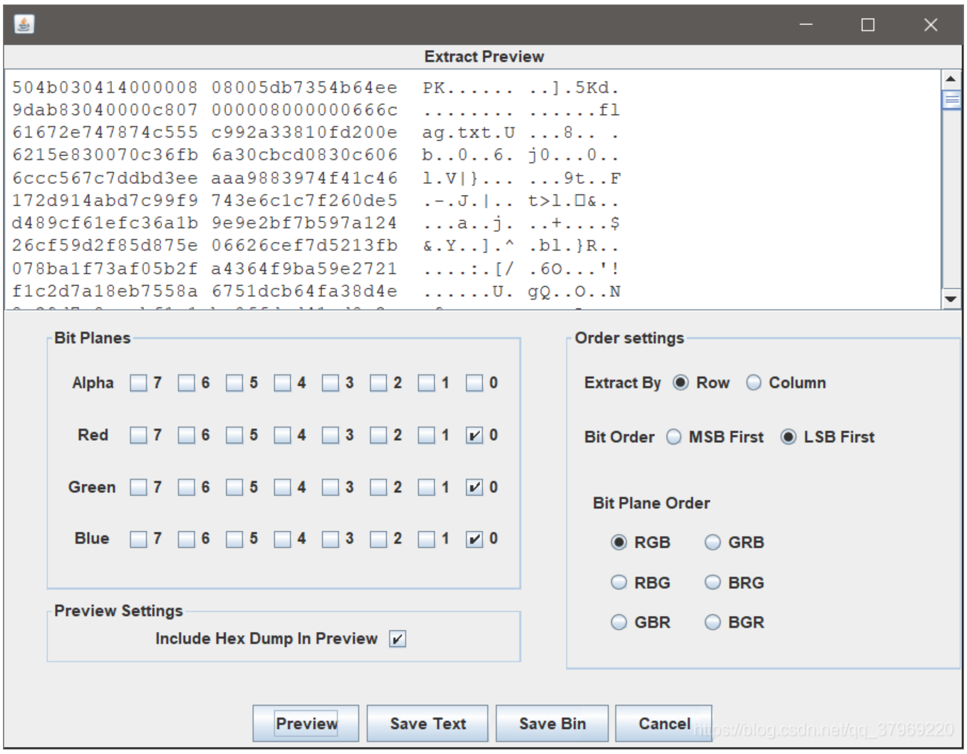
○ RBG ○ BRG

○ GBR ○ BGR

> flag{Plate_err_klaus_Mail_Life}

3-11

下载得到一张图片，用Stegsolve打开，发现存在LSB隐写，开头为zip的文件头，直接保存用压缩软件打开。



Extract Preview

```
504b030414000008 08005db7354b64ee  PK...... ..].5Kd.
9dab83040000c807 000008000000666c  ........ ......fl
61672e747874c555 c992a33810fd200e  ag.txt.U ...8.. .
6215e830070c36fb 6a30cbcd0830c606  b..0..6. j0...0..
6ccc567c7ddbd3ee aaa9883974f41c46  l.V|}... ...9t..F
172d914abd7c99f9 743e6c1c7f260de5  .-.J.|.. t>l.□&..
d489cf61efc36a1b 9e9e2bf7b597a124  ...a..j. ..+....$
26cf59d2f85d875e 06626cef7d5213fb  &.Y..].^ .bl.}R..
078ba1f73af05b2f a4364f9ba59e2721  ....:.[/ .6O...'!
f1c2d7a18eb7558a 6751dcb64fa38d4e  ......U. gQ..O..N
```

Bit Planes

Alpha □ 7 □ 6 □ 5 □ 4 □ 3 □ 2 □ 1 □ 0

Red □ 7 □ 6 □ 5 □ 4 □ 3 □ 2 □ 1 ☑ 0

Green □ 7 □ 6 □ 5 □ 4 □ 3 □ 2 □ 1 ☑ 0

Blue □ 7 □ 6 □ 5 □ 4 □ 3 □ 2 □ 1 ☑ 0

Preview Settings

Include Hex Dump In Preview ☑

Order settings

Extract By ● Row ○ Column

Bit Order ○ MSB First ● LSB First

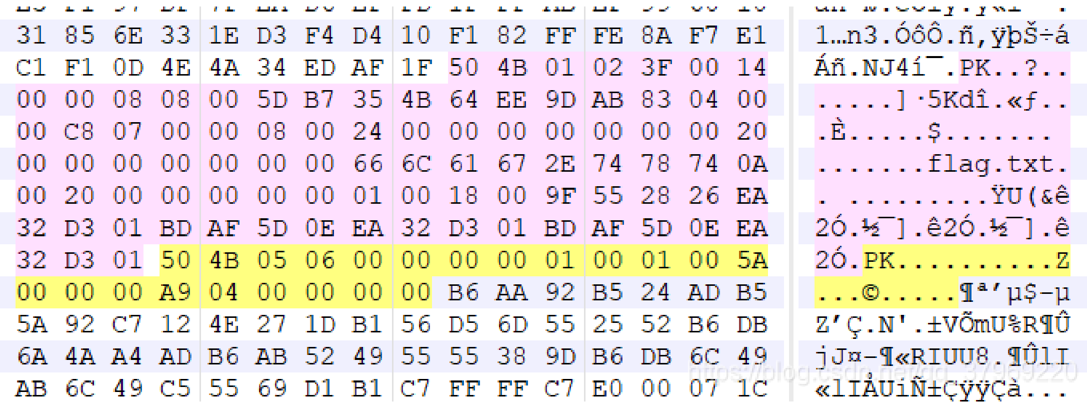
Bit Plane Order

● RGB ○ GRB

○ RBG ○ BRG

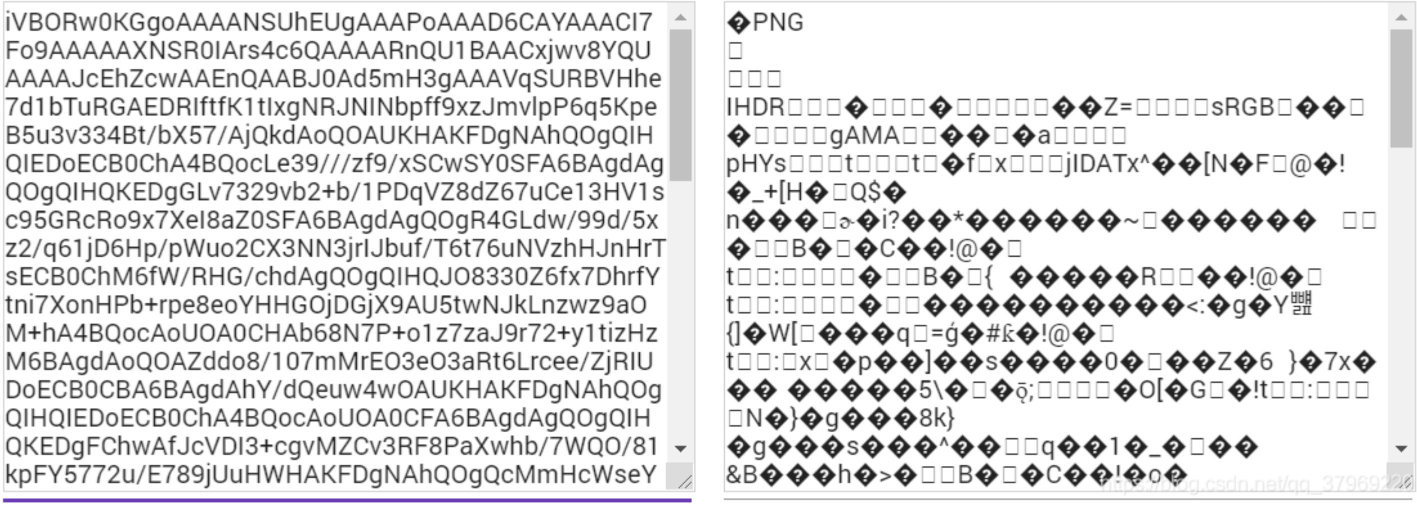
○ GBR ○ BGR

没有任何加密，但解压时提示压缩文件损坏，用010editor看一下，文件尾后面存在无用数据，直接删掉，成功解压。



```
31 85 6E 33 1E D3 F4 D4 10 F1 82 FF FE 8A F7 E1   1…n3.Óôô.ñ,ÿþŠ÷á
C1 F1 0D 4E 4A 34 ED AF 1F 50 4B 01 02 3F 00 14   Áñ.NJ4í¯.PK..?..
00 00 08 08 00 5D B7 35 4B 64 EE 9D AB 83 04 00   .....]·5Kdî.«ƒ..
00 C8 07 00 00 08 00 24 00 00 00 00 00 00 00 20   .È.....$....... 
00 00 00 00 00 00 00 66 6C 61 67 2E 74 78 74 0A   .......flag.txt.
00 20 00 00 00 00 00 01 00 18 00 9F 55 28 26 EA   . .........ŸU(&ê
32 D3 01 BD AF 5D 0E EA 32 D3 01 BD AF 5D 0E EA   2Ó.½¯].ê2Ó.½¯].ê
32 D3 01 50 4B 05 06 00 00 00 00 01 00 01 00 5A   2Ó.PK..........Z
00 00 00 A9 04 00 00 00 00 B6 AA 92 B5 24 AD B5   ...©.....¶ª’µ$µ
5A 92 C7 12 4E 27 1D B1 56 D5 6D 55 25 52 B6 DB   Z’Ç.N'.±VÕmU%R¶Û
6A 4A A4 AD B6 AB 52 49 55 55 38 9D B6 DB 6C 49   jJ¤¶«RIUU8.¶ÛlI
AB 6C 49 C5 55 69 D1 B1 C7 FF FF C7 E0 00 07 1C   «lIÅUiÑ±ÇÿÿÇà...
```

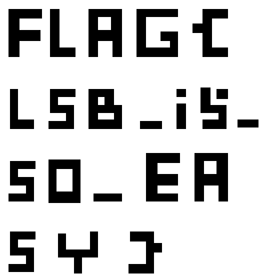
解压后的文件打开发现是base64加密，解密后能看到是一个png文件。



```
iVBORw0KGgoAAAANSUhEUgAAAPoAAAD6CAYAAACI7
Fo9AAAAAXNSR0IArs4c6QAAAARnQU1BAACxjwv8YQU
AAAAJcEhZcwAAEnQAABJ0Ad5mH3gAAAVqSURBVHhe
7d1bTuRGAEDRIftfK1tIxgNRJNINbpff9xzJmvlpP6q5Kpe
B5u3v334Bt/bX57/AjQkdAoQOAUKHAKFDgNAhQOgQIH
QIEDoECB0ChA4BQocLe39///zf9/xSCwSY0SFA6BAgdAg
QOgQIHQKEDgGLv7329vb2+b/1PDqVZ8dZ67uCe13HV1s
c95GRcRo9x7XeI8aZ0SFA6BAgdAgQOgR4GLdw/99d/5x
z2/q61jD6Hp/pWuo2CX3NN3jrlJbuf/T6t76uNVhrfY
sECB0ChM6fW/RHG/chdAgQOgQIHQJO8330Z6fx7DhrfY
tni7XonHPb+rpe8eoYHHGOjDGjX9AU5twNJkLnzwz9aO
M+hA4BQocAoUOA0CHAb68N7P+o1z7zaJ9r72+y1tizHz
M6BAgdAoQOAZddo8/107mMrE03eO3aRt6Lrcee/ZjRIU
DoECB0CBA6BAgdAhY/dQeuw4wOAUKHAKFDgNAhQOg
QIHQIEDoECB0ChA4BQocAoUOA0CFA6BAgdAgQOgQIH
QKEDgFChwAfJcVDI3+cgvMZCv3RF8Pwhb/7WQO/81
kpFY5772u/E789jUuHWHAKFDgNAhQOgQcMmHcWseY
```

```
�PNG
�
���
IHDR����������������Z=����sRGB����
������gAMA������a����
pHYs���t���t��f�x���jIDATx^��[N�F�@��!
�_+[H��Q$�
n������i?��*�������~�������  ��
����B���C��!@���
t��:�������B����{ ������R������!@����
t��:����������������������<:�g�Y
{]�W[����q�=ģ�#ꝁ�!@���
t��:�x��p��]��s�����0����Z�6 }�7x�
�� ������5\�����;�������O[�G���!t��:���
�N�}�g���8k}
�g���s���^�����q���1�_����
&B���h�>����B���C���!�o�
```

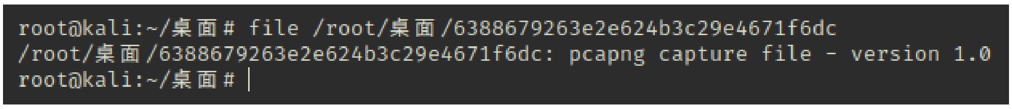
直接用base64转图片得到flag：



```
FLAG{LSB_i5_SO_EASY}
```

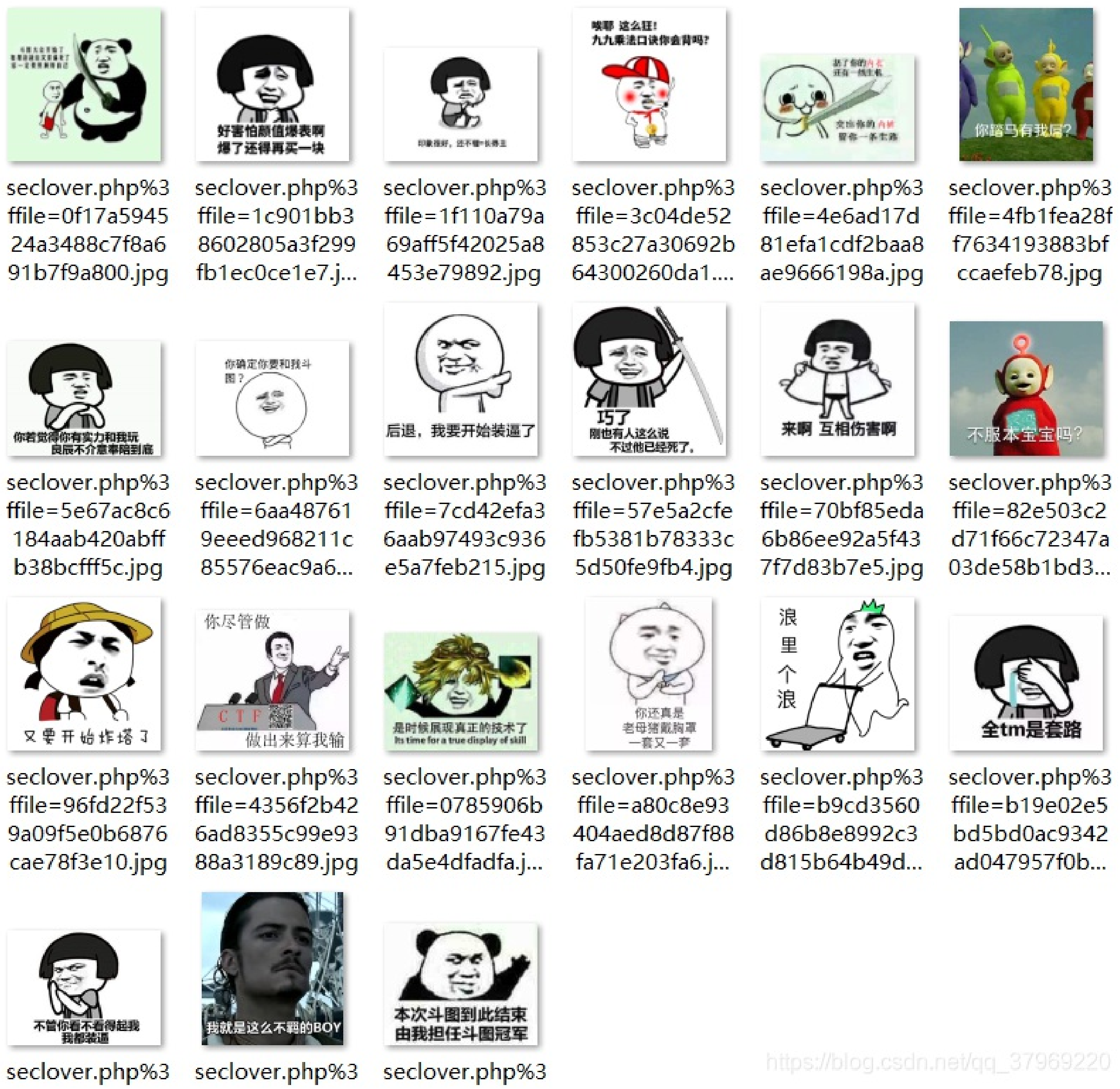
互相伤害！！！

下载解压得到一个位置类型的文件，丢到Kali里用file命令跑一下



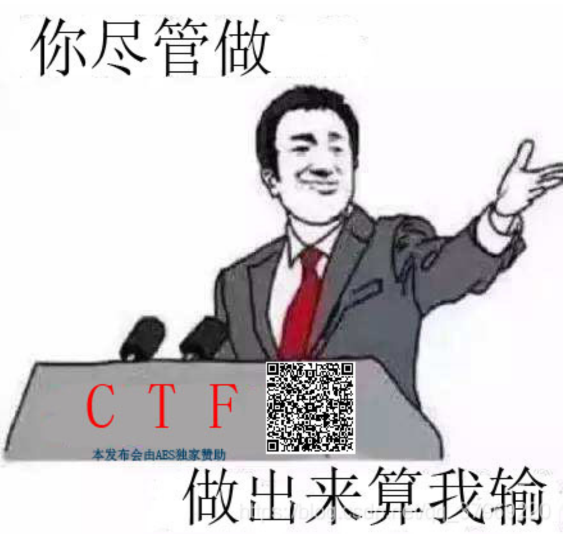
```
root@kali:~/桌面# file /root/桌面/6388679263e2e624b3c29e4671f6dc
/root/桌面/6388679263e2e624b3c29e4671f6dc: pcapng capture file - version 1.0
root@kali:~/桌面# 
```

得知为一个流量包，用Wireshark打开，右键追踪流发现全部是HTTP请求，内容全部是jpg图片，左上角文档里选择导出对象将所有HTTP请求里的东西全部导出来：

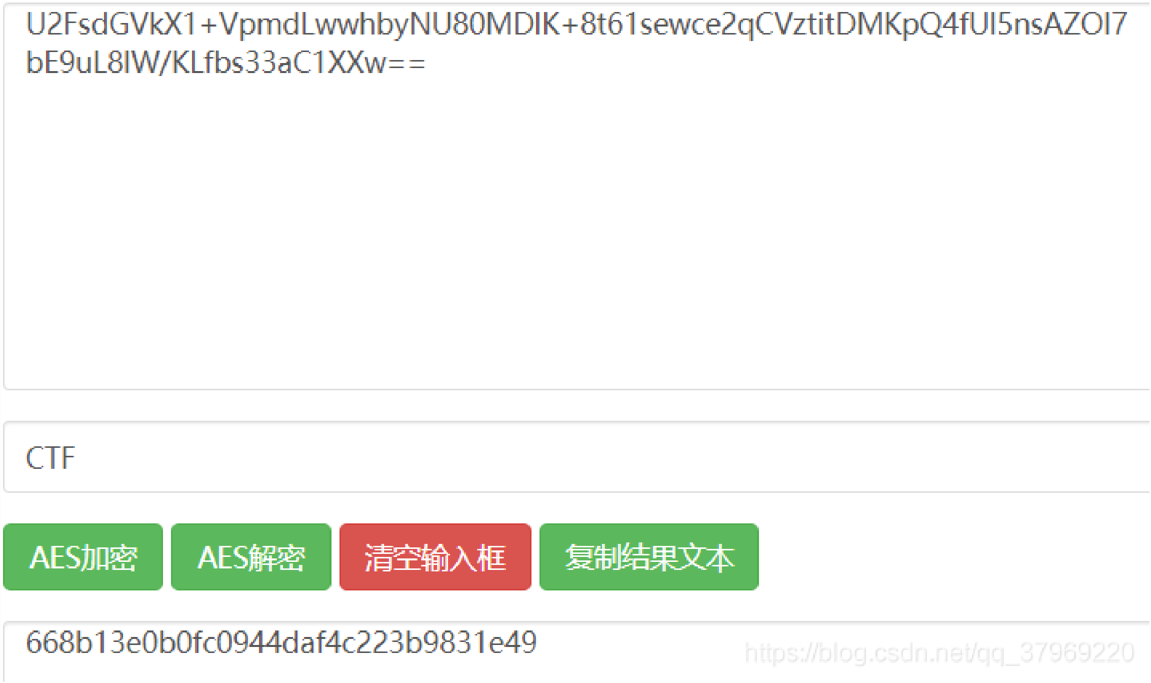


seclover.php%3ffile=0f17a594524a3488c7f8a691b7f9a800.jpg
seclover.php%3ffile=1c901bb38602805a3f299fb1ec0ce1e7.j...
seclover.php%3ffile=1f110a79a69aff5f42025a8453e79892.jpg
seclover.php%3ffile=3c04de52853c27a30692b64300260da1....
seclover.php%3ffile=4e6ad17d81efa1cdf2baa8ae9666198a.jpg
seclover.php%3ffile=4fb1fea28ff7634193883bfccaefeb78.jpg
seclover.php%3ffile=5e67ac8c6184aab420abffb38bcfff5c.jpg
seclover.php%3ffile=6aa487619eeed968211c85576eac9a6...
seclover.php%3ffile=7cd42efa36aab97493c936e5a7feb215.jpg
seclover.php%3ffile=57e5a2cfefb5381b78333c5d50fe9fb4.jpg
seclover.php%3ffile=70bf85eda6b86ee92a5f437f7d83b7e5.jpg
seclover.php%3ffile=82e503c2d71f66c72347a03de58b1bd3...
seclover.php%3ffile=96fd22f539a09f5e0b6876cae78f3e10.jpg
seclover.php%3ffile=4356f2b426ad8355c99e9388a3189c89.jpg
seclover.php%3ffile=0785906b91dba9167fe43da5e4dfadfa.j...
seclover.php%3ffile=a80c8e93404aed8d87f88fa71e203fa6.j...
seclover.php%3ffile=b9cd3560d86b8e8992c3d815b64b49d...
seclover.php%3ffile=b19e02e5bd5bd0ac9342ad047957f0b...
seclover.php%3
seclover.php%3
seclover.php%3

发现这张图里有一个二维码



直接解码解不出来，但根据图片上的信息可知为AES加密，密码为CTF，解码网站：http://www.jsons.cn/aesencrypt

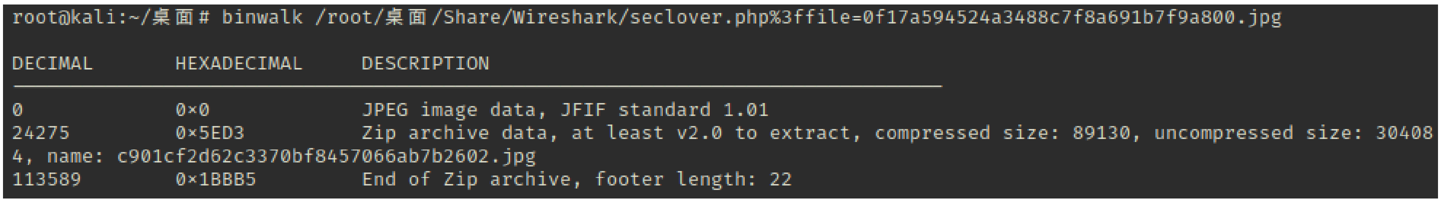


U2FsdGVkX1+VpmdLwwhbyNU80MDIK+8t61sewce2qCVztitDMKpQ4fUI5nsAZOI7
bE9uL8IW/KLfbs33aC1XXw==

CTF

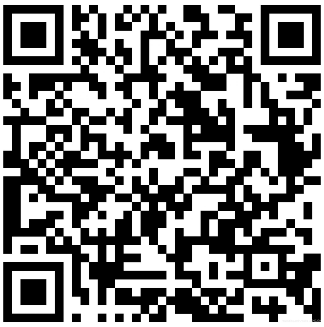
668b13e0b0fc0944daf4c223b9831e49

解码后是一串数字，但这并不是flag，继续用binwalk分析图片：



```
root@kali:~/桌面# binwalk /root/桌面/Share/Wireshark/seclover.php%3ffile=0f17a594524a3488c7f8a691b7f9a800.jpg

DECIMAL       HEXADECIMAL     DESCRIPTION
--------------------------------------------------------------------------------
0             0x0             JPEG image data, JFIF standard 1.01
24275         0x5ED3          Zip archive data, at least v2.0 to extract, compressed size: 89130, uncompressed size: 30408
4, name: c901cf2d62c3370bf8457066ab7b2602.jpg
113589        0x1BBB5         End of Zip archive, footer length: 22
```

发现藏有一个zip文件，foremost分离出来解压得到一张清晰的二维码：



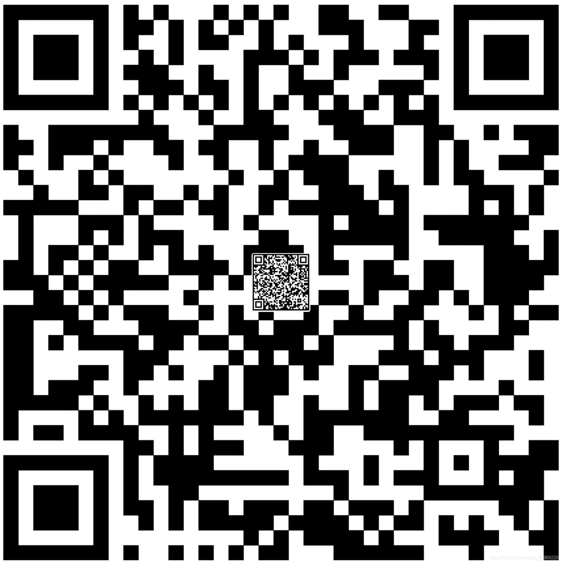
扫码得一句话：

> 扔下内衣真有一线生机？？？？
> 交出内裤才有活路！！！！

那么我们的目标就锁定到了这张图上：

然而这张图foremost分离出的压缩包里的二维码和之前那一张一模一样，最后我们发现这一张图片分离出的压缩包存在密码（真就照应题目名呗）：

这时我们想到之前得到的那一串数字，输入后成功解压，得到一张不一样的二维码：



外面大的二维码扫描结果和前面的一样，里面那个小二维码扫描后得到：

> flag{97d1-0867-2dc1-8926-144c-bc8a-4d4a-3758}

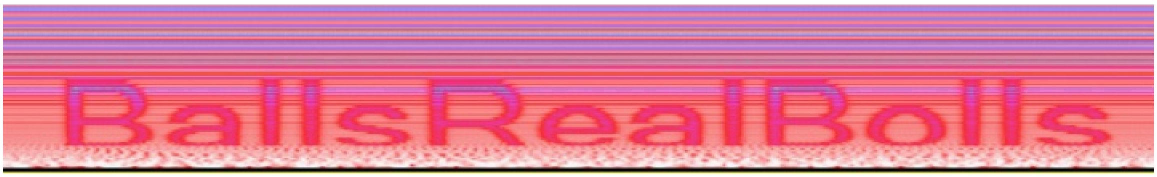
题目里说要提交flag{xxx}内的xxx内容，所以最终的答案就是括号里面的内容（又一个坑）

Miscellaneous-300

下载附件得到一个有密码的压缩包，暴力破解之得密码46783，刚好是被加密的压缩包的名字，解压出来的压缩包还是有密码，那么这题就应该是一个压缩包套娃题，题目里让我们检查73168.zip这个文件，直接写Python脚本解之：

```
import zipfile
name = r"C:\Users\28919\Desktop\f932f55b83fa493ab024390071020088.zip"
while True:
    if name == r"C:\Users\28919\Desktop\zip\73168.zip":
     print("find")
 ts1 = zipfile.ZipFile(name,'r')
 # 获取压缩包里第一个文件名并截取前5个字符
 passwd = ts1.namelist()[0][0:5]
 print(passwd)
 ts1.extractall("C:\\Users\\28919\\Desktop\\zip\\",pwd=passwd.encode())
 name = "C:\\Users\\28919\\Desktop\\zip\\"+ts1.namelist()[0]
```

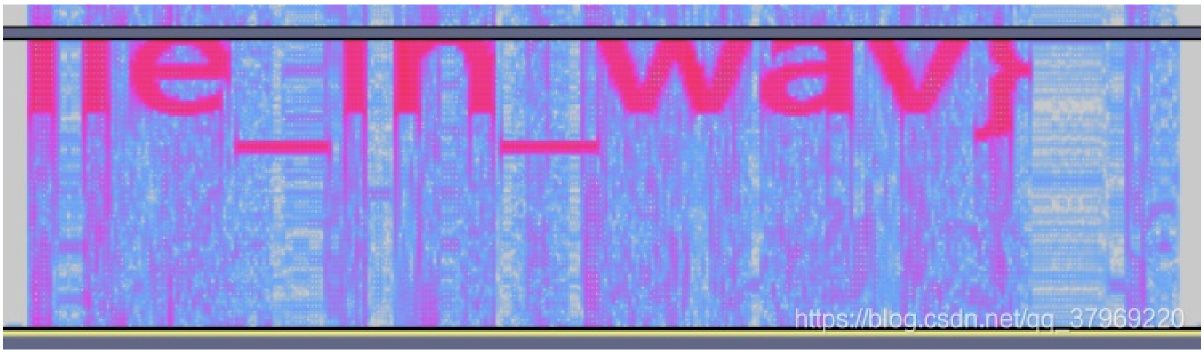
全部解压完有1509个压缩包，然而没有一个是73168，但是我们看到最后解压出的压缩包里是一个wav文件，暴力破解得密码：**b0yzz**，用Audacity打开切换到频谱图看到flag：



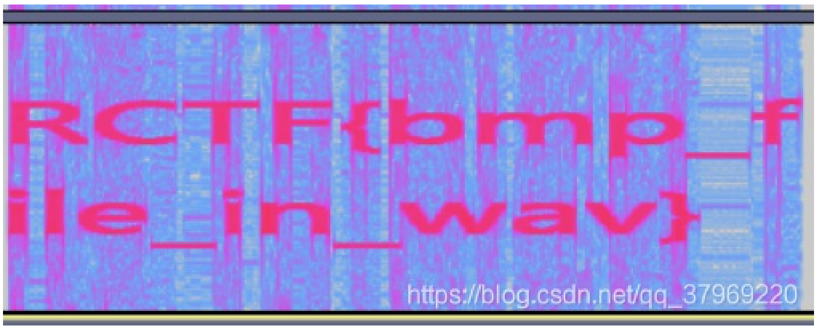
> BallsRealBolls

intoU

下载解压得到一个wav文件，直接播放发现最后有一段杂音，用Audacity打开切换到频谱图看到有一段flag，然而并不完整



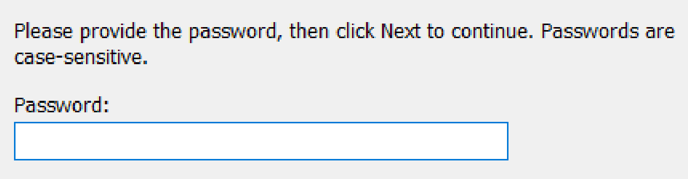
这道题目做法有很多，主要是Audacity的使用，左侧可以在菜单中把采样率改小，或者直接右击左侧频率栏选择缩小，一番操作完成后flag就出来了



> RCTF{bmp_file_in_wav}

Just-No-One

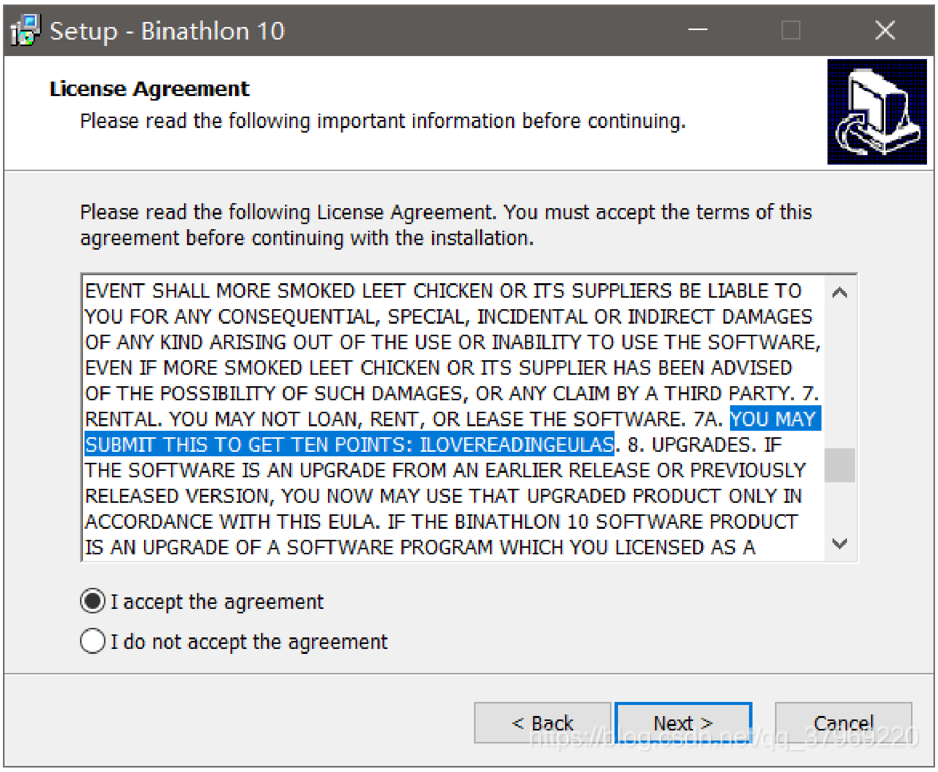
下载附件得一个exe文件，运行，发现是一个安装程序，继续，发现需要输入密码



Please provide the password, then click Next to continue. Passwords are case-sensitive.

Password:

由于这是道MISC的题，应该不是逆向分析，我们回到上一步看这个永远没有人会看的许可协议，里面有一句话：



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● I accept the agreement

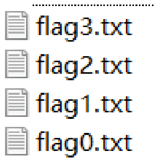
○ I do not accept the agreement

嗯，没错这就是flag

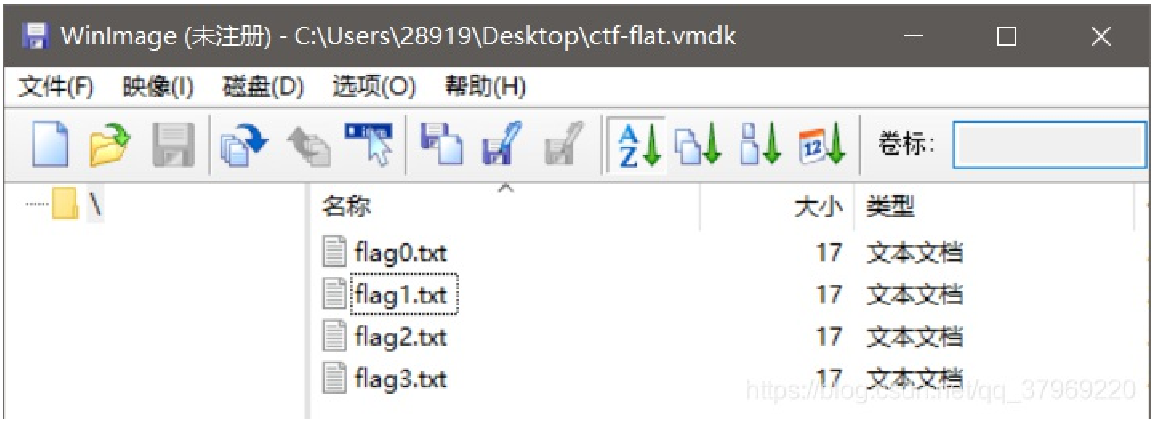
> ILOVEREADINGEULAS

Disk

下载解压得到一个vmdk文件，解压看到里面有4个txt文件（WinRar可能会报错压缩包损坏）

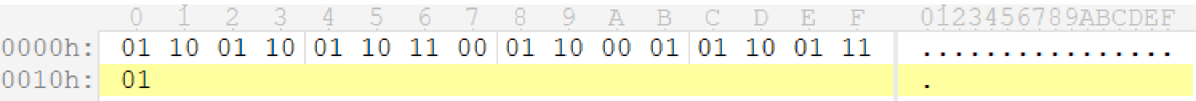

flag3.txt
flag2.txt
flag1.txt
flag0.txt

打开里面只有一句话：**flag is not here.**
用WinImage打开，右键将4个文件提取出来


WinImage (未注册) - C:\Users\28919\Desktop\ctf-flat.vmdk

名称	大小	类型
flag0.txt	17	文本文档
flag1.txt	17	文本文档
flag2.txt	17	文本文档
flag3.txt	17	文本文档

再用010Editor打开提取出来的文件，看到全部都是是二进制格式，将数据整合到一起转为字符串就得到flag

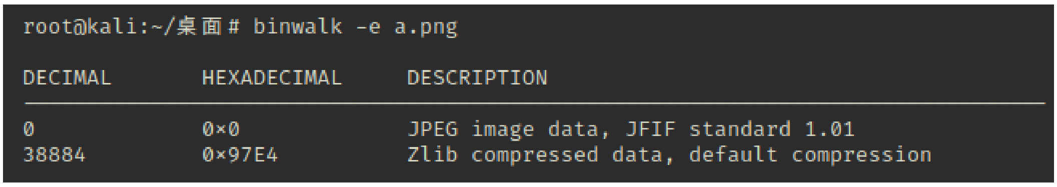

```
        0  1  2  3  4  5  6  7  8  9  A  B  C  D  E  F   0123456789ABCDEF
0000h: 01 10 01 10 01 10 11 00 01 10 00 01 01 10 01 11   ................
0010h: 01                                                .
```

```python
# 二进制转换为文本
s = '''01100110011011000110000101100111011110110011010\
001000100010100110101111100110001011011100101111101000\
1000011000101110011011010110111101'''
flag = ''
for i in range(0,len(s),8):
    flag += chr(int(s[i:i+8],2))
print(flag)
```

> flag{4DS_1n_D1sk}

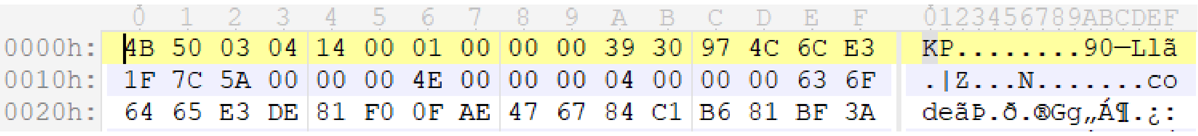
picture2

下载得到一张png图片，但是实际格式是jpg，用binwalk命令跑一下发现里面有一个zlib文件，再用binwalk分离出来（binwalk会自动将zlib文件解压）



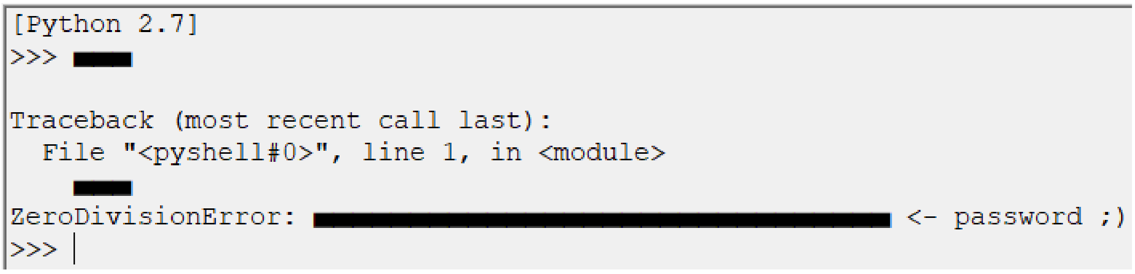
```
root@kali:~/桌面# binwalk -e a.png

DECIMAL         HEXADECIMAL     DESCRIPTION
--------------------------------------------------------------------------------
0               0x0             JPEG image data, JFIF standard 1.01
38884           0x97E4          Zlib compressed data, default compression
```

得到的文件是一段Base64，解码后根据文件头可以看出是一个zip文件，但是文件头前两个字符颠倒了



```
        0  1  2  3  4  5  6  7  8  9  A  B  C  D  E  F   0123456789ABCDEF
0000h: 4B 50 03 04 14 00 01 00 00 00 39 30 97 4C 6C E3   KP........90—Llã
0010h: 1F 7C 5A 00 00 00 4E 00 00 00 04 00 00 00 63 6F   .|Z...N.......co
0020h: 64 65 E3 DE 81 F0 0F AE 47 67 84 C1 B6 81 BF 3A   deãÞ.ð.®Gg„Á¶.¿:
```

改正后解压发现需要密码，压缩包里的注释告诉我们密码是ZeroDivisionError这个报错信息后面的一句话，用Python写个1/0运行得到后面的文本为：**integer division or modulo by zero**



```
[Python 2.7]
>>> [redacted]

Traceback (most recent call last):
  File "<pyshell#0>", line 1, in <module>
    [redacted]
ZeroDivisionError: [redacted] <- password ;)
>>> 
```

解压后对里面的这段文本用 uuencode 解码即可得到flag

```
G0TE30TY[,C,X.$%&,C@Y,T5".#5%0C%"-#,Y04)&1C8Q-S,Q.49]
```

```
CISCN{2388AF2893EB85EB1B439ABFF617319F}
```

MulTzor

题目有点小问题，最后应该少了一位，这里贴上正确的原文

```
38708d2a29ff535d9e3f20f85b40df3c3fab465b9a731ce55b54923279e85b4397362be25c54df2020f8465692733ce5535193363dab465
b9a732eee41479a2137ab735f933a3cf8125a91730ee4405f9b730eea4013b61a79ff5d138d3638ef12408a312aff535d8b3a38e7125292
3c2ce54640df3c3fab7f5c8d203ca6515c9b363dab40529b3a36ab515c923e2ce55b509e2730e45c40df3c3fab465b9a7318f35b40df233
6fc57418c732de35347df3b38ef12519a3637ab575d9c3a29e357419a3779fe415a913479ce5c5a983e38ab5f529c3b30e55740d1730de
35b40df2a30ee5e579a3779e65b5f962738f94b13963d2dee5e5f96343ce55156df2431e2515bd37338e75d5d98732ee2465bdf2731ea4
613992136e6125c8b3b3cf912579a302bf242479a3779ca4a5a8c732bea565a907338e556138b3635ee4241963d2dee40138b2138e54
15e96202ae25d5d8c7f79fc5340df3430fd575ddf2731ee125090373ce5535e9a730ce746419e7d79df5a5a8c732eea41139c3c37f85b57
9a213cef125186732eee41479a2137ab61468f213ce65713be3f35e25757df1036e65f5291373cf91277883a3ee34613bb7d79ce5b409a
3d31e445568d732de4125b9e253cab50569a3d79a956569c3a2ae24456dd732de41247973679ca5e5f96363dab445a9c2736f94b1df55
90de35713ba3d30ec5f52df3e38e85a5a91362aab45568d3679ea12559e3e30e74b13903579fb5d418b323be757139c3a29e35741df3e
38e85a5a91362aab455a8b3b79f95d47902179f851419e3e3be757418c7d79cc5d5c9b7336fb57419e2730e555138f2136e857578a213
cf81e138f2136fb5741932a79ee5c5590213aee561fdf2436fe5e57df3b38fd571392323dee1247973679fb5e46983136ea4057df1637e25
55e9e7334ea515b963d3cab475d9d213cea59529d3f3ca5127b90243cfd5741d37334e44147df3c3fab465b9a731eee405e9e3d79e65b
5f962738f94b13993c2be85740d3732aee51419a2779f85741893a3aee41139e3d3dab515a893a35e2535ddf323eee5c5096362aab465
b9e2779fe41569b731ce55b54923279ee5f43933c20ee56138f3c36f9125c8f362bea465a913479fb405c9c363dfe40568c7f79ea5c57df3
a2dab45528c732de357409a7329e45d41df232be451569b262bee41138b3b38ff1252933f36fc5757df2731ee1276913a3ee6531392323
ae35b5d9a2079ff5d139d3679f957459a212aee1f56913430e557568d363dab535d9b732de357139c3a29e357418c732de412519a732b
ee5357d15953df5a56df143cf95f52917329e747549d3c38f9561e9a222ce242439a3779ce5c5a983e38ab50569c3234ee127d9e2930ab
75568d3e38e54b148c7329f95b5d9c3a29ea5e139c2120fb465cd22020f84656927d79c2461388322aab504190383ce5125186732de35
713af3c35e2415bdf143ce557419e3f79d8465299357ef81270962331ee4013bd262bee5346df3a37ab76569c3634e95741df6260b8001
fdf2430ff5a138b3b3cab535a9b7336ed12758d3637e85a1e8c2629fb5e5a9a3779e25c479a3f35e2555691303cab5f528b362be2535fdf3
c3bff535a91363dab5441903e79ea12749a2134ea5c138c2320a51272df3e36e5465bdf313ced5d419a732de3571390262de940569e38
79e45413a83c2be75613a8322bab7b7ad37338ff1252df3036e554568d3637e85713973635ef125d9a322bab65528d2038fc1e138b3b3
cab625c933a2ae31270962331ee4013bd262bee5346df2031ea40569b7330ff4113ba3d30ec5f52d2312bee5358963d3eab46569c3b37
e243469a2079ea5c57df273ce85a5d903f36ec4b13883a2de31247973679cd4056913031ab535d9b731bf95b47962031a512778a2130e
555138b3b3cab75568d3e38e5125a912538f85b5c917336ed1263903f38e5561fdf3036f95713af3c35e2415bdf1030fb5a568d731bfe40
569e2679fb57418c3c37e5575fdf243cf957139a2538e847528b363da71245963279d95d5e9e3d30ea1e138b3c79cd405291303cab455
b9a213cab465b9a2a79ee41479e3135e2415b9a3779ff5a56df031aab70418a3d36ab415a983d38e74113963d2dee5e5f96343ce55156
df202dea465a903d79fc5b4797731ff9575d9c3b79ed5350963f30ff5b568c732afe424390212da512608a303aee4140992635ab515c902
33cf95347963c37ab535e903d3eab465b9a7309e45e568c7f79ff5a56df152bee5c50977f79ea5c57df2731ee12718d3a2de2415bdf322d
ab705f9a273ae35e56867309ea4058df3036e5465a91263cef1246912730e712798a3d3cab030acb6375ab455b9a3d79cd405291303ca
b41468d213ce556568d363dab465cdf2731ee12749a2134ea5c40d15953cd405c92732de35b40df313cec5b5d913a37ec1e138b3b3cab
7041962730f85a13b83c2fee405d923637ff127090373cab535d9b731af2425b9a2179d8515b903c35ab1a74bc751ad81b139e2779c95e
568b3031e7574adf0338f959139d2630e746138a2379ea5c139a2b2dee5c4096253cab514186232dea5c52932a2de251139c3229ea50
5a933a2df21c13b63d30ff5b52933f20a71247973679ef57508d2a29ff5b5c91732eea4113923230e55e4adf3c3fab7e4699272eea54559
a7371cc5741923237ab535a8d733fe440509a7a79ea5c57df3279ed5744df1b3cee4013d7143cf95f52917338f95f4ad67334ee41409e34
3cf81e139e2079ff5a56df182be257548c3e38f95b5d9a7371cc5741923237ab5c52892a70ab575e8f3f36f25757df3e2ce85a13923c2bee
12409a302cf957138f2136e857578a213cf81255902179fe415a913479ce5c5a983e38a51272933237ab66468d3a37ec1e139e731aea5f
518d3a3dec5713aa3d30fd57418c3a2df2125e9e2731ee5f528b3a3ae2535ddf3237ef125f903430e85b52917f79fb405c893a3dee56139
2263ae3125c99732de35713902130ec5b5d9e3f79ff5a5a913830e555138b3b38ff125f9a3779ff5d138b3b3cab56568c3a3ee5125c9973
2de357139c2120fb4652913235f2465a9c3235ab505c92313cab5f529c3b30e55740df2731ea461388362bee125a91202df9475e9a3d2d
ea5e13963d79ee445691272cea5e5f86733bf95752943a37ec1247973679e553459e3f79ce5c5a983e38a5127b90243cfd5741d3732de
35713b42130ee554092322be25c56df3a37ff405c9b263aee56139e3d79ce5c5a983e38ab44568d2030e45c13883a2de31252df3536fe4
04797732be4465c8d733fe4401396272aab671e9d3c38ff411fdf213cf8475f8b3a37ec125a917338ab4241903f36e555569b7329ee405a
903779fc5a5691732de357409a7334ee41409e343cf81250902635ef125d902779e957139b363af94b438b363da51264962731ab465b9
a733aea42478a213cab5d55df213ce757459e3d2dab515a8f3b3cf912589a2a2aab535d9b732de357138a203cab5d55df3e2ce85a1399
322aff5741df060aab7c52892a79e95d5e9d362aa712419a342ce75341d3732bea425a9b732bee5357963d3eab5d55df0674e95d528b7
334ee41409e343cf812419a202ce65757d15953df5a56df3535ea5513962063ab7677bc071ff002579c3638b806069d326dbd040bcf316
9e90101cc3761ea0a02cf656db8570a82
```

用Python把16进制字符转为字符串：

```python
f = open('input.txt','r')
s = f.read()
s = s.decode('hex')
open("output.txt","w").write(s)
```

这道题用的是异或加密，用xortool尝试找出密钥：

```
root@kali:~/桌面# xortool -c 20 /root/桌面/output.txt
The most probable key lengths:
 3:  11.9%
 6:  19.7%
 9:   9.4%
12:  14.5%
15:   7.1%
18:  11.2%
21:   5.3%
24:   8.4%
30:   6.8%
36:   5.7%
Key-length can be 3*n
1 possible key(s) of length 6:
w3\xffSY\x8b
Found 1 plaintexts with 95%+ valid characters
See files filename-key.csv, filename-char_used-perc_valid.csv
```

输出的文件最后可以看到明显的flag，但并不正确，猜测应该是密钥还是存在错误.

> T-e fla" is: DCTF{udcea3q5ba46s80b0bv23d8a}10643 9}Y

密钥共6位，而从文件头开始每6个字符里第一个都是错误的，推测出密钥的第一位错误。再看上面那句话，T-e应该为The，对 ‘-’ 和 ‘w’ 进行异或得原文字符为 ‘Z’，再对 ‘Z’ 和 ‘h’ 异或得密钥为 ‘2’。至此我们就得到了异或加密的密钥：**23\xffSY\x8b**
最后用Python进行异或解密即可得flag：

```
f = open('input.txt','r')
s = f.read()
s = s.decode('hex')
flag = ''
key = '23\xffSY\x8b'
length = len(key)
for i in range(len(s)):
 flag += chr(ord(s[i]) ^ ord(key[i%length]))
print flag
```

> DDCTF{0dcea345ba46680b0b323d8a810643e9}

攻防世界MISC高手区部分题目WriteUp（2）

后续