数据库2021“安恒·泰山杯”山东省网络安全大赛测试赛部分题目write up

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2021“安恒·泰山杯”山东省网络安全大赛测试赛部分题目wp

线上测试赛，两个多小时8道题做出来5道，感觉自己还是太菜，简单记录一下。能down下来的东西都在最后百度云链接里。

web1 adminlogin

扫描得到admin.php

得到登录页面，根据提示flag在数据库里，推测是sql注入。
试了一下substr、database等等能过滤的都过滤了，有点烦，想留到最后做结果也没来得及做。

web2 ezphp

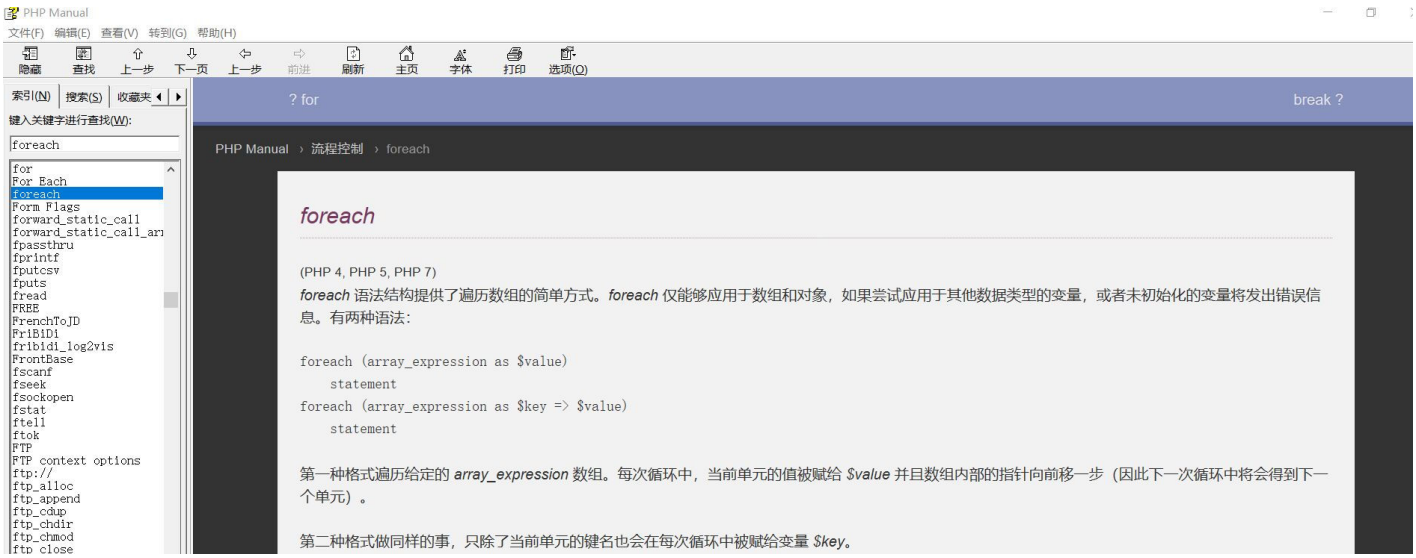
Where is flag?

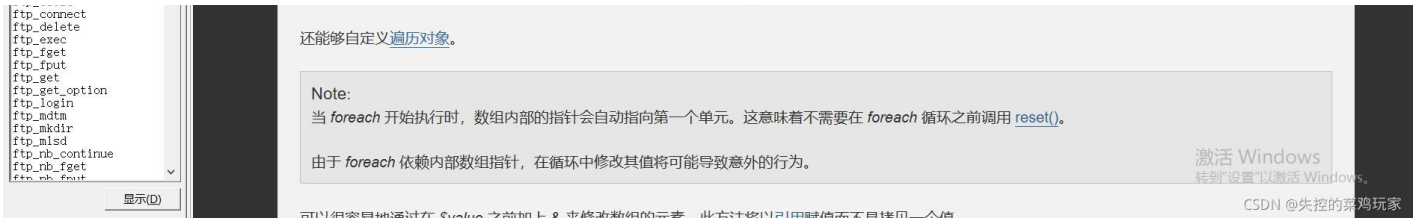
源代码：

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Welcome</title>
</head>
<body >
</div>
<h1 style="text-align: center">Where is flag?</h1>
<!--
foreach ($_POST as $item => $value){
    $$item=$$value;
    $secret = $$item;
}
foreach ($_GET as $key => $value){
    if ($key=='flag'){
        $str=$value;
        $$str=$secret;
    }
}
if (isset($hehe)){
    echo "
```

```
".$hehe."
```

```
"; } //flag+flaag=DASCTF{XXXXXXX} --> </body> <center> </html>
```

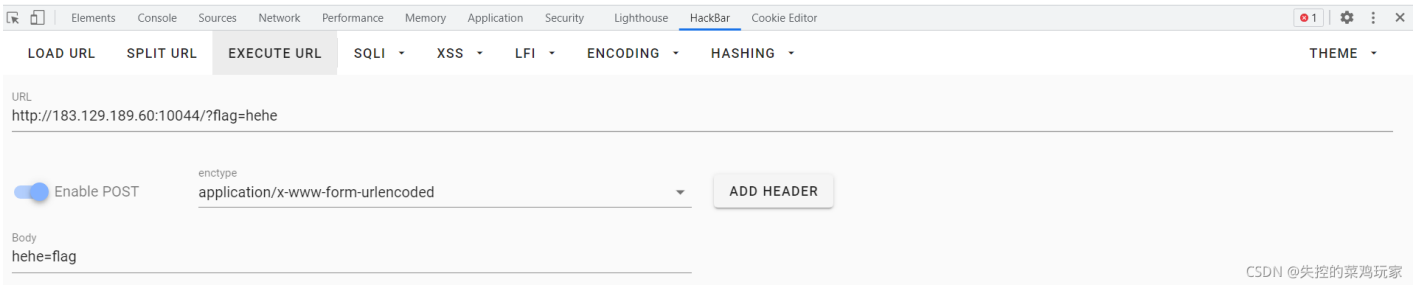




代码审计一下，是一个变量覆盖漏洞，具体漏洞原理可参考其他大佬的博客：
https://www.cnblogs.com/zzjdbk/p/12985530.html

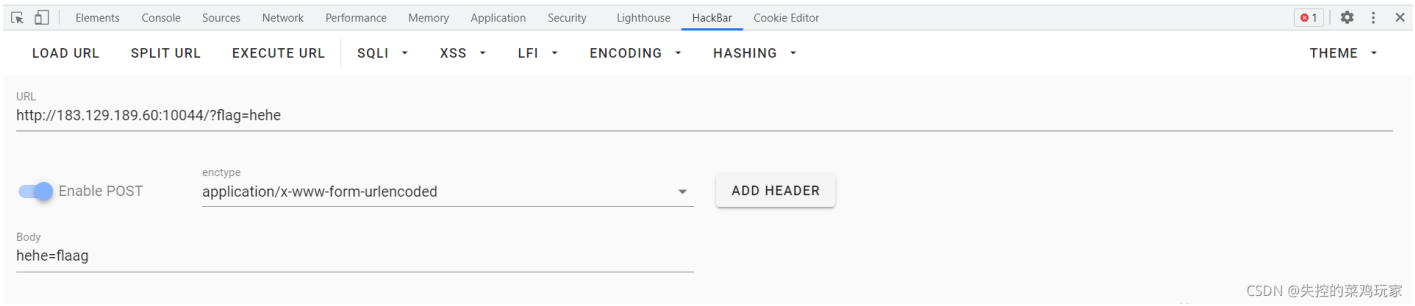
Where is flag?

DASCTF{27b62da69



Where is flag?

e01bf1ad3e4e737c2b8f4a1}



将两部分拼一下就能得到flag。

http://www.zuowenge.cn

wp来自另外一位大神：
先写一个多层zip解压脚本，并且注意到zip文件名似乎是有规律的，这里顺便把文件名也记录了一下。

```
import zipfile
import os

name = '[REFTQ'

s = []
while True:
    s.append(name)
    with zipfile.ZipFile(name + '.zip', 'r') as ziip:
        ziip.extractall(pwd=name.encode())
        delname = name
        name = ziip.filelist[0].filename[0:6]

        print(s)
    os.remove(delname + '.zip')
```

最深处有个图片，调整图片宽高，最下面有个提示who am i。

有点熟悉，百度一下是斐波那契，想到斐波那契数列，再结合文件名的特点，写出下面的脚本。

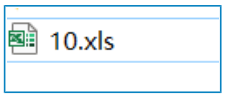
```
s = ['[REFTQ', '1RGe0V', '4dHJhY', 'eht8on', '3RhbGx', '8smjtq', 'zmckit', 'fSXNfU', '9rskp5', 'a93su6', 'a

print(len(s))
fbnachi = list(map(int, '1、2、3、5、8、13、21'.split('、')))
res = ''
for i in fbnachi:
    res += s[i-1]
print(res)
```

base64解密一下即得flag

```
DASCTF{Extractall_Is_So_Fun}
```

misc2 认真你就输了



附件是一个Excel文件，但是打开提示文件已经损坏，放到kali里看一下格式。

```
┌──(root💀kali)-[~/Documents]
└─# ls
10.xls  debug  dvcs-ripper-master  easyre.exe  F5-steganography-master  GitHack-master  linux_server64  output  re

┌──(root💀kali)-[~/Documents]
└─# file 10.xls
10.xls: Microsoft Excel 2007+

┌──(root💀kali)-[~/Documents]
└─# binwalk 10.xls

DECIMAL       HEXADECIMAL     DESCRIPTION
--------------------------------------------------------------------------------
0             0x0             Zip archive data, at least v2.0 to extract, compressed size: 19, uncompressed size: 17, name: xl/charts/flag.txt
67            0x43            Zip archive data, at least v1.0 to extract, name: docProps/
106           0x6A            Zip archive data, at least v2.0 to extract, compressed size: 404, uncompressed size: 872, name: docProps/app.xml
556           0x22C           Zip archive data, at least v2.0 to extract, compressed size: 322, uncompressed size: 608, name: docProps/core.xml
925           0x39D           Zip archive data, at least v1.0 to extract, name: xl/
958           0x3BE           Zip archive data, at least v2.0 to extract, compressed size: 1441, uncompressed size: 9895, name: xl/calcChain.xml
2445          0x98D           Zip archive data, at least v1.0 to extract, name: xl/charts/
2485          0x9B5           Zip archive data, at least v2.0 to extract, compressed size: 1064, uncompressed size: 3398, name: xl/charts/chart1.xml
3599          0xE0F           Zip archive data, at least v2.0 to extract, compressed size: 996, uncompressed size: 3001, name: xl/charts/chart2.xml
4645          0x1225          Zip archive data, at least v1.0 to extract, name: xl/drawings/
4687          0x124F          Zip archive data, at least v2.0 to extract, compressed size: 397, uncompressed size: 1013, name: xl/drawings/drawing1.xml
5138          0x1412          Zip archive data, at least v2.0 to extract, compressed size: 397, uncompressed size: 1014, name: xl/drawings/drawing2.xml
5589          0x15D5          Zip archive data, at least v1.0 to extract, name: xl/drawings/_rels/
5637          0x1605          Zip archive data, at least v2.0 to extract, compressed size: 179, uncompressed size: 293, name: xl/drawings/_rels/drawing1.xml.rels
5881          0x16F9          Zip archive data, at least v2.0 to extract, compressed size: 179, uncompressed size: 293, name: xl/drawings/_rels/drawing2.xml.rels
6125          0x17ED          Zip archive data, at least v2.0 to extract, compressed size: 272, uncompressed size: 613, name: xl/sharedStrings.xml
6447          0x192F          Zip archive data, at least v2.0 to extract, compressed size: 598, uncompressed size: 1377, name: xl/styles.xml
7088          0x1BB0          Zip archive data, at least v1.0 to extract, name: xl/theme/
7127          0x1BD7          Zip archive data, at least v2.0 to extract, compressed size: 1467, uncompressed size: 7079, name: xl/theme/theme1.xml
8643          0x21C3          Zip archive data, at least v2.0 to extract, compressed size: 366, uncompressed size: 687, name: xl/workbook.xml
9054          0x235E          Zip archive data, at least v1.0 to extract, name: xl/worksheets/
9098          0x238A          Zip archive data, at least v2.0 to extract, compressed size: 838, uncompressed size: 2706, name: xl/worksheets/sheet1.xml
9990          0x2706          Zip archive data, at least v2.0 to extract, compressed size: 1881, uncompressed size: 12007, name: xl/worksheets/sheet2.xml
11925         0x2E95          Zip archive data, at least v2.0 to extract, compressed size: 1127, uncompressed size: 6779, name: xl/worksheets/sheet3.xml
13106         0x3332          Zip archive data, at least v2.0 to extract, compressed size: 1520, uncompressed size: 10201, name: xl/worksheets/sheet4.xml
```


binwalk命令看到一大堆压缩包，将文件后缀改为zip，挨个翻一下文件得到flag.txt。

crypto1 rsa17

给了一段代码：

```
from Crypto.Util.number import *
import binascii
import gmpy2
flag = '****************************************'
hex_flag=int(flag.encode("hex"),16)

p=getPrime(256)
q=getPrime(256)
n=p*q

e=0x3
c1=pow(hex_flag,e,n)
c2=pow(hex_flag+1,e,n)


print("n=",hex(n))
print("e=",hex(e))
print("c1=",hex(c1))
print("c2=",hex(c2))

'''
('n=', '0xb28ae8f29f8b90e8b8c5667b2b71e49929446b41f7f7a3e9e45bc52a1e8c45d59c1788be48a9c365d51feee0b2cd32950
('e=', '0x3')
('c1=', '0x7ba5502ecbc3b15ad8c2db8f30a593eb062dde4d7dfacadf0a28291d1a576389a18dfba0607c0243f843f637449089dd
('c2=', '0x891ac4f663df41c1f6433ee3513d749c3ba02fe0aacd7f51d791b9bac4f7e5194bd484d78d972c344faf600f7d3aa580
'''
```

e=3，想到关联信息攻击

2. 关联信息攻击 - e=3，m[2] = a*m[1] + b

写一个脚本：

```
#!/usr/bin/python
# -*- coding: utf-8 -*-
import gmpy2

n = 935103560957991243058022436240691377521648526086680106025023584149713164967582147303804449072955058963
e = 3
c1 =647585363647905064559649608608058281678996306632338981567277071430861963371154190979389105280254741598
c2 =718074887826945158022362747405686850956124925137535146573736556745451880678665713425345380037386498775

def get_m1(a, b, c1, c2, n):
    a3 = pow(a, 3, n)
    b3 = pow(b, 3, n)
    tmp1 = ((c2 + 2*a3*c1 - b3) * b) % n
    tmp2 = ((c2 - a3*c1 + 2*b3) * a) % n
    tmp3 = gmpy2.invert(tmp2, n)
    tmp4 = (tmp1 * tmp3) % n
    return tmp4

m1 = get_m1(1, 1, c1, c2, n)
print(m1)
#m1=0b21877497180408552855835896941760344670251177325090488210835438666229662999964438368165088986576900
```

将十进制转化为字符串得到flag：

```
C:\Users\XuanJian>python3
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> bytes.fromhex(hex(218774971804085528558358969417603446702511773250904882108354386662296629999644383681650889865769009)[2:])
b'flag is :3e7f54b8ad38787670776c2698a67c01'
```

crypto2 移位凯撒

密文：ch\at;X[hUeQZcNU_QL^f
c的ascii码+3=f的ascii码值
h的ascii码+4=l的ascii码值
\的ascii码+5=a的ascii码值
a的ascii码+6=g的ascii码值
t的ascii码+7={的ascii码值
前面拼起来就是flag{
所以是一个变形的凯撒密码，密文和明文的差值从3开始递增

```
c = r"ch\at;X[hUeQZcNU_QL^f" /  #这里一定要加r，不然\会被当作转义符
move = 3
flag = ""
for i in c:
    flag += chr(ord(i) + move)
    move += 1
print(flag)
```

reverse ezgo

看标题，go语言的逆向，本菜鸡暂时只学过c语言的逆向，时间有限，比赛中暂时搁置了，文件保存了，以后做出来补充。

pwn ez_rop

时间有限，比赛中暂时搁置了，文件保存了，以后做出来补充。

除了web1都能down下来，百度云链接：链接：https://pan.baidu.com/s/19bdOz9z5i3CHQLqC3P7P4g
提取码：mipu
–来自百度网盘超级会员V5的分享